



Charles Sturt
University

A photograph of three students walking on a paved path on a university campus. In the foreground, a young woman in an orange polo shirt and denim shorts is smiling and gesturing with her hands. Behind her, another young woman is partially visible. To the right, a young man in a grey t-shirt with a 'RIP CURL' logo and red shorts is walking. The background features a modern building with grey panels and orange accents, surrounded by lush greenery and trees under a cloudy sky.

2024 Sustainable Development Goals Report



Acknowledgement of Country

We respectfully acknowledge the traditional owners and custodians of the lands on which we live and work together. Charles Sturt University and its staff pay respect to Elders within First Nations communities and acknowledge the continuity of cultures, languages, leadership and knowledge systems.

We acknowledge First Nations peoples' continuous connection to Country, recognising the unique, diverse identities and cultures of peoples in our communities, regions and nation. As such, we value the collaboration to strongly position First Nations peoples in our university, through languages, leadership, cultures, knowledges, research and ceremonies.

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The following icons are used throughout this report:



Research



Partnerships and engagement



Learning and teaching



Facilities and operations

Related impacts



Social impact



Economic impact



Environmental impact

Vice-Chancellor's foreword

Welcome to Charles Sturt University's 2024 Sustainable Development Goals report. At Charles Sturt, we embrace the ethos of "yindyamarra winhanganha" which means the wisdom to respectfully know how to live well in a world worth living in. This guiding principle is at the heart of our commitment to creating access and equity in higher education, addressing critical skills shortages, and generating new knowledge to tackle global and local challenges.

Our work towards these goals is diverse, ranging from large international projects to small grassroots initiatives in the local community. Each of these efforts, regardless of scale, holds significant value and impact, demonstrating our unwavering commitment. Some of the examples you will find in the report include:

- Opening of a student food pantry on our campuses to assist with increasing cost-of-living pressures and to tackle student hunger.
- Student work-integrated learning social impact where students and employers work together to develop solutions for key challenges in our regional communities.
- Collaboration with international communities towards community resilience in the face of a changing climate.
- On-campus events with our local communities that are designed to conserve and showcase our native wildlife.
- Profiles of academic and professional staff members who are leaders in their field, champion equity and access in higher education, and community connections.

- Profiles of our undergraduate and postgraduate students who are undertaking important community fundraising through our student clubs, or who are researching important medical techniques.

Universities play a pivotal role in shaping a better future. Our staff and students embody this responsibility through their dedication and innovative efforts, as showcased in the inspiring case studies within this report. Their work towards achieving the sustainable development goals is more important than ever, reflecting our collective resolve to make a meaningful difference.

I am continually inspired by the passion and commitment of our university community. I hope this report inspires you as well, and that together we continue this vital work into the future.



Professor Renée Leon PSM
Vice-Chancellor and President



Hear more from Vice-Chancellor Professor Renée Leon about sustainability at Charles Sturt.



Charles Sturt
University

Business

Media & Communications

Health & Society





Our commitment at a glance

In September 2019, Charles Sturt became a signatory to the University Commitment to the United Nations' Sustainable Development Goals (SDGs). This commitment recognises the important role universities play in progress toward achieving the goals.

Through our promise, we agree to:

- support and promote the principles of the SDGs
- report on our activities in support of the SDGs
- provide our students with the educational opportunities to acquire the knowledge and skills necessary to promote sustainable development
- contribute to achieving the SDGs by ensuring our campuses and major programs are environmentally sustainable and socially inclusive
- undertake research that provides solutions to sustainable development challenges.

1 NO POVERTY



451 scholarships awarded to students through the Charles Sturt Foundation with 25 per cent of these awarded to students from lower socio-economic areas.

2 ZERO HUNGER



\$30 million invested in Charles Sturt's Biosecurity Hub to safeguard Australia's food and farms.

3 GOOD HEALTH AND WELL-BEING



Provided face-to-face sessions for 120 rural health professionals through the new Rural Mental Health Educational Enhancement Hub.

4 QUALITY EDUCATION

In 2024, 81 per cent of our students belonged to one or more key equity groups.

5 GENDER EQUALITY

850 students attended seminars on consent and sexual assault during orientation.

6 CLEAN WATER AND SANITATION

453,952 kilolitres of potable water used across Charles Sturt University campuses in 2024.

7 AFFORDABLE AND CLEAN ENERGY

5,620,233 kilowatt hours of renewable electricity generated by campus rooftop solar power stations – equivalent to the annual energy use of more than 800 Australian households.

8 DECENT WORK AND ECONOMIC GROWTH

Seven First Nations businesses completed the Charles Sturt First Nations Entrepreneur Program in 2024.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

\$1.59 million grant for our AI and Cyber Futures Institute and AgriPark's 'Agri-twin' project designed to transform the agricultural sector globally.

10 REDUCED INEQUALITIES

580 university staff are members of employee networks enhancing our equity, diversity and inclusion policies and practices.

11 SUSTAINABLE CITIES AND COMMUNITIES

Over 300 hours of student volunteering by, lending a hand in our community.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Over 200 pieces of furniture and equipment headed for landfill, repurposed for on-campus uses.

13 CLIMATE ACTION

16,263 tonnes CO₂-e emissions avoided in 2024 as a result of procuring electricity from 100 per cent renewable sources and electrification of gas heating systems in several buildings.

14 LIFE BELOW WATER

15 students from across South-East Asia undertook an Australia Award Fellowship placement program in sustainable river management led by the Gulbali Institute in partnership with the School of Agricultural, Environmental and Veterinary Sciences.

15 LIFE ON LAND

1,000 students in Australia and internationally learning through our Biosecurity Training Centre.

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

13 libraries established in gaols in the Philippines in through Dr Jane Garner's collaboration with the Philippine Government and the United Nations.

17 PARTNERSHIPS FOR THE GOALS

51 per cent of our research publications include an international collaboration.



1 NO POVERTY



End poverty
in all its forms
everywhere

United Nations goal

SDG 1 aims to eradicate extreme poverty by 2030. It seeks to ensure that all individuals, regardless of their circumstances, have access to basic resources, services and opportunities necessary for a decent life.

This goal recognises that poverty is not just about income; it also encompasses access to education, healthcare, food, clean water and more. Addressing poverty requires comprehensive efforts, including social protection systems, job creation, and reducing inequalities.

Research outcomes

50
publications

2.40
Field-weighted citation impact

66%
of publications involve an
international collaboration

Figures are for 2020–2024



Related impacts



Professor Pawar on the world stage

Professor Manohar Pawar from Charles Sturt's School of Social Work and Arts was recognised as a leading researcher in the global social development movement through his delivery of the welcoming address at the 10th International Consortium for Social Development Asia Pacific (ICSDAP) Biennial Conference in the Philippines in October 2024. The event was attended by more than 200 social development practitioners, educators, researchers, and advocates across Asia-Pacific region, Africa, and North America.

Marking the 50th anniversary of the International Consortium of Social Development (ICSD), Professor Pawar, who is also the president of the ICSD, opened the conference by sharing his insights into the theme, "The fifth industrial revolution amidst multifaceted disruptions: harnessing the power of social development". Professor Pawar spoke of the role of technology in tackling global challenges through its potential to reduce poverty, bridge inequality gaps, and improve resource distribution.

Hosted by the University of the Philippines College of Social Work and Community Development, experts discussed strategies for navigating crises and fostering inclusive, human-centered progress.

Image: Professor Manohar Pawar from the School of Social Work and Arts.



Find out more about
ICSDAP Biennial Conference



Related impacts



Podcast explores world's biggest crises

The Surviving Global Pressures podcast launched in 2024 provides an insightful platform for exploring global challenges, with a strong emphasis on education's role in addressing poverty. Through expert interviews and real-world case studies, the podcast integrates interdisciplinary learning, encouraging students to think critically about systemic issues like economic inequality and climate-induced poverty.

Senior lecturer in social work in Charles Sturt's School of Social Work and Arts Dr Bernadette Moorhead said the podcast series helped foster critical discussions on sustainability, resilience, and socio-economic disparities. "We're currently experiencing an ongoing cost-of-living crisis, a housing crisis and have been battling a range of natural disasters, so my podcast will discuss how our essential workforce is finding new ways of operating, and new places to operate from, to continue to help those in need."

Each episode features experts across a range of fields currently navigating and developing solutions to critical challenges, such as information technology and artificial intelligence, agriculture, social work, law and justice, and paramedicine.

Image: Students and discipline experts tackle global issues in the Surviving Global Pressures podcast.



Find out more about
Surviving Global Pressures



Related impacts



Tackling homelessness through partnerships

Charles Sturt has been driving real change in the fight against poverty with our Addressing Homelessness Social Impact Project. With clear links to SDG 1: No poverty, the initiative has gone beyond providing shelter – it has led to the development of lasting solutions through collaboration and community engagement. By working closely with local governments, non-profits, and industry partners, the project tackles homelessness at its roots, while giving students the opportunity to make real-world impacts.

Through these strategic partnerships, the project delivers emergency accommodation, long-term housing solutions, and vital support services such as mental health care and financial assistance. Students and researchers play a key role, applying academic expertise to co-design evidence-based interventions and shape policy discussions.

The 2024 Addressing Homelessness Social Impact Project was proudly supported by Shelter NSW, Mission Australia, Murrumbidgee Primary Health Network, and St Vincent de Paul Society. The Project, facilitated by Dr. Noelia Roman in the Work-Integrated Learning (WIL) Team, was funded by the National Priorities and Industry Linkages Fund (NPILF).

Image: Heidi Lindner, Anita Thakuri and Alison Wheeler distributing flyers to students.



Find out more about
Addressing Homelessness



Related impacts



Breaking barriers to put education first

Many students from regional and disadvantaged backgrounds face a tough reality – balancing full-time study while working an average of 30 hours a week just to make ends meet. Our Regional Impact Scholarship Fund directly addresses this challenge by easing financial burdens and ensuring students can focus on their education.

This initiative is powered by partnerships with donors, businesses, and community organisations, creating a robust support system that extends beyond tuition assistance. Scholarship recipients gain access to mentorship, career development, and essential resources, helping them stay in school and achieve long-term success.

By reducing the financial strain on students, we're not just supporting individuals – we are also strengthening regional communities. The Regional Impact Scholarship Fund empowers students to complete their degrees with less economic stress, reinforcing education as a pathway out of poverty and toward sustainable economic security.



Find out more about
The Regional Impact
Scholarship Fund



2 ZERO HUNGER



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

United Nations goal

SDG 2 focuses on ending hunger, achieving food security, improving nutrition, and promoting sustainable agriculture. The objective is to ensure that no one goes to bed hungry.

This involves increasing food production and ensuring equitable access to nutritious and sufficient food. Sustainable agricultural practices, efficient food distribution systems and reducing food waste are essential components of this goal.

Research outcomes

267
publications

4.26
Field-weighted citation impact

70%
of publications involve an international collaboration

Figures are for 2020–2024



Related impacts



Keeping plants and humans healthy

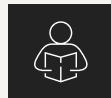
The research of leading Charles Sturt nanotechnology scientist Distinguished Professor Muhammad JA Shiddiky focuses on developing biosensing methods and portable diagnostic devices for various biomedical, agricultural and environmental uses. Professor Shiddiky said the availability of simple, fast and affordable molecular testing methods and devices for detecting and treating diseases on-site has the potential to change the way we approach healthcare and agriculture. "This shift would move us towards a more personalised, predictive and preventative model, focusing on early detection and effective management of diseases."

Currently, diagnostic methods for healthcare and agriculture often require expensive materials, facilities and are time-consuming, making them inaccessible in low-income and resource-poor countries. These advancements in molecular testing and technology have led to more affordable, on-site testing. "Such testing is also applicable to agricultural biomarkers, including plant disease-causing pathogens and global water-related disease biomarkers like cryptosporidiosis and giardiasis."

Image: Professor Muhammad Shiddiky's research activities focus on healthcare and agricultural diagnostics.



Find out more about
Distinguished Professor
Shiddiky



Related impacts



Eye-opening experience for Marieke

A first-hand farming experience in Timor-Leste for Charles Sturt graduate Marieke Hoelscher has not only helped shape her future career, but the future of Australian agriculture too. One of 13 Charles Sturt students who travelled to the southeast Asian country as part of the Agriculture, Forestry and Livestock Education program, Marieke said it was fascinating to learn about the challenges and opportunities in agriculture in Timor-Leste. "A real highlight was seeing the different socioeconomic background in Timor-Leste and exploring the effect of history, especially colonialism and subsequent civil war, economics and politics, and how this impacts agriculture there."

Another important takeaway from the trip for Marieke was the Timorese smallholder sustainable farming techniques – born of necessity of living in a third-world country – that Australia can learn from. For example, farming fish in ponds then reusing the water to irrigate crops. Experiences like this help shape globally aware graduates who are not only equipped with practical skills, but also with a deep understanding of sustainable practices and the role they play in building a more resilient and connected world.

Image: Charles Sturt graduate Marieke Hoelscher with fellow students on the Timor-Leste study tour.



Find out more about

Agriculture, Forestry and Livestock
Education program



Related impacts



Biosecurity Hub to safeguard food and future

Australia's defence against crippling biosecurity threats was strengthened with the August 2024 launch of Charles Sturt's Biosecurity Hub – a co-investment in research and training of almost \$30 million to enhance the nation's biosecurity defences, protecting our food, farms and communities. The hub brings together a team of expert researchers, scientists and trainers from various fields.

The university's long-standing partnerships in biosecurity, including collaborations with the Department of Agriculture, Fisheries and Forestry, Asia-Pacific government and industry partners, state government agencies, industry and the community, equips the Hub to tackle a range of current or emerging biosecurity threats. It will specifically respond to threats as outlined by the CSIRO, where it is estimated that invasive species cost Australia approximately \$25 billion annually. "Our Biosecurity Hub focuses on strengthening Australia's capacity to detect, prevent and respond to pests and diseases that threaten our food, farms and future," Charles Sturt Vice-Chancellor Professor Renée Leon said.

Image: CSU and industry partners at the Hub launch.



Find out more about
Charles Sturt's Biosecurity Hub



Related impacts



Food pantry fights student financial strain

At Charles Sturt, we understand that often the cost of living can create unexpected life challenges. Giving students access to a student food pantry means everyone can access nourishing, affordable food – no matter their circumstances. By offering free pantry staples and essential items, the food pantry aims to relieve financial pressures so students can focus on their studies and personal growth. It also provides a chance for the Charles Sturt community to work together – through donations, volunteering, or simply spreading the word – so that no student goes without a meal.

The food pantry is a Student Services and Amenities Fee (SSAF) funded initiative, available to students whether they study on campus or online. Food pantries are available across several campus locations in Albury-Wodonga, Bathurst, Dubbo, Orange, Port Macquarie and Wagga Wagga.

Image: International Student Support Officer Polly Goodlet (left) with student and Charles Sturt employee Katharine Hogan at Bathurst campus Student Food Pantry.



Find out more about
Student Food Pantry



3 GOOD HEALTH AND WELL-BEING



Ensure healthy lives and promote wellbeing for all at all ages

United Nations goal

SDG 3 seeks to ensure healthy lives and wellbeing for all by addressing various health challenges. It includes reducing maternal and child mortality, combating diseases like HIV/AIDS and malaria, and providing universal access to healthcare services.

This goal underscores the importance of mental health and aims to achieve health coverage that leaves no one behind.

Research outcomes

781
publications

5.16
Field-weighted citation impact

62%
of publications involve an international collaboration

Figures are for 2020–2024



Related impacts



Improving patient experiences in hospital emergency departments

Researchers from Charles Sturt's School of Nursing, Paramedicine, and Healthcare Sciences collaborated with NSW Health to evaluate Patient Experience Officers (PEOs) in 51 emergency department (ED) waiting rooms. Demand for ED services in public hospitals has surged since 2021, with admissions increasing by 11 per cent. Population growth, workforce challenges and changes, increasing wait times, and patient and carer anxiety have all contributed to increased pressure on EDs across NSW. Violence and aggression towards healthcare workers has also risen.

PEOs are crucial in this stretched system, enhancing workplace efficiency by reducing workflow interruptions and delays in patient care. They assist with tasks that triage or clinical nurses cannot complete, improving patient experience and helping staff manage their workload, thus reducing wait times. The evaluation underscored the essential role of PEOs in emergency departments and provided key recommendations for care models, as well as supported the case for continued funding for this important role.



Find out more about
Patient Experience Officer role



Related impacts



Aged care placement program fosters student empathy

The Three Rivers Department of Rural Health has partnered with three rural aged care facilities in the Riverina to offer a student placement program focused on promoting healthy living and wellbeing. In 2024, 48 students from nursing, paramedicine, and physiotherapy completed 122 weeks of placement.

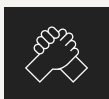
This program provides students with valuable insights into the health and wellbeing of older adults through meaningful interactions with resident mentors. These mentors share their experiences and perspectives, fostering intergenerational communication and learning. To support this initiative, a resident mentor guide and reciprocal learning activities have been collaboratively developed and integrated into the placement program.

The program aims to develop innovative strategies for engaging residents during student placements. By gaining a deeper understanding of residents' perspectives, the initiative seeks to explore opportunities to reshape the nature, duration, and purpose of student placements in aged care.

Image: Aged care facility resident Tess Evans with Charles Sturt student Kathryn Box.



Find out more about
Student placement program



Related impacts



Launch of Rural Mental Health Education Hub

Recognising the shared goal of achieving equitable rural mental health outcomes, the Three Rivers Department of Rural Health (DRH) partnered with Murrumbidgee Primary Health Network (MPHN) to launch the Rural Mental Health Educational Enhancement Hub in October 2024. The online hub is designed to support students across various health disciplines during their rural mental health placements, as well as health professionals working in mental health within the Three Rivers geographical footprint.

Since its launch, the virtual hub has attracted more than 2,000 site visits from national and international visitors and has hosted multiple training events covering a range of topics. To date, more than 120 rural health professionals have participated in face-to-face sessions, with more events planned. This digital education platform serves as a vital resource, connecting community members, academics, and both current and future health professionals with real-time, localised, and relevant mental health resources.

Image: (From left) MPHN Cristy Houghton with Three Rivers DRH Lucinda Derrick and Latitia Kernaghan.



Find out more about

Rural Mental Health Education Hub



Related impacts



Dedicated to student wellbeing

Charles Sturt's Student Wellbeing Framework supports the University Strategy 2020–2030 with a university-wide, integrated approach to student wellbeing. This initiative prioritises holistic wellbeing, helping students achieve their full potential academically and personally.

The framework's integrated approach and commitment to inclusivity and support reflects the university's dedication to student success and wellbeing. It provides tools, support, and resources for students to thrive during their time at the university and beyond. The framework focuses on four priority areas: mental health and wellbeing, healthy lifestyles, respectful relationships, and safe environments.

Guided by our wellbeing vision, Charles Sturt is committed to cultivating a thriving community where every student is empowered to flourish academically, personally, and socially. By investing in student wellbeing, Charles Sturt aims to nurture resilient, empathetic, and capable leaders of tomorrow.

Image: Orientation leaders.



Find out more about

Student Wellbeing Framework

Living the goals



Ruth Pape is a senior lecturer in diagnostic radiography at the University of Papua New Guinea and an AUSAID scholar recipient completing her PhD in mammography at Charles Sturt. She completed her final PhD experiment in mammography at the Heidelberg Repatriation Hospital in Melbourne in October 2024, under the supervision of Michelle Kostidis. Her research yielded significant results in breast tissue inclusion.

Ruth's contributions to medical imaging aim to enhance diagnostic accuracy and patient outcomes, making a substantial impact in both clinical and educational settings.

Through her research, Ruth has been invited to present her PhD research at the Australian Society of Medical Imaging and Radiation Therapy (ASMIRT), published her research in the Q1 Radiography Journal (United Kingdom) and the Innovative Practices in Breast Health Journal (France), and during the same period Ruth represented Charles Sturt at the Women's Agenda Leadership Awards in Melbourne.



Find out more about
Ruth Pape



4 QUALITY EDUCATION



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

United Nations goal

SDG 4 emphasises the importance of inclusive, equitable, and quality education for all. It aims to ensure that individuals have access to lifelong learning opportunities that equip them with essential knowledge and skills.

This goal involves improving access to education and enhancing the quality of teaching and learning, reducing disparities in educational outcomes, and promoting education for sustainable development.

Research outcomes

312
publications

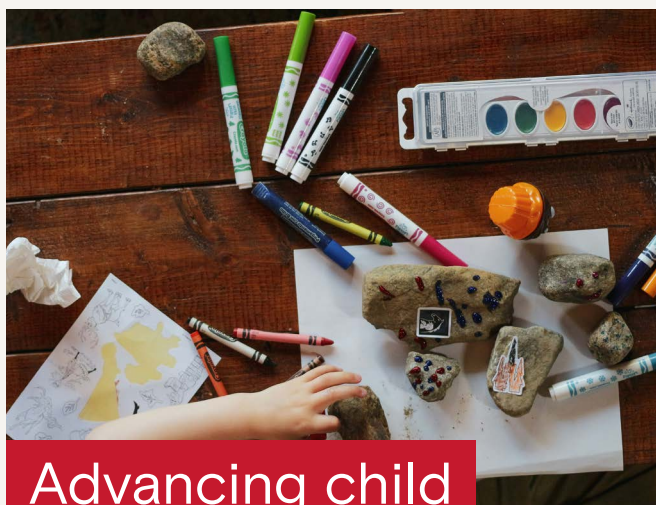
1.98
Field-weighted citation impact

32%
of publications involve an international collaboration

Figures are for 2020–2024



Related impacts



Advancing child protection education

The Social Work and Human Services Work-integrated Learning (WIL) Project is transforming child protection education through industry-led research and immersive learning. A co-designed simulation program embedded in the curriculum enhances students' readiness for practice.

Collaborations with 12 agencies and 29 placement supervisors drive curriculum co-design and authentic assessments, while a placement experience survey ensures best-practice WIL placements, strengthening the regional workforce.

Secured funding for an Australian child protection simulation hub establishes the project as a model for sector-wide impact. Preliminary findings emphasise the importance of practical knowledge in child protection roles, statutory requirements, and key attributes like building relationships, curiosity, self-awareness, and resilience. Essential course content is focused on communication skills, assessment, report writing, and cultural understanding of First Nations family structures. This project highlights the benefits of industry collaboration in shaping curricula to better prepare graduates for practice.



Find out more about
Work Integrated Learning



Related impacts



Innovative nursing simulation provides edge for Charles Sturt students

A first for regional Australia, Charles Sturt is leading the way in sustainable healthcare education with HealthiERSim® – an integrated electronic health records simulation. Developed in-house by nurse researchers, this cutting-edge technology provides students with realistic, risk-free opportunities to build digital literacy and practice clinical documentation without the need for printed materials, or reliance on physical clinical placements. Rather than mirroring existing clinical systems, HealthiERSim® has been purposefully designed to ensure students are well-prepared for digital practice while engaging with a tool that meets their stage of learning. To date, over 3,000 students have used HealthiERSim®, demonstrating its scalability and contribution to long-term educational sustainability. As part of Charles Sturt's commitment to innovation and reducing resource use, HealthiERSim® exemplifies how universities can embrace digital transformation to meet environmental, economic, and social sustainability goals while preparing the future health workforce.

Image: Ms Mariam Barengayabo and Ms Eloise Miller with the HealthiERSim® technology.



Find out more about
HealthiERSim®



Related impacts



Celebrating Charles Sturt's educational legacy

Charles Sturt proudly released a series of publications exploring the rich history of higher education and teacher training in regional NSW. Two volumes focus on the Wagga Wagga and Albury-Wodonga campuses of the Riverina College of Advanced Education, reinforcing Charles Sturt's role as a cornerstone of education in regional Australia.

This achievement was celebrated with a book launch for *Paradigm Shifts – Riverina College of Advanced Education 1972 – 1985*, authored by Neil Hall.

The book chronicles the personnel, management, courses, and infrastructure, showcasing the remarkable accomplishments of the historical institution. The event, held in Wagga Wagga, brought together history enthusiasts, alumni, and community members to honour our shared heritage. It provided a unique opportunity to connect with the past and celebrate the individuals and events that have shaped the modern day Charles Sturt.

Image: Rup and Justin Hall, and Doug Hill at the *Paradigm Shifts* book launch.



Find out more about

Higher education and teacher training



Related impacts



Children's Voices Centre launched

Charles Sturt has established the Children's Voices Centre (CVC), a pioneering research hub dedicated to amplifying children's voices and creating a more inclusive world. Guided by the United Nations' Universal Declaration of Human Rights and the Convention on the Rights of the Child, the Centre focuses on two primary research themes: children, families, and communities, and workforce and policy. CVC researchers collaborate with a broad range of stakeholders, including children, families, professionals, and communities, to conduct transformative interdisciplinary research with global impact. The centre addresses key issues such as children's health, children's activities, multilingual children's speech, early childhood education and workforce needs, and children with speech, language, and communication needs.

By bringing together experts from fields like education, health, psychology, social work and the media, the CVC champions children's communication, learning, health, and development, aiming to empower all children to contribute to a better future.

Image: Learning from children about issues that matter at our Children's Voices Centre.



Find out more about

Children's Voices Centre

Living the goals



Distinguished Professor Sarah O'Shea is a prominent researcher in higher education equity at Charles Sturt. As the Dean of Graduate Research and head of the Higher Education Equity Research Unit (HEERU), she has significantly contributed to educational inclusivity and equity. Her research focuses on equitable access, participation, and success for underrepresented groups, including those who are the first in family or community to attend university and learners from low-socioeconomic backgrounds, and regional communities.

Professor O'Shea's work aligns with the United Nations' SDGs particularly Goal 4, which aims to ensure inclusive and equitable quality education.

Professor O'Shea's research is informed by Bourdieusian social theory, her institutional and nationally funded projects advance understanding of how under-represented student cohorts enact success within university, navigate transition into and through this environment, manage competing identities and negotiate aspirations for self and others. Her extensive publication record includes over 120 outputs since 2010 including seven books, 22 book chapters, 55 journal articles and 37 commissioned reports or invited contributions. A recent book entitled *Career Development Learning and Sustainability Goals: Considerations for Research and Practice*, published by Springer, considered how quality career support can underpin international sustainability goals including SDG 4, SDG 8, SDG 10 and SDG 17. This and other

publications related to education equity, have been widely cited and have significantly impacted the field of higher education equity.

Currently Professor O'Shea's research focus is higher degree by research students. "Not as much attention is given to the equity aspects of the higher degree by research journey, but it is a key one. If we can encourage more diverse learners to consider higher degree research and support their success, then we can recreate universities so they are more reflective of our diverse society."

Professor O'Shea's contributions have been recognised through numerous awards, including the Australian Award for University Teaching Citation for Outstanding Contribution to Student Learning (2012) and the prestigious Churchill Fellowship (2017). She is also a Principal Fellow of the Higher Education Authority (AdvanceUK) and has been acknowledged internationally for her impact on higher education research by the UKs Society for Research in Higher Education (SRHE).

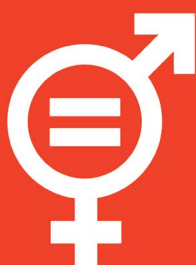


Find out more about

Distinguished Professor
Sarah O'Shea



5 GENDER EQUALITY



Achieve gender equality and empower all women and girls

United Nations goal

SDG 5 strives for gender equality and the empowerment of all women and girls. It involves eliminating all forms of discrimination, violence, and harmful practices against women.

This goal aims to ensure equal participation in decision-making processes and economic opportunities, bridging gender gaps in education and healthcare access, and promoting gender-responsive policies.

Research outcomes

143
publications

2.07
Field-weighted citation impact

40%
of publications involve an international collaboration

Figures are for 2020–2024



Related impacts



Exploring period poverty among regional university students

Charles Sturt researchers Elizabeth Smith, Tracey Parnell and Jessica Biles investigated the prevalence and impact of period poverty among regional university students, and explored students' awareness and utilisation of free period products provided through Dignity Vending Machines (DVMs).

Over half (56 per cent) of the research participants reported experiencing period poverty which impacted their academic, professional, and social lives. Many participants (62.2 per cent) were unaware of the DVMs, and of those who were aware, just over half had used them.

This research provides valuable insights into the experiences of tertiary students and highlights the need for further research and targeted interventions to address period poverty in regional tertiary education settings.

Dignity Vending Machines and signage have been installed in bathrooms in Library and Learning and Teaching spaces on our Albury-Wodonga, Bathurst, Orange, Port Macquarie and Wagga Wagga campuses to address period poverty.



Find out more about
period poverty



Related impacts



Empowering students with gender equity and safety training

Charles Sturt actively addresses gender equity and gender-based violence through comprehensive training programs. These initiatives include DV-Alert training for staff, seminars on consent and sexual assault for students, and online modules. Student accommodation and orientation leaders receive both face-to-face and online training on the Respect Now Always campaign, along with workshops on responding to sexual violence disclosures.

In recent years, the university has introduced initiatives to educate students on consent, healthy relationships, and bystander intervention. These efforts aim to instil understanding of respectful behaviour, empowering students to support a culture of consent and mutual respect. Among these is the MATE (Motivating Action Through Empowerment) online program, which develops proactive bystander skills and equips participants to identify and safely respond to gender-based violence and discrimination. To date, 2,535 students have completed the program. Awareness campaigns, via social media, posters, and events, complement these efforts by promoting a safe, inclusive university culture. Through these actions, Charles Sturt University continues to foster an environment where every individual feels secure, respected, and able to thrive.



Find out more about
Project Zero



Related impacts



Guiding young women to better mental health

Bronte Johnson, a Bachelor of Education (K–12) student at Charles Sturt in Albury-Wodonga, was recently named a National Youth Advisor for Womn-Kind, a youth mental health organisation. Bronte's own high school mental health struggles led her to seek help from the organisation. In Year 11, her best friend was diagnosed with cancer, prompting her to use Womn-Kind's app for support. After three years, she transitioned from participant to youth advisor, helping other young women improve their mental health.

Bronte's leadership story is a powerful example of how Charles Sturt students are stepping up to empower young women, within their communities and across the country.

"University is hard enough with the workload, so making sure mental health is a priority ensures we can be our happiest and do our best."

Bronte encourages classmates facing mental health challenges, needing study tips, or navigating friendships to use Womn-Kind's resources.

Dr Bernadette Moorhead praised Bronte's commitment to support and advocacy. "Her work as a national youth advisor reflects the kind of leadership we need to reduce stigma around mental health in Australia."

Image: Student Bronte Johnson is creating a brighter future.



Find out more about
Bronte's story



Related impacts



Authentic storytelling to foster inclusivity

Charles Sturt's Division of Learning and Teaching (DLT) Equity, Diversity and Inclusion meeting is a group of like-minded individuals committed to fostering a more inclusive workplace culture. With passion and purpose, they work to create and sustain an environment where everyone feels valued and respected.

Through authentic storytelling and shared lived experiences, they highlight the impact of systemic barriers, gender inequality, racism, and the true meaning of respect – driving deeper understanding and meaningful change. This group identifies possible improvements and how these might be achieved. Recommendations are presented to the DLT leaders for implementation across the teams, leading meaningful changes at Charles Sturt for staff and students.



Find out more about
the Division of Learning and Teaching



Charles Sturt hosts historic GEA Conference

Port Macquarie campus was honored to host the first regional International Gender and Education Association conference.

The 20th Annual International Gender and Education Association (GEA) 2024 conference was held at Charles Sturt's Port Macquarie campus, marking the first time in GEA history that the event took place in a regional location.

Led by Co-chairs Associate Professor Cate Thomas and Director of External Engagement Kate Wood-Foye, a team of 36 Charles Sturt staff from various faculties and campuses organised and delivered this significant forum. The team secured a competitive bid to host GEA's first post-COVID in-person conference.

In collaboration with key industry partners, publishers, and institutions like SAGE (Science in Australia Gender and Equity), Charles Sturt facilitated the delivery of this international conference, emphasising social responsibility and global equity in education. The conference theme, 'Be the change,' attracted participants from around the world to the regional campus on Birpai country.

The event featured over 120 delegates from countries including China, South Africa, the United Kingdom, Afghanistan, and Sweden, along with 10 keynote speakers. It offered 81 diverse presentations,

pre-conference workshops for Higher Degree Researchers and Early Career Researchers, and crucial discussions on dismantling systemic gender barriers in education. The successful delivery and commitment to inclusivity showcased Charles Sturt's leadership in diversity and inclusion, fostering lasting partnerships and initiatives for ongoing positive change.

The conference not only boosted the economic, cultural, and social wealth of the Port Macquarie Hastings region but also underscored Charles Sturt's commitment to diversity, equity, and inclusivity. Global delegates experienced the university's genuine approach to accessibility, intersectionality, and global representation, resulting in a world-class conference that positioned Charles Sturt as a leader in gender and education.

Image: Delegates at the 20th Annual Gender and Education Association Conference held in Port Macquarie.



Find out more about
GEA Conference



6 CLEAN WATER AND SANITATION



Ensure access to clean drinking water and sanitation for all and sustainable management of water resources

United Nations goal

SDG 6 focuses on ensuring the availability and sustainable management of clean water and proper sanitation for all.

This includes improving water quality, increasing water-use efficiency, and providing access to sanitation facilities. Clean water and sanitation are crucial for public health, environmental sustainability and overall well-being.

Research outcomes

194
publications

4.76
Field-weighted citation impact

53%
of publications involve an international collaboration

Figures are for 2020–2024



Related impacts



Water leak detection fast-tracked

Charles Sturt's Global Digital Farm, in partnership with Farmbot Monitoring Solutions, have developed a solution to dramatically decrease the time it takes to detect and fix water leaks on farms. Through the Farmbot platform, the time taken to detect water leaks can be reduced from anywhere between days to months, down to one hour for a major leak, and 24 hours for a minor. This also reduces average costs in finding and repairing leaks using traditional processes.

Using a combination of field sensors and modelling software, the Farmbot platform can characterise water loss, whether it be through a leak, or animal consumption, or other means, allowing rapid detection and identification of where the leak originated. Where previously a farmer would have to be on-site to search for leaks, this technology enables leaks to be tracked and detected remotely, saving time, money and energy for farmers.



Find out more about
water leak detection



Related impacts



2024 Engineers Without Borders university student challenge

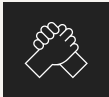
Three first-year Charles Sturt engineering students, Toby Wilson, Daniel Skrinnikoff, and Hamish Lang have won first place in the 2024 Engineers Without Borders (EWB) Australia national showcase event, for 'Most Outstanding Design Project'. Their project, titled 'Portable tarp-based rainwater catchment and storage for Pu Ngaol, Cambodia' won the 'Cambodia context' section of the event, competing against 14 entries from Australia and New Zealand. With their tarp-based solution, they solved the issue of water scarcity in the region of Pu Ngaol. Their innovative design utilised locally-sourced materials, reducing the cost of the project.

"The judges spoke highly of the students' project pitch, including how the team empathised with the community, sourcing locally available materials to reduce any cost, as well as using native language khmer for communication," stated Dr Miao Li, course Director and senior lecturer in Civil Engineering, who is extremely proud of their work.

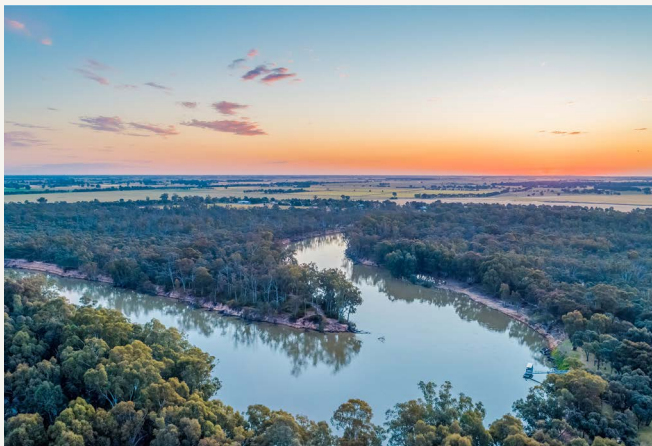
Image: Dr Miao Li, students Hamish Lang, Toby Wilson, Daniel Skrinnikoff with judge Hilda Lee.



Find out more about
engineering student challenge



Related impacts



Modern fish protection screening in Australia

The Gulbali Institute, in partnership with the NSW Department of Primary Industries (DPI) has successfully installed modern fish screens in waterways in New South Wales. The new screens are pump operated, differentiating them from the original gravity-fed design. The modern screens help preserve aquatic life, while clearing water for human use, without compromising the volume of water diverted. Between 2018–2024, 36 modern fish protection screens have been installed in NSW, the majority of which are in the northern Murray–Darling Basin. These protect approximately 819,126 native fish per year and deliver up to 2600 ML of cleaner water to water users per day across 234.09 km² of irrigated agriculture. The project is continuing using a community approach, engaging with stakeholders through an Expression of Interest (EOI) process, enabling interested parties to nominate themselves as ‘early-adopters’, and receive support either financially or technically, to install screens in local waterways.

It is predicted by 2026 there will be 46 sites in operation.

Image: Murray Darling Basin – A Prime Site for Fish Screens



Find out more about
Fish Screens Australia



Related impacts



Collaborative solutions for regional water management

Charles Sturt hosted a Policy Lab at the Bloomfield campus in Orange, uniting academics, industry professionals, government officials, and community representatives. This two-day event focused on localism in water management in Central NSW, drawing on extensive research and experience. The Policy Lab exemplifies the university’s commitment to industry, innovation, and infrastructure, addressing critical issues like water security in a changing climate.

Key outcomes include ongoing collaboration between the university and Central NSW Joint Organisation to advance regional planning for climate change adaptation and develop a 50-year bipartisan plan for the Lachlan Valley and beyond. This partnership leverages the river as a terminal system, showcasing innovative approaches to sustainable water management. The Policy Lab underscores the power of collective action in tackling complex environmental challenges, reinforcing Charles Sturt’s role in fostering sustainable solutions.

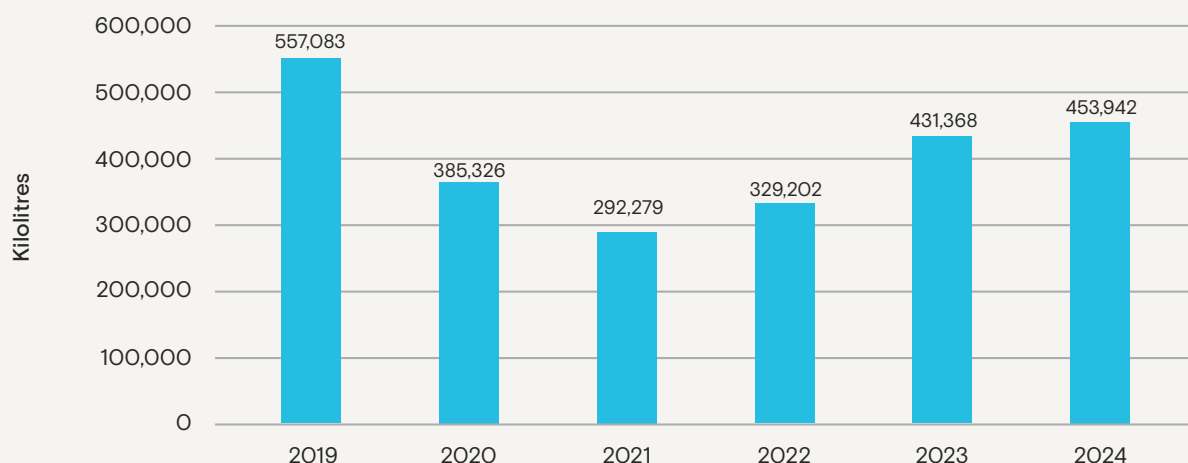
Image: (L to R) Julia Andrews, Prof. Lee Baumgartner, Prof. Mark Evans (Charles Sturt), Jenny Bennett and Meredith McPherson (CNSWJO).



Find out more about
Policy Lab



Annual potable water consumption trends



Water consumption trends for Charles Sturt campuses

Charles Sturt's potable water consumption for 2024 was 453,942 kilolitres. This equates to an increase of nine per cent over the previous year which can be largely accounted for by a significant leak identified and resolved in late 2024 from our largest campus. Annual consumption, discounting for the leakage, approximately equates to 2023, and comes on the back of a significantly lower rainfall year in 2024, compared to 2023 which increased demand for irrigation water.

Improvements to water management were focused around the Wagga Wagga campus in 2024 and included additional metering installed and further roll-out of water saving devices in residential facilities.



7 AFFORDABLE AND CLEAN ENERGY



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

United Nations goal

SDG 7 promotes access to affordable, reliable, sustainable, and modern energy sources.

It aims to enhance energy efficiency and expand the use of renewable energy to drive economic growth while mitigating environmental impacts.

Research outcomes

68
publications

2.11
Field-weighted citation impact

62%
of publications involve an international collaboration

Figures are for 2020–2024



Related impacts



Australian Agri-Renewables Innovation Challenge

The Renewables in Agriculture Centre of Excellence (RenCoE) was established in 2024 as a partnership between Charles Sturt's AgriPark and Food Agility to drive the adoption and maximise the value of renewable energy in agriculture and regions.

RenCoE partnered with RACE for 2030 CRC to launch the Australian Agri-Renewables Innovation Challenge, offering a \$2 million investment pool for challengers to pitch their solutions to the following themes:

- How might farmers adopt renewable energy?
- How might farmers adopt renewable chemicals and fertilisers?
- How might farmers create value from organic wastes, byproducts, and residues?

Six proposals have progressed to a detailed planning phase, aiming to establish a demonstration facility on Charles Sturt's Global Digital Farm in 2025. Technologies include solar thermal industrial heat production, renewable gas and fertiliser production from farm waste, modular hydrogen-powered energy generation, compact methane monitoring, and solar-powered water pumping using second life components.

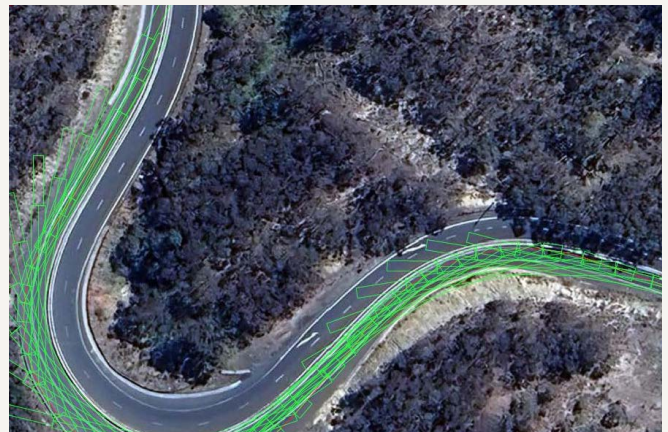
The facility will create a living lab for academics, students, farmers, and other stakeholders to explore how the technology can be adopted.



Find out more about
Agri-Renewables



Related impacts



Real world challenges to renewable energy solved by engineering students

Charles Sturt civil engineering students tackled a team challenge to design a proposed wind farm in the NSW Central West. The team developed plans for widening roads to transport long wind blades, managing stormwater, and designing structural footings for wind turbines and concrete slabs for a truck wash and site office.

This project showcased the transferability of engineering skills to the clean energy sector. Engineers Australia's report, *Making a clean transition – Transferability of engineering skills for the clean energy transition*, identified key areas for facilitating this transition, including crucial technical and professional skills, addressing skill shortages, and proximity to projects to maximise workforce retention. Charles Sturt recognises the vital role regionally based engineering students play in enabling renewable energy projects and supporting Australia's clean energy goals.

Image: A plan created by students showing the clearance area required for safe transportation of turbine blades.



Find out more about
studying Engineering



Related impacts



Providing energy to Bega Circular Valley

Bega Circular Valley aims to establish the Bega Valley as the most circular regional economy by 2030. Led by Bega Group, the project is implicitly collaborative, designed to create a replicable template for place-based, low carbon transitions in the regions.

As a founding member, Charles Sturt is excited to lead the energy workstream to develop an action plan that will transition the Valley to 100 per cent renewables by 2030. To this end, a workshop was convened in August 2024 by Simon Wright from Charles Sturt's Gulbali Institute and attended by more than 40 community stakeholders from small and large businesses, local and state government, the energy industry and local community groups.

Attendees shared the significant achievements in energy resilience and security in the wake of bushfires and flood in the Valley and priorities for future funding. Outputs from the workshop informed a recent funding submission to create an energy action plan in 2025.

Image: Simon Wright from Charles Sturt's Gulbali Institute facilitating the workshop with Bega Circular Valley stakeholders.



Find out more about
Bega Circular Valley



Related impacts



Enabling renewables through campus electrification

Charles Sturt has set an objective to operate our campuses using 100 per cent renewable energy. A key component to achieving this goal is the phase out of gas through the electrification of campus infrastructure.

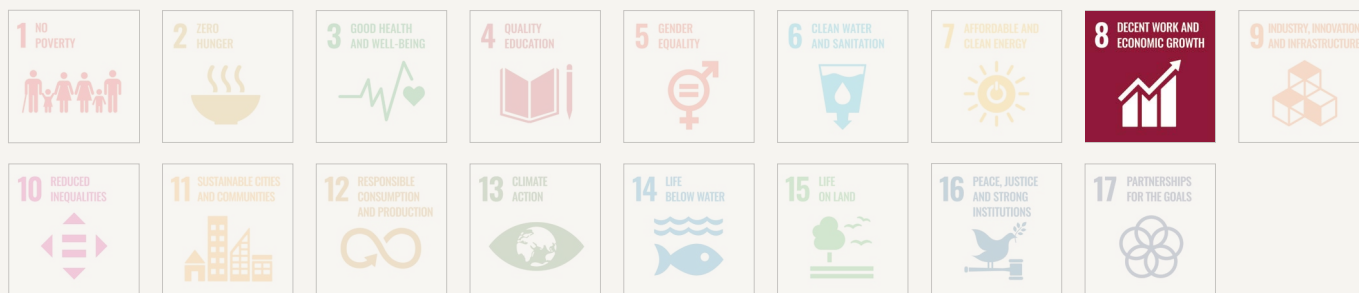
In 2024, Charles Sturt implemented two major electrification projects at its Bathurst campus. The first project involved the conversion of gas boilers servicing hydronic heating systems with electric heat pumps at Macquarie Village, a 200-bedroom residential accommodation precinct. The second project involved the replacement of gas storage domestic hot water systems with heat pump systems across Windradyne Village, a 96-bedroom residential accommodation precinct.

Air-sourced heat pumps used in both projects provide the advantage of pulling free heat from the air and allowing the systems to consume much less energy than equivalent gas or electric resistance systems. Coupled with our 100 per cent renewable electricity sources these new installations will operate with zero greenhouse gas emissions.

Image: Heat pump units installed on campus.



Find out more about
Campus electrification



8 DECENT WORK AND ECONOMIC GROWTH



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

United Nations goal

SDG 8 emphasises the importance of sustained, inclusive, and sustainable economic growth. It involves creating decent employment opportunities, ensuring fair labour practices, and supporting entrepreneurship.

This goal aims to reduce unemployment, particularly among young people, and address issues like informal employment and child labour.

Research outcomes

126
publications

2.81
Field-weighted citation impact

59%
of publications involve an international collaboration

Figures are for 2020–2024



Related impacts



Lived experience drives research

A paper published by a Charles Sturt psychology PhD candidate, which is derived from her researcher thesis, has been recognised by a peak US psychology organisation. Chrissy Antonopoulos received the Harold Yuker Award for Research Excellence from the Division of Rehabilitation Psychology of the American Psychological Association (APA) in 2024 for her paper 'Implicit bias towards people with disability: a systematic review and meta-analysis'. The paper was published in the APA journal Rehabilitation Psychology in 2023. Chrissy has lived with disability for most of her adult life and has experienced the effects of negative attitudes and stereotypes. "My lived experience led me to pursue a PhD and write this paper on implicit bias towards people with disability. This paper found overwhelmingly that people with disability experience negative implicit attitudes and stereotypes, and such negative attitudes can limit people with disability achieving their goals and aspirations."

Ms Antonopoulos said she hopes this research can contribute to change for the disability community, particularly in the areas of government strategy and policy around disability employment.

Image: PhD candidate Ms Chrissy Antonopoulos.



Find out more about

Implicit bias towards people with disability



Related impacts



Microcredentials address skills shortage

Two free microcredentials are being offered by Charles Sturt to 'out-of-field' teachers to upskill in the areas of mathematics and science. Announced in 2024, these microcredentials are supporting out-of-field teachers of mathematics and science, or teachers looking to add an additional teaching area. Funded through the Australian Government's Microcredentials Pilot in Higher Education, these microcredentials are a much-needed solution to the qualified STEM teacher shortage projected to affect up to 70,000 students annually by 2030.

"We know that subject matter expertise directly influences the quality of education, and the aspirations students have in STEM fields," Charles Sturt mathematics education lecturer Dr Janelle Hill said. "These microcredentials are about equipping teachers with the confidence, skills and pathways to positively shape our future generations." Furthermore, this addresses critical gaps in the teaching workforce as experienced teachers move into retirement. These microcredentials are open to any accredited teachers based in Australia, with 25 dedicated scholarships on offer.



Find out more about

free microcredentials



Related impacts



First Nations business ideas grow wings

A Charles Sturt program has provided seven First Nations entrepreneurs with the skills and encouragement to explore their business ideas to make an impact in their communities. Charles Sturt's AgriPark hosted the 10-week program, offering the participants the chance to ensure their ideas resonate culturally and commercially as they build their capabilities in innovation and entrepreneurial methods. Charles Sturt's Director of Innovation Programs Ms Jo Palmer said celebrating First Nations businesses is essential for showcasing Indigenous innovation, breaking down barriers and inspiring future generations, while promoting economic self-determination and cultural pride.

"The program has played a role in fostering innovation and entrepreneurial skills within the First Nations community, as part of Charles Sturt's commitment to social responsibility and empowering First Nations led businesses to contribute to economic growth." The program's weekly mentoring online sessions were held through The Scale Institute, a First Nations owned and led organisation.

Image: (From left) Charles Sturt's Jo Palmer and program participants Max Lyons and Fiona Harrison.



Find out more about
First Nations Innovators



Related impacts



We stand for the rights of all

Charles Sturt's Modern Slavery Annual Statement 2024 sets out the university's commitment to continuously improving practices, to ensuring the university prevents and does not contribute to acts of modern slavery within its supply chains and operation.

Modern slavery denies millions of people around the world their basic human rights. Charles Sturt is committed to ethical practices, to ensure the university and its partners are free from modern slavery.

The university's commitment to preventing modern slavery extends to ensuring everyone working in Australia or planning to work here is aware of their rights relating to minimum wages, work conditions, and treatment at work. Furthermore, to be conscious of modern slavery's various forms: slavery, servitude, forced and compulsory labour, underpayment, and human trafficking – all of which have in common the deprivation of a person's liberty by another to exploit them for personal or commercial gain.



Find out more about
Modern Slavery Statement



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



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

United Nations goal

SDG 9 calls for the development of resilient infrastructure, the promotion of inclusive and sustainable industrialisation, and the fostering of innovation.

It recognises the role of infrastructure and innovation in driving economic growth and enhancing the overall quality of life.

Research outcomes

105
publications

1.75
Field-weighted citation impact

51%
of publications involve an international collaboration

Figures are for 2020–2024.



Research on agricultural data exchange: boosting industry innovation

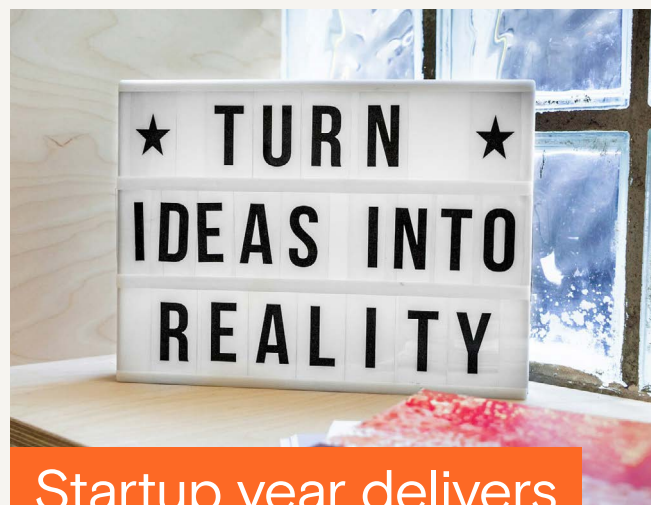
Charles Sturt researchers, including Dr. Michael Bewong, Dr Ryan Ip, Professor Yeslam Al-Saggaf, Professor Branka Krivokapic-Skoko, Professor Zahid Islam, Mr Jonathon Medway, Associate Professor Cliff Lewis, Basharat Ali and Ella Dixon have unveiled a study on the Australian Agricultural Data Exchange (AADX) initiative, highlighting its potential to transform the agricultural technology sector. The research explores the benefits and challenges of a national data-sharing approach. The findings indicate that while there is a strong incentive for data sharing, concerns about trust, data management, and storage need to be addressed.

The AADX initiative aims to enhance existing data-sharing practices, offering significant benefits in biosecurity, traceability, governance and market access. By fostering a secure and efficient data-sharing culture, the initiative supports the digitalisation of agriculture, meeting environmental, ethical, and consumer demands for sustainable produce. This research underscores the importance of data exchange in driving innovation and efficiency in the agricultural industry.

Image: Dr. Michael Bewong (insert) and colleagues' research is improving agricultural data-sharing.



Find out more about
Agricultural Data Exchange



Startup year delivers the next generation of entrepreneurs

Charles Sturt was selected as one of 11 institutions to pilot the Australian Government's Startup Year program, designed to foster entrepreneurial education and regional innovation. The inaugural cohort is participating in an eight-month hybrid program based in Wagga Wagga, engaging in six subjects focused on social entrepreneurship, transformational leadership, and strategic innovation.

Students have so far tackled sustainability challenges including food security, digital inclusion, and Indigenous economic empowerment. They have been supported by a diverse network of mentors—60 per cent from regional Australia—including Selena Griffith (Enactus Australia), Alisha Geary (ProovyPay), Elvis Gleeson (Creative Guild), Mariam Mohammed (MoneyGirl), and Liam Daley (LivSims).

These mentors brought expertise from creative industries, fintech, social impact, and Indigenous enterprise. Their regional perspectives and lived experiences were key to supporting students to co-design viable ventures responding to community-identified needs. This program reinforced Charles Sturt's leadership in place-based, purpose-led innovation. The program will end on with students presenting their business ideas and solutions.



Find out more about
Startup Year program



Related impacts



Empowering Cambodian women with Charles Sturt alumni leadership

Graduates from Charles Sturt's Master of Business degree are leading the next generation of women in business in Cambodia through the Women Bright Program. Established in 2018 by the Charles Sturt University – Alumni Cambodia Association (CSU-ACA), this initiative equips Cambodian women with the confidence, skills, and resources needed for academic and professional success.

The program focuses on empowering women as key economic drivers by helping them set career goals, overcome obstacles, and develop their talents. Workshops and seminars have reached over 4,300 students, covering themes like 'Strive for the Future' and 'Women Empower Women'. The program has also awarded 39 university scholarships to Cambodian and international students.

CSU-ACA collaborates with local organisations, including the Chamber of Professionals and Micro-Enterprise and the Cambodia Women Entrepreneurs Association (CWEA), to deliver these impactful sessions. This partnership highlights the university's commitment to fostering gender equity and supporting the socioeconomic growth of Cambodia.

Image: The CSU-ACA is empowering women.



Find out more about
Women Bright Program



Related impacts



AICF's Regional Demonstrator Lab: a hub for regional innovation

The AI and Cyber Futures Institute (AICF) has launched its Regional Demonstrator Lab in Bathurst, marking a significant milestone for students and researchers in regional Australia. This cutting-edge facility is designed to foster pioneering research in AI and cybersecurity, offering state-of-the-art resources such as advanced robotics, aerial and underwater exploration tools, and computer vision technology.

The lab provides an unparalleled environment for hands-on learning and innovation, enabling students and researchers to explore and develop new technologies. It has already hosted events for future students and top young researchers, providing them with invaluable experience and mentorship. The lab is set to become a cornerstone of regional development, driving forward the future of research and technology in Australia.



Find out more about
Regional Demonstrator Lab

Living the goals



Kate Wood-Foye, Director of External Engagement at Charles Sturt's Port Macquarie campus, is a dynamic leader dedicated to sustainability, community development, and regional growth. She co-founded and chairs the Luminosity Youth Summit, a national forum inspiring young people to explore creativity, excellence, and entrepreneurship, significantly impacting youth leadership and skills development in the region. Across the last 12 years the forum has inspired over 4,500 regional young people to step into their futures with confidence and connection to reach their full potential.

Kate's engagement with the Mid-North Coast community encompasses organising events and initiatives that promote community resilience and leadership. Her achievements include attracting and delivering the 20th Annual International Gender and Education Association (GEA) conference to the Port Macquarie campus, focusing on advancing gender equity in education. Kate's work also supported the establishment of the Mid North Coast Community Leadership and Resilience Network and coordinated support for bushfire and flood crisis responses, demonstrating her commitment to community support and sustainability.

Kate works extensively to connect and elevate diverse groups across the region to include the international community through cultural festivals and celebrations on campus, interfaith acceptance through the Multifaith Dialogues Series and celebration of LGBTQIA+ community through the annual Queer Film Festival and exhibition.

Kate collaborates with industry partners to identify and deliver strategic opportunities for the university and the region, including the inaugural Charles Sturt Bachelor of Nursing at Taree. Her role in the COVID-19 Recovery Working Group, co-developing the Relaunch, Reboot, Refresh – COVID pop-up series, further highlights her dedication to assisting individuals and businesses impacted by the pandemic.

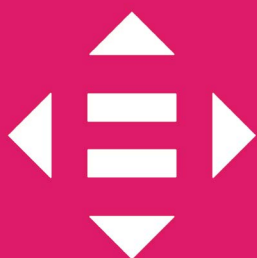
Kate's diverse engagement work underscores her commitment to fostering sustainable, resilient, and thriving communities in the region.



Find out more about
Kate Wood-Foye



10 REDUCED INEQUALITIES



Reduce inequality within and among countries

United Nations goal

SDG 10 aims to reduce inequalities within and among countries. It involves addressing income inequality, promoting social inclusion, and empowering marginalised groups.

This goal acknowledges that inequality can hinder overall development progress and seeks to create a more equitable world.

Research outcomes

203
publications

2.54
Field-weighted citation impact

46%
of publications involve an international collaboration

Figures are for 2020–2024



Related impacts



Unconditional documentary highlights the contribution of unpaid carers

Unconditional is a documentary by Charles Sturt PhD candidate Dalanglin (Dalang) Dkhar's study, which launched in March 2024, in Canberra. The film explores the lives of four full-time, unpaid carers through raw and unfiltered footage. Dalang, a full-time carer for her autistic son, used her personal experiences to inform the documentary.

With over three million (ABS, 2022) unpaid and unrecognised carers in Australia facing lower wellbeing and financial insecurity, compared to average Australians, this research highlights their significant contributions to society. The documentary highlights the emotional and practical realities of caregiving featuring stories like Megan, who cares for her adult daughter with cystic fibrosis, and Razi, who has been caring for his elderly parents for fifteen years.

Since its premiere, the film has influenced ACT policymakers, increasing the visibility of carers. Dalang's partnership with Carers ACT has led to the documentary's inclusion in government training, discussions for a Carer recognition card, and advocacy for carers in workplaces and communities.

Image: (L to R) Sarah Ansell, Dalanglin Dkhar, Dr Emma Rush and Dr Monica Short.



Find out more about
Unconditional



Related impacts



Australia's only disability-affirming and disability-informed inclusive education short courses

With increasing student diversity and rising awareness and identification of disability, educational institutions are struggling to provide quality education for all students. In response, Charles Sturt launched Australia's only disability-affirming and disability-informed inclusive education short courses in 2024. Co-created with the disabled community, these courses equip teachers, school leaders, parents, and policymakers with new theories and strategies to design inclusive learning environments. With a focus on accessibility and equity, this initiative empowers schools to re-prioritise wellbeing, joy and lifelong learning for all. These courses address a critical gap, positioning disabled voices at the centre of educational reform.

The courses also helps solve the teacher shortage by addressing some of the key reasons teachers are leaving the profession, including being undervalued, unsupported and unequipped to respond to the greater diversity of complex learning needs common in contemporary classrooms.



Find out more about
Inclusive education



Related impacts



Podiatric medicine collaboration with Albury-Wodonga Aboriginal Health Service

Charles Sturt University has brought First Nations health and wellbeing to the forefront of learning through a place-based learning model. Under this initiative, a partnership with the Albury-Wodonga Aboriginal Health Service (AWAHS) team members Linda Ball (Kamilaroi) and Cate Melville allows podiatry students to complete the subject 'Podiatry for Chronic Disease Management' in a real clinical setting. Lecturer in Podiatric Medicine Ms Kirsty Van Grinsven said such authentic cultural learning experiences encouraged systemic change within institutions and professions. Students can also use knowledge and skills from their experience to work alongside First Nations podiatry patients at the local Westside Community. "Our students have received excellent feedback from staff and patients alike regarding the way their clinical practice has evolved to be more culturally responsive in this environment," Ms Van Grinsven said. This ongoing innovative teaching model has earned two consecutive Teaching Academy Change One Thing Awards.

Image: Kirsty Van Grinsven, Linda Ball and Cate Melville at AWAHS.



Find out more about
place-based learning model



Related impacts



Increasing accessibility at Bathurst Diggings sports field

The Bathurst Diggings sports field was identified by Shane O'Brien from the Division of Facilities Management and Alexandra Cary from the Division of Student Experience as a campus facility that could be further enhanced to improve accessibility. These enhancements are to improve accessibility for both individuals with disabilities and greater mobility requirements as well as the addition of an access path for emergency services vehicles suitable for use while responding to medical emergencies on the sports fields.

During preparations for EngFest 2023, Shane engaged with Engineer in Residence Ken Lingabala to facilitate engineering students undertaking a design study as a simulated real-life group project. The design for this project was completed in 2024, and the project has now been fully realised to provide the planned enhancements to accessibility.

Image: Accessible path and emergency vehicle access at Bathurst Diggings sports fields.



Find out more about
Accessibility and Inclusion



Charles Sturt employee networks promoting inclusion and belonging

Charles Sturt's employee networks provide a safe place for people to connect around diversity, inclusion and belonging.

Our employee networks provide a safe space for dialogue around diversity, workplace inclusion, and belonging. They unite individuals who share identities or experiences, and those who support them, to raise issues, provide feedback, and guide university decisions.

Accessibility and Neurodiversity Employee Network

Members contribute to initiatives promoting neuro-affirming practices and disability inclusion, such as updating processes for workplace adjustments, developing 'Neurodivergence in the Workplace' training, and sharing lived experiences on significant days.

Ally Network

The Ally Network supports LGBTQIA+ staff and students by promoting a safe and inclusive environment. Allies are trained to understand the challenges faced by LGBTQIA+ individuals and advocate for their rights and well-being within the university. They collaborate on pride events and significant days like Pride Month, IDAHOBIT and the Queer Screen Festival.

Carers Employee Network

This network provides a forum for people with caring responsibilities, and those who support them, to safely share experiences and discuss issues

impacting them. It supports carers through initiatives including flexible work and access to resources, recognising a diversity of caring responsibilities.

Diverse Faiths and Cultures Employee Network

This network supports individuals from diverse cultural and ethnic backgrounds, providing a forum to discuss workplace barriers and consult on supportive initiatives.

First Nations Employee Network

This network connects First Nations employees, enhances cultural competency and integrating First Nations perspectives into university policies and practices. It is an important voice in developing the First Nations Cultural Load initiatives, the First Nations Employment Strategy, and strategic outcomes of the First Nations Strategy.

Gender Equity Employee Network

Members discuss experiences and support initiatives enhancing gender equality. They collaborate on events like the 16 Days of Activism Against Gender-based Violence and International Women's Day, and advise on gender pay gap actions and policy updates.



Find out more about
employment networks



11 SUSTAINABLE CITIES AND COMMUNITIES



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

United Nations goal

SDG 11 focuses on making cities and human settlements inclusive, safe, resilient, and sustainable. It involves sustainable urban planning, infrastructure development, and affordable housing.

This goal recognises that urbanisation is a global trend and aims to ensure that cities can accommodate growing populations while minimising their environmental impact and protecting the world's cultural and natural heritage.

Research outcomes

143
publications

4.32
Field-weighted citation impact

37%
of publications involve an international collaboration

Figures are for 2020–2024



Related impacts



Bringing endangered species to life through art

In 2024, the Wagga Wagga Art Gallery, in collaboration with Charles Sturt, launched the *Understories* exhibition. This immersive installation highlighted the interconnected stories of eight critically endangered species from local ecological communities. The exhibition featured multimedia storytelling through sculpture, video, audio, and text, creating an engaging experience for visitors.

The project raised awareness about the plight of endangered species and their habitats. Supported by the Country Arts Support Program and Eastern Riverina Arts, the exhibition aimed to foster a deeper understanding of ecological conservation and the need for sustainable practices.

Charles Sturt academics, including Associate Professor Christopher Orchard and Timothy Crutchett, played a key role in creating the exhibition. Their research focused on the impact of environmental changes on species like the Bogong Moth and Pale-headed Snake, using interactive mechanisms to illustrate these effects.



Find out more about
Endangered species



Related impacts



Wagga youth inspired by annual holiday experience

Wagga Wagga saw the 12th Annual Wagga African Association's (Wafrika) Intercultural program kick off in true style. Mount Austin Public School hosted the 2024 event, bringing together around 70 children from the Wagga Wagga community. Over 5 days, they learned, played and interacted without the interruption of devices and technology.

The program is supported by a Charles Sturt University Partnership Grant.

Charles Sturt's Dr Kiprono Langat, lecturer in the Faculty of Arts and Education (FAOE), and Dr Randy Adjonu, lecturer in food science and technology, helped facilitate the event and have marked it a great success. Activities around crafts, sports, literacy and numeracy ensured there was something for everyone, while educating the kids in a fun, interactive environment. This year's event added an extra layer with leadership discussions for the older children, which was extremely well received.

This is just one landmark event that Wagga Wagga's multicultural community hosts to continue to build and nurture relationships with the wider Australian community.

Image: Wafrika's intercultural program participants, photograph thanks to Shri Gayathir Rajen.



Find out more about
Annual holiday



Related impacts



Stargazing brings community together for 'Sky Stories 2024' in Orange

Sky Stories 2024 community event held at Charles Sturt's Orange campus brought together approximately 200 people in a meeting of First Nations and Western Sciences, to create a night of stargazing fun and education.

Dr Sid Parissi, lecturer in problem-based learning, helped organise this year's annual event which saw 'everyone enjoying and learning about First Nations culture and Wiradjuri Sky Lore from award-winning Wiradjuri knowledge holder Ian Sutherland, and by the Wagga - I - bhaan Dance Group.

Seven telescopes were provided by the Central West Astronomical Society, enabling everyone to gaze at the stars and planets while listening to the sky stories told by Ian Sutherland. The annual event is initiated by, and hosted by Charles Sturt as a Science, Technology Engineering and Mathematics (STEM) based learning for students, but bringing students, family and community together in this way was at the heart of the evening.

Image: Celebrations at the Charles Sturt 'Sky Stories 2024' community event in Orange.



Find out more about
Sky Stories



Related impacts



Exploring global art histories

Dr. Sam Bowker, Associate Professor in art history and Sub Dean, Research and Graduate Studies at Charles Sturt, shared the beauty and complexity of international art history through a 12-part lecture series, 'The art of everywhere else.'

The lectures explore the diversity of global art histories beyond Australia, aiming to preserve and understand the treasures of humanity. In 2024, the series was offered online and internationally, hosted by Charles Sturt and Arts National. These lectures provide a global audience the opportunity to engage with this rich content. Sam's work highlights the importance of global art education and its accessibility to the public.

This series was originally supported by Wagga Wagga City Council and Charles Sturt and delivered in person in 2022, and linked to the subject ART241: Global Art Histories.

Image: Dr Sam Bowker is sharing his knowledge of global art histories.



Find out more about
Global art histories

Living the goals



Charlie Willis is a third-year Bachelor of Communication student and has been a dedicated member of the Charles Sturt Football Club since commencing his studies. His involvement with the club began out of a lifelong passion for football, a sport Charlie has played exclusively. Upon joining, Charlie discovered the club's commendable history of fundraising for Headspace Bathurst. Fundraising has always been integral to Charlie's life; prior to moving to Bathurst, he raised money for the McGrath Foundation during his final year of high school and participated in the World's Greatest Shave.

Getting involved in student clubs and local sports is a great way for students to build supportive networks, ease stress, and feel less isolated. These connections boost retention, encourage peer mentoring, and inspire community-minded actions like fundraising. This kind of engagement helps create inclusive, resilient student networks that stay connected to the wider local community and support the Goals.

“Fundraising and raising awareness for Headspace has given me a university experience that cannot be replicated. I have felt empowered and like it is my responsibility to not only raise as much money as possible but to help out with every aspect of fundraising events.”

Bachelor of Communication student Charlie Willis



Find out more about
student clubs



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



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

United Nations goal

SDG 12 promotes sustainable consumption and production patterns. It encourages efficient resource use, reducing waste generation and minimising environmental impacts throughout the lifecycle of products and services.

Research outcomes

106
publications

2.31
Field-weighted citation impact

57%
of publications involve an international collaboration

Figures are for 2020–2024



Related impacts



Accelerating environmental flow benefits to overcome global freshwater biodiversity loss

Environmental flows, or e-flows, are more than just water allocations. They're lifelines for rivers, wetlands, and the communities that depend on them. By restoring natural flow patterns, e-flows help revive biodiversity, strengthen ecosystems, and support sustainable livelihoods. Dr. Gordon O'Brien, Senior Fellow in Water at the Gulbali Institute, leads the CSU-Oppenheimer Generation Sustainable African Rivers Initiative.

Drawing on 13 global case studies, his research reveals what makes e-flow programs succeed, and how they deliver biodiversity gains. The review shares proven strategies to halt freshwater biodiversity loss, build partnerships, and equip the next generation of e-flow leaders with tools for adaptive water management. Backed by growing global policy support and funding, e-flows are emerging as powerful, nature-based solutions, reducing flood risks, restoring fisheries, and boosting climate resilience.

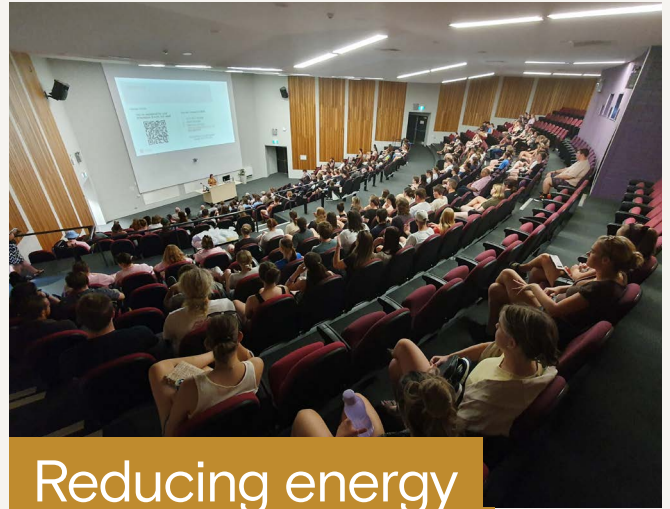
Image: The Limpopo River in southern Africa is overutilised by over 20 million people from five countries.



Find out more about
Environmental flows



Related impacts



Reducing energy consumption one lecture at a time

The operation of air-conditioning systems throughout teaching spaces on Charles Sturt campuses is automatically controlled via communication between our timetabling software and building management system. This system works wonderfully when spaces are only scheduled for use at the times when they are occupied but is prone to energy wastage when sound room booking practices are not maintained.

Throughout 2024, our timetable team have taken significant steps to reduce carbon emissions through sustainable timetabling practices. By optimising room usage, unscheduling activities with zero enrolments, and collaborating with various teams to cancel unnecessary bookings, the team have saved 1,504 hours of energy usage across six campuses. This initiative is a crucial part of Charles Sturt's Clean Energy Strategy endeavours, promoting energy efficiency, reducing the environmental footprint, and supporting broader sustainability goals. It is estimated this initiative has led to more than 30 megawatt hours of electricity being saved.



Find out more about
our clean energy strategy



Related impacts



Charles Sturt innovation showcase event

Charles Sturt has a proud history supporting the agricultural sector and as Australia's largest educator of undergraduates in agricultural science. In an exciting collaboration with leading industry stakeholders and partners, AgriPark hosted an inaugural public Challenge program. The hybrid Charles Sturt innovation showcase event enabled participants to explore what a world of sustainable packaging looks like. The key focus of the event was to explore what solutions might be available to solve challenges that the environment, industry and consumers face in managing the excess packaging that exists in the marketplace today. It also explored how we can develop more sustainable uses, materials and systems to reduce or reuse packaging from our valuable agri-food products. Eight teams nationally and internationally competed to address three key challenge statements on caring for country through thinking and talking about innovation in sustainable packaging within the food and beverage sectors. Participants worked closely with AgriPark to connect into the industry and to refine and advance their technical solutions.

Image: Sustainable Packaging Innovation Challenge winning organisations Packamama, Pack2Earth, Earthodic.



Find out more about
Innovation showcase event



Related impacts



Bathurst campus' Sustainable Sips and Stylish Swaps

The Bathurst Campus Environmental Working Group (BCEWG) and Cheers Food and Beverage Services collaborated to host the inaugural Sustainable sips and stylish swaps in November 2024. The event aimed to promote sustainability through a clothes swap and green drinks, encouraging a shift from disposable to sustainable practices.

Bathurst staff were asked to donate three to four quality items, resulting in four racks of clothes for swapping. This initiative helped extend the life of garments, reduce waste, conserve resources and lower greenhouse gas emissions.

Cheers Food and Beverage Services provided eco-friendly beverages. This ensured the event also fostered a sense of community among our Bathurst staff.

A significant amount of clothing was swapped on the day, with leftover clothing retained for future events and a new swap shop for students.

The event was deemed a resounding success by both BCEWG and Cheers Food and Beverage Services. More events will be held in 2025.



Find out more about
Sustainable events



13 CLIMATE ACTION



Take urgent action to combat climate change and its impacts.

United Nations goal:

SDG 13 addresses climate change by promoting urgent action to combat its impacts and adapt to changes.

It involves reducing greenhouse gas emissions, enhancing resilience and mobilising resources for climate-related initiatives.

Research outcomes

153
publications

3.39
Field-weighted citation impact

62%
of publications involve an international collaboration

Figures are for 2020–2024



Related impacts



Exploring impacts of extreme heat on the aged care workforce in rural communities

In 2024, academics from Charles Sturt commenced research to better understand the impacts of climate change on a segment of our essential workforce. The team of Dr. Jodie Kleinschafer, Associate Professor Maree Bernoth, Associate Professor Elyce Green, Professor Andrew Hall, Professor Larissa Bamberry, Professor Julaine Allan in collaboration with aged care industry partners are examining the weather-related labour productivity impacts of climate change on the BaptistCare workforce, who deliver in-home care to older people. The research emerged from a collaborative symposium hosted by Charles Sturt's Regional Work and Organisational Resilience group. It aims to better understand the impact of extreme heat on the physical and mental health of aged care staff, how this affects home care delivery, and current approaches used to manage weather-related labour productivity. The goal is to develop a model for preparing for and responding to extreme heat that can be trialled and implemented across the sector.

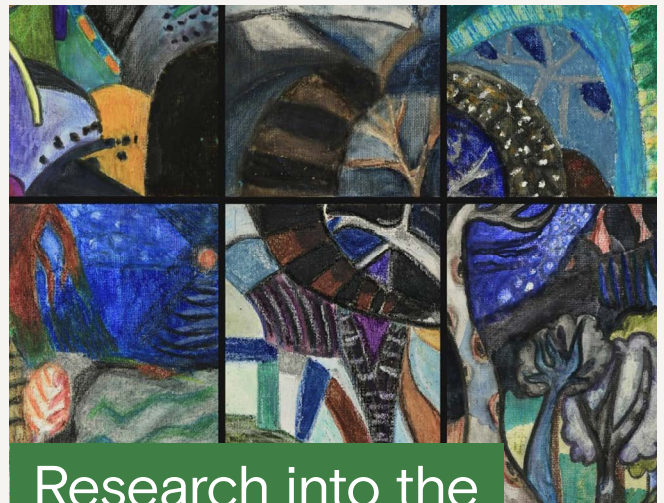
Image: Larissa Bamberry, Sharon Simpkins (BaptistCare) and Maree Bernoth at the Murrumbidgee Health and Knowledge Precinct showcase.



Find out more about
Regional Work and
Organisational Resilience group



Related impacts



Research into the community impacts of climate disasters

A team of academics from Charles Sturt's School of Psychology introduced a new assessment in 2024 for undergraduate and postgraduate subjects – PSY309 and PSY469 Qualitative Research Methods.

The teaching team implemented a new project, designed to be a genuine contribution to knowledge, something the teaching team have interest in researching, manageable for student assessment, not high risk ethically, and deliverable across 150 students and five cohorts. This concrete research task has been created around research undertaken in 2022 by academics from our School of Psychology that explored the direct experiences of young rural Australians, as a result of the catastrophic Australian Black Summer Bushfires that occurred in 2019/20. The 2022 research involved young people making art and being interviewed, with quotes and art used to create an exhibition and booklet. The research question being addressed by PSY309 and PSY469 students is 'How do climate visuals influence members of the public?'

Image: Young people's artwork featured in the *Burning Generation* exhibition and booklet.



Find out more about
Qualitative Research Methods.



Related impacts



Living hot: finding ways to survive and flourish on our heating planet

A new book co-authored by Professor Clive Hamilton (Vice-Chancellor's Chair in Public Ethics at Charles Sturt University) offers an assessment of the challenges we face on our heating planet and provides a farsighted road map for what we must do next if we want to survive and thrive. In their groundbreaking book, *Living Hot – Surviving and Thriving on a Heating Planet*, Clive and Dr. George Wilkenfeld confront the urgent challenges posed by climate change. Launched at Parliament House in Canberra in June 2024, this insightful work shifts the focus from merely reducing carbon emissions to building resilience against climate extremes. Clive argues that preparing for intensifying heatwaves, floods, droughts, and bushfires is crucial for Australia's future and will require a comprehensive investment and social change program to protect communities.

The book highlights the inadequacy of current efforts, calling for the prioritisation of resilience-building to ensure that all Australians, especially the vulnerable, are prepared for the tough times ahead. With the university's support, Clive has commissioned the first ever survey of the attitudes of Australians towards making their lives and the nation more resilient to climate change. The results are expected in late 2025.



Find out more about
Living Hot project



Related impacts



Campus master planning applies a climate risk and resilience lens

Charles Sturt is committed to ensuring its campuses are vibrant, fit for purpose, and aligned with the university's strategic vision. To this end, a campus master planning process was initiated in 2024 with an initial focus on the Wagga Wagga campus. The master plan aims to:

- align physical and digital assets with strategic ambitions.
- inform decision-making for future capital planning
- support development outcomes that benefit both users and the community.
- enhance community engagement.

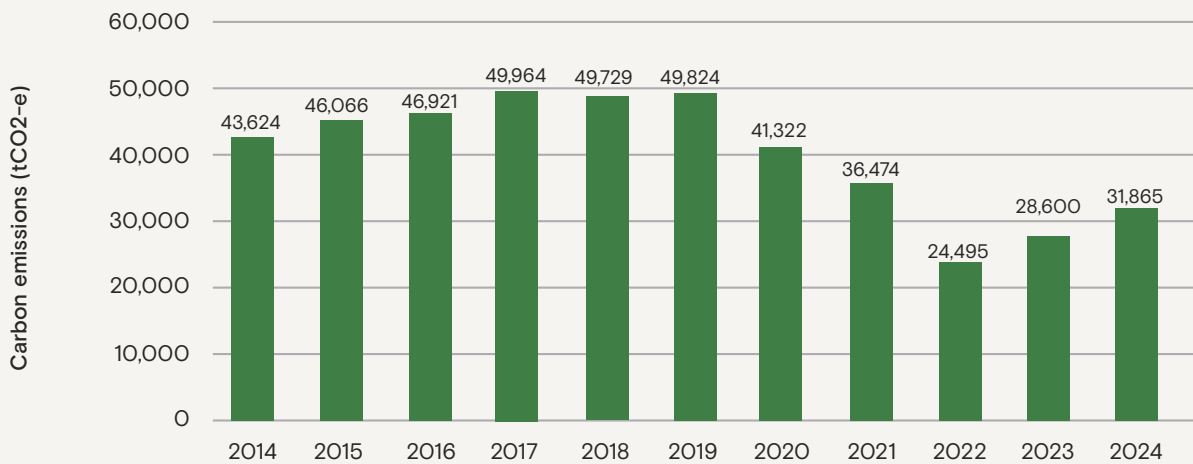
A climate risk assessment was conducted as part of the master plan development process to review and analyse climate-related shocks and stresses. The team, involving both internal and external stakeholders, assessed natural hazards and disasters that could disrupt campus operations via a two-part workshop process. Major climate risks identified included temperature rise, increased wind events, reduced rainfall, and intensified storms. The outputs of the climate risk assessment have helped to inform the final recommendations of the campus master plan and will contribute to Charles Sturt's preparedness for future climate challenges.



Find out more about
campus master planning



Annual organisational carbon emissions



What has influenced greenhouse gas emissions in 2024

Charles Sturt's primary focus for driving reductions in organisational greenhouse gas emissions (GHGE) in 2024 was its comprehensive clean energy strategy which sets out a pathway for becoming a resilient, efficient and low-carbon university. In 2024, despite efforts to reduce GHGE, overall emissions increased by 3,265 t CO₂-e (11 per cent) compared to the previous year. This represents a 27 per cent reduction from the 2014 baseline. Key initiatives in 2024 that contributed to 16,263 t CO₂-e avoided emissions included:

- continuation of our renewable power purchase agreement for major sites.
- continuation of GreenPower purchases for minor sites.
- energy efficiency improvements and elimination of some natural gas sources.

Non-energy related Scope 3 emissions rose by 54 per cent, in comparison to 2023, to 12,324 t CO₂-e. Increases were attributed to new emission sources being introduced into reporting in alignment with the GHG Protocol as well as a larger building construction and renovation program. All residual emissions were offset in line with Charles Sturt's ongoing commitment to carbon neutrality under the Australian Government Climate Active program.



Find out more about

Charles Sturt's carbon neutral certification



Southern NSW Innovation Hub: research impact through collaboration

The Southern NSW Innovation hub leads collaborative and impactful research that supports building resilient regional communities.

The Southern NSW Drought Resilience Adoption and Innovation Hub (Southern NSW Innovation Hub) was established in June 2021 at Charles Sturt, forming an unincorporated joint venture with seven partners. It is one of eight hubs funded by the Australian Government's Future Drought Fund. The hub's partners include industry and community groups, researchers, educational institutions, resource management practitioners, and state government agencies. Hosted by Charles Sturt at our Wagga Wagga campus, this partnership provides the hub with institutional support and access to extensive resources, research, educational networks, and facilities.

Since its inception, Southern NSW Innovation Hub has generated significant economic impacts, transforming an initial cash and in-kind investment of \$19 million into over \$50 million in value-added economic activity. Key projects include making soil science accessible through Regional Soils Coordinators, establishing the Drought Resilient Long-term Mixed Farming System Trials with a core site at Charles Sturt, delivering the GRDC and CSIRO RiskWi\$e program across NSW, and making practical on-ground support available to farmers through drought adoption officers. The hub's innovative approach to project development through collaboration and people-centred co-design

has engaged diverse communities and individuals and led to significant proposals for future funding, demonstrating its impact on drought resilience and agricultural innovation in southern NSW.

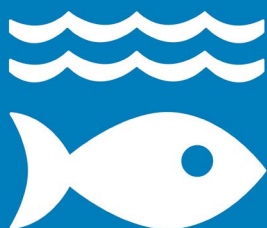
In 2024, Southern NSW Innovation Hub launched the Early Insights for More Resilient Communities Dashboard, which helps regional NSW communities visualise their resilience and is set to expand nationally. The hub won a 2024 Australian Biosecurity Award in the community category for its Managing Biosecurity Risks project, which worked with high value industry and producers in the southern half of NSW to find ways to increase the speed of tracking possible vectors to reduce, halt or eradicate biosecurity threats.



Find out more about
Innovation hub



14 LIFE BELOW WATER



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

United Nations goal

SDG 14 aims to conserve and sustainably use marine resources, protect marine ecosystems and prevent overfishing to preserve marine biodiversity. It recognises the importance of oceans and coastal areas for the well-being of humanity and the planet.

Research outcomes

84
publications

1.89
Field-weighted citation impact

67%
of publications involve an international collaboration

Figures are for 2020–2024



Related impacts



Marine parasites: unveiling their impact on whale navigation and strandings

Researchers from Charles Sturt have discovered that nematodes found in the blowholes of stranded pilot whales may disrupt their navigation and communication abilities. This theory, developed by Professor Shokoofeh Shamsi and Dr. Diane Barton, was sparked by a 50-year-old sample from a Tasmanian museum. The study, published in the *Journal of Diseases of Aquatic Organisms*, highlights the potential impact of marine parasites on whale behaviour and raises questions about their role in whale strandings, particularly in Tasmania.

This research exemplifies the innovative and impactful work being conducted at Charles Sturt to address environmental challenges and promote sustainability.

Image: Professor Shokoofeh Shamsi examining nematodes that could be linked to whale beaching.



Find out more about
Marine parasites



Related impacts



Radiation impact on growth of marine algae: informing offshore oil and gas decommissioning

Alexandra Bastick, an honours student at Charles Sturt, has researched the impact of ionising radiation on marine microalgae at ANSTO's Lucas Heights campus. Her study focused on how decommissioned pipelines containing Naturally Occurring Radioactive Materials (NORM) might affect marine organisms. Australian legislation currently mandates the complete removal of decommissioned offshore oil and gas facilities, but there has been discussion around the benefits of leaving certain infrastructure as artificial reefs to enhance local biodiversity in these ecosystems. Using a sealed source of radioactive Cesium-137 to generate external radiation dose rates expected from NORM contaminated pipelines, she simulated ocean environments in the lab and found minimal growth impact on *Tisochrysis*. This is a first step in creating the possibility of suitable decommissioning options for this type of infrastructure. This work also attracted interest at the 2024 joint conference with AMSA and NZ Marine Sciences Society, where Alex was awarded the Ron Kenny Award for her work.

Image: Alex Bastick (left) with fellow student and Charles Sturt research leadership staff.



Find out more about
Radiation impact



Related impacts



Researchers tracking ‘mushy fish’ syndrome spread in Australia and New Zealand

Charles Sturt researchers in Port Macquarie are working with anglers in Australia and New Zealand to track the spread of a parasite causing ‘mushy fish’ syndrome. This condition, affecting fish like Yellowtail Kingfish, results in flesh disintegration, making the fish unpalatable. The suspected parasite, a microscopic Cnidarian, is believed to be spreading due to climate change.

Dr. Jessica Tout-Lyon, leading the project, emphasises the importance of collecting data from anglers to improve understanding of the issue. The parasite’s presence is confirmed only through cooking or smoking the fish, as infected fish appear normal when raw. The project aims to gather new information to track the parasite’s spread and impact on fish populations.

Anglers are encouraged to log their catches on the project’s website to aid in this research.

Image: Dr. Jessica Tout-Lyon (inset) providing focus on Yellowtail Kingfish.



Find out more about
Mushy fish



Related impacts



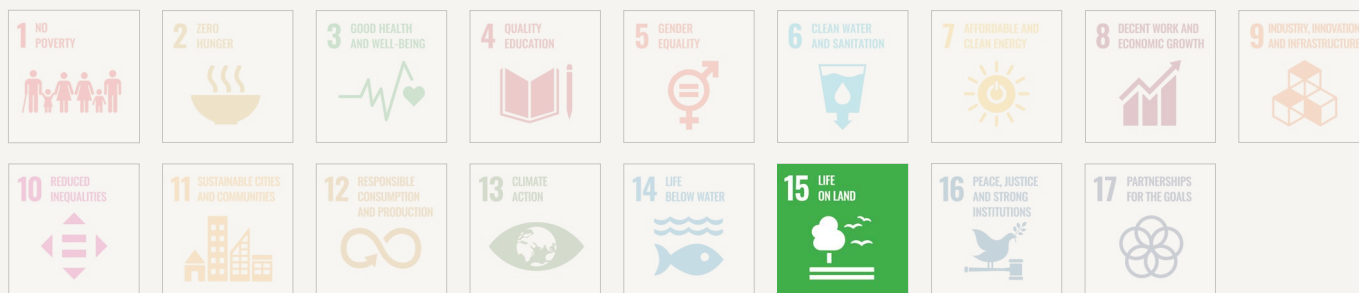
Farm dam project: improving water quality of dam through sustainable design principles

A partnership between Charles Sturt Farm and Facilities Operations has led to the delivery of the Wagga Farm Healthy Dam project. This project aimed to demonstrate how grazing livestock can successfully integrate with farm dams to improve water quality and biodiversity around watering points, as well as improving the welfare and performance of stock grazing. This project involved fencing to exclude stock from accessing the dam and surrounding inflow zone, and diverting stock to use water troughs, revegetation of the dam inflow zone, and monitoring of water quality and dam aquatic life pre and post implementation. The project also has the potential for integration into learning and teaching applications by fostering greater understanding of sustainable water management principles within agricultural areas. The area has already seen improvements in health, with monitoring reports suggesting “increasing density of vegetation” throughout the area, as well as within the main drainage line.

Image: Drone footage of the current farm dam under transition to sustainable practice.



Find out more about
Farm dam project



15 LIFE ON LAND



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

United Nations goal

SDG 15 focuses on protecting, restoring and sustainably managing terrestrial ecosystems. It addresses issues like deforestation, desertification, and the loss of biodiversity, emphasising the need to safeguard the natural world.

Research outcomes

360
publications

1.94
Field-weighted citation impact

47%
of publications involve an international collaboration

Figures are for 2020–2024



Related impacts



Charles Sturt hosts Soil CRC 2024 conference: advancing soil stewardship and innovative farming solutions

Charles Sturt is a major partner in the Soil CRC, a national cooperative research centre. In August 2024, the Wagga Wagga campus hosted the Soil CRC's annual conference with over 150 participants, including researchers, PhD students, grower groups, and industry representatives. The event featured presentations on the latest Soil CRC research, practical solutions for farmers, and field trips to research trials in the region. The conference emphasised the importance of soil stewardship and the evolving challenges in farming systems. Charles Sturt's contribution, led by Professor Catherine Allan, focused on the social and economic aspects of soil management through Program 1 of the Soil CRC. This Program takes a multidisciplinary approach to understanding agricultural practice. Dr Allan is one of many Charles Sturt researchers who are contributing to the Soil CRC's national program.

Image: Dr Catherine Allan presenting at the Soil CRC 2024 Conference.



Find out more about
Soil CRC 2024



Related impacts



Social Impact Project: environmental sustainability through collaborative partnerships

The Charles Sturt Social Impact Project, established in 2024, incorporated multiple focal points including environmental sustainability by connecting students, advocates, and industry experts to address complex social issues. It emphasised understanding the interconnections between land, creatures, plants, and waste. Through collaborative sprints, students engaged in discussions, explored diverse perspectives, and co-designed solutions with industry partners. Led by Charles Sturt students Brianna Winner and Edward Pratt, with the project facilitated by Dr. Noelia Roman of the Work-Integrated Learning (WIL) Team, the project included a tree planting day on the Bathurst campus to connect key habitats for species such as the Bathurst Copper Butterfly. It also aimed to connect students, staff, and community members with green spaces, with the installation of signs that educated users on mental health and wellbeing exercises to incorporate into their utilisation of key natural spaces.

Image: Participants at the Bathurst tree planting day supported by the NPILF funded Social Impact Project.



Find out more about
Social Impact Project



Related impacts



International Bat (Gulan) Night: connecting community with the fascinating world of bats

Over 200 community members and bat enthusiasts gathered at the Port Macquarie campus for the inaugural International Bat (Gulan) Night, part of the globally celebrated International Bat Night held annually in August. Led by Dr Anke Frank, lecturer in ecology, and co-designed with the Birpai People, Sustainability at Charles Sturt, External Engagement, and the Faculty of Science teams, the event aimed to educate and connect participants of all ages.

Highlights included a bat detector tour, live bat trapping with experts, weaving for bat conservation with Birpai Elders, a bat poster competition, guest lectures about microbats, Birpai bat storytelling with Elder Arli Gili Mehan, community bat stalls, and a visit from Frankie the Giant Flying Fox mascot. This event exceeded expectations with connecting community to nature and provided invaluable education on the fascinating world of bats.



Find out more about
International bat night



Related impacts



Supporting native birdlife: Bathurst campus nest box initiative and community engagement

Charles Sturt's Bathurst campus is vital for habitat connectivity between major local ecosystems, including Boundary Road Reserve and the Macquarie River system. With only five significant hollow-bearing trees, the campus needed interim solutions for native birdlife while current biodiversity enhancement projects mature. The Bathurst campus environmental working group were kindly donated 10 nest boxes from the Peel Native Flora and Fauna Reserve Trust. These nest boxes were modified by Charles Sturt Facilities Management team to include a baffle, which prevent Myna species from inhabiting them. These boxes favour native species such as lorikeets and parrots. The project also involved a community engagement element with the Mitchell Early Learning Centre, where children were given the opportunity to paint the nest boxes before installation. This initiative aims to provide habitat connectivity for migratory birds, including the Critically Endangered Swift Parrot.

Image: Mitchell Early Learning Centre students participate in painting of nestbox installations.



Find out more about
Supporting native birdlife

Living the goals



Jonathon Howard is an academic in the School of Agricultural, Environmental and Veterinary Sciences at Charles Sturt's Albury-Wodonga campus. With a PhD and extensive experience in natural resource management, Jonathon is dedicated to ensuring our lives and wider society are more sustainable. At the university he oversaw the implementation of the integration for sustainability into a number of course curriculums.

For more than five years he has also played a crucial role in chairing the Albury campus' environmental working group. Over the years, the campus has benefited from the working group's initiatives including leading a number of student and staff tree planting events, showcasing to various school and community groups the sustainable design features of the campus infrastructure, as well as installing on campus educational signage about the habitat of the endangered Sloane's Froglet and signage advising visitors to keep their dogs on a leash so the ground nesting bird and other wildlife are not disturbed.

In addition to his academic role, Jonathon is an active citizen in the region. He chairs a local community group that has distributed more than 100 nest boxes across the surrounding suburbs, provides advice to the NSW National Parks and Wildlife Service about park management across Western NSW, serves on the Murray-Darling Basin Authority's Community Committee, as well as the Murrumbidgee Environmental Water Advisory Group and is an active member of Albury City Council's Sustainable Advisory Committee. This commitment to a range of community and industry engagement opportunities benefits Charles Sturt as it informs the curriculum design of our environmental science degrees – ensuring our graduates have the highest employment rates in Australia.



Find out more about
Jonathon Howard



16 PEACE, JUSTICE AND STRONG INSTITUTIONS



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

United Nations goal

SDG 16 advocates for peaceful, just, and inclusive societies. It involves promoting the rule of law, reducing violence and corruption, and ensuring effective, accountable, and transparent institutions.

Research outcomes

257
publications

1.30
Field-weighted citation impact

31%
of publications involve an international collaboration

Figures are for 2020–2024.



Related impacts



Prototype takes aim at 'fake news'

The detection of 'fake news' in social media is the goal of a research project by a Charles Sturt PhD student, whose prototype may assist in identifying and mitigating misinformation.

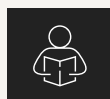
PhD student, Sarah Condran, has developed the Model-agnostic Aggregation Prediction eXplanation (MAPX) tool, which uses AI-driven techniques to identify and flag false narratives, ensuring that governments, media, and the public have access to reliable information. Her work integrates machine learning models with human expertise, creating a dynamic approach to combating digital misinformation.

"Existing models often use content or context features in isolation, limiting their effectiveness, because the dynamic and temporal nature of social media content is often overlooked, and the quality of document features and their impact on prediction trustworthiness is not adequately considered," Sarah said.

Extensive experiments on benchmarked 'fake news' datasets demonstrate that MAPX consistently outperformed state-of-the-art models. Sarah and her co-authors also received a best paper award at the 2024 International Web Information Systems Engineering (WISE) conference.



Find out more about
Fake news



Related impacts



Strengthening governance through education

Charles Sturt and the Caribbean Forum (CARICOM) have partnered to deliver a customised customs study program to facilitate eight European Union-funded Graduate Certificates in Customs Administration. This initiative enhances learning and teaching by equipping customs officers with expertise in trade regulations, compliance, and ethical governance.

Professor David Widdowson, CEO of the Centre for Customs and Excise Studies, has highlighted the transformative impact of collaborative educational programs in customs and border management.

"Our Centre is thrilled to be able to help provide customs professionals with advanced knowledge and skills in the field of customs and border management through our course accredited by the World Customs Organization," David said.

"Once these scholars have completed the program, they will go on to perform crucial roles in shaping customs regimes within CARIFORUM, as well as enhancing and implementing contemporary policies and practices in cross-border trade management."

Image: Professor Widdowson (inset) and the CCES are strengthening training of customs officers.



Find out more about
postgraduate scholarship program.



Related impacts



Louie pays it forward

Louie Liu's journey from crime to care exemplifies personal transformation and community impact, aligning with Charles Sturt's advocacy for a more just and fair society.

After a troubled youth marked by crime and incarceration, Louie's time in gaol became a turning point where he utilised education and rehabilitation programs to rebuild his life, including a Cert IV in cooking.

After his release, Louie furthered his education by studying exercise science followed by physiotherapy, he spent nine years with Charles Sturt in total, eventually completing his qualifications to become a registered physiotherapist.

In 2024, Louie partnered with Charles Sturt to establish the New Start Reformer Scholarship – an opportunity for formerly incarcerated students to access the financial and social support that had been crucial to his own rehabilitation.

"Education created a world worth living in for me, that is why I have approached Charles Sturt to set up the scholarship, with the intention to give both a financial and morale boost to those who are facing similar challenges," Louie said.

Image: Mr Louie Liu with a painting by an inmate of Bathurst Correctional Centre's Girrawaa Art Centre.



Find out more about
Louie Liu's journey



Related impacts



Pledge on the ethical treatment of animals

Charles Sturt is proud to be a signatory to the Openness Agreement on Animal Research and Teaching in Australia. The university's participation in this agreement marks a significant step towards improving public awareness about the role of animals in research and education.

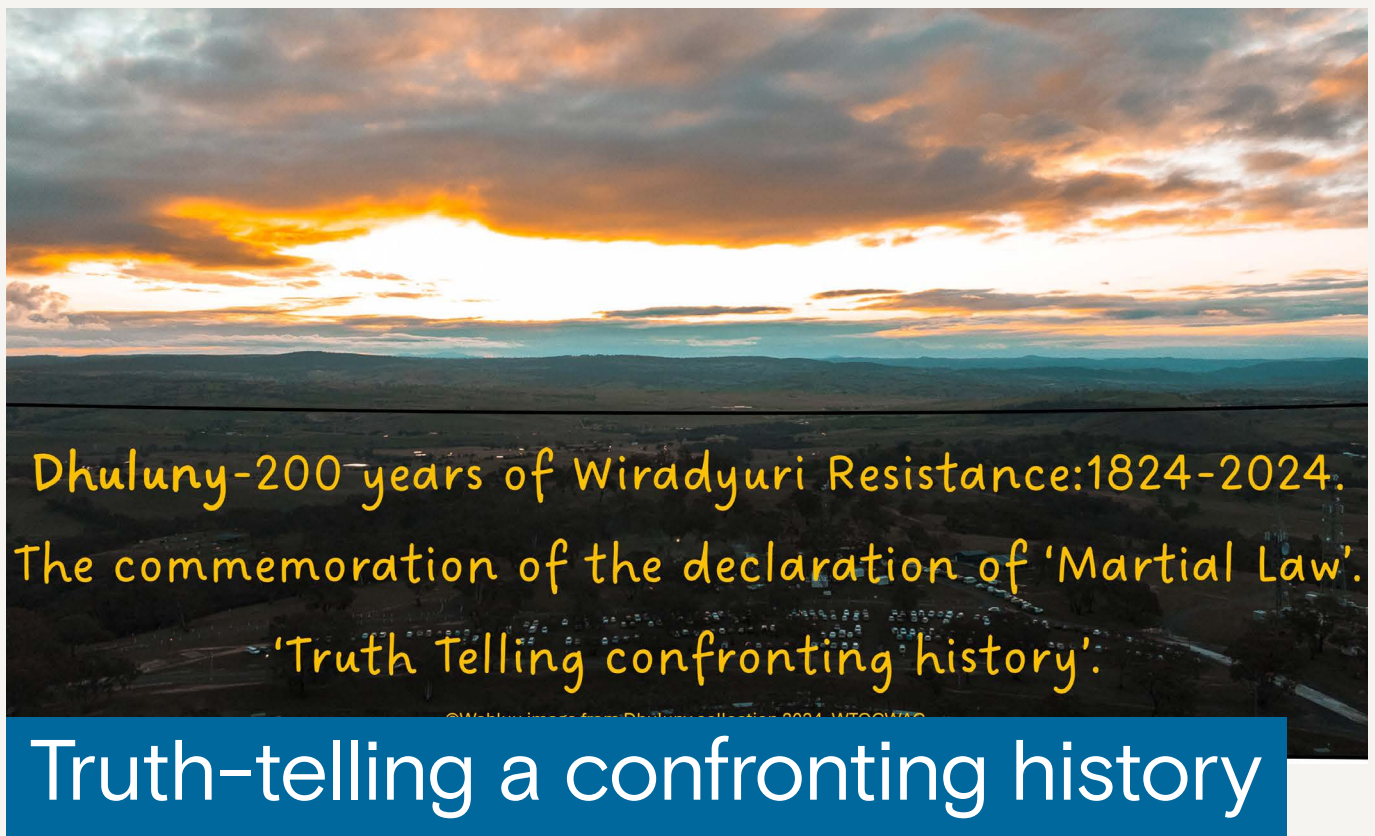
As part of being a signatory to the agreement, Charles Sturt will report annually to improve openness in its use of animals in researcher teaching.

Charles Sturt has a long history of delivering agricultural, environmental, veterinary and ecology research projects and teaching activities. The university uses animals for various projects, from wildlife surveying to veterinary training using small and large animals.

The university also employs an animal welfare officer to assist academics with their animal use applications. This position is important to ensure the university meets the standards, guidelines, and regulations that underpin the principles of animal ethics. It also ensures that the standards of care and use of animals in teaching and research are closely monitored and continually improved.



Find out more about
Openness Agreement



Dhuluny-200 years of Wiradyuri Resistance: 1824-2024. The commemoration of the declaration of 'Martial Law'.

The Dhuluny Project was a series of events commemorated from 11 to 18 August 2024 that marked the 200-year of the proclamation 'declaration of martial law' Wiradyuri Country and the ensuing frontier violence.

Why was Dhuluny important?

Wiradyuri Traditional Owners Central West Aboriginal Corporation (WTOCWAC) took the initiative to offer the opportunity to share and understand the true history of our Countries untold frontier violence, through a series of events that celebrated the resilience of the Wiradyuri nation and all Aboriginal and Torres Strait Islander peoples, commemorating and honouring the fallen on all sides of the frontier wars.

It's important to remember history and the effect that history continues to have.

WTOCWAC received funding grants, sponsorship, and in-kind contributions from Bathurst Regional Council, Charles Sturt and other community allies to go toward working together to remember the resilience and strength of Wiradyuri, their allied nations, warriors, and also the fallen innocent on all sides.

Charles Sturt, WTOCWAC Elders, and selected staff from Charles Sturt's Centre for Law and Justice scheduled the Dhuluny Conference over two days. The event convened a diverse assembly of Wiradyuri Elders, First Nations academics, scholars, artists, and community leaders who provided profound insights into the historical and contemporary significance of these events; and explore the enduring impacts of colonial violence and the resilience of the Wiradyuri people.

Wiradyuri language: Dhuluny is a Wiradyuri word meaning 'truth, rectitude, that which is direct, straight, acting, living or gospel' – aptly encapsulated the conference's mission to confront and reflect upon this pivotal chapter in Australian history.

Wahluu sunset. Image provided by Wiradyuri Traditional Owners Central West Aboriginal Corporation.



Find out more about
Dhuluny



17 PARTNERSHIPS FOR THE GOALS



Strengthen the means
of implementation and
revitalise the Global
Partnership for Sustainable
Development

United Nations goal

SDG 17 underscores the importance of global partnerships, cooperation, and resource mobilisation to achieve all the other goals. It calls for collaboration between governments, the private sector, civil society and international organisations to address complex global challenges and promote sustainable development.

Research Outcomes

1,737

publications in total with an
international collaboration

11%

increase on the period
2017–2021

52%

of publications involve an
international collaboration

Figures are for 2020–2024



Related impacts



Enhancing community resilience in the Indus Delta

The Adapting to Salinity in the Southern Indus Basin (ASSIB) project, funded by the Australian Centre for International Agricultural Research (ACIAR), exemplifies international collaboration to enhance climate resilience across Pakistan's Indus Basin.

One coastal community in the Indus Delta – an area heavily impacted by climate change – benefited from a capacity assessment process developed by Charles Sturt researchers. Organised around social, human, physical, and financial capitals, the process was implemented in collaboration with the International Union for Conservation of Nature (IUCN) to help local groups to identify their capacity strengths and areas for improvement. Eight participating community groups (four all-women, three all-men and one mixed group) revealed high bonding and bridging social capital, moderate organisational capital, and low physical and financial capital. These findings sparked discussions on strengthening resilience against climate challenges. Positive outcomes included increased engagement with NGOs and government departments, demonstrating the project's success in fostering adaptive strategies through international cooperation.

Image: A feedback session organised by IUCN with one of the all-men community groups.



Find out more about
Adapting to Salinity



Related impacts



High school students use their voice

Lecturers from Charles Sturt's School of Communication and Information Studies collaborated with 20 senior high school students from Bathurst to create a series of podcasts. Supported by a Sustainability at Charles Sturt project grant and overseen by Bachelor of Communication lecturers, these original audio episodes explore youth experiences related to the Sustainable Development Goals (SDGs).

Initial workshops, held at Kelso and Bathurst campuses of Denison College by academics Zoe Rodwell and Travis Holland, allowed students to brainstorm ideas about self, community, and education in relation to the SDGs. Following these workshops, students gathered at the Bathurst Communication precinct for a full day of podcast scripting and recording.

Image: Local students recorded a series of podcasts about their experiences related to the goals.



Find out more about
Future Voices series



Related impacts



ASEAN delegation explores river health solutions

Gulbali Institute hosted a distinguished delegation of 30 professionals from five ASEAN countries – Indonesia, Lao PDR, Cambodia, Thailand, and Vietnam – who visited to foster regional cooperation on river health issues. Supported by the Australian Centre for International Agricultural Research (ACIAR) and the Department of Foreign Affairs and Trade (Mekong-Australia Program), this initiative aimed to address the impacts of river development on food security.

The delegation explored various sites within the Murray-Darling Basin and the Hawkesbury-Nepean system, engaging in discussions on river connectivity, water quality solutions, pest species management, water scarcity, and environmental flows. Beyond these productive sessions, delegates experienced Australian culture and cuisine.

Representatives from government agencies, academia, and local communities emphasised the importance of global collaboration in addressing development challenges, particularly with the uncertainty of future water scarcity.



Find out more about
ASEAN Delegation



Related impacts



Radiography education and the sustainable development goals

Charles Sturt researchers Shayne Chau, Associate Professor Kelly Spurr and Bismark Ofori-Manteaw undertook research investigating how radiography education at Charles Sturt supports the SDGs. Their work focused on SDG 3 (Good Health and Well-being), SDG 4 (Quality Education), and SDG 17 (Partnerships for the Goals) through curriculum development, interdisciplinary learning, and global partnerships. Their paper emphasised sustainable healthcare education, fostering global collaborations, and preparing future healthcare professionals to drive positive change. It also serves as a basis for a follow-up project promoting critical reflection on education's role in sustainable health outcomes.

An empirical study is planned to develop and validate a soft skills assessment tool to evaluate medical radiation science students' competencies, linking to SDG 4 and SDG 3. This work will positively influence teaching at Charles Sturt by strengthening the integration of sustainability concepts, specifically the SDGs, into the medical radiation science (MRS) curricula.



Find out more about
Radiography education



1800 275 278 (free call within Australia)
+61 1800 275 278 (callers outside Australia)



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