



Charles Sturt
University

2023 Sustainable Development Goals Report



Acknowledgement of Country

We respectfully acknowledge the traditional owners and custodians of the lands and waters 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 position First Nations peoples strongly 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

Serving the needs of our communities is central to the values of Charles Sturt University. Enhancing social, environmental and economic wellbeing through our research, education and community engagement is an important way we can meet community needs while also delivering on the United Nations Sustainable Development Goals.

The staff and students at Charles Sturt University have much to be proud about. As Australia's leading regional university, we strive to inspire our students by shaping a brighter future. Our goal is to foster prosperity, not just for our local communities, but globally.

I am pleased that of how Charles Sturt University has again delivered a positive impact throughout 2023. Examples of this include:

- The Grow Your Own Teacher program focused on supporting education workers with existing classroom experience to complete formal teaching qualifications and service the needs of targeted school locations such as Dubbo and the Murray region.
- The establishment of Yindyamarra Nguluway – a program of research, events, podcasts and wider contributions to public discourse that explores achieving justice for First Nations peoples, reforming democracy and speaking back to the deeper moral and spiritual crises of our times.
- A team of Charles Sturt's internationally recognised freshwater fish experts have led the development of a new course being offered online to support

authorities in South-East Asia to mitigate the impacts of river development on fish populations through the education of key stakeholders.

- The Women in Trades in Regional Australia program has established the framework for a robust trades workforce and sustainable skills development to drive job growth and economic prosperity post COVID-19, including the Trade Pathways Program, which provided a Women in Trades Strategy to increase the participation of women in trades.

I am continually inspired by the university's commitment to making a real difference in people's lives. The work we do here has a lasting impact, and I hope it serves as a source of motivation for all of us. I look forward to witnessing even more positive outcomes in the year ahead as we continue this important journey together.



Professor Renée Leon PSM
Vice-Chancellor and President



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





Our commitment at a glance

In September 2019, Charles Sturt University 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.



570 free on-campus accommodation scholarships were offered to eligible students in 2023.



In 2023, \$77,709 from the Student Services and Amenities Fee (SSAF) was spent on food and beverages for students on campus (including those attending intensive schools), benefitting an estimated 7,667 students.



566 health checks were performed by our paramedicine students at the Henty Machinery Field Days, through a WIL partnership with the Australian Men's Shed Association and Murrumbidgee Local Health District.

4 QUALITY EDUCATION

Launched our Teaching Academy, offering \$80,000 in grants for 17 projects for teaching staff and providing 14 x \$1,000 awards to challenge staff to 'Change One Thing'.

5 GENDER EQUALITY

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

6 CLEAN WATER AND SANITATION

429,345 kilolitres of potable water were consumed across Charles Sturt campuses in 2023.

7 AFFORDABLE AND CLEAN ENERGY

72,000 kilowatt hours of electricity per annum saved through the external lighting replacement program at Orange campus.

8 DECENT WORK AND ECONOMIC GROWTH

Nine new microcredential subjects and one short course were developed and launched in 2023. These credentials were created in consultation with the NSW Department of Education and Training, the Australian Nuclear Science and Technology Organisation, IBM, Albury City Council, and the Rural Alliance in Nuclear Scintigraphy.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

A \$4.6 million capital grant was invested in upgrading our Communications Precinct on the Bathurst campus, delivering new spaces and equipment for our on-campus radio station and communication education.

10 REDUCED INEQUALITIES

\$10.5 million was awarded in student scholarships, an increase of \$4.5 million compared to 2022.

11 SUSTAINABLE CITIES AND COMMUNITIES

Launched a new First Nations Employment strategy, co-designed with the First Nations Staff Network, which includes recruitment, career progression and support structures and mentoring.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Became a member of Supply Nation, enabling us to actively identify First Nations suppliers and purchase appropriate goods and services from them.

13 CLIMATE ACTION

15,941 tonnes of greenhouse gas emissions avoided due to Charles Sturt's procurement of 100 per cent renewable electricity.

14 LIFE BELOW WATER

Our world-first breeding program for the endangered stocky galaxias fish saw the release of 130+ fish into Eucumbene Borrows.

15 LIFE ON LAND

Over 1,000 native seedlings planted by 120 volunteers, in partnership with Wagga Wagga City Council, to establish a biodiversity corridor at the Charles Sturt Farm.

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

\$200,000 in support was provided by Charles Sturt University's Centre for Customs and Excise Studies to the University of Customs and Finance in war-torn Ukraine.

17 PARTNERSHIPS FOR THE GOALS

51 per cent of our research publications include 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

51
publications

1.49
Field-Weighted Citation Impact

69%
publications involve an
international collaboration

Figures are for 2018–2023



Related impacts



FOCUS on farming success in Vietnam

Capacity building and upskilling communities in Vietnam to address issues with saline soils was the focus of a partnership between Australian Aid, the Australian Centre for International Agricultural Research (ACIAR) and Charles Sturt University.

The Farmer Options for Crops Under Saline conditions (FOCUS) program provided training on a diverse range of topics, including soil salinity, soil constraints, technical skills such as instrumentation and statistics, and gender training.

The program engaged 145 farmers and Department of Agriculture and Rural Development (DARD) staff in participatory workshops, equipping them with practical skills to measure and identify salinity. Specialised gender training encouraged participants to incorporate gender inclusivity in their research projects.

In 2023, six members of the Can The University Crop and Soil Management team travelled to Australia for intensive soil-based training, supported by funding from the Crawford Fund and Select Carbon. Charles Sturt University delivered workshops on soil processes in field-based research, including DNA extraction and sampling, as well as qPCR analysis.



Find out more about
Crawford fund training



Related impacts



First Nations innovators cultivate success

Traditional knowledge meets entrepreneurial action in the 10-week First Nations Entrepreneurs Program, operated by Charles Sturt University's Innovation Hub. Rooted in First Nations wisdom, the program guides participants in exploring entrepreneurial ideas that resonate both culturally and commercially. The initiative validates ideas and business models and places an authentic focus on creating sustainable opportunities that honour the pathways forged by First Nations changemakers.

Mindy Woods, a graduate of the program in 2023, focused on expanding her renowned native food restaurant, Karkalla Byron Bay, into the retail sector with her new venture, Karkalla at Home.

“I was looking to diversify my business to try and find ways to increase our representation and making the business viable, by not losing those cultural aspects through food that are so important to us as a mob and as a nation.”

The program is open to First Nations Australians interested in entrepreneurship and innovation. Applications are encouraged from community leaders, emerging entrepreneurs and anyone passionate about making a positive impact in their communities.

Image: The 2023 cohort of First Nations Entrepreneurs Program business founders and supporters.



Find out more about
Entrepreneurs Program



Related impacts



Better outcomes for at-risk students

Charles Sturt University provides exceptional support to students from disadvantaged backgrounds who are at an increased risk of dropping out. The university's specialist retention team uses learning analytics to identify disengaged students and target those at risk of disengagement. Once identified, these students receive assessment support through an Embedded Tutor Program.

In 2023, Sarah Teakel, Kelly Linden, Neil van der Ploeg and Noelia Roman from the retention team published their research on the success of the Embedded Tutor Program in the journal *Assessment and Evaluation in Higher Education*. In the program, tutors with unit-specific knowledge were embedded in 98 first-year subjects across the university. Among the 1,080 students who met with a tutor, assessment marks were, on average, eight per cent higher, and cumulative unit marks were 15 per cent higher.

The study also demonstrated that students with multiple equity factors benefitted the most from the program.

In recognition of the team's success, in 2023 they received an Australian Award for University Teaching (AAUT) for programs that enhance learning and support diversity and inclusive practice.



Find out more about Embedded Tutor Programs



Related impacts



Social work researchers praised for international collaboration

A three-year transnational collaboration involving three Charles Sturt University researchers was recognised with an award from the Australian and New Zealand Social Work and Welfare Education and Research (ANZSWWER) organisation last year. Doctors Nicola Ivory and Monica Short, along with research officer Emma Pascoe, received the award in acknowledgment of three published, student-led, rural-focused cooperative inquiry research projects. These projects investigated: (i) experiences of social work students undertaking a remote research-based placement during a pandemic, (ii) the perspectives of Australian and Irish social work on the impact of rural disadvantage on accessing services, and (iii) social work educational competency in disaster management.

As part of this collaboration, a total of 17 students from Australia and Ireland were able to lead their own social work research using the cooperative inquiry research method, with full support from academic staff. The students connected through the International Network of Co-operative Inquirers (INCoInq), which is led by Dr Short and includes all three researchers as members. The collaborators also presented at an international conference and published their experiences.



Find out more about Disaster-affected communities



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

278
publications

1.32
Field-Weighted Citation Impact

69%
publications involve an international collaboration

Figures are for 2018–2023



Related impacts



Growing our future farmers

In a bid to boost the number of students graduating from university-based agricultural courses, one of rural and regional Australia's largest employers, Nutrien Ag Solutions, launched a new scholarship in 2023 worth \$80,000 over several years.

With the number of graduates from agricultural courses in Australia falling well short of the industry's needs, the Nutrien Harvesting the Future Scholarship program invests in the education and development of the country's future agricultural leaders. As agriculture in Australia evolves, a workforce equipped with the necessary skills and capabilities to lead the industry into a new era of technological advancement and market complexity is essential.

Scholarships like the one offered by Nutrien Ag provide Charles Sturt University's undergraduate students the opportunity to enhance their studies through first-hand industry knowledge and leadership insights, preparing them to meet the needs of not only rural communities but also agriculture worldwide.

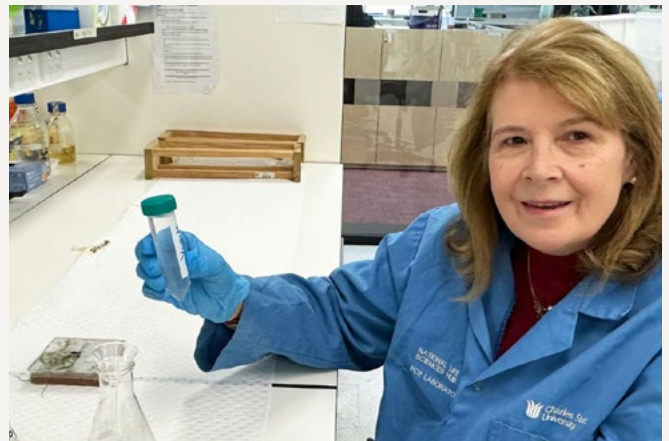
Image: Nutrien Ag Solutions Harvesting the Future Scholarship 2024 recipient, Lance McClelland with Nutrien Ag Solutions general manager, Scott MacGregor.



Find out more about
Nutrien Harvesting the Future Scholarship



Related impacts



Plant research unlocks key to better crops

Pioneering research by Charles Sturt University's Professor Leslie Weston has improved the agricultural and commercial farming industries' understanding of crop protection. Her research, focused on chemical ecology and physiology, and the interactions between plants, weeds, herbivores and pests, as well as biocontrol organisms, was recognised in 2023 when she was elected as a Fellow of the Australian Academy of Science.

Her work on preventing herbicide resistance in common pasture and crop weeds, along with developing alternative management strategies for weeds and livestock pests, has provided "big picture solutions" for farming. Professor Weston says that, together with industry and other scientists, "we work on systems-based approaches to understanding how competitive crops work or how we can protect a plant or livestock from interactions that are detrimental".

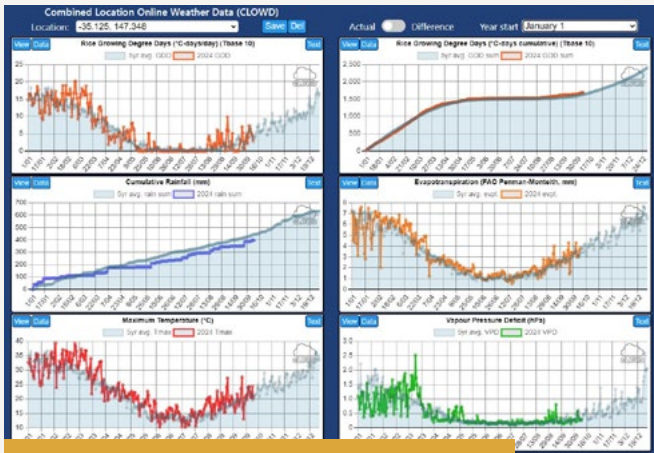
Image: Professor Leslie Weston's research into plant interactions has seen her elected as a Fellow of the Australian Academy of Science.



Find out more about
Professor Weston's work in crop protection



Related impacts



Weather app aids smarter farming

An online weather tool that allows farmers to make more informed crop and pasture management decisions has been developed by a Charles Sturt University postdoctoral researcher. Dr Darren Yates from the School of Computing, Maths and Engineering in collaboration with industry research partners SunRice and the Food Agility CRC, created the new Combined Location Online Weather Data (CLOWD) app. The app enables farmers and growers to analyse recent and historical weather information for any location in Australia, simply by selecting a point on a map.

Although the app was originally developed and tested with rice farmers in mind, it has shown strong potential for use with a range of other crops, including barley, peanuts, wheat, cotton, fruits and more.



Find out more about
CLOWD apps



Related impacts



Student fee fights hunger

The Student Services Amenities Fee (SSAF) is paid by students to the university to fund non-academic support services and facilities. The SSAF began in 2012 and has since contributed to new and refreshed student services and support, both face-to-face and online, as well as improved facilities and student spaces on each of the Charles Sturt campuses.

In 2023, the SSAF budget was allocated to address student hunger, providing food and beverages during intensive schools; free lunches during Orientation; and free tea, coffee and snacks across all campuses through Library Services.

Image: Free lunches were available during Orientation Week in 2023.



Find out more about
SSAF Funded Projects 2023

Living the goals



Jake Fountain is a Lecturer in Small Animal Veterinary Practice at Charles Sturt. In May 2023, he completed a PhD focused on biosecurity behaviours in Australian beef cattle producers, which has the potential to significantly influence on-farm biosecurity practices. Australia, a leading global exporter of beef, relies on maintaining a disease-free status. Dr Fountain's research developed a simulation model of bovine viral diarrhoea virus (BVDV), demonstrating how the timing of disease introduction and re-introduction affects long-term production outcomes.

Dr Fountain's thesis advocates for a values-based approach to biosecurity, suggesting that collaboration between industry and farmers can enhance standards.

His research supports practical biosecurity measures that align with farmers' day-to-day operations, ensuring the sustainability and health of Australia's beef industry.

At Charles Sturt, Dr Fountain continues to inspire future veterinarians with innovative teaching methods and practical insights. His thesis was supervised by Charles Sturt's Professor Marta Hernandez-Jover and Dr Jennifer Manyweathers, alongside Associate Professor Victoria Brookes from the University of Sydney.

Image: Dr Jake Fountain, Lecturer, School of Agricultural, Environmental and Veterinary Sciences.



3 GOOD HEALTH AND WELL-BEING



Ensure healthy lives and promote well-being for all at all ages

United Nations goal

SDG 3 seeks to ensure healthy lives and well-being 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

680
publications

2.87
Field-Weighted Citation Impact

59%
publications involve an international collaboration

Figures are for 2018–2023



Related impacts



Learning the language of rural mental health

Giving paramedicine students the tools to care for their own mental health, as well as that of their patients, is the aim of a program introduced by the Three Rivers Department of Rural Health. Based in the Riverina and Central West region of New South Wales, the department offers a range of services and programs within the Three Rivers regional footprint (Albury, Bathurst, Dubbo, Griffith, Orange and Wagga Wagga) to support nursing, midwifery, allied health and dentistry students.

The rural health education team implemented a support program to help paramedicine students engage in mental health conversations during a Work Integrated Learning (WIL) activity at a 2023 field day event. The program enabled students to participate safely in the experience and learn the language of rural mental health.

Learning how to have conversations about mental health can be complex but, for paramedicine students, it's vitally important as they are likely to attend a large number of mental health calls in their future practice. It is also important that paramedicine students learn how to monitor and manage their own mental health.



Find out more about
Rural mental health



Related impacts



Older persons wellbeing clinic model born of student project report

A project initiated by a Charles Sturt University student report has led to the development of a model for opening a clinic focused on the wellbeing of older people in the Port Macquarie area. The first phase of the Older Persons Project led to the establishment of the Social Work Student Unit. This unit produced a report with important findings on the wellbeing and support needs of older Australians living in the Port Macquarie region, representing the first step in co-designing a model for an interdisciplinary community wellbeing clinic for the area.

The proposed clinic would provide nursing and allied health students studying social work, occupational therapy, psychology and related disciplines with Work Integrated Learning (WIL) opportunities. Additionally, the project's findings establish a baseline for further research, including collaboration, engagement and consultation with older persons, the local community and the service sector.

Image: A first step towards bringing an interdisciplinary community wellbeing clinic to the Port Macquarie region: Rachel Venteman, Dr Trish Mackey, Lisa Campbell, Professor Graham Brown, Caitlin Black, Paul Condon and Tracy Frost at the presentation of the report in Port Macquarie.



Find out more about
Older Persons Project



Related impacts



Nurses get vital infection prevention training in Murrumbidgee hospitals

Charles Sturt University and the Three Rivers Department of Rural Health (Three Rivers) have partnered with the Murrumbidgee Local Health District (MLHD) to deliver crucial infection prevention training, focusing on microbiology, to nurses working in rural hospitals.

The 'Microbiology in a Nutshell' workshop, updated with relevant findings and practices from the COVID-19 pandemic, was delivered at Wagga Wagga Base Hospital. Up to 20 MLHD nurses who work in rural infection prevention roles in hospitals across Wagga Wagga, Holbrook, Harden, Tumut, Young, Finley, Culcairn and Leeton participated.

The workshop was organised by Associate Professor in Immunology Thiru Vanniasinkam, lecturers from Charles Sturt's Three Rivers Ms Kathryn Castelletto and Dr Elyce Green, and MLHD Infection Prevention Control District Clinical Nurse Consultant Ms Mary-Clare Smith (pictured).

The workshop expanded the nurses' existing knowledge of microbiology, making it more applicable to hospital settings where stringent infection prevention is required. Professor Vanniasinkam said, "We have collaborated with other healthcare providers involved in infection control cases... to bring theory and practice together."



Find out more about
Microbiology in a Nutshell



Related impacts



Theatre explores real-life mental health experiences

Real-life mental health stories were shared during a stage performance delivered to the Bathurst Community in 2023. Charles Sturt University hosted *Actually It's Me*, a production by Listening to Voices Theatre, directed by Ms Catherine Simmonds, OAM. The performance explored the challenges actors faced in navigating the mental health system and what they found helpful in their recovery.

The event was part of a collaboration between Charles Sturt and Listening to Voices, who also co-produced a free online mental health education resource, funded by Three Rivers Department of Rural Health. This resource highlights the lived experiences of individuals with mental health issues and aims to address stigma, educate and inspire change.

Dr Tracey Parnell, Associate Head of the Charles Sturt School of Allied Health, emphasised the importance of this resource in promoting inclusive approaches to mental health services. The evening featured a Q&A session, offering insights into the impact of the project on both the cast and the audience.

Image: Actors in the performance of *Actually It's Me*, directed by Catherine Simmonds.



Find out more about
Actually It's Me



Communication for all and the Sustainable Development Goals

Communication is essential for achieving the United Nations’ 17 Sustainable Development Goals (SDGs) and is recognised as a fundamental human right.

The *International Journal of Speech-Language Pathology* (IJSLP, vol. 25, no. 1) dedicated a special issue to exploring the role of communication and swallowing in achieving the SDGs. Guest co-edited by Charles Sturt University Distinguished Professor Sharynne McLeod and Professor Julie Marshall, this issue included articles by Charles Sturt speech pathology academics and students, highlighting their contribution to the field.

The special issue underscores that effective communication is crucial for realising all 17 SDGs at both global and individual levels. It advocates for the establishment of SDG 18: Communication for All. The 36 papers address various goals, such as poverty, health, education and justice, with research conducted in diverse countries.

The findings highlight that communication for all is vital for achieving the SDGs and for promoting peace and prosperity globally. This special issue emphasises the need for inclusive communication strategies that consider the diverse needs of all stakeholders. The special edition is available online to the public.

As a result, Speech Pathology Australia featured the special issue on their website and hosted a podcast episode with the guest co-editors, discussing how the profession can contribute to peace and prosperity. Professors McLeod and Marshall have since been invited to present the special edition, highlighting the importance of communication in achieving the Goals, at numerous international conferences and forums.

Image: Guest co-editors Professor Sharynne McLeod and Professor Julie Marshall, along with the authors of the Special Edition of the *International Journal of Speech-Language Pathology*, celebrating its publication at an international conference in Auckland, New Zealand.



Find out more about
Communication for All.



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

270
publications

1.45
Field-Weighted Citation Impact

30%
publications involve an international collaboration

Figures are for 2018–2023



Related impacts



National award for student through powerful storytelling

Ms Remy Naughton (pictured), a second-year communication student in Bathurst, was named the winner of the Our Watch (individual, any medium, undergraduate) award for a story about best practice reporting of violence against women.

Remy won the Ossie Award for outstanding student journalism for delicately telling the story of sexual assault survivors. The “meticulous and succinct” storytelling from a “compelling angle” of a powerful narrative of survival and recovery earned her recognition even before her professional career has begun.

The Ossie Awards, organised by the Journalism Education and Research Association of Australia (JERAA), showcase Australia’s best student journalism. Charles Sturt communication students write and produce their own news stories from their first session of study and gain on-the-job experience through the National Radio News (NRN) newsroom at Bathurst.

Remy’s story was produced for NRN with an extended interview and was subsequently aired on the national current affairs show *The Wire*. “When I received the email that I had won, I felt very humbled,” Remy said. “As a second-year journalism student, this award has given me the confidence to know that I have chosen the right career path and that I can make a difference.”



Find out more about
Our Watch award story



Related impacts



School is for Everyone

The SIFE (School is for Everyone) project is a collaborative mixed-methods study involving high schools across NSW. The study is conducted by the Centre for Children and Young People (CCYP) at Southern Cross University (SCU) in collaboration with partners including Dr Donnah Anderson (Charles Sturt University), the NSW Advocate for Children and Young People, and the NSW Department of Education. The team is supported by a Youth Advisory Council at ACYP and a Young People’s Advisory Group (YPAG).

SIFE consists of four phases and aims to understand and improve the participation, wellbeing and sense of belonging for students at risk of disengaging from school. Phase 1 identified a range of practices that either help or hinder participation and belonging at school. Phase 2 examined practices linked with students’ engagement, recognition, wellbeing and safety. Phase 3 involves a series of co-designed online professional learning modules based on the findings from Phases 1 and 2, designed to guide schools wishing to improve or change their practices related to belonging and participation. Phase 4 will make these professional learning resources available to schools across NSW. Funded by the NSW Department of Education’s Strategic Research Fund: Priority Projects, the study directly addresses the department’s policy priorities for wellbeing, pedagogical innovation and inclusiveness.



Find out more about
School is for everyone



Related impacts



Philanthropic partnerships with schools in Zimbabwe

The Zimbabwean Government has implemented policies allowing schools to establish public-private partnerships with tourism companies in exchange for funds to provide much-needed resources and infrastructure. Dr Kathleen Smithers investigated a host school providing cultural entertainment for tourists in exchange for philanthropic funds.

Dr Smithers' qualitative research explored three configurations of tours and funding using semi-structured interviews with teachers, school staff and tourism personnel to understand the issues associated with these niche partnerships. While little is known about philanthropic tourism, Dr Smithers contributes a deeper understanding of the tensions these partnerships create for teachers, school founders and children. She also sheds light on these new forms of tourism and the potential risks of perpetuating and recreating harmful colonial stereotypes.

Image: Dr Kathleen Smithers' research explores philanthropic tourism in Africa.



Find out more about
Philanthropic tourism in Africa



Related impacts



Charles Sturt establishes Teaching Academy

The Teaching Academy was designed and established in response to the academic community's needs of learning and teaching staff at Charles Sturt University. It is based on a hub-and-spoke model, with centralised support provided by the Division of Learning and Teaching. The Sub Dean (Academic Development) serves as the Director of the Academy and leads a small team that coordinates and drives its objectives. The Academy employs an inclusive and sustainable approach to support, acknowledge and advance education at Charles Sturt.

The Teaching Academy helps our institution to be a university that recognises, rewards and values excellent teaching. It aims to enhance scholarly activity, leading to greater research grant success and both national and international teaching awards. The Academy is committed to embodying the university's values, standards and principles as guiding benchmarks for best practice. It works collaboratively with strategic partners across the university to ensure that it is fully integrated to support staff, drive improvement in academic quality and advance staff careers.



Find out more about
Teaching Academy



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

117
publications

1.56
Field-Weighted Citation Impact

37%
publications involve an international collaboration

Figures are for 2019–2023



Related impacts



Researchers selected for global women in STEMM leadership program

For the second year in a row, female researchers at Charles Sturt University have been selected for the transformative Homeward Bound leadership program. Dr Alexandra Knight and Jessica Leck from the Port Macquarie School of Agricultural, Environmental and Veterinary Sciences, along with Dr Juliette Tobias-Web from the Artificial Intelligence and Cyber Futures (AICF) Institute, are among the 108 women invited to join the global 2023 Homeward Bound Program, which will culminate in a research excursion to Antarctica in 2025.

To help fund her position in the program, Ms Leck is visiting schools across eastern NSW to increase awareness about STEMM pathways. "I am offering to visit each school twice: first to give a talk about myself and the program, the importance of diversity in STEMM, and what a career in STEMM can look like in a regional area; then, following my voyage to Antarctica, I will return to tell students about the trip and the inspiring stories of the women I met."

Image: Dr Alexandra Knight (left), Lecturer in Environmental Management, and Ms Jessica Leck (right), a sessional lecturer in the School.



Find out more about STEMM leadership program



Related impacts



Student radio program Feministory celebrates women through history

Two passionate communication students, Faith Hanstock and Sophie Norris (pictured), are celebrating their third year on air with the radio talk show, *Feministory*. This half-hour talk show, produced at the 2MCE Bathurst campus community radio station, displays Faith and Sophie's dedication to female empowerment, audio production and storytelling. Each episode is scripted and delivered by the students, spotlighting a remarkable woman from history, known as 'Feministory's fabulous female of the week'. These remarkable women have ranged from mathematician Ada Lovelace to novelist Mary Shelley and Australian icon Olivia Newton-John. To mark International Women's Day 2023, Faith and Sophie produced a special episode examining the life of French philosopher and feminist Simone de Beauvoir, renowned for advocating for gender equality.

2MCE Station Manager Rebecca Wotzko supports students with production and actively encourages innovation and diversity in the form and content of programming. 2MCE is an important learning and teaching resource for the Bachelor of Communication (CRICOS 0101020) in the School of Information and Communication Studies. All 45 episodes of *Feministory* are available to listen to through the 2MCE website.



Find out more about Feministory



Related impacts



Supporting female high school students to pursue careers in STEMM

For the second year, Charles Sturt University in Bathurst hosted the Biomechanics Research and Innovation Challenge (BRInC), designed to encourage girls interested in STEMM education and careers. Dr Kerry Mann, Lecturer in Exercise Science–Biomechanics in the School of Allied Health, Exercise and Sports Sciences, is an academic mentor in the BRInC program and enjoys supporting regional female participation.

“This is not a competition, but rather an initiative to increase awareness and participation among girls in biomechanics-based STEMM and to provide them with access to female role models working in the field, highlighting some of their career possibilities,” Dr Mann said.

As part of the 2023 challenge, three female Year 9 students from Orange High School spent a day with Dr Mann undertaking data collection in the biomechanics lab at the university in Bathurst. Dr Mann is also part of a Charles Sturt research initiative evaluating the impact of this program on girls’ and women’s participation in STEMM.

Image: Participants from Orange High School (left to right): Emily Charnock, Marley Aplin and Malia Nicol.



Find out more about

Biomechanics Research and Innovation Challenge



Related impacts



Research team publish recommendations for mining industries

Charles Sturt University academics Dr Donna Bridges, Dr Elizabeth Wulff, Dr Jodie Kleinschafer, Associate Professor Branka Krivokapic-Skoko and Dr Larissa Bamberry partnered with Newcrest Mining to publish data gathered from more than 120 women working in the mining industry.

Funded by Charles Sturt and Newcrest’s Cadia Cares program, *Tradeswomen in the Mining Industry: Living and working in regional and rural Australia* explores the mining industry’s commitment to employing women and its ability to create inclusive and diverse workforces in regional, rural and remote areas of Australia. The recommendations hope to impact present and future industries across five categories:

1. Gender-safe worksites.
2. On-the-job training, continuing education and job counselling.
3. Initiatives and policies for family-friendly and flexible work, such as paid/unpaid parental leave, parent-friendly rosters, flexible work packages and part-time work.
4. Access to safe, clean and respectful toilets and change facilities.
5. Work uniforms designed for women’s bodies.



Find out more about

Tradeswomen in the Mining Industry



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

180
publications

1.54
Field-Weighted Citation Impact

51%
publications involve an international collaboration

Figures are for 2019–2023



Related impacts



Mitigating the impact of irrigation infrastructure on fish migration

A team of internationally recognised freshwater fish experts from Charles Sturt University has led the development of a new course designed to mitigate the impacts of river development on fish populations. Infrastructure developments within freshwater ecosystems continue to negatively affect migratory fish populations, particularly in parts of South East Asia. These developments can reduce access to food supplies and disrupt sources of household income.

The new course was made possible with funding from support from Australian Aid and the Australian Water Partnership, and is freely accessible online. A digital qualification is provided to participants upon successful completion.

The course covers migratory fish ecology and explains how river developments, such as dams and weirs, impact fish biodiversity and food security. It also looks at practical solutions to modernise irrigation through policy and engineering tools that can mitigate the impacts of river development on fish populations.

Image: A group of graduates from an Indonesian masterclass “Mitigating the impact of irrigation infrastructure on fish migration” course on a field trip in West Java Island.



Find out more about
Fish ecology courses



Related impacts



Water fluoridation in Australia: A systematic review

Water fluoridation is widely considered a safe and effective public health strategy to improve oral health. A review conducted by an academic team led by Charles Sturt University’s Lalantha Senevirathna, Associate Professor in Engineering, aimed to systematically summarise the available evidence on water fluoridation in Australia, focusing on its history, health impacts, cost effectiveness, challenges and limitations.

The review highlighted the uneven distribution of research on water fluoridation in Australia, with certain regions taking a more proactive role in this area over the years. Since 2010, there has been notable growth in publications, indicating sustained interest from the research community. Recent studies consistently highlight the positive effects of water fluoridation, particularly in reducing tooth decay among both children and adults.

Despite most Australians having access to fluoridated water, some regional and remote communities still lack this public health measure. It is important to maintain a balanced approach to researching both the positive and negative impacts of fluoridation to ensure remaining gaps are not overlooked.



Find out more about
Research into water fluoridation



Related impacts



Mapping river infrastructure for improved water resource management

The need for fishery restoration efforts is growing globally. However, the allocation of resources often falls short, especially in low-income countries.

This is particularly pronounced in South East Asia, where fisheries play a significant role in providing food security for millions of people. Charles Sturt University's Dr Ana Horta, Senior Lecturer in Spatial Sciences, worked with a team from the Food and Agriculture Organisation of the United Nations to leverage geospatial data and modelling to maintain river connectivity focused on the Citarum River catchment in Indonesia.

The work utilised integrated geospatial data and local knowledge to efficiently prioritise fish passage barriers. A valuable outcome of this methodology was the capacity building in spatial planning among stakeholders involved in water resource management. By empowering local stakeholders to accurately map and validate river infrastructure, evaluate barriers and make well-informed decisions about ecosystem restoration, a country's ability to address water resource challenges improves.

Image: Dr Ana Horta of the Gulbali Institute.



Find out more about
Water resource management



Related impacts



Dubbo campus irrigation system upgrades

Sophisticated irrigation controllers that take climatic conditions into account have been installed at Charles Sturt University's Dubbo campus to improve water efficiency. With an annual average rainfall of less than 600 millimetres, the Dubbo region relies heavily on supplementary irrigation to maintain the health of its landscaped areas.

Building on previous upgrades, which replaced sprinklers with highly efficient drip irrigation systems, the Facilities Management team at Dubbo campus has made further progress in maximising irrigation efficiency by installing cloud-connected irrigation controllers. These controllers factor in past and upcoming rainfall, as well as wind speed, to determine the optimal time for irrigation.

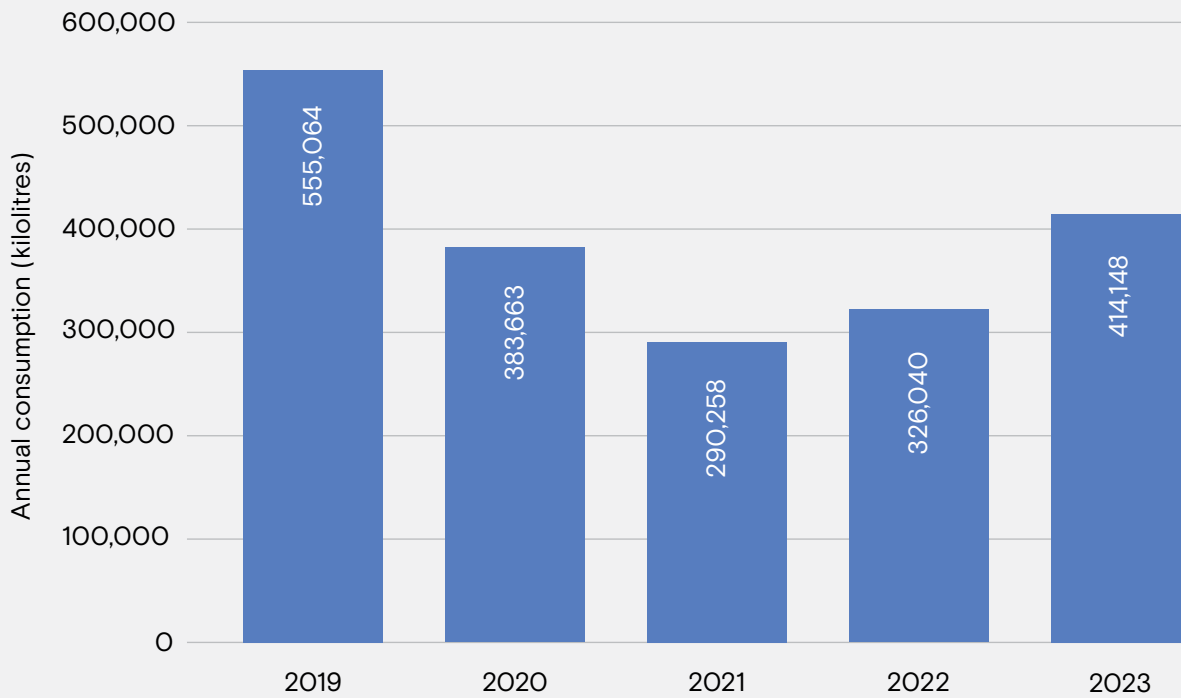
Water consumption on campus has decreased by nine per cent compared to the previous year after just six months of operation.



Find out more about
Smart irrigation



Annual potable water consumption trends



Water consumption trends for Charles Sturt campuses

Charles Sturt’s water consumption for the 2023 calendar year was 414,148 kilolitres.

This is an increase of 88,100 kilolitres (31 per cent) on the previous year, and coincides with much drier weather conditions due to significantly reduced rainfall compared to 2022.

Significant leaks were identified and rectified on two of our biggest campuses, which contributed to exceeding our target benchmark performance. The increase from these two campuses accounted for 95 per cent of the total annual increase in 2023.



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

64
publications

2.24
Field-Weighted Citation Impact

67%
publications involve an international collaboration

Figures are for 2019–2023



Related impacts



International lessons to guide Australia's approach for a rapid and just transition to low carbon industries

How can Australia learn from international experiences to ensure its transition from a fossil fuel-powered economy to one aiming for net zero is swift and inclusive, without leaving the workforce in fossil fuel industries behind? That is the question Charles Sturt's Senior Research Fellow in Energy and Circularity, Dr Simon Wright, explored during a Churchill Fellowship-supported study tour completed in 2023.

The tour included locations such as Canada, Poland, Belgium, Germany, Spain and Slovakia, and Dr Wright conducted numerous interviews with international practitioners who have lived experience with local transitions. Key factors identified as contributing to successful transitions include grassroots engagement of the entire community in developing solutions, ambitious political leadership, coordinated governance across multiple stakeholders and government departments, and regional capacity and skills to implement changes effectively.

Image: Dr Simon Wright inspecting snow-laden solar panels in Germany.



Find out more about Energy and Circularity



Related impacts



Converting human hair to a potential building block for batteries

Research led by Dr Amandeep Singh from Charles Sturt's Rural Health Research Institute is developing novel methods for converting waste products, such as human hair, into cost-effective ingredients for battery manufacturing, offering potential to aid the clean energy revolution. Natural graphite, a key component in energy storage batteries, has a limited and geographically restricted supply, making alternatives highly desirable.

Dr Singh's unique chemical reactor design, which used shock wave technology, has successfully converted human hair into graphite at low temperatures. The advantages of this technology include its ability to provide a cost-effective, locally sourced raw material independently of disruptions in the global supply chain, and its lower environmental impact compared to conventional processes used in the manufacture and purification of graphite.

Image: Dr Amandeep Singh in Charles Sturt University research laboratory with first-generation reactor.



Find out more about First generation reactor



Related impacts



Navigating complexity in the regional energy transition

Research conducted by a Charles Sturt University team, comprising Simon Wright, Mark Frost, Alfred Wong and Kevin Parton, has evaluated factors affecting the establishment and success of distributed renewable energy generation systems.

Microgrids and standalone power systems have attracted interest from regional and remote communities as potential solutions to their energy insecurity and unreliability. The research reveals that projects in various locations facing similar opportunities and barriers. Ownership models are evolving, complicated by outdated regulation and entrenched market players. While technology serves as an enabler, social and cultural drivers often take precedence over economic and environmental issues, particularly in remote areas where energy security lead to improved health outcomes and greater community engagement.

Key recommendations from the investigation include extending financial support beyond current funding timelines, enhancing knowledge sharing between early-stage projects, and removing regulatory barriers to encourage the development of microgrid systems.



Find out more about
Regional microgrids



Related impacts



Shining a spotlight on high-efficiency LEDs for outdoor lighting

Pedestrian safety has been improved at Charles Sturt University's Orange campus, along with increased efficiency, following a major outdoor lighting upgrade project targeting street lighting, security and general building perimeter lights. A total of 102 lights, previously using outdated technology such as mercury vapour lamps, have been replaced with high-efficiency LEDs.

The installed lights operate with 75 per cent lower energy consumption than the previous equipment and are projected to save Charles Sturt more than 72,000 kilowatt-hours of electricity and nearly \$20,000 in energy-related costs per year. The project focused on diverting as much material as possible from the old equipment away from landfill, including recycling metal components and responsibly disposing of removed globes to allow for the recovery of heavy metals. The new LEDs also offer much longer lifespans compared to the technology they replaced, leading to further cost savings and reduced waste from the disposal of failed components.



Find out more about
High-efficiency LED lighting



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 labor 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

121
publications

1.25
Field-Weighted Citation Impact

56%
publications involve an international collaboration

Figures are for 2018–2023



Related impacts



Growing teachers where they're needed most

In 2023, Charles Sturt University introduced a program to address the teacher shortage in traditionally hard-to-staff areas and provide community members with the opportunity to start a career in teaching. The Grow Your Own Local Teacher Pipeline program allows participants to gain valuable on-the-job experience as educational paraprofessionals in a local NSW public secondary school, while completing their teaching qualification with Charles Sturt.

Upon completion, participants will graduate as qualified secondary teachers and be offered a teaching position at a NSW public school within their agreed-upon location. This program helps increase the number of teachers in regional Australia; recognises prior vocational qualifications; and offers flexible, supported and online learning pathways to help students balance work, life and study.

Image: Student Learning Support Officer Vanessa Clark is making the most of Charles Sturt's teacher programs to develop her career and help students such as Dubbo's Lachlan Mules.



Find out more about
Grow Your Own Teacher



Related impacts



Charles Sturt and IBM open doors for students

Since 2021, Charles Sturt University has partnered with global technology innovator IBM to offer students the opportunity to secure a paid internship. Interns work on key IBM client projects and gain industry experience and mentoring from IBM professionals. On completion of the internship, participants can apply for a graduate position at IBM, allowing them to build a career with the company while residing in regional NSW.

This collaboration creates a pipeline of future-ready, skilled technology talent. IBM interns work 20 hours per week for one to two years in a real-world environment and benefit from hands-on technology training and microcredentials in a range of subjects, including data engineering, security, AI and cloud computing.

Image: Manveersingh (Manu) Saluja completed an IBM internship while studying at Charles Sturt, which led to a full-time job with the company in Bathurst in regional Australia.



Find out more about
IBM internship



Related impacts



Charles Sturt committed to a diverse and inclusive workplace

Charles Sturt University’s Workplace Diversity and Inclusion Plan 2023–2025 outlines the university’s actions, principles, roles and responsibilities related to diversity and inclusion. It draws on themes identified from a wide range of data sources, including Charles Sturt’s Your Voice staff survey results, working parties, staff forums and networks, and incorporates feedback from consultation activities conducted in 2022 and 2023.

Staff are the centre of this plan; it is crucial for enabling the university to build and attract a workforce that reflects the communities it serves. The plan is underpinned by the University Strategy 2030 and positively contributes to the university’s achievement of its Key Performance Indicators.

Image: Staff participate in the Wagga Wagga Mardi Gras parade in 2023. The parade is a key event celebrating university diversity and inclusion.



Find out more about
Charles Sturt’s Workplace Diversity and Inclusion Plan



Related impacts



Research initiates meaningful change

The Women in Trades Research Team at Charles Sturt University has made a significant impact with its research on the lived experiences of tradeswomen, apprentices, the industries they work in and the organisations that support them. The project has had notable policy, community, and economic impacts in New South Wales and Victoria, as well as across Australia, with both regional and metropolitan outcomes.

Beginning in 2018, the project has produced eight research outputs: four in Q1 journals, three in Q2 journals and one industry report. Significantly, this project has demonstrated substantial community, state and national impact and has been used by community, political and corporate entities to educate, support and develop gender-equitable employment sectors. The research outcomes have been utilised by companies to address issues related to integrating women into the trades and have attracted industry funding for further research into the careers of tradeswomen in the mining sector.

Image: ‘The ‘A Trade of One’s Own’ report was launched in September 2019. This research project has since continued to have a far-reaching and long-term impact.



Find out more about
A Trade of One’s Own



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

96
publications

1.4
Field-Weighted Citation Impact

45%
publications involve an international collaboration

Figures are for 2018–2023



Related impacts



Charles Sturt takes a look 'Beyond 2050'

Hosted on Charles Sturt University's Wagga Wagga campus and featuring speakers from our academic staff, the Telstra Wagga Wagga Beyond 2050 event focused on innovation and technological advances supporting our regional communities to become more sustainable, resilient and liveable.

The event brought together leaders in digital connectivity, including Charles Sturt's own Andrew Hagan, Director of the eXtended Reality Centre (XRC) at AgriPark.

The key message of the conference was 'What was once considered an impossibility will soon become a reality for the Wagga Wagga community,' highlighting the creative possibilities for nurturing sustainable development in the region.

Image: Director of the Charles Sturt University eXtended Reality Centre Mr Andrew Hagan, Group Editor Region Media, Ms Genevieve Jacobs AM, Chairperson of Committee4Wagga, Mr Adam Drummond, and Director of External Engagement Wagga Wagga and Albury-Wodonga at Charles Sturt University, Mr David Bardos.



Find out more about
Beyond 2050



Related impacts



TRAKKA – Make Data Flow software promotes data sharing

A research collaboration between Charles Sturt University, the Food Agility CRC and tech company TerraCipher is supporting agricultural producers in sharing data and information to enhance the red-meat value chain. Sharing this data among producers, the market and service providers is expected to unlock value within the agrifood value chain.

Through the collaboration, TRAKKA software was developed, creating a platform for producers to control and share their data. The software has been adopted by government agencies, producers and researchers to improve sustainability projects.



Find out more about
TRAKKA



Related impacts



Future of Technology in Australian Farming free webinar puts innovative farming and sustainability in the spotlight

Charles Sturt University hosted a free webinar in 2023 that focused on how technological and data innovations are transforming Australian farming. This online professional development event provided industry professionals with insights into the future of agriculture, emphasising sustainability and profitability.

Speakers from Charles Sturt, the National Farmers' Federation and tech companies like Zetifi discussed cutting-edge solutions in data management, rural connectivity and precision agriculture.

Participants also learned about new postgraduate courses designed to equip future leaders with the skills needed to drive agricultural advancements. This event underscored Charles Sturt's commitment to fostering industry collaboration and supporting the development of sustainable farming practices.

Image: Head of Digital and Sustainable Agriculture Jonathon Medway was a keynote speaker in the webinar.



Find out more about

Future of Technology in Australian Farming webinar



Related impacts



Medical simulation centre donation brings the latest medical technology to regional areas

A high-tech medical simulation centre, made possible by a \$1.4 million donation from the Newmont Mining Sustainability Fund, has provided regional students with access to the latest technology. Situated at the Bloomfield Health Campus in Orange, this advanced facility, has introduced high-tech simulation resources – once only available in larger cities – to rural areas.

The centre offers local Doctor of Medicine students and medical professionals exceptional training and practical experience without the need for travel. Its features include a simulation ward, resuscitation room, control centre and immersive interaction room.

Sarah Ansell, CEO of the Charles Sturt University Foundation Trust, expressed appreciation for Newmont's contribution, noting its profound impact on enhancing medical education and community health. The centre's construction was completed in 2023.

Image: Staff from Newmont Cadia and Charles Sturt's School of Rural Medicine with students in the Bachelor of Clinical Science (Medicine) / Doctor of Medicine.



Find out more about

Medical simulation centre



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

151
publications

1.77
Field-Weighted Citation Impact

46%
publications involve an international collaboration

Figures are for 2018–2023



Related impacts



Partnering with CSIRO to support the next generation of Indigenous STEM leaders

CSIRO has partnered with Charles Sturt University to create a scholarship for First Nations students studying STEM disciplines. This scholarship, valued at \$10,000 for each full-time student and \$5,000 for each part-time student, will be awarded annually in perpetuity to at least one student. The scholarship is open to both undergraduate and postgraduate students, whether they study on campus or online. The funds can be used for various study-related purposes, such as work placement support, textbooks and other learning tools.

CSIRO University Partnerships Manager and Wailwan/Wiradjuri man, Frank Gafa, said that the scholarship is a key part of the Indigenous Science and Engagement Program. He also stated that CSIRO is working to provide opportunities for scholarship holders to undertake student placements with CSIRO during their studies.

Image: A representative from the scholarships team engaging with prospective students at the Open Day in Bathurst.



Find out more about

STEMM scholarship for First Nations students



Related impacts



FishTech: Applying gender equality, disability and social inclusion principles in agricultural water resources management

Under the leadership of the Gulbali Institute's Professor Lee Baumgartner, the FishTech project adopted a twin-track approach to gender equality, disability and social inclusion. Conducting research in Cambodia, Indonesia and the Lao People's Democratic Republic, the project investigated the environmental management of fish passages and water resources and the socioecological impacts and benefits for marginalised communities.

In Lao PDR, modifications to the design of a fishway were made to create a safer environment for children to play, socialise and develop their fishing skills. In Indonesia, the project assisted with the design of a fishway aimed at increasing the glass eel population, a lucrative export, following the development of a hydropower project.

Throughout, the team engaged with local organisations representing women, ethnic minorities and people with disabilities. The project demonstrated that incorporating local knowledge into fish passage design can better address health, safety and livelihood requirements, plus environmental management.



Find out more about

FishTech project



Related impacts



Charles Sturt University: A proud supporter of the Queer Screen Festival

Charles Sturt University has again been a loud and proud supporter of the lesbian, gay, bisexual, transgender, intersex, queer and asexual (LGBTIQA+) community, including individuals in regional and remote areas, by partnering with Queer Screen to host the Queer Screen Film Festival: Best of the Fest.

Queer Screen Film Director, Lisa Rose, welcomed Charles Sturt as the regional partner for the 2023 festival. Screenings took place in September and October at Charles Sturt campuses in Port Macquarie, Bathurst and Dubbo. Proceeds from ticket sales supported the Charles Sturt University Ally Network.

Image: Charles Sturt Community Relations Officer Halima Kramel, Out Loud & Proud Port Macquarie Founder Racquel Robinson, Charles Sturt Ally Network Campus Lead Deanne Tilden, Port Macquarie Headspace Community Engagement Officer Emily Lawson, and Charles Sturt Director of External Engagement (Port Macquarie) Kate Wood-Foye.



Find out more about
Queer Screen Festival



Related impacts



Staff Wellbeing Framework and Plan

Based on feedback from staff, the results of the annual Your Voice survey, benchmarking against other universities, and in support of the University Strategy 2020–2030, Charles Sturt University announced the Staff Wellbeing Framework and Plan in April 2023. The aim of the plan and framework is to create a safe and healthy work environment, foster a culture of positive wellbeing, empower individuals to make positive behavioural health changes, and establish a psychologically safe environment where staff feel supported and valued.

The plan is governed by four pillars: well body, well mind, well culture and well places. The Wellbeing Framework and Plan will be implemented through collaboration with faculties and divisions and will work to integrate wellbeing initiatives with other major projects and programs. Progress will be monitored through staff feedback collected via the Your Voice survey. The plan is designed for continual improvement, with a focus on embedding safety, wellbeing and engagement metrics into performance management for all people leaders.

Image: Charles Sturt staff members engaging in on-campus events.



Find out more about
Staff Wellbeing Framework

Living the goals



Professor Dominic O'Sullivan, Professor in Political Science at Charles Sturt University, has a keen interest in the intersection of Indigeneity and global policy frameworks. In his recent book, *Indigeneity, Culture and the UN Sustainable Development Goals*, Professor O'Sullivan critically examines the ambitious UN Sustainable Development Goals (SDGs) adopted in 2015 from an indigenous perspective.

Professor O'Sullivan emphasises that “the UN Sustainable Development Goals, while aiming to ensure that ‘nobody is left behind,’ are compromised by their inattention to culture and political context. These omissions restrict indigenous peoples’ ability to define what it means to be ‘not left behind.’ Revising the Goals to support self-determination requires integrating culture into state policy and ensuring substantive indigenous leadership and participation”.



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.

Research outcomes

130
publications

2.36
Field-Weighted Citation Impact

37
publications involve an international collaboration

Figures are for 2019–2023



Related impacts



Ride2Work for Charles Sturt

On 18 October, Charles Sturt University celebrated its 30th anniversary of Ride2Work Day with members of the Wagga Wagga campus, supported by Transport for NSW. Ride2Work Day addresses both the rise in obesity and health issues in Australia, as well as increased traffic congestion. The Sustainability at Charles Sturt team organised and participated in the national Ride2Work Day.

Across Charles Sturt campuses, staff, students and families also participated in the annual event that brings the community together. Riding to work can save time, save money, have a positive impact on climate change and address mental health and physical fitness, as exercise leads to a general feeling of wellbeing.

Image: The Wagga Wagga team enjoying a cuppa after riding to campus.



Find out more about
Ride2Work Day



Related impacts



The Teaching Academy Changes One Thing Award

To change the world, you don't have to change everything – just one thing. The annual Change One Thing Award recognises the outstanding work of the teaching community in creating innovative solutions to teaching challenges. Kirsty Van Grinsven, Cate Melville and Caroline Robinson, a team from the School of Allied Health, Exercise and Sports Sciences, created their award-winning submission in the Indigenous Engagement category: Spaces and Places for Authentic Learning.

The team identified gaps in the understanding of First Nations' health and wellbeing. By working directly with the community and following the philosophy of Yindyamarra – moving slowly with respect – the team, in conjunction with the Albury Wodonga Aboriginal Health Service (AWAHS), developed an interactive learning experience for third-year podiatry students. With careful preparation, the students participated in a 'Yarning Circle' with First Nations' health practitioners, organised by AWAHS. This enabled them to understand, from the grassroots level, the health concerns of the community. This unique approach is, without doubt, a huge step towards creating sustainability and respect for all cultures.

Image: Spaces and Places for Authentic Learning – A Yarn About Indigenous Health.



Find out more about
Spaces and Places for
Authentic Learning



Related impacts



Get on board with the War on Waste

It can be overwhelming to think about all the ways we can reduce waste, whether or not those practices cause more harm than good. However, instead of looking at the big picture, we can often make more progress and have a greater impact by focusing on what we can do in our own backyards – the things that we can do now.

In November 2023, Charles Sturt University Alumni ran a ‘War on Waste’ sustainability challenge to measure how much waste the university could save in just one month. The challenge focused on kilograms of waste diverted from landfill, kilograms of CO2 saved and water consumption. Every participant’s efforts contributed to great results! By the end of the challenge, we had:

- 153 participants from eight countries
- 2,748 sustainability actions logged
- 7,269kg of CO2 saved
- 251kg of waste diverted
- 78,000L of water saved.



Find out more about
War on Waste



Related impacts



Balayanhi Wiradyuri Garingundhi

Dr Jessica Russ-Smith’s PhD project, ‘Balayanhi Wiradyuri Garingundhi. We are sovereign my granddaughter. Embodying Wiradyuri women’s sovereignty through Wiradyuri knowing, being and doing’ is a prime example of the Yindyamarra philosophy. Dr Russ-Smith removed the noise of traditional Western ways of developing her PhD, while holding onto her deep-seated Wiradyuri traditions and methods. This approach resulted in her graduating with the highest honour – the Higher Degree by Research University Medal. It was not just the PhD itself but the process of utilising her individual methods in research and discovery that complemented both her heritage and the university’s ethos.

Image: PhD graduate Dr Jessica Russ-Smith accepts her Higher Degree by Research University Medal.



Find out more about
Balayanhi Wiradyuri
Garingundhi



Provoking traditional thinking through public lecture series

In 2023, Charles Sturt University introduced the 'Provocations' lecture series, an initiative designed to challenge conventional thinking and revitalise policy ideas and political discourse. This series re-examines the grand challenges faced by our regional communities and highlights our university's research, making it accessible to audiences both online and across our campus footprint.

'Provocations' covers critical aspects of sustainability. To date, it has featured lectures exploring communication as a human right, water conservation and fast fashion, sustainable production, the silent threat of parasites, and behavioural data science. By showcasing the expertise of our leading academics, the series provides valuable insights that extend beyond the university, fostering meaningful dialogue within the community.

Future lectures in the series include presentations on topics like invasive species management, equity in education, and rural health challenges. Each presentation aims to challenge existing assumptions and propose new approaches to these critical issues. The series is designed to spark discussion and offer

fresh perspectives, particularly relevant to regional Australia. For more detailed insights you can visit the [Research Provocations page](#).

An accompanying web page provides a space for articles, commentary and discussions from academics across our various disciplines. This allows the knowledge shared in the lecture series to reach a broader audience, encouraging ongoing reflection and discussion.

Image: Charles Sturt researchers provoking new thinking through our Provocations lecture series.



Find out more about
Provocations lecture series



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

99
publications

1.5
Field-Weighted Citation Impact

60%
publications involve an international collaboration

Figures are for 2018-2023



Related impacts



Investigating education for sustainability through science in Australian secondary schools

The Charles Sturt University STEM Education Research Group focuses on empowering learners and educators to apply STEM knowledge and skills in daily life. The group includes STEM education academics, HDR students, research assistants, educators and community members, all working together to improve STEM educational practices and outcomes. At the Australasian Science Education Research Association (ASERA) 2024 Conference, members Sabira Sultana (PhD candidate), Dr James Deehan and Dr Kathleen Smithers presented a poster on a PhD study examining education for sustainability (EfS) in secondary science teaching.

In the 21st century, technological advancements, environmental degradation and socioeconomic issues pose significant threats to sustainability. UNESCO advocates for education to foster sustainable development, and Australia supports EfS by integrating sustainability as a cross-curricular priority in the Foundation-10 curriculum. Science education scholars emphasise its importance in developing critical skills for social activism and agency. The research poster highlighted the perspectives of science teachers and students on sustainability in the curriculum and its classroom implementation.



Find out more about STEM educational practices



Related impacts



Charles Sturt University researchers investigate the Dairy Beef Project trials

The eating quality and production pathway of dairy beef cattle are under investigation by researchers at Charles Sturt University, who are identifying viable market pathways for Holstein or Holstein-cross calves, which have performed as well as or better than traditional beef cattle.

The Dairy Beef Project, co-designed with dairy producers and industry experts, was Australia's largest trial to demonstrate a market path for dairy beef. Over nearly five years, Charles Sturt conducted growth studies at its Wagga Wagga research feedlot. The university's Red Meat Innovation Centre coordinated consumer sensory trials, where over 1,600 participants evaluated the beef's juiciness, tenderness, flavour and overall likeability. Professor Jane Quinn highlighted the three-fold benefits for producers, industry and consumers:

1. Producers gain confidence in growing male dairy calves to feedlot weight.
2. The industry identifies a productive value chain for non-replacement calves.
3. Consumers are assured of a high-quality, high-welfare meat product.



Find out more about The Dairy Beef Project



Related impacts



Thirst for power – the rivers of conflict in Southeast Asia

The Provocations lecture, 'Thirst for Power – the rivers of conflict in Southeast Asia', explored water security challenges and innovative community solutions in both Australia and Southeast Asia. Presented by Professor Lee Baumgartner, Executive Director of the Gulbali Institute for Agriculture, Water and Environment at Charles Sturt University, in partnership with the Western NSW Branch of the Royal Society of NSW, the lecture emphasised the need for future water management to integrate technical solutions, sound policy and inclusive water-sharing strategies. This is particularly crucial in Australia, the driest inhabited continent, and Southeast Asia, where millions depend on healthy rivers.

The lecture also addressed the water consumption involved in fast fashion manufacturing in Southeast Asia, urging consumers to make informed choices when purchasing clothing. Highlighting the adverse environmental outcomes and the impact of climate change, Professor Baumgartner concluded that without intervention, water security in these regions will face heightened competition for increasingly scarce resources.

Image: Provocations lecture 'Thirst for power' with Professor Lee Baumgartner.



Find out more about
Thirst for Power



Related impacts



New EVs in Charles Sturt fleet reserve

The Fleet and Logistics team has introduced four electric vehicles (EVs) in alignment with Charles Sturt University's strategic objective of 'Planning for the future'. As the fleet reserve expands to meet travel demand and hire car shortages, more EVs will be added across campuses. Currently, EVs are available in Albury-Wodonga, Bathurst, Orange and Wagga Wagga for single-day travel between campuses or local events. Fully trained mechanics service these vehicles, and a user manual is provided for staff.

In collaboration with Facilities Management, the team also introduced in-house electric vehicle charging infrastructure at the Albury-Wodonga, Bathurst, Orange and Wagga Wagga campuses. Initially, the chargers are located within Fleet compounds, but public-facing chargers will be introduced in 2024, beginning with the Bathurst campus.

Image: One of Charles Sturt's new electric fleet vehicles.



Find out more about
Charles Sturt Fleet Reserve



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

142
publications

2.18
Field-Weighted Citation Impact

63%
publications involve an international collaboration

Figures are for 2019-2023



Related impacts



Job-ready experience at its best: farmlets help students prepare for a future climates

Charles Sturt University has established nine drought-resilience farmlets as part of a program in Wagga Wagga, providing agriculture, animal science and veterinary students with hands-on experience in all-weather farming. The farmlets have been established with funding from the Federal Government's Future Drought Fund.

Each farmlet is 6.5 hectares in size and has been set up with 50 per cent established pastures, while the other 50 per cent has been sown with dual-purpose crops. Each farmlet is stocked with 18 composite ewes and their offspring.

According to Senior Research Fellow Dr Shawn McGrath, the farmlets provide students studying relevant animal and agricultural science degrees with hands-on experience to ensure they are better prepared for future careers in a more challenging and variable climate. This innovative approach allows students to gain vital knowledge in managing livestock, pastures and crops through variable seasons, including periods of below-average rainfall.

Image: Veterinary students Brook Wilson and Emma McTavish at the Empowering Generations Z farmlets at Charles Sturt in Wagga Wagga.



Find out more about
Drought resilience farmlets



Related impacts



Young rural Australians share climate disaster experiences through art

In 2019–2020, Australia experienced a severe series of bushfires known as the Black Summer Bushfires. Several regional areas of NSW were significantly affected, with loss of life, homes, businesses and livestock, as well as billions of wild animals and vast tracts of native forest lost.

Dr Rachael Fox and Associate Professor Andrew McGrath, from the School of Psychology at Charles Sturt University, conducted action research with young rural people aged 12–24 who were directly affected by these fires to produce art responding to their experiences. In the Snowy Valleys and Bega Valley, the work – run in collaboration with local artists and funded by the NSW Department of Regional NSW and Charles Sturt – culminated in powerful exhibitions and published art booklets.

The project sparked valuable conversations across the community about the needs and experiences of rural young Australians during climate disasters. It was also featured in radio and news media and was formally acknowledged in the NSW State Parliament.

Image: A collection of artworks that will be featured during the Burning Generation exhibition in Wagga Wagga.



Find out more about
Burning Generation exhibition



Related impacts



Riverina Climate Update 2023: Community collaborate on climate challenge

The Riverina Climate Update 2023 was hosted at Charles Sturt University in Wagga Wagga, in collaboration with Kildare Catholic College, The Australian National University and Wagga Wagga City Council. This community forum and panel discussion explored how the Riverina community can respond to climate change in an informed and logical way, relevant to the local context.

The session, headlined by the Vice-Chair of the Intergovernmental Panel on Climate Change, Professor Mark Howden, drew on the expertise and enthusiasm of academics, farmers, high school leaders and local councillors. They discussed the sobering reality of the impacts already being felt from climate change, as well as the local actions already being taken in response.

With nearly 200 community members in attendance, including a contingent of high-school students, the forum struck a balance between delivering a call to action and showcasing examples of meaningful responses relevant to those in the room.

Image: Panel speakers at the Riverina Climate Forum 2023 Professor Dale Nimmo, Gemma Purcell, Councillor Jenny McKinnon, Ella McCorry and Eamon Kurta.



Find out more about
Riverina Climate Update



Related impacts



Partnership to reveal soil organic carbon levels of the Global Digital Farm

Charles Sturt University has partnered with Downforce Technologies to assess soil organic carbon levels at the Global Digital Farm (GDF). The GDF, operated in conjunction with the Food Agility Cooperative Research Centre, hosts farm technology trials across approximately 2,000 hectares at Wagga Wagga and Orange in regional NSW.

Downforce Technologies co-founder and former chief scientist of the United Nations Environment Programme, Professor Jacqueline McGlade, described the partnership as an exciting opportunity to work with a leading innovator in Australian agriculture. "The power of our methodology in assessing soil organic carbon at scale lies in the richness of the many datasets we synthesise, from remote sensing and satellite imaging to soil maps and on-the-ground sampling."

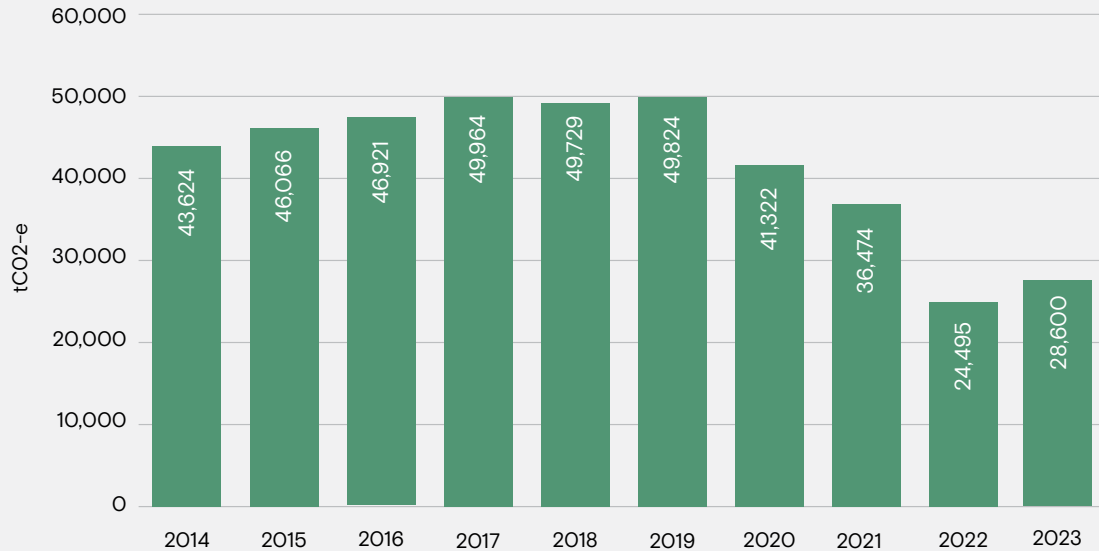
Charles Sturt's Head of Digital and Sustainable Agriculture, Jonathon Medway, said "To be able to see the soil carbon differences between continuous cropping, a rotational system and continuous pasture will be really interesting, and we will be opening our books to say, 'Here's our soil carbon estimation from Downforce, and here's the management plan behind it.'"



Find out more about
Soil organic carbon levels



Annual organisational carbon emissions



Renewable energy delivers reductions in Charles Sturt's carbon footprint

Charles Sturt's primary focus for carbon reduction initiatives has been its comprehensive Clean Energy Strategy, which sets out a pathway for Charles Sturt to be resilient, efficient and ready for a low-carbon energy environment.

While this plan continued in 2023 to contribute to mitigating climate change by reducing its greenhouse gas energy emissions, Charles Sturt's overall greenhouse gas emissions increased by 4,105 tonnes CO2-equivalent (17 per cent) compared to the prior year. This represents a 15,024 tonne CO2-equivalent (34 per cent) reduction compared to Charles Sturt's base year reporting (2014).

Avoided emissions in 2023 resulted from:

- Renewable power purchase agreement (2022), continuing in 2023 (major sites).
- GreenPower purchases – 2023 (minor sites).
- Energy efficiency improvements and elimination of some natural gas-consuming appliances.
- Additional rooftop solar output and consumption.

Total emissions avoided in 2023 were 17,379 tonnes CO2-equivalent. These additional emissions avoided in 2023 were more than offset by an increase in business-related activities, primarily attributable to the categories of building construction and renovations, business travel, and capital equipment purchases (e.g. motor vehicles).

These non-energy-related Scope 3 emissions have increased by 28 per cent compared to 2022.

Charles Sturt purchases and retires carbon offsets equivalent to its organisational carbon footprint as part of its commitment as a certified carbon neutral organisation under the Australian Government Climate Active program.



Find out more about

Charles Sturt's carbon neutral certification

Living the goals



“I am in the second year of my environmental science and management course, and I’m loving it. I am incredibly passionate about creating a sustainable environment where both humans and wildlife can coexist and thrive. As the Student Sustainability Adviser on the Albury-Wodonga campus, I value the opportunity to work closely with the Sustainability at Charles Sturt team. This year, I have been running a ‘Sunshine Washing Challenge’ to encourage students to use their outdoors clotheslines instead of dryers to help reduce our campus emissions.

“Outside of my studies, I am involved with the Charles Sturt Mud Dogs league tag team, and I love supporting wildlife conservation by adopting koalas

and platypus through the student-led Enviro Club. As an environmentally committed student, I have collaborated with peers and Charles Sturt staff to extend sugar glider habitat by planting vegetation, establish nesting boxes, create hives for native bees and plant campus veggie patches. I have also attended bird walks and volunteered with NSW Environment and Heritage, putting up habitat boxes for the endangered pygmy possum. It’s important to maintain a healthy and thriving natural environment on campus – not just for our native species, but for the wellbeing of our students as well.”

Image: Rebecca (Becky) Groat.



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

1.74
Field-Weighted Citation Impact

50
publications involve an international collaboration

Figures are for 2018–2023



Related impacts



Student projects tackle plastic pollution in Cambodia

Charles Sturt University has actively involved its student engineers in environmental projects that have a global impact, such as a soft plastic recycling initiative in Cambodia. In partnership with Engineers Without Borders, these students worked on developing sustainable methods to tackle the significant issue of plastic pollution. The project focused on transforming soft plastics into reusable materials, providing both environmental benefits and economic opportunities for local communities.

The initiative tackled waste management challenges while giving students valuable hands-on experience in creating innovative solutions for real-world problems. By participating, the student engineers contributed directly to environmental sustainability and learned practical skills that will benefit them in their future careers. This project highlights Charles Sturt's commitment to combining education with impactful industry partnerships to drive global environmental change.

Image: Charles Sturt engineering students tackle plastic pollution in Cambodia.



Find out more about Environmental projects



Related impacts



Educating 'citizen scientists' to support research data collection

Charles Sturt University's Gulbali Institute for Agriculture, Water and Environment has partnered with OzFish and Karltek on an innovative research project that leverages the efforts of 'citizen scientists' to gather crucial data in the Murray-Darling Basin. The project trains a select group of anglers in fish handling and passive integrated tagging (PIT) procedures, which involve implanting microchips in fish. These tags are later detected by specialised antennas placed throughout the river system.

The pilot study, funded by the Australian Government's One Basin Cooperative Research Centre and other partners, aims to demonstrate that citizen scientists, when properly trained, can significantly contribute to large-scale scientific research. This initiative could reduce reliance on government resources while ensuring high-quality data collection. The first workshop was held in Deniliquin, with more planned across the Basin, focusing on ensuring ethical and scientifically robust methods.

This project represents a significant step forward in community-driven environmental conservation and research.

Image: Charles Sturt staff members An Vi Vu and Cameron McGregor demonstrate the fish tagging process in Deniliquin.



Find out more about Citizen scientists



Related impacts



University researchers talk fish with local communities

In May 2023, Charles Sturt University collaborated with the local fishing community in Port Macquarie to support water conservation efforts. Researchers Dr Jessica Tout-Lyon and Dr Alexandra Knight presented their work on environmental DNA (eDNA) for tracking fish communities and monitoring mangrove health, respectively.

Dr Tout-Lyon introduced a citizen science project aimed at collecting water samples to detect fish species and to understand the ecological impacts of past droughts and fires. Dr Knight emphasised the importance of mangrove systems in coastal protection and carbon sequestration, addressing the stress these ecosystems face from recent environmental changes. Kris Cooling, from the NSW Fisheries Research and Development Cooperation, provided insights into the economic and environmental value of key fisheries. This event, funded by the NSW Recreational Fishing Trusts and retailer BCF, fostered community involvement in vital water conservation research.

Image: Charles Sturt researchers are working with local fishing communities to support water conservation.



Find out more about

Economic and environmental value of key fisheries



Related impacts



Students making sustainable choices for on-campus events

Charles Sturt University students are embedding sustainable practices into their on-campus events. In 2023, their efforts were focused on reducing plastic waste, banning plastic balloons and providing reusable cutlery during key student events in Orientation weeks. They also made a conscious effort to consolidate student merchandise, maximising resources and avoiding duplication. These initiatives reflect the practices encouraged in our University Sustainability Event Guide.

Image: Students are bringing sustainable practices to Orientation events.



Find out more about

Sustainable practices



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

371
publications

1.63
Field-Weighted Citation Impact

49%
publications involve an international collaboration

Figures are for 2019–2023



Related impacts



How Charles Sturt in Albury-Wodonga celebrated biodiversity month

Biodiversity month is a national initiative promoted throughout September across Australia. At Charles Sturt University, the significance of biodiversity month has grown year on year, with multiple events held across its campuses, engaging students, staff and the wider community.

In 2023, a student-led event was organised at the Albury-Wodonga campus to raise awareness about biodiversity and mental health. In recognition of the benefits of spending time in nature and outdoors for reducing stress, anxiety and depression, volunteers contributed to projects that will have tangible benefits for local biodiversity.

Approximately 240 native seedlings were planted, with species chosen for their ability to provide food and habitat for threatened species, such as squirrel gliders and Sloane's froglet, which are known to inhabit the Albury-Wodonga campus. Additionally, artificial nest boxes were installed in trees to supplement native tree hollows, offering homes for squirrel gliders and various native parrots.

Image: A student volunteer planting a tree at the event held at Charles Sturt in Albury-Wodonga to raise awareness for biodiversity and mental health.



Find out more about Biodiversity month



Related impacts



Eavesdropping on wetland birds

Eavesdropping on wetland birds is a project that heralds a new era in environmental monitoring. Using acoustic monitoring technology and remote motion-sensor cameras, the project extends the scope of time and location data collection to detect wetland bird species and monitor their diversity. The timing and frequency of the noises the birds make vary seasonally, and they can be used to detect breeding events.

Led by a team of Charles Sturt researchers, comprising Dr Elizabeth Znidersic, Dr Michael Towsey and Professor David Watson of the Gulbali Institute, the project focuses on a selection of wetlands in south-eastern Australia and Tasmania. The research aims to improve understanding of the distribution of little-known wetland bird species, trial large-scale deployment of acoustic sensors alongside manual data collection and improve artificial intelligence training datasets.

As indicator species of wetland health, the status of wetland birds can shed light on the overall health of these ecosystems and inform future management decisions.

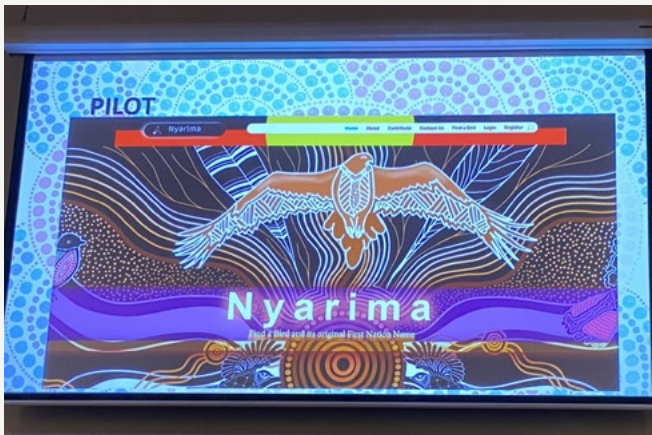
Image: Dr Elizabeth Znidersic deploying an acoustic monitoring device at a wetland site.



Find out more about Eavesdropping on wetland birds



Related impacts



Birds on Country – Indigenous knowledge and conservation of birds symposium

Charles Sturt University has a long and proud history in ornithological education, which was celebrated in November 2023 when the university served as the major sponsor of the Birds on Country – Indigenous Knowledge and Conservation of Birds Symposium at the 12th Australasian Ornithological Conference. Birds on Country is a dedicated session showcasing Indigenous-led projects focused on bird research and conservation. Indigenous perspectives were well represented throughout the conference, underscoring the relevance of cultural diversity, the integration of different knowledge systems and the pivotal role of First Nations communities in catalysing meaningful, on-ground action across Australia and beyond.

Dr Maggie Watson, Senior Lecturer in Ornithology, who attended the conference, said the Birds on Country symposium highlighted the diverse ways in which communities are connected to birds and how collecting stories can inform better conservation management. “The importance of language was a central theme, as was respecting cultural preferences for sharing certain stories only with certain people. The symposium also provided an opportunity to showcase the valuable and effective work that Aboriginal ranger groups are doing to care for Country.”



Find out more about

Australasian Ornithological Conference



Related impacts



University honours commitment to biodiversity through community events in Wagga Wagga

Charles Sturt University honoured its commitment to allocate 20 per cent of university land to biodiversity enhancement, as part of National Tree Day in 2023. The university partnered with Wagga Wagga City Council, and more than 120 community volunteers helped to plant 1,000 native seedlings, in a new biodiversity corridor at Charles Sturt’s Global Digital Farm in Wagga Wagga.

This activity builds on a decade-long effort, during which Charles Sturt has planted more than 25,000 native seedlings. The university has also used the Wagga campus and farm to connect native vegetation at a local landscape level, improving habitat, food sources and movement corridors for native species.

“Active regeneration of previously cleared land is one way we can improve the biodiversity of our landscape by increasing its value as habitat to native species,” said Charles Sturt Sustainability Manager, Mr Ed Maher. “Research conducted by our institution has shown it’s a win-win scenario: vegetation diversity in areas such as tree corridors and road reserves can provide agricultural benefits by boosting populations of beneficial insects that prey on pest species,” Mr Maher said.



Find out more about

Biodiversity on the Wagga Wagga Campus



Showcasing innovation and collaboration in Regional NSW – Digital Agrifood Summit

Charles Sturt University’s commitment to advancing sustainable agricultural futures was showcased at the Digital Agrifood Summit held in October, 2023 in Wagga Wagga. This annual event brought together prominent leaders from both international and Australian agrifood sectors, highlighting the university’s role as a leader in agricultural research and innovation. The Digital Agrifood Summit is a key initiative of the Food Agility Collaborative Research Centre (CRC).

At the heart of the summit was the Global Digital Farm, Charles Sturt University’s flagship initiative dedicated to transforming agricultural practices through cutting-edge technology and data-driven solutions. The farm, a commercial-scale landscape laboratory, serves as a vital benchmark for sustainable food, fibre and energy production. Professor David Lamb, chief scientist at the Food Agility CRC, emphasised the farm’s role in providing delegates with a tangible vision of the future of farming.

The summit, themed ‘Paddock to Profit’, showcased how digital transformation can enhance value and sustainability in the agrifood sector. Delegates explored real-world applications of data through a custom dashboard developed by Australian start-up Pairtree Intelligence, featuring real-time insights

from leading agtech providers such as Downforce Technologies and AgriWebb.

The event also featured an impressive lineup of experts, including former UN Environmental Programme chief scientist Professor Jacquie McGlade and Canadian innovation hub leader Laura Kilcrease. Their insights, along with presentations from industry figures like Richard Heath of the Australian Farm Institute, underscored the importance of collaborative research and industry engagement in driving agricultural innovation.

Supported by gold sponsors Transgrid and ANZ Bank, and strategic partner the Office of the NSW Chief Scientist and Engineer, the summit reinforced Charles Sturt University’s dedication to fostering sustainable agricultural practices. Networking opportunities, such as the growAG Breakfast and the Gulbali Stargazing Gala, further facilitated meaningful connections and showcased local produce, highlighting the university’s integral role in shaping the future of agriculture through research and collaboration.

In its first two years (2022 and 2023), the summit attracted more than 450 delegates to the regional centre of Wagga Wagga. Additionally, more than 150 high school students from 10 participating schools attended the summit to be inspired by careers in agriculture.



Find out more about
Digital Agrifood Summit

Image: Our Digital Agrifood Summit brings together international leaders in Agrifood research and innovation.

Living the goals



“We wanted to create a walk through the Orange campus’s Biodiversity Zone, to allow staff and students to explore the nature around the campus. The Thornbill Walk goes around a dam and through native woodland, which is home to numerous species, such as thornbills, ducks and tortoises. We have enjoyed seeing the walk used by staff and students, which has helped to motivate the maintenance team to extend the walk. We will also be running a series of tree planting days in and around the main campus.”

Robert Shaw, Campus Facilities Manager – Charles Sturt University



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

218
publications

1.33
Field-Weighted Citation Impact

32%
publications involve an international collaboration

Figures are for 2018–2023



Related impacts



Social work intensive a 'gamechanger'

A week-long social work intensive learning pilot program, held concurrently in Canberra and Wagga Wagga in 2023, was hailed as a success, sparking hopes that more locations will be offered in the future to improve access to social work education.

Thirty-seven Bachelor of Social Work (CRICOS 25195D) students completed their Social Work Theory and Practice Two intensive through the program. It focused on supporting students from non-conventional backgrounds, such as mature-age or part-time students, as well as those affected by cost-of-living challenges.

Senior Lecturer and Course Director of the Bachelor of Social Work in the Charles Sturt School of Social Work and Arts, Dr Trish Mackey, said the feedback on the intensive had been positive.

"It was wonderful to work with the students and see their excitement for social work practice," Dr Mackey said. "The pilot was a gamechanger for improving the accessibility of intensives for our social work student cohort."



Find out more about
Social work intensive program



Related impacts



IT graduate powering ahead in industry

A commitment to creating new career opportunities in cybersecurity for First Nations people is just one of the many admirable achievements of Charles Sturt University graduate and award-winner Craig Ford.

As a so-called 'ethical-hacker', Craig has worked as a security engineer, cybersecurity journalist and novelist over a 20-year career focused on the pursuit of a safer and more equitable information security landscape.

Craig is currently the Chief Technology Officer at Baidam Solutions, an First Nations-owned and operated information technology business that delivers cybersecurity services to private, public sector and not-for-profit clients. Since joining Baidam three years ago, Craig has embraced the company's mission to bridge the gap for First Nations peoples by contributing to the launch of the company's Security Operations Centre, the first in Australia to be First Nation co-designed.

In 2023, Craig was awarded the Charles Sturt Innovation, Entrepreneurship and Creativity Award for his contributions to producing accessible information and learning tools in cybersecurity.

Image: Graduate Craig Ford was the recipient of the Alumni of the Year Innovation, Entrepreneurship Creativity Award for 2023.



Find out more about
Innovation, Entrepreneurship
Creativity Award



Related impacts



Local government issues under the microscope in policy lab

An inaugural local government ‘policy lab’ has brought together leading experts from Australian and British local governments to tackle the most critical challenges facing regional NSW councils.

The policy lab, a partnership between Charles Sturt University and the local government network Central NSW Joint Organisation (CNSWJO), was held in September 2023 and facilitated by Charles Sturt’s Deputy Vice-Chancellor of Research, Professor Mark Evans.

The lab focused on answering the question ‘What can we do in this region to strengthen the role of local democracy in delivering positive social, economic and environmental outcomes for regional communities?’

“This lab brought together leading experts from Australian and British local governments, as well as social media specialists, alongside local councillors and policy officers, to unlock the potential of local democracy in delivering better outcomes for regional communities,” Professor Evans said.

Image: (From left) Charles Sturt Deputy Vice-Chancellor (Research) Professor Mark Evans, Executive Director of the Central NSW Joint Organisation Ms Jenny Bennett, Chair of Central NSW Joint Organisation and Mayor of Cabonne Shire Council Cr Kevin Beatty, and The University of Technology’s Professor Graham Sansom at the “policy lab” Orange campus.



Find out more about
Policy lab



Related impacts



Policy framework improves outcomes for Maori population

New Zealand key policymakers are utilising a framework, partly designed by a Charles Sturt researcher, to improve health and wellbeing outcomes for its Māori population.

The framework, Critical Tiriti Analysis (CTA), is an original public policy development and evaluation method developed by Professor Dominic O’Sullivan (pictured) from Charles Sturt’s School of Social Work and Arts, alongside New Zealand academics Dr Heather Came and Tim McCreanor.

In 2023, CTA was used by several New Zealand organisations, including the Health and Disability Commission, Auckland Regional Public Health Service, Ministry of Defence, Pharmac (the public pharmaceutical purchasing agency), Health and Quality and Safety Commission, Auckland District Health Board, Family Violence Death Review Committee, Mental Health Foundation and the Research Council.

The ultimate beneficiaries of CTA in public health policy are Māori leadership of, and the general Māori population, whose health outcomes are expected to improve due to the privileging of Māori knowledge in policymaking and service delivery.



Find out more about
Critical Tiriti Analysis



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

1,567
publications in total with an international collaboration

11%
increase on the period 2017-2021

51%
publications involve an international collaboration

Figures are for 2019-2023



Related impacts



Psychology students' international experience in Nepal

A group of undergraduate psychology students, led by Associate Professor Andrew McGrath, travelled to Nepal for a short-term study trip in December 2023, supported by the New Columbo Plan. Students worked with school children, NGOs supporting people with intellectual disabilities and malnutrition, and psychologists and psychiatrists offering mental health services in Kathmandu.

In the world-famous Chitwan National Park, the students were able to see firsthand the conservation efforts to protect endangered species such as vultures, rhinoceroses and tigers. They also had time to visit some of Kathmandu's well-known temples and palaces, as well as learn how to make the local delicacy mo-mos (dumplings). Nepal proved to be a beautiful and welcoming destination, allowing students to observe the challenges faced by people living in a lower-middle-income economy, which has been affected by the recent COVID-19 pandemic, natural disasters such as the 2015 earthquake, and ongoing economic difficulties.



Find out more about
Overseas student opportunities



Related impacts



Co-operating in Cambodia to develop a speech-language pathology workforce

Researchers from Charles Sturt University played a significant role in evaluating speech-language pathology (SLP) services in Cambodia. The study highlighted the limited availability and accessibility of SLP services, as well as disparities in service access between urban and provincial areas and between adult and paediatric populations. The findings underscored the importance of partnerships in developing a sustainable SLP profession.

The paper focuses on the development of SLP services in Cambodia, analysed through the lens of the United Nations' SDGs. While Cambodia has made strides in areas like poverty reduction and climate action, it still faces significant challenges in many SDGs, including health, education and economic growth. The study emphasises the growing commitment to establishing a sustainable, locally based SLP workforce in Cambodia, which is essential for addressing communication and swallowing difficulties. It also highlights the importance of partnerships in achieving these goals.

Image: (L to R): Mrs Ruth Bryce, Ms Chenda Net, Professor Megan Smith, Dr Catherine Easton, Professor Ngy Tann, Mrs Theary Huot, Mr Team Sar, Ms Many San.



Find out more about
Speech-language pathology workforce



Related impacts



Advocating for communication for all at WHO International conference in the Philippines

At the 74th WHO Regional Committee for the Western Pacific, Distinguished Professor Sharynne McLeod from Charles Sturt University played a pivotal role in advocating for the global recognition and support of communication disabilities.

Representing Charles Sturt and the International Association of Communication Sciences and Disorders (IALP), she highlighted the widespread, often invisible nature of communication disabilities and the absence of biological causes in many cases. Professor McLeod proposed strategic solutions, using the successful establishment of speech-language pathology programs in Vietnam as a model for other nations. Her contributions emphasise the importance of developing a robust global SLP workforce, showcasing Charles Sturt's commitment to advancing health, education and communication rights worldwide.

Image: Distinguished Professor Sharynne McLeod at the WHO International Conference in the Philippines.



Find out more about
WHO International conference



Related impacts



New book explores indigeneity, culture and the UN Sustainable Development Goals

Dominic O'Sullivan (pictured), Professor in Political Science at Charles Sturt University, has critically analysed the UN Sustainable Development Goals (SDGs) in his book *Indigeneity, Culture and the UN Sustainable Development Goals*. His work, the first to critique the SDGs from an indigenous perspective, argues that these global goals are compromised by their lack of attention to culture and political context, limiting indigenous peoples' ability to define their own criteria for not being "left behind".

O'Sullivan suggests that the SDGs need to incorporate indigenous perspectives, particularly through the UN Declaration on the Rights of Indigenous Peoples, to truly support self-determination. Drawing on examples from Australia, Canada and New Zealand, he proposes new indicators for each of the 17 SDGs to better align them with the needs of indigenous communities in liberal democracies. The book emphasises the importance of indigenous agency and leadership in state policy processes to ensure true inclusion.

The book was launched by Professor Stan Grant Jnr in Canberra in July 2023.



Find out more about
Professor O'Sullivan's book



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