

WESTERN SYDNEY
UNIVERSITY



**Driving Sustainability:
A 2015 Roadmap
to Success**



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DRIVING SUSTAINABILITY: A 2015 ROADMAP TO SUCCESS

We take a broad, interdisciplinary approach to sustainability

Western Sydney University's Securing Success 2015-2020 Strategic Plan places a student-centred and research-led culture at the core of our next phase of development.

Our impact driven research agenda has a focus on innovation, wellbeing and sustainability. We seek to embed sustainability principles in the delivery of our innovative teaching programs and to develop graduates that are active global citizens. We have also set out to practice what we teach and for 2020 have set environmental sustainability targets for our campus operations, procurement and teaching practices.



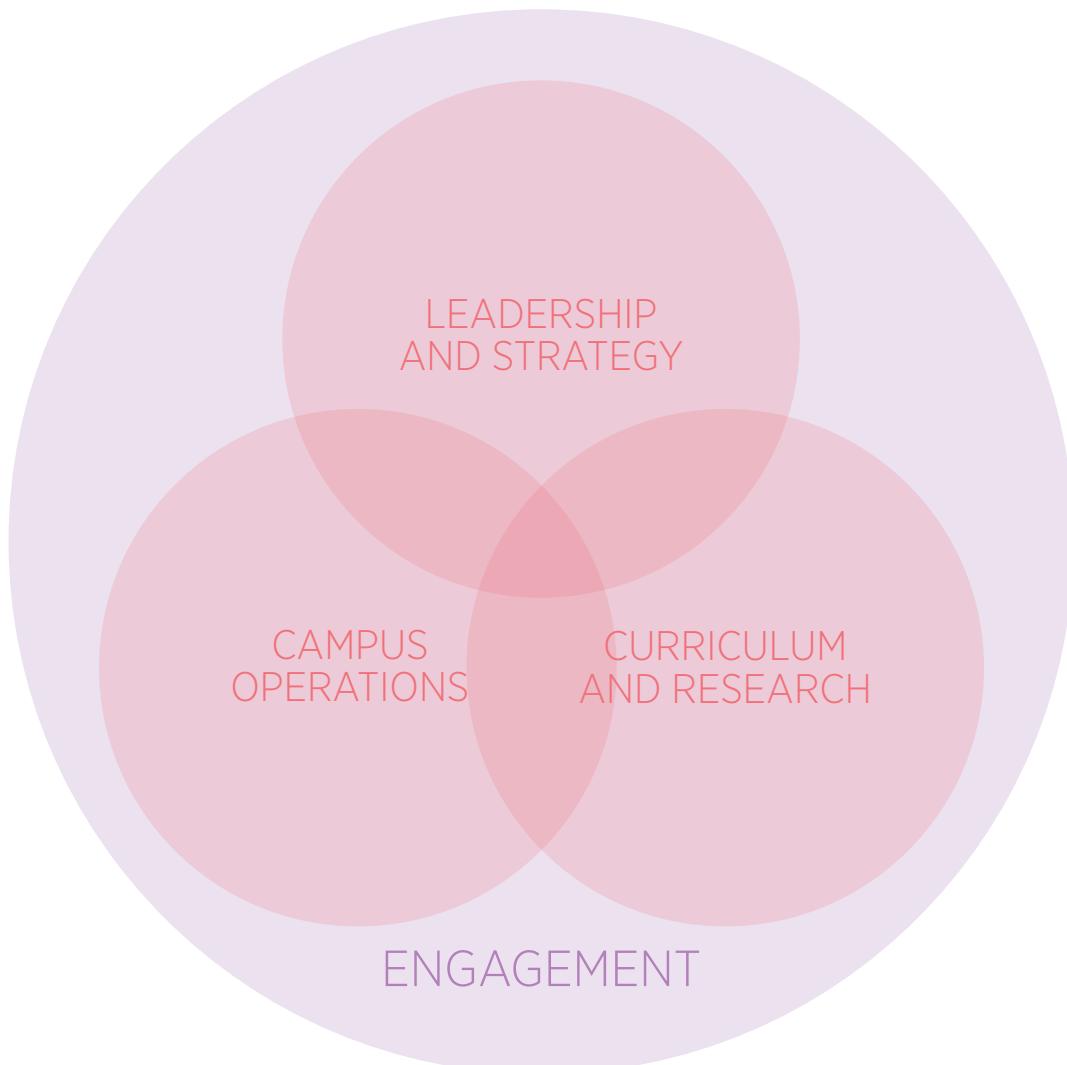
REGIONAL CENTRE OF EXPERTISE
ON EDUCATION FOR
SUSTAINABLE DEVELOPMENT

ACKNOWLEDGED BY



UNITED NATIONS
UNIVERSITY

OUR SUSTAINABILITY FRAMEWORK: MAKING SENSE OF SUSTAINABILITY



SUSTAINABILITY AMBITION

Western Sydney University 2020 Targets



↓ 12%

ENERGY CONSUMPTION PER PERSON
(GIGAJOULES/EFTSL)



↓ 15%

GREENHOUSE GAS EMISSIONS PER PERSON
(TONNES OF CARBON DIOXIDE EQUIVALENT/
EFTSL)



↓ 45%

POTABLE WATER USED PER PERSON
(KILOLITRES/EFTSL)



↓ 90%

WASTE TO LANDFILL PER PERSON
(TONNES/EFTSL)



↑ 90%

RECYCLING RATE AS A % OF TOTAL WASTE



↑ 40%

OFFICE SUPPLIES OF EARTHSAVER OR
EQUIVALENT PRODUCTS



↑ 50%

FOREST STEWARDSHIP CERTIFIED (FSC) OR
CARBON NEUTRAL PAPER USAGE IS CURRENTLY
99.05%. HOWEVER WE ARE INCREASING FSC
PAPER TO 50%.

These targets are against 2010 baseline data and based on past trend and emerging technologies against Equivalent Full Time Student Loads (EFTSL)

OUR CAMPUS INITIATIVES

Our University as a model, teacher and learner

ENERGY MANAGEMENT AND GREENHOUSE GAS REDUCTIONS

Our energy conservation initiatives include: Green Star accredited buildings; networks of Building Management Systems (BMS); Photovoltaic arrays; solar hot water installations and building refurbishment guidelines incorporating LED lighting, occupancy sensors, energy efficient HVAC (heating, ventilating and air conditioning, and passive solar design elements.

WATER CONSERVATION

Water conservation initiatives include Water Sensitive Urban Design, rainwater harvesting, water efficiency measures and campus landscaping with resilient species, trickle irrigation and mulching. The Hawkesbury Recycled Water Scheme can reuse up to 700,000 kilolitres of water each year for irrigating campus grounds, playing fields, agricultural production and bushfire mitigation – equivalent to 350 Olympic swimming pools.

WASTE AND RECYCLING

Waste reduction and recycling initiatives include: waste compaction on all major campuses, with post compaction recycling at Material Recycling Facilities (MRFs); the

removal of waste skips across campuses to reduce illegal dumping, the Green Office program with minimal bins in offices complemented by recycling bins in common areas and across campuses and increasing recycling of a range of waste streams, including donation of preloved furniture, and recycling of e-waste, metals and cooking oils.

BIODIVERSITY CONSERVATION

Hawkesbury campus has the third largest stand of Critically Endangered Cumberland Plain Woodland in Greater Western Sydney and this is of increasing importance, with smaller patches on our Penrith, Bankstown and Campbelltown campuses. Vegetation Management Plans are in place for all remnant bushland. We partner regularly with Local Land Services and leading providers of environmental management and bush restoration services to eradicate noxious weeds (e.g. blackberry), control environmental weeds and eradicate feral pest species.

GREEN PROCUREMENT

Our office procurement includes products that have:

- i. Recycled content - contain at least 30% post-consumer recycled content.

- ii. Third-party standards and certifications - products that adhere to a select group of third-party environmental standards and certifications.

- iii. Other environmental designs - products with these features contain 30% or more agricultural residues, rapidly renewable materials or bio-based plastics.

We support carbon neutral or FSC paper: FSC is the world's most rigorous forest product labelling scheme and we aim to increase our purchases in this area.



THE DIGITAL UNIVERSITY

Graduates who are global citizens and future thinkers

We have a deep commitment to our student experience and to preparing our graduates for success in an ever changing world. The international field of “Education for Sustainability” (EfS) has emerged in response to urgent requirements for critical global citizenship. EfS puts emphasis on the necessary interrelationships between theory and practice; local and global scales and present and future. EfS literacies have global citizenship component that requires a critical evaluation of environment and social justice issues.

CONVERGENT MEDIA LEARNING APPROACHES

We are committed to realising the opportunities offered by new pedagogies and transformational technologies for all students. Since 2013 1,146 units have been converted to a digital learning mode - offering an enriched and exciting student learning experience. In 2015 Basic Standards for Blended and Fully Online Learning Environments were developed with a target to achieve 85% consistency and compliance for 2015. Convergent media approaches such as flipped classrooms have

been introduced to create flexible and engaged teaching experiences. We have also enhanced features in vUWS such as Zoom Webinars.

ELECTRONIC SUBMISSION OF ASSIGNMENTS

We currently have a number of technologies in place that allow electronic assignment submission. The two main providers are: vUWS Assignment tool and Turnitin. Turnitin is used more widely due to plagiarism checking.

TEACHING TARGETS

100%

double-sided printing of all centrally coordinated exams for 2016

95%

compliance rate of electronic submissions for 2020

85%

consistency and compliance for blended learning



32

Programs, Majors and Submajors with an EfS focus across 5 schools

Bachelor of Sustainable Agriculture and Food Security

Immersed in an approach that integrates social, economic and environmental values, students will view plant and animal production from consumer contexts to explore personal and community perceptions about food sustainability. This innovative degree merges topics of agriculture, food and health to empower students to design solutions for international development, community education and the urban-rural interface.

Bachelor of Building Design Management

This new degree enables construction students in the School of Engineering, Computing and Mathematics to develop expertise in designing integrated, practical, spatial, technical and environmentally sustainable building projects.

Sustainable Development Major

Bachelor of Business students can undertake a Sustainable Development major and begin to understand the need to balance development with the need to respect cultures, society, community and the environment.

Peace and Development Sub-Major

This sub-major is concerned with methods for promoting peace, human rights and sustainability. Students from Arts, Social Science and International studies examine the structural causes of racist and gendered violence, environmental crises, forced migration, poverty, resource conflict, and inter-generational inequity.

EDUCATION FOR SUSTAINABILITY

Sustainability focused programs

BUILDING DESIGN
MANAGEMENT
ENVIRONMENT AND
HEALTH
ENVIRONMENTAL
MANAGEMENT
SUSTAINABLE
AGRICULTURE AND
FOOD SECURITY
CLIMATE CHANGE
CONSERVATION
BIOLOGY
ENVIRONMENT AND
SUSTAINABILITY
ENVIRONMENTAL
CONSULTING
ENVIRONMENTAL
HEALTH MANAGEMENT
GEOGRAPHY AND
URBAN STUDIES

HERITAGE AND TOURISM
NATURE CONSERVATION
PEACE AND
DEVELOPMENT
SUSTAINABLE
DEVELOPMENT
URBAN STUDIES
BUSINESS
SUSTAINABILITY
RESPONSIBLE DESIGN
AND SUSTAINABILITY
SOCIAL ECOLOGY
WATER AND
ENVIRONMENT
DEVELOPMENT,
SECURITY AND
SUSTAINABILITY
ENVIRONMENTAL
ENGINEERING

School of Education

As one of Australian Curriculum, Assessment and Reporting Authority (ACARA) cross curriculum priorities 'sustainability' literacies have been mapped and embedded in education programs

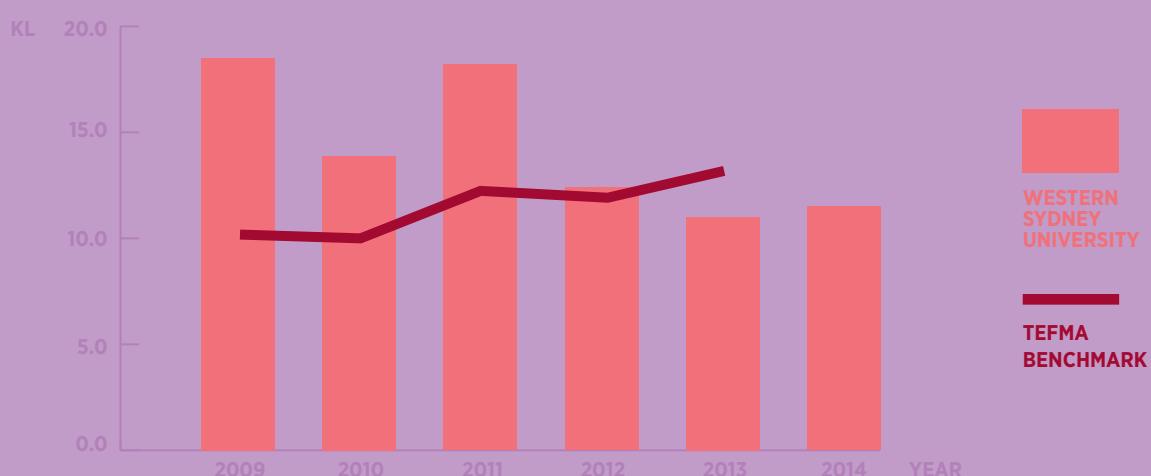
SUSTAINABILITY SUCCESS

We are outperforming national benchmarks

ENERGY CONSUMPTION PER EFSTL



POTABLE WATER CONSUMPTION PER EFSTL



WASTE - LANDFILL VS RECYCLING



SUSTAINABILITY SUCCESS

Our performance 2010 - 2014



↓ 6%

ENERGY CONSUMPTION PER PERSON
(GIGAJOULES/EFTSL)



↓ 10%

GREENHOUSE GAS EMISSIONS PER PERSON
(TONNES OF CARBON DIOXIDE EQUIVALENT/
EFTSL)



↓ 19%

POTABLE WATER USED PER PERSON
(KIOLITRES/EFTSL)



↓ 81%

WASTE TO LANDFILL PER PERSON
(TONNES/EFTSL)



↑ 71%

RECYCLING RATE AS A % OF TOTAL WASTE

SUSTAINABILITY INNOVATION

SURF: The Sustainable University Rolling Fund

The University launched the SURF initiative in 2010 to fund sustainability projects developed, managed and implemented by University staff and students. The initiative provided up front finance to staff and students to fund projects that aimed to reduce environmental impacts and have quantifiable returns. In 2013 a second stream of funding was offered to support the implementation of Education for Sustainability curriculum programs and student learning.

“SURF funding was sought to support the solar car project and the approved application was instrumental in guaranteeing the survival of the project at that stage since it allowed the team to purchase much needed equipment to kick start the project. If it wasn’t for this generous contribution we would have failed to showcase our project and attract much more needed funds. The SURF support was essential as it lifted the morale of the students.”

Dr Ali Hellany Senior Lecturer
Academic Course Advisor, Engineering ACA (honours) Academic Supervisor, Solar Car Team
SCEM

OUTCOMES

\$345,000
funds

42
projects completed

740
participants

8.25% p.a.
estimated return on investment

IMPACT

Savings p.a.



86,805 km
of car travel = traveling Sydney to Perth by car x26



11,168 tonnes
of Greenhouse Gases = the weight of 25 Boeing 747s



1,264 kl
of water = enough to fill 21 backyard swimming pools



172 tonnes
of waste diverted from landfill = equivalent to weight of 5 semi-trailers

REGIONAL AND INTERNATIONAL PARTNERSHIPS

Think global, act local

Western Sydney University continues to be connected and engaged with our region.

We have a wide range of programs and initiatives from school's outreach, work integrated learning placements and strong research partnerships that demonstrate this commitment. The University hosts one of four Australian Regional Centre's of Expertise on Education for Sustainable Development - RCE Greater Western Sydney (RCE-GWS).

Regional Centres of Expertise on Education for Sustainable Development (RCEs) are endorsed by the United Nations University. They bring together key educational, community, NGOs, government, business and council groups in a specific region to link and leverage sustainability outcomes. RCEs are a proven international framework to deliver regional impacts. There are 133 RCEs now operating internationally which our students and academics have access to.

\$1.2 m

Collaborative regional funding for sustainability research and education

35

Regional partners committed to RCE-GWS

LOOKING FORWARD

In 2016 - supported by New Colombo Mobility Plan funding - our tourism and business students will undertake an immersive study program on sustainable tourism in South Korea at RCE Tongyeong. They will stay at the RCE's Sejahtera Centre - a \$20m USD investment by the South Korean Ministry of Environment in Education for Sustainable Development - set up to be the hub for Asia Pacific RCEs.



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