RCE SNAPSHOT 2014

Greater Western Sydney

LOCAL NETWORKS SUPPORTING REGIONAL CHANGE

Produced by the Office of Sustainability, University of Western Sydney, RCE-GWS Secretariat
RCE Greater Western Sydney

Transformative Learning

Action Research

Events and Seminars
An RCE is a network of existing formal, non-formal and informal education organisations, mobilised to deliver Education for Sustainable Development (ESD) outcomes to local and regional communities.

The RCE network is coordinated and delivered through the United Nations University and aspires to achieve the goals of the UN Decade of Education for Sustainable Development (DESD, 2005 - 2014). To date 135 RCEs have been endorsed globally and constitute a Global Learning Space for Sustainable Development.
Greater Western Sydney (GWS) is located in the western part of the Sydney metropolitan area and is a growing region of economic opportunity, community aspiration and environmental diversity. GWS is recognised as an area of growing national importance and has one of the fastest growing populations in Australia. As such it faces the distinctive sustainability challenges associated with a rapidly developing, culturally diverse, peri-urban region.

- **GWS Populations**
  - 1996: 1.6 million people
  - 2011: 2.0 million people
  - 2036: 3.0 million people

- **GWS Local Government Areas**: 14
  - Auburn City, Bankstown City, Blacktown City, Blue Mountains City, the Camden Council area, Campbelltown City, Fairfield City, Hawkesbury City, Holroyd City, Liverpool City, the City of Parramatta, Penrith City, The Hills Shire and Wollondilly Shire

- **GWS Profile**
  - Home to roughly 1 in every 11 Australians
  - Has the third largest economy in Australia
  - Has more than 240,000 local businesses
  - Encompasses significant areas of national parks, waterways and parklands

- **GWS Population Growth**

- **GWS Population Density**: 2.15 persons per hectare

- **GWS Land Area**: 894,074 hectares
OUR RCE
GREATER WESTERN SYDNEY

The United Nations’ endorsed Regional Centre of Expertise on Education for Sustainable Development – Greater Western Sydney (RCE-GWS) has 34 regional partners. All stakeholders are committed to the RCE vision of building collaborative and innovative platforms for transformative teaching and learning. Four interwoven regional challenges have been identified for GWS:

1. Transitioning to a low carbon economy
2. Developing sustainable communities; health, housing and transport
3. Ensuring agricultural sustainability and food security
4. Conserving biodiversity and river health

RCE-GWS has gained international and national recognition for its work and is a proven international framework for engaged research, teaching and community engagement.

Given the complexity of these sustainability challenges the RCE-GWS constituency recognises this work is an ongoing process of action, learning and reflection via its forums, working groups and governance processes. Using a hybrid form of Open Space Technology, partners have formed a series of working groups.

SNAPSHOT

FUNDING RECEIVED
$1,040,000
worth of external funding was received for a range of local initiatives since inception

SOCIAL MEDIA
113,379
people were reached in a number of projects via social media sites

STUDENT OUTREACH
11,271
primary and secondary school students have been engaged via school-based programs

COMMUNITY ENGAGEMENT
1,935
community members have been engaged via local programs

PARTNERS
34
regional RCE partners from local government, tertiary education and community groups
OUR WORK

OUR PROGRAMS FOCUS ON

Transformative Learning

“Transformative learning is the idea of people changing the way they interpret their experiences and their interactions with the world with others and their environment” (Mezirow, 1978).

Action Research

“Action Research is a process of community inquiry and active participation to address questions and issues that are significant to the participant as co-researchers” (Reason and Bradbury, 2008).

Events and Seminars

Events and seminars are a useful tool to engage on regional issues to different target audiences.
OUR NETWORK
PARTNER CONSTITUENCY

School Networks
Community Groups
Local Government
Vocational Education & Training
Associate Members
Corporates Consultants Business
University

34 members constitute RCE Greater Western Sydney

INITIATIVES

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KEY: IMPACT STAR
This symbol indicates the actual impacts of an intervention or initiative on the social, economic and environmental factors which the intervention is designed to affect.
The University of Western Sydney occupies a historic 40 hectare holding of prime agricultural land on the banks of the Hawkesbury River, gazetted in 1799. The Darug people are the traditional custodians of the land on the south bank of the Hawkesbury River where the Riverfarm is situated.

The reinvigoration of the Riverfarm will transform the site into a unique outdoor living and learning laboratory that links land, food, culture and water for a range of educational purposes. TAFE WSI pre-apprentice students, under the supervision of their teachers, have assisted with the rejuvenation and renovation of the Riverfarm site.

STUDENT LEARNING OUTCOMES

“After being at the Riverfarm I have been inspired to learn more about how we as humans have been affecting the ecosystem in our own back yard, and the simple steps I can take to make a change. I would love to take these ideas into my teaching.” - UWS Education Student
**Windsor to Weir** was funded by the NSW Office of Environment and Heritage led by Greening Australia. The project aims to support and connect eight existing local Landcare and Bushcare sites along the Hawkesbury Nepean River, one of which is the Hawkesbury Riverfarm.

**Fish @ the Hawkesbury Riverfarm** was funded by the NSW Department of Primary Industries, Recreational Fishing Trust as a Habitat Action Grant ($21.8k), in partnership with the Bass Fishing Club. The initiative involves the weed management and re-vegetation of the riparian zone, as well as the installation of a number of artificial fish hotels.

**Project Partners**

University of Western Sydney, Bass Fishing Club, Greening Australia, Blue Tongue Ecosystems, Department of Primary Industries - Fisheries & Aquaculture, Youth Food Movement GWS and local artist Mr Greg Hansell
The Youth Eco Summit (YES) is a unique two-day curriculum-based event held annually at Newington Armory, Sydney Olympic Park. YES exemplifies the shift to a 21st Century model of education; one that ensures curriculum content and teaching pedagogies remain relevant and responsive in a rapidly changing world. It also fosters social change by encouraging students to adopt sustainable practices and promotes student leadership.

Building on the United Nations’ ‘International Year of Family Farming’, the 2014 summit saw primary and secondary students participate in more than 50 curriculum-linked hands-on workshops, interactive displays, seminars and presentations.
YES was awarded the NSW Green Globe Award for Public Sector Sustainability in 2013. It was also awarded a National Australasian Campuses Towards Sustainability Green Gown Award for Social Responsibility, as well as runner up for the International Green Gown Award in the same category in 2014.

COUNTRIES THAT PARTICIPATED IN YES VIRTUALLY

8,650 participants attending the two-day summit, both on-site and online, over 4 years

73% of teachers implemented sustainability into the curriculum after the event

57 program providers participated in YES including businesses, institutions and government agencies

Project Partners
Sydney Olympic Park Authority, NSW Department of Education and Communities, University of Western Sydney, UWS Pre-Service Education Students, NRMA and the GWS Giants
The UWS Office of International Social Engagement and Leadership Program (SELP) is a volunteer program that runs annually over four weeks in GWS. SELP brings together teams of multi-disciplinary domestic and international student volunteers to assist in local community projects. The program is closely aligned with the University’s vision and mission to enhance the student learning experience through engaging with community and offers an inclusive, intellectual learning environment that values social responsibility and sustainability. SELP teams have worked with a variety of community groups and local government including RCE-GWS partners to deliver local community benefits ranging from youth action campaigns to bush regeneration projects.

In 2014 Penrith City Council, an RCE-GWS partner, had three SELP teams that worked on ideas for how to engage the community with events and activities for World Environment Day, researching other councils Sustainable Purchasing Policies and waste education and local recycling engagement events.

**MUTUAL BENEFITS**

“The program has been valuable to Council and the outcomes are a good return on our investment of time. Above and beyond this, we recognise the value of providing learning opportunities to UWS students to help their professional development, and to expose students from a range of study areas to sustainability.” *Penrith City Council*
**EFS* PROGRAMS**

**COURSE BASED LEARNING**

"Education for Sustainability" (EfS) is a lifelong learning process that leads to an informed and involved citizenry having the creative problem-solving skills, scientific and social literacy, and commitment to engage in responsible individual and cooperative actions (McNerney and Davis, 1996). A number of UWS students undertake work placement and short internships to gain real-world professional experience, as individuals or in teams. Students have worked with a variety of community groups, organisations and businesses including RCE-GWS partners.

### Projects

<table>
<thead>
<tr>
<th>Project: Digital Knowledge Ecosystems Mobile App Development</th>
<th>RCE Partner: UWS &amp; Hawkesbury Harvest</th>
<th>UWS Students: Computing</th>
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<tr>
<td>Project: Community Support for Senior Citizens</td>
<td>RCE Partner: SEVA International</td>
<td>UWS Students: Peace and Development</td>
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<td>Project: Professional Experience Placements for Pre-Service Teachers</td>
<td>RCE Partner: NSW Public Schools</td>
<td>UWS Students: Education</td>
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<tr>
<td>Project: Marketing the Hawkesbury Harvest Farm Gate Trail</td>
<td>RCE Partner: Hawkesbury Harvest</td>
<td>UWS Students: Marketing</td>
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"I commend the participatory and collaborative approach taken by the UWS Peace and Development team and in building community relationships in our common pursuit of sustainable development." *SEVA International*

"Students presented us with four (marketing) reports that are highly valued. We have gained a great amount of inspiration and direction." *Hawkesbury Harvest*
Held for over a decade, the UniSteers Challenge brings together high school agricultural students to compete in the annual steer-raising challenge. Each school receives a Poll Hereford steer that students feed, handle and care for, for approximately 100 days. The steers are then presented for competition by each school, before being sold on the beef market.

UniSteers focuses on production systems, husbandry of the animals, careers and education in agriculture. This year for the first time senior students participated in an additional workshop focusing on the science of meat from different cuts to the chemical composition and taste testing.

“Sensory testing was a highlight, kids seemed to enjoy the challenge of meat identification” - High School Teacher

NUMBER OF STUDENTS PARTICIPATING IN UNISTEERS ANNUALLY
HIGH SCHOOLS THAT PARTICIPATED IN THE UNISTEERS CHALLENGE

Project Partnerships
University of Western Sydney, Primary Industry Centre for Secondary Education (PICSE), NSW Public Schools and Catholic and Anglican School Education

“We want children to learn how to value food, and to understand the effort and commitment it takes to bring good quality food from the paddock to the plate” - Stephen Blunden, UniSteers Coordinator

76% of students wanted to learn more about agriculture at UWS as a result of the “Meat Science” workshop

16 schools participated in the annual UniSteers Challenge from across the Sydney Basin
The GreenSkills Hub is a state-of-the-art energy efficient building located at Nirimba College TAFE NSW - Western Sydney Institute. The GreenSkills Hub models sustainable technology, innovation, design and practices to deliver a range of green or environmentally friendly skill-sets in a range of discipline areas.

The building itself features a number of the key sustainable design elements including the floor plan, orientation, structural elements, energy and water usage, water harvesting, heating and cooling features, lighting embedded technology and refrigeration systems - all of which are linked to education and research.

Through the use of this facility the Institute is able to address national training needs in new and emerging green technologies, while connecting and engaging with industry partners and the community.

800 students access the GreenSkills Hub annually as part of their hands-on training.

11 diverse qualifications use the GreenSkills Hub from Renewable Energy to Information Technology.
Youth Leading the World (YLTW), an Oz Green initiative, encourages young students to become change agents in their own communities. Wooglemai Environmental Education Centre held two camps that brought together South-West Sydney students, providing them with an opportunity to collaborate and develop projects centred around sustainability. From this, three schools were given a small amount of seed funding to support sustainability projects in their schools.

Similarly students from the Penrith region attended a two-day workshop at UWS Kingswood campus. After participating in a range of activities, students were inspired to come up with their own projects for their schools. Kingswood High School submitted a successful funding application to rejuvenate their school’s vegetable garden.
Bee Aware of Your Native Bees is an experiential learning, environmental education program based across five selected sites in Greater Western Sydney and Lithgow, funded by the New South Wales Environmental Trust.

The program aimed to promote the conservation of native bees by building awareness of their existence and importance as pollinators, assessing current distribution, diversity and habitat preference and increasing existing populations by the installation of artificial habitat.

PARTICIPATING SITES ACROSS FIVE LOCAL GOVERNMENT AREAS

Publication produced
A series of community based workshops were conducted by Bees Business. Along with this were the installation of artificial bee hotels. The first **Australian Native Bee Symposium** was held in 2015 at the UWS Hawkesbury campus with almost 200 guests.

**Social Media Engagement**

- **Twitter**: 404 posts, favourites and retweets
- **YouTube**: 443 clip views, aired on Television Sydney
- **Facebook**: 4,307 posts, likes and comments

**Project Partners**

Bees Business, University of Western Sydney, Australian Museum, John Irving Community Garden, Blue Mountains Organic Community Garden, Australian Pioneer Village, Mamre House and Erskine House

**Bee Aware of Your Native Bees** was an Environmental Trust Funded program.

**300** different species of native bees are found in the Greater Western Sydney region

**778** community members participated in the program on site and via social media
“We were called the Bitterwater clan because we drank water from the rivers. There is Sweetwater and they drink water from the springs. Then there’s Saltwater - they eat fish from the sea.” - Aunty Fran Bodkin, D’harawal Elder

The University of Western Sydney Centre for Educational Research led the Love your Lagoons (LYL) study. The LYL program is an inclusive wetland sustainability education initiative across the three Macarthur LGAs in South West Sydney.

Students from Year 2 to Year 11 attended the LYL Planning Day on 18 February 2014 with their class, teachers and community educators. After the planning day six schools actively took up the research project opportunity to integrate sustainability into their curriculum through investigating a local wetland. The students celebrated their work in September at the annual Belgenny Farm Sustainable Schools Expo, Camden.
SCHOOLS THAT PARTICIPATED IN THE LOVE YOUR LAGOONS PROJECT

Project Partnerships
Australian Museum, University of Western Sydney, Campbelltown City Council, Wollondilly Shire Council and Camden Environmental Education Centre

$150k

9 community partners participated in the Love your Lagoons project

329 students participated in the program from both primary and secondary schools

SCHOOL AND COMMUNITY COLLABORATIONS
“The benefits for us were definitely exposure and creating connections – we did speak to other people doing displays, we have had the councils interested in general in Streamwatch.” - Manager Outreach, Australian Museum
The RCE-GWS partners have the opportunity to collaborate with the School of Science and Health Bachelor of Natural Science students on a year long Field Project Study with both gaining benefits from the arrangement.

All UWS undergraduate students undertaking this degree are required to undertake a 'real world' project for a professional or community client in their area of study. Students are required to identify a problem/issue and a relevant research question in consultation with a client. Over 12 months students will use a traditional scientific research framework to work towards producing a final report that assists the client’s issue. UWS Field Projects require either Human Ethics or Animal Care and Ethics to be undertaken as necessary.

MAKING A DIFFERENCE
STUDENTS AS RESEARCHERS

The UWS Bachelor of Natural Science offers the following majors:

- Animal Science
- Environmental Health
- Environmental Management
- Sustainable Agriculture and Food Security

94 students have participated in the “Field Project” unit as part of their degree this year.

327 clients have taken on students to complete their projects over four years.
STUDENT CASE STUDIES

**Project:** Investigating the awareness of climate change in the city of Parramatta, NSW
**RCE Partner:** Parramatta Climate Action Network
**UWS Student:** Environmental Management

**Project:** Restored Riparian Vegetation Suitability as Nesting Sites for Local Native Avian Species
**RCE Partner:** Greening Australia
**UWS Student:** Environmental Management

**Project:** Animals Studies Market Driven Animal Production Systems: A case study on the impacts of new RSPCA guidelines on poultry in NSW
**RCE Partner:** Office of Sustainability and Hawkesbury Harvest
**UWS Student:** Animal Science

**Project:** A comparative analysis of substrates for growing mushrooms
**RCE Partner:** Hawkesbury Earthcare Centre (HDRA)
**UWS Student:** Food Systems

INFORMING FUTURE WORK
“The research has shown a high concern from the general population over the welfare of chickens and how they are raised however while it is the consumer who is changing animal production systems there is still confusion about the various methods of production. Those who buy at the farm gate (Hawkesbury Harvest) often confuse the barn system with the free range system and need further educating.” - UWS Animal Science Student
‘Checking the Pulse of the Hawkesbury River’ is an academic environmental enrichment program that targets Stage 6 (Year 11 and 12) science school students. The program runs twice a term on the Hawkesbury River, allowing students to monitor water quality and algal diversity to assess river health on the Hawkesbury River at Sackville.

Student data is published on the HaRWEST website, produced by UWS, which aims to connect scientific water quality data, educational river information and personal water stories to the communities of the Hawkesbury-Nepean.

Project Partnerships
University of Western Sydney - School of Science and Health and Brewongle Environmental Education Centre

Scan the QR code to visit the HaRWEST website
SCHOOL STUDENTS AS RESEARCHERS

BANDICOOTS, BUGS & THE BUSH

‘Bandicoots, Bugs and the Bush’ is an academic environmental enrichment program that targets Stage 5 (Year 9 and 10) public school students, building on scientific and geographical investigation skills. The program runs once a term at the UWS Hawkesbury Campus using the critically endangered Cumberland Plain Woodland. Students work in small teams and are given a scenario to explore, and learn fieldwork and analysis techniques to come to conclusions about the scenario.

By tapping into University of Western Sydney’s expertise and facilities and collaborating in program design and delivery, the Environmental Education Centres enhance their suite of offerings and knowledge.

645 students have participated in both of these environmental enrichment programs

10 years of engagement with schools and students focusing on science and environmental education

Project Partnerships

University of Western Sydney - School of Science and Health and Longneck Lagoon Environmental Education Centre
The Penrith Business Seminar, “The Green Bottom Line”, was a free event for small to medium enterprises (SMEs) coordinated by Penrith City Council and supported by TAFE WSi. The seminar looked at how going green could help SME businesses achieve real money savings while minimizing their impact on the environment. The seminar covered the benefits of going green, short term and long term opportunities, access to state government programs and training opportunities.

18 local SME businesses from across the Penrith LGA participated in the seminar.

100% of participants said they would ‘probably’ or ‘definitely’ follow up about the programs.

Project Partnerships
Penrith City Council, TAFE NSW Western Sydney Institute, Parramatta City Council and the Office of Environment and Heritage.

TYPES OF BUSINESSES IN ATTENDANCE
EAT WORKSHOPS
PROFESSIONAL DEVELOPMENT

Held in conjunction with the Youth Eco Summit, Sydney Olympic Park Authority trialed a Teacher Professional Development workshop for primary and secondary teachers. Engagement with Agriculture Toolkit (EAT) workshops are aimed at teachers to build the knowledge capacity and professional network of school teachers around the cross-curriculum priority area of Sustainability, particularly where it intersects with Agriculture, Science and Technology and Hospitality. At this workshop a live, interactive video connection and demonstration between a crocodile farmer in the Northern Territory, an alligator farmer in the USA and the attending teachers at Sydney Olympic Park was showcased.

35 primary and secondary teachers attended the first EAT workshop event

11 K estimated people connected to the event via social media including Twitter and Instagram

Project Partnerships
Sydney Olympic Park Authority, Royal Agricultural Society of NSW, PICSE and Immersiv8
The Nirimba Education Precinct held a free community e-waste recycling weekend for the general public and small businesses in May 2014. The event targeted every day household items such as televisions, computers, DVD players, data projectors, cables and many other items that people struggle to dispose of in an environmentally responsible manner.

The event was overwhelmingly successful with 2 semi-trailer loads, equivalent to 20,000 tonnes, of e-waste collected on site and will now become a key annual event for the site and local community.

Project Partnerships
TAFE NSW Western Sydney Institute, University of Western Sydney UWSCollege, Wyndham College, Terra Sancta College and EcoActiv

308 cars dropped off their e-waste at the Nirimba site from the surrounding local area

20 K estimated tonnes of electronic waste, largely made up of televisions, was collected and recycled
“We, the participants of the UNESCO World Conference on Education for Sustainable Development held in Aichi-Nagoya, Japan, from 10 to 12 November 2014, adopt this Declaration and call for urgent action to further strengthen and scale up Education for Sustainable Development (ESD), in order to enable current generations to meet their needs while allowing future generations to meet their own, with a balanced and integrated approach regarding the economic, social and environmental dimensions of sustainable development.,”

*Aichi-Nagoya Declaration on Education for Sustainable Development*

RCE-GWS has committed to the following three year UNESCO Global Action Program (GAP) programs:

1) To accelerating sustainable solutions at a local level via two pathways:
   i) Continuing to link and leverage current RCE-GWS related programs
   ii) “Engaging the disengaged” and targeting non traditional community groups for collaborative programs

2) Empowering and mobilizing local GWS youth via:
   i) continuing current RCE-GWS related programs – notably the award winning Youth Eco Summit (YES) – as well as efforts in linking to international RCE partners and embedding Education for Sustainability principles in the Higher Education curriculum of UWS
   ii) a stocktake to identify gaps and add value to relevant programs as applicable
References
