



The Sustainable Engineering Society

...engineering in harmony with ecology

SENG-WA Newsletter – March 2023

In this edition of the SENG-WA newsletter, we present an introduction to the Green Star Buildings tool by EA, incorporating the SDGs into your studies with Murdoch, and means of accounting for the future invaluable quality of nature by the WA Biodiversity Science Institute and the UWA Public Policy Institute.

Readers are reminded of the call for abstracts for the EA Climate Smart Engineering Conference taking place in November.

We invite members to contribute to the SENG Accessible Sustainability Collection by submitting any relevant sustainability and climate change material useful for research, project work, policy development and education by emailing suggested links to seng.library@gmail.com.

WA businesses are also invited to let us know how they are being Sustainability Champions in their industry. Please [get in touch](#) if sustainability is at the heart of your business, or a business you know.

QUESTIONS AND ANSWERS

A 'Climate Change Challenges' series of webinars and forums was run in 2021 by the WA Division of Engineers Australia, in conjunction with the University of WA and Murdoch University.

During the series, over 100 questions or comments were submitted from around 1000 attendees. A 'Q&A' of the most pertinent, together with suggested answers, was put together by a group of senior EA members. The answers are NOT official EA answers; they are possible answers provided by the group as thought provokers.

In our Newsletter we will be publishing one Question and one possible Answer in each edition. We invite comments from our readers, a summary of which will be published in the following edition. Simple comments, such as agree/disagree are welcome, as are more detailed comments. These may be emailed to the [Q&A reply email](#).

This month, our question and possible answer is:

Q

What are the ideas for regeneration?

A

Basically, regeneration is about making things significantly better. It is beyond keeping environmental, social and economic outcomes the same or a just a little bit better. Regeneration is making them significantly better, at least one and a half times better. Most engineering projects can get benefit cost ratios well over 1.5, the aim is to do the same for social and environmental conditions. An environmental example is putting back over 1.5 times the vegetation you remove, which can be afforded by a project with good economics.

EVENTS

INSIGHTS INTO INCLUSIVE CONSTRUCTION

Webinar by Engineers Australia

Date: 20 March 2023

Time: 09:00 – 10:00 AM AWST

The new Green Star Buildings Tool aims to tackle inclusivity on construction sites by introducing ratings that are designed to drive diversity, safety and well-being.

This webinar looks at the guidelines, examining why inclusivity is important, how it can be achieved and - importantly - how sites and managers can measure the success of their programs to ensure credits in the Green Star process.

In this session you will learn:

- How to define inclusive construction
- How to use needs-based testing to introduce effective inclusive practices.
- Different programs and practices that can be used to address inclusivity.
- Ways to measure the success of inclusive programs implemented.

More information: <https://www.engineersaustralia.org.au/event/2023/02/insights-inclusive-construction-47251>

SUSTAINABILITY BY DEGREES: THE SDGs AND YOUR EDUCATION

Event by Murdoch University

Date: 22 March 2023

Time: 12:30 – 4:30 PM AWST

Location: Murdoch University, The Loft, Upstairs Bld 425, 90 South Street, Murdoch

Many organisations are deeply engaged with the Sustainable Development Goals (the SDGs), a globally recognised plan of action to tackle climate change, gender inequality, poverty, environmental degradation, unsustainable production and economic structures.

In this workshop, participants will work with trained facilitators to discover:

- your personal values and understanding of what sustainability is,
- what Murdoch University is doing to support implementation of the SDGs, and where are the gaps,
- what you feel you need to be well prepared around the topics of sustainability in your studies

More information: <https://www.eventbrite.com.au/e/sustainability-by-degrees-the-sdgs-and-your-education-tickets-550170393457>

PUTTING A VALUE ON NATURE: ENVIRONMENTAL COSTS AND POLICY

Free Event by The WA Biodiversity Science Institute and UWA Public Policy Institute

Date: 23 March 2023

Time: 5:30 – 7:00 PM AWST

Location: Level 3, Eastern Terrace, WA Museum Boola Bardip, Perth Cultural Centre, Perth

Nature and biodiversity are often considered invaluable and beyond a price tag, yet policy discussions concerning the natural environment regularly rely on placing a cost to action and inaction. The 'value' of nature is culturally dependent and socially constructed, as deeply historical Indigenous ways of knowing and engaging with Country as custodians do not rely on market value, costs and trade-offs, and political agendas. How can we integrate the 'invaluable' into policy budgeting? How do we account for the future invaluable quality of nature and its intergenerational costs in policy settings?

The panel will discuss key findings from the State of the Environment Report 2021, the net-zero and 'nature positive' pledges and targets committed to by organisations and governments, ways of integrating Indigenous ecological and cultural wisdom, and harnessing scientific knowledge to inform nature conservation decision-making.

Join the WA Biodiversity Science Institute and UWA PPI for a discussion on how the natural environment is valued by government, business, Traditional Owners, various communities and more. The panel will provide input on policy challenges when defining value, the consequences of

not articulating value, and how policymakers might consider value in a multitude of ways beyond economics.

More information: <https://wabsi.org.au/latest-news/putting-a-value-on-nature-economic-costs-and-policy/>



WA CLIMATE SCIENCE INITIATIVE - PUBLIC LECTURE

Free Event by Murdoch University and DWER

Date: 24 March 2023

Time: 2:00 – 5:00 PM AWST

Location: Boola Katitjin, Murdoch University, 90 South Street, Murdoch

The WA Climate Science Initiative is producing the most reliable and comprehensive Western Australian climate change projections to date extending a century into the future. These projections will help business, industry and all levels of government to better understand and adapt to the impacts of climate change.

The project is part of the Climate Science Initiative being led by the WA Government Department of Water and Environmental Regulation (DWER) in partnership with Murdoch University, the NSW and Australian Regional Climate Modelling Project (NARCLIM 2.0) and the Pawsey Supercomputing Research Centre.

Join experts from the DWER and Murdoch University on Friday 24 March to hear about how the state-of-the-art projections are being produced. Presentations will be followed by a facilitated panel discussion and light refreshments

More information: <https://www.eventbrite.com.au/e/wa-climate-science-initiative-public-lecture-tickets-540796044527>



CLIMATE SMART ENGINEERING CONFERENCE 2023 (CSE23)

Event by Engineers Australia

Date: 29-30 November 2023

Location: Melbourne Convention and Exhibition Centre

Engineers Australia has just announced that the 2023 Climate Smart Engineering Conference #CSE23 call for abstracts is now open. Abstracts are invited for conference themes including the circular economy, energy transition, adaptation and mitigation, systems thinking, business management and more. Don't miss your chance to inspire the profession and be at the forefront of sustainable engineering.

Help us spread the word to your colleagues, co-workers, peers, and friends that the call for abstracts and early bird registrations for CSE23 is now open.

Engineers Australia's signature conference, Climate Smart Engineering (CSE23) will be held at the Melbourne Convention and Exhibition Centre 29-30 November 2023. Now in its third year, CSE23 will continue to address climate change. More importantly, the conference will demonstrate that sustainable practices and environmental considerations are central to the engineering profession, whatever the discipline and wherever it's applied.

Submit your abstract today. <https://engineersaustralia.org.au/cse/abstracts>

NEWS

HEATWAVES ROCK WA INVERTEBRATES (SOURCE: WATERCAREER)

Marine heatwaves are decimating sea urchins, molluscs and other life at WA's Rottnest Island.

Researchers believe rising sea temperatures are to blame for the plummeting number of invertebrates such as molluscs and sea urchins at Rottnest Island, with some species having declined by up to 90 per cent between 2007 and 2021.

The west end of Rottnest Island has suffered a "catastrophic decline" in biodiversity, according to Adjunct Professor Fred Wells, from Curtin University's School of Molecular and Life Sciences.

Full article: <http://www.watercareer.com.au/news/heatwaves-rock-wa-invertebrates>

Research article: <https://www.frontiersin.org/articles/10.3389/fmars.2023.1075228/full>

FASTER, HIGHER, HOTTER: WHAT WE LEARNED ABOUT THE CLIMATE SYSTEM IN 2022

Beyond all the hype and all the anxiety about climate policymaking, the upbeat news making about energy transitions and the growing dread of civilisational collapse, what have we learned about the climate system in the last year? This 3-part series outlines some key observations drawn from research and data published in 2022.

Part 1: <http://www.climatecodered.org/2023/02/faster-higher-hotter-what-we-learned.html>

Part 2: http://www.climatecodered.org/2023/02/faster-higher-hotter-what-we-learned_22.html

Part 3: http://www.climatecodered.org/2023/02/faster-higher-hotter-what-we-learned_24.html

INDUSTRIAL HEMP PROCESSING FACILITY TO PROVIDE ALTERNATIVE BUILDING MATERIAL FOR HOMES IN SA FIRST

An industrial hemp processing facility is set to start operating later this year, which could lead to more South Australians living in homes made from carbon neutral fibre.

Australian plant processing company Vircura is developing the facility as part of a new innovation precinct in Monarto, at the site of a former retail warehouse.

Vircura general manager Adam Djekic said industrial hemp was a versatile material.

"It can be put into a range of products from building products, like hempcrete, to textiles," he said.

Full article: <https://www.abc.net.au/news/rural/2023-03-10/south-australian-hemp-homes/102072664>

SUPERCOMPUTER TO PREDICT WA CLIMATE CHANGE 75 YEARS INTO FUTURE

One of the world's most powerful and greenest supercomputers will soon produce the most reliable and comprehensive climate change projections for Western Australia until the end of the century.

The Pawsey Supercomputing Research Centre's Setonix supercomputer will help governments, businesses, and communities understand and adapt to the impacts of climate change.

The projections will allow the Government to prepare for more intense extreme weather events like cyclones, floods and bushfires, better protect WA's unique biodiversity and support major investment decisions in energy infrastructure, planning and regional development.

Full media release:

<https://www.mediastatements.wa.gov.au/Pages/McGowan/2023/03/Supercomputer-to-predict-WA-climate-change-75-years-into-future.aspx>

More information on the Climate Science Initiative:

www.wa.gov.au/service/environment/environment-information-services/climate-science-initiative



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