



WICCNews

WICC Newsletter October - November 2023



Kambarang

Second spring, wildflower season
Season of birth, longer dry periods



Farmers in focus

Soils save the world

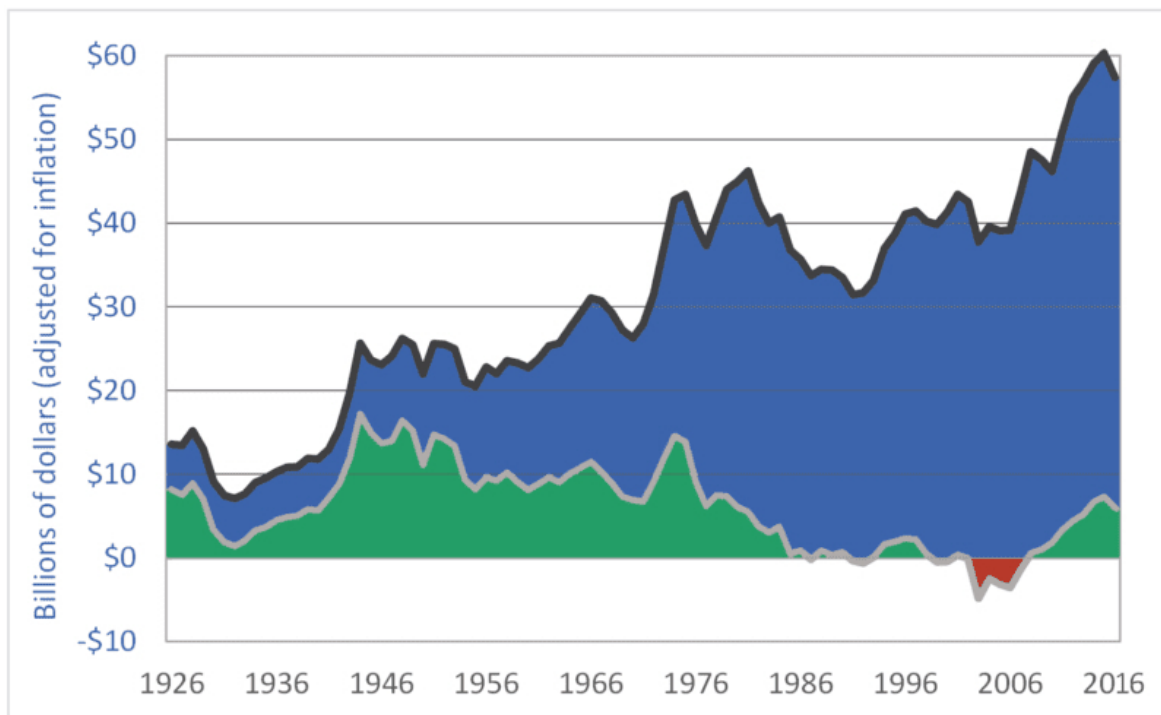
In early September, WICC staff and members joined a crowd of over 300 people attending the Regenerative Agriculture Conference 2023 in Margaret River. The term 'regen ag' has had a

resurgence in recent years with some farmers and agronomists questioning what regenerative agriculture is, often finding the term a little ambiguous. Some even find the term offensive as it implies we have damaged our farms through conventional practices. Following three days of talks from regenerative farmers and soil scientists we feel we can shed a bit more light on regenerative agriculture, its principles and how it is making a difference for many growers and the environment. Many 'conventional' farmers will find that regenerative agriculture is just good farming practice.

What is regenerative agriculture anyway?

Regenerative agriculture aims to improve farmland – increasing soil health, biodiversity, water cycling, plant and animal health. Farmers can use a range of sustainable techniques to achieve this goal. Grazing management, planting trees, minimum tillage, multi-species and perennial pastures are often used as tools to help restore degraded land. Techniques have a scientific basis but also go beyond soil chemistry into biological interactions.

By providing soluble nutrients directly to plants we have inadvertently, over time, reduced the plants' capacity to use biological networks to access otherwise inaccessible nutrients in the soil. Costs of farm inputs have become an increasingly large burden on farmers as soil and plant health declines. The graph below from Canada shows the impacts this is having on farmers hip pockets. While total farm revenue (black line) has increased over time, net profits have largely decreased... with input costs (shaded blue section) taking the biggest piece of the pie. There is much more money in agriculture these days.... but it is not going to the farmer.



Canadian gross vs net farm profit - 1926-2016. Source: Statistics Canada, CANSIM matrices, and Statistics Canada, Agricultural Economic Statistics, Catalogue No. 21-603-XPE

Increasing soil health, choosing appropriate plant species and the presence of healthy soil microbes and beneficial insects can reduce the need for inputs like insecticides and fungicides. However, regenerative agriculture doesn't prohibit any tools – but instead asks the farmer to

consider their options carefully, including possible unwanted consequences to soil health and food webs.

Many regenerative farmers are also using the same practices to build soil carbon, drawing carbon from the atmosphere, with global benefits.

Why does WICC care about regen ag?

Sustainable and regenerative agriculture is vital to keeping our land, waterways and wildlife and planet healthy, and that's what WICC is all about. Some of our recent workshops including regenerative techniques (on-farm composting and multi-species pastures) have been very popular with local farmers and we wanted to support those interested take the next steps of putting these ideas into practice. At the conference, we heard from many who are already working towards regenerative agriculture in different ways. We all eat food grown by farmers; a farm is a complex ecosystem and we can help our catchment's health by helping farmers to adopt sustainable practices.

The crux of the issue with conventional farming is that we are diminishing the function of the rhizosphere to carry out a whole suite of beneficial services which we are only just beginning to understand... we then become dependent on adding expensive synthetic fertilisers which are lining the pockets of big corporations.

What did we learn about regenerative agriculture?

- Agriculture can help save the world! We've lost a large amount of soil carbon to the atmosphere since the introduction of industrial farming, but this can be reversed with improving practices. Building soil carbon is an important way to fight climate change and restore ecosystem function. As Gabe Brown from Polyface Farm, USA said: "it all starts with the soil."
- Over the past 70 years, nutrient levels in foods (particularly fruits, vegetables and grains) have declined – they now have less protein, vitamins and minerals than those grown in the past. Regenerative agriculture aims to reverse this and grow healthier, more nutritious food.
- Adding new layers to farm businesses can be a great way to improve sustainability and profitability, while bringing more people to land and local communities, to benefit all of us. Kirsty Stewart from Victoria shared her farm's woman power setup with 3 daughters all choosing to return to the farm as adults, running a range of enterprises including direct-selling lamb, agroforestry (trees planted in shelter belts and on creeklines also producing timber); agrotourism (hosting school groups and camps) and wildflowers. Check out their farm at: facebook.com/yanyangurtwestfarm
- Chickens are awesome! We heard from farmers incorporating pasture-raised egg laying and meat chickens onto their farms, with benefits in the form of an additional income stream while also improving pasture, soils (with careful management) and providing manure. Three Ryans farm in Manjimup facebook.com/threeryans, Runnymede Farm in Harvey facebook.com/RunnymedeFarmPasturedEggs and Southhampton Farm in Balingup facebook.com/southamptonhomestead have all developed their own systems for managing chickens in a healthy and sustainable way.
- Soil carbon projects can be done on small properties, and doing some of the preparation and paperwork yourself can help keep costs down. Brett Hazelden from the 200-acre Blackwood River Farm (running sheep) has signed up for the first DIY soil carbon project in south west WA. He plans to direct sell his lamb and being carbon-positive will be part of his marketing.

- Us farmers need to take care of ourselves, rest when we need it and help each other in working towards this important goal of improving our land.

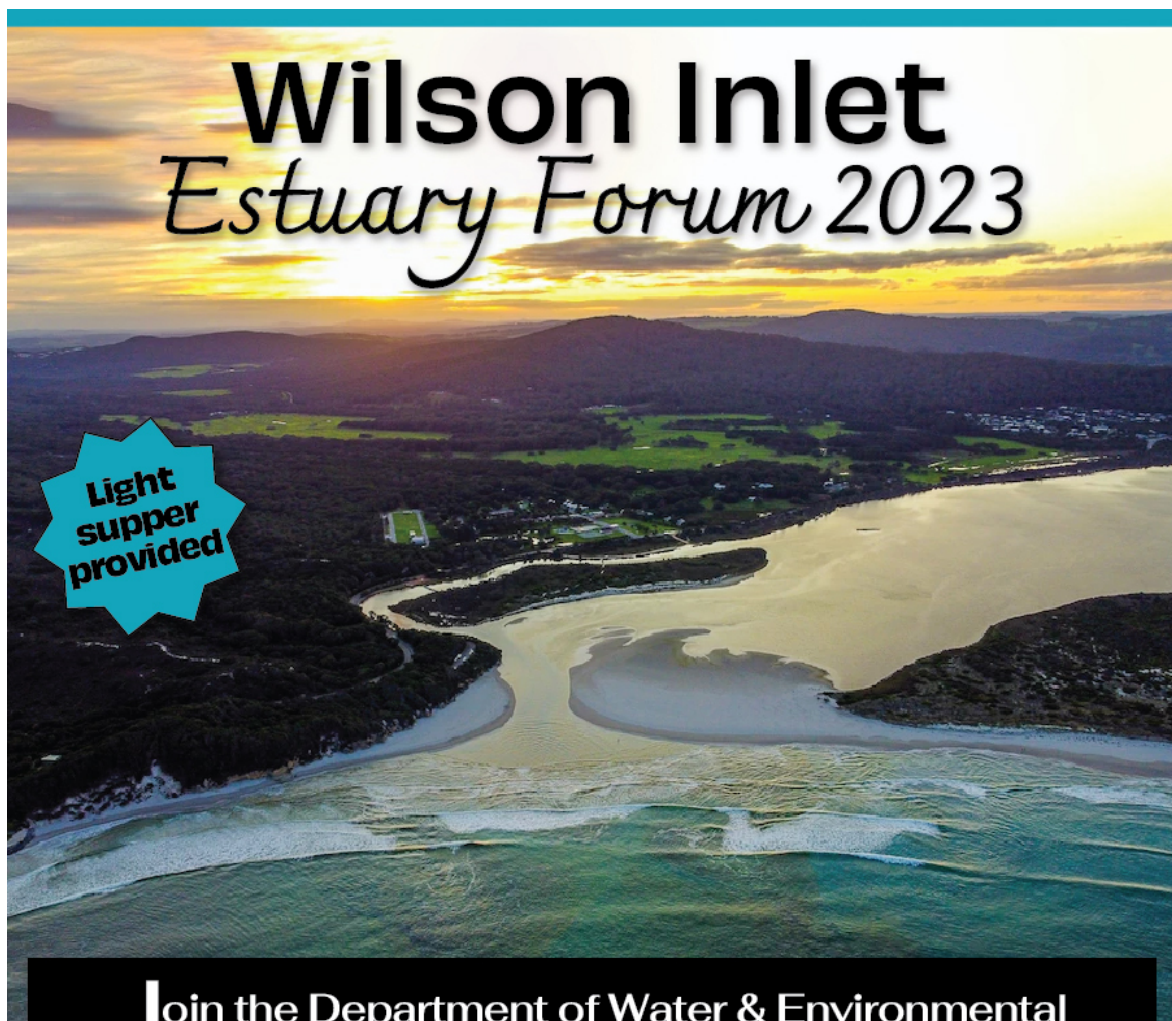
Biographies of these and other interesting speakers at the conference can be found at regen2023.com.au/speakers.

Inlet update

Makuru and Djilba, the months of the highest river flows, led to increased nutrient concentrations in the inlet due to input from the catchment. This led to higher microalgae activity compared to winter months, something that we see every year.

If you are interested to hear how water quality this year compared to previous years and about seagrass and the catchment model, please join us for the Healthy Estuaries WA Nullaki forum on the 28th Nov 2023.

[Click HERE](#) to see the latest inlet monitoring data



Regulation & the Wilson Inlet Catchment Committee
for the latest information on the health of the inlet,
scientific research & updates about projects to
improve the health of our inlet.

28th November at the Riverside Club Denmark
5:15pm to 7:30pm, presentations start at 5:30pm

A light supper will be served, RSVPs essential for catering.

RSVP at: <https://www.wicc.org.au/wilson-inlet-estuary-forum-2023-rsvp.html>

RSVP by the 20th Nov. For more information email Shaun at info@wicc.org.au



Department of Water and Environmental Regulation
Department of Primary Industries and Regional Development



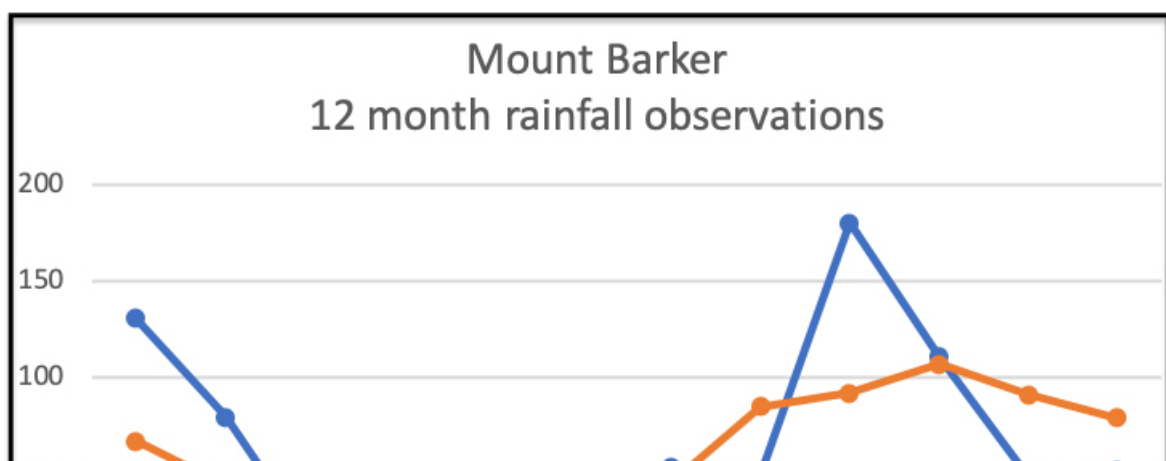
SCAN ME TO RSVP

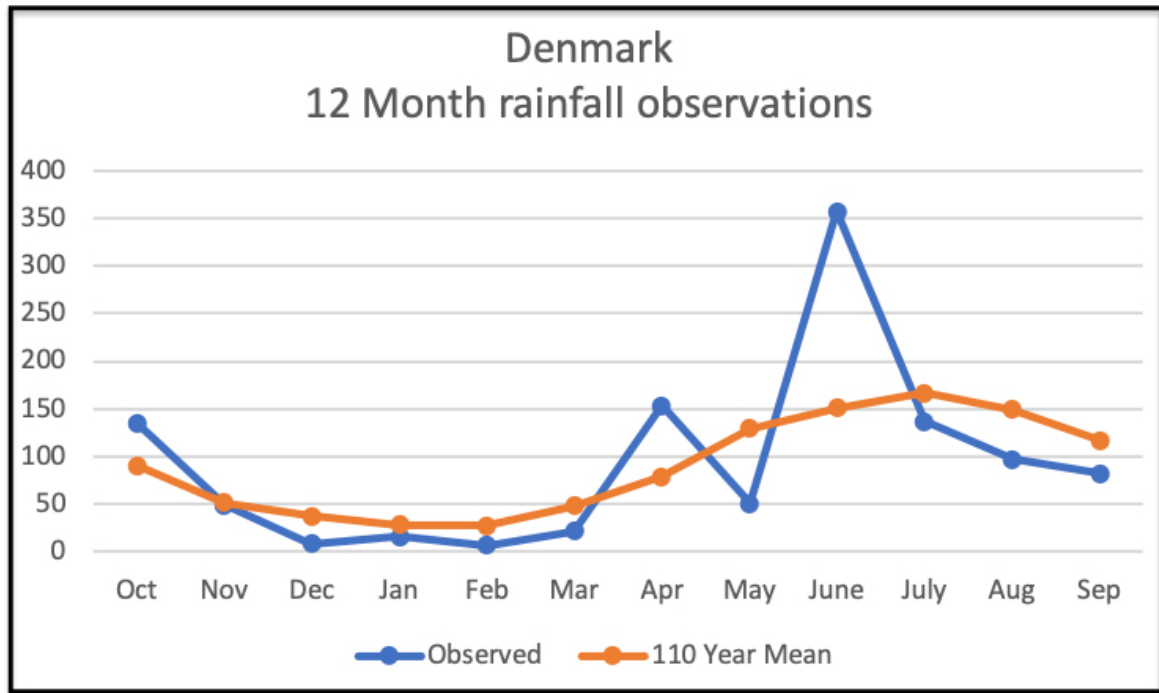
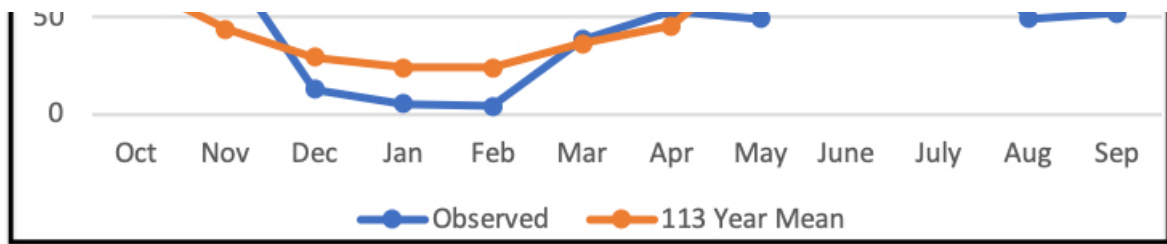
Forum RSVP Here

Rainfall update

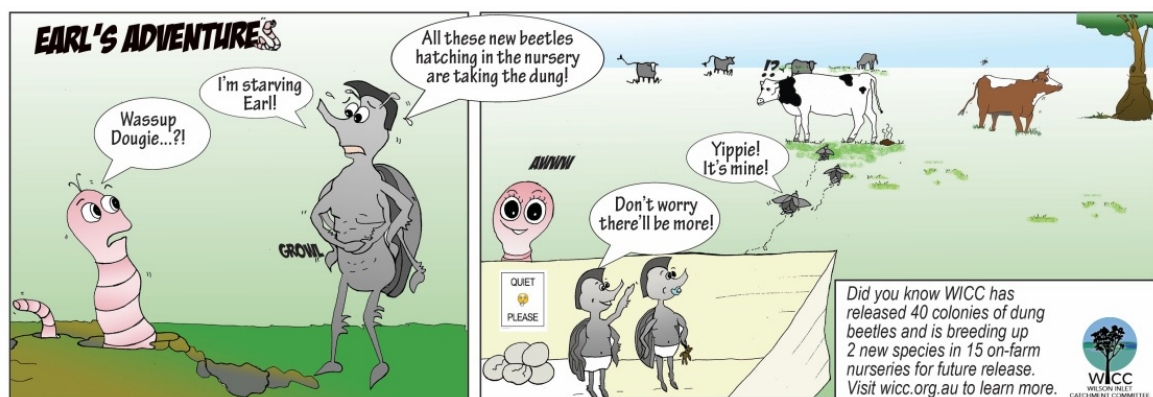
Needless to say, August and September were warm and fairly dry in our patch. For the South West Land Division as a whole, August rainfall was 39.2 mm, 30% below the 1961–1990 average, and the driest August for 16 years since 2008. It was the warmest September on record (since 1910) for WA as a whole, with the mean temperature being 2.94 °C above the 1961–1990 mean average, more than half a degree higher than the previous record (2.37 °C anomaly in 2020). Rocky Gully set a record for it highest mean average daily temperature for September of 19.1°C (BoM).

Looking ahead, all of our climate drivers are trending towards a drier and hotter conditions until the end of November.





ABC highlights WICC dung beetle program



Cartoon by Claudia Simpson

WICC's dung beetle program has been a raging success thanks to the passion and commitment from Kylie Cook, our Sustainable Agriculture Officer. Kylie recently caught up with Kathy Dawson (another dung beetle queen) at our most recently Owingup Kent Growers Group (OKGG) meeting to

share some of their key findings and dung beetle tips.

Kathy emphasised that dung beetles can be adversely affected by drenches and that beetles are most susceptible when they first become active for the year, so in May for winter beetles. Kathy also pointed out that we need more research into the effects of various products on dung beetles, as well as a greater diversity of species that suit our climate – not all imported beetles are suitable for our local area.

Kylie has been working to fill seasonal gaps in dung beetle activity in our catchments. Kylie said that we are fortunate to have well established summer dung beetle populations which rapidly bury dung in our warmer months, improving soil health while reducing flies and parasites, so most farmers are already convinced of the benefits of dung beetles. We just need more species of beetle, active at different times of year, to increase the benefits further. To do this, WICC has collected and released over 30,000 deep-tunnelling winter beetles (*Bubas bison*) onto farms across the catchment this year.

Local farmers are also breeding two species of beetle that are spring (*Bubas bubalus*) and autumn active (*Geotrupes spiniger*). The spring-active *Bubas bubalus* arrived from South Australia in September 2022 and were placed into nurseries on six farms, where they were cared for by the farmers. These new beetles have survived well in our nurseries and the new generation of beetles has just begun to emerge, which is very promising. WICC has applied for additional funding to continue breeding these beetles and bring them to more farms, getting them established in our local area as soon as possible, to help fill the spring gap in beetle activity.

The ABC got wind of Kylie's work and interviewed her recently alongside Mount Lindesay sheep farmer, Mark McHenry. You can listen to the podcast [HERE](#). (18:40)



OKGG is funded in part by the Western Australian Government's State Natural Resource Management Program. Visit wicc.org.au or contact Benita Cattalini; okgg@wicc.org.au for more information.

Eungedup Wetlands Update



Purple Swamphen feeding chicks



Black Swan with cygnets



Water Rat emerging from a swim

The WICC team and our volunteers have been busy beavers at Eungedup. With the sound of bitterns booming in the background we have been tackling arum lilies, setting up audio recorders, exploring eDNA, tackling ferals, monitoring water quality and applying for grants to carry out further works.

We have recently acquired 3 audio recorders which will be placed around the perimeter of the wetland in the coming weeks. These high tech devices record animal sounds (e.g. bird calls) at preset times. The data is then fed into a computer program. After we teach the program what each unique animal's noise is we can then triangulate the calls so we know who is where... and when... and what habitat they prefer. Ultimately, we can then ensure we protect, and potentially create similar habitats throughout the wetland for threatened species such as the Australasian Bittern. We will also know which areas to keep people away from at certain times of the year.

In mid-October we collaborated with Conservation Council WA (CCWA) to take eDNA samples at multiple locations in the wetland. eDNA is a revolutionary biology that allows us to see what animals have passed through an area (water, soil or vegetation) by detecting minute traces of DNA that each animal sheds (If that particular animal has had its DNA sequenced). This revolutionary technology will be a game changer for managing Eungedup. We will share the results with you through our next newsletter and Facebook page. We would like to thank our friends at CCWA for their time and expertise.

The Department of Water and Environmental Regulation joined us at Eungedup in late October to help us design a comprehensive water quality monitoring program. Our staff and volunteers are being trained by DWER's Dr Elke Reichwaldt to monitor Ph, dissolved oxygen and salinity. Total Nitrogen and Phosphorus will be analysed in the water column along with sediment nutrients. Understanding water quality and its changes over time will help us ensure that Eungedup remains a suitable habitat for a diversity of fauna. If we have to control water levels in the coming years, having this baseline will be vital.

We have also partnered with the Department of Biodiversity Conservation and Attractions and

We have also partnered with the Department of Environment, Conservation and Forestry and Birdlife Australia to submit a grant application to the Australian Government for a whole range of actions for Eungedup. If successful we will be able to increase our feral management and carry out Lidar and bathymetry mapping so we can better manage water levels.

Lastly, we have engaged a highly regarded consultant, whom has donated his time to help us develop the Eungedup Management Plan. We will be holding a series of community consultation sessions so we can hear how you want Eungedup to be managed. There are options for in person and online sessions. Please book in your spot below.



Dr Elke Reichwaldt

WICC's Eungedup motion sensitive camera images were checked last week. The cameras were operating over Djilba into Kambarang (August- October). These images coupled with a few site visits recently, demonstrated that there has been a lot of breeding at Eungedup Wetland! The typha fringed waterways are creaking and clicking with Slender tree, Motorbike and Rattling frogs. However, most noticeable are the waterbirds with young. The Purple Swamphen with its black, fluffy, clumsy looking chicks adapting to outlandishly long stilt-like legs. Pacific and Black Ducks with their flotilla of chicks paddling closely, as they should, with the odd hungry fox skulking around and Swamp Harriers watching from above. The Black Swans have their contrasting grey cygnets to organise and there was even footage of a Musk Duck chick getting a ride on the lower back of its parent. Perhaps without chicks or maybe just not observed with them were Blue-billed Ducks, Australian Shovelers, Eurasian Coots, Dusky Moorhens, Ibis and Yellow-billed Spoonbills sweeping and filtering aquatic bugs in shallow pools. Not to ignore the bush birds, there were plenty of Red-winged and Splendid Fairy-wrens, Fantails, White-browed Scrubwrens, Ravens and the cheery song of the Australian Reed Warbler. Also recorded by the cameras were our priority native

mammal species the water rat (Hakali), very busily swimming around at dawn and dusk. Males, females and a smaller individual were observed indicating they too are breeding. A new record of the critically Endangered Western Ringtail Possum was made in the southern edge of the wetland. We're hoping this may be due to our 1080 baiting regime which began this year. Hopefully we'll continue to see more possums and less foxes over time.

YOU CAN HELP!

Are you passionate about the wetland & its management?
Do you want to make a lasting impact on the stunning Eungedup?

Join us for a co-design workshop that brings together community & creativity to understand how the Eungedup wetland could be managed.

What to Expect – Help us discover & understand what makes the Eungedup wetlands vital to you. Engage in dynamic group sessions with other local stakeholders. Share your unique perspectives & ideas on the Eungedup wetlands.

Who Should Attend? – Donors, local residents, people interested in learning more about the wetland.

Don't miss this unique opportunity, we are having three sessions,
(1) Youngs Siding Hall - Saturday 4th November 9:00 am to 11:30 am,
(2) ZOOM session on Wednesday 8th November - 6:00 pm - 8:30 pm.
(3) Denmark Environment Centre - Thursday 9th November - 9:00 am - 11:30 am,

Secure your spot today & be part of the management of Eungedup wetlands. Limited seats are available, for registration click the link below, to learn more visit wicc.org.au or contact Shaun Ossinger at info@wicc.org.au



RSVP HERE-Management Plan Sessions

You are **voluntarily invited** to complete this electronic questionnaire about your views and actions regarding the Eungedup Wetlands.

Eungedup Wetlands Survey

Like the work we are doing? You can help by donating to one of our initiatives.





Wetlands Initiative

WICC is raising funds to purchase Bungedup Wetlands. Nestled between Denmark and Albany on the south coast of Western Australia, these remarkable wetlands provide a unique opportunity to preserve endangered wildlife.



Biodiversity Initiative

Work with landowners to restore and maintain the natural biodiversity in the catchment through invasive species controls, preservation of remnant native revegetation and weed control.



Waterways Initiative

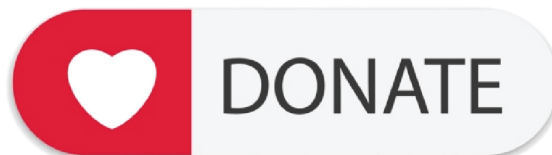
We implement work programs in coastal waterways to further establish native vegetation, minimise erosion and strip nutrients.



Sustainable Agriculture Initiative

We source and distribute funds and expertise to assist landowners to implement environmentally sustainable practices that reduce nutrient loads in the catchment.

To learn more or donate click [here](#)



Donations of \$2 or more are fully tax-deductible