

# Regional Roundup

MAGAZINE

Celebrating Agriculture  
and Landcare across the  
Murray Region

JUNE 2023



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## External links

QR codes are included throughout this magazine. You can scan or click the code and be taken to an external website for more information. The following icons are a key to the type of links you'll come across.



Website



Further information such as a case study



Facebook page



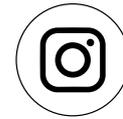
Landcare Gateway



YouTube or other video



Twitter



Instagram

Murray Landcare Collective © 2023

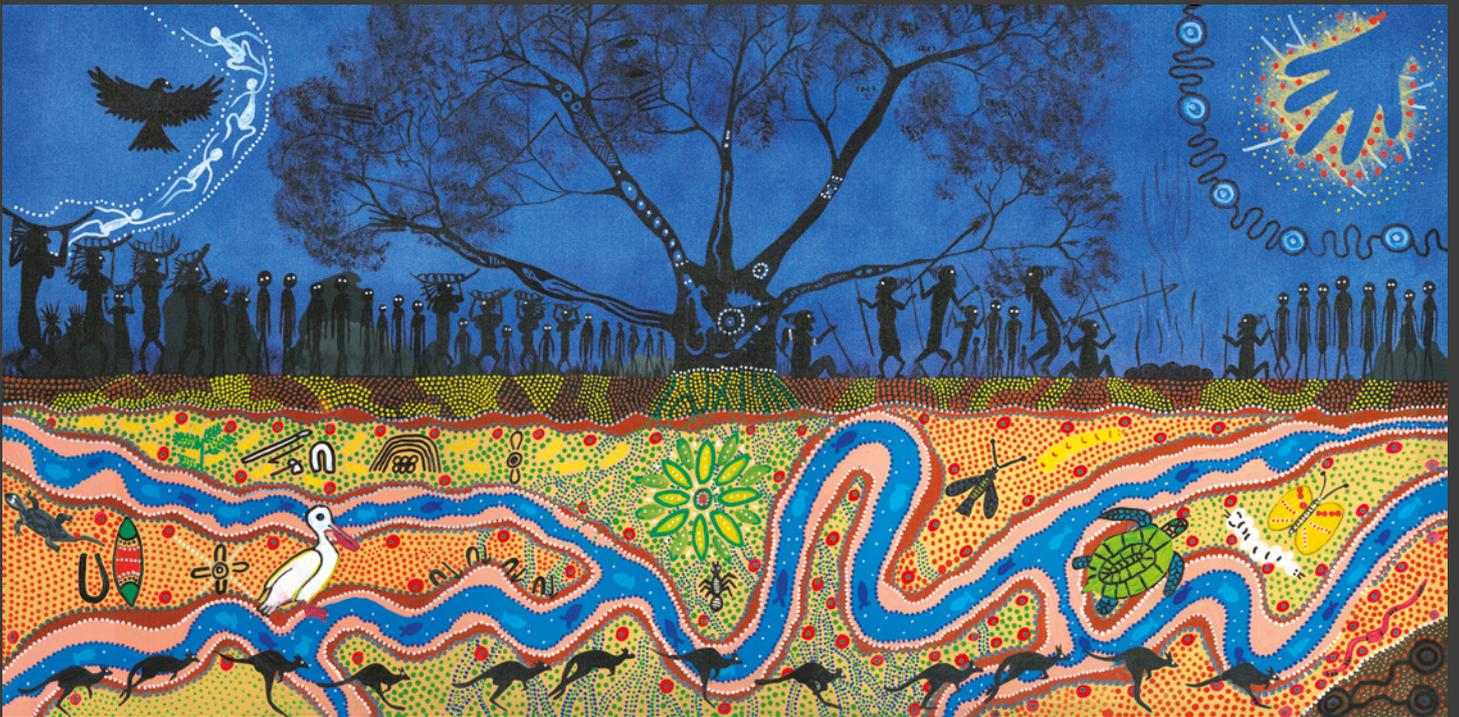
This publication is supported by Murray Local Land Services through funding from the Australian Government's National Landcare Program.

Thank you to the Landcare and farming systems groups and organisations across the Murray region continually striving for improved sustainable agriculture and environmental outcomes - their work is truly inspiring and valued.

Photos supplied by Landcare groups and coordinators unless otherwise indicated. Front cover credit: Kelly Coleman



# Acknowledgement of Country



Murray Landcare Collective would like to acknowledge the traditional custodians of the land in which we meet and pay our respect to Elders past, present and emerging.

We also extend that respect to all First Nation's People and celebrate the rich culture, diversity, strength and knowledge of caring for our land and sea country.

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## Looking after Country

"I think we are a little bit afraid of each other at times but if we can build those relationships we can break down those barriers and start building the relationship to work together because when we work together we achieve great things".

– Wiradjuri Elder, Uncle David Dunn

# Introduction

The Regional Roundup Magazine aims to showcase the valuable activities and projects conducted by various groups across the Murray region in the fields of agriculture and Landcare. It serves as a celebration of their identity, purpose and exemplifies the diverse, important and successful initiatives they carry out throughout the region, contributing to agricultural practice change and natural resource management.

This magazine is a collaborative effort between the Regional Agriculture Landcare Facilitator (RALF), the Regional Landcare Coordinator (RLC), Local Landcare Coordinators (LLCs), and Landcare and Producer/Farming systems groups in the Murray region of NSW.

The RALF is part of the Australian Government's National Landcare Program from July 2018 to June 2023 and foster sustainable agriculture across the country. In the Murray region, the RALF is hosted by Murray Local Land Services and works closely with Landcare, producer groups and landholders to enhance the sustainability, productivity and profitability of agriculture.

Additionally, the four-year NSW Landcare Program (2019–2023), employs 72 part-time Local Landcare Coordinators and 12 part-time Regional Landcare Coordinators who, in turn, assist over 880 Landcare groups. The program is a collaboration between Local Land Services and Landcare NSW, supported by the NSW Government and overseen by a Joint Management Committee. The Murray is home to one Regional Landcare Coordinator and five local Landcare Coordinators, hosted by local organisations. These coordinators play a crucial role in supporting community capacity and participation to deliver outcomes in natural resource management, agriculture, landuse and community initiatives.

These significant programs primarily focus on delivering sustainable agriculture and Landcare outcomes in the Murray region. However, their current operations will conclude on 30 June 2023, with support transitioning to different arrangements starting from 1 July 2023.

Regional Agriculture  
Landcare Facilitators



Landcare NSW  
Program



# 2019-2023 Landcare Coordinator Achievements

Regional and Local Landcare Coordinators use the NSW Landcare Program Coordinator Activity Tracker (CAT) to capture data about the activities they have organised, participated in or supported to happen.

A few of the datasets have been summarised here to highlight key Murray Landcare Coordinators achievements from 1 July 2019 until 31 March 2023.



27 Grants received...

with a total value of...



\$1,673,800



30 groups supported



950 events held across the region

Worked with 13 Local Government Associations



30 First Nations events



Sent out 643,802 communications



Supported 13 First Nation organisations



21,000 event participants

Worked with 180 project partners



1,415 nest boxes checked

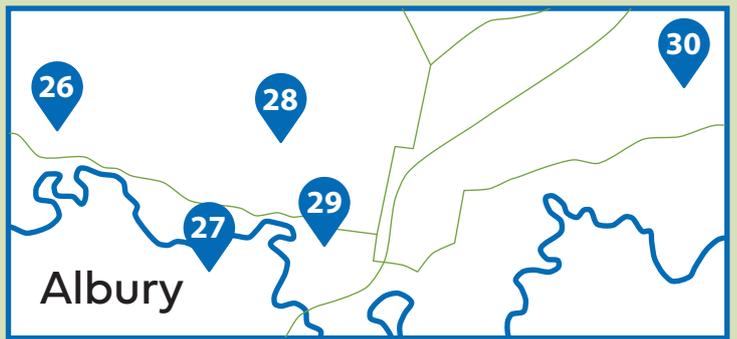
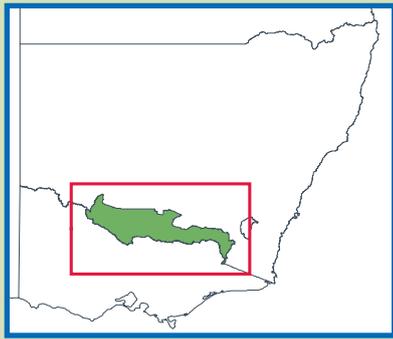
# Agriculture and Landcare support across the Murray Region



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3	Barham Landcare
4	Central Murray BestWool/ BestLamb
5	Koondrook Perricoota Alliance

6	Ricegrower's Association of Australia
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# Murray Landcare Collective

## *Our Purpose*

To build trust and support through relationships for the good of our communities and environment.

# Murray Landcare Collective



Murray Landcare Collective comprises community based, not for profit, landcare, agriculture, producer/farming systems and environmental groups in the Murray region of New South Wales. We include relevant state and federal departments and agencies like Local Land Services, Dept. Planning & Environment, Biodiversity Conservation Trust, Saving Our Species, Office of Energy and Climate Change, Murray Darling Basin Authority, National Emergency Management Agency, Universities, Local Aboriginal Land Councils and Corporations and Murrumbidgee Local Health in our circle and work closely with The Southern NSW Drought Resilience Adoption and Innovation Hub and the National Landcare Program's Regional Agriculture Landcare Facilitator.

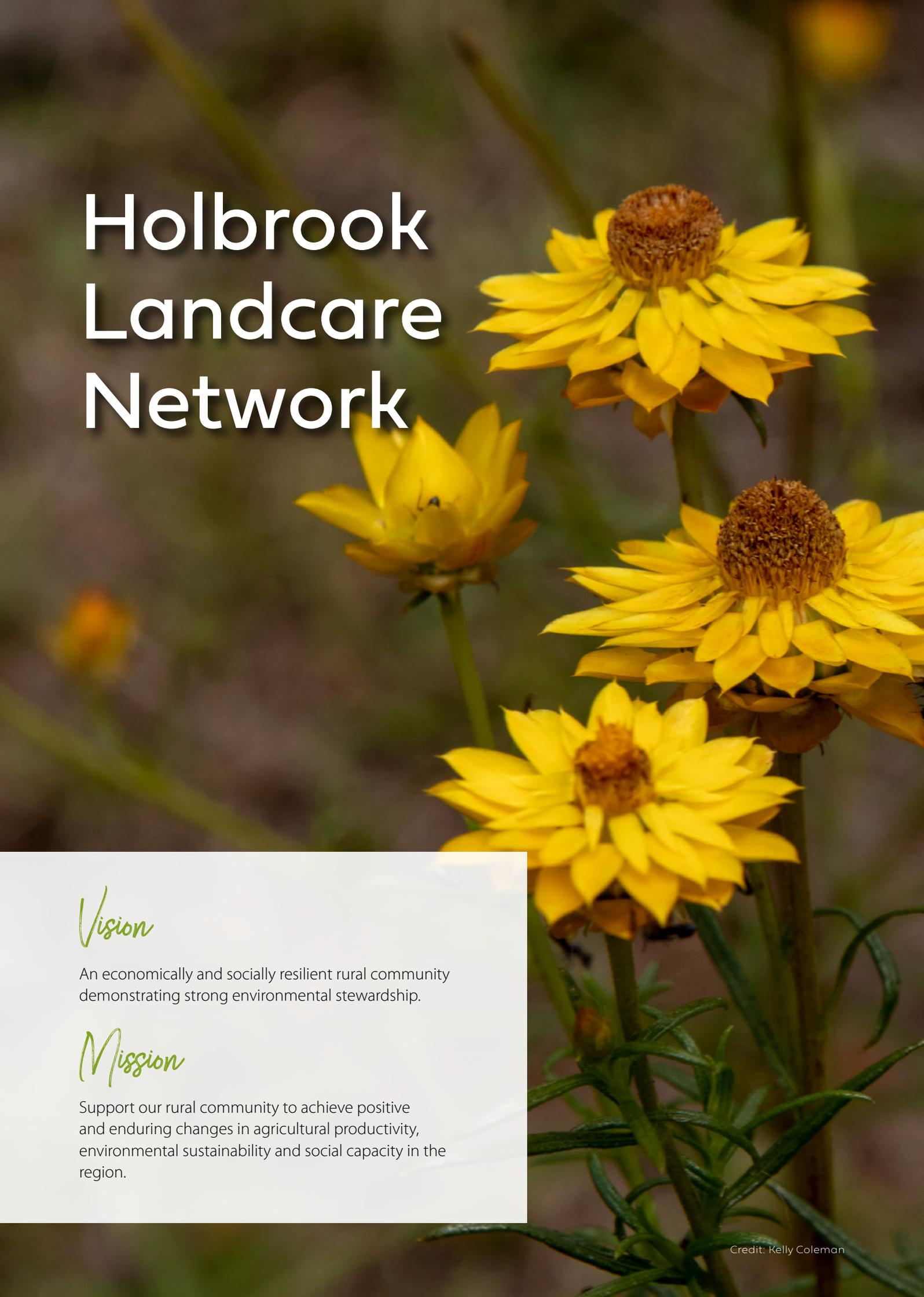
The Collective is not a formal landcare network or organisation, it does not operate to represent the Murray region. We focus on learning together through collective interaction to deliver better natural resource management, sustainable agriculture, rural community development and social cohesion. Our guiding principle is to build trust and support through relationships and reduce duplication.

We have meetings several times per year and as opportunities arise.

Collaborations across a diverse range of communities and topics deliver more effective programs, outcomes and spread of services. Some common topics include: natural capital accounting and carbon markets, wildlife and threatened species, food supply chain models, revegetation and habitat conservation, creating occupational opportunities, riparian and soil management, farming next practices (e.g. livestock, grazing, irrigation, dryland cropping, rangelands management and business skills), school and community education programs, community capacity building, support and training especially for volunteers and land managers, and mental health and resilient rural communities.



# Holbrook Landcare Network

A close-up photograph of several bright yellow flowers with brown centers, likely a species of daisy or similar, set against a blurred green background. The flowers are the central focus of the image, with some in sharp focus and others slightly out of focus.

## *Vision*

An economically and socially resilient rural community demonstrating strong environmental stewardship.

## *Mission*

Support our rural community to achieve positive and enduring changes in agricultural productivity, environmental sustainability and social capacity in the region.

# Holbrook Landcare Network



Nestled on the fringe of the south-west slopes of the Great Dividing Range in southern New South Wales, Holbrook Landcare Network (HLN) is a vibrant rural organisation that manages a range of agricultural and natural resource management projects to deliver information and support our community. Established in 1989, HLN draws the majority of our 450+ membership from within a 50 km radius of Holbrook. However, given the applicability of activities, HLN also attracts a wider audience, including landholders in the Upper Murray region of both NSW and Victoria, as well as the south-west slopes and eastern Riverina area of southern NSW.

Currently employing 10 staff, HLN is one of the region’s largest not-for-profit rural community-led organisations, and takes on many leadership responsibilities in the community. These include serving as the presiding host of Murray Regional Landcare Inc. and a Knowledge Broker for the SNSW Drought Innovation Hub. HLN’s current project portfolio includes over 25 projects with an expected annual income of approximately \$3 million. Detailed information about our projects, services and strategic plan can be found on our website.

As a community-led business with a volunteer board, HLN works closely with other Landcare and volunteer community groups, local government, state agencies, private industry and other stakeholders active in the region. This close collaboration ensures that our activities are as collaborative as possible, avoiding duplication or competition with existing services.

HLN fosters a culture of innovation, with a focus on both enterprise excellence and long-term farming system sustainability and landcare. This culture enables HLN to serve as an effective conduit of services between funding bodies, research and development organisations, industry groups, government bodies and land managers.



# Walking together, Working together

Holbrook Landcare Network (HLN) acknowledges our community is established on First Nations People’s land, and recognises that their cultural values and knowledge are critical to improving land, water, biodiversity and community connections. We also recognise that we have not done enough in the past to make this happen and wish to change. It takes a community with ongoing relationships and a shared future to care for and connect to Country responsibly, and healthy Country fosters healthy people, culture and communities.

The Landcare in a Cultural Landscape, Walking Together-Working Together project seeks to broaden our perspective through relationships, education, experiences, policies and guidelines.

By using traditional cultural values of collaboration, commitment, inclusiveness, shared responsibility and opportunity embedded into all levels of Landcare, we wish to build true partnerships with Wiradjuri, Ngarigo, Waveroo and Wolgalu peoples, the traditional owners of the lands where we live and work. First Nation’s People should be a fundamental part of our organisation, as partners, members and staff.

This project assists HLN staff, board and members to grow their awareness, appreciation, and cultural sensitivity. In this way we will bring the practices, discussions and real-life actions into Landcare groups at a local level, helping to shine the light on historical misunderstandings, exclusions and injustice, and expand the toolkit for HLN to respectfully form long-term, culturally-safe partnerships with local First Nations’ Peoples.

We believe that working together to Care for Country will help us restore and reconnect our lands and all of its peoples.

We seek to embed Cultural Land Management Values into our Landcare ethos. Ongoing relationships with First Nations Peoples will allow Two Way Caretaking of Cultural Materials and land, embracing Australia’s First Nations Peoples’ culture and show a way how each of us can contribute to achieving reconciliation in Australia.

This project is funded through the NSW Landcare Program with additional support from Murray Local Land Services and Landcare NSW.



# Testing tropical pastures in the NSW southern slopes

Holbrook Landcare Network is currently in its second year of a Producer Demonstration Site (PDS) known as 'Testing Tropical Pastures in the NSW southern slopes' funded by Meat and Livestock Australia. The project was established in response to increasing summer rainfall in the region and aims to demonstrate the role of sub-tropical grasses in southern NSW grazing systems.

The NSW southern slopes are dominated by winter perennials or annual pastures and there are few perennial species that are currently capable of best utilising summer rainfall (with the exception of lucerne, which is constrained by soil factors and the need for rotational grazing).

Further challenges in summer feed production include seasonal rainfall downgrading the quality of dry standing feed from winter pastures, resulting in reduced weaner growth rates and increased dependency on supplementary feeding.

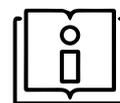
The project aims to demonstrate how to successfully incorporate sub-tropical grass species into temperate systems without sacrificing winter production, and ensuring temperate legumes can adequately supply these grasses with a long-term nitrogen source.

Data gathered from the PDS will be used to evaluate whether sub-tropical grasses can persist in our temperate region, replace

annual summer weeds, reduce summer and autumn feeding costs, improve or maintain livestock growth rates over the summer period, and increase the feed base over the autumn feed gap period. This will better position livestock enterprises moving into winter months.

Holbrook Landcare currently has three Producer Demonstration Sites on farms at Yerong Creek, Henty and Pulletop. Our Yerong Creek site demonstrates a pasture mix of digit grass and kikuyu, while our Henty and Pulletop sites are demonstrating digit grass stands.

The Testing Tropical Pastures in the Southern NSW Slopes project is funded by Meat and Livestock Australia



# Tools and data for restoration decisions

For 30 years, Landcare has driven grassroots change in natural resource management and landscape restoration. Landholders and the Landcare community need to prepare for a future where climate change and natural capital income streams form part of farm business and drought resilience strategies.

Holbrook Landcare Network are working in partnership with Murrumbidgee Landcare Incorporated on a Landcare-led Landscape Resilience – Tools and Data for Restoration Decisions project, which aims to boost private, on-farm investment in natural capital and enhance resilience through climate-ready revegetation.

As part of the project, a forum was held in Wagga Wagga (December 2022), bringing together over 70 revegetation practitioners from across the catchment to discuss

opportunities, ideas and lessons from the past, through the sharing of knowledge and experiences.

As a result of this forum, both the South-West Slopes Revegetation Guide and the Native Vegetation Guide for the Riverina (pictured below) will be updated. These updates will include best-practice revegetation techniques and guide site selection, site preparation, species selection, planting and ongoing maintenance and monitoring practices. The guides will aim to build resilience into revegetation plantings, considering the effects of climate change, and will incorporate First Nation's Peoples land and plant knowledge, cultural practices, traditional uses and language.

A local network of demonstration sites is also underway, utilising modern 'best practice' restoration and revegetation techniques. This will allow for the showcasing of the positive economic, production and environmental impacts of native vegetation restoration, as well as the collection of robust datasets to inform future efforts. This will be supported by case studies and an effective communication strategy.

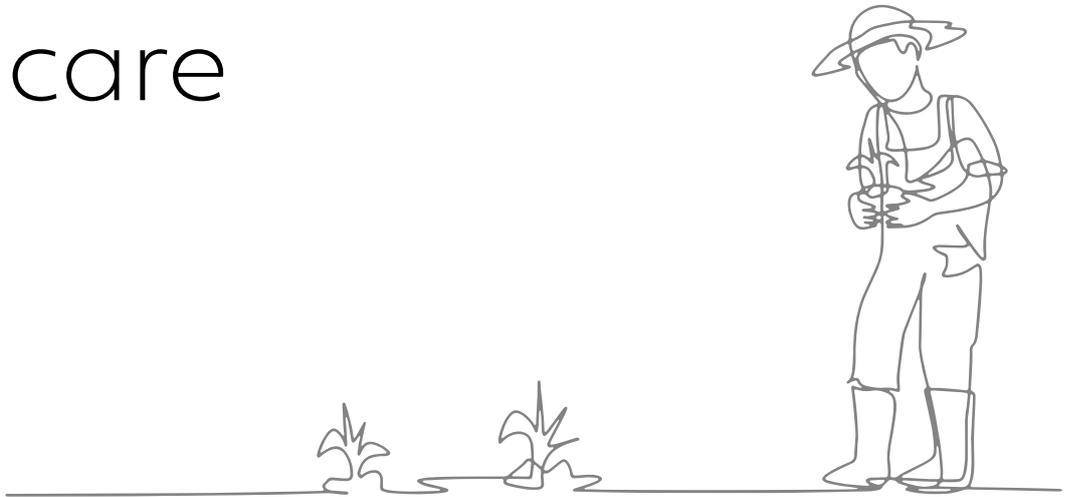
A community of practice has been established to prepare Landcarers and farming communities for transition to market-based instruments to fund revegetation, and increase the awareness and uptake of these alternative income streams to drive resilience to drought in farm businesses.



The Landcare-LED Landscape Resilience project is funded through the Federal Government's Future Drought Fund – Drought Resilient Soils and Landscapes Grants Program.



# Khancoban Landcare



In March 2023, members of the Khancoban, Greg Greg, Tooma, and Welaregang communities in the NSW Upper Murray region gathered for a meeting with great enthusiasm. Their purpose was to revive the Khancoban Landcare Group, which had been dormant for over 17 years. The motivation behind their reunion was the profound impact of the 2020 bushfires on their landscape, biodiversity and community.

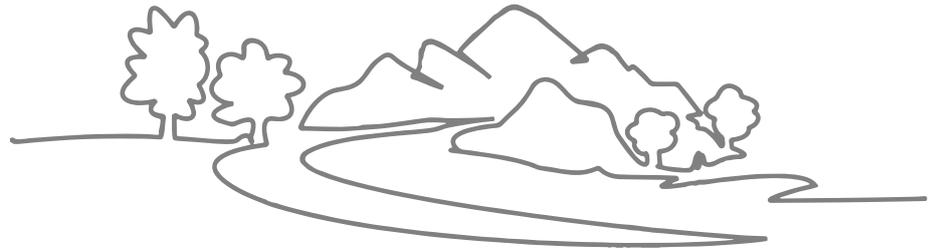
While retaining its individual identity, Khancoban Landcare now operates as a sub-group of Holbrook Landcare Network. This arrangement allows its members to access a wider range of activities, resources, staff and partnership opportunities. Importantly, it relieves the committee from the administrative burden of managing a separate business or incorporated entity.

With the support of a Local Landcare Coordinator, the group has several key focus areas planned. These include prioritising bushfire recovery efforts from 2020, engaging in revegetation projects along the Khancoban pondage foreshore, collaborating with local schools, expanding their knowledge of carbon accounting, addressing the issue of blackberry weed infestation and initiating a community collaboration through a nest box program to protect threatened species, such as gang-gang cockatoos and greater gliders. Additionally, Khancoban Landcare aims to establish a productive partnership with the National Parks and Wildlife Service and Snowy Hydro to ensure the care and preservation of the local bushland that backs onto the western fall of the Kosciusko National Park, a UNESCO Biosphere Reserve.

Khancoban, a picturesque town nestled high up in the Snowy Mountains, was initially constructed in the 1960s to accommodate around seven thousand people working on the Hydro Electric Scheme. Presently, it is home to approximately 320 full-time residents and experiences seasonal influxes of holidaymakers. The town's main industries include the power-station, cattle grazing, public service and tourism.



# Mountain Landcare



Mountain Landcare is a community-group that encompasses Tumbarumba and its surrounding areas, located in the southwest slopes of NSW. Its membership comprises individuals from diverse backgrounds, including both urban and rural residents. The committee consists of passionate volunteers who actively contribute to the regeneration of the local environment, biodiversity and implementation of community-driven initiatives aimed at enhancing the natural spaces for the enjoyment of both locals and visitors.

To achieve their objectives, Mountain Landcare, a sub-committee of Holbrook Landcare Network, frequently collaborates with various groups and agencies, forming partnerships that support its members and enable the successful implementation of on-ground projects. They actively engage in a range of activities, including post-bushfire recovery initiatives that involve revegetation of paddock trees and replanting vegetation on bushfire affected farmland, offering landholders nest boxes to support wildlife habitat, installing cameras to monitor the return of native fauna and the presence of invasive species post-fire, as well as providing community support to aid in the recovery process.

Additionally, Mountain Landcare has taken part in revegetation projects along the Tumbarumba to Rosewood Rail Trail, the Tumbarumba Police Paddock rehabilitation and school education activities, supported by a Local Landcare Coordinator.



# Tumbarumba to Rosewood Rail Trail

The Tumbarumba to Rosewood Rail Trail provides a continuous link of native vegetation between Tumbarumba and Rosewood. Opened in 2020, the trail was one of three Government supported pilot projects in NSW involving turning a disused, overgrown public railway line into a tourist draw-card, recreation destination and brought together local communities.

The paved rail trail winds through approximately 21 km of beautiful subalpine countryside and farmland including seven vegetation communities with rare locally native plants as well as historic European and First Nations Cultural Heritage sites.

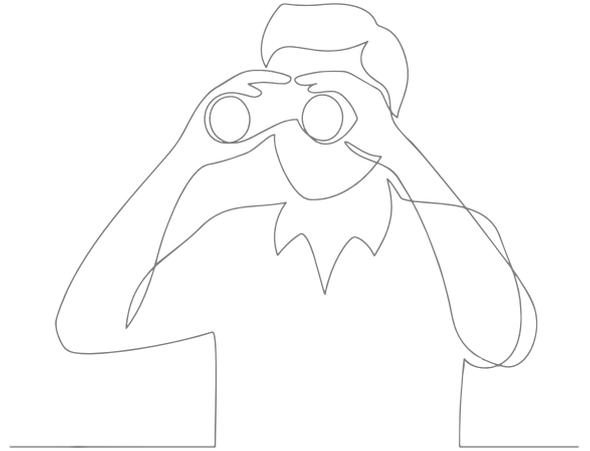
A survey conducted along the trail recorded 51 species of bird (including the threatened flame robin and dusky woodswallow, 5 species of mammal, 4 species of frog and 3 species of reptile.

Mountain Landcare has been working with the Snowy Valley Council since 2018 to support the improvement and maintenance of the rail trail and its committee. Landcare engaged with over 100 volunteers, students from four schools, landholders and the wider community, to improve the condition of biodiversity and connectivity of vegetation. Hundreds of locally native species have been planted in biodiversity hotspots and weed control of blackberries, St John's wort, olives, pines, and non-native plants is continuing along the trail.

This successful ongoing project has enabled landholders, school groups and the users of the trail to work together, connect with each other, learn about weeds and locally native plants and animals, and improve the condition and connectivity of the habitat along the rail trail. They can also enjoy coffee and cake after a working bee at one of the many thriving cafés.



# Culcairn Landcare Group



Culcairn Landcare Group is an incorporated community organisation made up of passionate locals who care about their town, their farms, their environment and their region.

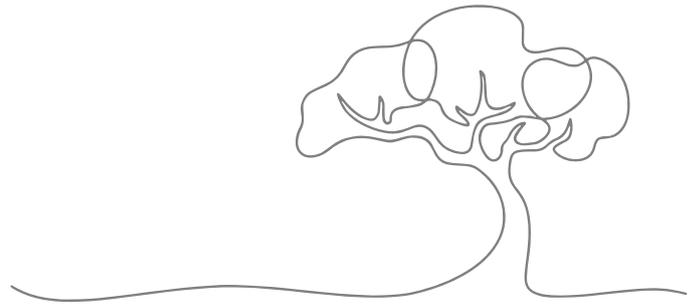
With a few peaks and troughs in activity, Culcairn Landcare has been operating since 1994, with a focus on projects including revegetation for livestock shelter belts, waterways, arboreal mammals and woodland birds, groundcover management, fertiliser management, stock containment areas, dung beetles and perennial pastures. Where possible, we partner with other groups and agencies to support both environmental and production objectives and community engagement opportunities.

We recently collaborated with the Local Landcare Coordinator, Holbrook Landcare Network (HLN) and NSW Biodiversity Conservation Trust, to hold a 'Shine 'n' Dine' spotlight night at the Culcairn Golf Course. The evening started with a BBQ and chat about nest boxes, local biodiversity, trees with hollows and spotlighting tips. Then guided by a trained ecologist, we wandered around the golf course's beautiful old white box, yellow box and red gum trees and spotted 21 ringtail possums, a brushtail possum and, excitingly, one squirrel glider.

Another standout event was a 'Bird Walk and Biodiversity Ramble' with HLN, BirdLife Australia and ANU Sustainable Farms in the White Box Woodland Reserve on the outskirts of Culcairn to learn about ways to encourage birds and beneficial insects on farms and in backyards.



# Gum Swamp Walla Walla Management Committee



The Gum Swamp Walla Walla Management Committee are a keen group of volunteers who protect and maintain the Gum Swamp reserve, located two kilometres north of Walla Walla, NSW. Gum Swamp is a high conservation wetland spanning 458 hectares. It is an important cultural heritage site on Wiradjuri Country as well as a popular community recreation area and biodiversity refuge.

Gum Swamp was declared an area for Environmental Protection and Public Recreation in 2001 and is listed in the Directory of Important Wetlands in Australia for its ecological features and notable birds. Endangered bush stone-curlews and brolgas have been recorded at the swamp, along with white-bellied sea eagles, fishing bats and squirrel gliders. It is also a seasonal feeding ground for the migratory sharp-tailed and marsh sandpipers, both breed in Siberia and travel over 11,000 km to Australia.

The Gum Swamp Walla Walla Management Committee is a 355-committee that works under the guidance of the Greater Hume Shire Council. The committee manages regular activities at the reserve including fencing repair and maintenance, weeding and rubbish removal, interpretive signs and raising community awareness of biodiversity and cultural heritage.

The hard work of this volunteer committee ensures that Gum Swamp is a fantastic place to enjoy many recreational activities including walking, nature photography, picnicking, canoeing and bird watching.





# Western Murray Land Improvement Group

## *Our Purpose*

To enrich our community through the power of innovative thinking and knowledge sharing.

# Western Murray Land Improvement Group



Western Murray Land Improvement Group is a not-for-profit group and charity based in Barham, NSW, that gives their community a voice in its growth, environment, wellbeing and future.

We work in the pillars of agriculture research, development and extension, industry diversification, Landcare, environmental services and markets. We work closely with our First Nations People and pay our respects to the Barapa Barapa, Yorta Yorta, Wamba Wamba, and Wadi Wadi nations and to their Elders past, present and emerging. We acknowledge that their rich knowledge and understanding of the land that we work and live on is a privilege to share in.

Our area of operation and membership base spans 7,500 square kilometres within the Murray River Council local government footprint. Our landscape consists of a unique blend of bushland, agricultural and floodplain landscape, encompassing nationally recognised icon sites such as the Koondrook-Perricoota Forest and culturally significant locations for our indigenous population and wider community.

We were established in 2003 by a group of passionate regional producers and community members in response to community needs in the capacity building, farm productivity and environment space. Today, we are governed by a 10-member board with a diverse skillset that represent local community needs and the geographical spread of our area of operation.

Over the past 20 years we have engaged in projects that build on our community's resilience, and their capacity to harness and utilise their skills and knowledge to deliver positive economic, social, and environmental outcomes.

We employ a co-designed solutions-based approach, encourage leadership, and represent a collective voice. We aim to bring about positive change, both incremental and transformational, within our community.



# Industrial hemp trial

A Hemp Cluster Group was formed in June 2021 in the Murray River local government area due to local interest in growing the crop for building materials. Western Murray Land Improvement Group worked with landholders to develop a strategic approach to creating a hemp industry in the region that would provide economic, social and environmental benefits.

With the support of the Hemp Cluster Group, WMLIG conducted the following activities with the aim of understanding the feasibility and benefits to growing hemp in the area for building community resilience:

- Establish a series of field trials to demonstrate plant effectiveness in the region
- Identify uses and benefits of Hemp in cropping rotation.

- Collate information on production, processing, and marketing.
- Investigate business case for local Hemp production and manufacturing
- Provide information on return on investment for a commercial scale value add process and manufacturing
- Identify potential synergies between Hemp production and Biochar use on farm.
- Establish partnerships throughout the value chain e.g., local community, investors and business partners including R&D partners.

A seven hectare demonstration trial was established in the Tullakool area using 5 varieties of hemp. The trial produced 20 tonnes of biomass that was processed locally to be used in buildings in Swan Hill, Melbourne and Canberra.

Another trial saw 3.5 tonne of seed harvested with a conventional header which is currently stored locally with a buyer yet to be confirmed.

Two successful field days were held with a total of 125 people attending including industry representatives who were impressed with the collaborative approach to building a sustainable local industry.

A pre-feasibility study developed by an independent company showed a positive outlook for developing a hemp processing and manufacturing industry within the region.

This project was funded by the Australian Government under the Murray–Darling Basin Economic Development Program and Murray River Council.



# Building our community in advance

In 2020, with input from the local community, Murray River Council developed an Adverse Event Plan (AEP) to prepare for and recover from the impact of adverse events – be it drought, flood, fire or pandemic.

To build on from the plan, Murray River Council, through their Building Our Communities in Advance Project, engaged Western Murray Land Improvement Group (WMLIG) to undertake research and consultation with their agricultural community to identify means by which improvements in land and agricultural productivity could be achieved.

The funding enabled strategic thinking and further investigation of ideas that lead to a mix of on ground activities, workshops and desktop scoping studies in the following areas:

- Resilient farming systems – native grass soil aeration trial
- Emerging markets – environmental and biodiversity markets
- Community foundation – kick start those that want to move to landscape and farm
- Community energy – renewable energy that allow communities to be self sufficient
- Organic waste circular economy
- Making the most of weather and climate information – climate forecasting and predicting weather patterns
- Water market and trading
- Community energy and benefits programs

A total of eight case studies were completed to explore these areas in more detail and projects have been identified that can improve adaptation and resilience outcomes in the future. As a result of the project WMLIG has had seven project opportunities detailed in Murray River Council's 2022–2032 Community Strategic Plan.

This project was supported by Murray River Council's Building Our Communities in Advance Project, via funding from Local Government NSW.



Credit: Koondrook Barham Bridge Newspaper



# Wakool Agri-Innovation

The Wakool Region has been impacted severely by the Basin Plan water reform process with the socio-economic wealth decile rating dropping to the lowest 20%, limiting the financial capacity for the community to adapt to change.

Western Murray Land Improvement Group (WMLIG) successfully received funding from the Murray Darling Basin Economic Development Program to deliver capacity building activities as part of the Wakool Agri-Innovation Program to improve community resilience.

The program aimed to:

- improve underlying skills and workforce capability that supports economic development, provides the structure, plans and support to connect the community

- establish collaboration processes for partnerships with business, industry, government, research, and education institutions.

Capacity building activities included:

- two innovation forums with keynote speakers,
- a business coaching program with business development opportunities and follow up masterclasses,
- field days to provide information and targeted support to rural landholders
- individual subsidies to capacity building workshops were offered to broaden participant ideas and skills sets and improve business capabilities.

In total, 28 capacity building activities were completed with 603 attendees, providing resources for improved business efficiency and resilience via integration of modern technology, value adding and agribusiness diversification opportunities.

The project has left a legacy for the region through leveraged funding and reports to support future project development; and leadership skills developed within the community.

Through this program WMLIG has developed links and relationships with a wide variety of presenters resources and training organisations and have become the go to for our landholders when they are looking at ways to improve business outcomes

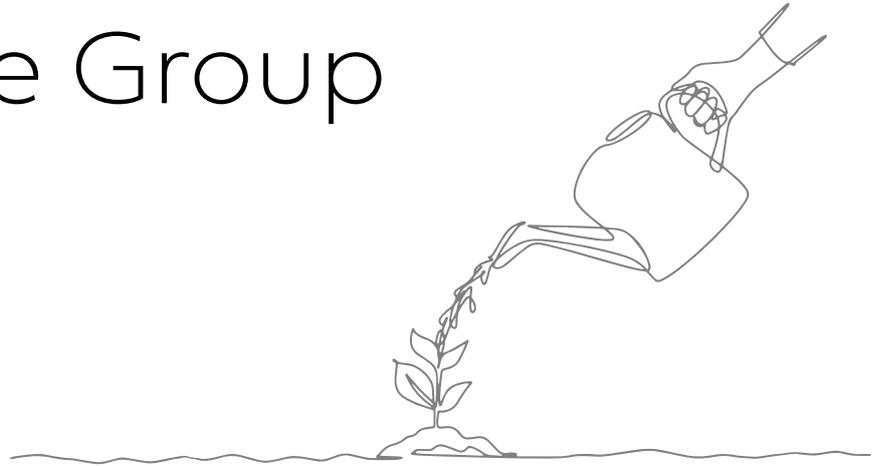


This project was funded by the Australian Government's Murray Darling Basin Economic Development Program.





# Barham Landcare Group



Barham Landcare Group are the caretakers of the Barham Federation Botanical Reserve and are dedicated to its management and enhancement. The 10ha reserve was planted in 1999 and showcases over 125 endemic plant species, making it a great place to also discover an array of wildlife including lizards, insects and more than 130 species of birds.

The Barham Federation Reserve is open to the public and contains three walking tracks with interpretive signage including information about how local indigenous 'Barapa Barapa' people used local natural resources for food, fibre, medicines and for cultural and spiritual purposes. Barham Landcare encourages visitors to the site which also contains a disabled toilet facility and many open areas to set up a picnic, barbeque or gathering.

Barham Landcare Group has also been responsible for many successful revegetation sites, supporting wildlife habitats, increasing the natural assets of Barham and surrounding areas and conserving our environmental landscape. The group has also delivered many other activities including plant identification training, plant propagation workshops and working bees.

## *Who are we?*

Barham Landcare Group is made up of volunteers focussed on improving knowledge and appreciation of local native plants based in the Barham area of NSW.

The group is always welcoming to any new members who want to join and participate in Landcare activities.





# Barham Lakes rehabilitation

The Barham Lakes complex is a privately owned 15 ha site consisting of four man-made lakes constructed in the 1980s by cluBarham. The complex is located one kilometre from the township of Barham and lies adjacent to the Murray River and Eagle Creek cutting.

Initially, the lakes were stocked with native fish species including Murray cod, golden perch, silver perch and catfish. The fish have thrived over the years with the lakes containing one of the largest self-sustaining populations of native catfish.

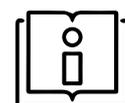
A combined community project funded by cluBarham aims to restore and enhance the habitat of the Barham Lakes Complex. This rehabilitation project will establish a threatened native small-bodied fish nursery and refuge site targeting endangered southern pygmy perch, purple spotted gudgeon and endangered eel-tailed catfish.

The lakes complex redevelopment project has been made possible through a collaborative community partnership. Together, a shared vision for the revitalisation of the area was created, and this vision has been used to guide the ongoing rehabilitation efforts. The project will unfold in five distinct stages, with the pilot stage already in progress.

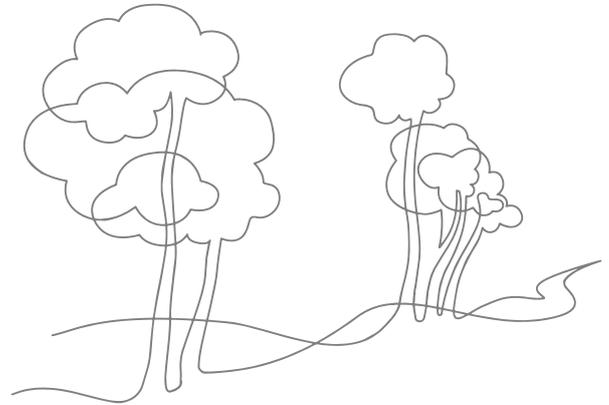
With the support of Barham Landcare, this stage will involve 45 students from Barham High School visiting the site over a period of 10 weeks to investigate native fish species and plant 140m of aquatic vegetation. So far, students have learnt how to identify native and exotic species and the importance of environmental water security in our community. School students will continue to be involved in revegetation and rehabilitation over the coming months as the lakes are improved to become a threatened small-bodied native fish nursery.



The project being delivered by Western Murray Land Improvement Group in collaboration with Barham Landcare Group, Eagle Creek Trust, Barham District Services Memorial Angling Club, Moama Local Aboriginal Land Council, Barham High School and cluBarham.



# Koondrook Perricoota Alliance



The Koondrook Perricoota Alliance (KPA) was established in July 2013 to ensure successful community engagement in the planning and delivery of managed watering events in the Koondrook-Perricoota (KP) Forest.

The Koondrook-Perricoota Forest is part of the NSW Central Murray State Forests, which together make up a site listed as a wetland of international importance under the Ramsar wetland convention. This Ramsar wetland is dependent on frequent flooding of the Murray River for its continued existence. It is an important breeding ground for colonial waterbirds and provides habitat for a range of threatened flora and fauna species.

Changes to the flow regime in the Murray River and its tributaries have significantly reduced the ecological health of the Forest. This has changed vegetation distribution and health, and reduced the abundance and diversity of waterbirds, native fish and other fauna species.

The KPA was formed by community, local government and industry members that have a vested interest in how environmental watering is managed in the Koondrook- Perricoota Forest. It is a sub-committee of Western Murray Land Improvement Group (WMLIG), who provides the KPA with governance and administrative support.

Members of the KPA are local landholders, the Red Gum Timber Industry, Wakool River Association, Murray River Council, broader community representatives and the Joint Indigenous Group (JIG). The JIG is a sub-group of the KPA and is made up of Barapa Barapa, Yorta Yorta, Deniliquin and Moama Local Aboriginal Land Councils.

The KPA enables and encourages collaboration across natural resource management and agriculture to achieve well rounded and considered outcomes. It is a trusted and respected organisation actively contributing to the current and long-term wellbeing of our community and environment.



# A community vision for Koondrook-Perricoota Forest

A series of community engagement events were held between December 2020 and April 2021 with the aim to create a cohesive community vision for the Koondrook-Perricoota Forest - a 33,750Ha state forest located along the Murray River spanning between the townships of Barham (NSW) and Echuca (VIC).

The Koondrook Perricoota Alliance (KPA) in partnership with Western Murray Land Improvement Group (WMLIG), initiated these public events with support from the Joint Indigenous Group (a KPA sub-group) involving Barapa Barapa and Yorta Yorta nations representatives and Deniliquin and Moama Local Aboriginal Land Councils. The KPA works to ensure successful community engagement in the planning and delivery of managed watering events in the forest.

Growing interest from the community about the state of the Koondrook-Perricoota forests led to the desire for the development of a shared vision. Four events were held including an introductory seminar, two field days to the Koondrook-Perricoota Forest, and a visioning workshop.

One hundred and sixty interested community members came together over the four sessions and 42 survey responses were submitted to provide a wide range of perspectives. Facilitated sessions enabled participants to express their thoughts and brainstorm themes ultimately leading to the development of a collective vision for their forest.

*A healthy working forest where native species can flourish, and where local communities can connect and co-manage the forest for future generations.*

Three key vision pillars of a healthy forest, a people's forest and a working forest were also developed by participants to provide more detail around desired outcomes for the forest.

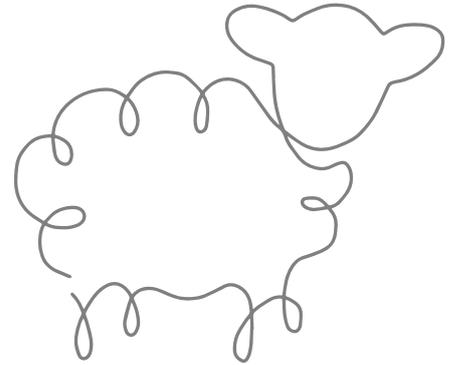
The shared community vision is now an important reference point for use when developing projects and delivering activities related to the Koondrook-Perricoota Forest. This community visioning exercise was regarded as a great success and will be used as a framework for future community engagement.



This project was delivered by Western Murray Land Improvement Group in collaboration with Koondrook Perricoota Alliance, Forestry Corporation and Murray Local Land Services.



# Central Murray BestWool/BestLamb

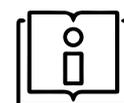
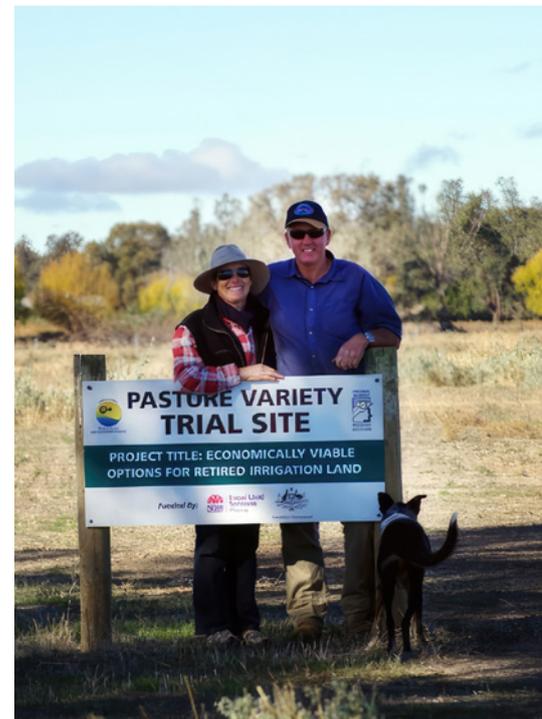


Central Murray BestWool/BestLamb (CMBWBL) was established in 2011 to service sheep producers in the Central Murray region of southern NSW and Northern Victoria. CMBWBL is part of the BestWool/BestLamb network, supported by the Victorian Government of Primary Industries and Australian Wool Innovation Limited.

BestWool/BestLamb is a program that facilitates practice change via appropriate learning activities delivered to a large network of producers, coordinators and groups. Members meet regularly for facilitated discussions, farm walks, training workshops and information sessions aimed at improving business profitability.

The group approach recognises that there is a mix of skills amongst livestock producers in any location, and that most producers have similar interests. Members identify key issues and the best learning approaches to assist them to reach their individual business goals. Coordinators play a major role in ensuring the success of all activities. They drive group members to question things and to overcome barriers to change and improvement.

Western Murray Land Improvement Group (WMLIG) provides administrative support to CMBWBL and collaborates on events and courses.



# Resilient pastures for a changing climate

The Resilient Pastures for a Changing Climate project aims to demonstrate adaptive natural resource and farm management practices that have the ability to build resilience in the agricultural landscapes within the Western NSW Murray region and beyond.

From 2021–2025, the project will deliver activities to improve long term drought resilience and farm sustainability by increasing the productivity of previously irrigated land which has reverted to dryland. Demonstration sites will be used to evaluate novel drought-tolerant pasture systems including a biodiverse mix of regenerative pasture and forage species.

Central Murray BestWool/ BestLamb is supporting Western Murray Land Improvement Group to deliver the project,

which will bring together local producers for training and field days covering preparation and recovery from drought, benefits of ecosystem services to a productive agricultural system, productivity and demonstration site results for soil health and profitability.

Tailored agronomic advice will also be provided to participating land holders and a decision support tool will be developed to assist landholders with pasture species selection to best meet their situation.

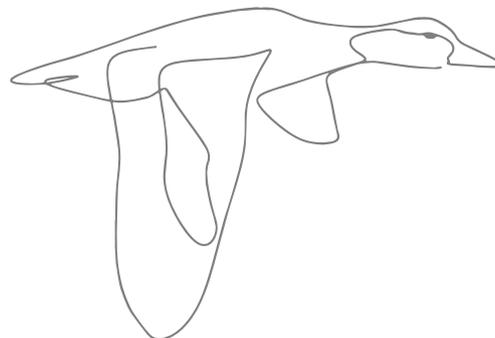
This project builds on a previous project, Economically Viable Options for Retired Irrigation Land (EVORIL), which took place over five years from 2013–2018. These trials assessed the suitability of grasses (including native species), legumes,

saltbush and other native shrubs as part of a diverse landscape mosaic. Central Murray BestWool/BestLamb was also integral in the delivery of this project and many of the learnings will be taken through to the current project.

A total of 30 landholders will participate in the project to achieve 4000 ha of practice change including improved soil health, groundcover retention and grazing management.



# Murrakool Land for Wildlife



The Murrakool area lies in the mid Murray River floodplain and is home to a unique array of wildlife and ecosystems. The rural landscape is criss-crossed with more than 2000 km of creeks, rivers and associated riverine forests and woodlands. Significant species and populations in the area include the southern bell frog, painted snipe, bush stone-curlew, grey-crowned babbler and Gilbert's whistler. Endangered ecological communities include the inland grey box, sandhill pine and myall woodlands.

Murrakool Land for Wildlife helps facilitate the Land for Wildlife scheme – a voluntary property registration scheme for landholders who wish to manage areas for biodiversity and wildlife habitat. Group members are Land for Wildlife property owners, and the group promotes and assists property owners to receive Land for Wildlife property registration within the Murrakool area.

The group has sponsored wildlife surveys, field days and been involved in projects that protect and enhance wildlife in the area including: installing movement cameras and nesting boxes in local schools, and the publication of wildlife brochures and reports.

## Who are we?

Murrakool Land for Wildlife is a voluntary organisation of farmers that promote wildlife conservation in the Murrakool area in the western part of the Murray region of NSW.





Australian painted snipe (Peter Merritt)



# Corowa District Landcare

## *Vision*

To improve the health of our agricultural systems, the environment and biodiversity in the Corowa and surrounding district.

## *Mission*

To build community capacity and support local groups in engaging in Landcare activities. We strive to help raise awareness and educate the local community about sustainable agriculture and natural resource activities.

# Corowa District Landcare



Corowa District Landcare, an incorporated Landcare group operating as a community not-for-profit organisation, has been actively serving the Federation Council region since 1996. We work with our community to carry out natural resource management and agriculture activities to improve the health and sustainability of our environment, farms and wider community

Recognised for our outstanding contributions, Corowa District Landcare was honoured with the prestigious Corowa Business Chamber Award for Outstanding Community Organisation in 2021. This achievement reflects our dedication and commitment to making a positive impact.

At Corowa District Landcare, we foster a diverse and inclusive community by bringing together a wide range of volunteers, staff members, and partners. Our membership base represents the rich tapestry of our community, encompassing farmers, urban residents, schools and other Landcare groups throughout the region. This diverse composition strengthens our ability to address various challenges and pursue comprehensive solutions.

Our efforts are directed towards tackling natural resource management and agricultural issues. These include climate change, soil degradation, loss of native vegetation, pest and weed management, protection of threatened species and the promotion of pasture and livestock health. By actively engaging with these issues, we aim to create a resilient and sustainable environment for present and future generations.



# Paper laneways

The Corowa/Federation region, in the agricultural sheep wheat belt of NSW, is a cleared landscape consisting mostly of degraded grassy woodlands.

Unfortunately, wildlife surveys and expert assessments indicated a steady decline in local biodiversity, primarily due to historical clearing practices and habitat fragmentation. The continuous deterioration of vegetation and ongoing removal of paddock trees pose significant concerns, particularly for isolated “biodiversity hot spots” at risk of losing their ecological integrity.

Without intervention to establish connections between these high biodiversity areas and other isolated vegetation habitats, we may witness a significant decline in populations of native woodland birds, mammals, and reptiles in the region.

To address this issue, the Corowa District Landcare initiated a project aimed at engaging local landholders in restoring and rehabilitating the “Paper Laneways”. These disused crown lanes, located adjacent to farms, were selected based on their biodiversity value and potential to enhance connectivity to existing significant vegetation areas.

Corowa District Landcare called for expressions of interest from landholders throughout the Corowa Shire who were willing to fence, revegetate, and manage the native vegetation areas within the crown laneways on their properties. The project provided participants with expert guidance and incentives, including materials for fencing, direct seeding or tube stock for planting, as well as support for pest animal and weed control.

With the collaboration and support of the Corowa Shire Council (now Federation Council), involvement from five farming families, and funding from the Environmental Trust’s Restoration and Rehabilitation program, the project achieved remarkable outcomes. These include:

- protection of 45 ha of biodiversity corridors
- 13 km fencing to control grazing
- 500 tube stock trees planted
- 7.2 kg of native seed direct seeded
- linking tree corridors with remnant native vegetation reserves
- ownership of paper laneways gifted to participating landholders
- landholders agreement to manage lanes for improved biodiversity in-perpetuity.

This project was funded by the NSW Environmental Trust in partnership with Federation Council and Murray Local Land Services.



# Savernake Station & Boat Rock field day

There was a recognition of the need to increase awareness about private land conservation efforts across NSW. As a response, Landcare NSW and the NSW Biodiversity Conservation Trust (BCT) formed a partnership. Their goal was to collaborate with regional and local Landcare networks to raise awareness and gather support for private land conservation initiatives throughout the state, including the Corowa area.

Corowa District Landcare, along with the Murray Riverina BCT team, hosted a biodiversity field day on 5 May 2022 at Savernake Station in the Central Murray region. This day showcased the biodiversity and remnant native forests on the historically significant property and the conservation efforts of the landholders, the Sloane family, over many generations. The field day included a visit to a nearby Aboriginal Cultural significant site, Boat Rock.

The following activities took place at the Boat Rock field day:

- 60 enthusiastic attendees at the event, including local farmers
- Welcome to Country with Bangerang Elder Darren (Dozer) Atkinson
- guided walk through Savernake Station's high conservation woodlands and white cypress pine forest areas with the NSW BCT
- Sloane family presented on their generational biodiversity conservation journey on Savernake Station, which dates back to 1862
- the Dumanmu Bangerang Dance Group and Bangerang Elder Darren Atkinson, told stories, danced and educated participants on the significance of Boat Rock for the local Bangerang people.

This project was supported with funding through the Partnering in Private Land Conservation, a joint initiative delivered by Landcare NSW and the NSW Biodiversity Conservation Trust



# Sounding the chorus of frogs

Corowa District Landcare wanted to address two major environmental issues:

1. the decline of the listed threatened species, Sloane's froglet (*Crinia sloanei*) in the Corowa region of NSW
2. the ongoing degradation of freshwater wetland habitat.

We also wanted to increase awareness of these issues in local primary schools.

In 2018, Corowa District Landcare and Charles Sturt University frog expert Dr Alex Knight, were successful at obtaining funding through the NSW Environment Trust Education Program to deliver the project "Sounding the chorus for frogs in Corowa's wetlands". The project focused on the Sloane's froglet and empowering school children and the broader community to care for frogs, threatened species and wetland habitats.

A digital educational resource kit for primary schools was developed for students and educators in the Corowa region to support frog-related learning opportunities and experiences in schools. The content is tailored to the local environment and frog populations. Two Local Aboriginal groups also contributed to the resource and it has been made available to the 11 primary schools in the region.

The project also included school visits by scientist, Dr Knight, to engage primary school children in hands-on creative activities.

Two sites in Corowa, Whitehead St Wetlands and River St Wetland where chosen for wetland rehabilitation as they both have a permanent water source with surrounding ephemeral wetlands suitable for frog breeding. Both sites have been planted with local wetland plant species.

This project was funded by the NSW Environmental Trust in partnership with Federation Council and Murray Local Land Services.



# Friends of River Street Wetlands



The River Street Wetlands site has historically served as a stormwater retention catchment, effectively filtering water runoff from residential areas before it flows into the Murray River. This wetland reserve offers a sanctuary for wildlife and is open to the local community, featuring walking trails for visitors to enjoy.

In 2022, a resident recognised the site's potential for both recreational and environmental purposes, envisioning the impact a friends group could have in maintaining and enhancing the area. With the support of the Corowa District Landcare Local Landcare Coordinator, funding was secured through a Riparian Restoration Grant, facilitated by Local Land Services and sponsored by the NSW Government. The grant finances the removal of woody weeds and the replanting of native vegetation, thereby improving habitat conditions for frogs and birds. Federation Council is among the project's supporters.

To ensure the long-term maintenance of the area, the "Friends of River Street Wetlands" group was established in January 2023. This dedicated group organises regular working bees at the site, ensuring a sense of ownership and effective ongoing management.

The site's visibility to the public, coupled with its adjacency to a well-utilised bike path, makes it easily accessible to both locals and visitors. By restoring and managing the wetland, a valuable destination within the town is created, offering opportunities for people to explore and learn about the local environment and wildlife.

Of particular importance is the presence of Sloane's froglet (pictured below), a threatened species found exclusively within the wetlands of Corowa and Albury in NSW. Consequently, protecting the habitat of this froglet species is of great significance to the local and regional area. Corowa's commitment to safeguarding this habitat positions the town as a critical area for the survival of this species, putting it on the map as a vital contributor to conservation efforts.



Left: Sloane's froglet  
(Dr. Alex Knight)

Right: Removing woody weeds around the wetland



# Corowa Tree of Life Community Garden



In 2012, the Community Garden initiative in Corowa was driven by Corowa District Landcare, a Corowa Shire Councillor, and Intereach as part of the Community Strategic Planning process.

A social planning exercise confirmed the viability of a community garden, leading to subsequent steps such as site selection, funding, incorporation, and business plan development. After consultation, the partnership secured the old tennis court area at the Uniting Church as an ideal site for the garden.

The aim of the garden is to provide sustainable, naturally grown food, promote social inclusion, and education on health, nutrition, agriculture and composting.

Maintained by enthusiastic volunteers, the flourishing garden features a central rotunda, raised beds, and a variety of vegetables, herbs, fruit trees, and berries. It offers a peaceful space for community members to connect, while delightful mosaic artworks created by members adorn the garden.

The Corowa Tree of Life Community Garden welcomes visitors with free entry. On Tuesdays and Thursdays around 10:30 am, guests can enjoy a cuppa and chat with the volunteers, making it a must-visit destination for all.

## *Vision*

The Garden has the vision of creating and sustaining a healthy and productive community garden for Corowa and district residents and visitors.

## *Mission*

To encourage participation by people of all ages, cultures and skills by growing produce and caring for nature using knowledge and best practices within our urban environment.



# Cultural weaving with Yarkuwa

As part of the regional “Landcare in a Cultural Landscape” project, the Corowa Community Gardens had the opportunity to host a weaving workshop in collaboration with the Yarkuwa Indigenous Knowledge Centre. In May 2021, Leticia Ross and Aunty Jeanette Crew from Yarkuwa visited the gardens to share their knowledge about weaving and bush tucker with the community.

During the workshop, Leticia demonstrated weaving techniques using locally collected Tanika (*Lomandra*). The participants were captivated by her weaving skills and learned about her efforts to bring people and families together through weaving sessions in the Deniliquin community. Leticia discussed various techniques, designs, preparation methods, plant choices and material options, and showcasing her artwork as examples.

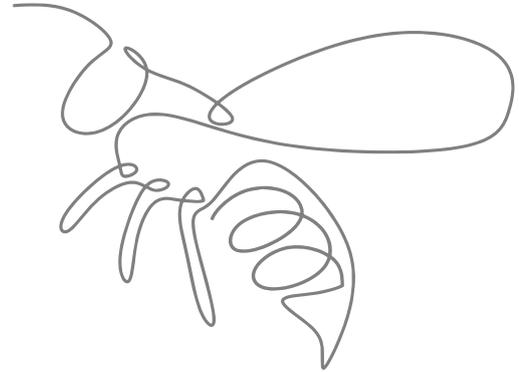
Aunty Jeanette generously shared her knowledge of bush tucker and was pleased to see the successful seed propagation of various native species, including warrigal greens, by Kerrie Ormond, a member of the Community Gardens. Aunty Jeanette also shared parts of her life story, highlighting her upbringing in Moonahcullah, 50 km northwest of Deniliquin, her experience in Natural Resource Management influenced by Wamba Wamba Perrepa Perrepa culture, and her work in government agencies and the Local Aboriginal Land Council. Her strong desire to share Aboriginal culture and promote the importance of caring for Country was evident.

The Corowa Community Gardens are eager to further engage with local First Nation People to plan additional hands-on weaving workshops using locally harvested materials. They also intend to organise bush tucker workshops to learn about native plants in the area and their traditional uses.

This workshop was made possible through the “Landcare in a Cultural Landscape” project, a Murray Landcare Collective initiative supported by Murray Local Land Services and funded by the Australian Government’s National Landcare Program.



# Redlands Hill Reserve Volunteers



In 1997, the Corowa District Landcare and Corowa Shire collaborated to restore a significant conservation site known as Redlands Hill. This area exemplifies the diminishing ecological community of Grey Box Grassy Woodland, characterised by an open woodland with a diverse native understorey. Situated 11 km northwest of Corowa on one of the region's highest hills, the site spans 61 hectares (150 acres).

In 1999, the Corowa Shire Council officially designated Redlands Hill as a Flora and Fauna Reserve, transitioning it from Crown Land to a protected area managed for environmental preservation and public recreation.

Since 1997, volunteers have actively engaged in numerous activities within the reserve. These include pest and weed management, mapping of old mine shafts for public safety, installation of fencing to control access and grazing, revegetation efforts, signage highlighting flora and fauna species, construction of a visitor's center and toilet facilities, installation of picnic tables, and the establishment and ongoing maintenance of walking tracks. The reserve features four easy-rated walking tracks, ranging from 700 m to 1.7 km, offering visitors the opportunity to explore the area with no prior bushwalking experience required.

One notable feature of the reserve is the Shearing Shed Visitors Centre, a replica of the shearing shed depicted in Tom Roberts' painting "Shearing the Rams". Originally built for the 1988 Australian Bicentennial Exhibition, the shearing shed was relocated with the assistance of local service groups in 2001. The original shed stood on the property opposite the reserve.

Corowa District Landcare has successfully secured funding for various activities, including an indigenous assessment of the reserve, enabling the implementation of restoration projects and conservation efforts. Additionally, the reserve serves as a regular venue for field days and events such as the BioBlitz, promoting community engagement and environmental education.





# Great Southern Bioblitz at Redlands Hill Reserve

The Redlands Hill Reserve Volunteers were thrilled to participate in the Great Southern Bioblitz for the first time from October 28 to 31, 2022, at the picturesque Redlands Hill Flora and Fauna Nature Reserve near Corowa in southern NSW.

The Great Southern Bioblitz is a global initiative aimed at conducting intensive biological surveys to document all living species within designated areas across the Southern Hemisphere during spring. The event serves the dual purpose of highlighting the rich biodiversity present while actively involving the public in scientific exploration and nature education through the citizen science platform iNaturalist.

During the Bioblitz, participants at Redlands Hill Reserve had an enjoyable morning documenting the incredible biodiversity in the area using iNaturalist. They discovered numerous native plant species, including nodding chocolate lilies, sticky everlastings, wedge-leaf hopbush, purple burr daisy, various goosefoot species, quandong, common onion orchid, common everlasting, wattles and many others. Additionally, the participants observed a wide array of fungi, insect species, and woodland birds such as white-winged choughs, white-plumed honeyeaters, and superb fairy-wrens.

Following the event, the Redlands Hill Reserve Volunteers held a planning meeting to discuss future endeavours. They strategised a working bee to enhance the Reserve by cleaning up tracks and updating interpretative signage. The volunteers expressed their enthusiasm for hosting the Great Southern Bioblitz again in 2023, eager to continue promoting biodiversity conservation and citizen engagement in scientific research.

This activity was conducted in partnership with Corowa District Landcare.



# Ricegrowers' Association of Australia



## *Vision*

A prosperous and progressive rice industry in Australia.

## *Values*

1. Integrity
2. Leadership
3. Innovation + progressive
4. Collaborative/Representative/Democratic
5. Environmentally conscious

# Ricegrowers' Association of Australia



The Ricegrowers' Association of Australia (RGA) represents over 1000 voluntary members and supports growers on issues affecting the viability of their business and communities.

Formed in 1930 during the early years of the rice industry, the RGA turned a small group of pioneering rice growers into an effective and cohesive force. Today, the RGA provides a strong, united voice for all growers and the broader Australian rice industry.

The RGA represents the interests of rice growers, and provides services to members, to ensure they can leave a legacy for their children, create employment in their districts and grow quality rice. With rice still the mainstay of many Murray and Riverina towns, it is important that RGA members have a strong and effective representation in three key policy areas of Water, Environmental Sustainability and Productivity and Industry Affairs.

The RGA is a member of the National Farmers Federation, National Irrigators Council, NSW Irrigators Council, Plant Health Australia, and the Associations Forum where RGA was awarded the 2022 Small Association of the Year.

RGA has been partnering with Landcare for over 20 years. At the RGA we define Landcare as; management practices that enhance the land and connected water. Landcare activities can relate to wetland management (including rice fields), soil health, vegetation and natural and productive habitats. Many Landcare projects support farm productivity improvement while providing improved environmental outcomes. In the early years this was a partnership linking the RGA Environmental Champions Program with Landcare. Since 2016 the RGA has been hosting a Local Landcare Coordinator from the Deniliquin office who supports local Landcare groups, producer groups and primary and secondary schools in the wider Deniliquin area.



# Rice stubble management

Rice crops produce a significant amount of stubble (12 tonnes rice grain = 15 tonnes straw) which provides many challenges. Burning stubble is a quick fix with minimal cost that enables good establishment of the following crop. However, burning is detrimental to the environment and nutrients and organic matter are lost from the system.

The burning of stubble fires in the autumn months increases the risk of local air pollution as inversion layers develop causing smoke to hang in the air close to ground level. To address this, farmers need to understand best practice stubble burning practices and find alternatives to stubble burning.

Alternatives to rice stubble burning have been investigated through a number of trials looking at composting stubble, stubble incorporation, surface stubble retention, rice bio char processing and direct seeding. There is no stand out alternative to stubble burning – it is imperative that farmers utilise the stored soil moisture from the rice crop by the timely planting of a winter cereal or oil seed crop. When the interval between harvest and new crop planting is delayed alternative stubble management practices can be used, meaning rice stubble burning will remain as a tool of last resort for some time.

The projects listed below have enabled the rice industry to continue to improve its advice to growers regarding stubble management including the delivery of an annual stubble management awareness program. This ensures that growers are aware of alternatives to stubble burning and how to burn responsibly where it is necessary to do so.

## Alternative uses of rice stubble



Alternative uses for Australian rice straw



Best practice guidelines and tools for stubble burning



These projects were conducted in partnership with Rice Extension in partnership with Western Murray Land Improvement Group and Murray Local Land Services.



# Biodiversity and cultural heritage field day

Increasing biodiversity on farms is an important part of managing the agricultural landscape. Educating landholders on the outcomes that can be achieved by increasing biodiversity on farm, the measures that they can take to enhance and increase the areas of vegetation and wetlands on their properties, can see environmental enhancement included in management decisions and secure the longevity of a farm business.

In conjunction with the NSW Biodiversity Conservation Trust (BCT) through the Partnering in Private Land Conservation Project, a biodiversity and cultural heritage day was organised at the property "Old Coree" near Jerilderie.

Attendees sat in the gardens surrounding the homestead to learn about the history of the property, the agricultural research undertaken and the holistic management of the property.

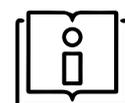
The Murray Darling Wetlands Working Group led a field tour to the wetland to present how environmental water was provided to the wetland and the response from the flooding. The species surveys from the monitoring and the health of the vegetation clearly showed increasing biodiversity and improvement in the health of the wetland. Staff from BCT shared information on the type of private land conservation agreements that were available to landholders and the process involved.

Murray Local Land Services staff were on hand with locally harvested seeds and a direct seeding machine. The day finished with a tour of the cultural heritage sites along Billabong Creek highlighting the importance of these sites to the community.

The day was a wonderful success with all attendees thoroughly enjoying the day. Many of the participants have done some revegetation or fencing on their farms. Feedback indicated that they would be looking to implement projects on their farms to increase the areas of vegetation and to protect existing vegetation.



This event was held in partnership with the Biodiversity Conservation Trust, Sunrice, Murray Darling Wetlands Working Group and Yarkuwa Indigenous Knowledge Centre.



# A lesson in Paddock to Plate

Mayrung Public School is a small school of 25 students from kindergarten to year 6 located in the heart of the rice growing area of the Murray Valley between Deniliquin and Jerilderie. Despite being surrounded by rice farms, many of the students were not aware of how rice is grown, harvested, milled and processed into the products that they see on the supermarket shelves.

A school parent and member of the Ricegrowers' Association of Australia (RGA) identified this challenge and saw the need to improve students understanding. RGA worked with SunRice and the parent to help students learn about rice growing and processing in their local area.

A visit to a local farm harvesting rice was organised and opened the students' eyes to seeing rice in the paddock and the rice header in action. The rice farmer spoke to the children about how the rice is harvested and how it is delivered into the rice mill. They learnt about the growth cycle of the rice plant and the habitat that the rice paddock provides to various animals throughout the growing season.

Back at school they learnt about the different stages of milling to create products they see on the supermarket shelf. SunRice presented and supplied samples of rice products – the students were fascinated by the variety of foods that could be made from one tiny grain. They asked lots of questions and were keen to touch and feel the rice plants and rice samples.

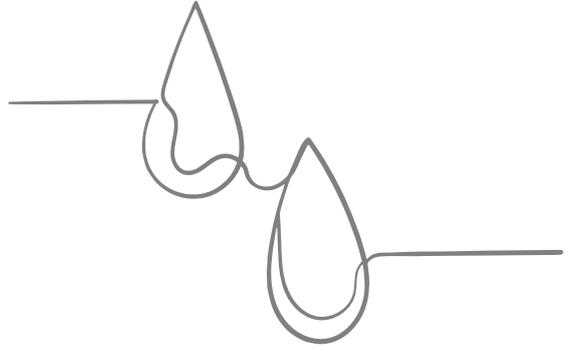
The combination of field visit and classroom time ensured that all students from kindergarten to year 6 were highly engaged in the program. The paddock to plate program will continue to educate and engage the students by highlighting different agricultural production systems and the connection with the environment.

This activity was conducted in partnership with SunRice and Mayrung Public School.





# Yanco Creek and Tributaries Advisory Council

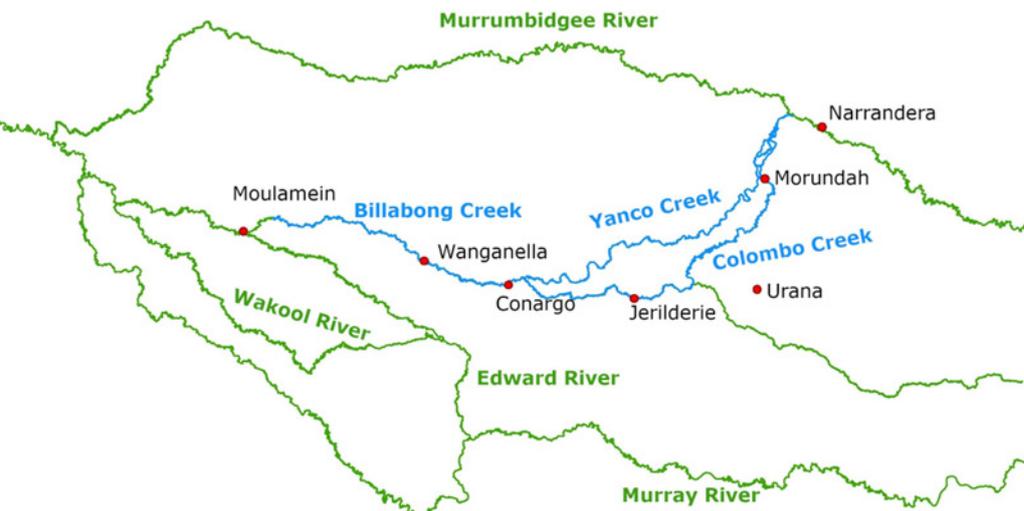


The Yanco Creek and Tributaries Advisory Council Inc. (YACTAC) operates within an extensive area of over 800 km of creek frontage, stretching from Narrandera to Moulamein. The Yanco Creek System comprising the Yanco, Billabong, Colombo and Forest creeks broadly connects the Murrumbidgee River to the Edward River.

YACTAC’s management team consists of nine volunteers and over 150 landholders who voluntarily contribute to the Yanco Creek System Natural Resource Management Plan Levy, aimed at maintaining and improving the system’s health since 2006.

The Yanco Creek System plays a vital role in the regional economy by providing town water, irrigation and stock/domestic water for towns like Jerilderie, Conargo, Urana, Morundah and Wanganella. The area holds significance for Indigenous groups, including Bpangerang, Wamba Wamba, Barapa Barapa and Wiradjuri, who value its productive watercourses, wetlands and floodplains.

Known for its environmental values, the Yanco Creek System supports one of only two known self-sustaining populations of the nationally endangered trout cod. It provides rare habitat conditions, such as perennial fast-flowing water, good water quality, abundant riparian vegetation, low macrophyte density and dense in-channel snag habitat. The system’s wetlands serve as crucial habitats for international migratory bird species, native fish and other aquatic life. Additionally, it acts as an undisturbed riparian corridor between the Murray and Murrumbidgee Rivers.





# Realising the fruits of our labour

## AUSTRALIA'S FIRST RELEASE OF A FRUIT-FEEDING WEEVIL FOR THE BIOLOGICAL CONTROL OF SAGITTARIA.

Yanco Creek and Tributaries Advisory Council Inc. (YACTAC) has partnered with the Victorian Department of Jobs, Precincts and Regions (DJPR), Department of Primary Industries (NSW DPI), and Murrumbidgee Irrigation Limited (MIL) to combat the invasive aquatic weed, sagittaria (*Sagittaria platyphylla*), which has been declared a Weed of National Significance (WoNS) in Australia. Sagittaria is known to grow aggressively in the Yanco Creek System, obstructing wetlands, natural watercourses, and irrigation channels.

To address this issue, YACTAC and its partners have released 50 fruit-feeding weevils (*Listronotus appendiculatus*) that feed on both the seed and fruit of sagittaria.

This is an important step towards containing the weed without relying on chemicals, improving the health of waterways, and increasing agricultural productivity.

The release of the weevils was the result of 17 years of extensive research and was attended by representatives of 11 organisations, including YACTAC, Agriculture Victoria, Edward River Council, Murray Irrigation, Murrumbidgee Irrigation, Murray River Council, Berrigan Shire Council, Edward Wakool Angling Association, Yarkuwa, Ricegrowers' Association, and Murray Local Land Services. The weevils have undergone stringent testing over the last five years to ensure that their release poses no threat to native species or other important plants in Australia.

This program is a significant milestone in the management and reduction of sagittaria's impact on waterways, and it demonstrates the effectiveness of biological control methods in addressing invasive species.



Photos: Andrea Mitchell and Dr Raelene Kwong; *Listronotus appendiculatus* weevil.



*This is a great example of advanced bioscience helping provide a long-term sustainable solution.*

Dr Raelene Kwong  
Senior Research Scientist,  
Agriculture Victoria

# Yarkuwa Indigenous Knowledge Centre



**YARKUWA**  
INDIGENOUS KNOWLEDGE CENTRE



Yarkuwa Indigenous Knowledge Centre Aboriginal Corporation (Yarkuwa) is a Traditional Owner organisation based in Deniliquin, New South Wales. Yarkuwa was established in 2003 with core values of inclusiveness, community development and social justice.

The aims of the organisation are to:

- collate and maintain cultural, heritage and environmental information as it relates to Wamba Wamba and Perrepa Perrepa country
- provide an educational service to the wider community including schools and community groups
- engage in negotiations with Local, State and Federal and other agencies on matters relating to culture, heritage and the environment
- provide the means for members to develop skills that will allow them to be involved in the provision of educational and research services
- provide a centre to facilitate the transfer of knowledge from one generation to the next
- acquire and hold title to land and water for the purposes of economic and cultural development.

Yarkuwa works in collaboration with a number of groups and organisations across the Murray region to incorporate Aboriginal values in their work including providing information about cultural protocols and helping to establish mechanisms for engagement between Landcare and Aboriginal communities. Chair of Yarkuwa, Aunty Jeanette Crew OAM, is the Regional Cultural Mentor for the Murray region. Aunty Jeanette supports the Landcare Coordinators and Murray Landcare Collective to embed First Nation's Peoples' cultural values and participation in Landcare.

As a community owned and Aboriginal governed organisation, Yarkuwa is in a unique position to develop and showcase local Aboriginal culture in the region.

Yarkuwa maintains strong relationships with the local community and partners which support exciting and innovative community owned initiatives that strengthen the community and create opportunities for future generations.

Yarkuwa also houses local cultural exhibits, family history, historic photos and weaving collections. The organisation has recently set up their new office including exhibits at 394 Hay Rd, and welcomes visitors.





# Kolety Werkul Rangers



## Kolety Werkul Rangers

The Deniliquin-based Kolety Werkul Rangers program has seen the establishment of a team of Indigenous River Rangers working to improve the Edward/ Kolety and Wakool River systems and wetlands, and Werai Reserve Ramsar site. Starting in 2021, the program is being delivered by Yarkuwa Indigenous Knowledge Centre through funding from the National Indigenous Australians Agency.

The rangers each bring extensive experience and expertise, and play a vital role in ensuring traditional knowledge and culture is practiced and maintained.

The team has been building their knowledge to effectively manage waterways, including conducting vegetation

surveys in and around waterways, water quality and biodiversity monitoring, pest plant and animal control, and understanding how environmental water works, where it comes from and why it's so important. A focus for the rangers has also been on developing relationships and partnerships with relevant organisations, groups and stakeholders.

The planned Kolety Werkul on country works program was stalled due to access and community safety issues during the 2022 flood emergency in and around Deniliquin. During this time, the ranger team regrouped and partnered with local, state and national emergency services personnel to respond to community needs, providing local knowledge and additional value the flood response in the local area – something they are all very proud of.

Currently, the ranger team consists of two On Country Operations Officers, one Project Implementation Officer, one Ranger, one Junior Ranger and two school-based trainees.

The Ranger team has obtained funding until 2026 and will continue to build their knowledge and deliver on-ground activities to improve the health of the rivers, creeks and waterways in the Deniliquin area and provide training opportunities for the local youth. They look forward to establishing their base in the new Yarkuwa office on Hay Road, Deniliquin.



Future leaders embark on traineeships



Turtles and Traditional Owners



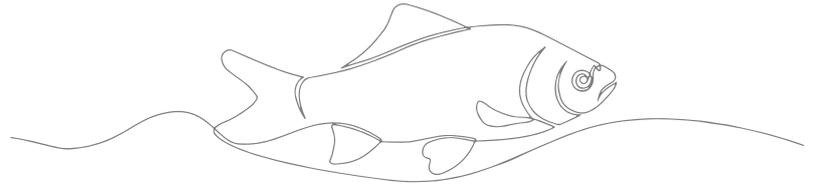
Kolety Wakool River Rangers



Yadabal Lagoon Wetland Restoration



# Deniliquin Kolety Lagoons Landcare Group



The Deniliquin Kolety Lagoons Landcare Group is made up of dedicated volunteers who work with community groups to restore and enhance the lagoons system in Deniliquin, NSW. The natural lagoon system is a unique feature of Deniliquin, meandering its way through the township, eventually connecting to the Edward River.

In 2010, members of the Edward Wakool Angling Association recognised the need to restore and enhance the lagoons to increase biodiversity and fish habitat, and provide a breeding ground for threatened fish species including southern pygmy perch, purple-spotted gudgeon, olive perchlet and eel-tailed catfish. This led to the development of the Deniliquin Lagoons Restoration Project, and ultimately to the formation of the Deniliquin Kolety Lagoons Landcare Group.

Overseeing the Deniliquin Lagoons Restoration Project is the main activity for the group. This wetland revegetation and rehabilitation involves the removal of European carp and silt, installation of fish habitat, stocking native threatened fish species and installing casting decks, tables and bench seating. Education is also a focus of this project with the creation of an Aboriginal cultural learning space, development of educational resources on fish habitat, environmental values and Aboriginal cultural values.

The group's volunteers have been running a school engagement project with Deniliquin High School Year 10 students since 2017. Students learn about the functionality of wetland ecosystems, history of the lagoons and the fish, plant and animal species present. The students also undertake fish and water quality monitoring, infrastructure projects and assist in the rehabilitation of the banks of the Edward/Kolety River.

Recent major achievements for the group include the release of threatened eel-tailed catfish into the Edward/Kolety River made possible through the money raised by the inaugural 2023 Edward/Kolety Fishing Challenge.







# Petaurus Education Group

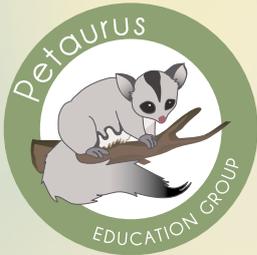
## *Vision*

A balanced, productive and resilient regional landscape with engaged communities.

## *Mission*

To encourage, support and connect our regional communities with their natural and cultural environment through the development and delivery of quality engagement, education and communication programs that promote positive change.

# Petaurus Education Group



Petaurus Education Group Inc. consults on, develops and delivers a range of learning and curriculum experiences, resources and initiatives for school and communities to connect with land, water, productive farming, sustainability and culture at the local and state-level. Petaurus has reached national and international acclaim in the environmental education sector.

Petaurus was incorporated in late 2014 to support the Wirraminna Environmental Education Centre and develop nature-based education activities for preschools, primary and secondary schools. Today, Petaurus works with government agencies, schools and community groups across north east Victoria and throughout NSW, delivering curriculum-relevant education programs, teacher support and creating bespoke resources and projects focused on the environment and sustainability.

Our team includes teachers, project managers, environmental scientists and practitioners, accountant, media/communications and consulting staff.

As a not-for-profit group our board are volunteers. They have professional expertise in natural resource management research and project delivery, First Nation's Peoples Culture, school curriculum and education department requirements, multimedia and community engagement.

Some of our recent programs include:

- Conservation Champions partnership with NSW Biodiversity Conservation Trust
- Sisters who SHINE Foundation
- Burrumbuttock squirrel glider LAMP project
- NSW Landcare Program – Local Landcare Coordinator
- Priority Weeds of the Murray and Riverina Region Identification Guide
- First People's Culture within the Murray Region of NSW
- Sustainable Schools and Basin Heros.





# Sisters who SHINE

Sisters who SHINE (SwS), developed by Petaurus Education Group, aims to inspire the next generation of local women to reach for the stars, showing them how they can achieve their goals while fostering a culture of mutual support and empowerment as they pursue the career and life they wish to lead.

The free and accessible programs cater to rural and regional girls from Albury-Wodonga and surrounds, and are delivered in-school, out-of-school, and in partnership with local disability and diversity employment service providers.

Built on the themes of SHINE: Science, Heritage, Innovation, Nature, and Empowerment, SwS programs have been developed

to inspire and equip young girls in the Albury-Wodonga region with the skills, knowledge, and confidence to make their mark on the world.

At the most recent Easter holiday program, participants were kind, enthusiastic, happy and very willing to try new things - which is what Sisters who SHINE is all about!

The girls were particularly excited about alternative sports and outdoor games and getting to know each other. They also enjoyed becoming engineers and robots while they discovered both the benefits and limitations of Artificial Intelligence.

Special guest presenters from NSW Police came along and shared some very important

information to help keep the girls safe online. A meaningful session by local Wiradjuri leader, Aunty Ruth Davys, helped the girls appreciate how traditional Wiradjuri tools, equipment, clothing and even toys have been made and used by Wiradjuri people for many centuries.

Thanks to the generosity of supporters, including the NSW Government, the Rotary Club of Albury, Charles Sturt University in Thurgoona, 2AY and the Border Trust, Petaurus has been delivering Sisters who SHINE programs since 2020 with exceptional feedback received from participants, parents, presenters and volunteers.

Petaurus encourages you to connect with them to explore how you can support Sisters who SHINE. Together, we can empower the next generation of local women and shape a brighter tomorrow for women everywhere!



# Woodland fun at Wirraminna

Petaurus Education Group provides high quality educational outreach programs to promote and inspire the next generation of Australians to discover and explore science and innovation. A very popular means for achieving these goals are school excursions to Wirraminna Environmental Education Centre in Burrumbuttock and incursions 'gala days' at the school or nearby nature reserve.

A trip to Wirraminna is an immersive experience for the students and teachers. The park is 5-hectares of restored woodland with lots of learning spaces in different settings, clear pathways to move around, toilets, tables and even an indoor discovery centre.

A 'gala day' means we come to you and make use of natural spaces in or near the school.

The Wirraminna and Petaurus team offer programs and activities tailored to suit the location, group size, age, syllabus outcomes and the season. We have found that mixing 'moving around' activities like bush treasure hunt, ghost-animal bingo, 'the glider game' and macro-invertebrates, where the students move through-out the site, with contained sessions like the 'Southern corroboree frog experience', 'Indigenous art and nature' and 'solar cars', help the students focus, learn and hold their attention throughout the day.

The activities promote brainstorming, communication activity, critical thinking activity, data manipulation and interpretation, practical activity and problem solving and are also based on the five steps of the sustainability action process, make the case, explore, plan, take action and reflect.

During 2022, the whole of Glenroy Public school went to Wirraminna over four separate days. It was so much fun. The sessions covered the ScOT topics: environmental sustainability, sustainable development, environmental impact and biodiversity.



# Connecting communities and conservation

Squirrel gliders (*Petaurus norfolcensis*) are an icon species in the Burrumbuttock area in southern NSW. While this glider has a wide distribution, it is considered rare throughout most of its range as it has specific habitat requirements. The loss of high-quality habitat has led to squirrel gliders being listed as Vulnerable under the *NSW Threatened Species Conservation Act*. They are likely to become endangered unless proactive conservation on-ground interventions are carried out.

The Burrumbuttock Squirrel Glider Local Area Management Plan (LAMP) aims to secure a robust population of squirrel gliders in a 10 km radius around

the village of Burrumbuttock. Using baseline glider population data, obtained through non-fatal trapping and surveying in 2014, this LAMP is a map that shows where on-ground vegetation protection and/or replacement planting work needs to be done and a passionate community willing to make it actually happen. Because the works cross property boundaries, the landholders and local Council had to be willing to participate in creating and maintaining a glider-friendly landscape.

LAMP revegetation activities over the past decade have significantly reduced fragmentation, which should lead to an increase in the squirrel glider population over time.

The goal to double the population of squirrel gliders through this community revegetation action is on-track, which means the population will be thriving, not just persisting, in Burrumbuttock.

On-ground actions include: stock-proof fencing and guards, replacing barbed-wire, planting and enhancing revegetation linking corridors, paddock-tree replacement, hollow-bearing tree protection, installing and monitoring nest boxes, glider awareness training for landholders, community events, school programs, social-media and fact sheets.



Currently delivered by Petaurus Education Group Inc. in partnership with West Hume Landcare, Wirraminna Environmental Education Centre, NSW Dept. of Planning and Environment, Murray Local Land Services and Greater Hume Shire with funding from the Natural Heritage Trust, Australian Government's National Landcare Program, and Catchment Action NSW and NSW Environment Trust.





# Bungowannah/ Splitters Creek Landcare Group



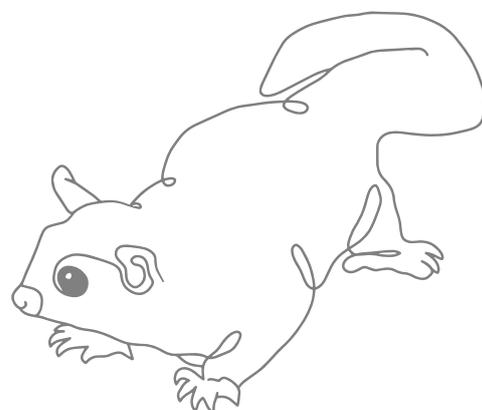
Bungowannah /  
Splitters Creek  
Landcare

Bungowannah / Splitters Creek Landcare Group is situated on the peri-urban western fringe of Albury, NSW. Our community consists of fulltime farmers, niche businesses, commuters, tree-changers, hobby farmers and horse enthusiasts. Our agricultural practices revolve around beef and sheep grazing, boutique viticulture, horticulture and some dairy farming.

As a volunteer-run incorporated organisation, we focus on small local projects. We collaborate with the Local Landcare Coordinator and work closely with Albury City, Murray Local Land Services, DPIE Saving Our Species team and Rural Fire Service. We actively participate in landscape-scale projects and events with other landcare organisations.

Since 1989, we have achieved significant milestones, including 19 years of groundwater level monitoring, publication of the Bretton and Splitters Creek Catchment Plans and ongoing efforts in revegetation and weed management. In recent years, we have expanded our scope to include urban sustainability initiatives.

Our activities encompass a regular produce swap, garden walks, community information and Landcare field days, nature-inspired art and craft events, school holiday and nature-play events at local environmental education centres, squirrel glider nest box program, maintenance of previous Green Army projects, community planting days, feral animal control, habitat connectivity revegetation and welcome packs for new residents.



Notable native species in our area, classified under the *Biodiversity Conservation Act 2016*, include the squirrel glider, Sloane's froglet, brown treecreeper, pink-tailed legless lizard and crimson spider orchid (pictured), all of which require conservation efforts.



# Sharing the land with squirrel gliders

The squirrel glider, listed as vulnerable under the *NSW Threatened Species Act 1995*, requires a coordinated program of landholder engagement and public awareness to ensure suitable habitat for its survival, as identified in the Splitters Creek Catchment Management Plan (2011).

In 2014, a nest box building workshop, funded by the Slopes to Summit (S2S) partnership of the Great Eastern Ranges Initiative and the NSW Government's Environmental Trust (managed by Holbrook Landcare) was initiated. Partially constructed boxes were built by a local nest box builder and these were assembled by 34 children and their families at a Little Landcare workshop. This community event attracted a total of 59 attendees and provided education on proper box placement, managing threats to the squirrel glider, and the significance of preserving their habitat.

The following year, a further 15 residents participated in the Albury Conservation Company Urban Nest Box Program, with the installation of nest boxes carried out by Parklands Albury Wodonga.

The discovery of a glider caught in a barbed wire fence in Splitters Creek highlighted the threat to glider flight paths. In response, the Wodonga Green Army team, sponsored by Parklands Albury Wodonga, replaced the barbed wire with plain wire at that site.

Today, nest boxes are spread across the Splitters Creek catchment, raising community awareness of the threats to the squirrel glider. The Landcare group regularly monitors the boxes using pole cameras, confirming the program's success as squirrel gliders frequently visit the nest boxes.

The 2022 monitoring revealed that 10% of the boxes surveyed had squirrel gliders present, totaling eight individuals, including juveniles in two boxes indicating successful breeding. Additionally, 72% of the boxes showed evidence of glider use, while the presence of active feral European honey bee hives decreased to 0.7% from the previous year.

Thanks to the AlburyCity Land Management Incentive Grant, the program will expand in 2023. New and replacement nest boxes will be installed, accompanied by community engagement activities to further support the conservation of the squirrel glider.



# Friends of Nail Can Hill



The Friends of Nail Can Hill are dedicated to conserving and enjoying Nail Can Hill, a remarkable natural treasure located in Albury. This undulating bushland is part of a regional crown reserve and has undergone significant changes due to historical clearing, gold mining, and localised bushfires. Despite these challenges, it is successfully regenerating and supporting a diverse range of threatened and vulnerable plant and animal species.

The area is predominantly comprised of Box Gum Grassy Woodlands, an endangered ecological community characterised by white box, yellow box, and/or Blakely's red gum trees, as well as other tree species like brown stringybark, white cypress pine and drooping sheoak.

Established in 2014, the Friends of Nail Can Hill actively promote community appreciation and engagement with the environment. They work closely with Albury City Council, the Crown Lands Section of the NSW government, the Local Landcare Coordinator and Parklands Albury-Wodonga to enhance the native biodiversity. Their activities include guided community walks focusing on various aspects of biodiversity, weed removal, Clean Up Australia Day participation, support for biological control agents, revegetation projects and the creation of local handbooks. The group also monitors nest boxes and welcomes volunteers.

The Friends of Nail Can Hill, although small, are a dedicated steering committee that encourages new members to join. They believe in inclusivity, as all activities and events are open to everyone. By fostering a sense of community involvement and shared responsibility, the group strives to protect and appreciate the natural beauty of Nail Can Hill.



# Squirrel gliders on Nail Can Hill

Nail Can Hill Flora and Fauna reserve, in the west and north of Albury, is a highly modified environment due to historical clearing, gold mining and localised bush fires. It is now successfully regenerating and supporting vibrant biodiversity and recreation activities.

There is very little survey data on native animal populations, especially small mammals on Nail Can Hill. One local volunteer community group, Friends of Nail Can Hill, decided to find out for themselves what fauna actually lives on the hill, starting with Squirrel gliders.

In 2020, Friends of Nail Can Hill successfully received a grant, auspiced by Parklands Albury Wodonga, to install 120 nest boxes on Nail Can Hill. Wodonga Men's Shed built boxes to

attract Squirrel gliders (*Petaurus norfolcensis*). Volunteers from Friends of Nail Can Hill worked closely with Parklands Albury Wodonga, the Albury Local Landcare Coordinator and the land managers AlburyCity and Crown Lands to deliver the project. The nest boxes are now labelled, installed, mapped, monitored and occupied. Squirrel gliders were using the new boxes within a month of installation at a variety of sites across the hill. Successful breeding is also occurring.

A community event launched the citizen science volunteer monitoring aspect of the project. Volunteers are trained to use the pole camera for safe, non-invasive monitoring, online forms for data entry, and how to use citizen science apps.

Monitoring continues two times per year by the volunteers with the results reported to the community. Spotlight nights and awareness activities have proven popular with a wide audience. Whilst nest boxes facilitate community engagement and absence/presence data they are not a substitute for hollow-bearing trees.

This project was completed in partnership with Parklands Albury Wodonga, Albury City Council and Petaurus Education Group Inc.



## BREAKING NEWS

The April/May 2023 survey found 31 Squirrel gliders in 19 boxes.

More than 80% of all the boxes showed signs of glider use!



# West Hume Landcare



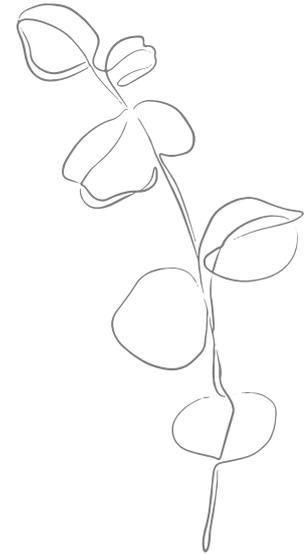
West Hume Landcare was established in 1989 as a response to community concerns around land degradation and a desire to work together. It is one of the first community run Landcare groups in New South Wales.

In 2019, West Hume Landcare celebrated 30 years of community action. Over this time, we have gained millions of dollars in funding to support projects in our local area focused on:

- preventing/repairing salinity patches, soil acidification and erosion
- fencing to protect remnant grassy woodlands
- planting native species to create shelterbelts and native wildlife corridors across the landscape
- protecting threatened species
- supporting sustainable agriculture
- pest and weed control.

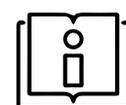
We share and discover through:

- on-ground projects
- field days
- workshops
- fun days
- friendships.



West Hume Landcare is a not-for-profit incorporated association. We are proudly part of the Murray Landcare Collective, Landcare NSW and a founding member of Murray Regional Landcare Incorporated.

Our activities are focused around Burrumbuttock, Balldale, Brocklesby, Howlong, Jindera, Walbundrie and Walla Walla in the Murray region but we welcome members from all areas whose interests align with our own.





# Farmers teaching farmers

**Landholder-driven discussion group to support the adoption of new technologies, tools and best management practices for mixed farming to reduce pressures on our natural resources in the West Hume Landcare region.**

Between 2018 and 2022, West Hume Landcare organised a series of information sessions, workshops and field trips for its Mixed Farming Group members. The program aimed to answer the question, “How can I be more sustainable, productive and profitable on my farm?”

The group environment was crucial as landholders shared their successes, discussed their challenges and supported each other through practice change. Each session was hosted by a group member, allowing others to observe what was working (and what wasn’t) on local farms. The facilitator, a local landholder, played a vital role in creating a friendly, safe space for sharing.

*“Incredibly valuable to hear other’s experiences and know you are not alone.”*

The program’s tailored delivery led to the group becoming more comfortable sharing with each other. The connections made between local landholders and experts from industry, not-for-profits, agribusiness and private consultants gave participants access to the latest information on best management practices and the tools, technologies and techniques available to support adoption.

The program’s positive outcome was evident in the last two workshops, which were led by landholders sharing the tools and technologies they use to implement sustainable land management practices on their properties.

*“Puts ideas in your head and gets you thinking about doing things differently.”*

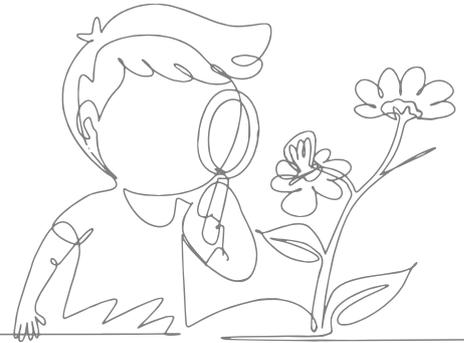
West Hume Landcare’s program is an excellent example of how farmers teaching farmers can invoke change by building trust and creating a supportive environment for sharing.



This project was supported by the National Landcare Program: Smart Farms Small Grants – an Australian Government initiative.



# Wirraminna Environmental Education Centre



Located in Burrumbuttock, southern NSW, Wirraminna Environmental Education Centre and public gardens are 35 km north of Albury. Established in 1995, Wirraminna occupies an old stock reserve and public watering place. Local volunteers have diligently developed and maintained the site, serving as a model for Landcare projects in the area, with a focus on restoring native vegetation and wetlands on farms.

Spanning 5 hectares, Wirraminna is a public park featuring gardens, natural woodlands and an abundance of locally rare native shrubs, grasses and wildflowers, all thoughtfully labelled for easy identification. Over the past 25 years, volunteers and school students have been involved in ongoing revegetation efforts using locally collected seeds, resulting in a vibrant habitat for numerous native animals, including the squirrel glider. The Burrumbuttock township and its surroundings have been home to an impressive 193 bird species.

Visitors to Wirraminna can explore walking tracks, themed garden beds, landcare shelter belts, bird hides, nest boxes, a seed production area, climate resilience garden, wetlands, a large dam and well-equipped BBQ and picnic areas. The centre also houses live exhibits of southern corroboree frogs and native fish aquariums. Serving as a community hub, Wirraminna offers Landcare, environmental education, cultural and sustainable agricultural programs delivered by dedicated staff and volunteers. The partnership-focused committee have facilitated numerous long-term projects, emphasising community empowerment.

Attracting people and schools from far and wide, Wirraminna is an amazing place and can be visited any day of the year by the general public. Spending time on the quiet waters edge, listening to the breeze and birds over the dam, brings a smile to your face. The natural surrounds help connect you back to nature. We love Wirraminna! Come and see... and you will too!





# Climate and habitat resilience garden

Wirraminna recognises that people learn best when they can witness things first-hand. To facilitate this, a demonstration garden has been created where visitors can explore climate adaptation and discover the best species to cultivate for future biodiversity.

The garden underwent a transformation in 2019 when old and degraded pine trees were removed from the cartwheel planting design known as the 'nelder'. Originally intended as a trial for various agroforestry species, including radiata pine, it became evident that planting pine trees was unsuitable due to low rainfall. In response, the area was revamped into a 'climate resilience' garden, showcasing plant communities and provenances that are more drought-tolerant.

Funding was secured from the NSW Department of Planning, Industry and Environment in early 2020 to support this project.

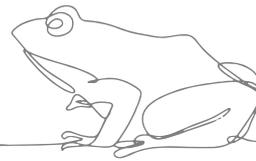
Considering the forecasted climate changes with higher temperatures and reduced spring rainfall, it is crucial to adapt our restoration efforts by carefully selecting species and sourcing seeds. To illustrate potential vegetation shifts in the next few decades, Wirraminna volunteers planted representations of five woodland vegetation communities, two from the Savernake region with an annual rainfall of 400mm, and three from the northern Forbes region using local seed sources. These plants possess genetic traits better suited to our future climate.

The climate resilience gardens serve as a glimpse into Wirraminna's woodlands in 2050 and beyond, reflecting the anticipated changes in our climate. AdaptNSW's projections for the Murray–Murrumbidgee region indicate a temperature increase of up to 2.5°C by 2079, along with a reduction in night-time frosts. While summer and autumn rainfall is expected to rise, spring rainfall will decline.

Through these gardens, Wirraminna aims to educate and inspire visitors, enabling them to comprehend the potential impacts of climate change on our local ecosystems. By showcasing adaptive strategies and providing tangible examples, we encourage proactive measures to safeguard our natural heritage.



# Woolshed Thurgoona Landcare Group



The Woolshed Thurgoona Landcare Group (WTLG) was established in February 2006, merging the Woolshed and Thurgoona Urban Landcare Groups. It is run by volunteers with members from diverse backgrounds, including environmental scientists, agricultural enterprises, hobby-farmers and lifestyle property owners, and residents from Thurgoona, Wirlinga, Ettamogah, Lake Hume village and Table Top in Greater Albury.

The Group is dedicated to preserving the natural environment and maintaining land and water health within its boundaries. They collaborate with the community to conduct on-ground activities and events on public and private land. Their efforts focus on habitat conservation, such as revegetation and biodiversity preservation on private properties, to establish wildlife corridors and protect threatened species like the squirrel gliders (*Petaurus norfolcensis*) and Sloane's froglet (*Crinia sloanei*), which are found in the area.

Having established strong connections with local landholders and experienced landcare farmers, WTLG has successfully completed various projects over the past six years. They have undertaken revegetation initiatives in Wirlinga and Table Top, enhanced understorey vegetation in Thurgoona parks and Lake Hume, and hosted a wide variety of biodiversity events. A significant project involves revegetating the banks of Hawksview lagoon, creating 13 hectares of protected wetland habitat for several threatened bird species, including the white-bellied sea-eagle.

The Group actively engages the community through initiatives such as an annual native plant giveaway in collaboration with AlburyCity. They also contribute to citizen science as members of the 'Sloane's Champions' FrogID app team, monitor nest boxes and promote community involvement in preserving hollow-bearing trees.

As the Group looks to the future, they aim to expand their revegetation efforts across the landscape with enthusiastic participation from local landholders.



Sloane's froglet (Dr Alex Knight)



# Connecting landscapes, connecting communities

Climate change and the reduction of natural environments is increasingly a concern. Loss of biodiversity is occurring globally due to human consumption and population needing more food production, infrastructure, mining and housing. It is a problem that feels insurmountable. People need to eat and live, but so do native animals. Small-scale projects like Woolshed Thurgoona Landcare's 'Connected Landscapes', give people a chance to contribute in a way that makes a genuine difference.

The Thurgoona/Wirlinga precinct is the growth corridor of Albury. The native vegetation, Endangered Ecological Community Box Gum Woodland meets Riverine Plains, supports 118 native birds, six listed as threatened, including the Vulnerable squirrel glider and Endangered Sloane's froglet.

Old trees full of hollows are being knocked down for roads and housing estates. Their homes for our homes.

Landcare groups revolve around people, building strong connections to each other, our neighbours, our community and to nature by learning from each other and working together. Volunteer participation in Landcare activities is a great way to connect with nature, which has been shown to evoke positive emotions as well as strengthen individual resilience and sense of belonging.

Projects like Connecting Landscapes not only returns native vegetation across the landscape, reducing habitat loss and fragmentation, it improves its ecological value for native wildlife and facilitates community connections and pride in our home city.

Undertaking the project prior to development, provides an opportunity for plantings to become established, building up the resilience of the landscape prior to the pending urban encroachment.

Since 2017, Woolshed Thurgoona Landcare have delivered:

- 6.4 km of stock-exclusion fencing
- 26 ha revegetated wildlife corridor linkages (10,000+ plants) dotted across Table Top, Thurgoona, Wirlinga and Lake Hume.
- Excluded stock from 13 ha of wetland.

All our events revolve around connecting with nature and community as a shared experience, which builds social cohesion and reduces isolation and enhances our local natural environment.

Funding partners include AlburyCity, OzFish Ltd, Australian Government and Local Land Services.





# Other groups in the region

# Woomargama National Park Volunteer Group



Woomargama National Park was formed in 2001 from three former state forests and other crown land. It is the largest protected area of forest west of the Great Dividing Range, with an incredible diversity of ecosystems across its 24,185 hectares. The park is 20 kilometres south-east of Holbrook and 30 kilometres north-east of Albury on the South West Slopes of NSW, just a short drive off the Hume Highway.

The national park is home to a number of endangered species including the Booroolong frog, rare wattle *Acacia phasmoides*, regent honeyeater, superb parrot and powerful owl. Important cultural heritage and historical sites exist in the park including art sites, tin mines and the Hume and Hovell walking track.

Woomargama National Park Volunteers are a dedicated group that meets semi-regularly, brought together by a common love for the park. We work closely with the National Parks and Wildlife Service local ranger to restore the park's natural environment, particularly for its threatened species and to encourage visitors to appreciate the park.

Some recent group activities have included participating in the planting of crimson spider orchid seedlings, grown by the Royal Botanic Gardens Victoria as part of a bigger orchid recovery program. The volunteers continue to weed and monitor the orchid enclosures – there are approximately only 650 crimson spider orchids left in the wild.

They also hosted a fascinating fungi workshop led by fungi expert Alison Pouliot. The day was held at a fire impacted site and Alison talked about the ecology of fungi and its relationship to fire – fungi is crucial to recover soil and restart nutrient cycling after fire. She also demonstrated how to identify local fungi groups and species.

Other activities we enjoy are track maintenance, weeding, monitoring phantom wattle (*Acacia phasmoides*) regeneration, bush fire recovery works and educational wildflower and bird walks.



# Parklands Albury Wodonga



Parklands Albury Wodonga (Parklands) is a cross-border, community-based, not for profit organisation focused on providing opportunities for people to access and experience the extraordinary range of bush parks in and around Albury-Wodonga. We undertake the conservation of these areas from an ecological perspective, while allowing sympathetic recreational access.

Our regional parklands embrace in excess of 3000 hectares of land along the riverine environment of the Murray and Kiewa Rivers, tributary creek valleys, sections of the Lake Hume foreshore, the High Country Rail Trail and hills and ranges surrounding Albury-Wodonga. We aim to ensure that the community takes ownership and responsibility for the long-term viability and enhancement of all its regional parklands. The primary focus of Parklands is to facilitate the involvement of our local community in each project.

Parklands Albury Wodonga achieves significant outcomes on the ground and connects people with nature through events and volunteering activities by making bushland areas accessible.

We want to encourage more people to get outdoors and appreciate the magnificent environment that is our shared backyard. We help this by:

- providing corporate volunteering and sponsorship opportunities
- facilitating regular community volunteering bush care working bees (weeding, planting, track and erosion works, fencing) to restore, improve and maintain a network of bush parks connecting our hills and rivers, the urban and rural
- supporting the Gateway Island Community Farm and 'Friends' groups
- conducting nest box monitoring and maintenance
- participating or hosting community awareness events to encourage community stewardship of the local natural environment
- running a Growing Green Carbon Offset program for businesses to offset their carbon footprint.



## Our Mission

To restore, improve and maintain the network of bush parks connecting urban and rural communities. We encourage community learning and engagement with the local natural environment.

## Our Vision

Our bush reserves and trails will have a high standard of biodiversity and natural values, achieved by empowering community participation and partnerships.



PROJECT 66

# Murray River Red Gum Trail

Project 66 is an ambitious project to join existing trails and create new linking sections to establish a significant new recreation trail between Albury and Lake Hume. The 66 km Murray River Red Gum Trail will unlock the natural treasures of the Murray River environs, allowing community access to the river, wetlands and billabongs all the way from Albury's Wagirra Trail to the weir wall at Lake Hume and paving the way for multiple recreation and tourism opportunities.

Initiated by Parklands Albury Wodonga (PAW), a local Community Steering Group has been exploring the feasibility of bringing this trail into existence as the final section of the Murray River Adventure Trail –

the larger initiative of Murray Regional Tourism aiming to create a nature adventure trail from lake Hume to the South Australian border. The group, in collaboration with Albury and Wodonga Councils and the Murray Regional Tourism Board, is now working across borders with community groups, landholders and local organisations to make Project 66 a reality.

With a feasibility study completed late 2022 for the seven new footbridges needed to link the trail across significant bodies of water on the route, the project has launched with it's own logo and short video clip explaining the route of the new trail.

Parklands staff are currently working with volunteers and community organisations to deliver pedestrian access infrastructure including chicane gates, boardwalks and track head signs and progressing development plans for further infrastructure alongside Project 66 partners. A number of events are in the pipeline under the Project 66 banner to celebrate community engagement with our magnificent river, including the launch of First Nations art murals on the Gateway Island section.

Community groups are welcome to adopt a section of the trail or bring ideas and related projects to the Project 66 table. Find out more on the PAW website, and contact us to get involved.



# Riverine Plains Inc.



## Vision

A trusted partner in farming excellence for the Riverine Plains.

## Purpose

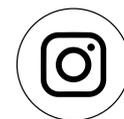
To grow member prosperity by building knowledge and skills.

Established in 1999, Riverine Plains Incorporated is an independent, for purpose, incorporated association dedicated to improving the prosperity of our members, associates and partners. With over 450 members and over 30 agribusiness partners across north-east Victoria and southern New South Wales, our organisation is known for its high impact project delivery, clear, targeted communications and valuable events.

**Our motto is 'farmers inspiring farmers' and all the projects we deliver are driven by our members' curiosity and need to fill knowledge gaps in their businesses.**

Riverine Plains specialise in providing independent, timely and relevant information through a rigorous research program and our annual schedule of events and publications. To date, we have successfully delivered over \$8 million in research, extension and validation projects across our region. Of this, \$3 million has been contracted in the last 18 months, demonstrating our recent significant lift in capacity and capability. Current and completed projects have covered aspects of stubble management, AgTech, containment feeding of livestock, water use efficiency, sub-soil acidity, harvest weed seed control, soil and weather information, pulse adoption, canola nutrition, nitrogen management, precision agriculture, soil carbon, nitrous oxide emissions and improved winter cropping systems.

Riverine Plains staff have an experience base of over 130 years in agriculture, research, field work, communications, business and industry. Along with formal tertiary, graduate and post graduate qualifications, the majority of the team have extensive practical experience working on farms providing know-how and capacity to deliver on the Riverine Plains' purpose.





# Cool soil initiative

Peter Campbell, a farmer from Henty, actively participated in the Riverine Plains Soil Carbon Project from 2012 to 2015, and he continues to contribute to the Riverine Plains' Cool Soil Initiative Project. In this case study, Riverine Plains reviewed how Peter's soil carbon management practices have changed in his farming system over the past five years.

## What is your farming enterprise?

We run a mixed farm with sheep and cropping over 1200ha and currently have around 2800 breeding merino ewes and 2000 lambs. Our cropping rotation is flexible.

## How do you manage your stubbles?

We try to retain our stubbles 100% across the farm. Although we try to keep our stubbles and sow through them you must be flexible in your approach.

## What pulse do you sow and what are your perceived and real benefits from including a pulse?

I have sown faba beans and albus lupins but found the grain yield to be unreliable so now we stick to narrow leaf lupins. The benefits of growing a pulse include providing a disease break and lower costs through not having to apply nitrogen and sometimes phosphorus.

## What value do you place on maintaining or improving soil carbon in your cropping system? How do you do this?

Maintaining and improving our soil carbon levels is very valuable to us. It is important as high carbon levels are linked with good soil fertility and allows us to reduce our nitrogen fertiliser use. We preserve and increase our soil carbon through stubble retention, through having a zero-tillage system and using pastures in our rotation. Healthy pastures need healthy soils and lime is a critical component to correct acidity.

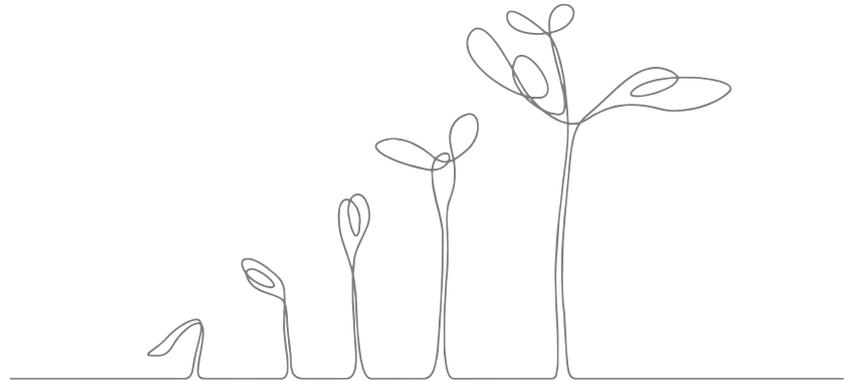


The Soil Carbon project was funded the Australian Government's Department of Agriculture Action on the Ground program and this case study funded by Foundation for Rural and Regional Renewal (FRRR).

The Cool Soil Initiative is a partnership between Mars Petcare, Kellogg's, Manildra Group, Allied Pinnacle, Corson, Pepsico, Charles Sturt University(CSU) and the Food Agility CRC with the support of the Sustainable Food Laboratory.



# Southern Growers



Southern Growers is a not-for-profit grower group servicing the Southern Murray Valley in New South Wales. The group formed in 2008 to respond to the growing need for information in irrigated farming systems. Southern Growers aims to drive innovation in the region to improve the profitability, efficiency and performance of agriculture in irrigated farming systems. As a result of this growers will be able to achieve greater water use efficiencies and more security for long term viability of their business.

Southern Growers has a board of seven members with experience in farming, financial and business management, industry development, extension, and not-for-profit organisation management. The group also has a farming systems committee made up of growers, private consultants and commercial agronomists who drive innovative research, development and extension and support synergies between growers and the agricultural industry.

Southern Growers partners with organisations to conduct research, development and extension and has been running extension programs on crop sequencing, timing of sowing, frost management, herbicide resistance and irrigation layouts. Southern Growers holds regular grower workshops and field days.

With irrigators operating in an environment of greater climate variability and reduced water allocation the need to continually improve water use efficiency is paramount.

## Objective

To improve the profitability and viability of Southern Murray Valley farming businesses, through research, demonstration and exchange of ideas amongst growers and industry groups.

## Our reach

Southern Growers connects through events, activities and communications growers, agribusinesses, researchers and industry partners across the Southern Murray Valley.



# Fodder for the future

Southern Growers Inc has partnered with Murray Dairy through the Fodder for the Future project to conduct vetch demonstration trials over the 2021 and 2022 seasons at their research site on the northern edge of Finley NSW.

Southern Growers is one of six organisations partnering with Murray Dairy across the Northern Victorian and Southern Riverina dairy areas to establish trial and demonstration sites that will showcase a range of winter crops and management strategies to maximise yield, quality, and profitability. The project aims to support dairy businesses at a time when increasing numbers of farms have moved away from relying on perennial pastures and are now growing more winter and summer crops.

The Southern Growers trial is designed to demonstrate a range of vetch varieties and management strategies that can optimise the yield and quality of vetch, specifically for use in dairy cow diets. Four vetch varieties (Rasina, Timok, Morava and RM4) were grown under both irrigation and dryland conditions. Two different sowing rates (30 and 60 plants per m<sup>2</sup>) were applied to see how yield and quality can be manipulated, and two different cutting times were compared to understand how this impacted the compromise between quality and quantity.

For the 2021 season common vetch variety Timok had better quality attributes than the woolly vetches. High sowing rates resulted in more plants established in vetch, but this didn't follow through to have

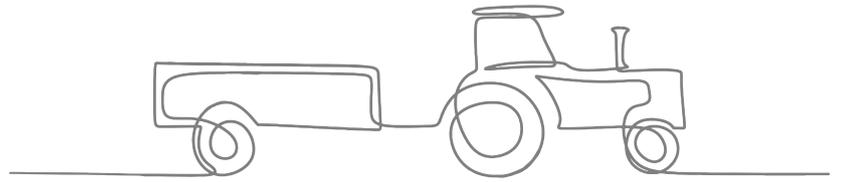
an impact on yield and quality. Good rainfall at the site in spring meant the differences in irrigation strategies was less obvious but overall, an autumn irrigation was associated with better yield in early developing common vetch cultivars but not in later developing woolly pod vetch. Full irrigation produced approximately two tonne hectare more than dry land in the same varieties.

The final results of these demonstrations will be available in 2023 and will provide valuable information on the impact various strategies have on final yield and quality of vetch.



# Irrigation Farmers Network

**Irrigation  
Farmers  
Network**



The Irrigation Farmers Network is committed to proactively contributing and influencing a positive future for irrigated agricultural industries by building on our 25-year legacy as the Irrigated Cropping Council. Our mission remains unchanged, to improve the profitability and long-term viability of mixed farmers and croppers in the irrigation areas of northern Victoria and southern New South Wales, through practical research, development and extension that leads to best practice.

Our new name has been chosen to truly reflect the breadth and scope of the organisation which brings people together to lift the bar of best practice, our members have access to the extensive network of 50 partners that help us deliver solutions to farmers in our region. We provide members with access to local, farmer-driven small plot research; demonstration sites; field days, conferences, and other events; and timely information across multiple media to address the issues they are facing. Our current research focuses on winter and summer grain and fodder crops and includes variety trials; agronomic management including nutrition, canopy management and fungicides; irrigation scheduling; soil carbon; and drought resilience.

The Irrigation Farmer Network collaborates with farmers, research and development corporations, federal, state and local governments, catchment management authorities, universities, research organisations, commercial service and agricultural retail providers, plant breeders, farming systems groups, landcare, other community groups and the southern NSW Drought Resilience Adoption and Innovation Hub to achieve outcomes for our members. The Irrigation Farmers Network continues to manage our permanent research site at Kerang, where we have been delivering quality trial results since 2002. We are looking to increase the diversity of trials, demonstration and events we offer through the development of a second research hub in Deniliquin.





# Irrigated variety trials

The Irrigation Farmers Network (formally the Irrigated Cropping Council) has been running fully irrigated variety trials at the same site in Kerang since 2002. By analysing average yield results, we've learnt:

- Gradually lifting the bar of best practice has significantly improved yield over time.
- It's the system, not any single agronomic input that has increased yields.
- Climate remains the biggest driver of performance in any given year.

Damian attributed the increases in yield over time to:

- No longer pre-drilling all our Nitrogen (N). By top-dressing during the growing season, N is available at critical growth stages.

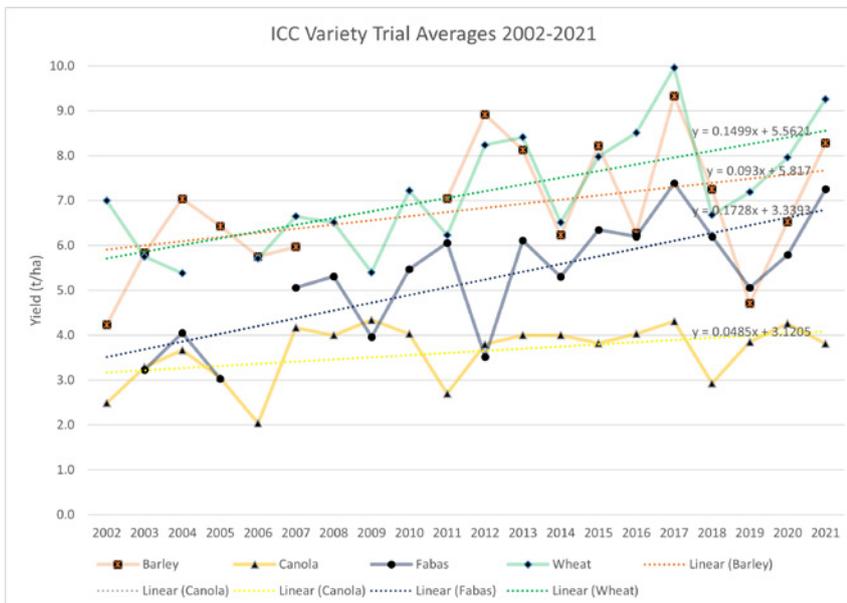
- Improving layouts enabled timely sowing. Faster irrigation meant we can pre-irrigate closer to sowing.
- Faster irrigation reduced irrigation time and drainage, reducing plant stress.
- Soil moisture monitoring improved irrigation scheduling, so we better meet plant needs.
- Reduced cultivation, we direct sow where possible.
- Improved plant breeding, every year we see the broad range of yields varieties can achieve under the same environmental and management conditions.

Although we've seen improved yield over time its all ups and downs! Climate is the biggest driver of yield in any given season. The Irrigation Farmers Network continue to research not just varieties but all aspects of the system so that we can flexibly respond to climate volatility. To learn more or become a member and receive your annual variety results, click or scan the QR code.



*"When I started in 2002, we were part of the 5 tonne club, now 8 tonne is our average and we're a regular member of the 10 tonne club."*

Damian Jones, research manager





# Murray Local Land Services

## *Who we are*

Local Land Services is a regional-focused NSW Government agency delivering quality customer services to farmers, landholders and the wider community

# Murray Local Land Services



Local Land Services connects people with groups, information, support and funding to improve agricultural productivity and better manage our natural resources. Our staff can answer questions on issues including:

- agricultural production
- biosecurity
- natural resource management
- help during emergencies.

The Murray Local Land Services Region spans more than 4.2 million hectares of public and private land bounded to the south by the Murray River and ranging from steep alpine slopes in the east to vast native grasslands, rangelands and riverine floodplains in the west.

107,000 people call the Murray Local Land Services region home. Land and water resources within the Murray catchment support diverse agricultural enterprises, including cropping, grazing and horticulture.

The Murray region spans the Traditional Lands of the Wiradjuri, Wolgalu, Ngarigo, Bangarang, Yorta Yorta, Barapa Barapa, Wamba Wamba, Nari Nari, Wadi Wadi and Mari Mari people. The Murray region is steeped in Aboriginal history, culture and spiritual significance. It encompasses many important cultural locations of national and international significance, and there are strong local efforts to maintain cultural knowledge and traditional practices.

We connect people with groups, information, support and funding to improve agricultural productivity and better manage our natural resources.



# Bushfire recovery

The 2019–20 bushfires had a profound impact on both private and public land, causing extensive damage across large areas. The severity of these fires resulted in significant consequences for native plants, animals, as well as soil quality and stability.

To aid in the recovery of specific species and promote traditional ecological knowledge and management practices, the Australian Government provided funding to Murray Local Land Services. A range of targeted actions were implemented in the Murray region, including erosion control to enhance habitat for the booroolong frog and Macquarie perch, restoration of gang-gang cockatoo habitats, weed control to safeguard important species and ecological communities and cultural healing of fire-affected significant sites and landscapes by local Aboriginal groups.

Further efforts involved ground baiting to target foxes near high conservation areas, benefiting the survival of the booroolong frog, smoky mouse, and broad-toothed rat. Aerial feral herbivore control and the installation of exclusion fencing were employed to mitigate grazing, trampling and erosion in Montane Peatlands, thus safeguarding endangered orchid species and improving habitat for the Macquarie perch and booroolong frog. Additionally, measures were taken to reduce the impact of pest herbivores on native regeneration by destroying rabbit warrens and implementing poison and fumigation methods.

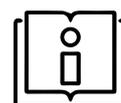
In February 2023, the NSW Department of Primary Industries Fisheries, Charles Sturt University's Gulbali Institute, and Local Land Services collaborated to release over 2,000 juvenile Macquarie perch and several

adults into Mannus Creek near Tooma. These fish, bred by the Victorian Fisheries Authority at Snobs Creek, were introduced to bolster the Macquarie perch population in Mannus Creek and enhance genetic diversity.

Initially, concerns arose about the survival of the Macquarie perch population in Mannus Creek following the fires. However, recent improvements in habitat conditions and the discovery of three young-of-year individuals have raised hopes that some fish have endured and are potentially breeding successfully. The released fish are expected to contribute to the population growth of Macquarie perch, furthering the recovery efforts in Mannus Creek. This marks a positive step towards the resurgence of Macquarie perch in the area.



This project has been made possible thanks to the Australian Government's Bushfire Recovery Program funding.



# Wild orchids



Orchids, renowned for their beauty and enigmatic nature, rank among the most captivating Australian native flowering plants. The Wild Orchids project has dedicated the past decade to mitigating the risk of extinction for three endangered orchid species: the sand-hill spider orchid (*Caladenia arenaria*), crimson spider orchid (*Caladenia concolor*), and Oaklands donkey orchid (*Diuris callitrophila*). Prior to this initiative, limited populations of these orchids remained in the wild, with only 1,809 sand-hill spider orchids, 1,122 Oaklands donkey orchids, and 603 crimson spider orchids recorded.

In July 2022, a remarkable re-introduction effort took place across six sites in the Murray region, involving over 6,000 threatened orchids. These included 1,683 *Caladenia arenaria*, 431 *Caladenia*

*concolor* and 4,016 *Diuris callitrophilla*. Local Land Services and the NSW Department of Planning and Environment collaborated closely with project partners to establish designated areas for orchid re-introduction, encompassing various tenures. Parklands Albury Wodonga, in preparation for the orchid plantings, installed stock-proof fencing and water tanks on land owned by Federation Council, Forestry NSW, NSW National Parks and Wildlife Service, Crown Lands and a private landholder.

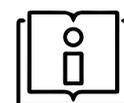
The Royal Botanic Gardens Victoria propagated the orchids, and in July 2022, they were planted with the assistance of the highly skilled and passionate volunteers from the Australasian Native Orchid Society's (ANOS) Victorian team. Local volunteers from Parklands Albury Wodonga, Corowa District Landcare and Woomargama National Park also played a crucial role in the

plantings. The collective effort of project partners, as well as the dedication of local and interstate volunteers, made this significant reintroduction of these exquisite and imperilled orchids possible.

This project is a collaborative endeavour involving the NSW Department of Planning, Industry and Environment – Conservation and Biodiversity Division, Department of Primary Industries – Lands, Royal Botanic Gardens Melbourne, Australian Network for Plant Conservation, Forestry Corporation of NSW, NSW National Parks and Wildlife Service, Local Government, Parklands Albury Wodonga and landholders.



Murray Local Land Services support this project through the NSW Environmental Trust funding.



# Building soil carbon

Soil carbon depletion is a concerning issue across Australia. Addressing this challenge, the Building Soil Carbon Project proposed that the most effective approach to increase soil organic carbon in irrigated agricultural soils is through the cultivation of productive, annual legume pastures. Well-managed legume pastures offer essential elements like carbon, nitrogen, phosphorus and sulfur, crucial for soil carbon enhancement.

To evaluate the persistence, productivity and soil carbon-building capabilities of various pasture species, five demonstration sites were established in the mid-Murray region. Over the course of four years, these demonstrations on both red and grey soils demonstrated that sub clover remains a suitable choice for irrigated and intermittently irrigated annual pastures. Sub clovers exhibited excellent

persistence across different seasons and irrigation intensities, high productivity, a broad tolerance to herbicides and effective competition against broadleaf weeds.

However, certain legume species possess specific attributes that make them suitable for distinct purposes. For instance, arrowleaf clover excels in spring production, particularly as a hay variety, while balansa clover demonstrates remarkable persistence and the ability to spread throughout the paddock. Although SARDI Persian was only sown at one location, it performed well in intensively managed sites with red loam soil.

Throughout the project, soil carbon levels were measured at each site. In general, it was observed that the growth of productive pastures correlated with an increase in soil carbon

over the four-year period. While a couple of exceptions defied explanation, the overall trend was positive, indicating progress in soil carbon enhancement.

We extend our sincere gratitude to the landholders who generously hosted the demonstration sites and contributed their valuable insights, which are shared in our comprehensive wrap-up video (see the link below).

This project is supported by Murray Local Land Services through funding from the Australian Government's National Landcare Program.



Pasture demonstration site, Logie Brae, May 2021.



Arrowleaf clover (top – NSW DPI).

Soil cores at Logie Brae. Red loam, clay soils.



# A bright future

This *Regional Roundup Magazine* is a demonstration of some of the capacity building and practice change outcomes delivered in sustainable agriculture and Landcare across the Murray region over the past five years (from July 2018 to June 2023). With vibrant, diverse and active Landcare, producer, farming systems and environmental groups across the region... the future is bright.

Going forward, there will be changes to the federally funded Regional Agriculture Landcare Facilitator (RALF) program and the State funded NSW Landcare Program.

## Sustainable Agriculture Facilitators

In May 2023, the Australian Government announced \$40.7 million to support a network of Sustainable Agriculture Facilitators (SAFs). They will provide the extension services needed to improve farmers' knowledge and uptake of climate-smart practices and understanding of carbon and biodiversity markets to inform critical investment decisions for their future sustainability. The SAFs will support the adoption of climate-smart, sustainable agriculture practices.

The current RALF program will end on 30 June 2023. The SAF program will acknowledge and build on the success of the regional agriculture facilitators over many years. Click or scan the QR code for more information.



## NSW Landcare Program 2023–2027

In March 2023, a pre-election commitment of \$59 million was made by the NSW Labor Party for the next phase of the NSW Landcare Program. In May 2023, the Honorable Tara Moriarty, MLC – Minister for Agriculture, Minister for Regional NSW, and Minister for Western NSW, attended the NSW Landcare gathering and confirmed the investment in Landcare. The commitment is more than double the amount of the current program and will see a significant increase in Landcare support across the state.

Over the coming months, details about the components of the future Landcare program will be considered, discussed and formalised. To stay in touch with details about the future program, visit Landcare NSW.



To find out more and stay in touch with Landcare, sustainable agriculture and natural resource management across the Murray region, visit [murraylandcare.com.au](http://murraylandcare.com.au)



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**Murray Local Land Services**

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Sandy works closely with Landcare Coordinators and groups, farming system groups, organisations and landholders to deliver sustainable agriculture outcomes across the Murray region.



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**Holbrook Landcare Network**  
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Paula supports:

- Murray Landcare Collective
- Bungowanah/Splitters Creek Landcare Group
- Friends of Nail Can Hill
- West Hume Landcare
- Wirraminna Environmental Education Centre
- Woolshed Thurgoona Landcare Group

**JEANETTE CREW**  
**Regional Cultural Mentor**  
**Yarkuwa Indigenous Knowledge Centre**

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Aunty Jeanette Crew OAM is our Regional Cultural Mentor and Chair of Yarkuwa Indigenous Knowledge Centre (based in Deniliquin). Aunty Jeanette supports the Landcare Coordinators and Murray Landcare Collective to embed First Nation's Peoples' cultural values and participation in Landcare.



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- Yanko Creek and Tributaries Advisory Council (YACTAC)
- Yarkuwa Indigenous Knowledge Centre

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- Central Murray BestWool BestLamb Group
- Barham Landcare Group
- Murrakool Land for Wildlife
- Koondrook Perricoota Alliance



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- Redlands Hill Nature Reserve Volunteers
- Corowa Tree of Life Community Gardens
- Friends of River Street Wetlands

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Rachael supports:

- Culcairn Landcare Group
- Gum Swamp Walla Walla Management Committee
- Holbrook Landcare Network
- Mountain Landcare
- Khancoban Landcare



[murraylandcare.com.au](http://murraylandcare.com.au)