

North Central chat

DECEMBER 2019

Keeping you up-to-date with all the Landcare and Waterwatch news



A message from the Regional Landcare Coordinator

Hi everyone,

November was such an invigorating month for the Landcare Team. We were involved in lots of activities and met many new faces, which is always energising.

Throughout the year, I have been involved in the 'Ramp up Resilience' event series, run through Make a Change Australia. In early November we had a final stakeholder group meeting to discuss the successes of the pilot community engagement initiative, which was aiming to activate community, to expand upon emerging local solutions, and address the challenges and issues arising from climate change. I was amazed to see the reach of the program across the Loddon and Campaspe shires and the City of Greater Bendigo, with more than 70 organisations involved in the program. What an incredible network of interested and active people to draw ideas and collaborations from. You can learn more about the local initiatives growing out of this program via: <https://www.makeachange.org.au/ramp-up-resilience/>

I was thrilled to be invited along to officially launch the Endangered Species signage series at Eppalock Primary School. The school received a 2018 Victorian Junior Landcare and Biodiversity Grant for a 'Who lives here - Citizen Science in the Eppalock community' project. The Axe Creek Landcare Group has supported the students and will replicate the signage along the roadside for local residents to enjoy. Congratulations to the teachers and students for their hard work over the past 12 months creating these works of art. The magnets are proudly on display in the CMA tearoom, receiving a lot of attention from staff.

The Victorian Landcare Team met and discussion focussed on the Victorian Local Landcare Facilitator initiative, Victorian Landcare Grants

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Eppalock Primary School students April and Dasha with the Blue banded bee sign. The series of 10 signs and magnets each feature student artwork and key messages focusing on local endangered species.

and community initiatives and data that contribute to Biodiversity 2037.

As this is the final edition of the Chat for 2019, I'd like to thank all the contributors, photographers, editors and readers. The collaborations make creating this monthly newsletter a joy.

The Chat will have a fresh new look and feel in 2020, so until then, Darren and I wish you all a very Merry Christmas and Happy New Year.

Enjoy the read,

Tess Grieves

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News...

Djandak Dja Kuditja (Country Healing its Home)

Congratulations to Dja Dja Wurrung Clans Aboriginal Corporation that was successful in obtaining \$1,819,587 from the NLP2 Smart Farms Partnerships program.

The project, Djandak Dja Kuditja (Country Healing its Home) will demonstrate how to successfully grow Kangaroo Grass (*Themeda triandra*) on farm in an agricultural cereals context. Kangaroo Grass is a native plant that has attributes that demonstrate resilience to climate change, which is reinforced by Dja Dja Wurrung knowledge, including the effects of variable temperatures and rainfall.

This is a huge achievement for one of our key partners, managing to secure funding with only 11 successful applicants throughout Australia.

Land and Water Management Plan

The Loddon Campaspe Irrigation Region Land and Water Management Plan is your chance to shape government funding opportunities that help you on your farm.

North Central CMA want to find out what the local irrigation farming priorities are and help our communities get them funded.

Whether it's farm planning, building knowledge and stewardship to help with decision making, innovating and supporting new technology or helping you with land-use and capacity questions, we know the benefits of getting the best information possible.

Our Land and Water Management Plan is your voice to government.

By helping us identify the local priorities, you can be part of community action.

Find out more about the plan online:
<http://www.nccma.vic.gov.au/projects/agriculture#node-2089>

Little Coliban River revegetation works

Article by Brendan Smith of Tylden Landcare

During Spring 2019 Tylden Landcare Group partnered with Tylden Primary School to propagate plants for use along the Little Coliban River. Recently these seedlings were planted, watered and guarded to improve vegetation along the river.

Grade 3 and 4 students helped in the river improvement program by planting the indigenous trees, shrubs and grasses along the river riparian area, along the floodplain and up into the nearby bushland. This work connects one end of the river with the other. It also connects the river with the surrounding riparian area, the floodplain and the adjoining bushland.

As part of the program the school students interviewed landcare volunteers for their five-minute news program on local events around Tylden. Questions included why are we planting along the river?, which species are we planting?, and why is Landcare important to the district.

The planting took place along the Little Coliban at PGL Campaspe Downs. Vanessa Thomson from Tylden School said, "Plants included a range of seedlings usually found along and adjacent to water courses and into bushland in our region." Vanessa added that the students are very aware that indigenous vegetation offers food and shelter for native animals, prevents soil erosion, keeps the air clean, helps keep our water catchments secure, and that native vegetation can connect our rivers to our landscapes.

School staff and parents assisted students on the day and said, "The students did a great job of planting along the river and now we feel we have contributed to the ongoing future health of the Little Coliban River."



Henry, Lily and Caillee from Tylden Primary School planting seedlings along the Little Coliban River



Protecting Victoria's Forests and Threatened Species

During November, the Victorian Government announced the largest environmental protection policy in the state's history, with immediate protection for the iconic Greater Glider species, native fauna and Victoria's remaining old-growth forest.

This historic decision, which includes a gradual phasing out of all logging in native forests by 2030, will reduce the amount of carbon in the atmosphere by 1.71 million tonnes of carbon-dioxide-equivalent each year for 25 years – the equivalent of taking 730,000 cars off the road annually.

Under the plan, 90,000 hectares of Victoria's remaining rare and precious old growth forest – aged up to 600 years old – will be protected immediately.

The announcement also includes the release of the Greater Glider Action Statement, an important roadmap to protect this iconic species, which was first listed as threatened in 2017.

Minister for Energy, Environment and Climate Change, Lily D'Ambrosio said "By ending the destruction of our old growth forests immediately, we're protecting the habitat of our Greater Gliders, Leadbeater's Possums, and many other threatened species."

To protect the future of the Greater Glider – alongside the Leadbeater's Possum and more than 35 other threatened species – the Action Statement maps out more than 96,000 hectares of forest across Victoria immediately exempt from logging.



A juvenile Greater Glider found on a spotlighting event, part of the [UCLN Spotlight on Species Project](#). Image courtesy of Elizabeth Parsons.

HAVE YOUR SAY: Drought Resilience Funding Plan

The draft Drought Resilience Funding Plan is available for comment. The Fund begins with an initial credit of \$3.9 billion.

Earnings will be reinvested until the balance reaches \$5 billion (expected in 2028-29). From 1 July 2020, \$100 million will be made available each year to support Australian farmers and communities. They will use these funds to prepare for, and become resilient to, the effects of inevitable future drought. Funded projects will:

- enhance public good by building drought resilience
- help farmers and communities be more prepared to respond to the impacts of drought
- lift the productivity and profitability of the agriculture sector
- enhance the health and sustainability of Australia's farming.

Feedback can be provided till December 13.

<https://haveyoursay.agriculture.gov.au/future-drought-fund>

Yarn at Yapenya – Traditional Owners and Landcarers

Landcare Facilitator with Connecting Country, Asha Bannon, recently posted a summary article on the Connecting Country blog which features the events and connections forming between Landcare and the Dja Dja Wurrung Clans Aboriginal Corporation (DDWCAC) at Yapenya, a private property in North Harcourt (Victoria) owned and managed by the DDWCAC.

During the event, the question 'So, what can you do?' arose. If you're a Landcarer or a landholder wanting to care for the land in line with DDWCAC's values, [read the full article](#) for a few simple actions suggested on the day



Hi everyone,

Well can you believe December and the end of another year is here already?! What a busy but fantastic year for Waterwatch. We have achieved so much together with our fabulous volunteers and are proud and excited about where our programs are heading.

I have included a few updates and achievements below.

From the Waterwatch team, we wish one and all a safe and happy festive season. See you all in 2020.

Britt Gregory

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Litter Trackers Update

You might recall back in the September edition of Chat an article on the launch of the Bendigo Creek Litter Trackers. Litter Trackers are sealed plastic bottle with a GPS inside to track, via an online map, how and where our litter travels.

Well the day came to retrieve the trackers, and what an eye opener that was! There is a staggering amount of litter in the Bendigo Creek, layers thick from decades of misuse. Hidden from the tall reeds, you really can't quite gauge how big the problem is until you are standing in the centre of the creek channel, looking for a specific bottle.

Within days of their launch, the trackers travelled quite easily along the concrete sections of the creek, from Golden Square to just below Lake Weeroona. At this point, the creek changes dramatically and dense vegetation has established in the silted-up channel. This is the point where a huge amount of litter and debris winds up, unlikely to move any further through the vegetation. All trackers ended up within 400 meters of each other, between Weeroona Avenue and Knight Street.

Unfortunately, three of the five trackers were unable to be located. The extent of the litter

among the reeds and tangle of weeds was unexpected. Although the trackers are fitted with GPS devices, the accuracy is simply not enough to enable locating them in such an environment.

In the new school year, we plan to work with River Detectives students to further help them understand why litter is an important environmental issue, how it remains trapped in our waterways, the impact it has on the aquatic environment and what can be done about it.

Stopping litter at the source is certainly the best option, but one of the biggest learnings for me is that dealing with the sheer amount of litter, tangled within the mass of weeds, is going to be a much bigger job than anyone might have expected. This is a bigger issue that will need a multi-agency approach, and something for another day.



Searching for a lost tracker. Photo: North Central CMA

River Basin Management Society Awards

Earlier this year the North Central CMA nominated the Statewide River Detectives program for the 2019 River Basin Management Society (RBMS) awards. We are thrilled to announce the River Detectives program was a finalist in the 'Involving Community in Waterway Management' category.

Another great achievement for the Statewide River Detectives program, this is a National recognition that celebrates the outstanding contributions that our program has made.

The last three years have been amazing, and we have established and strengthened some great partnerships along the way with other agencies and of course our dedicated schools and communities. The project is a result of the



collaboration, hard work, passion and commitment that we have all made together to making this little project such a huge success. Well done to everyone involved!



North Central Waterwatch Team, Britt Gregory, Cass Davis and Nicole Howie were all smiles with the 2019 RBMS awards nomination.

River Detectives Reimagine Bendigo Creek

Article by Nicole Howie

Northern Bendigo Landcare Group (NBLG) has been involved in habitat restoration activities along Bendigo Creek between Epsom and Huntly since 2009. Raising awareness of Bendigo Creek and engaging community in events is valued just as highly as the on-ground work. The group acknowledges that changing attitudes and enabling the community to get involved is the secret to long-term success.

Working collaboratively with Huntly and Epsom Primary Schools during this time has been extremely rewarding and beneficial. Many hundreds of students have enjoyed memorable days out planting trees, Backyard Learning days and by taking ownership of the teaching and learning experiences with Kids Teaching Kids events along the Creek.

With both schools now actively participating in the River Detectives program there is an even greater reason to work together for reciprocal benefits. During 2019, NBLG has supported both schools as they've travelled on a journey of learning about their adopted waterway through involvement with the 'Reimagining Bendigo Creek' Project.



Huntly Primary School students made an incredible Lego model to showcase their inspiring vision for Bendigo Creek and presented this to the Reimagining Bendigo Creek steering committee. Seeing the amazing potential of this model as a conversation starter for the Bendigo community, NBLG funded a clear case to house the model and it is now on display in the Bendigo Library for all to see.



Epsom PS were inspired by a workshop held at the North Central CMA where they learnt about the history, culture, assets and threats to Bendigo Creek and developed a specific goal to add more native grasses to the riparian zone of the creek near their school. Thanks to funding from Australia Post (through the Epsom Post Office) the NBLG was able to host a planting event with the Grade 1 & 2's where 300 native grasses were planted between their school and the creek.



Huntly Primary School students show off their Lego display

We would encourage all Landcare Groups to connect with their local schools, particularly if they are involved or interested in the River Detectives program. It's a wonderful way to add value to the student learning outcomes and for the Landcare group to promote custodianship of their local environment.

Upcoming events and special days

December	
International Volunteer Day	5 December
World Soil Day	5 December
February	
World Wetlands Day	2 February
International Day of Women & Girls in Science	11-12 February
Clean up Australia Day for Businesses	25 February

Water storages update

With limited rain, most storages have seen levels decrease this month:

Region	Water Storage	% full at 23 Oct	% full at 27 Nov
Murray Storages	Dartmouth Dam	55.97	↓ 54.08
	Hume Dam	39.98	↓ 35.82
	Torrumbarry Weir	100.02	100.02
	Third Lake	96.94	↓ 64.19
	Reedy/Middle Lake	96.55	↓ 96.07
	Kangaroo Lake	92.04	↑ 93.34
	Kow Swamp	83.26	↑ 87.73
	Lake Boga	88.66	↓ 83.73
Loddon Storages	Lake Charm	95.19	↓ 90.71
	Cairn Curran Reservoir	52.75	↓ 48.84
	Tullaroop Reservoir	84.24	↓ 77.36
Bullarook Creek Storages	Laanecoorie Reservoir	52.06	↓ 40.06
	Newlyn Reservoir	100.20	↓ 99.10
Goulburn Storages	Hepburns Lagoon	99.09	↓ 97.33
	Lake Eildon	46.38	↓ 46.10
Campaspe	Waranga Basin	65.29	↓ 63.23
	Lake Eppalock	35.16	↓ 32.45
Coliban Water Storages	Upper Coliban Reservoir	97.8	↓ 92.10
	Lauriston Reservoir	97	↓ 94.8
	Malmsbury Reservoir	75.4	↓ 65.6

Sources:
www.g-mwater.com.au/water-resources/catchments/storage-levels
www.coliban.com.au/about-us/reservoir-levels



Sustainable Ag snippet...

Regional Agriculture Landcare Facilitator, Darren Bain

Holistic Grazing Management

The Upper Loddon Regenerative Agriculture Farming Group recently held an Introduction to Holistic Planned Grazing workshop at Bung Bong, near Maryborough.

Glen Chapman, from Southern Blue Regenerative, ran the workshop. Glen started the day with an informative presentation, covering all aspects of regenerative grazing such as the benefits of rotating livestock through paddocks to provide rest and recovery of pasture.

Glen highlighted the need to manage pastures during the growing and non-growing periods. In the growing season you need to grow as much as you can, so you have enough pasture during the non-growing season to feed your livestock. Ideally if you can grow enough pasture, you won't need to hand feed during this period.



Estimating the amount of pasture in the paddock

After lunch Glen ran a session in the paddock with some practical hands on exercises. The first exercise was estimating how much pasture was in the paddock. Participants handpicked approximately 1kg of pasture from an area representative of the rest of the paddock and placed this into a bag. This gave participants an idea of the area required for 1kg of pasture. This area could then be measured and multiplied over the rest of the paddock to provide an estimate how much pasture is available in the paddock. Glen said once this is known, you can determine the number of grazing days depending on livestock type and number.

Glen recapped the day and reiterated the message of monitoring and keeping records. If

something is not going as you planned, then you would reassess and adjust as required. Glen also mentioned the importance of taking photos as this provides a visual reminder of your pastures at certain times of the year and before and after grazing. The participants now have a basic understanding of holistic grazing practices that can be practised on their own properties.

Events...

Managing Riparian Weeds Workshop

To ensure landholders have the skills and knowledge to continue to manage weeds along their waterways, the North Central CMA invites the community to a free workshop.

The North Central Catchment Management Authority (CMA) continues to work closely with communities to deliver lasting change across our region.

Speakers will include:

- Ben Perry, Biosecurity Manager, Agriculture Victoria - Riparian weed identification and best practice control advice
- Ashbourne Landcare's Weed Action Group – local control efforts

When: Sunday 15 December 2019, 9am – 11.30am

Where: Marsh Court Reserve, Woodend

What to bring: Free coffee van and plenty of fact sheets/information will be available. Please BYO camp chairs.

RSVP: To register by 12 December 2019, go to: <https://nccmamanagingriparianweedsworkshop.ventbrite.com.au>

For further information, please contact Angela Gladman on 5440 1825 or angela.gladman@nccma.vic.gov.au

Women in Conservation Breakfast

Trust for Nature and Bush Heritage Australia's 9th annual 'Celebrating Women in Conservation' Breakfast will take place on Thursday 5 March 2020.

Amanda McKenzie is one of the best-known public commentators on the climate crisis in Australia. She is the CEO and co-founder of the Climate Council, an independent climate change education and advocacy body.

FEATURE ARTICLE...

Revegetation

We receive so many queries about revegetation, everything from techniques, species selection and adapting to climate change. So, we asked for contributions from experienced revegetation practitioners, nursery owners and Landcarers to contribute their knowledge and experience to this feature article.



Deb Saxon-Campbell

Kara Kara Conservation
Management Network
Landcare Facilitator

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What type of environments do you usually work in?

Our revegetation projects are mostly on private land. We work with landholders to create new or improve existing bio-links that reconnect patches of remnant woodland and help facilitate the movement of species through the landscape.

What principles or experiences guide your revegetation practice?

We try to achieve a 'win-win' outcome for landholders and for biodiversity. Biodiversity benefits through the creation of new or enhanced habitat, however, our revegetation projects also benefit farmers with our bio-links creating shelter belts that protect livestock and, in the process, improve farm productivity and land values.

Given that we work mostly on private agricultural land and the areas we revegetate aren't large, we plant native tubestock almost exclusively over direct seeding. With the latter, we have found that seeds struggle to germinate in what was formerly either pasture or cropland as they are typically outcompeted/choked by the large seed bank of vigorous pasture grasses (e.g. rye grass or phalaris) and weeds.

We have found that the direct seeding method is best used for habitat/understorey improvement projects along road verges or in existing native woodland where non-native seed banks are less of a problem.

How do you select the species for projects?

We try to ensure that the indigenous species we choose for our projects are consistent with the character species of the Ecological Vegetation Class(es) (EVC) occurring in woodland adjoining or near to the proposed work site.

In your experience, what is the greatest challenge with revegetation?

For us, the greatest challenge is getting seedlings through their first year or their 'establishment phase'. Climate change-related weather patterns (i.e. increasingly intermittent rainfall, prolonged dry periods, and extreme frost and heat events), weed invasions, grazing pressure from kangaroos and occasionally, roaming stock: all of these things have the potential to impact on our seedling survival rate.

How have your techniques changed over time?

In 2017, we were fortunate to obtain some funding to undertake a monitoring program which saw us revisit some of our past revegetation projects to assess their success or otherwise. To our surprise, we found that the survival rate for many of our projects was very low, much lower than we had expected. The reasons were varied, but the stand out factor impacting survival rate was the increasingly erratic and extreme weather patterns associated with climate change. Where once we had planted tubestock in spring and left it to its own devices, we realised that we needed a change of strategy. And fast!

So, we did four things:

- 1) Our annual spring plantings were brought forward to autumn and early winter to give seedlings more time to establish their root systems and take advantage of any mid-year rainfall before the summer heat.
- 2) We worked with landholders to ensure that all work areas were fenced and that deep ripping and weed spraying were undertaken prior to projects commencing.
- 3) We improved our methodology, trialling weed mats and various guards, and looked at how and where we physically placed seedlings within the riplines with the aim of reducing potential competition from weeds while improving moisture delivery to young plants.
- 4) We realised that, even with all of our other process improvements, many seedlings were unlikely to survive long, dry spells or extreme summer heat events. So, we recently secured



some funding from the Wettenhall Environment Trust to purchase a dedicated water cart to enable us to give young plants additional support during these periods.

We believe these strategy changes are important, not only to improve our seedling survival rate, but also to improve the return on the many thousands of dollars and volunteer hours invested in these projects. Two years on, we are starting to see some positive results.

How do your revegetation practices consider climate change?

Climate change is creating some interesting challenges. Consider seed provenance for example. Most of the seedlings we plant are of local provenance; in other words, they are propagated by indigenous nurseries from seed collected within north-central Victoria. But how will these plants, which are adapted to our current climate, fare in 20 to 30 years from now and beyond when average temperatures for north-central Victoria are forecast to be more like those several hundred kilometres to the north, say, like those currently experienced in Dubbo?

So, in addition to changing our planting strategy, we are looking at changing the provenance mix of some of the widespread species we use in our native plantings to improve long-term survival. This issue raises some ethical questions and logistical challenges. Nonetheless, we believe it's something we need to consider if we are to increase the resilience of our plantings in a warmer climate.

Where is your favourite revegetation site you've been a part of?

Timing is everything, so the projects I most enjoy are those that happen to coincide with a good autumn/winter break. Seedlings get a great start, so they need less support during their first year and I get a lot of satisfaction from seeing their progress over time.



Jeroen van Veen

Bush Heritage Australia
Victorian Reserve
Manager;

Wedderburn CMN; Kara Kara CMN Committee Member

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What type of environments do you usually work in?

Woodlands, forests, riparian zones.

What principles or experiences guide your revegetation practice?

Learned on the ground.

How do you select the species for projects?

EVC specific.

Resource:

<https://www.environment.vic.gov.au/biodiversity/bioregions-and-evc-benchmarks>

In your experience, what is the greatest challenge with revegetation?

Unpredictability of seasons these days

How have your techniques changed over time?

Adapted to unpredictability of seasons, spread out risk, combined direct seeding with sapling plantings.

How do your revegetation practices consider climate change?

Don't count on rain. Spread risks. Started working with drier climate species and provenances.

Resource:

<https://www.bushheritage.org.au/creating-a-climate-resilient-woodland>

Where is your favourite revegetation site you've been a part of?

Cassinia's Ploughshare block and my own home block.



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What type of environments do you usually work in?

River health projects, protecting remnant vegetation and creating wildlife corridors to link remnant vegetation. I have delivered projects throughout the North Central CMA region.

What principles or experiences guide your revegetation practice?

I have always felt lucky with revegetation as when I started many years ago Greening Australia produced what I like to refer to as the ["Revegetation Bible"](#) and I was surrounded by expert's in the field at the time such as Ian Higgins, Lindsay Ezard, Jenny Spence, Dave Milson and Pat Mansbridge. This was a wonderful way for me to have a better understanding of our catchment by learning from others in the field and utilising their local knowledge and years of experience. I still believe that Greening Australia Revegetation Techniques manual is the definitive guide for revegetation in Victoria and is packed full of great information to help you through the decision-making process of increasing native vegetation cover on your property or throughout your area.

How do you select the species for projects?

I base my species list on EVCs and benchmarking as the first step. It's also important to seek local knowledge within your project area through farmer knowledge and local agency staff such as DEWLP and local government staff.

I have a long working history with revegetation contractors and their knowledge of our catchment and species selection is super important.

It's important to have a good understanding of your revegetation site. Is there any vegetation cover existing? Is the soil compacted? What pest plants and animals have you noticed on site? Choose what we call colonizing species. These are species we know are hardy and grow well such as eucalyptus, acacias, *Leptospermum* and *melaleuca*. Once these have established, they then start to help repair and change the soil and over time you can go back and add the softer more delicate species such as native daisies and grasses.

In your experience, what is the greatest challenge with revegetation?

Getting them through their first summer!

Timing and site preparation are really important factors. Where I can, I always look at deep ripping and rotary hoe the rip lines. This creates a great planting site as it is allowing the tubestock to get that tap root growing fast and in a healthy way. You must check off on cultural heritage values of the site. We want to increase native vegetation coverage but not at the expense of damaging the wonderful Indigenous history we have throughout the catchment. Everyone is welcome to contact the North Central CMA for more information on cultural competency in regard to revegetation.

Watering the plants in on the day they are planted is a must, no exception. After this I like to water seven days later then a final water 14 days after that. If you plant in early spring and can give them those stages of watering, you will have a good survival rate and get them through that first summer.

How have your techniques changed over time?

Not greatly. We use hand augurs to dig holes on sites where it is too steep to rip, or a culturally sensitive area particularly if you have really compacted soils due to long use of stock. The main aspect that has changed for me is the available funding. My current project allows me to assist landholders to revegetate along particular waterways. I find a lot of landholders would like to include wildlife corridors to link remnant vegetation back to the river. It would be wonderful to work on projects where this could occur.

How do your revegetation practices consider climate change?

At this stage I find it more about discussing the future of revegetation and the conversation is on "How to adapt to climate change?" There is some debate around species selection and provenances, for example should we use *Acacia* seed collected from Kerang and plant them in the south of the catchment? Is this another Pandora's Box we need to unpack? Truthfully, I don't have the answer- but there are experts out there unpacking this right now so for me it's a watch this space and see where it takes us.



Where is your favourite revegetation site you've been a part of?

This would have to be the work I completed on the Buloke Biolink at Trevor and Jenny Campbell's farm. The revegetation we delivered through this project was large-scale and right across the Buloke Shire, but the reason I remember it so fondly was due to the farming community and their unwavering support to see large scale native revegetation throughout their landscape.

This was also back in the day's where funding was in-kind, and landholders had to contribute to the project- and they certainly did! During late winter and early spring my weekends were always busy with Utes, farmers and kids moving up and down wildlife corridors planting, guarding and watering, with a big BBQ feed for all of us as well.

Their enthusiasm was contagious, and it resulted in an amazing project that delivered thousands of new native plants growing through corridors right across the Buloke Shire



Damien Cook

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What type of environments do you usually work in?

Wetlands and riparian environments are my focus, but I have also worked in terrestrial woodlands and grasslands.

What principles or experiences guide your revegetation practice?

The Society for Ecological Restoration Australia (SERA) has an excellent set of standards which I think everyone involved in revegetation can get value from. You can check them out on their website <https://www.seraustralasia.org/>.

How do you select the species for projects?

When working in wetlands you must select species that are suited to the planting sites water regime and soil type. You need to know how deep, for how long and how frequently the wetland will flood and choose appropriate species.

Mostly I select species that are very resilient. Most wetlands have suffered from disturbance and

many have an excess of nutrients. A large proportion of the plants I select have shown themselves to be good survivors that are able to compete against weeds.

Having said that I like to get rare species established if I think I can get away with it. Getting new populations of rare wetland plants established is a great way to increase their chances of survival, particularly as the climate becomes hotter and drier. I have had some great success with a few nationally endangered plants such as Stiff Groundsel (*Senecio behrianus*) and Ridged Water-milfoil (*Myriophyllum porcatum*). Having these species on a site greatly enhances its conservation significance and may help attract future funding and environmental water.

In your experience, what is the greatest challenge with revegetation?

I am sure many people will say weeds and I agree they are a massive challenge.

I would also say getting the timing right is very challenging and can make or break a project.

How have your techniques changed over time?

I use more direct seeding now. It is a bit more hit and miss than planting but if you get favourable conditions the results can be awesome and save a lot of hard labor.

How do your revegetation practices consider climate change?

I select resilient species that also occur in hotter and more drought-prone environments to where the project is. I have also recently started experimenting with getting some seed of local species but from areas about two degrees hotter (as recommended by CSIRO), as well as using locally sourced seed.

Where is your favourite revegetation site you've been a part of?

Wirra-lo Wetlands, Murrabit West. Restoration and revegetation at Wirra-lo has involved collaboration between the owners Ken and Jill Hooper, the North Central CMA, the Victorian Environmental Water Holder, local contractors and Barapa Barapa Traditional Owners, who have all worked together to achieve amazing outcomes.



Wirra-lo Wetlands, Murrabit West, north west of Kerang.

David Griffiths

Geometree, Land Planner

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What type of environments do you usually work in?

Mainly whole rural landscapes with an emphasis on integrated landscape management

What principles or experiences guide your revegetation practice?

Always to achieve functionality into systems for maximum synergy between all components. Could be summed up as bio-mimicry. Nature functions in wholes.

How do you select the species for projects?

Every time for function and analogues of complexity to suit function in the landscape and desired outcomes whether that be for habitat, fodder, forestry, savanna or a combination of all.

In your experience, what is the greatest challenge with revegetation?

To not be constrained by the obsession with provenance and to get purpose into any project for measurable outcomes not as is the norm to be measured by outputs.

How have your techniques changed over time?

More complexity of species and going for critical mass with connectivity between all parts of the bio-system. Ground preparation is essential. All my design and establishment is based on keyline theory for best outcomes for plant survivability and water function. Treat every property as a

whole, work on causes not symptoms.

How do your revegetation practices consider climate change?

Go for function and complexity. We will never restore just rehabilitate.

Where is your favourite revegetation site you've been a part of?

Every property I have designed and/or established, or been involved with through my landcare group, or for local government, is a favourite because they all have a unique purpose. I am most satisfied when my clients give me positive feedback on how working with me has given them enthusiasm for the investment in the transformation of their properties. They often comment on how the outcomes include more than environmental benefits. They see increased productivity, improved soil function, cleaner water, healthier livestock and they experience an increased feeling of wellbeing because they have a great place to work and live.



**Ken Wellard,
Owner.**

Ph: (03) 5446
9260

Email: neangarnursery@bigpond.com

www.neangarnursery.com.au

What type of environments do you usually work in?

At Neangar Nursery we specialise in supplying indigenous and native tubestock to broadacre projects across a range of industries. Projects include Landcare, revegetation, forestry (dryland), salinity control, civil applications, aquatic environments, landscaping, compliance and statutory work. The nursery also works with private landholders and schools in various forms.

What principles or experiences guide your revegetation practice?

I have over 30 years' experience in the nursery industry, with approximately 20 years in natural resource management. As well as this hands-on horticultural knowledge, the nursery has a network of scientists and practitioners who provide specialist advice and research. The nursery is actively involved in various horticultural research projects pertaining to growing media, fertiliser and plant nutrition.



How do you select the species for projects?

Species selection is critical for project success. Considerations include:

1. Site location, soil type, Ecological Vegetation Class and history along with an understanding of existing remnant veg all need to be assessed.
2. Customer requirements and requests need to be considered
3. Future climate challenges need to be judged wisely.
4. Species selection might not include non-indigenous plants depending on the site specifics

In your experience, what is the greatest challenge with revegetation?

1. Inflexible bureaucracy, particularly regarding funding timelines and over-blown funding processes
2. Customer inexperience and lack of critical thought processes
3. Practitioner's lack of planning and on-ground experience
4. Lack of stakeholder accountability
5. Lack of follow-up and analysis of issues
6. Lack of science and critical knowledge uptake
7. Failure to understand climate science
8. A limited understanding of soil biology, particularly relating to mycorrhiza and other bacteria.

How have your techniques changed over time?

The fundamentals of revegetation have scarcely changed over the years, but there is still a lack of understanding of some basic techniques such as deep ripping prior to planting.

Areas that have changed significantly:

1. Selection of climate-ready species, particularly in the commercial landscaping industry
2. The consideration of soil carbon and application of carbon products pre-planting
3. The long-term consideration of soil health, particularly in relation to soil biology and carbon.

How do your revegetation practices consider climate change?

1. Interchangeability of species and life-forms. E.g. C3 grass numbers might be reduced in favour of low-growing Chenopods, or the number of trees on a site may be reduced to reflect lower rainfall and hotter temperatures.
2. A careful and scientific approach to 'provenance' which sees some deliberate modifying of plant genetic selections.



Neangar tubestock toughing it out during 40-degree heat and a 70 km north wind. Photo: Neangar Nursery Facebook

Where is your favourite revegetation site you've been a part of?

Kamarooka project – [Northern United Forestry Group](#). This salinity project is possibly the most researched salinity project in the world. It combines a great range of techniques and plant selections, along with some intensive on-going scientific research.

Lake Tom Thumb – City of Greater Bendigo. This under-rated project displays great climate-ready and site-specific species selections as well as showing the best of site preparation.

Campbells Creek, Castlemaine – A great example of an ongoing group of projects designed for greater creek health. There is lots of community engagement, with the projects being driven by community groups that are invested in long-term outcomes for the broader population.

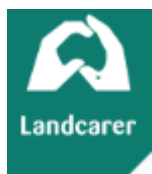
Other useful resources:

Victorian Landcare and Catchment Management Magazine- [Revegetation Feature Issue 57](#)



Courses & Resources...

Landcarer - online membership management



Landcare Australia Ltd. (LAL) have created a tool that can take your groups membership management online.

The online community platform, 'Landcarer' was launched at the 2018 National Landcare Conference in Brisbane and provides landcare groups a place to connect, share and manage online payments for memberships.

There is online support available to learn about this process and the platform can be used on a computer, tablet or phone. If this sounds like your kind of group innovation, the video about the membership management process can be found here:

<https://support.landcarer.com.au/videos/membership-management/>

Then, to get started, you just need to register with the platform and you're away.

LAL is also offering Landcarer training for groups or networks, either on the membership management feature, or any other aspect of the platform, so please get in touch if this would be of interest.

DELWP Loddon Mallee Climate Change & New Energy Newsletter

Are you seeking more local information on climate change projects, community initiatives and renewable energy incentives?

Then this newsletter series might be in interest.



The newsletter is [online](#) and provides updates on the ADAPT Loddon Mallee program, which has upcoming events including a Youth Climate Retreat and Partnering 4 Resilience Program.

If you have a story you would like to contribute to

the next newsletter or be added to the distribution list please email

dona.cavetana@delwp.vic.gov.au



New resources for Aussie farmers are live on FarmHub

FarmHub is pleased to announce that Aussie farmers can now access even more information in one central location!

Since we last featured the FarmHub resource in the Chat, two new areas of FarmHub have been made available:

1. [Regional Climate Guides](#) - providing data on seasonal trends for Australia's 56 NRM regions (a partnership between the Bureau of Meteorology, FarmLink and CSIRO); and,
2. [Learning & Development Directory](#) - over 100 learning and development opportunities for people in the farm sector (developed in partnership with the Council of Rural Research and Development Corporations).

Of course, farmers can still access the national directory of assistance and support measures.

Register your interest today



The [2020 National Landcare Conference](#) will be held at the International Convention Centre, Darling Harbour in Sydney.

Funding opportunities...

On-Farm Drought Resilience Grant Program

The Victorian Government through Agriculture Victoria within the Department of Jobs, Precincts and Regions has established the On-Farm Drought Resilience Grant Program to assist eligible farm businesses to invest in on-farm drought preparedness and to seek business advice.

The program is a key component of the increased drought assistance being provided to Victorian farmers.

A grant of up to \$5,000 (GST exclusive) per farm business is available to assist eligible farm businesses to implement on-farm infrastructure improvements and or undertake business planning and advice activities.

[The scheme](#) is available to landholders within the Goulburn Murray Irrigation District (GMID).

Eligible irrigation farm businesses, including those that have transitioned from irrigation production systems to dryland production since 1 July 2018, located in the GMID.

For more information about other drought support being provided by the Victorian Government and Commonwealth Government, please contact Agriculture Victoria.

A range of other support is available to farmers affected by the drought and potential applicants are strongly encouraged to participate in these programs.

Telephone: 136 186

Email: drought.support@ecodev.vic.gov.au

Web: agriculture.vic.gov.au/dryseasons

National Landcare Program: Smart Farms Small Grants Round 3

The Australian Government is inviting applications for projects to deliver services under the National Landcare Program – Smart Farms Small Grants Round 3.

Smart Farms Small Grants is an open, competitive, grant opportunity to support projects to increase farming, forestry and fishing communities' awareness, knowledge, skills and capacity to adopt best practice sustainable agriculture.

The purpose of Smart Farms Small Grants is to support land manager practice change that will deliver more sustainable, productive and profitable food, fibre and forestry business while protecting Australia's biodiversity; protecting and improving the condition of natural resources; and assisting Australia meet its international obligations.

The purpose will be achieved by supporting projects that contribute to achieving one or both of the program outcomes outlined below:

Outcome 1 – Increased adoption of best practice sustainable agriculture.

Outcome 2 – Increase the capacity of land managers to adopt best practice sustainable agriculture.

It is strongly advised to read through the [guidelines and criteria](#) before discussing your project with Darren prior to applying.

Round 3 applications close 19 December 2019 - 11:00pm AEDT

If you would like any support or advise in relation to eligibility, project ideas and completing the application, please contact Darren Bain, Regional Agricultural Landcare Facilitator darren.bain@nccma.vic.gov.au or call (03) 5440 1893.

