

AUTUMN EDITION

Welcome Craig!

This is the first edition of our seasonal updates on the happenings of the Noosa Oyster Ecosystem Restoration Project.

The project aims to restore complex oyster ecosystems to the Noosa River estuary. If you like these updates, [feel free to share with others!](#)

Brochure

It was a busy start to summer in Noosa, with the publication of our new project brochure. The brochure offers insight to the project's purpose and restoration techniques and has been well received locally. [Click here to download the brochure.](#)

FAQs

Drawing on more than 70 one-on-one local meetings, we've also developed a Frequently Asked Questions page on our website, check it out to find all your questions answered! [Read the FAQs.](#)

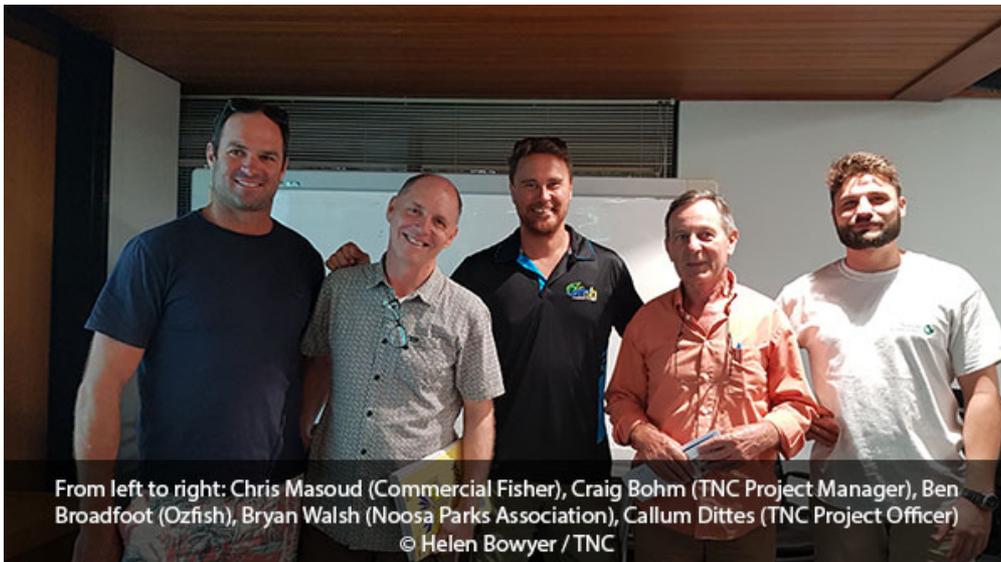
Community Engagement Workshop

On the 7th of December 2020, we hosted a workshop with local community groups and river stakeholders.

The group of 18 discussed a wide range of project ideas, which could support the project by getting people involved with oyster restoration.

Ideas ranged from Remote Underwater Video (RUV) monitoring to water quality monitoring, school oyster restoration awareness activities, oyster gardening and celebrating the Kabi Kabi people's strong connection to oyster beds and the Noosa River.

The participants also talked about working towards a common vision for the Noosa River and how restoration is just one part of a bigger story about river care that needs attention.



Public Information Sessions

On Monday the 14th of December 2020, we hosted nine very personal public information sessions at 'The J', Noosa Junction.

The sessions were designed to give everyone a chance to be heard and answered.

Groups discussed the project and restoration sites, listened to the project presentation, and had an opportunity to ask questions. The sessions were successful, with 38 people attending, and expressed overwhelming support for the project.

Shell Recycling — Shuck Don't Chuck

Thanks to our shell provider, Mooloolaba Fish Market and transport partner, Resource Recovery Australia, our stockpile of drying oyster shells has swelled to over 11 tonnes since we started collecting in September 2020.

The oyster shells are curing well in the Noosa sun.



Proud Team TNC Noosa at the Shuck Don't Chuck shell curing site, Noosa Recovery Centre 2020.
Left to right: Helen Bowyer, Craig Bohm, Callum Dittes © Simon Branigan / TNC

Restaurants Join Shuck Don't Chuck

Adding to these shell mountains are three newly appointed river side restaurants. This month we started our restaurant shell pick-up from three very proud restaurant owners keen to be onboard. These are **Noosa Yacht and Rowing Club, Noosa Harbour Fish Market and Grenny's Noosa by the River.**

Behind the Scenes

There has also been plenty of scientific work happening behind the scenes.

- **Habitat Suitability** — We have finalised the Noosa oyster restoration Habitat Suitability Model. It shows what parts of the Noosa River estuary are better than others for oyster restoration. The good news is, most of the estuary is 'suitable' to 'highly suitable' for restoration!
- **Restoration Suitability** — We then added other ecological considerations to our habitat model. Details of the built infrastructure and human uses of the Noosa River i.e. proximity

to seagrass and rocky reef, proximity to extant and historic oyster reefs, alluvial sands, small craft channels, tidal works, moorings, foreshore access, in-water urban utilities.

These parameters were then allocated exclusion criteria. This is to minimise potential interactions of the river users with restoration works e.g. distances from tidal works, foreshore access points, moorings, submarine cables. Together, this produced the Noosa Restoration Suitability Model.

- **Restoration Sites** — From Restoration Suitability Model, we then select the most suitable restoration sites that are both ecologically sound and supported by the community.



Next Steps

- Finalising the engineering and restoration design specifications
- Securing permits to allow us to work in the river
- Rolling out community participation projects, which will be profiled in our next edition

Thank you for your support. We appreciate all you can do to help restore these ecosystems for the benefit of people and nature.



**Craig Bohm,
Marine Coordinator, SE Queensland
The Nature Conservancy Australia**

We acknowledge the Kabi Kabi Traditional Owners who are the custodians of cultural knowledge and their collective memories of the Noosa River and Lakes region and advise this project accordingly. The project is located on Kabi Kabi Sea Country.

The Nature Conservancy gratefully acknowledges the generous support of our partners and donors.

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WINTER EDITION

Dear Craig!

Welcome to the Winter edition of Noosa Oyster Chronicle! No doubt a few of us have the beanie's and Ugg Boots out for a few months of cooler temperatures (but don't tell the southerners).

This edition is about Reef Builder in Noosa, community partnerships, site plans, construction permits, Shuck Don't Chuck and other shellfish reef related news. Feel free to share this update with your friends and networks.



REEF BUILDER

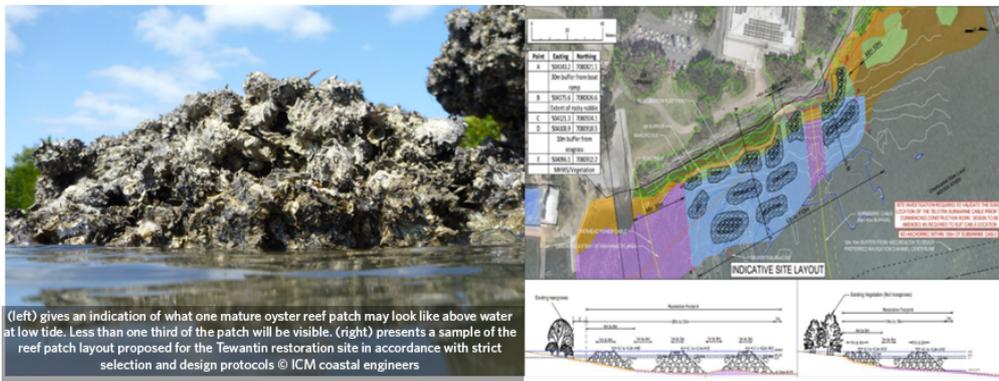
In January, The Nature Conservancy (TNC) kicked off the Australia-wide [Reef Builder](#) initiative for 2021. The initiative aims to bring shellfish reef ecosystems back from the brink of extinction – for the benefit of both people and nature. This is an exciting partnership between the Australian Government and TNC. For Noosa, Reef Builder funds means the restoration of another 1 hectare of oyster beds on top of the 1 hectare we are already restoring with our partners, Noosa Shire Council and The Thomas Foundation.

Designs for proposed oyster ecosystem restoration sites released

For the last 18 months, we have been working alongside community members, local indigenous elders, hydrographic surveyors, marine ecologists, coastal engineers and government agencies to select the most appropriate sites and reef designs for the restoration of oyster ecosystems in the Noosa River estuary. We have produced a special update to share this information with you.

With government approval, the project plans to work at two sites this summer (to be confirmed) and two sites the following summer. The actual construction work should take several weeks to complete.

Read the [Project Update here](#), or visit the [TNC Noosa webpage](#) for more info.



Restoration Permits

With the support of Noosa Shire Council we have submitted the draft restoration plans for the project to the Queensland government. The plans were well received, and a meeting was held between TNC and the agencies in June to discuss next steps. At the meeting, government agencies provided technical advice to help navigate the myriad of government requirements. This advice is helping ensure the project meets the highest possible standards. The team is currently working through feedback and will submit the refined plans to government for their formal assessment and permitting.

Just add water – Noosa’s Festival of Water 2021

In June, Noosa’s famous Festival of Water 2021 was held. Our project partner, Noosa Community Biosphere Association (NCBA), used their creative minds to run some exciting kids events which communicate the importance of river health and oyster ecosystem restoration. The NCBA team, worked with Noosa’s kids to produce these endearing oyster friends!



Working with Noosa Integrated Catchment Association

Noosa Integrated Catchment Association (NICA) is partnering with TNC to record water quality information around the oyster ecosystem restoration sites and to roll out oyster gardening. Oyster gardening is an activity where Noosa jetty owners help the restoration effort by growing local juvenile oysters (or 'spat'), settled onto clean oyster shells and hung in bags suspended from their jetties. Once the juvenile oysters are large enough to survive on their own, they are carefully placed onto the oyster reef patches to help kick start ecosystem recovery.

SHUCK DON'T CHUCK – Our shell collection is growing!

It was great to see a profile of our partner restaurants, Noosa Yacht & Rowing Club, Grenny's Noosa by the River, and Noosa Harbour Fish Market in the Noosa News recently. Their contributions are helping build our collection of cured oyster shell that will soon be used to produce 'seeded oyster cultch' – local Noosa juvenile oysters (or oyster spat') that has been settled onto desiccated (cured) oyster shell (or cultch).



Shell curing protocols

To ensure the oyster shell's we use are clean and safe, TNC follows strict biosecurity protocols. These include:

1. Shell is only cured at the designated and sign-posted shell curing site
2. Clean, shucked oyster shell is collected by the contractor from wholesaler/s, in bulk, in 1 tonne food-safe seafood transport containers and delivered to the shell curing site
3. Pre-washed shell is collected by the contractor from oyster retailers in Noosa in clean 20 litre buckets, and delivered to the designated shell curing site
4. All containers used for shell transport are thoroughly washed and disinfected before storage and re-use
5. At the shell curing site, shell is placed on the ground in rows separated and sign-posted by month collected
6. The shell is dried and cured (desiccated) in direct sunlight for 6 months, which is two months more than is required by the End of Waste Code
7. The shell is turned after three months of curing, as an additional desiccation measure
8. Each shell pile is no higher than 1 metre, which further enhances the desiccation process
9. The site is regularly monitored and maintained to reduce contamination of the shell piles
10. The curing site is located in an isolated area of the depot, so the risk of contamination from the depot's other waste management activities is negligible

11. Once cured, and prior to its removal from the depot, oyster shell may be washed with freshwater to remove any cumulated sediment or dried organic matter
12. The shell, when needed, is transported in clean containers

Oyster Broodstock

For oyster seeding the project only uses a handful of adult rock oysters collected from the Noosa River as brood stock, to provide the 'seeds' for the oyster shell. These will be collected against strict biosecurity protocols and permit conditions prescribed by the Queensland Government for this purpose.

VOLUNTEER HELP WANTED

We will soon embark on our spring shell cleaning and bagging activity, to prepare oyster shells for seeding with oyster spat in the government-run hatchery.

If you would like to get your hands dirty and get some direct experience with oyster ecosystem restoration work, email > helenbowyer@tnc.org.

TELL ME MORE ABOUT VOLUNTEERING!

Thank you for your support. We appreciate all you can do to help restore these ecosystems for the benefit of people and nature.



Craig Bohm,
Marine Coordinator, SE Queensland
The Nature Conservancy Australia

We acknowledge the Kabi Kabi Traditional Owners who are the custodians of cultural knowledge and their collective memories of the Noosa River and Lakes region and advise this project accordingly. The project is located on Kabi Kabi Sea Country.

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SPRING EDITION

Hi everyone,

Welcome to the Spring edition of the Noosa Oyster Chronicle!

Together with our partners, we're working to restore critically endangered rock oyster ecosystems in the [Noosa River estuary](#).

This edition of the chronicle is focused on the Shuck Don't Chuck shell recycling project and other community outreach activities.



"Ollie" and "Pearl" oyster puppets. Photo Credit: Marc Bright

The Happy Oyster Family

Coming soon to Noosa primary schools is the entertaining and **educational "Ollie" and "Pearl" oyster puppets** - along with their family of oyster characters.

These puppets will sing and interact with students, while teaching them about oysters and their habitat – **the Noosa River!** Local artisans 'Conscious Cartooning' are working together with the Noosa Community Biosphere Association to deliver this education program as **part of TNCs community outreach activities** in the Noosa region. You will see more of this activity in the next newsletter as the first performance is occurring in late November.



Shell washing well underway!

After spending more than six months baking in the Queensland sun, the dried, **sterile oyster shells are now moving into the cleaning phase.**

We are cleaning the shells ready for seeding with oyster spat at the Bribie Island Research Centre. Repurposing everything from buckets, baskets, ladders and chairs, supplied by the team at Resource Recovery Australia (RRA). The project team and volunteers are using the RRA facility at Doonan to wash an amazing **14 tonnes of oyster shell** – saving all these shells from ending up in landfill. A special thanks to RRA for their extensive support. Also, thank you to Ben Diggles, Ozfish and the Save Pumicestone Passage group for lending us their shell washing machine.

More volunteer help needed!

We need your help - if anyone would like to volunteer and join our Shuck Don't Chuck shell washing register, please contact us. Your help is vital to our success and is a great way to learn about the details of oyster ecosystem restoration. You can reach us at >> queensland@tnc.org

TELL ME MORE ABOUT VOLUNTEERING!



Volunteers from the ECOllaboration Cert III environmental management course. Photo Credit: Craig Bohm

Eco trainees volunteer

Volunteers from the ECOllaboration Cert III environmental management course, together with course coordinator, Mal Smith, got up close and personal with 2 tonnes of oyster shell. **A special thank you for your efforts.**

Another thank you to Noosa and District Landcare and their indigenous eco trainees who also lent a hand, shell washing and bagging, while also learning about oyster ecosystem restoration.

Together, Noosa shell washers have already bagged and transported **8 pallets - 4150kg of oyster shell** to the Bribie Island Research Centre. The centre, which is owned and operated by the Queensland Government, will spawn adult Noosa oysters and the resulting spat will be settled onto the shell in large tanks. They will then return to Noosa for placement across our sites, and be turned into beautiful oyster gardens.

NICA and NCBA step up

We would like to thank the efforts of the Noosa Integrated Catchment Association (NICA) and Noosa Community Biosphere Association (NCBA). They have worked tirelessly to help organise our amazing shell washing facility as well as washing and bagging many tonnes of cured oyster shell. A really big shout out to you from us!



Megan Connell talking to Noosa school children about shell recycling. Photo Credit: Emma Menzies

National recycling week

As part of Noosa Shire Council's National Recycling Week activities, local schools visited the shell washing site in Doonan. There they learnt about [Shuck Don't Chuck](#) and our oyster ecosystem rehabilitation work.

We're excited to be spreading the word with students across Noosa hearing about a different kind of recycling – **oyster shell recycling** through our shuck don't chuck program. Many thanks to Noosa

Council's Waste Education and Sustainability Officer, Emma Menzies for coordinating the visits.



Oyster gardening preparations

The team from **Noosa Integrated Catchment Association (NICA)** have been busy preparing oyster baskets. They have been talking to hundreds of Noosa locals and are building up a team of keen oyster gardeners.

Ozfish and the Save Pumicestone Passage groups have loaned TNC and NICA 70 oyster gardens, which they recently used in a successful oyster gardening project in Pumicestone Passage. NICA and TNC helpers have fully cleaned and revamped the baskets ready for deployment into the Noosa River.

NICA also recently ran an oyster basket demonstration day in Quota Park, Gympie Terrace, Noosaville, where locals could stop and chat

about the baskets, oyster gardening and oyster restoration. **Great work, NICA!** If you wish to get involved with [oyster gardening](#), please contact us at: queensland@tnc.org

BECOME AN OYSTER GARDENER TODAY!



New team member on board

In early October, **we welcomed a new staff member – Megan Connell**. Megan brings a wealth of experience in community engagement, stewardship, education and ecosystem restoration. Megan is working to expand the project's community outreach. She is also working closely with Noosa Council staff and all our partners to develop local stewardship for this important restoration work. **Please extend her a warm welcome as she continues to grow our work across the Noosa area.**

If you would like to contact Megan, you can email her at: megan.connell@tnc.org



Megan Connell - TNC Oceans Project Coordinator, QLD. Photo Credit: Adam Connell

Where can I find out more?

Website: natureaustralia.org.au/noosa

Email: queensland@tnc.org

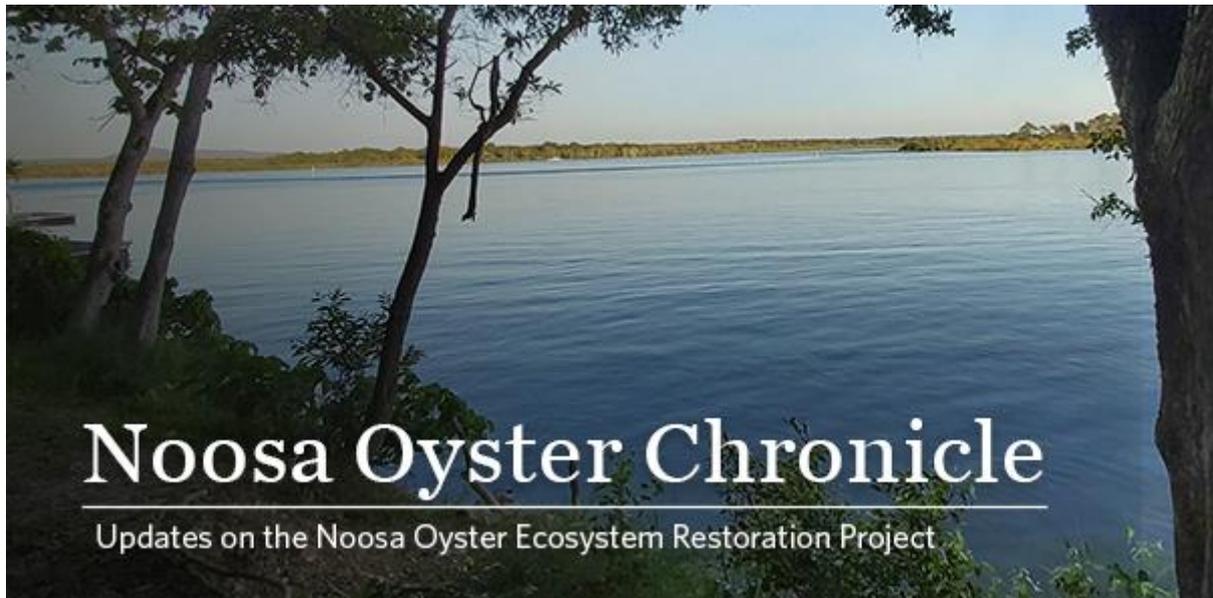
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**Craig Bohm,
Ocean Coordinator, Queensland
The Nature Conservancy Australia**

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knowledge and their collective memories of the Noosa River and Lakes region and advise this
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Hi Megan,

Welcome to the oyster reef construction edition!

The Nature Conservancy (TNC) is working with Noosa Shire Council, the Australian and Queensland governments, The Thomas Foundation, Noosa local businesses and Noosa community, to restore critically endangered rock oyster ecosystems in the [Noosa River estuary](#).

This edition of the Chronicle offers readers insight to the pre-construction preparations and updates on our local partnership projects.

Oyster reef build time locked in!

With a large amount of state and local permits secured, we expect to construction to commence in late July. The work will take several weeks to complete. Construction will need to work around weather conditions, the tides

and general (human) ebb and flow of the estuary. The work will be overseen by independent marine engineers, who also helped design the rocky reef foundations, as well as TNC's technical marine team.

The 4 restoration sites (Tewantin, Goat Island, Noosa Sound East and Noosa Sound West) will be marked with yellow aids for navigation, prescribed by Maritime Safety Queensland. The aids include signage and a QR code, which boaters can scan on their phone and be directed to an informative webpage about the project.

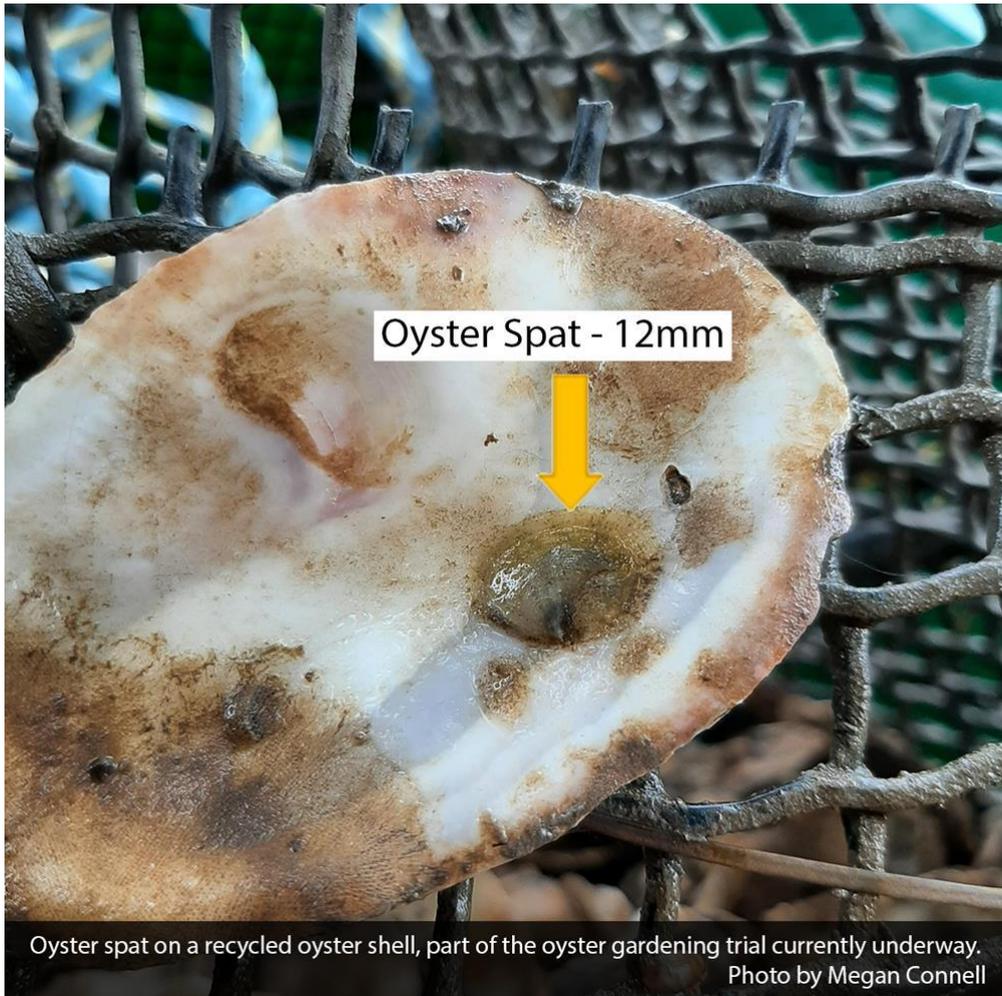
A range of fact sheets are available for those who want to know more, these include:

- Biosecurity fact sheet
- Frequently asked questions
- Construction News Update

For any of these factsheets, please email queensland@tnc.org and we will provide it to you!

Early success in the oyster gardening trial

The Noosa River Oyster gardening trial is showing early signs of success, with juvenile oysters, mussels and other marine species rapidly colonising clean oyster shells deployed in baskets in the Noosa River.



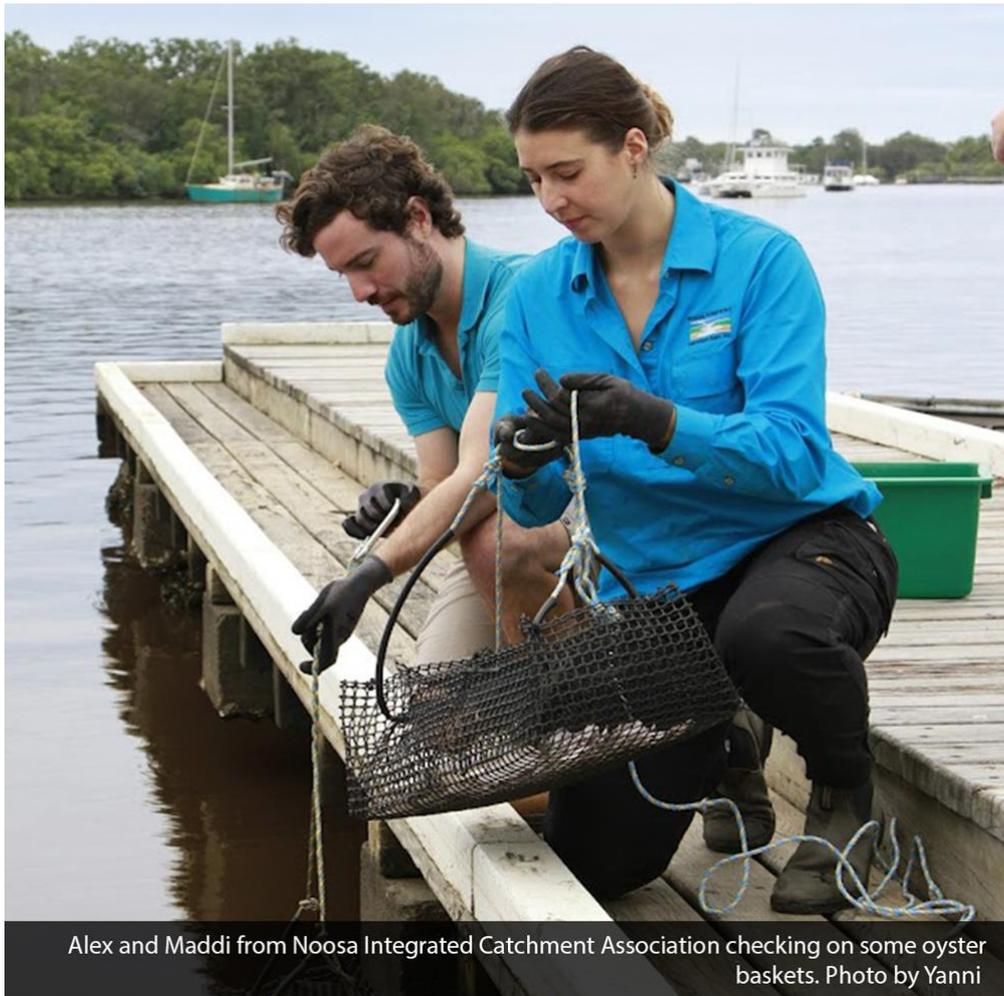
The Noosa Integrated Catchment Association (NICA) is undertaking these field trials to determine if the oyster baskets can contain the oyster shells, remain robust and attract wild oysters and other marine species.

Seeing recruitment this early is exceptionally good news for the gardening project, and indeed the restoration project more broadly.



Alex, Maddi and Megan check on an Oyster Basket and measure juvenile oysters as part of the oyster gardening trial. Photo by Yanni

Our oyster gardening project leads NICA are also looking for more oyster gardeners, so if you can think of anyone that might be interested, they can email Maddi at nicanoosa@gmail.com.



Alex and Maddi from Noosa Integrated Catchment Association checking on some oyster baskets. Photo by Yanni

Kabi Kabi connections enable learning of river management

Marine Science students from Noosa High Schools are learning about the Noosa River Oyster Restoration Project through educational resources developed by Noosa EE Hub. They are being taught about river ecosystems and traditional river management by Aunty Bev Hand, Kabi Kabi Traditional Custodian and Noosa EE Hub Aboriginal Educator. With guidance from the Hub, the school is adopting its local waterway, improving riparian health and conducting ongoing waterbug analysis for citizen science purposes.



Noosa EE Hub's Dalia Mikhail with Aunty Bev and local marine science students. Photo by Kate O'Reilly

Youth focused oyster gardening session

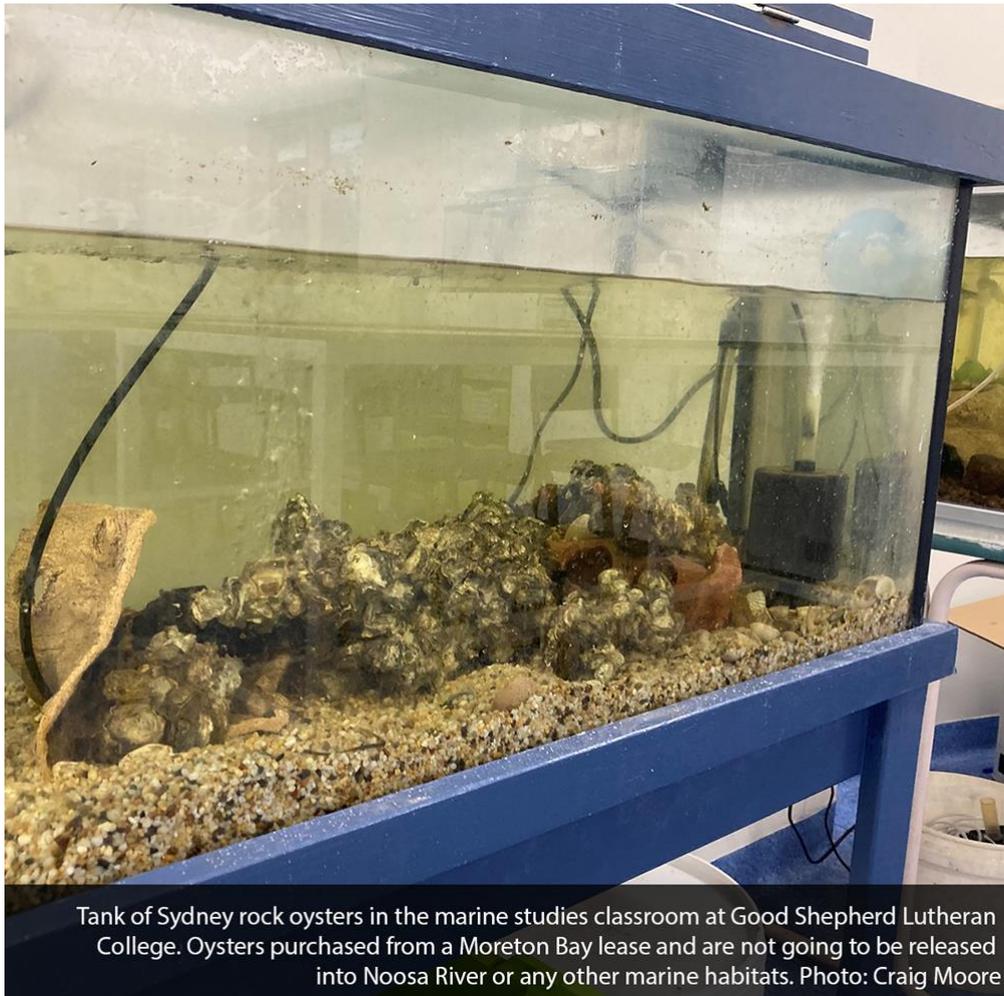
The Noosa EE hub has also been busy during school holidays with a series of environmental workshops. Young marine scientists gathered at the river for a junior oyster gardening workshop that involved species identification, monitoring oyster sizes and learning about river health. Budding young marine biologists and fisher people as well as interested general public attended the session by the river. All bags brought out for monitoring contained a large amount of new spat development as well as a range of other species including transparent shrimp. Kane, an educator with Envirotech, also talked to the group about their Marine Restoration Certificate which was of great interest to the students and adults.



Staff from NICA and Noosa EEHub at the youth focused oyster gardening session as part of the Noosa EE Hub school holiday program. Photo by Kate O'Reilly

Schools program ramps up in Term 3

Information generated from the school holiday sessions will be used within the secondary schools program facilitated by Noosa EEHub. Good Shepherd Lutheran College has successfully migrated oysters into a tank environment ready for Term 3 classroom activities as part of their Marine Science program.



Indigenous Oyster harvest features in articles

Recently, some great articles have been printed about the sustainable harvest of oysters in Queensland. This article refers to Butchulla Country (Hervey Bay), which is also relevant to our local Kabi Kabi Country.

- Indigenous people sustainably harvested oysters for thousands of years before European colonisation, study finds - [READ ARTICLE HERE](#)
- Another similar interesting piece appeared in the Guardian about Indigenous oyster harvesting in SE Qld - [READ ARTICLE HERE](#)

Thank you for your support. We appreciate all you can do to help restore these ecosystems for the benefit of people and nature.

**Craig Bohm & Megan Connell,
Ocean Coordinators, Queensland
The Nature Conservancy Australia**

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