



Regional
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Mid North Coast Circular Economy Research Report



An Australian Government Initiative

Mid North Coast Circular Economy Research Report

Contributors:

We thank and acknowledge the efforts and contributions of Keiran Travers and Liz Jeremy to the research project.

We thank and acknowledge the contributions of those who attended the Circular Economy forums and those who filled out the survey.

We thank and acknowledge the members of the Mid North Coast Joint Organisation for their support of this project.

List of Acronyms

GDP	Gross Domestic Product
LGA	Local Government Area
MNC	Mid North Coast
RDA	Regional Development Australia

Acknowledgement of Country

We acknowledge the traditional owners of the land and Elders past, present and emerging.

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Keiran Travers | Project support and mentoring

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Executive Summary

The Mid North Coast Circular Economy Research Project (Regional Snapshot) was undertaken by Regional Development Australia Mid North Coast (RDAMNC) in partnership with the Mid North Coast Joint Organisation (MNCJO).

The purpose of the Regional Snapshot was to scope existing Circular Economy activity on the Mid North Coast, as well as to identify challenges and opportunities for the further development of a more circular economy across the region.

There are clear economic benefits to a strong circular economy, including creating new types of jobs, supporting innovation and resource efficiency, as well as increased productivity.

In addition to the economic impacts, a strong circular economy has other significant benefits, notably in waste management, with landfill nearing capacity on all the Local Government Areas on the Mid North Coast, and in increasing the regional capacity, resourcefulness and resilience of the Mid North Coast, especially in times of disaster.

Like most regions the Mid North Coast has experienced significant supply chain gaps since Covid. There is opportunity for Circular Economy activities to alleviate these gaps particularly in the building industry.

While sustainability is a common concept across the region, circular economy is a new term often seen as a 'buzz word'. Our early research has identified numerous initiatives that would currently be easily linked with sustainability but not necessarily Circular Economy. With both levels of Government investing in Circular Economy activities this project is timely.

Opportunities to further develop the Circular Economy in the Mid North Coast are vast and will be stimulated through expanded communication networks, opportunities to share information and ideas, greater collaboration across Local Government Areas, education programs to increase community buy-in, connecting industry with investment partners and progressing existing innovative ideas.

Potential limitations and difficulties which were identified as obstacles to the expansion of a Mid North Coast circular economy include the geographic and demographic barriers of the region, including small, isolated populations and the tyranny of distance, infrequent opportunities for networking, perceived lack of support by government, and narrow profit margins which act as a disincentive for business.

RDAMNC looks forward to continuing this work into 2023.

Contents

Executive Summary	
Project overview	1
Regional Snapshot Background	1
Methodology.....	2
Regional Snapshot Objectives.....	2
Regional Snapshot Scope	2
Methodology and Analysis.....	2
Stakeholder Engagement.....	2
Desktop research	2
Key stakeholder groups in the emerging Mid North Coast circular economy.....	3
Mapping current Circular Economy activity in region	4
Experts	4
Not for profits and industry	4
Government Led Initiatives.....	5
Opportunities identified for future Circular Economy Initiatives in the Mid North Coast Region	7
Sharing information and ideas.....	7
Learning from other models and successful enterprises within and external to the region	7
Marketing and media.....	7
Discrete business opportunities	8
Potential Limitations and Difficulties for a Circular Economy	10
Governance and leadership	10
Information and education	11
Opportunities to network	11
Profitability.....	11
“Red tape”	12
Support	12
Recommendations	13
Governance structure	13
In-depth Mid North Coast Circular Economy research project:	13
Collaboration.....	13
Marketing and Education:.....	13
Food and Organic Waste:.....	13
Construction waste:	14

Project overview

Regional Snapshot Background

For the purposes of this Regional Snapshot, Regional Development Australia Mid North Coast (RDAMNC) has used Circular Australia’s definition of circular economy:

The Circular Australia (formerly Circular NSW) definition is:

“Circular economy is about decoupling economic growth from virgin resource use. Circular design of products, services and systems keep resources in the market longer, enabling sharing and reuse business models to become business as usual”

There are three primary principles associated with this transition to a circular economy according to the Ellen MacArthur Foundation:

- Design out waste and pollution
- Keep products and materials in use
- Regenerate natural systems

The process of a circular economy is shown diagrammatically below



A Circular Economy presents many economic and environmental opportunities for the Mid North Coast. This regional snapshot has attempted to identify activity, opportunities and challenges impacting Circular Economy activity across the region.

Methodology

Regional Snapshot Objectives

The aims of the Regional Snapshot were to locate existing Circular Economy initiatives on the Mid North Coast, as well as to identify opportunities and challenges for the further development of a more Circular Economy on the Mid North Coast.

Regional Snapshot Scope

Information was collated from various sources including local sustainability experts, not for profits, all levels of government, industry and interested residents.

This project aimed to provide a snapshot of activity, rather than an extensive examples of all activity across the region. The project aimed to showcase a range of current activities in the region with the view to highlight the positive approach that some organisations are undertaking. This report should inspire others to act, to adopt circular economy principles and at the same time better understand what is and isn't working to stimulate Circular Economy activity across the region.

Methodology and Analysis

The Regional Snapshot used a combination of primary and secondary research techniques, including stakeholder engagement (an online survey and four public forums), desktop research, and the expertise of mentor and sustainability consultant Keiran Travers.

Stakeholder Engagement

Potential Mid North Coast Circular Economy stakeholders were identified by contacting Local Government, business, not-for-profits, education and sustainability groups throughout the Mid North Coast region. These groups were invited to attend one or more of the public forums RDAMNC hosted in August 2022, initially to be located in Taree, Kempsey, Bellingen and online. There was a total of 45 attendees across all four forums. Due to an unexpected illness, the Taree and Kempsey forums had to be facilitated online. The Bellingen forum went ahead as a face-to-face event.

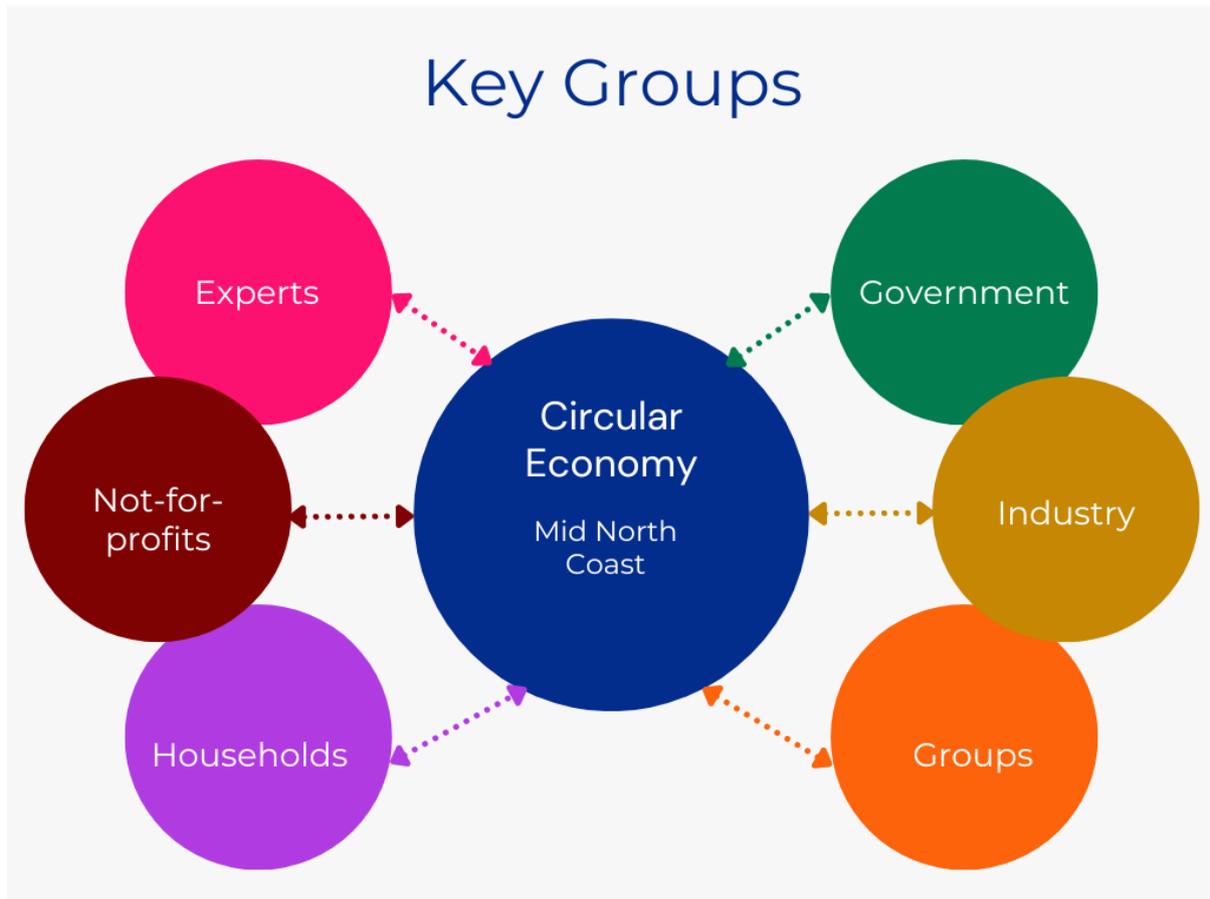
An online survey was also conducted, collecting 34 responses from August to October 2022. Questions were both quantitative and qualitative, aiming to determine local understanding of Circular Economy, opinions and experiences regarding opportunities and challenges in the circular economy space, as well as collecting organisational profiling data.

Desktop research

Desktop research was conducted to understand international and national Circular Economy trends and opportunities, identifying key industry and government groups who are providing support to the development of Circular Economies, as well as local organisations, businesses and community groups who were currently engaging in Circular Economy initiatives.

Key stakeholder groups in the emerging Mid North Coast circular economy

The following stakeholder groups were identified through desk research as being typical of a Circular Economy ecosystem. RDAMNC targeted Mid North Coast contacts from each group throughout the process of stakeholder engagement. Notably 27 sustainability groups were identified throughout the region.



Mapping current Circular Economy activity in region

While the Regional Snapshot identified some strong Circular Economy activities throughout the region there was a notable lack of large enterprises existing or emerging. The research probed to discover blockages to the development of Circular Economy activities in the Mid North Coast and issues are noted on following pages.

Experts

The research identified numerous people in the field who were more likely to identify as sustainability experts. While RDAMNC drew upon the knowledge of experts external to the region, there were no organisations nor individuals in the Mid North Coast that emerged as specific Circular Economy experts.

Not for profits and industry

The not-for-profit sector embraced Circular Economy activities in the form of social enterprise decades ago. From opportunity shops to materials recycling to resource recovery, the sector has expertise in adapting these business models to create employment opportunities, particularly in the disabilities sector.

Some key examples in the Mid North Coast include:

- Plastics recycling initiatives including those at Valley Industries in Taree and Port Plastics in Port Macquarie. All Local Government authorities provide a comprehensive recycling service, including plastics recycling, as part of their kerbside waste collection service.
- Initiatives involving the reduction of food waste are in progress as a pilot at the catering arm of Dundaloo Support Services in Taree which is collecting food waste from local organisations; Golden Dawn Fruit and Veg, a food wholesaler in Coffs Harbour processing their food waste to make jams and liqueur, and the well-established Oz Harvest program which operates in Port Macquarie and Coffs Harbour. There are many more of these examples across the Mid North Coast, especially in the agriculture sector, as farmers value add to their crops. This includes work from The Other Chef.
- Textile recycling is conducted by Willing and Able who are in the Port Macquarie-Hastings area. This organisation has implemented a program to recycle textiles with the dual aims to reduce landfill and to on-sell either as second-hand clothing or rags in their stores. The organisation has placed clothing bins in outlying villages in the Port Macquarie area and have saved 3000kg of textiles from going to landfill since the program began in January 2022.

- A plastics recycling initiative run by MiiMi Aboriginal Corporation in Bowraville. Aboriginal Sea Rangers employed by the Corporation will collect plastic waste from land and water and turn it into plastic pellets using a plastic recycling machine. The pellets will be purchased by the Gowings company, Surf Hardware International, for the creation of surfboard fins and surf accessories.

Industry is slower to adopt Circular Economy practices on a large scale. Perhaps this is because businesses in the Mid North Coast are generally small, and manufacturing and agriculture are a relatively small representation of economic activity.

In any case, several organisations noted circular economy as a core part of their operations. Further research in 2023 will identify many more examples.

- Nestle via their food manufacturing plant, located in Frederickton. The organisation takes waste from sawmills and wood processing areas and use that to run their boilers
- James Strong, located in Taree recycles both water and aluminium used to make cans
- On a much smaller scale, Welcome Dental facilitates community recycling of used dental products and donates revenue back to the community
- Several emerging partnerships were identified between the building industry and not for profits to reuse/repurpose construction waste that is reusable or recyclable such as windows, doors, and timber.

Government Led Initiatives

Government led initiatives across the Mid North Coast provide solid examples of what can be achieved in Circular Economy activities at this level. Some notable examples operating in the Mid North Coast include:

- **The Return and Earn – Container Refund Program.** This is a state Government initiative provides community members with revenue for returning aluminium cans and bottles to recycling depots across the region. There are 15 container refund points from Woolgoolga to Taree.
- **Collaboration between government and other bodies** are emphasising the importance of working towards circular outcomes and exploring new opportunities:
 - MidCoast council is partnering with social enterprises to deliver small scale projects that extend the life of used plastics and turn scraps into soil.
 - A mattress recycling initiative in Kempsey demonstrates a collaboration between TAFE NSW, Midwaste and Kempsey Council.

- **School programs** offer a way to educate young people and their broader communities around sustainability and circularity. Programs and networks such as the Sustainable Schools Network, Envirobank, food waste programs like Lunch Makers and Get Grubby, and rubbish bin audits are all initiatives currently operating in schools on the Mid North Coast. There are also some innovative education programs in high schools where students come up with ideas and business proposals to facilitate recycling e.g. One of the groups were looking at a system where if people were donating recycled goods, there was an app which calculated credits from weight of goods to be recycled.
- **Cigarette butts** are a well-known pollutant, becoming street litter and eventually washing into the ocean through stormwater channels. TAFE NSW Signed up with the EPA on the Butt Litter Project, putting in a grant application for four of five Mid North Coast regional campuses to be involved. Vandal proof Enviropole cigarette bins get emptied and shipped to Melbourne to a company which is using a fungus to break down the cigarette butts.
- **Green Waste** – Councils within the region collect a large volume of green waste which is often mulched and used for rehabilitation activities. Further, some food and garden organic waste is transported to private composting facilities where it is reprocessed into compost. The NSW Government has highlighted the need to expand Food Organic and Garden Organic (FOGO) waste collection and processing.
- **Local Councils** play a key role in the circular economy, particularly in waste management. They have similar aims including reducing waste, increasing recycling, diverting waste from landfill, reducing illegal dumping, and community education programs. Councils also assist their residents in handling more problematic types of waste, including chemicals, construction waste, e-waste and business waste. Most councils have waste management strategies existing or in development, and all councils manage waste facilities with recycling opportunities such as:
 - Reuse shops, such as Bellingen’s Bowerhouse Community Reuse Shop
 - Recycling facilities such as the Tuncurry Waste Management Centre and the Kempsey Waste Management Centre.
 - LGA collaboration such as Coffs Coast Waste Services, covering Nambucca, Bellingen and Coffs Harbour.

Opportunities identified for future Circular Economy Initiatives in the Mid North Coast Region

The Circular Economy forums demonstrated a strong starting point for future development of the sector in the Mid North Coast. Participants called for baseline communication and stakeholder engagement strategies to accelerate a Circular Economy movement across the region. This included:

Sharing information and ideas

The forum participants generally enjoyed the opportunity to network and connect, citing few opportunities to share ideas and to build upon concepts. This highlights the need for and the willingness to collaborate.

There are several social enterprises engaging in awareness raising activities around Circular Economy such as the Purple Card project (presently operating in the Hunter region and looking to expand into the Mid North Coast), Coffs Harbour Neighbourhood Centre and Rotary clubs.

Learning from other models and successful enterprises within and external to the region

The notion of working together and associated collaboration brought forward numerous suggestions about projects, businesses and models people had seen either within or external to the region. Suggestions including building on the good work already being undertaken by government, business and the not-for-profit sector.

Marketing and media

In a geography that presents difficulties to scale due to the tyranny of distance every activity counts. Without broad adoption of circular practices viable business models are very difficult to achieve.

The implementation of grassroots campaigns to get broader community and business buy-in is necessary. People who create these campaigns should be aware that the average person is not familiar with the term 'circular economy', although they are familiar with its components such as recycling, composting, renewable energy, repurposing, upcycling, repairing and more. Local authorities have many existing recycling collection and sorting programs which could be highlighted to improve circular economy outcomes.

Discrete business opportunities

The forums and further research in the field identified discrete business opportunities requiring further support to be realised.

The research identified a range of commercial ideas requiring drivers, business concepts requiring business case development and investment, and general concepts requiring stakeholder engagement and further discussion.

Enthusiastic and thoughtful discussion at the forums brought forward many ideas that had been gathered via observation, or ideas that built through the conversation. While business cases have not been undertaken to understand the economic viability of the concepts, the ideas discussed have been captured below:

- The example of Achieve Australia who are a sewing/craft recycling shop in Balmain that turns over up to \$7K per week on donations only. The business has since become a tourist destination. Many forum attendees thought a similar program could link in with other programs at TAFE NSW and other craft groups. It was noted that Taree has the largest community operating arts and crafts centre in NSW.
- It was believed that the expansion of plastics recycling including local processing of material (such as re-pelletizing plastic waste) was worthwhile.
- There is a need to improve water recycling in agriculture and horticulture.
- There is an opportunity to commence the Garage Sale program in the Mid North Coast. This is a well-established national program which could involve local media and social media as well as online workshops. The program is a simple and practical way to show people how they can contribute to the circular economy.
- Establishment of an eco-industrial park that would function like an education precinct with universities and innovation research all in one place. Could enable the Mid North Coast to become a leader in this space, collaborating across LGAs with business and industry to create amazing outcomes.
- Using recycled products in road bases e.g. Glass, tyres and plastics. The use of glass in road projects is not a new idea with several local authorities undertaking such a practice.
- Better and more thorough rubbish sorting programs e.g. in Armidale, Dumaresq Council changed their rubbish collections from larger bins to five or six 55L bins for household sorting. They reduced their landfill intake by 85% (accompanied by a significant education program). Such a program would need negotiation with the Mid North Coast local authorities.

- There is a need to establish solar panel recycling – high early uptake of solar panels in this area means that there will soon be a waste issue. Initiatives are underway in Central Queensland.
- It was suggested to develop community solar farms and battery hubs.
- The upgrading of existing or the establishment of a new resource recovery centre that allowed for increased sorting and recycling of materials
- Developing partnerships with universities to research and develop products and end markets for materials currently landfilled.
- Easily accessible solutions for waste streams that cannot be deposited into the red, yellow, green bins in the more rural areas.

Potential Limitations and Difficulties for a Circular Economy

Governance and leadership

There was general commentary throughout the research about Local Government as an ideally placed (although under-resourced) entity to be the centre of many Circular Economy programs and activities, including:



The challenge with this concept is that the structures are likely to be different between local government models making it difficult for industry stakeholders to engage in a consistent way as they do not always operate via local government borders.

Another suggestion was for a region-wide collaboration group to facilitate research and activities with key stakeholders, structured with an overarching Circular Economy committee with a representative from each sub-committee that sits at the table. Industry sub-groups each have an interest in a particular component of Circular Economy, sitting under an umbrella organisation who facilitates the process.

Information and education

Research has indicated that one of the key impediments to the development of a circular economy in the Mid North Coast was access to information and education. This factor impacted households, businesses, organisations and government in numerous ways, predominantly through resulting lack of community support, difficulties accessing appropriately skilled staff and lacking access to data to make business decisions.

During stakeholder consultation it was noted that even if communities understand and can access circular economy projects, they may not understand, nor engage with why they should get involved. Whether this is a philosophical debate through which no amount of education would turn the mainstream around, or if it is simply the lack of a common and clear message remains to be seen.

This is not helped by what some forum participants identified as a lack of trust in current recycling programs with some sectors of the community not believing their collected recyclable waste is being recycled, which impacts on effective domestic rubbish sorting and other recycling programs. Nor is it helped by 'green-washing' undertaken by organisations who manipulate environmental messaging to charge a higher price for goods.

Lacking access to training and other courses to support the development of a circular economy (e.g. advanced manufacturing, CNC operations, industrial design) makes it difficult for businesses to scale.

Lack of truthful, timely and relevant data about how much and what waste we are producing. This may be connected to the Environmental Protection Agency being both policy maker and regulator which has created a fear mentality resulting in organisations not reporting truthfully.

Opportunities to network

Lack of collaboration and communication means there are lots of small projects happening, with operators unaware of what is happening in other regions.

Profitability

Circular economy businesses operate in recycling and resource recovery on very small profit margins. The tyranny of distance alone in the Mid North Coast presents challenges in cost-effectively collecting enough raw materials to create a viable business model.

Because of the infrastructure required for recycling businesses, lots of small-scale projects would not be as viable as one large project. Scaling requires opportunities to gather raw materials across the region and if partnerships do not exist this becomes unviable.

“Red tape”

There is a strong perception within workshop participants that with the enormous amounts of red tape applied by the EPA, Work Cover and other Government entities, businesses can struggle to generate revenue post the paperwork required.

Safety issues and existing standards for some products do not allow the incorporation of recycled waste e.g. road-base standards, food waste.

Support

There is a perceived lack of support from State and Federal Governments – one of the participants commented that all the information is there and should be legislated - community, business and other organisations should not be having to make this up on a region-by-region basis. Development of a Circular Economy needs to be supported at a policy level down, setting targets for reducing waste and recycling. Lack of State-to-State coordination, with each State having different rules and standards has created a confusing regulatory environment.

Recommendations

Governance structure: People need opportunities to come together to discuss these ideas and learn from one another. A leadership model should be considered which enables basic facilitation and coordination of the identified opportunities.

A suggestion is to set up a region-wide committee with an independent chair to coordinate and facilitate Circular Economy conversations, take up opportunities, research, encourage collaboration, and drive projects. Sub-groups could include:

- Construction
- Textiles
- Agriculture and horticulture
- Medical waste
- Food and Organic waste
- Education programs
- Plastics
- Community renewable energy projects

In-depth Mid North Coast Circular Economy research project: The project would build on this Regional Snapshot, mapping circular economy projects across the region, creating a database, providing case studies, and identifying innovation hotspots and funding opportunities. There is the potential for this information to be held on a region-wide website maintained and updated by a neutral organisation.

Collaboration is essential to build a stronger Circular Economy on the Mid North Coast. Keeping projects locked into individual LGAs will not allow industry to develop the scale needed to be profitable, as populations are comparatively small and isolated. Local Governments need to collaborate and share resources around Circular Economy projects, particularly those to do with waste, including education campaigns, resource recovery centres and waste processing machines.

Marketing and Education: The region would benefit from a consistent marketing and education package. Messaging could be sourced from existing campaigns run by circular economy experts and organisations, such as Planet Ark Foundation, Circular Australia and state agencies. Marketing budgets are limited and messaging requirements are similar across the region, so collaboration is likely to be beneficial. Promotional messages could focus on:

- **Households** – encouraging good recycling habits, education about circular economy
- **Industry:** Actively promote good practices in terms of media attention and awards.
- **Council Infrastructure and Strategies:** making sure the community is aware of the available facilities and the benefits of a more circular economy.

Food and Organic Waste: Research from this paper as well as market knowledge indicates there are opportunities with organic waste. Some key initiatives can include:

- the reuse of green waste for Council rehabilitation activities
- highway landscaping (Coffs Harbour bypass an opportunity)
- recreation developments such as sporting fields, playgrounds and bike tracks
- supporting food waste programs for food retail, hospitality businesses and charities

Construction waste: There is an opportunity to reduce construction waste going into landfill across the region. This issue demonstrates the accuracy of ‘one man’s waste is another man’s treasure’, with opportunities to redistribute reusable materials from industry to community groups and individuals. There are some examples of this across the region, including Bellingen Shire Council’s Bowerhouse Community Reuse Shop. Some issues were identified during the research as challenges to be overcome in this area include demolition tender specifications needing to include preservation of materials that could be recycled or repurposed, as well as local infrastructure to support the distribution of these materials, such as Reuse shops.



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