



Australian Government
Great Barrier Reef
Marine Park Authority



Reef Guardian Councils

Climate change initiatives snapshot

2022

Local governments taking action for the Reef
and their communities



Great Barrier Reef
Marine Park Authority
Climate Change
Position Statement

*“Only the strongest and fastest possible actions
to decrease global greenhouse gas emissions
will reduce the risks and limit the impacts of
climate change on the Great Barrier Reef.”*

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Published by the Great Barrier Reef Marine Park Authority

ISBN 978-0-6450438-3-9

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A catalogue record for this publication is available from the National Library of Australia.

This publication should be cited as:

Reef Guardian Councils Climate change initiatives snapshot, Great Barrier Reef Marine Park Authority 2022.

Cover: Cairns Southern Wastewater Treatment Plant Solar Farm © Cairns Regional Council

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Acknowledgement

The Great Barrier Reef Marine Park Authority acknowledges the continuing Sea Country management and custodianship of the Great Barrier Reef by First Nations people, whose rich cultures, heritage values, enduring connections and shared efforts protect the Reef for future generations.

Aboriginal and Torres Strait Islander readers are advised this publication may contain names and images of deceased persons.

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It is clear councils and communities play a significant role in the race to reduce emissions to maintain a safe climate.

Australian Local Government Climate Review 2021



Introduction

The Great Barrier Reef is a global icon and an integral part of Australia's national identity. It is a vast and spectacular ecosystem and one of the most complex natural systems on Earth.

As the world's largest coral reef ecosystem, it is bigger in size than Italy, and spans 2300 kilometres of Australia's northeast coast. It comprises almost 3000 individual reefs, about 10 per cent of the world's coral reefs.

This World Heritage Area with Outstanding Universal Value is an economic powerhouse, contributing billions of dollars to Australia's national economy and tens of thousands of jobs.

However, like all coral reefs globally, the Great Barrier Reef is under pressure. Global emissions of greenhouse gases such as carbon dioxide from the burning of fossil fuels, agriculture and land clearing are causing climate change.

This change in climate is forecast to bring further destructive marine heatwaves due to increased sea temperature. Associated impacts from altered weather patterns — such as more intense storms, tropical cyclones and flood events — ocean acidification and rising sea level also damage coral reef ecosystems.

Strong global action to curb climate change is needed urgently to give the Great Barrier Reef the best chance of survival. Caring for the Reef is a shared responsibility. At a global scale Australia is party to the [Paris Agreement](#) which aims to strengthen the response to the threat of climate change by:

- holding the increase in the global average temperature to well below 2°C above pre-industrial levels
- pursuing efforts to limit temperature increase to 1.5°C.

The Australian government has formalised greenhouse gas emissions reduction targets in legislation, and is committed to advancing an effective and progressive response to the urgent threat of climate change drawing on the best available scientific knowledge.

The recently adopted [Climate Change Bill 2022](#) includes greenhouse gas emissions reduction targets to contribute to achieving the temperature goals of the Paris Agreement

(in line with Australia's Nationally Determined Contributions). The Bill also enhances accountability by way of an annual climate change statement to Parliament.

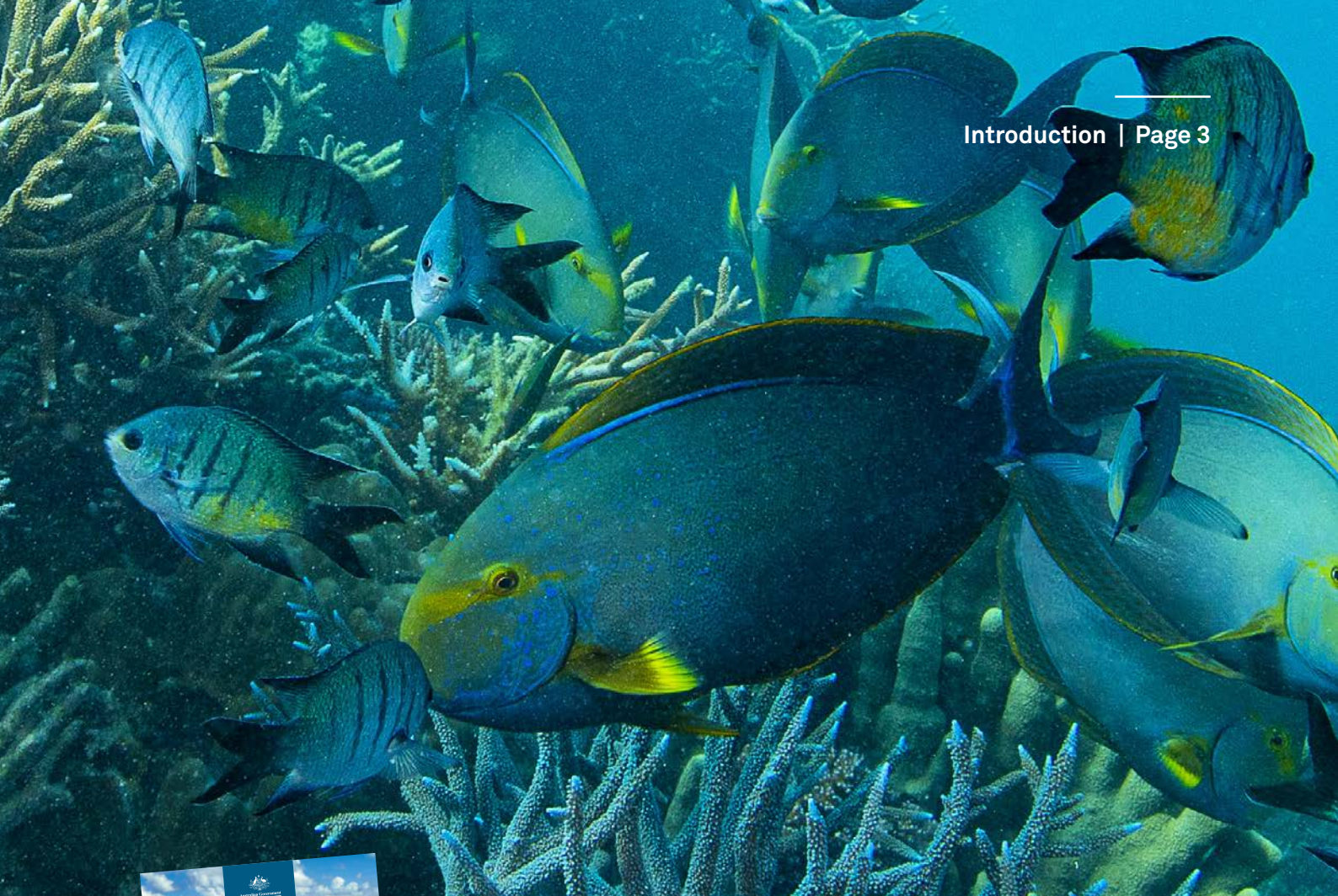
The Great Barrier Reef Marine Park Authority (Reef Authority) recognises the critical importance of strong and effective policies and tools supporting action on climate change by all levels of government. While the world takes action to reduce greenhouse gas emissions, protecting the Reef requires an innovative and multi-disciplinary approach. Actions in the Marine Park and throughout the Great Barrier Reef Region that strengthen Reef resilience, reduce cumulative impacts, and protect and enhance habitats with carbon storage potential are critical to help the Reef cope better with the changing climate.

The Reef Authority encourages actions both big and small to reduce the risks and limit the impacts of climate change on the Reef and coral reefs globally. We applaud the efforts our Reef Guardian Council partners are taking in accelerated actions to decrease emissions.

The collective climate focused actions taken by Reef Guardian Councils are critical in delivering on the Australian government commitment to reduce greenhouse gas emissions by 43 per cent below 2005 levels by 2030, and to net zero by 2050.

The climate focused actions taken by Reef Guardian Councils are also contributing to the delivery of the goals and achieving the objectives and longer term outcome and vision of the [Reef 2050 Long-Term Sustainability Plan 2021-2025](#). These contributions are strongest under work area 1 "Limit the impacts of climate change" and strategic action 1.2 "Foster partnerships and stewardship for climate mitigation". These commitments are tangible examples that support the call-to-action within the Reef Authority's [position statement on climate change](#) which encourages "the strongest and fastest actions to reduce global greenhouse gas emissions".

While in no way definitive, this Climate change initiatives snapshot (Snapshot) showcases the actions – the 19 Reef Guardian Councils are undertaking to decrease emissions. The Snapshot demonstrates actions that help achieve an objective in the Great Barrier Reef blueprint for resilience: to promote the uptake of renewable energy and emission reduction activities among Reef communities, industries and visitors, including through showcasing practical initiatives.



While the Reef Authority and its partners have little direct control over global carbon emissions, we do have an opportunity to highlight impacts of climate change on coral reefs, influence global discourse on carbon emissions and to demonstrate leadership in emissions reduction.

Great Barrier Reef Blueprint for Resilience



This Snapshot is based on information available at the time of writing and was informed via the following:

- survey of Reef Guardian Councils' climate action initiatives being undertaken or planned
- desktop review of all 19 Reef Guardian Council websites to assess climate action information
- collection of climate change activities from each of the Reef Guardian Councils
- input and review of each council's activities by Reef Guardian Council officers and Executive Committee representatives.

The Snapshot focuses on the climate mitigation initiatives Reef Guardian Councils are undertaking to decrease emissions. The Reef Authority also acknowledges the significant climate change adaptation work local governments are undertaking to improve their understanding of the vulnerabilities and risks to communities, infrastructure, and the environment from current and future climate change risks. However, these adaptation initiatives are not included in the Snapshot.

Australia is committed to ambitious and practical action on climate change. We're taking significant steps at home, in our region, and at the global level.

The Australian Government is implementing a substantial and rigorous suite of new policies across the economy to drive the transition to net zero, including the [Climate Change Bill 2022](#) which legislates the nation's commitment to reduce greenhouse gas emissions by 43% below 2005 levels by 2030, and net zero by 2050.

Australian government 2022

Reef Guardian Councils in the Great Barrier Reef catchment

The Reef Guardian Councils program is a collaborative stewardship arrangement between local governments in the Great Barrier Reef catchment and the Reef Authority. The program recognises that local and regional approaches are central to protecting and managing the Reef and the communities it supports.

The Reef Guardian Councils program's vision is, "A local government alliance to reduce land-based impacts on the Great Barrier Reef through collaboration, education and targeted action".

There are currently 19 local governments within the Great Barrier Reef catchment that partner with the Reef Authority as Reef Guardian Councils.

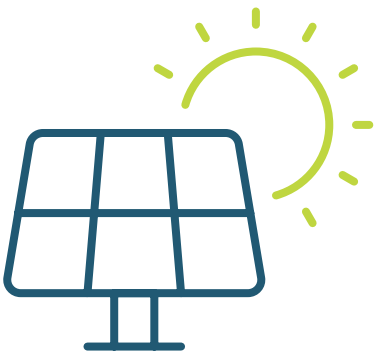




Climate change initiatives: survey results

All 19 Reef Guardian Councils were invited to contribute to the below survey data, with 16 councils responding and the below information has been compiled from their input.

Reef Guardian Councils that contributed are: Bundaberg, Burdekin, Cairns, Cassowary Coast, Central Highlands, Cook, Douglas, Gladstone, Hinchinbrook, Livingstone, Mackay, Mareeba, Rockhampton, Tablelands, Townsville and Whitsunday (refer Appendix A for further details).



14 councils have installed solar

on council facilities and 1 council is investigating, and Yarrabah Aboriginal Shire Council is undertaking a solar microgrid feasibility study

1 council is purchasing clean energy

and 2 are investigating



10 councils have changed street lighting to LED or solar

and 5 councils are investigating



1 council is using landfill gas for energy production

and 7 are investigating

6 councils flare landfill gas to reduce emissions

and 1 is investigating

15 councils are diverting organic waste (including green waste) from landfill

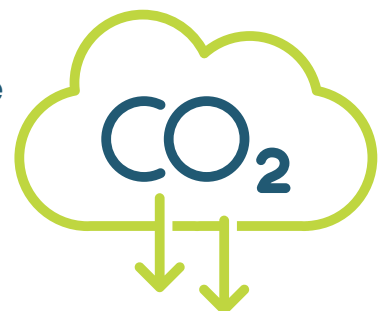
6 councils have targets for emissions reduction

and 5 councils are investigating a target

13 councils have strategies, plans and/or policies in place

to reduce emissions from their own operations

8 councils have a baseline emissions inventory



Rockhampton and Townsville Food Organics, Garden Organics

Rockhampton Regional Council and Townsville City Council are trialing kerbside collection of Food Organics, Garden Organics (FOGO) through support from the Queensland Government.

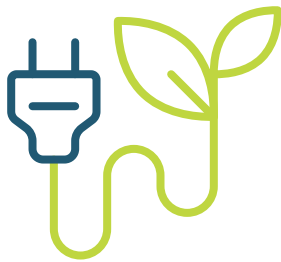
When organic waste is sent to landfill rather than recycled it creates greenhouse emissions. In Australia, around 13 million tonnes of CO₂-e (carbon dioxide equivalent) is created as a result of organic waste going to landfill. This equates to approximately three per cent of Australia's total emissions.

The FOGO trial diverts organic waste from landfill and turns it into valuable compost and soil conditioner.

Benefits for councils and communities include:

- reduce carbon emissions
- return valuable organic material to the soil
- extend the life of landfill facilities
- mitigate the impact of Queensland Government's waste levy on ratepayers.

This trial is another example of the important actions Reef Guardian Councils are taking to tackle [climate change](#).



7 councils have had an audit of facilities/buildings

e.g. by the Green Building Council of Australia or CCIQ ecoBiz and 2 are considering

9 councils have a policy for choosing green products and providers

(greening of supply chain) and 1 is considering

9 councils are implementing or developing urban forest or 'greening strategies'

3 councils are implementing offsets

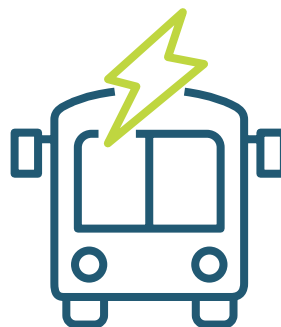
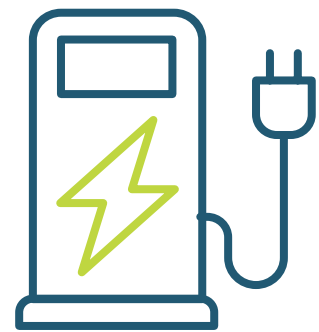
(purchased or provided through other means) and 2 are investigating



14 councils have installed bike paths for active transport

9 councils have electric vehicle charging stations installed in their region

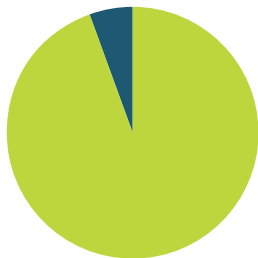
and 5 are investigating



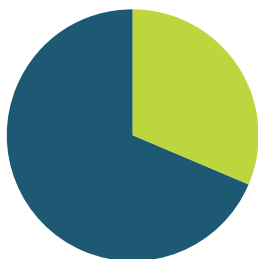
7 councils have electric or hybrid fleet vehicles

and 2 are considering

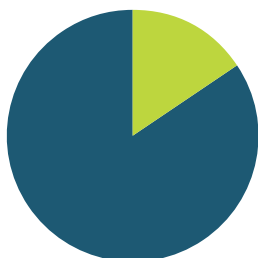
Other climate change programs



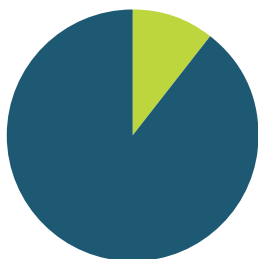
18 Reef Guardian Councils are participating in the Queensland Climate Resilient Councils program, which aims to strengthen the internal decision-making capacities of councils throughout the state to support climate resilience decision making. (The 18 councils are Bundaberg, Burdekin, Cassowary Coast, Cairns, Central Highlands, Cook, Douglas, Gladstone, Hinchinbrook, Livingstone, Mackay, Mareeba, Rockhampton, Tablelands, Townsville, Whitsunday, Wujal Wujal, Yarrabah.)



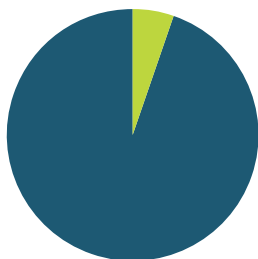
6 Reef Guardian Councils are participating in the Cities Power Partnership, which brings together local governments from around the country to accelerate Australia's transition to a renewable energy future. Members must pledge to take five key actions across renewable energy, energy efficiency, sustainable transport and working together. (The six councils are Bundaberg Regional Council, Cairns Regional Council, Douglas Shire Council, Livingstone Shire Council, Mackay Regional Council, Whitsunday Regional Council.)



3 Reef Guardian Councils are participating in the Clean Growth Choices program, which supports regional communities in developing economic and social roadmaps for the future. It will also provide valuable case studies and learnings for other Queensland communities wishing to develop their own transition plans. (The three councils are Central Highlands, Cook, Rockhampton.)



2 Reef Guardian Councils are members of ICLEI – Local Governments for Sustainability, a global network of more than 2500 local and regional governments committed to sustainable urban development. ICLEI works at multiple scales, building connections across local, regional, national and global actors and policies to create systems change, developing integrated solutions along five interconnected development pathways towards low emission, nature-based, equitable, resilient and circular development. (The two councils are Cairns and Mackay.)



1 Reef Guardian Council is undertaking a project under the Land Restoration Fund, which aims to expand carbon farming in the state by supporting land-sector projects with significant co-benefits, including benefits for Aboriginal communities. (The council is Tablelands.)

Native planting project is first to generate carbon credits for Land Restoration Fund

This project seeks to demonstrate economically efficient and biodiverse rainforest restoration on the Atherton Tablelands in partnership with Native Conifer Carbon Sink and local landholders. It uses a mix of native conifers, riparian and high biodiversity rainforest plantings.

Tablelands Regional Council and **Native Conifers Carbon Sink** are working together on this exciting permanent tropical reforestation project that will see 35,000 native conifers and mixed rainforest tree species planted over five years in the region.

It's all part of a partnership between local landowners and contractors implementing the Queensland Government's pilot **Land Restoration Fund** program to reforest landscapes and create vegetation communities to cope with changing carbon dioxide levels. It is the first project of its kind to successfully generate Australian Carbon Credit Units for the Land Restoration Fund.

"Tablelands Regional Council is pleased to be an active partner in the emerging Carbon Credit space," Mayor Rod Marti said.

"Our nursery has taken up the challenge to supply the rainforest seedlings on a commercial basis."

The large-scale plantings create healthier waterways and native wildlife habitats and reduce the total per hectare cost of restoration, paving the way for rehabilitating larger areas.



Lou van Rikxoort, Director, Native Conifers Carbon Sink, with Kauri pine seedlings. © Dezmond Green

The Great Barrier Reef Outlook Report 2019 found the condition of many of the Reef's natural values – including species, habitats and ecosystem processes – had deteriorated since the *Great Barrier Reef Outlook Report 2014*. It concluded the size of the Reef is becoming a less effective buffer to broadscale and cumulative threats and the long-term outlook for the Reef's ecosystem had deteriorated from poor to very poor. The greatest threat to the Reef is climate change.

Global warming, and the climate change it drives, is the most serious and pervasive threat to the Reef – a threat in common with all coral reefs globally.

The long-term outlook for the Reef is critically dependent on limiting global temperature rise to the maximum extent possible, as quickly as possible.

[Reef 2050 Long-Term Sustainability Plan](#)



Desktop audit results

The **2021 Australian Local Government Climate Review** (the Review) provides an evidence-based and comprehensive analysis of climate change actions, barriers and opportunities facing councils and communities. The Review noted *“Local councils are well placed to drive and influence action on climate change through the services they deliver, their regulatory and strategic functions, and their roles as community leaders, major employers, large-scale procurers and landlords. Local authorities are directly accountable to their constituents for their decisions and are better placed to take swift action than national officials.”*

As part of both the 2021 and 2017 Review, a desktop audit was conducted of all local government websites to assess climate information with reference to climate related activities and targets. As part of the Reef Guardian Councils climate change initiatives Snapshot a similar desktop audit of the 19 Reef Guardian Council websites was undertaken, the results of which are provided in Table 1 (full break down provided at Appendix B).

Table 1. Desktop audit using criteria for comparison from the 2017 and 2021 Australian Local Government Climate Review, Ironbark Sustainability and ICLEI – Local Governments for Sustainability (ICLEI Oceania).

| | Information addressing climate change issues | Presents actions focusing on reducing or saving energy | Presents current strategies, actions and plans to reduce emissions | Presents current targets to reduce emissions for council operations | Presents current targets to reduce community emissions |
|---------------------------------------------|----------------------------------------------|--------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------|--------------------------------------------------------|
| Reef Guardian Councils | 63% | 47% | 89% | 58% | 16% |
| Australian local government comparison 2017 | 50% | 48% | 42% | 19% | 7% |
| Australian local government comparison 2020 | 50% | 40% | 33% | 24% | 11% |



Results of the desktop audit of Reef Guardian Council websites show that in comparison to the 537 Australian council websites audited in the Review, the Reef Guardian Councils rated above average in all comparison criteria, with:



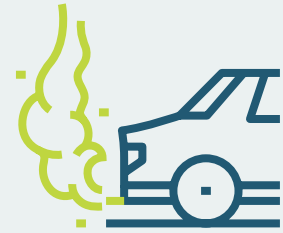
63%

(compared to 50 per cent) having information addressing **climate change** issues



47%

(compared to 40 per cent) presenting actions focusing on **reducing or saving energy**



16%

(compared to 11 per cent) presenting current targets to **reduce community emissions**

The most significant variances noted are:

89%

of the Reef Guardian Council websites (compared to 33 per cent) present current strategies, actions and plans to reduce emissions

58%

(compared to 24 per cent) present current targets to reduce emissions for council operations

These results demonstrate Reef Guardian Councils' clear leadership in this field.

Responding to a global problem

Climate change is a global problem that requires a global solution, and Australia has a role to play in mitigation (reducing emissions) and adaptation (increasing the resilience of the Reef and associated communities and industries).

Our efforts to protect, rehabilitate and support the Reef's adaptation through strong, site-based management of local and regional pressures are within our direct control. They will be most effective when combined with concerted national and global action to reduce greenhouse gas emissions.

[Reef 2050 Long-Term Sustainability Plan](#)



Individual Reef Guardian Council activities

Bundaberg Regional Council

Bundaberg region is the gateway to the Southern Great Barrier Reef. Renowned for its beautiful coastline, islands and reef, Bundaberg Regional Council is implementing a number of initiatives to tackle climate change and protect the Reef.

Bundaberg Regional Council covers more than 6400 square kilometres and is home to around 97,000 residents. It is also home to many islands, including the Reef's southernmost coral cays Lady Elliot Island and Lady Musgrave Island. Not only popular tourism destinations, these islands are havens for nesting sea turtles, giant manta rays, whales and many bird species.

Climate change action

Alternate landfill closure trial - phytocapping Qunaba Landfill

Bundaberg Regional Council is undertaking a trial phytocapping project as an alternative method to landfill capping. A trial pad measuring 20 metres by 20 metres has been set up at Qunaba Landfill with specific soil type, 38 trees and grasses (stratified), irrigation and instrumentation to measure a water balance model. Soil moisture probes, lysimeters, a surface runoff catcher and a weather station are all monitored in real time via the cloud.

Bundaberg bioHub Industrial Park

Bioenergy developer Utilitas Group has collaborated with Bundaberg Regional Council to acquire the former East Bundaberg Wastewater Treatment Plant to create an industrial park focused on renewable natural gas, biomethane and hydrogen. Utilitas Group and local gas network owner Australian Gas Infrastructure Group are currently jointly assessing the feasibility of green gas from the Bundaberg bioHub going into the Bundaberg gas distribution network via a new connection.

Landfill gas flaring program

In recent years council has initiated gas flaring at two of its landfill sites. At Cedars Road Landfill over 9.9 million cubic metres of landfill gas has been flared which represents approximately 55,337 tonnes of CO₂-e (from inception in 2013 to August 2020) and over 10 million cubic metres of landfill gas has been flared at University Drive Landfill representing approximately 55,206 tonnes of carbon dioxide equivalent (from inception in 2015 to August 2020). This is equivalent to 23,882 passenger vehicles driven for one year.

One million trees project

Council has a vision of planting one million trees to improve the livability of the region and to offset regional carbon emissions. Working together with residents, businesses, schools, not-for-profit organisations and all levels of government, council hopes to achieve this goal by 2024.

Solar system and energy efficiency scoping and analysis

Guided by the *Sustainable Bundaberg 2030 Strategy*, Bundaberg Regional Council has made a conscious effort to invest in renewable energy projects that provide positive environmental and economic outcomes. The objective of this project is to further solar installations on council facilities (in addition to the more-than one megawatt already installed). To date, the scoping and analysis study has indicated a 10 year pay back period for the installation of additional solar on the infrastructure identified.

Where appropriate, council is also seeking similar analysis on energy efficiency solutions that may either be free standing or complement solar installations at current facilities (e.g. use of variable speed drives for pumps, battery storage, or adjustments to operation time to coincide with maximum solar generation).

Street tree planting

Each year, Bundaberg Regional Council plants approximately 1000 native street trees in urban areas of the region. These trees sequester carbon, provide shade and will reduce the effects of climate change on residents. For example, heat waves are predicted to increase in frequency and severity due to climate change.

Phytocapping to reduce emissions

Phytocapping has been considered as an effective, economical, sustainable, and environment-friendly technique to cover old dumpsites and to cap new landfills, with an objective to minimize leachate generation by reducing water infiltration into waste and to mitigate greenhouse emission and odour by promoting methane oxidation in cover soil¹.

Phytocapping reduces percolation through three main mechanisms: (a) canopy interception of rainfall, (b) storage of moisture in the soil layers, and (c) evapotranspiration (i.e., hydraulic lift) of stored water. Phytocapping has been shown to be at least as effective as clay capping in reducing percolation through landfill cover materials, provided site specific conditions are factored into design, and providing many additional benefits, including increased cap stability, reduced erosion of capping materials, reduction of wind-blown dust, enhanced biological diversity, increased opportunity to establish commercial plants, carbon sequestration, and enhanced methane oxidation from microbial communities².

1. *Bioremediation for Environmental Sustainability: Approaches to Tackle Pollution for Cleaner and Greener Society* (chapter Phytocapping: an eco-sustainable green technology for environmental pollution control, Vineet Kumar, Kshitij Singh, Maulin P. Shah, Manish Kumar), Vineet Kumar, Gaurav Saxena, Maulin Shah, 2021

2. *Phytocapping: An Alternative Technology for the Sustainable Management of Landfill Sites* Lamb, Dane T; Venkatraman, Kartik; Bolan, Nanthi; Ashwath, Nanjappa; Choppala, Girish; et al. *Critical Reviews in Environmental Science and Technology*; Boca Raton Vol. 44, Iss. 6, (2014): 561.



Phytocapping at Qunaba Landfill © Bundaberg Regional Council

Burdekin Shire Council

Burdekin Shire is a thriving agricultural region with two major river systems, Burdekin and Haughton rivers, plus a number of waterways and lagoons that discharge to the Great Barrier Reef. Burdekin Shire Council is addressing climate change through a number of activities.

Burdekin Shire covers 5044 square kilometres and supports a population of more than 17,000 residents. Burdekin Shire Council has developed an Environmental Policy that incorporates ecologically sustainable development principles into council management systems and decision-making processes, to guide council in making sound environmental decisions and undertaking good environmental practices.

Climate change action

Macro-algal bio-remediation trial

Burdekin Shire Council, together with James Cook University and Pacific Bio, has invested significantly in a small-scale Macro-Algal Bioremediation trial, and has allocated \$2 million for earthworks to commence a full scale facility subject to pending grant applications in 2022-23 financial year budget.

Construction of traditional tertiary wastewater treatment facilities suitable for the population was estimated at more than \$40 million in 2016. A Macro-Algal Bioremediation Facility is not only significantly cheaper to design and construct, coming in at \$8.3 million, but is more cost-efficient to operate and maintain. This low cost and low energy facility is a model that can be replicated at other coastal councils around Australia and the world to significantly reduce concentrations of harmful nutrients such as nitrogen and phosphorous making their way to the marine environment. The project will harness nature to do the heavy lifting in treating wastewater to a tertiary standard. Reductions in water treatment chemicals and emissions are also expected.

Increased renewable energy generation

Burdekin Shire Council has installed key solar systems at council sites, a 30 kilowatt solar system in 2017 and a 100 kilowatt solar system in 2019. Council will install 20 kilowatt solar panels at the Burdekin library in Ayr in 2022.

Energy efficiency measures

In 2017, LED lights were retrofitted and heat resistant paint was applied at selected council buildings.

Recycling program

Burdekin Shire Council continues its advocacy position, promoting the waste hierarchy of 1) waste avoidance, 2) re-use, 3) recycle, 4) recover energy, 5) disposal. Council also participated in the Recycling Right Campaign – North Queensland Regional Organisation of Councils (NQROC) region. Other recycling initiatives include developing educational material and school visits to promote the waste hierarchy.

Alva Beach planting

Funding from NQ Dry Tropics received via the Australian Government Reef Trust and the Environment Restoration Fund and Council, has enabled Burdekin Shire Council to undertake dune rehabilitation and maintenance works at Alva Beach, north of Ayr. The works included planting of nearly 9,000 plants (which increases habitat and contributes to carbon sequestration) across the dunes covering an area of about 7.4 hectares. Approximately 2 km of temporary fencing was installed along the foreshores providing access control and preventing vehicular access. Two hundred temporary signs were also installed along the fencing encouraging the public to stay off the dunes and to allow the area to flourish. Project contributors included the Three Big Rivers, Gudjuda Reference Group and Lower Burdekin Landcare.

Single use plastic policy

This policy applies to all council events and venues, and stipulates the implementation of no plastic straws and plastic free catering where possible for council meetings, functions and events. Council also supports and promotes the plastic free July campaign.

Cairns Regional Council

In the last decade of emissions reduction initiatives, 2012–22, Cairns Regional Council reduced its greenhouse gas emissions by 46.5 per cent compared to 2007–08 levels.

Located in Far North Queensland, Cairns Regional Council covers an area of 1689 square kilometres, with a population of more than 170,000 residents. Council has made notable progress in reducing greenhouse gas emissions in the 10 years since 2012, consisting of:

- 30 per cent reduction from landfill gas management
- 14.5 per cent reduction from wastewater treatment (i.e. reduced fugitive gas emissions)
- 2 per cent reduction from energy efficiency and rooftop solar power.

Council's next decade of climate change mitigation and adaption will be guided by the Cairns Regional Council Climate Change Strategy 2030, adopted 23 March 2022. The strategy set a target of Net Zero Emissions by 2030, including a commitment to 100 per cent renewable energy for Council operations.

Council hosts Cairns Ecofiesta, the regions annual sustainable living festival which also acts as a showcase of climate action initiatives of the regions environmental groups, agencies and organisations. Ecofiesta 2023 was attended by over 10,000 locals and visitors keen to engage with sustainable living solutions.

Through its grants program, Council also supports non-profit organisations to run their own emission reduction, environmental restoration and community resilience initiatives.

Community targets and the full list of council's climate action commitments can be found in the full strategy at: www.cairns.qld.gov.au/climatechange



Cairns Northern Wastewater Treatment Plant Solar
© Cairns Regional Council

Climate change action

Net zero emissions by 2030

Cairns Regional Council has adopted its Climate Change Strategy 2030, which sets an operational target of Net Zero Emissions by 2030.

This target includes all [emission scopes](#), most notably Scope 3 emissions which are the emissions generated during the manufacture and transport of goods that council purchases. This inclusion creates a powerful driver to green the council supply chain and see council play a leading role in the region's transition to a smart green economy.

100 per cent renewable energy

In 2021–22 council tendered for a Power Purchase Agreement that will see all council facilities and infrastructure powered by offsite renewable energy. Council is currently reviewing tenders. Through the initiative council will aim to:

- eliminate its Scope 2 emissions, which account for 10 per cent of council's annual emissions
- achieve a 10-year price certainty for electricity costs
- contribute to clean energy investment in Far North Queensland.

Solar farms

Each year, council's 2.8 megawatts of solar from its solar farms generates more than 4.5 gigawatt hours of renewable energy, saving more than \$700,000 and 3600 tonnes of CO₂-e annually.

Landfill gas management

As a greenhouse gas, methane is more than 20 times more potent than carbon dioxide. In landfills, methane is generated by the breakdown of organic matter such as food scraps and garden waste. Methane from Cairns' closed Portsmith Landfill has been captured and flared since 2012, eliminating this source of greenhouse emissions.

Through the Emissions Reduction Fund, landfill gas management at the Portsmith Landfill generates an average of 5500 Australian Carbon Credit Units.

Wastewater treatment plants

Council operates six wastewater treatment plants that interact with the environment as follows:

- the nutrient load of the treated wastewater that is discharged to local waterways
- the bio-solids, which are used in agriculture, offsetting the use of chemical-based fertilisers and return organic carbon to soils
- the direct greenhouse gas emissions (e.g. carbon dioxide and nitrous oxide) generated by decomposition of organic matter in the wastewater
- the indirect greenhouse gas emissions from the use of grid electricity and mains power to treat wastewater.

In 2009, as part of the Cleaner Seas Initiative, council upgraded its four largest wastewater treatment plants to help reduce nutrient pressures on the Great Barrier Reef. Implemented at a cost of \$188 million, these upgrades included membrane bioreactor technology that contribute to the following water quality outcomes:

- five times less nitrogen and 10 times less phosphorous than previous wastewater discharges
- elimination of chlorine disinfection
- significant reductions in the use of water treatment chemicals such as aluminium sulphate and sodium hypochlorite
- removal of micro-plastics from wastewater via submerged membrane filters.

Initially, these new treatment processes resulted in a 150 per cent increase in electricity use. To address this, council commenced an extensive process optimisation exercise in 2010 to improve the energy efficiency of the upgraded wastewater treatment plants without compromising the quality of the wastewater discharge. This process is ongoing and to date has resulted in a 25 per cent reduction in the use of mains power from these wastewater treatment plants.

In 2019, 320 kilowatts of rooftop solar was installed on the four largest wastewater treatment plants as part of a one megawatt rooftop solar project. In 2021, council switched on 1.8 megawatts of ground-mounted solar at five of its six wastewater treatment plants.

Why are waste management and recycling important for emissions reduction?

The disposal of waste into a landfill creates environmental problems for Queensland.

Landfills emit additional greenhouse gas emissions (particularly from organic waste), and the need for long-term management of contaminated land can cause a cost burden.

Over time the need for fewer landfill facilities will reduce local air, land and water pollution.

Together with the reduction of interstate waste transportation and less organic waste in landfills, this will reduce greenhouse gas emissions.

By reducing the amount of waste that goes to landfills, and subsequent greenhouse gas emissions, the Queensland Government Waste Management and Resource Recovery Strategy will also directly contribute to the goals of the Queensland Climate Transition Strategy, including to:

- achieve zero net emissions by 2050
- reduce emissions by at least 30 per cent below 2005 levels by 2030 (interim target).

The deployment of certain types of energy recovery technology may also contribute to achieving the goal of powering Queensland with 50 per cent renewable energy by 2030.

Queensland Government Waste Management and Resource Recovery Strategy

Cassowary Coast Regional Council

Known for its rainforest and Reef position, the Cassowary Coast Regional Council has a vested interest in protecting the Great Barrier Reef. Cassowary Coast Regional Council is delivering a number of climate change associated activities.

The Cassowary Coast Region is located in Far North Queensland, stretching about 150 kilometres along the coast between major regional cities Townsville and Cairns. The region covers 4688 square kilometres and is home to 30,000 people.

Climate change action

Solar power installation

Council continues to install solar power systems on council's major buildings, depots and sewerage treatment plants.

Community nursery and tree giveaway

Cassowary Coast Regional Council continues to provide advice and support through council nursery outlets and conducts four Free Tree giveaway events each year. This aims to increase native species planting and, in turn, sequester carbon through revegetation.

Compost bin rebate program

To reduce food and other organic waste buried in landfills, council offers each household one \$20 rebate to offset the purchase of any organic recycling system including compost bin, worm farm, and indoor recycling systems.

Waste education strategy

The waste education strategy aims to reduce waste entering landfills by increasing community awareness of the Waste Hierarchy Framework (avoid, reuse, recycle) and providing the Cassowary Coast community with knowledge and tools to reduce waste at home, work, places of learning and within the community.

Recycling program

Council supports the reduction of waste entering landfills and illegal dumping. Council offers recycling of up to 23 waste products at waste transfer stations, customer service centres and libraries and is continuing to investigate sustainable recycling options.



Battery recycling © Great Barrier Reef Marine Park Authority

Central Highlands Regional Council

Central Highlands is a proud Reef Guardian Council, engaging council departments, businesses, schools and the broader community to tackle climate change.

The Central Highlands region is located at the top of the Fitzroy Basin which flows to the southern Great Barrier Reef. It covers 59,834 square kilometres and has a population of 27,000 residents.

As part of the Fitzroy Basin, the second largest seaward draining basin in Australia, Central Highlands Regional Council recognises its region's role in protecting the health of the Reef.

Climate change action

Solar suitability assessment project

Thinking out of the box, Central Highlands Regional Council teamed up with students from Marist College, a Reef Guardian School. The students completed their Certificate III in Aviation Remote Pilot course to undertake a roof solar suitability assessment using drones. This project is part of the broader Clean Growth Choices Program.



Students from Marist College, a Reef Guardian School
© Central Highlands Regional Council

Infrastructure plan

Council is dedicated to developing and implementing a robust Infrastructure Plan through effective long-term asset management practices. Feasibility and identification of a new site for council's new super resource recovery centre have been completed with steps taken to acquire the site.

Clean growth choices program

Central Highlands Regional Council is participating in the Clean Growth Choices Program. As such, council is committed to plan and deliver essential infrastructure that supports a sustainable future, and investigate, identify, and report initiatives aligned with the Clean Growth Choices program, including:

- solar distributed energy resources
- waste to energy facility
- development of a strategy to achieve zero net greenhouse gases.

Energy efficiency strategies

As well as its focus on delivering essential infrastructure that supports a sustainable future, council continues implementing energy-efficient management strategies at its assets and facilities to reduce environmental impacts. Council intends to apply for solar power infrastructure for council facilities.

Active transport strategy

Council is delivering well-maintained walkways and cycling paths (to facilitate active transport) as part of an Active Transport Strategy.

Waste, recycling and reuse strategies

Council continues delivering waste, recycling, and reuse strategies across the region, with a focus on:

- improving waste recycling and reuse of resources
- undertaking a school education program targeting waste reuse and recycling habits
- adopting a new waste strategy
- delivering an education program to increase awareness of waste and recycling following a bin audit.

Cook Shire Council

Drawing on the efficiencies of solar power, recycling and collaboration with other councils, Cook Shire Council continues to implement climate change initiatives.

Cook Shire is the largest shire in Queensland in terms of land area, covering more than 100,000 square kilometres and stretching most of the eastern and central parts of Cape York Peninsula. The shire is home to some 5000 residents.

Climate change action

Clean growth choices program

Council is involved in climate change adaptation and resilience planning, including progressing the Makin Water Work and Food Futures business cases developed as part of a pilot program involving six regional Queensland councils.

CCIQ ecoBiz program

As part of implementing CCIQ's ecoBiz Program, council continues its energy efficiency initiatives at three key council facilities – the administration building, the Cooktown pool and Cooktown library. These three facilities were identified and selected for energy efficiency initiatives in resource assessment sessions.

Solar power

Council continues its commitment to installing solar power at council facilities. To date, council has installed solar power at five of council's top energy-consuming facilities:

1. Water Treatment Plant at Annan
2. Sewage Treatment Plant
3. Administration Building
4. Community Events Centre
5. Natures PowerHouse

Council is currently installing solar street lighting in Coen and solar power to support pool heating and pool energy consumption.

Plastics Pirate trial

Council is working with Plastics Pirate to conduct a **pilot in Far North Queensland in 2022** with communities, industries and key stakeholders, to trial the conversion of plastic waste to usable fuels. The world-first mobile pyrolysis plants convert most types of plastic into usable fuels onsite – removing large volumes of agricultural, community and industrial plastic from the waste stream, and substituting fossil fuels with pyrolysis oil for energy. Other partners include Lakeland banana growers who will provide large volumes of plastic feedstock to process and test the diesel on farm machinery, as well as Auswaste – Cooktown Containers for Change depot participating with in-kind site, plastic collection, processing and transport facilities.

Douglas Shire Council

With tourism the major contributor to Douglas Shire's economy, protecting the Great Barrier Reef is important to Douglas Shire Council. Council has instigated several initiatives to reduce emissions and tackle climate change.

Douglas Shire covers 2445 square kilometres, with 95 kilometres of Coral Sea coastline linking it to the Great Barrier Reef. More than 12,000 people call Douglas Shire home.

Climate change action

Corporate emissions profile

Council has completed a corporate emissions profile and has included reporting on council channels and [website](#).

Waste education strategy

Council is drafting a Waste Education Strategy to align the education program with Queensland Government's Waste Management and Resource Recovery Strategy.

Circular economy initiatives

Circular economy enlists innovative approaches to waste diversion and reuse. Council promotes and supports reduce, reuse and recycle initiatives, including through the Plastic Free Places program, waste reuse, reuse of waste materials in construction and Douglas Shire Council's procurement policy.

Plastic Free Places Program

The Plastic Free Places Program has been operating in Douglas Shire since 1 July 2021, with funding from Department of Environment and Science (DES) allowing the program to continue until the end of 2022.

Recycling program

Council offers kerbside recycling to all accessible residential and commercial properties in Douglas Shire. This service is supported by the waste education program offered to all schools, businesses and multi-unit dwellings.

Waste education program

Council's waste education program aims to reduce waste generation and increase landfill diversion rates. This program is offered to all schools, businesses and multi-unit dwellings.

Food composting trial

Council is supporting a small-scale food composting trial in Douglas Shire, offering a site to trial larger scale composting with new feedstock.

Phytocapping at historical landfill site

This initiative saw trees planted at a historical landfill site to minimise the percolation of water into waste. Council, in conjunction with Griffith University, continues to monitor sap flow and groundwater at the site.

Community nursery and tree giveaway

Douglas Shire Council nursery staff continue to provide advice and support to the local community and offers ratepayers six free plants every year. In 2020–21, the council nursery propagated 28,310 seedlings and supplied 27,065 to community groups, private landowners, council works and grant funded programs.

Dune maintenance and protection

The Queensland Government's Reef Assist Program has allowed Douglas Shire Council to undertake coastal rehabilitation and maintenance works as part of the Resilient Coast Strategic Plan 2019–29. The program allowed for the employment and training of eight job seekers. On-ground efforts include treatment of approximately five hectares of weeds (including site preparation), revegetation of 9031 native plants (which increases habitat and contributes to carbon sequestration) and approximately 240 metres of fencing to formalise beach access tracks, reduce vehicles accessing the beach and protect coastal vegetation against illegal clearing. The team is also learning basic nursery operations.

Solar power infrastructure

Council plans to install additional solar power systems at council facilities and install solar powered street lighting. Council also intends to purchase and install solar powered equipment such as CCTV cameras.

Promote active transport options

Council continues to expand and renew its existing principal cycle and walkways network to promote active transport within the shire.

Plastics reduction

In a groundbreaking piece of research, WWF (World Wildlife Fund) and global consultancy firm Dalberg worked together to estimate the **true cost of plastics to society and the environment**, and the results are staggering.

Building on existing models and data, Dalberg calculates that the lifetime cost of plastic produced globally in just one year (2019) is around AU\$5 trillion.

Of this, the cost met by Australia is around AU\$17 billion, including **damage caused to the economy** and threats to Australia's wildlife.

These costs include the market price of virgin plastic production and the cost of **greenhouse gas emissions**, waste management costs and damage to marine ecosystems.

The report found that plastic is responsible for generating 1.8 billion tonnes of greenhouse gas emissions a year across its lifecycle. That is more than the annual emissions from aviation and shipping combined.



Dune maintenance © Great Barrier Reef Marine Park Authority

Gladstone Regional Council

Located in the heart of the Southern Great Barrier Reef, the Gladstone Region covers more than 10,000 square kilometres and is home to more than 63,000 people.

Gladstone Regional Council is taking action in its role as a Reef Guardian Council. The 2021 – 26 Corporate Plan commits actions for climate change initiatives and ensures that the environment is front of mind in what Council does. Council is a driver for economic growth through supporting our industry to transition to a low carbon future.

Climate change action

Transition economy strategy

Council has developed a regional transition plan in partnership with The Next Economy (TNE) to secure a diversified low carbon economy for the region to become a green energy hub. The Strategy is a comprehensive transition plan that includes a range of economic, social and technical strategies aimed at maintaining the regions industrial heritage while moving away from coal powered energy and towards renewable green energy.

Charging ahead

Council has added its first fully electric vehicles (EV) to its fleet with the delivery of 5 EV forklifts and a SUV. The Gladstone Library took charge of its first fully electric SUV vehicle that will be used to travel between their six locations throughout the region, with the vehicle being charged by rooftop solar powered charging station at the Gladstone Library. These EVs will be used to guide future operational decisions as Council moves towards a greener fleet.

Waste reduction

One of the key priority actions of Council's Waste Management and Resource Recovery Strategy is the reduction of organics being disposed to landfill. The Strategy has a desired outcome of more sustainable waste management and resource recovery practices resulting in a reduction of greenhouse gas emissions. The set targets for 2050 include a 25 per cent reduction of household waste, 90 per cent of resource recovery rates and 75 per cent recycling rates across all waste types.

Urban forests

Council adopted an Urban Forest and Tree Management Corporate Standard in 2021. The Corporate Standard recognises that trees are necessary for a healthy environment and that urban forests serve critical functions in terms of climate change mitigation and adaptation. The Corporate Standard drives Councils urban forest maintenance and replacement of trees programs.

Green power generation

Gladstone Regional Council has achieved 325,000 tonnes of CO₂-e and a 60 per cent reduction of landfill greenhouse gases since 2012, thanks to the development and implementation of the Benaraby Landfill Carbon Abatement Project. Beginning as a landfill gas collection and methane flare system, this National Award for Excellence in Local Government Infrastructure initiative is now providing electricity for 1600 Gladstone homes. The release of landfill gas is the Council's largest source of greenhouse gas emissions. This gas-to-green power project reduces environmental risks associated with the release of landfill gas and saves money. In 2012 the initiative was predicted to save Gladstone Regional Council up to \$100 million in carbon tax liabilities in the 30 years from inception. The project also caters for the inclusion of an adjacent solar plant, creating an Australian-first green energy hub. Through this project, Council is able to provide biosolids to third parties to use in agriculture.

Hinchinbrook Shire Council

Hinchinbrook Shire Council is a proud custodian of the Great Barrier Reef and is committed to delivering climate change action at the local level.

Located along the coastline connecting to the Central Great Barrier Reef, Hinchinbrook Shire covers 2800 square kilometres and is home to 11,000 residents. As well as many community engagement events throughout the year focused on the region's environmental health, Hinchinbrook Shire Council is undertaking a range of climate change-associated activities.

Climate change action

Reducing emissions

In addition to recently adopting a corporate environmental statement demonstrating council's commitment to a sustainable future, Hinchinbrook Shire Council is currently engaged with ecoBiz to identify actions to reduce energy consumption and associated emissions from operations.

Circular economy

Hinchinbrook Shire Council is committed to creating and supporting a circular economy. Currently, council is exploring reuse and recycling options for all waste streams collected through council's transfer stations.

Corporate sustainability plan

Council is in the process of developing and implementing a Corporate Sustainability Plan. This Plan aims to reduce council's resource consumption and waste generation.

Solar power

Council is interested in the economic and environmental benefits of solar power. Council continues investigations into solar opportunities for council infrastructure.

Waste education

Council is dedicated to developing and delivering a waste education program aimed at promoting reducing, reusing and recycling with the intent to reduce waste and associated emissions.

Water use efficiency

Smart water meters, which assist in identifying leakages and overuse, have been installed throughout the shire to improve water and associated energy efficiency.

Palm Creek restoration

Council, in collaboration with the Herbert River Catchment Group with funding through Greening Australia's - Reef Aid program, has planted 14,000 native trees at Palm Creek to reduce erosion and sediment within a riparian area and contribute to connectivity and ecosystems services.

Carbon farming opportunities

Hinchinbrook Shire Council is looking at the potential for carbon farming on both council-owned lands and supporting opportunities for other landholders in the district to support jobs, diversify economies and improve habitat for local wildlife.

Bin tagging education program

Hinchinbrook Shire Council aims to raise awareness and improve recycling habits through a Bin Tagging Education Program. The program involves a simple visual assessment of the contents of each household recycling bin, followed by individual feedback about how the household can ensure their recycling bin is as healthy as can be.

Bin tagging has proven a successful strategy to reduce contamination in recycling by providing on-the-spot feedback about the contents of the recycling bin. Other states have reported up to a 48 per cent decrease in contamination.

Hinchinbrook Shire Council nursery

Last year, council's nursery produced approximately 22,000 native trees to supply local revegetation projects and giveaways at community events.

Planting for restoration and mitigation

To avoid catastrophic climate change, 2030 should mark two milestones: the end of the UN Decade on Ecosystem Restoration and the achievement of emissions reduction targets in line with the Paris Agreement goal to limit global warming to below 2°C. Delaying this will push us past a tipping point, beyond which solutions will be less effective – and some damage, irreversible (Intergovernmental Panel on Climate Change 2018).

Improved land stewardship, including restoration, is one effective strategy to limit global warming (Griscom et al. 2017; Bastin et al. 2019; Strassburg et al. 2020). However, restoration is only part of the solution. Successfully achieving net zero emissions will also rely on rapid emission reductions across all sectors worldwide. Without this multi-pronged effort, the benefits gained through restoration efforts may be only temporary.

Nature-based solutions can potentially contribute over one-third (11.3 GtCO₂e per year) of the total climate change mitigation needed by 2030 to keep global warming to just below 2°C. Within nature-based solutions, restoration is a key element. This could involve action to better manage some 2.5 billion hectares of forest, crop and grazing land (restoration and avoided degradation), and restoring over 230 million hectares of natural cover (Griscom, B.W., Lomax, G., Kroeger, T., Fargione, J.E., Adams, J., Almond, L., et al. (2019). We need both natural and energy solutions to stabilize our climate. *Global Change Biology* 25, 1889-1890).

***United Nations Environment Programme (2021).
Becoming #GenerationRestoration: Ecosystem
restoration for people, nature and climate. Nairobi.***

Isaac Regional Council

Isaac Regional Council believes in the power of collective change and is aware of its role as a Great Barrier Reef champion and leader of change. In 2020, the council was awarded for its sustainability efforts.

The Isaac region is located in Central Queensland, at the northern end of the Southern Great Barrier Reef. It covers 58,708 square kilometres and has more than 20,000 people. Isaac Regional Council is undertaking a number of climate change initiatives.

Climate change action

Sustainability award

In 2017, Isaac Regional Council's Water and Wastewater Directorate decided to develop and implement an integrated management system (IMS) to drive business performance, deliver continual improvement and maximise efficiency. Within two years, the directorate achieved its vision and attained certification to global standards. This enhanced long-term sustainability in delivering essential services enabled the thinking of doing more with the same and maintained the highest safety, quality and environmental standards. It has also led to a committed focus on environmental sustainability, which has resulted in the adoption of Isaac Regional Council's first Environmental Policy and Guidelines to minimise the impact that the delivery of essential services has on the environment.

These efforts resulted in the Isaac Regional Council – Water and Waste Integrated Management System winning the Sustainability Award in the 2020 Queensland Local Government Awards for Excellence.

Climate change policy and action plan

Council is currently developing a council-wide climate change policy and action plan.

Mobile Muster

Council is in the process of establishing Mobile Muster collection points at Council Community Hubs. Mobile Muster is a free mobile phone recycling program.

Euro-6 emissions specifications

Council is adopting Euro-6 emissions specifications for council's waste services fleet. Euro-6 are the pollutants that the European emissions standards aim to reduce: nitrogen, carbon monoxide, hydrocarbons and particulate matter.

Landfill caps

Isaac Regional Council is installing caps at the Dysart and Middlemount landfills to control leachate and reduce gas emissions.

Social sustainability policy

Council is implementing its social sustainability policy and developing an action plan.

Collaboration

Isaac Regional Council collaborates with the Whitsunday Climate Change Hub to identify projects. Council has also joined the Queensland Climate Resilient Councils program.

Carbon calculation plan

Council is looking to implement a LG Sherlock Carbon Calculation Plan.

Livingstone Shire Council

Climate change continues to be a priority for Livingstone Shire Council as the council implements its *Low Carbon Livingstone 2030: A strategy to reduce Livingstone Shire Council's carbon footprint*.

Livingstone Shire is located along the Capricorn Coast in Central Queensland. The shire covers approximately 11,776 square kilometres, with 36,000 residents. The Livingstone Shire Council has numerous actions underway or in the pipeline to actively address climate change.

Climate change action

Low Carbon Livingstone 2030

Low Carbon Livingstone 2030: A strategy to reduce Livingstone Shire Council's carbon footprint sets out a plan for council to reduce its carbon footprint by 30 per cent, based on current inventory, by 2030. This is to be achieved through a suite of renewable energy, energy efficiency, behavioural change and carbon offset focused projects, programs and initiatives, including fleet audits, efficiencies and electric vehicles and infrastructure, waste management and infrastructure, a lighting program and education and awareness-raising.

Clean economy opportunities for the CQ Region forum

In August 2021, Livingstone Shire Council hosted a Central Queensland (CQ) local government forum targeting councils within the CQ region. The forum's objective was to identify and understand risks to organisations in the CQ context and look at opportunities to move forward and transition into this new carbon economy.

Electric vehicle charging station network facilitation

With the rise in profile and accessibility to electric vehicles, Livingstone Shire Council actively promotes electric vehicle use in Livingstone Shire by identifying champions in council and the community and holding information days. Council is currently working with the community and local businesses to install electric vehicle charging stations along the Capricorn Coast.

Street light replacement program

This ongoing program sees council replacing council-controlled halogen street lights with LED and/or solar options.

Sustainability workshops and events

The annual Sustainable Livingstone Expo is an information, education and behavioural change event featuring interactive activities, workshops, stalls, and displays incorporating themes such as waste, water, energy, biodiversity, transport, food, community gardens, buildings and procurement.

Sustainability initiatives

Council currently offers incentives to residents who purchase reusable nappies and sanitary products.

Sustainable living workshops

Council continues to deliver a series of waste and sustainability workshops including composting, recycling, reusable nappies, upcycling bicycles and other less-waste efforts. These workshops aim to build capacity in the community and further mainstream the topic of sustainability.

Waste strategy

In 2021, council adopted the strategy *A New Dimension: A Strategy for the Management of Resource Recovery and Waste in Livingstone Shire to 2030*, to drive the circular economy in Livingstone.

Great Keppel Island decarbonisation project

This action is part of Queensland Government's **Decarbonisation of the Great Barrier Reef Islands program**. Livingstone Shire Council employed a project officer to deliver actions, including developing a resilience plan, an education campaign and establishing composting units on the island.

Yeppoon sewage treatment plant solar array

An array of photo-voltaic solar panels with inverters and battery storage has been installed at the Yeppoon sewage treatment plant, meaning the plant can now be powered by the solar facility during daylight hours, while directing any surplus to battery storage for use during the night.

Carbon audits

Council will continue conducting annual carbon audits, to monitor progress in emissions reduction.



Great Keppel Island composting © Livingstone Shire Council

Mackay Regional Council

Mackay Regional Council is committed to helping to protect, conserve and enhance the values of the Great Barrier Reef for future generations.

Located where the Southern Great Barrier Reef meets the Central Great Barrier Reef, the Mackay region covers more than 7600 square kilometres and is home to 120,000 people. Mackay Regional Council's actions as a Reef Guardian Council are working towards improved water quality and helping build Reef resilience.

Climate change action

Actions completed

Mackay Regional Council acknowledges its role as a custodian of the Great Barrier Reef, and has already implemented a number of climate change actions, including:

- implemented an energy management system
- developed a corporate carbon emission inventory
- developed a community carbon emission profile
- joined the Cities Power Partnership
- joined the Queensland Climate Resilient Council program and undertaken the LGAQ climate briefing
- established a baseline for staff use of sustainable transport modes.

Community emissions management plan

Council is committed to developing a community Emissions Management Plan to support a net zero emission pathway for the Mackay region.

Energy and carbon management plan

Council is in the process of developing a corporate Energy and Carbon Management Plan that underpins a net zero emissions pathway for council.

Climate change statements

Mackay Regional Council continues its commitment to identifying and updating corporate documents requiring a statement about climate change. This action aims to improve the disclosure of physical and transitional climate risks.

Waste management plan

Council is developing and implementing a corporate Waste Management Plan to promote a circular regional economy.

Free native plant giveaway program

Council intends to progressively increase the number of local native plants established by council and property owners in the region through the free native plant giveaway program, with the view to distribute 12,000 plants per year.

Sustainable transport modes

Council will continue to increase the use of sustainable transport modes by council employees and the community through the Mackay region Integrated Transport Strategy.

Sustainable procurement outcomes

Council is updating relevant procurement policies and contract templates to improve sustainable procurement outcomes aligning with corporate waste, energy and emissions targets.

Further actions

Mackay Regional Council is currently considering membership to ICLEI's Global Covenant of Mayors for Climate and Energy Program to ensure community emission reduction initiatives align with global science-based targets. Council is also considering participation in the Coastal Councils Adaptation Taskforce's proposed Cooperative Research Centre for Thriving Coasts to explore opportunities for climate change research programs and partnerships.

One of Queensland's great strengths is its regional communities—and their support is vital to the state's economic transition.

Action at a local level will have a significant impact on our state's overall ability to meet the 2050 target, and will extend and complement action being undertaken at national and interstate level.

[Queensland Climate Transition Strategy](#)



Mareeba Shire Council

Mareeba Shire Council is doing its part to help protect the Great Barrier Reef.

Mareeba Shire is located at the base of the Cape York Peninsula in Far North Queensland. It covers an area of 54,491 square kilometres and is home to more than 22,500 residents.

Climate change action

Climate change resilience policy

Climate change crosses several enterprise risk categories including strategic, financial, operational, human resources and macro risks. Climate change presents the potential for business discontinuity, increased insurance risk, infrastructure failure, greater workplace and safety risk to workers in prolonged heat conditions and increased local disaster management due to increased acts of nature. A lack of climate change response may also present reputational risk.

Mareeba Shire Council's Climate Change Resilience Policy outlines council's actions to minimise the impact of climate change and realise potential opportunities for mitigation.

Solar power for infrastructure

Council has engaged design consultant, Peak Services, to advise on a shire-wide initiative to reduce carbon emissions through renewable energy. As a result of funding through Works for Queensland, FNQ Solar Solutions (successful tenderer) finalised the installation of 1559 solar panels at nine sites across the shire. Duplication of solar lighting will also be installed in Bicentennial Lakes.

Rivers to Reef climate change resilience alliance

Council is participating in this catchment-based approach to developing a regional community of practice encouraging awareness and collaboration to progress climate change mitigation and adaptation projects delivering social, environmental, community and economic benefits.

Fire management

Council will continue implementing fire management plans, including cool burns to reduce wildfire risk through organic load management. Efficient fire management practices, as well as helping manage risk, may limit carbon emissions.

Energy consumption auditing

Council will continue to review solar installations to monitor the reductions in energy consumption, further understand ongoing benefits and identify opportunities for improvements or savings.

Establishing a buy-back shop

Council intends to establish a buy-back shop to promote the diversion of resources into the circular economy, encourage dialogue and minimise waste generation.

Community engagement

Council continues engaging with the local community, using Facebook and council's website to post regular topics on a range of environmental and sustainable topics.

Controlled burning of natural environments could help offset our carbon emissions

Planting trees and suppressing wildfires do not necessarily maximise the carbon storage of natural ecosystems. A new study has found that prescribed burning can actually lock in or increase carbon in the soils of temperate forests, savannahs and grasslands.

When fires are too frequent or intense – as is often the case in densely planted forests – they burn all the dead plant material that would otherwise decompose and release carbon into the soil. High-intensity fires can also destabilise the soil, breaking off carbon-based organic matter from minerals and killing soil bacteria and fungi.

Without fire, soil carbon is recycled – organic matter from plants is consumed by microbes and released as carbon dioxide or methane. But infrequent, cooler fires can increase the retention of soil carbon through the formation of charcoal and soil aggregates that protect from decomposition.

University of Cambridge. "Controlled burning of natural environments could help offset our carbon emissions." ScienceDaily. ScienceDaily, 23 December 2021.

Rockhampton Regional Council

Rockhampton Regional Council is proud to be a Reef Guardian Council. The Rockhampton region includes extensive wetlands, creeks and river systems, covering six per cent of the total region. The Fitzroy River is the region's major waterway and the largest river catchment flowing to the Great Barrier Reef.

Located on the Tropic of Capricorn and covering an area of 6570 square kilometres, the Rockhampton region is home to more than 82,000 people.

Climate change action

Environmental sustainability strategy

In September 2018, Rockhampton Regional Council adopted its first ever **Environmental Sustainability Strategy**. Since that time, council has been working together with its residents, communities, businesses, industries and other levels of government to deliver local initiatives that accelerate the region's progress towards state government emissions reduction targets while strengthening community, environmental and economic resilience. Council maintains a sustainability governance framework and produces an annual Year in Review report that highlights progress against the strategy.

Some of the key achievements to date are listed below.

Energy action

Council has installed over 500 kilowatts of solar generation capacity across 13 council sites. Council is finalising arrangements for a 1300 kilowatt solar system at the Glenmore Treatment Plant and is currently scoping additional opportunities across council's footprint. Council continues to choose LED and energy-efficient lighting and equipment for routine replacements and upgrades. Council is also promoting the Rockhampton region as a renewable energy hotspot in line with the Queensland Government's Renewable Energy Zones.

Minimising waste

Council is moving towards zero waste and established landfill gas flaring at the Lakes Creek Road Landfill in late 2020. Council diverts green waste and biosolids from landfills for beneficial reuse and is currently trialling kerbside collection of FOGO. Council has established an expanded polystyrene recycling plant, awarded contracts for processing old solar PV panels and continues to run the popular Recycling Hero Schools program to improve local waste education and diversion opportunities.

Urban greening

Council is working to increase the region's urban canopy coverage by integrating tree planting into key projects and redevelopment activities. As part of the Bringing Nature Back program, council also delivers an annual native plant giveaway for residents to help celebrate National Tree Day.

Active transport

Council continues to support active and public transport by improving infrastructures such as bus shelters, pathways and bike lanes. Council also partnered with private industry to introduce eScooters to Rockhampton in early 2022.

Electric vehicles

Council currently has six electric cars and seven hybrids, with the potential to significantly increase these numbers once fully-electric utilities become more readily available over the next few years. The Rockhampton region has a number of existing electric vehicle charging stations, and council has recently installed two new charging stations for council's fleet.

Sustainability awareness and action

Council's Living Sustainably program provides local residents with practical tips and resources covering a wide range of areas from minimising food waste, caring for our catchments, finding energy efficiencies, encouraging wildlife habitat, recycling right, reducing single-use plastics and more. Internally, council's Second Nature program supports staff to work together to improve environment and sustainability performance through behaviour change initiatives and collaborative projects.

Emissions planning and monitoring

Council is developing a Corporate Emissions Inventory and Emissions Reduction Action Plan to guide further action.

Climate change is the greatest threat to the Great Barrier Reef. If we are to secure a future for the Great Barrier Reef and coral reef ecosystems globally, there is an urgent and critical need to accelerate actions to reduce global greenhouse gas emissions. This must happen in parallel to taking actions to build the Reef's resilience.

[Great Barrier Reef Marine Park Authority Climate Change Position Statement](#)



Tablelands Regional Council

Tablelands Regional Council is committed to working with government, organisations and the community to help reduce emissions and adapt to climate change.

The Tablelands region is located in Far North Queensland, covers 11,293 square kilometres and is home to more than 25,500 people. While having no coastline, the region recognises the connection of land to Reef. Tablelands Regional Council is dedicated to climate change action.

Climate change action

Climate risk management strategy

Tablelands Regional Council is currently developing a Climate Risk Management Strategy to direct action, planning and implementation towards a low carbon economy.

Barron River connected councils climate alliance

Tablelands Regional Council is working with Mareeba Shire Council and Cairns Regional Council to form the Barron River Connected Councils Climate Alliance. Alliances are proven to deliver emissions reductions, infrastructure upgrades, advocacy, plan and deliver projects that just one council could not do alone and seek to deliver cost savings.

Rivers to Reef climate resilient alliance

Tablelands Regional Council has partnered with FNQROC, Cairns Regional Council and Mareeba Shire Council to develop and pilot appropriate models for collaboratively accelerating on-ground, community-wide actions to reduce greenhouse gas emissions, transition their communities to a low carbon economy and build resilience to climate risk.

Emerging carbon economy

Council continues to provide advice for the emerging carbon economy (Cassowary credit methodology) based on 31 years of reforestation experience through the Tablelands Regional Council Community Revegetation Nursery.

Building landscape resilience

Council is committed to building landscape resilience to support industries through creating lower-cost restoration techniques. Council will continue its ongoing work to restore habitat for sustainable land management through the Tablelands Regional Council Community Revegetation Nursery.

Land restoration Fund (LRF)

Council is a partner in the LRF pilot program – Permanent Tropical Reforestation with Native Conifers, Riparian and High Biodiversity Rainforest Plantings – which seeks to demonstrate how carbon farming activities can sequester or abate greenhouse gas emissions, alongside environmental, social and economical, and First Nations co-benefits. The project aims to demonstrate economically efficient and biodiverse rainforest restoration on the Atherton Tablelands in partnership with landholders using a mix of native conifers and rainforest species.

Townsville City Council

Townsville City Council is a proud Reef Guardian Council and champion for environmental protection and sustainability principles. Council's corporate plan sets the ambitious target of reaching carbon neutrality by 2040 and zero landfill by 2030.

The Townsville region covers an area of 3726 square kilometres and has a population of around 200,000. As the most populous city located along the Great Barrier Reef and a major regional hub, Townsville acknowledges the importance of the Reef to its city, residents and economy.

Climate change action

Environmental policy

For many years Townsville City Council has championed environmental protection and sustainability principles including greenhouse gas reduction, energy efficiency, demand management, behaviour change and smart technology, resilience, and climate change adaptation through its [Environmental Policy](#).

Corporate Plan 2021–26

Townsville City Council's [Corporate Plan 2021–26](#) sets ambitious actions aimed at reaching carbon neutrality by 2040, zero landfill by 2030, and embraces the circular economy to advance business and move towards zero waste.

Magnetic Island climate resilience

Climate resilience is a recognised priority for Magnetic Island. Council has partnered with the Queensland Government, several organisations and community members over the past 18 months to identify 18 projects to build resilience, reduce emissions and create jobs on the island.

A new Magnetic Island decarbonisation project has commenced, partly funded by Queensland Government, and includes catalysation projects from the list (Microgrid, Biological Material Recovery, and Community Education).

Climate change policy and emissions reduction target

Townsville City Council has incorporated climate change into their Environmental Policy and committed to emissions reduction targets in its Corporate Plan 2021-26 and implemented through Annual Operating Plans. The Corporate Plan targets include the below.

Council energy transition to carbon neutral:

- by 2023 provide waste to energy as a renewable power source
- by 2026 transition 60 per cent of council energy use to renewables.

Circular economy principles embedded in the construction of all new assets:

- by 2026 use recycled products in new council assets to incorporate materials diverted from landfills.

Corporate emissions profile

Council intends to maintain zero growth in council energy costs and emissions profile across council property through energy efficiency, demand reduction, renewables and tariff optimisation. This includes collaboratively partnering with Energy Queensland (Ergon) to install LED lighting across city streets not managed by council to reduce costs to council.

Increased renewable energy generation

Council is working to generate green energy and fuels for use within the region and export, and:

- by 2026 businesses and residents have a choice to purchase locally produced green energy – including via waste to energy at a comparable or cheaper price than current energy options including competitive network and demand charges
- by 2026 Townsville is a globally recognised green energy export hub.

Transition to council assets powered by renewable energy and supported by batteries:

- by 2026, 60 per cent of council assets to be powered by locally installed renewable energy sources 24 hours a day.

Buildings and facilities reduction

Council is working to develop building strategies for energy efficiencies. Some of these activities include:

- demonstrate energy and carbon accounting and business case integration (TCC Energy & Carbon Framework)
- analyse energy flows across council sections and integrate within Enterprise Energy Management System (EEMS)
- implement machine learning (precooling, solar and batteries) on council buildings
- improvement, innovation and iterations of council's sustainable energy innovation and demonstration projects
- optimisation of EEMS and Environmental Data Integrator for energy efficiency, demand management, behaviour change (awareness and action) and renewables and batteries.

Fleet emissions reduction

Council is working toward having its fleet powered by renewable energy sources. By 2026, council intends to have transitioned 70 per cent of council fleet to renewable energy sources. This work includes partnering for hydrogen powered heavy vehicles such as waste collection.

Landfill management emissions reduction

Council has set targets for landfill management emissions reduction:

- divert 60 per cent of material from landfills by 2026
- divert 60 per cent of organics from landfills by 2026
- divert 60 per cent of household waste by 2026
- reduce landfills' commercial waste quantities by 20 per cent (from 68,130 tonnes to 54,500 tonnes) by 2026.

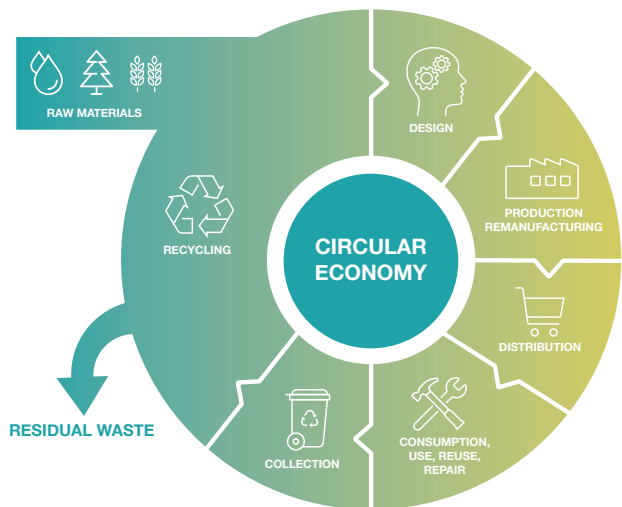
Circular economy initiatives

Council supports a circular economy, looking to innovative waste diversion and reuse strategies. Council has amended council standards and documentation to enable circular economy principles, will develop procurement processes that support participation from innovative small to medium businesses and will have circular economy requirements embedded in specifications and contracts. Targets include:

- by 2026, 90 per cent of council procurement expenditure to local businesses (from 86.99 per cent)
- by 2026, 65 per cent of council procurement expenditure to local small to medium businesses (from 54 per cent).

Education, mitigation and adaptation

Townsville City Council is committed to climate change education, mitigation and adaptation initiatives for the wider community. As well as delivering education and awareness activities for schools and the broader community across waste and recycling, council will continue to manage the Coastal Change Hazard Adaptation Strategy.



[National Waste Policy Action Plan 2019 - circular economy](#)

Local governments have an important role to play in facilitating and supporting progress towards zero net emissions goal.

Queensland Climate Transition Strategy



Whitsunday Regional Council

The Whitsundays region is located in the heart of the Great Barrier Reef. Whitsunday Regional Council is working to protect the Reef through recycling, revegetation and solar, among other actions.

The Whitsunday region is renowned for its natural beauty. Covering 23,800 square kilometres, the Whitsundays is home to more than 36,000 people.

Climate change action

Climate change innovation hub

Whitsunday Regional Council has developed a climate change innovation hub, guided by a panel of climate-related experts, to provide a link between researchers, stakeholders, council and the community. The hub is the only one of its kind in the country. It is focused on developing innovative, practical solutions to help the Whitsunday region manage the impacts of climate change, both present and future. In doing so, the hub acts as a think-tank to gather and share knowledge with the community to build resilience in the region, throughout Australia and across the globe.

The goal of the hub is to:

- be valuable to the Whitsunday and global community for the services the hub provides
- enable the community to be a leader in climate change mitigation
- aid the Whitsunday community to proactively prepare for climate change
- deliver innovative solutions that are practical, feasible, affordable and can be implemented by the community today
- attract the world's leading climate change practitioners, researchers and solution providers to work within the community
- share the hub's research and findings often, to build momentum for climate change mitigation and adaptation worldwide.

Biosolids reuse project

Council is committed to the Biosolids Reuse Project to reduce methane generation and the need for chemical fertiliser in the region. This project involves investigation, de-risking and long-term trial to reuse biosolids from sewerage treatment plants as fertiliser, soil ameliorant and micronutrient blend on a small number of sugar cane and grazing properties. The project aims to remove biosolids from landfill where it generates methane gas.

Bowen water treatment plant intake energy optimisation

Council is designing and delivering an optimised intake arrangement at Bowen Water Treatment Plant to reduce energy consumption further and move water production to times when solar generation is available. This project is being delivered in stages to manage cash flow.

Cannon Valley reservoir

Council is constructing a new regional water reservoir for the greater Airlie Beach region. In the medium term, this capacity will allow water production scheduling to align mostly with renewable energy generation timeframes. It will also improve resilience of the Greater Airlie Water Supply region.

Carbon offset opportunities project

Council has engaged a contractor to review its carbon offset options. The information gathered from this project will inform council's future greenhouse gas reduction plan.

Decarbonising the tourism sector

Council is engaging the tourism sector in measuring their carbon footprints and decarbonisation.

Internal climate change and sustainability committee

Council has established a working group to discuss and review climate change and sustainability initiatives across council.

Solar energy generation at water sewerage treatment plants

Council is undertaking an investigation and prioritisation of Water Sewage Treatment Plants' suitability for on-site solar energy generation. This involves analysing the historic energy demands and possible future energy demand profiles for key electricity using assets and ranking the sites in order of suitability for on-site solar energy generation.

LG Sherlock carbon emission

Council is working to more accurately calculate council operations' carbon emissions to better understand how to reduce emissions and save costs.

Greenhouse gas reduction plan

Council has an emissions reduction target of 50 per cent reduction by 2030. It is working to develop a plan to reduce council's greenhouse gas emissions by 20,000 tonnes per year by 2030.

Solar farms

Council is looking to expand its solar farms and is working to identify council facilities' potential to house solar panels.

Bowen water treatment plant solar array

Council will deliver a 400 kilowatt solar array at the Bowen Water Treatment Plant that will produce an estimated 664 megawatt-hour of power equivalent to 538.1 tonnes of greenhouse gases per annum and will operate the Bowen Water Treatment Plant using all of the self-generated energy as a climate change mitigation activity.

Solar energy generation and plant upgrades

Council is upgrading equipment and controls at Collinsville Water Treatment Plant and Sewerage Treatment Plant, and delivering an on-site solar array to allow the facilities to use up the 80 per cent self-generated renewable power. This will turn the expensive-to-maintain oversized water

treatment plant, sewerage treatment plant and reservoir system (compared to population) in Collinsville into an opportunity to significantly transition to self-generated renewable energy. In addition, this project will integrate a diesel backup generator to improve emergency resilience of these essential services.

Optimising pumping energy use

Council is partnering with local contractors to use a range of variable speed drive set points for dry and wet season pumping to save total energy consumption (more than 10 per cent for modified pumps). Additionally, council is working with instrumentation and control contractors for advanced system optimisation and efficiency.

Sustainable destination accreditation

Currently, Whitsunday Regional Council is working towards attaining sustainable destination accreditation.

Revegetation of Twin Creek Cannonvale

Council planted 1500 plants along Twin Creek within a council reserve to reduce the area needing mowing and increase the resilience of the creekbank to flooding.

Recycling and resource recovery

Council is committed to continuing the provision of resource recovery and recycling services and seeking further opportunities to support a circular economy.



Whitsunday climate change hub welcome event 2021 © Whitsunday Regional Council

Wujal Wujal Aboriginal Shire Council

The connection between land and Sea Country must be acknowledged when protecting the health of the Great Barrier Reef. Wujal Wujal Aboriginal Shire Council is proud to do its part as a Reef Guardian Council.

Wujal Wujal Aboriginal Shire is located in Far North Queensland, covering just 12 square kilometres and with a population of more than 300 residents. The shire is nestled between Douglas and Cook Shires and is the traditional country of the Kuku Yalaji, Kuku Nyungul and Jalunji people. Wujal Wujal is the local Kuku Yalanji clan name meaning ‘many falls’ in reference to the spectacular waterfalls in this rainforest region.

Today’s residents know from stories retold over thousands of years how their ancestors adapted to natural variations in the climate, including sea level rise. Now the coastal community is on the front line of rapid climate change, with disruptions to seasonal bush food calendars and increased exposure to severe weather events.

Climate change action

Recycling centre

Recycling reduces the need for production, particularly of plastics, from virgin materials. In 2020 Wujal Wujal opened its brand new recycling centre. The container deposit facility has already received thousands of items that could have washed into coastal creeks and out to the Great Barrier Reef.

Council plans to install a state-of-the-art glass crushing machine to convert bottles into construction material. This will cut transport costs and reduce associated emissions, create jobs and give council an income stream.



The new recycling centre in Wujal Wujal Aboriginal Shire.
© Commonwealth of Australia (GBRMPA)

Coral reefs globally, including the Great Barrier Reef, are deteriorating from the impacts of climate change. Immediate national and international action is required to reduce global greenhouse gas emissions to levels that maintain the ecological function of coral reef ecosystems. The Great Barrier Reef underpins significant social, cultural and economic benefits for Australia and we have an ongoing responsibility to show leadership in continuing to reduce global emissions.

Ian Poiner, Chairperson of the Great Barrier Reef Marine Park Authority

[Great Barrier Reef Marine Park Authority Climate Change Position Statement](#)



Yarrabah Aboriginal Shire Council

Yarrabah Aboriginal Shire Council is a small shire with a big commitment to taking climate change action.

Yarrabah Aboriginal Shire lies to the east of Cairns, with coastline from False cape around Mission Bay, past Cape Grafton and Kings Point, and south to Palmer Point. The shire covers approximately 159 square kilometres, with almost 2600 residents. Yarrabah is the traditional country of the Gunggandji and Mandingalbay Yidinji people.

Climate change action

Landfill upgrade

Yarrabah Aboriginal Shire Council is working with Queensland Government's Building our Regions program to upgrade the Yarrabah Waste Transfer Station. The project will improve environmental protection at the site and reduce volume of solid waste.

Access to recycling centre

Currently, no recycling facilities are available at Yarrabah. As part of the landfill upgrade project, Council is working to gain access to a recycling centre in nearby Cairns, which will help council reduce the shire's environmental footprint.

Rivers to Reef climate resilience alliance

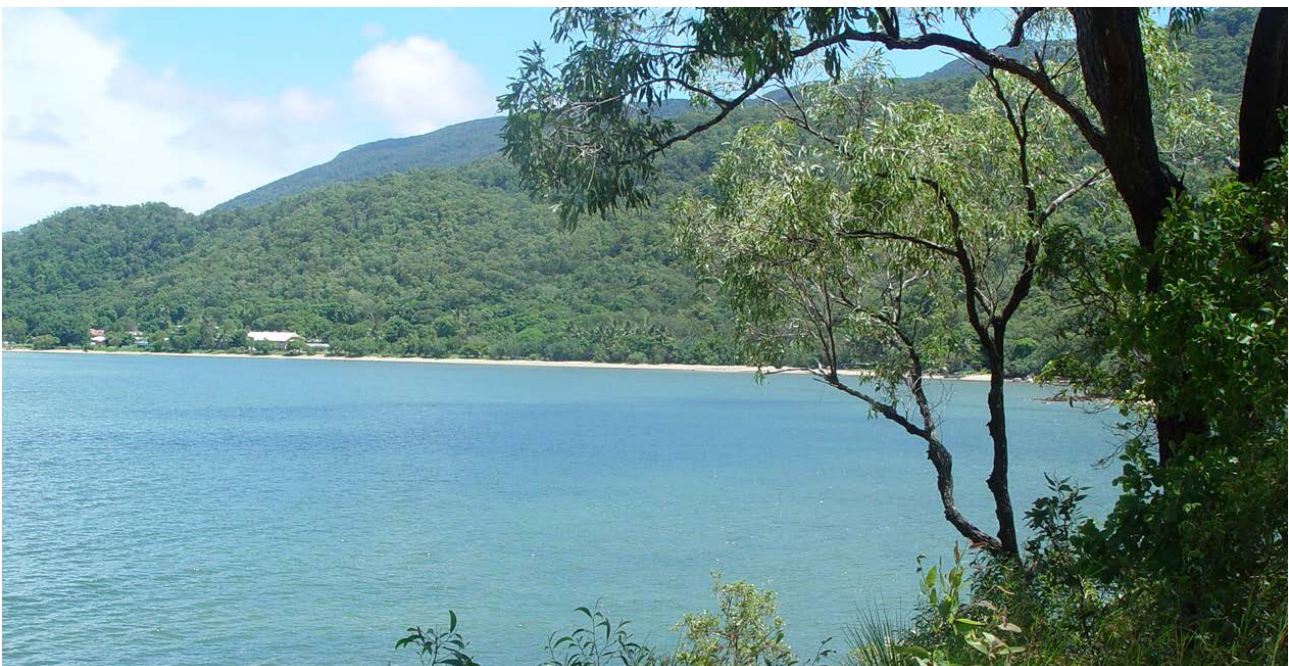
Yarrabah is part of an alliance of councils working together to manage risks and develop opportunities for a climate-resilient, low-carbon future. The alliance is facilitated by Far North Queensland Regional Organisation of Councils, with support from LGAQ (Local Government Association of Queensland).

Undertaking a solar microgrid feasibility study

The Regional Australia Microgrid Pilots Program (RAMPP) is a \$50 million program administered by the Australian Renewable Energy Agency (ARENA). The program aims to improve the resilience and reliability of power in regional and remote communities throughout Australia. Yarrabah Aboriginal Shire Council is currently completing a feasibility study in 2022, with a business case to follow.

Seeking funding for electronic transport transition

Council has developed, and is seeking funding to progress, its plan for an e-transport network, which includes electric buses, rideshare vehicles, e-bicycles and scooters. The goal of this e-transport network is to mitigate greenhouse gas emissions and improve socio-economic outcomes within the shire.



Beach at Yarrabah © Great Barrier Reef Marine Park Authority

Appendix A: Climate change action survey results

The 19 Reef Guardian Councils were invited to contribute to the below survey data, 16 councils responded and the below information has been compiled from their input.

Reef Guardian Councils that contributed are: Bundaberg, Burdekin, Cairns, Cassowary Coast, Central Highlands, Cook, Douglas, Gladstone, Hinchinbrook, Livingstone, Mackay, Mareeba, Rockhampton, Tablelands, Townsville and Whitsunday.

Figure 1: Climate change actions underway or planned

14 councils have installed solar on council facilities and 1 council is investigating

Bundaberg Regional Council – more than one megawatt solar power across council facilities. Council has completed a scoping study for future solar investment, with budget allocated for future installations.

Burdekin Shire Council – has installed key solar systems at council sites. A 30 kilowatt solar system in 2017, a 100 kilowatt solar system in 2019, and 20 kilowatt solar panels will be installed at the Burdekin library in Ayr in 2022.

Cairns Regional Council – 2.8 megawatts of ‘behind the meter’ solar.

Cassowary Coast Regional Council – 970 kilowatt currently installed.

Central Highlands Regional Council – proposed 1.2 megawatts (20 systems). Contract to construct has been awarded with construction to commence latter half of 2022.

Cook Shire Council – heating and solar power recently installed at the Cooktown swimming pool, including 20 kilowatt solar panels installed to offset the energy required to heat the pool and cover 70 per cent overall pool power usage.

Douglas Shire Council – 2.655 kilowatt solar system installed on council Diwan Depot. Purchased solar powered mobile CCTV. Wharf Street solar lighting seven 60 watt PV array.

Gladstone Regional Council – approximately 92 kilowatt of solar panels and cells installed across administration centres and water facilities.

Hinchinbrook Shire Council – has installed solar facilities on the Kelly Theatre building and is currently investigating the application of solar at council’s main administration building/shire hall as well as the main depot.

Livingstone Shire Council – solar panels have been installed at council’s lagoon building and currently being developed is a 500 kilowatt solar array of photovoltaic solar panels with inverters and 1953 kilowatt-hour battery storage at the Yeppoon Sewerage Treatment Plant to generate 850 megawatt-hour per year.

Mareeba Shire Council – in 2021 council installed 683 kilowatt solar panels on nine infrastructure sites.

Mackay Regional Council – 2.2 megawatt of installed solar generation capacity across 31 sites with more sites being considered as part of council’s corporate emissions reduction plan.

Rockhampton Regional Council – council has more than 500 kilowatt of solar generation capacity installed across 13 sites. Council is also finalising arrangements for a 1300 kilowatt solar system at the Glenmore Water Treatment Plant (council’s largest electricity-consuming facility) and is currently scoping additional opportunities across council’s footprint.

Townsville City Council – council has installed over 1.5 megawatt of solar, wind and batteries to date and has budgeted and programmed a further 550 kilowatt of solar to be installed over the next two years.

Whitsunday Regional Council – council has installed solar power systems on council buildings totalling 1,037,408 kilowatt saving approximately 810 tonnes CO₂-e per year.

Yarrabah Aboriginal Shire Council – is currently undertaking a solar microgrid feasibility study

1 council is purchasing clean energy and 2 are investigating

Cairns Regional Council – to progress its commitment to Net Zero Emissions by 2030, council has entered final contract negotiations with a retailer for supply of renewable electricity via an Electricity Sales Agreement.

Mackay Regional Council – being considered as part of council’s corporate emissions reduction plan.

Townsville City Council – council’s flagship administration building at 103 Walker St, a 5-star NABERS rated energy efficient building, is Green Power Accredited as 100 per cent clean energy. Council’s sister building at 143 Walker Street is powered by 50 per cent renewable energy.

10 councils have changed street lighting to LED or solar and 5 councils are investigating

Bundaberg Regional Council – 212 street lights have been replaced with Smart enabled LED lights, in conjunction with Ergon Energy.

Burdekin Shire Council – In 2017, LED lights were retrofitted.

Cook Shire Council – installed solar lighting in Coen.

Cairns Regional Council – council-owned CBD streetlights converted to LED, and a bulk replacement business case undertaken for all streetlights in the Cairns region.

Cassowary Coast Regional Council – have changed to LED street lighting through Ergon/Energex initiative.

Central Highlands Regional Council – feasibility being carried out.

Douglas Shire Council – installed solar lighting and converted street lights to LED along Port Douglas esplanade, in public parks and residential streets.

Gladstone Regional Council – has planned to undertake a Street

Lighting Asset Growth Plan to identify opportunities to update street lighting and install new lighting where required.

Hinchinbrook Shire Council – currently investigating LED lighting in the 2023–24 financial year.

Livingstone Shire Council – continual transition of street lighting to LED and in some cases solar, such as around the Yepoon lagoon.

Mackay Regional Council – in negotiations with Ergon Energy and state government to develop a viable business case for a streetlight LED replacement project.

Mareeba Shire Council – Duplication of solar lighting will also be installed in Bicentennial Lakes.

Rockhampton Regional Council – local street lighting has been transitioned to LED as lights become due for replacement. Council has also installed LED street lighting within redeveloped parts of the CBD and continues to install LED pathway lighting as part of routine upgrades.

Townsville City Council – 80 per cent of council-owned street lighting has been converted to LED, and 80 per cent of Main Roads street lights have been converted to LED in the Townsville local government area. Council is working with Ergon to convert 50 per cent of Ergon-controlled street lights in the local government area to be LED by 2025. Council has installed more than 100 solar street lights with batteries.

Whitsunday Regional Council – council has installed LED in public park lighting.

6 councils flare landfill gas to reduce emissions and 1 is investigating

Bundaberg Regional Council – 53,300,000 cubic metres of landfill gas since project inception in 2013 which is equivalent to 506,000 tonnes carbon abated from its two landfills with gas flaring.

Cairns Regional Council – methane from Cairns' de-commissioned Portsmouth Landfill has been captured and flared since 2012.

Gladstone Regional Council implemented a landfill gas extraction and flaring system at Benaraby landfill in 2012. The landfill gas and solar panels have been used to produce electricity which has exported into the local electricity network since 2016.

Hinchinbrook Shire Council – has installed innovative capping at the Warrens Hill Landfill and Resource Recovery Centre to reduce surface gas emissions.

Livingstone Shire Council – currently investigating landfill gas flaring/capture.

Mackay Regional Council – council flared 27,331 tonnes of CO₂-e from the Hogan's Pocket Landfill.

Rockhampton Regional Council – commenced flaring landfill gas at the Lakes Creek Road Landfill in November 2020. The flare is designed to save approximately 20,000 tonnes of carbon dioxide equivalent emissions.

Townsville City Council – council flares landfill gas at Hervey Range Landfill where 1,421,274 cubic metres is flared yearly abating 96,602 tonnes of CO₂-e. At Stuart Landfill 5,179,179 cubic metres is flared yearly abating 44,116 tonnes of CO₂-e.

1 council is using landfill gas for energy production and 7 are investigating

Bundaberg Regional Council – project has been initiated and currently tendering.

Gladstone Regional Council – 27,590 Kyoto Australian carbon credits (KACCU) issued to the Landfill Gas Industry Pty Ltd in the 2020–21 financial year.

Central Highlands Regional Council – a waste to energy facility feasibility study is currently under consideration.

Livingstone Shire Council – currently investigating landfill gas flaring/capture.

Mackay Regional Council – currently flaring landfill gas. Council's next Resource Recovery/Waste Management Strategy will consider a net-zero by 2050 landfill emissions reduction target.

Rockhampton Regional Council – council is currently investigating options.

Townsville City Council – council has a target to install landfill gas Waste to Energy at Stuart Landfill by 2023.

Whitsunday Regional Council – investigated costs of landfill gas flaring.

15 councils are diverting organic waste (including green waste) from landfill

Bundaberg Regional Council – green waste mulched onsite and sold to the public and local companies so that it can be made into high value compost. Since July 2020, 7415 tonnes of green waste received, processed and diverted from landfill.

Burdekin Shire Council – approximately 10,000 tonnes of garden waste only (no food waste) has been diverted from landfill.

Cairns Regional Council – In addition to the 22,000 tonnes of green waste that is processed into mulch products each year, 55 per cent of waste from kerbside collection is diverted from landfill via the SUEZ Advanced Resource Recovery Facility.

Cassowary Coast Regional Council – 8000 tonnes of wet waste and 30,000 cubic metres of greenwaste are diverted from landfill.

Central Highlands Regional Council – approximately 4000 tonnes per year of green waste is diverted from landfill and converted to usable mulch.

Cook Shire Council – mulches green waste and shredded cardboard

Douglas Shire Council – 5412 tonnes per year sent to SUEZ composting facility, with approximately 55 per cent being diverted from landfill (2976 tonnes per year).

Gladstone Regional Council – adopted a Waste Management and Resource Recovery Strategy 2019. One of the strategy's priority actions in the strategy is to develop a plan to drive the reduction in organics disposed to landfill aligned with council and state government targets. This is an Operational Plan 2021–22 item and currently under development. Council currently mulches green waste.

Hinchinbrook Shire Council – 1552 tonnes of green waste was diverted from landfill in the 2020–21 financial year. Council also participated in a FOGO roadmap with other NQROC councils and has conducted additional local modelling on the implementation of FOGO.

Livingstone Shire Council – mulches green waste.

Mackay Regional Council – processed 6505 tonnes of green waste in 2019–20, 207 tonnes more than the previous financial year. Organic waste diversion will be a component of council's next Resource Recovery / Waste Management Strategy.

Mareeba Shire Council – in the 2020–21 financial year, council diverted 6235 tonnes kerbside waste from landfill to Cairns-based recycle facility, the Advanced Resource Recovery Facility. This equates to an average diversion of 52.87 per cent.

The material has been made into compost for local farmers.

Further, 8944 tonnes metal was processed into renewable resources, and 94.24 tonnes of recyclable plastics, paper, cardboard has been diverted to the Material Recycling Facility in Cairns where it is baled into resources for reuse.

Rockhampton Regional Council – green waste is diverted from landfill. Council is currently trialling kerbside collection of FOGO.

Townsville City Council – council diverts 21,767 tonnes of organic waste per year, and is currently trialling FOGO for 1500 homes which diverts an estimated 540 tonnes per year from landfill. Council has developed “weeds to soil” humification project with products, services and on-ground ecological landscape businesses and not-for-profits to create sustainable products markets, value weeds, restore landscapes and divert waste (water and land weeds) from landfill.

Whitsunday Regional Council – council diverted approximately 6700 tonnes of green waste in the 2020–21 financial year via its two main landfills at Kelsey Creek and Bowen.

5 councils have a target for emissions reduction, and 5 councils are investigating a target

Bundaberg Regional Council – has committed to a net-zero target by 2030.

Cairns Regional Council – net zero emissions by 2030 for council operations as part of the Climate Change Strategy 2030.

Central Highlands – a target of net zero emissions by 2030 is yet to be adopted with further investigative work being undertaken to ascertain what is achievable.

Douglas Shire Council – investigating.

Livingstone Shire Council – target is to reduce council’s carbon footprint by 30 per cent by 2030.

Mackay Regional Council – considering a net zero corporate emissions target by 2030 (excluding landfill).

Rockhampton Regional Council – investigating.

Tablelands Regional Council – investigating.

Townsville City Council – council has set the goal to be a Carbon Neutral Council by 2040 and transition 60 per cent of council energy to renewables by 2026.

Whitsunday Regional Council – target is 50 per cent reduction by 2030, and carbon neutral by 2050.

13 councils have strategies, plans and/or policies in place to reduce emissions from their own operations

Bundaberg Regional Council – Sustainable Bundaberg 2030 is currently in place with work on a Net Zero Emissions Strategy set to begin early May 2022.

Cairns Regional Council – Cairns Climate Change Strategy 2030.

Cassowary Coast Regional Council – Waste Management strategy to 2025, currently under review for update.

Central Highlands Regional Council – intends to implement a net zero greenhouse gas emissions action plan 2030. This strategy has been adopted to commence in the 2022–23 financial year.

Douglas Shire Council – Climate Change (Council Operations) General Policy, Corporate Sustainability General Policy, Environmental (Council Operations) General Policy, Douglas Shire Council Corporate Plan 2019–24, and Corporate Sustainability Strategy 2017–20.

Gladstone – have an Environment Policy and Waste Management and Resource Recovery Strategy, are participating in the Queensland Climate Resilient Council Governance assessment, and are considering fleet improvements with more efficient and lower emission equipment in place, for example, Council has purchased its first Electric Vehicle and that is charged by a solar powered charging station at the Gladstone library, and is taking delivery of 5 EV forklifts.

Livingstone Shire Council – Low Carbon Livingstone 2030 Strategy, Community Plan and Environmental Sustainability policy.

Mackay Regional Council – corporate emissions reduction plan looks at comparative costs of achieving both 2030 and 2040 net zero corporate emissions targets. Council is using the corporate emissions reduction plan to develop formal emissions reduction targets to pursue through a corporate energy and carbon management plan.

Mareeba Shire Council – Mareeba, Cairns and Tablelands have joined together in a Barron River to Reef Climate Change Resilience Alliance. This is being coordinated through FNQROC.

Rockhampton Regional Council – council is currently developing a Corporate Emissions Inventory and Emissions Reduction Action Plan and has begun implementing emissions reduction into routine business where practical.

Tablelands Regional Council – council has produced a draft Climate Risk Management Strategy.

Townsville City Council – council has incorporated emissions reduction targets in its Corporate Plan 2020–24. Implemented via the: TCC annual Operating Plan (2021–22 and 2022–23) through core documents incorporating Energy and Carbon management and reductions: TCC Integrated Energy & Carbon Management Framework (2017); TCC Energy and Resource Management Framework is being updated; TCC Enterprise Energy Management System (a digital portal and system), the Bitpool and Environmental Data Integrator; and TCC Smart Infrastructure and Sustainable Energy Framework.

Whitsunday Regional Council – council currently produces 66,000 tonnes of carbon dioxide per year, including 9000 tonnes of carbon dioxide from electricity per year. Council’s proposed Greenhouse Gas Reduction Plan will identify options, costs and develop pathway of tasks to get to 50 per cent reduction in greenhouse gas emissions by 2030.

8 councils have a baseline emissions inventory

Cairns Regional Council – Council’s 2030 Net Zero Emissions Target uses a 2018–19 baseline to track progress towards net zero.

Douglas Shire Council – 2019–20 greenhouse gas emissions baseline of 6864.79 tonnes CO₂-e.

Livingstone Shire Council – carbon audit carried out in 2018 identified baseline emissions inventory of 27,346 tonnes CO₂-e.

Mackay Regional Council – detailed baseline emissions inventories have been completed since 2017–18. The 2019–20 year’s corporate emissions were calculated as 80,909 tonnes of CO₂-e.

Rockhampton Regional Council – baseline has just been completed.

Tablelands Regional Council – as part of works of the climate alliance (with Mareeba and Cairns shires) program only.

Townsville City Council – annually, council collates carbon emissions from landfill, wastewater/water recycling plants, fleet and electricity consumption.

Whitsunday Regional Council – council has determined that it generates 66,144 tonnes of CO₂-e per year, which includes 9400 tonnes of CO₂-e from electricity.

7 councils have had an audit of facilities/buildings, e.g. by the Green Building Council of Australia or CCIQ ecoBiz and 2 are considering

Bundaberg Regional Council – engaging with ecoBiz.

Burdekin Shire Council – Tropical Energy Solutions conducted an Energy Audit (Level 2 as per Australian Standard 3598:200) on selected council buildings.

Cairns Regional Council – ongoing energy management across the asset fleet, with emphasis on council's top 20 energy consuming facilities.

Cook Shire Council – ecoBiz audits of swimming pool, library and Council Administration Building conducted as part of the Communities in Transition Clean Growth Choices pilot program.

Hinchinbrook Shire Council – recently undertook ecoBiz audit of three key council facilities. Council's main office, Hinchinbrook Visitor Information Centre and TYTO Conference Centre and Events Centre/TYTO Regional Art Gallery/Hinchinbrook Shire Library.

Livingstone Shire Council – Pacific Environmental conducted audit in 2018.

Mackay Regional Council – considered as part of council's corporate emissions reduction plan.

Rockhampton Regional Council – council has worked with ecoBiz to conduct a number of facilities audits and continue to integrate audits into any major facilities upgrade projects where appropriate.

Townsville City Council – has undertaken various Level I, II & III energy audits on 12 different buildings and facilities.

10 councils have a policy for choosing green products and providers (greening of supply chain) and 1 is considering

Cairns Regional Council – the Cairns Regional Council **Procurement Policy** includes environmental and sustainability provisions and is a key instrument in greening council's supply chain (i.e. Scope 3 emissions) as part of its path to Net Zero by 2030.

Cassowary Coast Regional Council – limited policy through procurement and sustainability policies.

Central Highlands Regional Council – limited to recycled paper only at this stage. This is being expanded.

Cook Shire Council – procurement policy contains a section around sustainable procurement. Priority areas are wood and paper products from sustainable sources, safe chemical based products, e.g. cleaning products, pesticides or soil enhancers, products with a high degree of durability, i.e. avoiding disposable products where possible, and energy efficient products.

Douglas Shire Council – Procurement General Policy, Corporate Sustainability General Policy and Corporate Sustainability Strategy 2017–20.

Gladstone Regional Council – Environment Policy, Single Use Plastics Policy and Procurement Policy.

Mackay Regional Council – considered as part of council's corporate emissions reduction plan.

Mareeba Shire Council – council's procurement policy promotes the purchasing of environmentally friendly goods and services.

Rockhampton Regional Council – some limited considerations already in place. Further work required as part of the Emissions Reduction Action Plan.

Townsville City Council – council's procurement policy has been updated to encourage business innovation and circular economy principles. Relevant staff have undertaken sustainable procurement training.

9 councils are implementing, developing or investigating urban forest or 'greening strategies'

Bundaberg Regional Council – drain naturalisation projects at Belle Eden (5800 trees) and Washpool (up to 12,000 trees). 1 Million Trees Program has goal of planting one million trees within the term. Street tree program will see minimum 4000 trees planted throughout term.

Cairns Regional Council – The development of a **vegetation management strategy** has commenced as part of the Climate Change Strategy 2030.

Cassowary Coast Regional Council – investigating with intent to develop a greening strategy.

Gladstone – An Urban forest and tree management Corporate Standard that is aligned to the Environment Policy and Biodiversity Strategy.

Mackay Regional Council – is currently developing an urban greening strategy to align with council's Environmental Sustainability Strategy and any future emissions reduction targets.

Rockhampton Regional Council – investigating.

Tablelands Regional Council – council has produced a draft Voluntary Habitat Resotoration Policy which highlights priority parcels of native vegetation for protection and restoration, and guides decision making by council and staff, landholders, community groups, agricultural industries and other interested stakeholders.

Townsville City Council – council has been implementing a community-based landcare and dry tropics approach to greening projects and processes. There are several dry tropics council-based revegetation and restorative ecology processes and programs underway in council and with the support of council in the community. Council is exploring urban environment greening and stormwater improvement opportunities through the Bohle Water Quality Offsets Roadmap. Council has also developed a tree policy requiring no net loss of trees on council-controlled land. Some 15,000 local native trees, shrubs and grasses were planted in projects and environmental areas in the 2021–22 financial year.

Whitsunday Regional Council – council is developing a street tree implementation project.

3 councils are implementing offsets (purchased or provided through other means) and 2 are investigating

Bundaberg Regional Council – Australian National Registry of Emissions Units (ANREU) account containing Australian carbon credit units (ACCU), to be sold under public auction.

Cairns Regional Council – emissions offsetting forms part of council's pathway to net zero emissions, identified within the Climate Change Strategy 2030. An offsets framework is being developed to maximise opportunities for environmental, social and economic co-benefits of generating or purchasing carbon offsets.

Mackay Regional Council – considered as part of council's corporate emissions reduction plan.

Townsville City Council – implements offsets for carbon emissions via LMS Energy, creating ACCUs. Council is also developing an integrated offsets framework for State and Commonwealth Environmental Offsets, Biodiversity Offsets, Reef Offsets Advanced Offsets and Plastic Offsets.

Whitsunday Regional Council – investigating. Council has engaged a consultant to review carbon offset options.

14 councils have installed bike paths for active transport

Bundaberg Regional Council – 4.3 kilometres of concrete pathways installed since July 2020, across 15 sites throughout the region.

Burdekin Shire Council – 12 kilometres of concrete pathways installed as Be Active trails in Ayr and Home Hill.

Cairns Regional Council – an additional five kilometres of cycleways were added to the regions walking and cycling network in 2020/21.

Cassowary Coast Regional Council – 250 metres shared pathway installed in 2020–21.

Central Highlands Regional Council – is delivering well-maintained walkways and cycling paths as part of an Active Transport Strategy.

Cook Shire Council – new shared pathway and pedestrian bridge installed at Two Mile in Cooktown, linking racecourse and RV park to township.

Douglas Shire Council – two kilometres of bike path installed, 1700 tonnes of concrete recycled from crushed footpath (landfill diverted) and 65.44 tonnes emissions saved.

Gladstone Regional Council – is represented in the Department of Transport and Main Roads' (DTMR) Principle Cycle Network Plan for Central Queensland. DTMR review the priority route maps every two years, and local governments must have an endorsed plan to access funding for cyclone infrastructure. Gladstone Regional Council's Pedestrian and Cycle Strategy was adopted in 2018. The Strategy provides a five-year action plan to improve conditions for walking and cycling in the region.

Hinchinbrook Shire Council – council has a bike path strategy and continues to add to the pathway length each financial year.

Livingstone Shire Council – shared pathway now extends down to Mulambin from Farnborough Beach. Planning underway for pathway from Mulambin to Emu Park.

Mackay – council's Integrated Transport Strategy includes the continued installation of bike paths but these projects are not directly linked to an emissions reduction target.

Rockhampton Regional Council – several kilometres of new pathways each year as funding allows.

Townsville City Council – council has an extensive bike path network across the city. Douglas Stage 2 bike path is under construction and studies are underway for three further cycleways. An Active Transport Strategy is also underway.

Whitsunday Regional Council – council is reviewing its transport strategy which includes cycleways.

9 councils have electric vehicle charging stations in their region, and 5 are investigating

Bundaberg Regional Council – charging stations installed in Bundaberg City, Burnett Heads, and one station each in Gin Gin and Childers, provided by Queensland Government as part of the Queensland Electric Super Highway.

Burdekin Shire Council – one non-council-owned charging station is located within the shire.

Cairns Regional Council – two public charge points are in operation at the esplanade lagoon carpark as part of the Queensland Electric Super Highway.

Cassowary Coast Regional Council – Innisfail, Tully, Cardwell and Mena Creek (four total in region), installed by other entities.

Central Highlands Regional Council – fast charging stations will be installed at Dingo and Emerald, as part of the Queensland Electric Super Highway.

Cook Shire Council – investigating installation.

Douglas Shire Council – six electric vehicle charging stations are in the shire, and were installed as part of the Queensland Electric Super Highway or by other entities.

Gladstone Regional Council – one station installed for Council Fleet at the Gladstone library, with further stations planned to support the EV forklifts.

Hinchinbrook Shire Council – council has received quote for an electric vehicle charging station

Livingstone Shire Council – investigating installation of charging stations in the Yepoon CBD.

Mackay Regional Council – being considered as part of council's corporate emissions reduction plan

Rockhampton Regional Council – a number of existing EV charging stations are in the region including one at City Hall. Council has recently installed two new stations for council fleet (Glenmore Water Treatment Plant and Dooley Street Depot) and is working with Tesla to identify suitable locations for new community charging stations.

Townsville City Council – council has installed one fast charging station in a CBD main street, three public charging stations in key community locations, and four council depot chargers. One petrol station has installed fast chargers, multiple hotels have installed chargers and the Queensland Government has installed fast chargers at JCU as part of its super highway strategy.

Whitsunday Regional Council – two in the region.

7 councils have electric or hybrid fleet vehicles and 2 are considering

Cairns Regional Council – more than 12 hybrid vehicles in council's passenger fleet.

Cassowary Coast Regional Council – four hybrid light vehicles, three currently on order, continue replacement program as vehicles retired through renewal process as part of 10 year fleet asset management plan.

Douglas Shire Council – currently investigating electric vehicles. Council is transitioning to hybrid trucks, and developing a Plant and Equipment Asset Management Plan.

Gladstone Regional Council – One electric vehicle and five EV forklifts purchased with ongoing assessment of available/suitable vehicles being undertaken in-line with improved required infrastructure.

Hinchinbrook Shire Council – council has one hybrid vehicle and is investigating the purchase of an electric vehicle in 2022–23 financial year.

Livingstone Shire Council – council has two hybrid vehicles.

Mackay Regional Council – considered as part of council's corporate emissions reduction plan.

Rockhampton Regional Council – council's fleet includes six electric and seven hybrid vehicles, with the potential to significantly increase these numbers once fully-electric utilities become more readily available over the next few years.

Townsville City Council – currently has three electric vehicles, one petrol electric plug-in hybrid, and eight petrol hybrids (e.g. Prius/Camry) and has released a tender for 60 utility vehicles that could be electric, hybrid or low emission vehicles.

Appendix B: Desktop survey results

Desktop audit, of Reef Guardian Councils' websites, using criteria for comparison from 2021 Australian Local Government Climate Review, Ironbark Sustainability and ICLEI – Local Governments for Sustainability (ICLEI Oceania).

| Council | Website address | Information addressing climate change issues | Presents actions focusing on reducing or saving energy | Presents current strategies, actions and plans to reduce emissions | Presents current targets to reduce emissions for council operations | Presents current targets to reduce community emissions |
|---------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------|--------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------|--------------------------------------------------------|
| Bundaberg Regional Council | www.bundaberg.qld.gov.au | Y | N | Y | Y | N |
| Burdekin Shire Council | www.burdekin.qld.gov.au | N | N | Y | N | N |
| Cairns Regional Council | www.cairns.qld.gov.au | Y | Y | Y | Y | Y |
| Cassowary Coast Regional Council | www.cassowarycoast.qld.gov.au | N | N | Y | Y | N |
| Central Highlands Regional Council | www.centralhighlands.qld.gov.au | N | N | Y | Y | N |
| Cook Shire Council | www.cook.qld.gov.au | N | Y | Y | Y | N |
| Douglas Shire Council | www.douglas.qld.gov.au | Y | Y | Y | N | N |
| Gladstone Regional Council | www.gladstone.qld.gov.au | Y | N | Y | N | N |
| Hinchinbrook Shire Council | www.hinchinbrook.qld.gov.au | Y | N | Y | N | N |
| Isaac Regional Council | www.isaac.qld.gov.au | N | N | Y | N | N |
| Livingstone Shire Council | www.livingstone.qld.gov.au | Y | Y | Y | Y | N |
| Mackay Regional Council | www.mackay.qld.gov.au | Y | Y | Y | N | N |
| Mareeba Shire Council | www.msc.qld.gov.au | N | Y | Y | N | N |
| Rockhampton Regional Council | www.rockhamptonregion.qld.gov.au | Y | Y | Y | N | N |
| Tablelands Regional Council | www.trc.qld.gov.au | Y | Y | Y | N | N |
| Townsville City Council | www.townsville.qld.gov.au | Y | Y | Y | Y | N |
| Whitsunday Regional Council | www.whitsundayrc.qld.gov.au | Y | Y | Y | Y | N |
| Wujal Wujal Aboriginal Shire Council | www.wujalwujalcouncil.qld.gov.au | Y | N | N | N | N |
| Yarrabah Aboriginal Shire Council | www.yarrabah.qld.gov.au | N | N | N | N | N |
| Reef Guardian Councils | | 63% | 47% | 89% | 58% | 16% |
| Australian local government comparison 2017 | | 50% | 48% | 42% | 19% | 7% |
| Australian local government comparison 2020 | | 50% | 40% | 33% | 24% | 11% |



Reef Guardian Councils

Great Barrier Reef Marine Park Authority

Email: reef.councils@gbrmpa.gov.au

www.gbrmpa.gov.au



Australian Government

Great Barrier Reef
Marine Park Authority

