



Sustainability and Climate Action Plan 2022 - 2025

Supporting the Central Coast to adapt to a
changing climate

**‘We Acknowledge The
Traditional Owners of the Land
on Which We Live and Pay Our
Respects to Elders Past and
Present.’**

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Image: Sydney Red Gum (*Angophora costata*) - Chris McLean

The Central Coast Sustainability and Climate Action Plan 2022-2025 aims to...

The Plan includes 27 Actions within five themes, relating to natural systems, water and energy efficiency, community empowerment, waste reduction and improved strategic planning. The actions include initiatives that are currently underway and those that will be started over the next three years. Through the implementation of the actions within the Plan the Central Coast Council aims to reduce its environmental footprint and mitigate the effects of a changing climate.

The actions in this document will assist Council in becoming a Net Zero Emissions Council.

What you said?

Over the past three years Council has asked you, the community, for your perspectives on environmental sustainability and climate change. This includes a sustainability survey completed via Your Voice Our Coast in 2019, face to face and online consultation completed as part of Council's Climate Change Policy and consultation for the Climate Action Plan completed online and partially face to face in 2020.

2.1 Sustainability Survey 2019

You were asked which key areas do you think are the key areas where we are making the greatest progress towards in achieving environmental sustainability.

The online survey was conducted from Monday 18 February to Sunday 17 March 2019. In total, 702 participants took part in the survey.

The sustainability survey was the first step in informing the actions in the Sustainability and Climate Action Plan for the Central Coast.

Top Five You Nominated



**Maintenance/
preservation
of waterways,**
lagoons & lakes



Waste, recycling,
organic waste



**Sustainable
buildings,** planning,
DA compliance



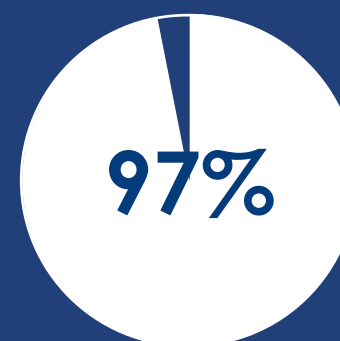
Education,
engagement,
community awareness



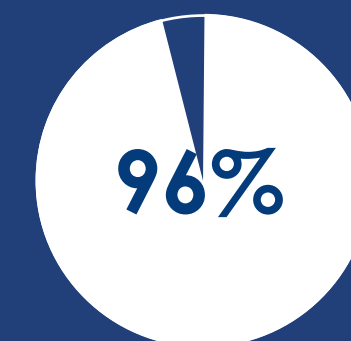
Sustainable and **active
transport**

Other feedback

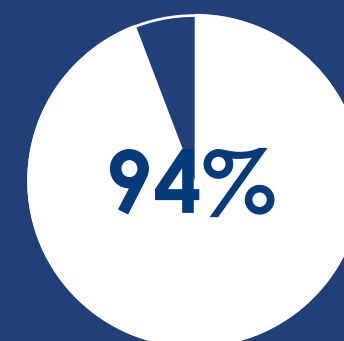
Extensive consultation occurred with the community during the public exhibition stage of the Central Coast Climate Change Policy 2019. Several submissions were also received which identified the following.



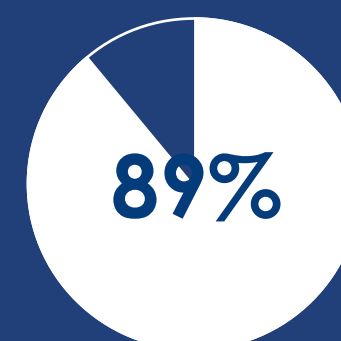
Waste and recycling
was very important



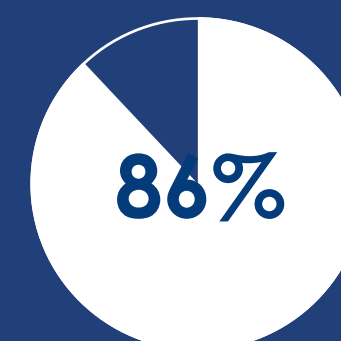
Water security on the
Central Coast was
very important



**Conserving the
Central Coast
Biodiversity** was very
important



**Renewable energy
and green house gas
emissions** were very
important

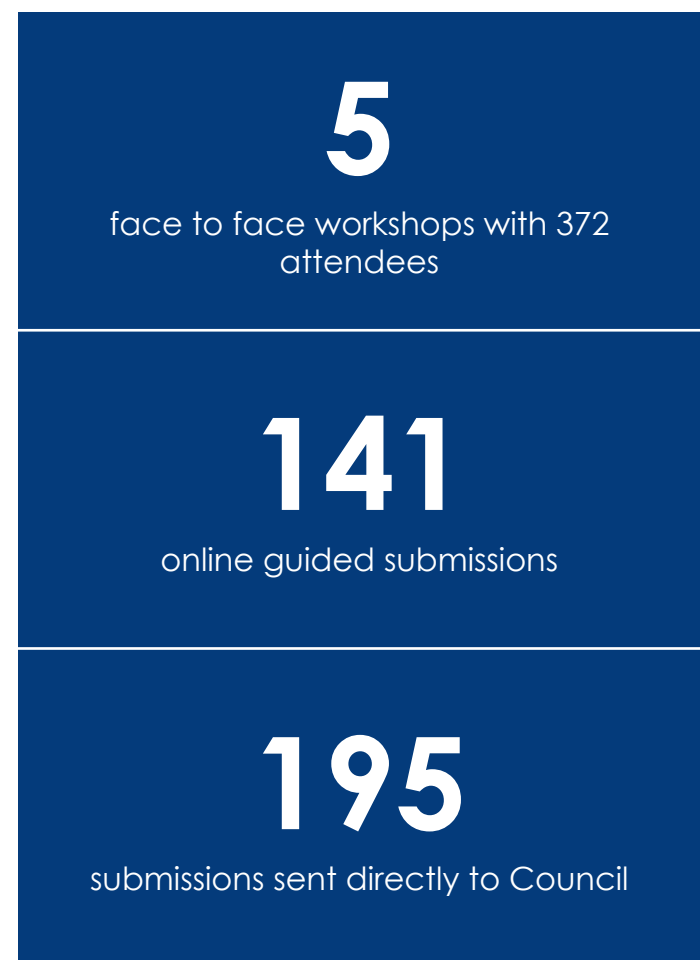


**Preparing for climate
change** is very
important

2.2 Climate Change Policy Consultation 2019

Some of the key findings that came out of the Climate Change Policy consultation were;

- The effects from rising water levels/ floods and extreme weather events;
- Concerns for bush-fires are also greater for respondents that live closer to bushland/ nature reserves;
- A quarter of Central Coast Council staff believe Council business and/ or their work activities will be impacted by having to deal with damage/ changes to local infrastructure from severe weather events; and
- Respondents liked that the policy acknowledges and attempt to address/ tackle climate change.



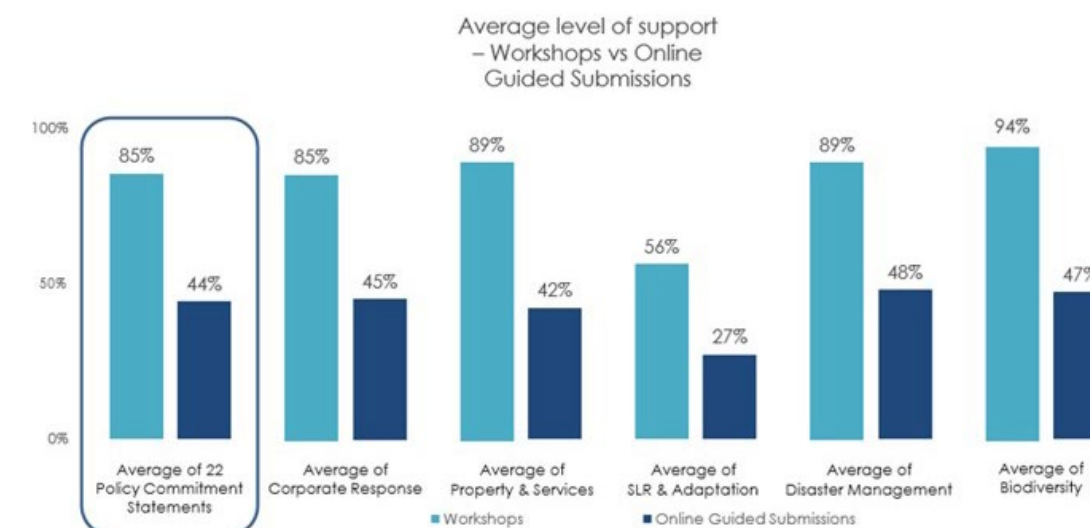
A statement expressed at the Ettalong public consultation session 2019:

"I keep hearing about 'when I was growing up there was no sea level rise, there was no bush fires, there was no this, etc.' But for me growing up, every other week on the news there's another natural disaster, there's hundreds of people dying from cyclones and from this and that. There's not enough planning in place to protect these people. So for you growing up, yes, maybe it wasn't a big part of your life, but for me growing up, it's a weekly thing."

"I keep hearing about 'when I was growing up there was no sea level rise, there was no bush fires, there was no this, etc.'"

Summary of Support - Category Averages

The bar graph below shows workshops were seen to engage those in the community who are supportive or eager to see a commitment towards improved sustainability and climate action throughout the Central Coast.



A working group of community members was established in late 2019 to guide the development of the Climate Action Plan. This group provided guidance towards the development of Actions which was used to develop this Plan.

2.3 Climate Action Plan pre-consultation 2020

The pre-consultation was intended to consist of community workshops across the Central Coast, however due to COVID-19, in-person workshops were not possible so an online survey was conducted instead. The online survey received 3860 unique submissions. A separate student survey, promoted through local schools was run in parallel and received 734 responses.

3860

public submissions received online

734

student submissions received





**Why do we need to become
more sustainable and address
climate change?**

The Australian climate has warmed on average by 1.44 ± 0.24 °C since national records began in 1910. This has resulted in more very hot days. This is directly correlated to the release of the greenhouse gases of carbon dioxide and methane.

3.1 Increased warming & greenhouse gas emissions

In 1950 the concentration of atmospheric carbon dioxide was around 300 parts per million, while in May 2021 the estimated concentration was around 419 parts per million.

Carbon dioxide is not the only gas that contributes to global warming. Greenhouse Gases also include methane and nitrous oxide. Both gases are generated by agricultural practices (livestock and fertilisers). Options for completely stopping these emissions are limited however there are opportunities to offset their impacts by planting trees or rehabilitating vegetation.

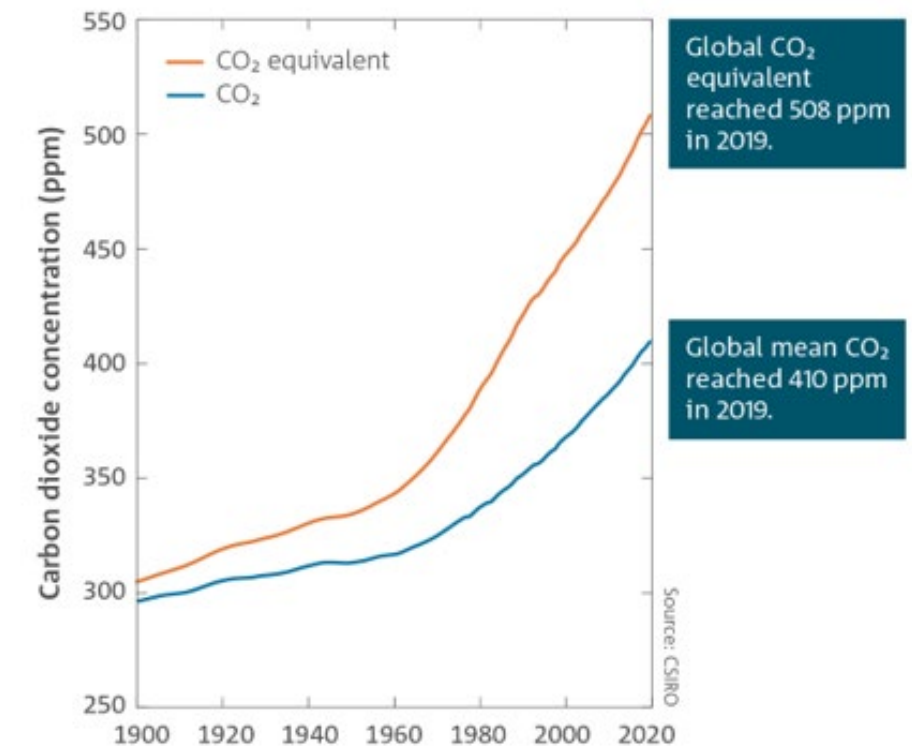
At the recent United Nations climate summit 2021 in Glasgow, more than 90 nations signed a global pledge to cut methane emissions. Unfortunately Australia was not one of them.

3.2 Representative Concentration Pathways (RCPs) and What They Mean?

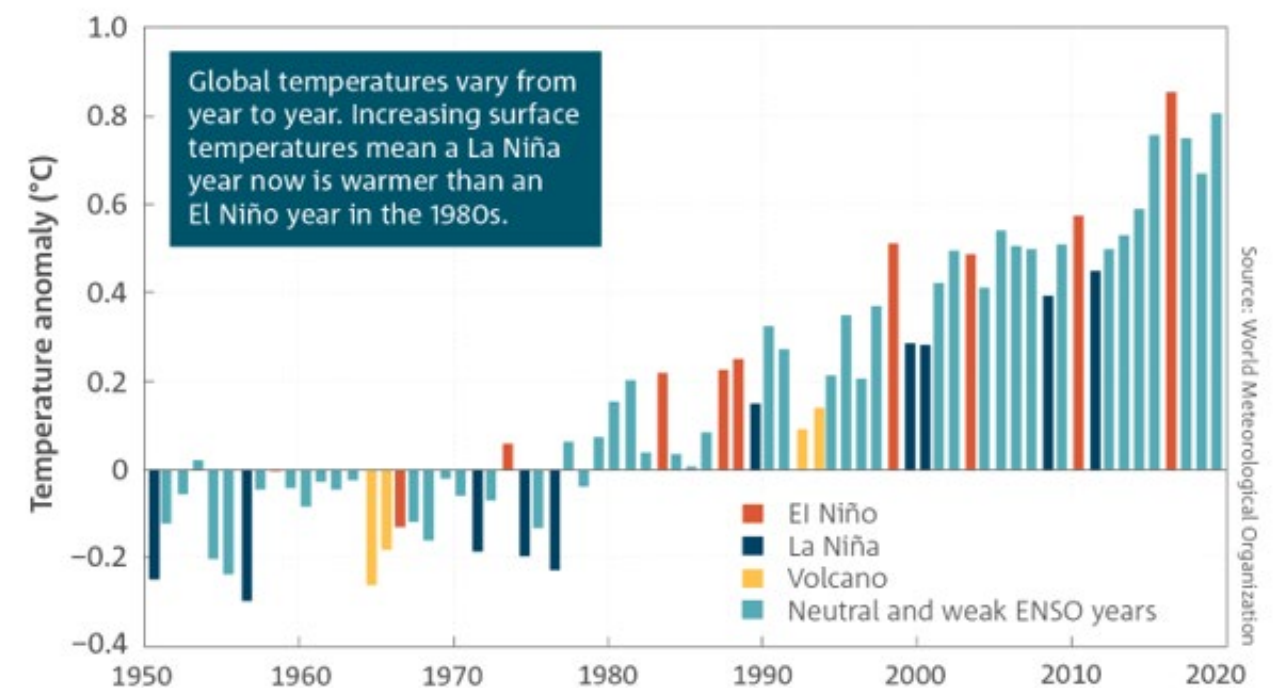
A Representative Concentration Pathway (RCP) is a greenhouse gas atmospheric concentration, adopted by the Intergovernmental Panel on Climate Change. Different RCPs reflect different levels of the residual energy retained in the atmosphere, expressed as the number of watts per square metre.

The Paris Climate Agreement, which aims to limit increased warming to less than 1.5°C aligns to a RCP 1.9. Other RCPs have also been considered, through to RCP 8.5 which is a worst-case scenario that would occur without any abatement and collapse of frozen ecosystems.

As global citizens, the Central Coast community has a role to play in mitigating the effects of climate change. As such actions within this Plan will assist the Central Coast community in providing their contribution towards reaching RCP 1.9.



Carbon dioxide atmospheric concentration over time. Source: Australian Bureau of Meteorology



Global surface temperature anomalies of land and sea temperature the Earth for 1950 to 2019. Source: Australian Bureau of Meteorology.

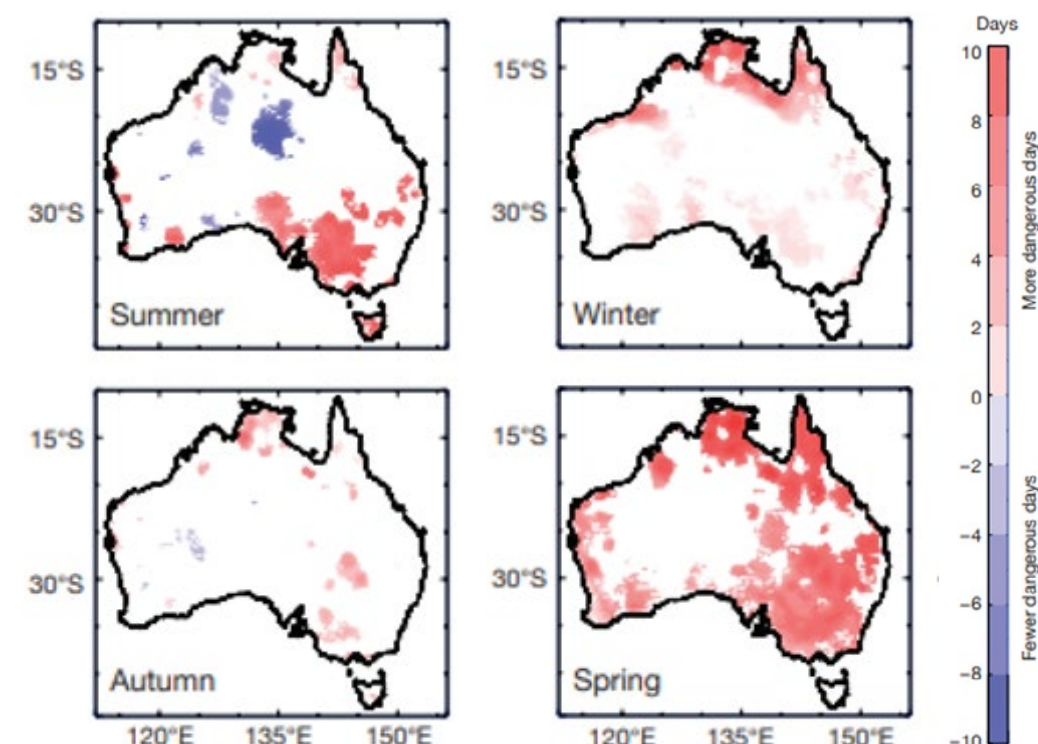
Extreme heat events are one of the most significant natural hazards and responsible for more deaths in Australia than any other natural hazard. Average temperatures across Australia have increased by 1.44 °C since 1910 (CSIRO & BOM 2018).

3.3 Effects of Climate Change on Extreme Weather

Work by Adapt NSW suggests that climate change is expected to increase fire risk across the Central Coast region by:

1. Predicted higher temperatures and greater frequency of droughts. This means a greater number of days at a severe or greater fire weather condition and if ignitions occur, its more likely these will occur under conditions that make fires more unpredictable and difficult to control.
2. Longer fire seasons, with the first day at a high fire weather condition becoming earlier. This reduces the window in which fuel reduction burning can be completed.

It's likely that local temperatures will increase by approximately 1°C over the coming decade and by approximately 2.7°C by 2070. Its also projected that the number of extreme heat days and heat-waves will increase in prevalence over time.



Changes between 2000-2016 in the number of days experiencing severe or greater fire weather condition. Source: National Environmental Science Program (NESP).



Image: 2019 Bushfires - The Guardian, Photograph By Dan Himbrechts/ EPA

Anthropogenic climate change poses a significant threat to global biodiversity and is considered to impact on 82% of 94 core ecological processes globally.

3.4 Climate Change Effects on Biodiversity

Evidence has emerged showing that the distribution of many species have shifted in latitude and elevation in response to climate change, while other observed changes include earlier breeding in wildlife and earlier flowering of plants.

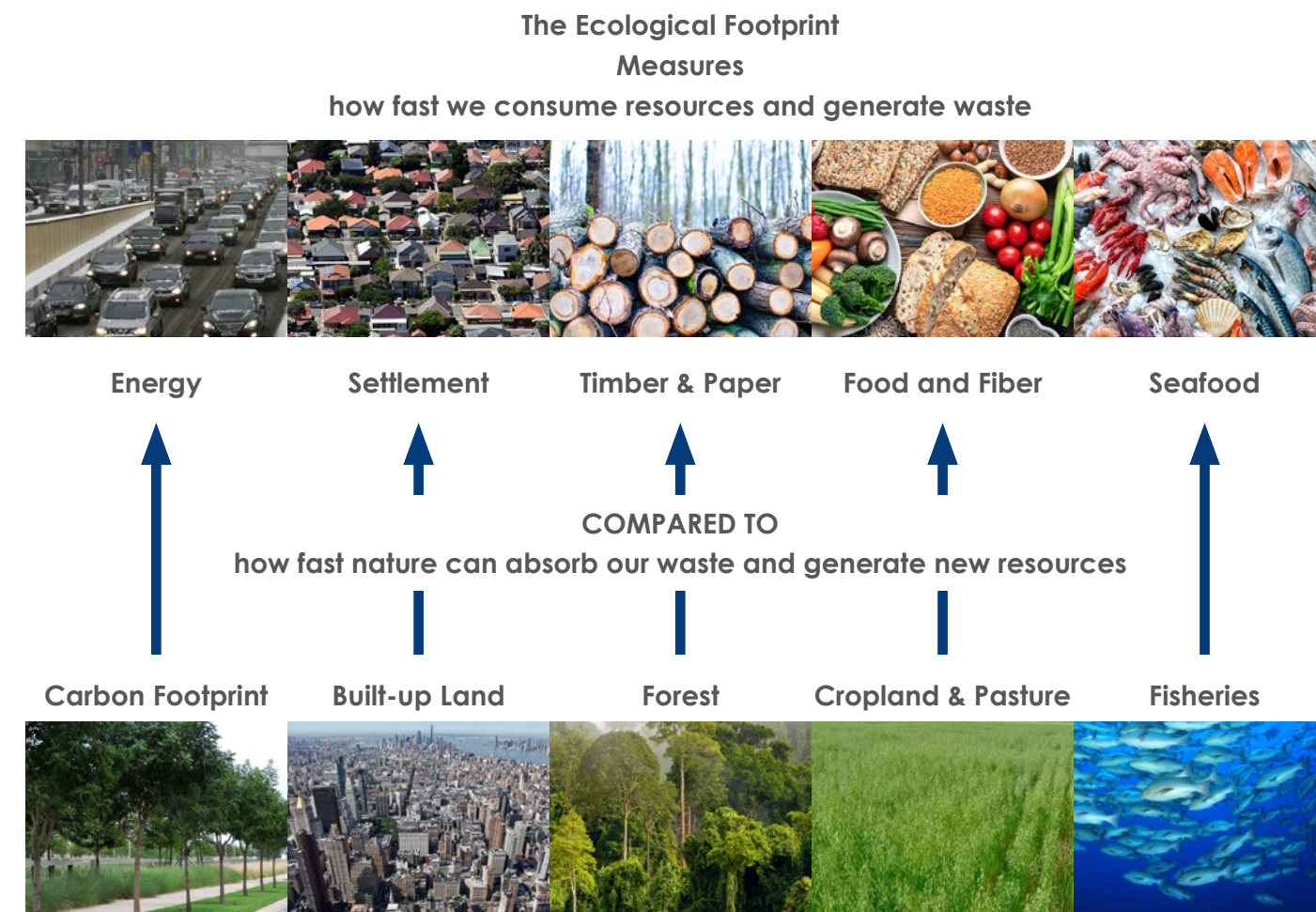
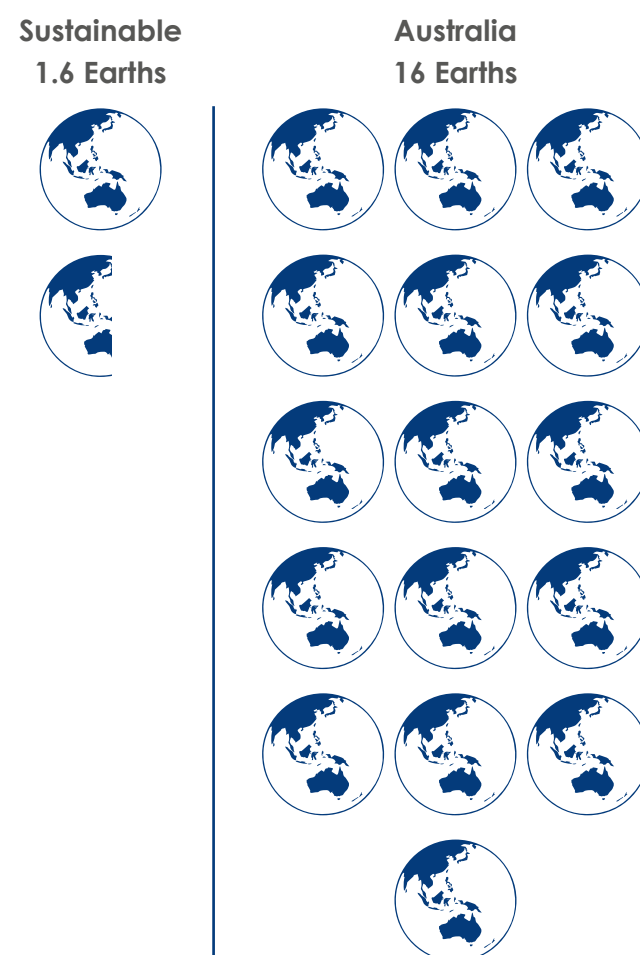
Heat-waves which are more likely to occur in a warming world can affect biodiversity. Plants and animals already stressed from drought can die.



Ecological footprints relate to the amount of resources that are consumed compared to the natural replenishment rate of those resources. This includes clean water, food production, other raw materials such as timber, along with their impacts, such as the release of pollutants, soil erosion and other environmental harm.

3.5 Ecological Footprints and Importance Towards Environmental Sustainability

To sustain life on Earth, 1.6 Earth's worth of resources are used each year. However, in Australia we use over 16 Earth's resources to sustain our lifestyles. It takes around six hectares of land to sustain the lifestyle of each person in Australia. Most of this impact relates to high levels of carbon dioxide release from the burning of coal and oil.

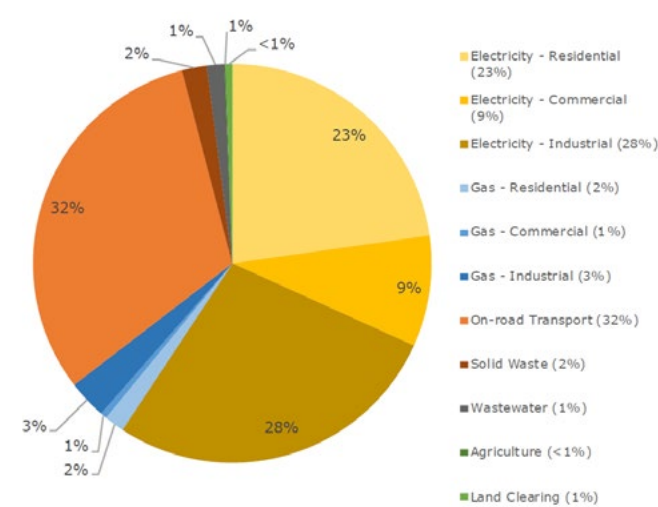


In 2019 Council engaged Ironbark Consulting to develop a community emissions profile for the Central Coast. This work was able to determine the total emissions and break these down by emissions type.

3.6 Community Emissions Profile

Electricity consumption was the biggest emitter, accounting for 60% of the region’s emissions across residential, commercial and industrial uses.

On-road transport was the next biggest emitter, accounting for 32% of emissions. Combined transport and electricity consumption account for 92% of the region’s emissions.



Category	Total Emissions (t CO ₂ -e)	Percentage
Stationary Energy – Electricity	2,231,121	60%
Stationary Energy – Gas	199,460	5%
Transportation – On-road	1,179,874	32%
Waste	75,879	2%
Wastewater	53,254	1%
Agriculture	3,157	0.1%
Land Use - Land Clearing	20,488	0.5%
Land Use - Afforestation	(36,763)	-1.0%
Total	3,726,470	100%

Sources of our greenhouse gas emissions on the Central Coast



Image: The Central Coast Peninsula - Central Coast Council



Introducing the Five Themes and Actions for Sustainability and Climate Action.

The five themes for sustainability and climate action have been identified.

4.1 The Five Themes

These relate to both reducing emissions and environmental footprints as well as ensuring that the region is resilient against environmental change and natural disasters and embrace environmental sustainability practices.



Image: Picnic area at Norah Head - Chris McLean

The Five Themes

T1.

Protect, enhance and or manage natural systems, including hydrological processes (the water cycle) towards climate mitigation and adaptation, ensuring climate impacts to natural systems are reduced.

T2.

Council to become a leader in water and energy efficiency in the Central Coast region.

T3.

Empower the Central Coast community to become advocates towards climate mitigation for the region.

T4.

Support reduced waste generation via enhancing community awareness and action around waste avoidance and adopting a circular economy approach to reusing or recycling materials to reduce waste and raw material extraction, production and transport costs.

T5.

Strategic Planning incorporates sustainability principles into town centres, urban renewal and greenfield development.

Consistent with the adopted Central Coast Council Climate Change Policy (CCCCP) the six key principles drive Council's commitment to Climate Change and Sustainability.

4.2 The Six Principles

Each of the six principles are consistent with the Central Coast Climate Change Policy 2019 and aligned to one of the 19 Policy Commitment Statements.

Home > All Projects > Climate Change Policy

Climate Change Policy

This public exhibition has now concluded.

Council wishes to thank the community for helping shape the Central Coast Council's Climate Change Policy.

[View the adopted policy.](#)

The revised policy has been amended specifically to respond to the following key issues raised by the community:

- Revise the wording of the draft Policy to be more reflective of what the Council wishes to achieve in a simplified format.
- More community involvement in the decision making, consultation and planning around climate change issues.
- More information needed in relation to flood mapping to identify the risks and explain the impacts.
- Concern about the potential financial implications that may arise as a result of the draft Policy (including decreasing property values, increasing insurance premiums and the relocation costs of planned retreat).
- Council should not be investing in this and rather focus on other core services and belief that this is a State and Federal Government matter.

CLOSED

Business Papers - 13 August 2018 Council Meeting (See Item 5.1 - Climate Change...)

Minutes - 13 August 2018 Council Meeting (See Item 5.1 - Climate Change report)

The Six Principles

P1

Council endorse the Ecologically Sustainable Development (ESD) values through integrating social, economic and environmental considerations into Council's decision making through the implementation of the four principles: precautionary principles, inter-generational equity, conservation of biological diversity and improved valuation, pricing and incentive mechanisms.

P3

Council implement evidence based decision making to respond, to adapt and build resilience to Climate Change.

P5

Council implement a proactive approach and ensure continuity to better anticipate and adapt to complex challenges posed by the changing climate.

P2

Council implement a holistic approach to anticipate and adapt to climate change actions identified as now and the future as well as the impacts between man-made and environmental systems..

P4

Council implement a collective decision making approach to collaborate and partner with the community, business and other stakeholders in framing and implementing climate actions through learning and shared responsibility.

P6

Council implement a Place-based approach to enhance Council and community capacity for climate resilience that is context specific, knowledge based and collaborative.

Along with over 145 Australian Councils, Central Coast is a member of the Climate Council's Cities Power Partnership. To achieve Council's commitment, six pledges have occurred. These pledges are reflected in the Actions included in this Plan.

4.3 Council's Cities Power Partnership Commitments

The Climate Council's Cities Power Partnership (CPP) seeks to celebrate and accelerate the emission reduction and clean energy successes of Australian towns and cities to date. In this the program seeks Councils to commit to pledges that reduce their emissions over time.



The Six Pledges

CPP1.

Install renewable energy (solar PV and battery storage) on council buildings for example childcare facilities, libraries, street lighting, recreation centres, sporting grounds, and council offices.

CPP2.

Identify opportunities to turn waste to energy.

CPP3.

Implement landfill gas methane flaring or capture for electricity generation.

CPP4.

Public lighting can use a large proportion of a city's energy budget - roll out energy efficient lighting (particularly street lighting) across the municipality.

CPP5.

Ensure Council fleet purchases meet strict greenhouse gas emissions requirements and support the uptake of electric vehicles.

CPP6.

Support local community energy groups with their community energy initiatives.

The 27 actions for sustainability and climate action have been identified.

4.4 The Actions

The following 27 actions have been identified and coordinated with Councils internal business units and future Delivery Program.

Each of the actions relate back to the 5 themes for sustainability and climate action and identify the associated SCAP principle, Cities Power Partnership pledge, timing and lead business unit/s.

Council Business Unit	Abbreviation
Strategic Planning	SPU
Roads & Drainage Infrastructure	R&DIU
Engineering Services	ESU
Environmental Management	EMU
Facilities Management & Operations	FM&OU
Waste & Resource Recovery	W&RRU
Open Space & Recreation	OS&RU
Plant & Fleet	P&FU





1.

Protect, enhance and or manage natural systems, including hydrological processes (the water cycle) towards climate mitigation and adaptation, ensuring climate impacts to natural systems are reduced.

SCAP Principle	CPP Pledge	The Actions	Commence By Financial Year	Lead Unit/s
P6	NA	1a Undertake environmental management activities that increase the ecological resilience of Council's natural areas, water ways and riparian zones.	Action Already Underway	EMU
P1, P2, P6	NA	1b Prepare Species Management Plans for key threatened species, identify climate refuges and include a monitoring component to track the status of these species over time in a changing climate.	Action Already Underway	SPU
P1, P2, P6	NA	1c Facilitate opportunities for community groups where appropriate to undertake tree plantings along identified streets and underutilised Council land (parks & reserves) throughout the Central Coast. In accordance with Councils Civil Works Specification, Greener Places Strategy and Street Design Manual.	22/23	ESU, R&DIU, OS&RU & EMU
P1, P2, P6	NA	1d Invest in urban forest canopy in areas of high pedestrian and cyclist activity to mitigate urban heat island effects.	23/24	ESU & R&DIU
P1, P2, P6	NA	1e Develop and use geospatial data to inform and guide strategic planning to identify critical locations where vegetation, habitat, connections or species must be avoided and protected to ensure persistence under a changing climate.	24/25	SPU
P5	NA	1f Develop a Citizen Science program that allows the community to track changes in biodiversity in their community over time.	24/25	EMU



2.

Council to become a leader in water and energy efficiency in the region.

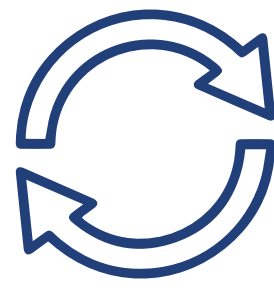
SCAP Principle	CPP Pledge	The Actions	Commence By Financial Year	Lead Unit/s
P3	CPP5	2a Ensure Council fleet purchases meet strict greenhouse gas emissions requirements and support the uptake of electric and hydrogen-powered vehicles.	Action Already Underway	P&FU
P3	CPP1	2b Adopt best practice energy and water efficiency measures and install renewable energy on council buildings.	Action Already Underway	FM&OU
P3	CPP4	2c Roll out energy efficient public lighting (particularly street lighting) across the region	22/23	R&DIU & OS&RU
P3	CPP1	2d Create an internal revolving green energy levy to finance renewable energy projects. Additionally where cost savings occur across the organisation ensure they are reinvested into green energy initiatives.	23/24	FM&OU
P3	NA	2e Ensure where possible alternate water sources are utilised to irrigate sports fields. Explore opportunities to introduce water recycling during sports field upgrades or as part of new sports complexes.	23/24	OS&RU



3.

Empower the Central Coast community to become advocates towards climate mitigation for the region.

SCAP Principle	CPP Pledge	The Actions	Commence By Financial Year	Lead Unit/s
P4	NA	3a Re-establish support for community garden initiatives via community grants, sponsorship funding and developing a Community Garden Guideline to help residents establish and manage community gardens. Community gardens encourage local farmed food (herbs, fruit and vegetable) and can be constructed from recycled materials.	22/23	OS&RU
P4	NA	3b Develop strategies and initiatives to support the community to reduce their energy use and waste generation. E.g. equipment upgrades to reduce energy consumption, investment in energy and emissions monitoring and management systems and energy generation and storage projects such as solar systems and batteries.	23/24	W&RRU
P4	NA	3c Develop a program to provide free long-lived large shrubs and trees (or nursery vouchers) to the community to assist them in reducing urban heat islands at their home.	24/25	EMU
P4	CPP6	3d Support local community based energy groups with their community energy initiatives.	24/25	FM&OU



4.

Support reduced waste generation via enhancing community awareness and action around waste avoidance and adopting a circular economy approach to reusing or recycling materials to reduce waste and raw material extraction, production and transport costs.

SCAP Principle	CPP Pledge	The Actions	Commence By Financial Year	Lead Unit/s
P4	CPP3	4a Maximise landfill gas capture rates through the installation of new infrastructure, the upgrade of existing equipment and changes to management practices.	Action Already Underway	W&RRU
P4	NA	4b Reduce the amount of organic material going to landfill through the investigation and planning for a large-scale waste processing solution for food and garden organics (FOGO)	22/23	W&RRU
P4	NA	4c Council will develop and deliver a program to engage with residents and businesses to enhance community awareness and behavioral change around waste avoidance and reuse/ repair/ repurposing through targeted education campaigns.	23/24	W&RRU
P4	NA	4d Facilitate and utilise local end markets for recycled products and materials.	23/24	W&RRU
P4	NA	4e Identify barriers and opportunities to expanding the urban horticulture industry, with links to circular economy principles on the Central Coast, such as through the production of Micro Greens. Work with the industry to facilitate these opportunities.	24/25	SPU
P4	CPP2	4f Explore the viability of an integrated resource recovery precinct(s) to maximise recovery of resources from a wide range of local waste streams, which if viable may become a Circular Economy precinct.	24/25	W&RRU



5.
Strategic Planning incorporates sustainability principles into town centres, urban renewal and greenfield development.

SCAP Principle	CPP Pledge	The Actions	Commence By Financial Year	Lead Unit/s
P6	NA	5a Facilitate the provision of sustainable transport options and infrastructure (public transport, shared paths, cycleways etc.) through Council transport planning and design. E.g. The adopted Central Coast Pedestrian Access and Mobility Plan (PAMP) and Street Design Manual, currently in development.	22/23	SPU, R&DIU & ESU
P6	NA	5b Amend planning controls to require medium and high density development to set minimum energy efficiency benchmarks, storm-water reuse, and other sustainability measures such as provision of electric charging infrastructure and carbon offsetting. Coordinate with the NSW Department of Planning, Industry and Environments Design and Place State Environmental Planning Policy (SEPP).	22/23	SPU & DAU
P2	NA	5c Review and update Council's Climate Change Policy on adoption of this Sustainability and Climate Change Action Plan.	22/23	SPU
P6	CPP5	5d Identify the most suitable public locations for fast-charging infrastructure for electric vehicles throughout the region considering EV Infrastructure as part of Council's Integrated Transport Strategy for the Region.	23/24	SPU
P4	NA	5e Lobby for new electric and or hydrogen powered buses on the coast. Working closely with Busways and other privatised public transport providers across the Central Coast.	23/24	SPU
P4, P6	NA	5f Support improved rail transport powered by renewables, including the Fast Rail project. Sydney Trains and NSW TrainLink Services have already transitioned to net zero emissions. The first heavy rail network in Australia to transition to completely green energy.	24/25	SPU

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**Consistency with other
Sustainability and Climate
Change Policy Directions.**

One Central Coast is a 10 year community vision that reflects the values of the Central Coast community and what matters most to them.

5.1 One Central Coast: Central Coast Community Strategic Plan 2018 - 2028

The Community Strategic Plan (CSP) is the 10 year plan developed by Council through engagement with the community to help set their priorities and confirm strategies and activities that best achieve the community's desired outcomes for the future.

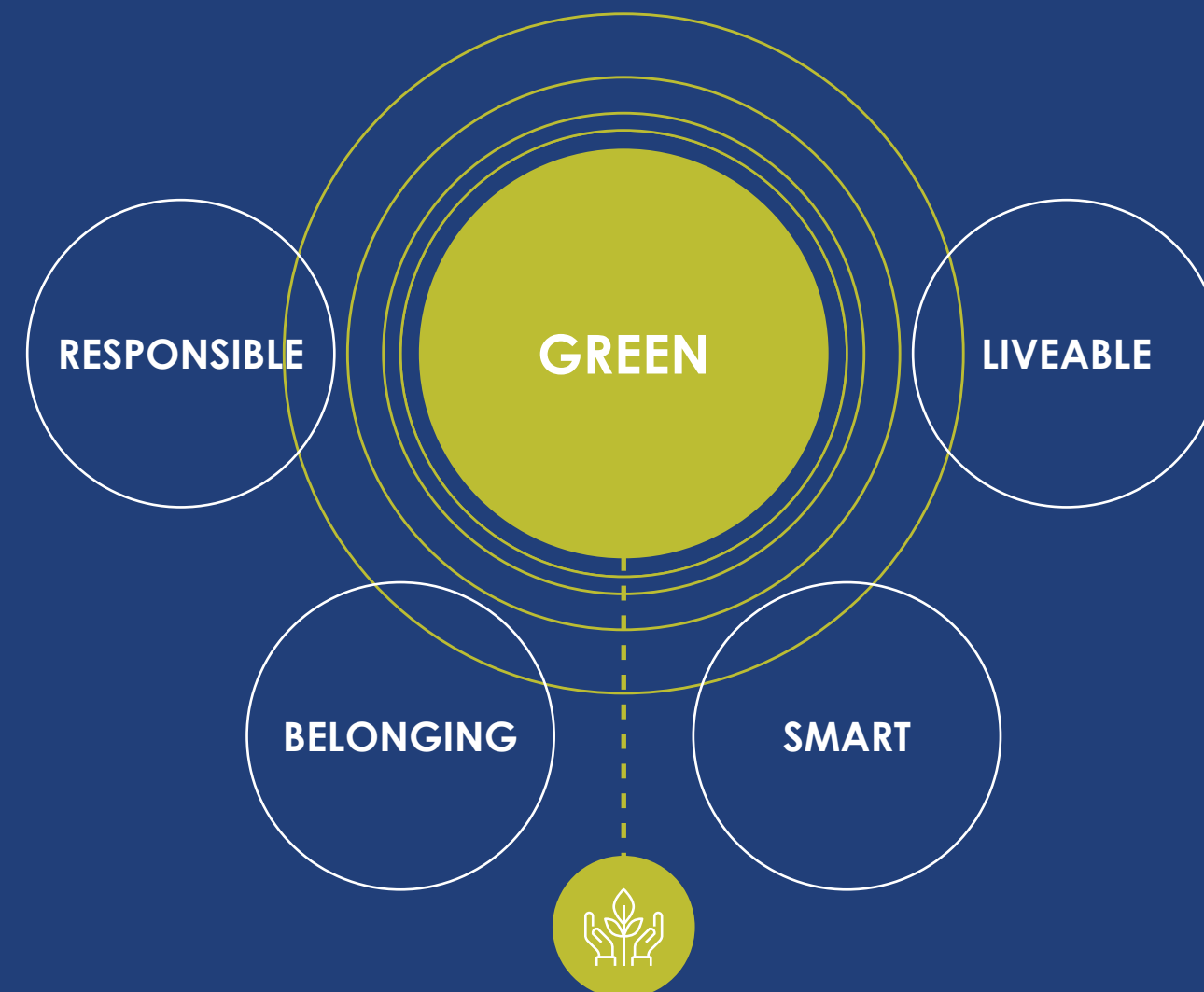
The CSP includes the five key themes of:

- Belonging
- Smart
- Green
- Responsible
- Liveable

Each theme includes a number of objectives.

This plan addresses objective F4: "Address climate change and its impacts through collaborative strategic planning and responsible land management".

The actions of this Sustainability and Climate Change Action Plan will be included in Councils 2022/23 to 2024/25 Delivery Program.



The Central Coast is known for its natural beauty; maintaining our natural assets is a critical component of what we value as a community.

Ongoing education is key to our **green** approach, as is inviting the community to take a hands-on role in conservation, protection and remediation of our environment. Reducing litter, minimising waste and championing renewable energy in our future design and planning will minimise the impacts of climate change in our region and will enable the preservation of our beaches, waterways, wildlife corridors and inland areas for the variety of species that inhabit them.

F4 Address climate change and its impacts through collaborative strategic planning and responsible land management and consider targets and actions.

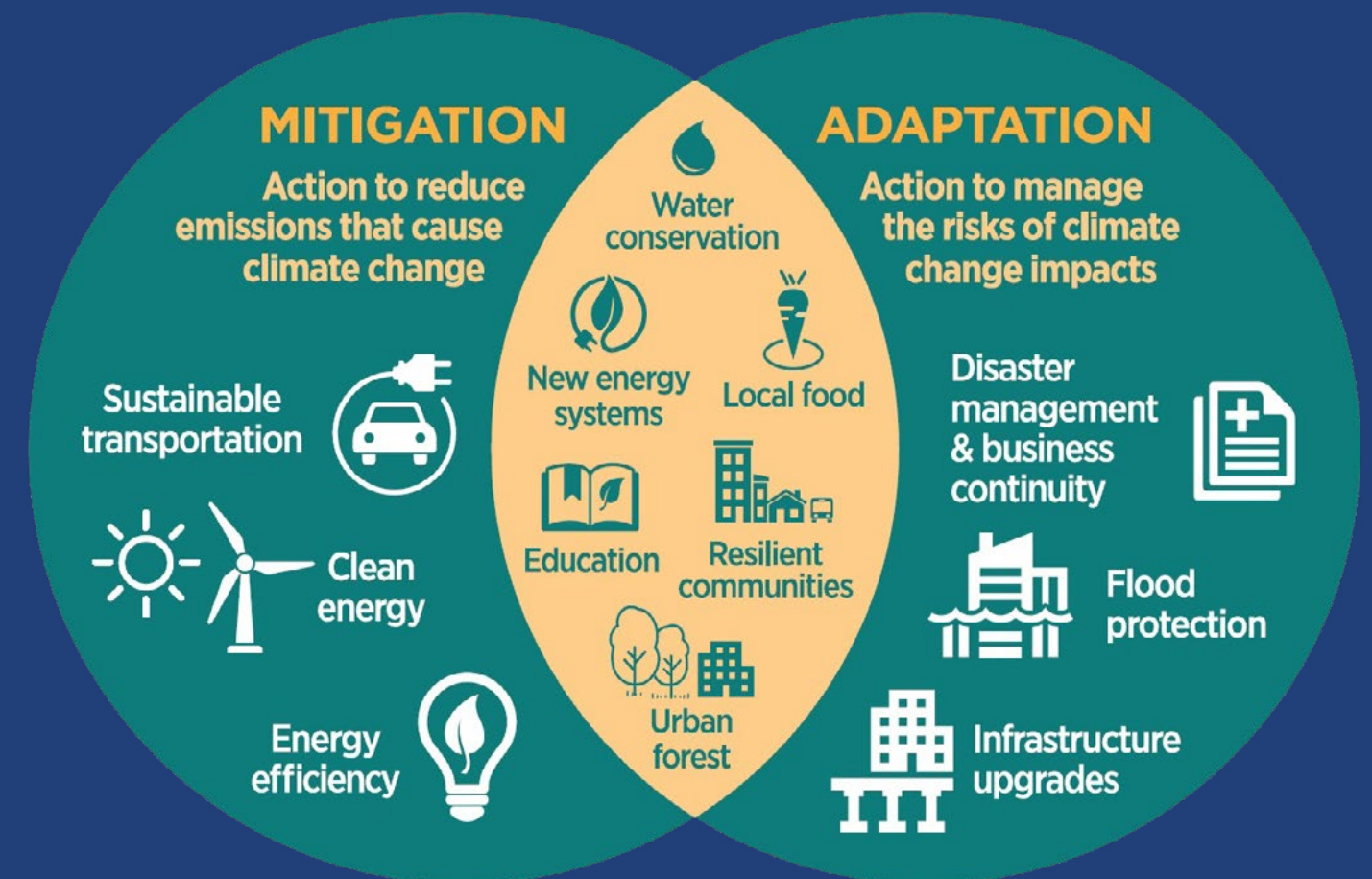
The IP&R Framework sets a long-term strategic direction for Council's, as well as identifying medium and short-term programs and projects to achieve the strategic aspirations.

5.2 Act Now on Adaptation: Hunter Joint Org. Climate Change Integrated Planning and Reporting (IP&R) Package

This project supports the 11 participating Council's and their community's climate change journey by providing user friendly, practical tools and templates to embed climate change as business as usual (BAU) in the IP&R process.

The package aligns with the framework and time line for the overarching IP&R documents - Community Strategic Plan, Delivery Program and Operational Plan. It provides a user-friendly pathway for Council's leadership teams to determine their climate change commitment level, and to embed the associated principles and actions into the IP&R documents.

The benefit of this approach is that it puts Climate Change on the agenda coordinated with Council's overall commitments. This ensures the allocation of resources can be prioritised in the operation plan and included in Council's future works program.



Some actions in this plan were adapted from the recommended actions within this IP&R framework. Progress towards these actions will be incorporated into Council's IP&R framework as it acknowledges Council's commitment until 2025.





Determining this Plans Success.

Actions within this Plan follow SMART principles of being Specific, Measurable, Achievable, Realistic, and Timely. From this we can effectively measure the success of the Plan.

6.1 Evaluation and Review

Once endorsed specific measures for each action against SMART principles will be developed by Council staff and progress reported annually to Council. Furthermore inclusion of the actions in Council's Delivery Program means regular reporting will be undertaken against each action.

A review of the success of this Plan will occur in 2025 and the Climate Change Policy 2019 in the 22/23 financial year to determine their effectiveness.

S	• Specific: State exactly what you want to accomplish (Who, What, Where, Why)
M	• Measurable: How will you demonstrate and evaluate the extent to which the goal has been met?
A	• Achievable: stretch and challenging goals within ability to achieve outcome. What is the action-oriented verb?
R	• Relevant: How does the goal tie into your key responsibilities? How is it aligned to objectives?
T	• Time-bound: Set 1 or more target dates, the "by when" to guide your goal to successful and timely completion (include deadlines, dates and frequency)



CSIRO and Bureau of Meteorology: State of the Climate 2018 available at: <http://www.bom.gov.au/state-of-the-climate/State-of-the-Climates-2018.pdf> accessed: 20 October 2020.

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