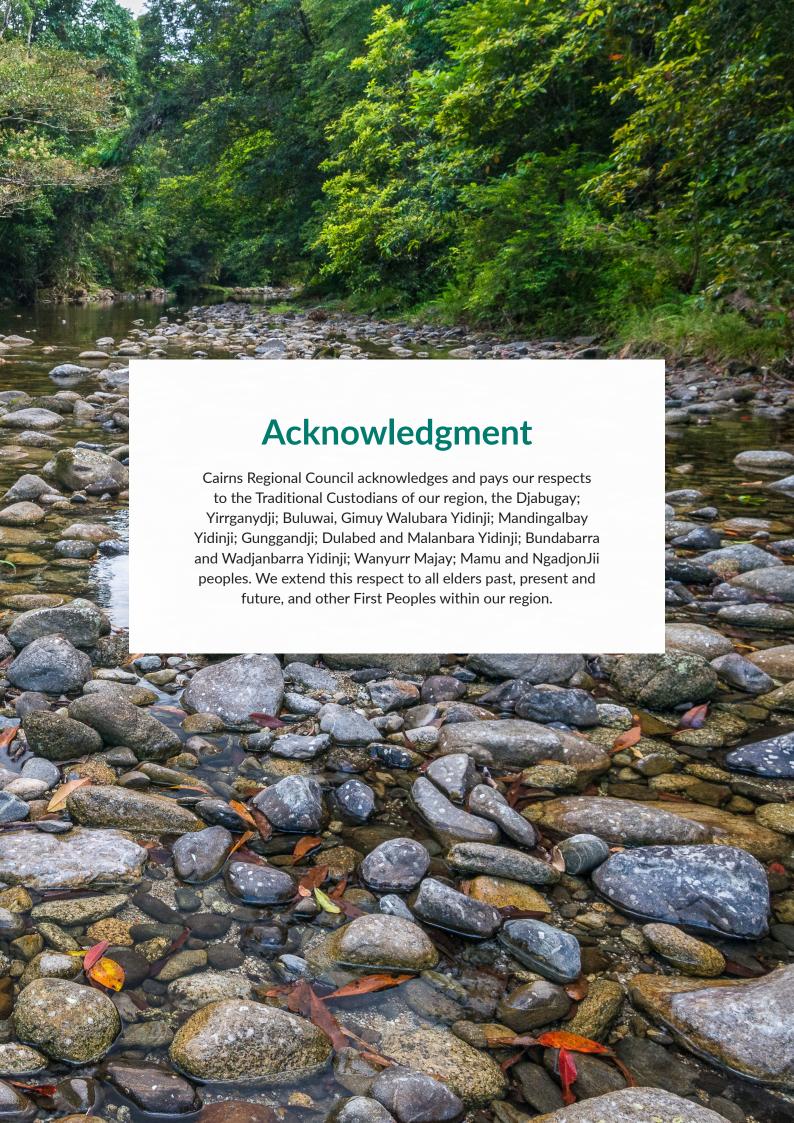


**Tropical Cyclone Jasper** 

# Local Disaster Recovery Plan

2024-2026



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# **Executive summary**

Tropical Cyclone Jasper, the wettest cyclone on record, drenched the Cairns region in December 2023, causing extensive flooding to a number of Cairns suburbs. Homes were lost, infrastructure severely damaged and people's lives turned upside down following one of the most devastating natural disasters the region has ever experienced.

The scale and destruction was immense, especially for those severely impacted in the northern beach suburbs of Machans Beach, Holloways Beach, and Yorkeys Knob, as well Caravonica, Lake Placid, Kamerunga and Aeroglen.

The event was a Q100 or 1% Annual Exceedance Probability (AEP) Flood meaning there is a 1-in-100 chance that a flood of that size (or larger) could occur in any one year.



The Cairns Local Disaster Management Group's response was to prioritise safety and wellbeing of the community, repair damage and restore access and connectivity for residents.

To facilitate a coordinated approach to community recovery, the Cairns Local Disaster Management Group (CLDMG) stood up four recovery subcommittees covering human and social, economic, environment and infrastructure on 19 December 2023.

#### The Cairns Local Disaster Management Group identifies the functional pillars as follows:

- **Human and Social** focuses on supporting the emotional, social, physical and psychological health and wellbeing of individuals, families and communities following a disaster.
- Economic focuses on rectifying the direct and indirect impacts on the economy as a result
  of a disaster.
- **Environment** focuses on rectifying the impacts on the natural environment as a direct result of a disaster or through a secondary impact or consequence.
- **Infrastructure** focuses on rectifying damage and disruption which inhibits the capacity of essential services, networks and the functioning of the built environment.

On 21 December 2023, the Cairns Local Disaster Management Group transitioned to focus more fully on recovery planning. Recovery strategies were developed based on an in-depth assessment of impacts and needs and reflected in the Tropical Cyclone Jasper Local Disaster Recovery Plan.

The plan aims to identify and meet short-to-medium-term needs – both acute and developmental - while informing longer-term recovery and resilience. Key strategies in the Recovery Plan include the rebuilding of infrastructure, addressing the environmental impacts of the event, and implementing a range of initiatives necessary to support economic and social recovery.

The Tropical Cyclone Jasper Local Disaster Recovery Plan sets out the tasks and actions to guide our community towards recovery, helping to establish a 'new normal' and improve lifestyles and livelihoods for our community.



# **Recovery narrative**

#### About our region

The Cairns Regional Council Local Government Area (LGA) encompasses 1,687 km<sup>2</sup> of land on a narrow coastal strip between the Great Dividing Range and the Coral Sea. It extends from the Eubenangee Swamp (near Mirriwinni) in the south to the Macalister Range (near Ellis Beach) in the north.

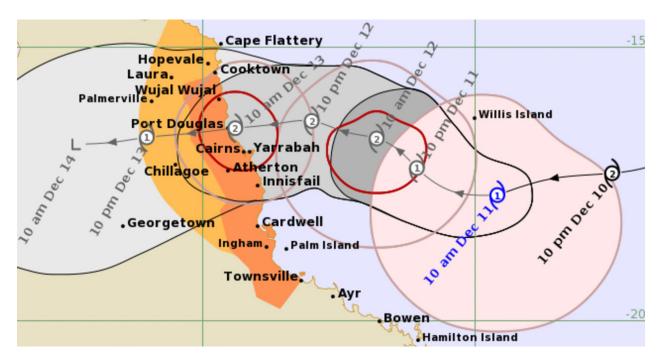
- The estimated residential population of the Cairns region: 171,970 people (72,624 dwellings)
- Visitor numbers on any given night: 30,000+
- Two designated Storm Tide Cyclone Shelters
- Major river systems: Barron, Russell, Mulgrave

#### About the event

Tropical Cyclone Jasper crossed the coast north of Cairns at Wujal Wujal at 8:00pm on Wednesday 13 December 2023. Tropical Cyclone Jasper stalled over Cape York Peninsula and coupled with a surface trough produced heavy rainfall over the weekend of 16-17 December resulting in widespread flooding in the region.

On 17 December 2023, the Barron River experienced a significant flood event, reaching approximately 14 metres on the Myola gauge, its highest flood level in more than 100 years. The resulting flood in the Barron Delta area affected several suburbs including Caravonica, Lower Freshwater, Yorkey's Knob Beach, Holloway's Beach, and Machan's Beach, as well as the Cairns International Airport and associated infrastructure.

The event was a Q100 or 1% Annual Exceedance Probability (AEP) Flood meaning there is a 1-in-100 chance that a flood of that size (or larger) could occur in any one year.





The Barron River peaked at

4.4 metres

well above the previous record of 3.8m in 1977



6,800 cubic metres of water

passed the river gauge at Myola every second at the height of flooding



2.2 metres

of rainfall recorded in the Cairns catchment



941

properties damaged by flood waters



30,000

customers impacted by electricity infrastructure damage



2,000 tonnes of flood affected hard waste removed from

**800+** homes





4,000+

**Rapid Damage Assessments** completed by Queensland Fire and Emergency Services



Resulting in approximately

homes

being listed as flood and/or landslip damaged



displaced people



people evacuated during event



475m

water pipe replaced or installed



sewer main replaced or installed



Treated water 3%

(equating to two hours of normal consumption)



100 metre

temporary causeway

built in five days to reconnect 55 isolated homes at Holloways Beach

Council costs expected to exceed \$131 million







Large scale transport disruption and power outages



Major impacts on agriculture, infrastructure, businesses, and tourism

Impacts	Cairns SA4 <sup>1</sup>	CRC Local Government Area (LGA)
Businesses impacted <sup>2</sup>	85.9%	83.8%
Impact on revenues	-4.1%	-3.6%
Businesses employment impacted	38.8%	36.2%
Impact on employment medium-term	-1,436 persons	-758 persons
Time to recovery	6.2 months	3.4 months
Gross Regional Product (GRP) impact	-\$649.1 mill	-\$389.4 mill
GRP impact after support	-\$643.8 mill	-\$385.5 mill

#### Micro (1-4 employees) and Small (5-19 employees) businesses were more severely impacted.

Impacts	Micro	Small
Impact on revenues	-26.0%	-7.3%
Impact on employment medium-term	-16.8%	-12.7%

#### Additional details - Cairns SA41

\$20,000

Median value of asset damage

>\$100,000

Anticipated total lost revenue

28% of businesses

>\$500,000

**Severe asset damage** 7.5% of businesses

54.6%

Asset damage covered by insurance

\$30,000

Total median lost revenue

16.4%

of businesses received government support

Business and economic impact data presented on this page has been sourced from an independent Economic Impact Assessment undertaken by Conus Business Consultancy Services.

<sup>&</sup>lt;sup>1</sup> Statistical Area Level 4 is one of the spatial units defined under the Australian Statistical Geography Standard (ASGS). Cairns SA4 area overlaps with the Cairns, Cassowary Coast, Douglas, Mareeba and Tablelands Local Government Areas.

<sup>&</sup>lt;sup>2</sup>Percentage based on 511 businesses surveyed

#### **Timeline**

#### Thursday 7 December 2023

The Cairns Local Disaster Management Group (CLDMG) moved to alert status and continued to monitor Tropical Cyclone Jasper.

#### Friday 8 December 2023

The Cairns Local Disaster Management Group moved to "lean forward" status and continued to monitor Tropical Cyclone Jasper.

#### Monday 11 December 2023

The Cairns Local Disaster Management Group went to stand up on 11 December and established its Incident Management Team to coordinate an immediate response to the event.

#### Wednesday 13 December 8:00pm

Tropical Cyclone Jasper crossed the coast near Wujal Wujal as a category 2 system.

#### Thursday 14 December 11:30am

Bureau of Meteorology (BoM) update - Tropical Cyclone Jasper downgraded to a tropical low. Severe weather warning for heavy rainfall (100-400ml in 24hours) and flood watch issued.

#### Friday 15 December 11:30am

BoM Update - Tropical Cyclone Jasper slowed movement over the peninsula resulting in heavy rain.

#### Saturday 16 December 4:36pm

BoM Update - Severe weather and flood warnings issued.

#### Sunday 17 December

BoM Update – Barron River peaked at approximately 14 metres (Myola gauge) resulting in a flood event in Barron Delta affecting Caravonica, Lower Freshwater, Yorkeys Knob, Holloways Beach, Machans Beach and Cairns International Airport.

#### **Local Disaster Centre was activated:**

7 - 15 December 2023; 16 December 2023 - 5 January 2024; and 22 - 31 January 2024.

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
4 December	5	6	7 CLDMG "Alert" status	8 CLDMG "Lean forward" status	9	10
CLDMG "Stand up" status	12	TC Jasper crossed the coast	TC Jasper downgraded to tropical low	15 Ex TC Jasper caused heavy rainfall	Severe weather and flood warnings	Barron River peaked resulting in flood event

# **Establishing the Plan**

The Tropical Cyclone Jasper Local Disaster Recovery Plan provides guidance to local leaders, service organisations and the State and Federal Governments about our community's support needs and recovery goals. It outlines what will be needed for recovery and who is responsible for delivering the strategies.

The Tropical Cyclone Jasper Local Disaster Recovery Plan is a commitment to coordinate support efforts for those affected by this event as we continue to navigate the road to recovery.

The Cairns Local Disaster Management Group is responsible for the oversight of the plan to direct their work and monitor progress in partnership with key stakeholders. This keeps a focus on the community's short-term needs while looking towards recovery in the medium to long-term while accessing State and Federal funding as well as other forms of recovery support.

The Cairns Local Disaster Management Group stood up the Local Recovery Group on Tuesday 19 December 2023 consisting of four committees (Human and social, Economic, Environment and Infrastructure) under the local disaster management arrangements to guide the recovery work. The Local Recovery Coordinator, responsible to the Cairns Local Disaster Management Group, established a small recovery team located within Cairns Regional Council.

Each pillar undertook a process tailored to the unique circumstances and needs of its stakeholders, sectors and the nature of the impacts. All pillars met regularly with their concerns and requirements communicated to the Local Recovery Committee.



# Recovery timeframe

Informed by the State Recovery Planning framework, Cairns Local Disaster Recovery Sub-Plan and Queensland Reconstruction Authority (QRA) methodology, the plan follows a structure of:

- Damage and impacts
- Recovery objectives, tasks and timeframes
- Measures of success

Recovery operations are undertaken across three phases.



#### Short-term recovery January 2023 - April 2024

Short-term - includes emergency relief, clean up and repairs, preliminary impact assessments etc. Planning and commencement of event specific recovery plan. This phase is the more reactive phase – focusing on identifying and responding to emergent issues.



#### Medium-term recovery May 2024 - May 2025

Medium-term - includes rehabilitation and reconstruction. This phase offers greater clarity and control over the impacts, their potential consequences and the planned remediation strategies.



#### Long-term recovery June 2025 - June 2026 (TBD)

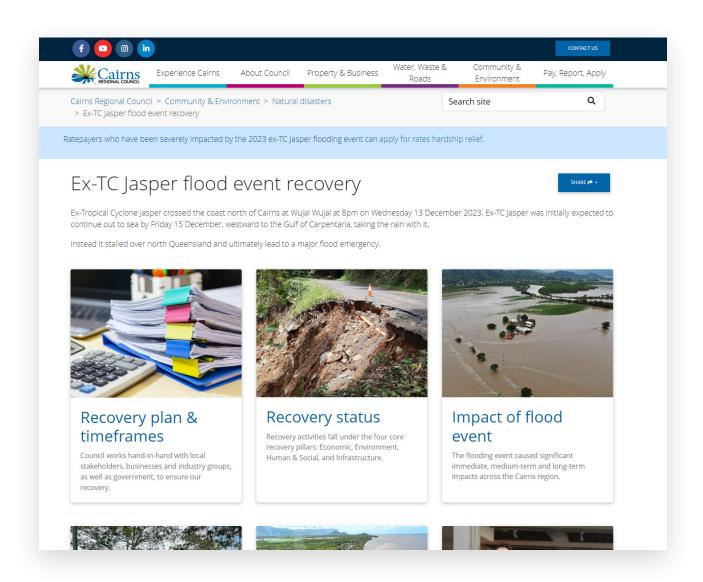
Long-term - includes rebuilding, reshaping and sustainability. This includes returning to business as usual (BAU) and embedding long-term behaviour change and awareness, new connections and ways of doing things. Overall, the community determines that it is recovered.

# Recovery response

Tropical Cyclone Jasper crossed the coast north of Cairns at Wujal Wujal at 8:00pm on Wednesday 13 December 2023. Tropical Cyclone Jasper was initially expected to continue out to sea by Friday 15 December 2023, westward to the Gulf of Carpentaria, taking the rain with it. However, it stalled over North Queensland and ultimately led to a major flood emergency.

Cairns Local Disaster Management Group remains committed to working directly with those affected by this unprecedented event. Recovery updates can be found by following the link below to the Council website,

cairns.qld.gov.au/community-environment/natural-disasters/jasper-recovery



#### Human and social

The pillar's current focus is on facilitating development of a rapid social needs assessment to identify the effects and ongoing recovery needs in the community. This process includes a range of inputs, such as continuing community consultation via a public online survey and targeted focus groups involving key human and health services.

Whilst the full extent of the human and social impact is still being determined, it is evident that the most recent event has compounded pre-existing challenges and there remains a significant degree of vulnerability including emotional stress in the most affected areas. Council continues to work closely with the community sector to support the service responses and provision of essential assistance for impacted communities.

#### **Economic**

The short-term focus was to provide support to mitigate the immediate economic impacts from the disaster. This included informing the development and deployment of various funding and ancillary support packages from all three levels of government to support business and industry sector recovery. An independent economic assessment of the impacts of the disaster was completed to inform medium-to long-term economic recovery and resilience planning.

#### **Environment**

Environmental impacts on Council land predominantly on beachfronts (sand erosion) need to be addressed in the medium to long-term. Assessments of damage to significant, high value vegetation, waterways and protected areas are ongoing, but indicators so far suggest that significant damages were localised. Some areas will naturally recover. Environmental damages - such as pest infestation spread - will be unknown until germination occurs or populations grow to detectable levels.

#### Infrastructure

Significant impacts on infrastructure needs to be addressed in the medium to long-term. Council has begun undertaking detailed assessments of damaged infrastructure and areas to prioritise works and ensure inclusion in our future works program.

Hard waste collection was completed on Friday 19 January 2024 with case-by-case assessments in flood affected areas throughout early February.

Priority works include Barron Gorge Road, Casuarina Street/road bridge reconstruction options, Fisheries Bridge reconstruction (temporary pedestrian bridge installed), Lake Morris Road (closed for at least 6 months), Savannah Street (Palm Cove) drainage, Lower Kamerunga Cycleway reconstruction and numerous culvert and drainage structure projects across the city.

# Measuring the financial impact

Tropical Cyclone Jasper and the associated flooding event is estimated to have had a \$390 million adverse impact on the Cairns economy. Conus Business Consultancy Services was engaged by Council on behalf of the Economic Recovery Sub-Committee to undertake an Economic Impact Assessment of the Cairns region to understand the economic impact of the event.

Of the 511 organisations across the Cairns SA4 region surveyed, 85.9% reported that they were impacted by the event, with 73.2% closing temporarily, and 38.8% reporting impacts to their employment levels. Asset damages to those organisations was more than \$100 million, with over 7.5% of respondents stating their asset damages exceeded \$500,000. The estimated adverse gross economic impact in the Cairns Local Government Area was \$389.4 million, and \$649.1 million in the wider Cairns SA4 region.

Council is now forecasting a \$127 million repair bill associated with the flooding event, of which \$100 million is expected to be recovered from external funding. Council will continue to work closely and collaboratively with the Queensland Reconstruction Authority to advocate for funding.

A \$3 million Rural Landholder Recovery Grants Program specific to FNQ Local Government Areas (LGAs) is being jointly funded through Disaster Recovery Funding Arrangements (DRFA). The program, announced 3 May 2024, is available alongside a range of initiatives that will also benefit communities recovering from the December 2023 storms and floods in South East Queensland.

This includes:

\$51.3 million

**Environment Recovery Programs** 

\$9.56 million

Mental Health Programs



\$14.81 million

Sport and Recreation Community Facilities Programs



\$13.4 million

Small Business Support programs



Community Health and Wellbeing Program,
Community Recovery and Resilience Officers,
and Flexible Funding Grants Packages

### Governance

This document is prepared to support the Local Disaster Management Plan Cairns Region (LDMP-CR). The LDMP-CR is the overarching document that describes the management and governance arrangements that support disaster management in the Cairns region.

The LDMP-CR also identifies several issues addressed as part of the hazard and risk assessment process undertaken in conjunction with the development and maintenance of this plan. Such issues include governance, collaboration, health, the environment, economic and infrastructure development, all of which can impact the resilience of the region's communities.

A range of processes contributed to the Tropical Cyclone Jasper Local Disaster Recovery Plan, which was endorsed by the Cairns Local Disaster Management Group and noted by Council in June 2024. The plan outlines the actions and strategies undertaken by Council and relevant agencies with a focus on community sustainability and resilience.

A key aspect of the plan's governance process is that it is overseen by the Cairns Regional Council Chief Executive Officer (CEO), with regular updates reported to Council.

Council officers worked closely with the Queensland Reconstruction Authority (QRA) to formulate Council's official submissions for Disaster Recovery Funding Arrangements. Officers prioritised projects with the intention to lodge submissions quickly once the scope of works were determined.

The Disaster Recovery Funding Arrangements is a joint funding initiative of the Australian and Queensland governments.

Funding submissions are reported to Council for noting via the CEO report. When appropriate, a stand-alone report will be provided to Council detailing all the QRA submissions made in relation to the Tropical Cyclone Jasper flooding event.

Council has frameworks and appropriate systems in place to manage the funds, ensuring they are acquitted, administered, and reported as required by the Disaster Recovery Funding Arrangements.



# **Community engagement**



The Local Recovery Committee's four subcommittees (human and social, economic, environment and infrastructure) engaged key support agencies and stakeholders to facilitate a coordinated approach to community recovery.

The committees provided a central source of information to be shared with affected individuals, the public, community leaders, the private sector, media, government representatives, support agencies and emergency services organisations. Engagement activities included:

- Regular Disaster Recovery Committee Meetings with briefing notes communicated to key stakeholders.
- Face-to-face communication via community meetings, events, community hubs and through the collaboration of members of the committees.
- The use of multiple media channels including direct mail, websites, social and traditional (print, radio and television) media to keep the community updated on recovery efforts and how to access support services.
- Engagement and communication activities considered the requirements outlined in the Queensland Government arrangements for coordinating public information during a crisis.

# Damage and impacts

#### **Human and social**

Since late December 2023, Council worked with recovery partners to coordinate immediate relief for people and families, reinstate critical infrastructure, and position the region to access critical state and federal funding. Recovery efforts are now focused on the next six to 12 months. Council partnered with James Cook University to conduct a survey aimed at gathering input on the support needed to help individual households and the broader community forge a path to full recovery. These needs could span material (e.g. furniture, white goods), financial (including insurance queries), physical (e.g. housing, trades) and emotional supports (e.g. mental health services).

The online survey was open from 17 April – 8 May 2024. Feedback will be used to develop a regional plan with a mix of targets aimed at rebuilding, reinvigorating and future proofing our economic, social, built infrastructure and natural environments against future impacts. The Tropical Cyclone Jasper Local Disaster Recovery Plan will combine the resources and efforts of key recovery partners together with strategies to build a more resilient Cairns LGA, one that is better able to rebound against any type of adversity.

This work includes capturing the learnings of what worked well in Tropical Cyclone Jasper. In the coming months the community will be invited to share these stories. This includes documenting the many inspirational acts of selflessness and innovation led by community members and first responders that will become a cornerstone of future disaster response and recovery efforts.

#### **Economic**

The natural disaster had an immediate economic impact, resulting in businesses being unable to trade, job losses, transport networks closed, and the tourism industry reeling from cancellations. The short-term focus was on providing support to mitigate the immediate economic impacts from the disaster. This included informing the development and deployment of various funding and ancillary support packages from all three levels of government to support business and industry sector recovery.

Conus Business Consultancy Services were engaged by Cairns Regional Council on behalf of the Economic Recovery Sub-Committee to undertake an Economic Impact Assessment of the Cairns region to understand the full impact of the event. This included a survey of 511 organisations across the Cairns SA4 region. A substantial 85.9% of organisations surveyed were impacted by the event, with 73.2% closing temporarily, and 38.8% reporting impacts to their employment levels. The scale of asset damage of the organisations surveyed was over \$101 million, with over 7.5% of respondents stating their respective asset damage exceeded \$500,000.

With consideration of the survey findings, the estimated gross economic impact on the Cairns Local Government Area due to the event was a reduction of \$389.4 million, and \$649.1 million in the wider Cairns SA4 region.

#### **Environment**

Initial assessments indicated the weather event caused localised significant damage to vegetation, waterways and protected areas, as well as the loss of livestock and native animals. Public health, safety and environmental issues were addressed, including retrieving scattered livestock, the disposal of livestock carcasses and removal of deceased fish washed from reservoirs.

Management actions were taken to care for native and domestic animals displaced during the event and the need to monitor the potential spreading of weeds and invasive species (e.g. exotic invasive ants).

Large-scale erosion and sediment loss occurred in the Barron River catchment, while localised bank slips were observed in the Mulgrave Russell catchment. The weather event eroded sand from the northern beaches causing vegetation loss and damage to infrastructure. Surveying of the coastline will continue over the next year to determine if Council replenishes sand at affected beaches, understanding there is a chance this may occur naturally.

Environmental impacts, including pest infestation and long-term ecological changes, will be monitored to determine if interventions are necessary.

#### Infrastructure

Commencing 17 December 2023, the Barron River flooded the Barron Delta to a nominal 1% AEP, or Q100 (1 in 100) year event. This impacted residents in the northern beaches and significant volumes of infrastructure including the Cairns International Airport. The flooding event resulted in damage to over 800 homes, airport facilities submerged, electricity and communication infrastructure damaged, wastewater treatment and water supply disruptions, waste management issues and extensive cleanup efforts. Transport infrastructure including bridges and roads suffered damage, isolating communities. Reconstruction projects, including road, bridge, and drainage works, were prioritised for recovery.

During this period, the Mulgrave River also experienced a peak flow event destroying Fisheries Bridge and flooding several low lying properties south of Gordonvale. The combination of these events impacted almost every infrastructure service line provided to the Cairns community and was without question the single largest event in living memory.



# Recovery objectives, tasks and timeframes

#### Human and social

#### **Objectives:**

- 1. Impacted individuals and cohorts have access to the range of information, support services and resources needed to reinstate levels of wellbeing and functioning (e.g. desired lifestyle and livelihood).
- The health and social services sector has the capacity (e.g. resources, personnel, and coordination mechanisms) to support affected individuals and cohorts throughout their recovery journey.
- 3. There is a comprehensive understanding of the long-term needs and recovery processes, particularly for most impacted and/or vulnerable groups.
- 4. Overall community resilience is improved through increased levels of social capital.
- 5. Learnings are incorporated into future social and community resilience strategies, specifically related to disaster preparation and preparedness.

#### Short-term (December 2023 to April 2024)

- Coordinated community support services meet regularly to identify ongoing needs.
- Provide financial relief to impacted residents and community groups.
- Ensure mental health support is available and promoted to those in need.
- Case management support is established for mental health and wellbeing.

#### Medium-term (May 2024 to May 2025)

- Finalise community and sector social needs assessments and incorporate findings into longer-term recovery strategies.
- Continue to support sector integration and targeted advocacy regarding service gaps and opportunities through networks, forums and state and federal inquiry submissions.
- Facilitate opportunities for community connection and cohesion through supporting grants for community events and programs.
- Support ongoing community-led initiatives that help to increase social capital such as community hubs, community celebrations and information sessions.

- Continue implementation of Person-Centred Emergency Planning (PCEP) targeting most vulnerable cohorts and develop sector capacity building program.
- Commence development of Local Area Community Disaster Resilience Plans (LACDRP) for locations with highest vulnerability of isolation in severe events.
- Review Public Information Warnings and Alerts (PIWA) framework in partnership with lead agencies with a view to improving public messaging.

#### Long-term (June 2025 to June 2026)

- Implement PCEP sector capacity building program.
- Finalise Local Area Community Disaster Resilience Plans for locations with highest vulnerability of isolation in severe events (six locations).
- Investigate models of coordinated deployment of community-led volunteer programs (i.e. donations for physical support).
- Commence Barron Delta Flood Resilience Strategy.
- Community awareness campaign based on review of PIWA.
- Carry out impact assessment study with community to track recovery journey and distance travelled.

OBJECTIVE	TASK	TIMEFRAME	LEAD
Impacted individuals and cohorts have access to the range of information, support services and	Undertake community and sector rapid social needs assessment.	Medium	Cairns Regional Council (CRC)
resources needed to reinstate levels of wellbeing and functioning (e.g. desired lifestyle and livelihood).	Commence Person Centred Emergency Planning (PCEP).	Medium	CRC

OBJE	ECTIVE	TASK	TIMEFRAME	LEAD
2.	2. The health and social services sector has the capacity (e.g. resources, personnel, and coordination mechanisms) to support affected individuals and cohorts throughout their recovery journey.	Undertake sector integration and advocacy (Human and Social Sub-Committee meetings – as required); Assess state and federal submissions.	Medium	CRC
		Implement PCEP sector capacity building program.	Long (Ongoing)	CRC (in partnership with sector peaks and University of Sydney).
3.	There is a comprehensive understanding of the long-term needs and recovery processes, particularly for most impacted and/or vulnerable groups.	Complete social impact assessment study.	Long	CRC
		Community connection and cohesion is increased through grant opportunities (LACDRP).	Medium (Ongoing)	CRC
4.	4. Overall community resilience is improved through increased levels of social capital.	Support ongoing community-led initiatives.	Medium (Ongoing)	CRC
		Investigate community-led volunteer program model.	Long (Ongoing)	CRC
5.	<ol><li>Learnings are</li></ol>	Commence development of Local Area Community Disaster Resilience Plans.	Medium (Ongoing)	CRC
s rr s	incorporated into future social and community resilience strategies, specifically related to	Review Public Information (Warnings and Alerts) (PIWA) framework.	Long (Ongoing)	CRC
disaster preparation and preparedness.		Develop the Barron Delta Flood Resilience Plan as a priority (LACDRP).	Long	CRC

#### **Economic**

#### **Objectives:**

- 1. Facilitate access to immediate financial relief though government and industry grants.
- 2. Provide information to impacted businesses regarding support available and how it can be accessed.
- 3. Conduct business and industry impact assessments across the region to identify impacts and issues.
- 4. Restore impacted supply chains.
- 5. Understand ongoing impacts and share information within the business sector.
- 6. Advocacy highlighting the issues experienced by business.
- 7. Restore tourism and economic activity to normal levels.
- 8. Ensure the business community is aware and prepared for future disruptions and disasters.

#### Short-term (December 2023 to April 2024)

- Establish grant, concessional loan and other programs to support immediate business recovery.
- Implement proactive communication strategies to ensure that impacted businesses are informed about the available recovery support and how to access it.
- Undertake economic impact assessment to understand breadth, depth and likely duration of economic and business impacts.

#### Medium-term (May 2024 to May 2025)

- Continued deployment of grant, concessional loan and other programs to support business recovery.
- Finalisation of insurances claims for impacted businesses.
- Ensure the business community is aware of potential impacts from future disruptions and disasters and is better prepared for them.

#### Long-term (June 2025 to June 2026)

- Restore tourism, agricultural (sugarcane) and economic activity to normal levels.
- Further diversification of the tourism sector and Cairns economy more broadly to support economic resilience.
- Enhanced supply chain and economic resilience delivered through improved regional transport infrastructure disaster resilience (roads, airport, seaport); water infrastructure resilience (Cairns Water Security Stage 1); and energy resilience.

OBJECTIVE	TASK	TIMEFRAME	LEAD
1. Facilitate access to immediate	Establish rates hardship relief program for impacted residents and businesses.	Short (Establishment complete, implementation ongoing)	CRC
financial relief though government and industry grants.	Establish grant and concessional loan programs for impacted businesses, primary producers and not for profits.	Short (Establishment complete, implementation ongoing)	Queensland Rural and Industry Development Authority (QRIDA)
	Hold insurance 'community town hall' events for claimants to help them understand the insurance claim process/es.	Short (Complete)	Insurance Council Australia
2. Provide information to impacted businesses regarding support available and how it can be accessed.	Hold small business disaster recovery pop-up events for small businesses to communicate support available/answer questions.	Short (Complete)	Queensland Department of Employment, Small Business and Training (DESBT)
	Establish dedicated webpage content providing details of business recovery support available and promote through electronic business newsletter and other communication channels.	Short (Complete)	CRC
	Deploy mental health/wellbeing and financial counselling services for impacted business owners.	Short (Establishment complete, implementation ongoing)	Various
3. Conduct business and industry impact assessments across the region to identify impacts and issues.	Conduct a business survey of the region to understand impacts from Tropical Cyclone Jasper and associated flooding event/s.	Short (Complete)	CRC
	Undertake an Economic Impact Assessment to quantify the impacts (breadth, depth and likely duration) from Tropical Cyclone Jasper and associated flooding event/s.	Short (Complete)	CRC

OBJECTIVE	TASK	TIMEFRAME	LEAD
4. Restore impacted supply chains	Consideration of further deployment of exceptional circumstances (DRFA Category D) package/s relevant to impacted businesses – tourism, agriculture (including funding for reestablishment of crops) and general aviation (maintenance and repair) sectors identified as priorities.	Medium	Relevant State Agency
5. Understand ongoing impacts and share information within the business sector	Economic Functional Recovery Group, led by DSDI, to work with local government to assess the impact on current and future employment issues and the capacity of local businesses to operate effectively.	Medium	Queensland Department of State Development and Infrastructure (DSDI)
	Skills retention - promote the range and quantity of job opportunities in the region via an event for employers with vacancies, job seekers, school leavers and parents to raise awareness of the opportunities and the region's capacity to support these via education and training.	Medium	FNQ Employment (Workforce Australia Local Jobs)
6. Advocacy highlighting the issues experienced by business	Advocate to bring forward a review of The Cyclone Pool (reinsurance pool for northern Australia) to analyse efficacy regarding Tropical Cyclone Jasper and identify areas for improvement.	Medium	Advance Cairns
	Advocate for a Common User Facility situated within the Cairns Airport precinct to support the recovery and disaster resilience of the general aviation sector.	Medium	Advance Cairns

OBJECTIVE	TASK	TIMEFRAME	LEAD
7. Restore tourism and economic activity to normal levels	Establish tourism recovery and resilience program including: visitor incentive initiatives, support for isolated businesses and/or those unable to trade; resilient infrastructure grants; and event promotions and tourism campaigns.	Short (Establishment complete, implementation ongoing)	Queensland Department of Tourism, Innovation and Sport (DTIS) and Tourism and Events Queensland (TEQ) supported by Queensland Reconstruction Authority (QRA)
	Develop and implement a range of programs aimed at supporting the medium to long-term recovery of the TNQ tourism sector.	Medium	Queensland Department of Tourism Innovation and Sport, Tourism Events Queensland and Tourism Tropical North Queensland
	Finalisation of insurance claims for impacted businesses.	Medium	Insurance Industry (Insurance Council of Australia as representative body)
	Progress the planning work relating to the expansion of the Smithfield Mountain Bike Park trail network to better cater to both Crankworx and other national and international events as well as creating a platform for year-round activation of the Park by commercial tourism operators (supports tourism recovery/diversification).	Medium-Long	Department of Tourism and Sport (DTS) and CRC
	Seek commitment for a \$20 million Great Barrier Reef marketing fund over four-years from 2025-26 to help address the negative impacts of climate change media coverage on impacted reef communities in TNQ.	Medium-Long	Tourism Tropical North Queensland

OBJECTIVE	TASK	TIMEFRAME	LEAD
	Seek commitment for a \$5 million extension to the very successful International Tourism Recovery Program (initially \$15 million) funded through Austrade to drive international visitation to the region in 2025-2026.	Medium-Long	Tourism Tropical North Queensland
7. Restore tourism and economic activity to normal levels	Seek an extension of the State Government's Great Barrier Reef education subsidy, and creation of a program for students in other parts of Australia to gain a travel subsidy to visit and learn about the Great Barrier Reef.	Medium-Long	Tourism Tropical North Queensland
	Seek investment in a new partnership model for tourism in protected areas between traditional owners, protected area managers and the tourism industry to support the development of new ecotourism experiences and create a shared negotiating table in advance of the transition of key protected areas (and the commercial activity permit arrangements to the traditional owners).	Long	Tourism Tropical North Queensland

OBJECTIVE	TASK	TIMEFRAME	LEAD
8. Ensure the business community is aware and prepared for future disruptions and disasters	Support businesses in their future disaster preparedness and business continuity planning through a range of education and awareness activities.	Medium	Cairns Chamber of Commerce and CRC
	Information sessions to be held with businesses regarding risks of underinsurance and noninsurance.	Medium	Insurance Council of Australia and Cairns Chamber of Commerce
	Review disaster response from a business perspective to determine lessons learned and areas for improvement (e.g. were grant and support packages effectively structured and deployed?).	Medium	CRC
	Progress water access and security for the region, increasing food security and advocating for associated road/port infrastructure for Lakeland and Etheridge precincts with flow on effects for Cairns.	Medium	Regional Development Australia Tropical North (RDATN)
	Deliver the Cairns Water Security Stage 1 (CWSS1) project thereby improving the disaster resilience of the city's water supply network – supports business continuity and confidence and visitor (tourism) reputation.	Long	CRC
	Support economic diversification and resilience by progressing Regional Precincts and Partnerships Program concepts for Health Innovation Precinct, Waste Recovery & Recycling Precinct, Cairns Major Events Precinct, and Aviation Precinct.	Long	Relevant Precinct Proponents in consultation with RDATN
	Deliver Regional Drought Resilience Plan for Wet Tropics in collaboration with JCU.	Long	RDATN/James Cook University (JCU) (proposed by RDATN)

#### **Environment**

#### **Objectives:**

- 1. Remove flood debris from natural assets including waterways, conservation areas and open space/recreational areas.
- 2. Monitor and address public health issues arising from flood contamination.
- 3. Monitor and address impacts on vegetation, waterways and fauna.
- 4. Implement sustainable environmental recovery/resilience projects.

#### Immediate recovery tasks (post-impact relief and emergency repairs)

- Roaming Livestock Recovery (creating safety issues).
- Carcass Recovery/Disposal (Impacting Public).
- Environmental Incident Management; Reactive (Spills, Wildlife).
- Ensure disposal/transport of materials aligns with Biosecurity requirements to prevent further spread of pests post event.
- Vector/Disease related works and messaging (mosquitoes, soil borne etc).
- Remove waste and debris from roads.
- Ensure appropriate management of domestic animals, livestock and wildlife.

#### Short/medium-term recovery tasks (re-establishment, rehabilitation, and reconstruction)

- Improve pest hygiene for movement of materials (tramp ants, weed seed).
- Site remediation works to prevent further erosion/damage e.g. bank reinstatement, sand replenishment.
- Any remaining wildlife/livestock issues e.g. lack of food, suitable habitat or injured animal care/recovery.
- Conduct impact assessments across to identify environmental impacts and potential issues across green environment, natural amenities and ecosystems.
- Investigate disease, public health and safety risks associated with the event.
- Assess environmental impacts to high-risk businesses.

#### Long-term recovery tasks (restoration, rebuilding, reshaping and sustainability)

- Long-term wildlife issues e.g. feeding required, population effects.
- Revegetation/rehabilitation in degraded/eroded landscapes.
- Follow-up survey and treatment of new pest infestations and locations.
- Full restoration of community natural areas including parks and conservation zones (not facilties as covered by infrastructure).
- Reinstatement of fire lines and management of any new fire risk created from landscape changes.

OBJECTIVE	TASK	TIMEFRAME	LEAD
	Remove waste and debris from roads	Immediate post event	Lead agency/s: CRC
			Lead agency/s: CRC land Council
1. Remove flood debris from natural assets including waterways, conservation areas and	debris from natural assets ncluding waterways, conservation areas and	Immediate post event	Government land with identified owner to that State Dept. otherwise DNRM/DoR (State Creeks/unallocated State land) Landowners, tenants
open space/ recreational			Lead agency/s: CRC
areas.	Ensure disposal/transport of materials aligns with Biosecurity requirements to prevent further spread of pests post event	Immediate post event	Support agency/s: WTMA YCA, NEAEP, BQ Tropical Weeds Program

TASK	TIMEFRAME	LEAD
Respond to environmental incidents (Spills, Wildlife).	Immediate post event	Lead agency/s: CRC  Support agency/s: DES, QPWS, QFES, SES
Carcass Recovery/Disposal.	Immediate post event	Lead agency/s: CRC
		Support agency/s: Livestock owners
Roaming Livestock	Immediate post event	<b>Lead agency/s:</b> Livestock Owner
Recovery.		Support agency/s: CRC
Provide public information regarding safe disposal of contaminated materials, asbestos, hazardous waste.	Immediate post event	Lead agency/s: CRC/ DES
Vector/Disease related works and messaging (mosquitoes, soil borne etc).	Immediate post event	Lead agency/s: CRC/ Qld Health - Tropical Public Health Services
Investigate long-term disease, public health and safety risks associated with the event.	Short/ medium-term	Lead agency/s: CRC/ Qld Health - Tropical Public Health Services
	Respond to environmental incidents (Spills, Wildlife).  Carcass Recovery/Disposal.  Roaming Livestock Recovery.  Provide public information regarding safe disposal of contaminated materials, asbestos, hazardous waste.  Vector/Disease related works and messaging (mosquitoes, soil borne etc).  Investigate long-term disease, public health and safety risks associated with	Respond to environmental incidents (Spills, Wildlife).  Carcass Recovery/Disposal.  Roaming Livestock Recovery.  Provide public information regarding safe disposal of contaminated materials, asbestos, hazardous waste.  Vector/Disease related works and messaging (mosquitoes, soil borne etc).  Investigate long-term disease, public health and safety risks associated with  Immediate post event  Short/ medium-term

OBJECTIVE	TASK	TIMEFRAME	LEAD
	Respond to environmental incidents.	Immediate post event	Lead agency/s: CRC  Support agency/s: DES, QPWS, QFES, SES
	Ensure disposal/transport of materials aligns with biosecurity requirements to	s aligns with Immediate	Lead agency/s: CRC Support agency/s: WTMA
	prevent further spread of pests.	post event	YCA, NEAEP, BQ Tropical Weeds Program
	Ensure appropriate management of domestic	Immediate	Lead agency/s: CRC /DES
	animals, livestock and wildlife.	post event	Support agency/s: Wildlife Groups/ QPWS/ Council
	Improve pest hygiene for movement of materials (tramp ants, weed seed).	Short/	Lead agency/s: CRC/ BQ QLD
3. Monitor and address impacts on vegetation, waterways and		medium-term	Support agency/s: WTMA YCA, NEAEP, BQ Tropical Weeds Program
fauna.	Management of natural wildlife issues e.g. food sources, habitat, population effects.	Short/long- term	Lead agency/s: DES
			Support agency/s: Wildlife Groups/ QPWS/ CRC
	Conduct impact assessments to identify impacts and issues on green environment, natural amenities and ecosystems.	Short/ medium-term	
	Follow-up survey and treatment of new pest infestations and locations.	Long-term	Lead agency/s: Groups/ Individuals as a General Biosecurity Obligation (GBO – reasonable and practical actions based on risk and activity).
			Support agency/s: CRC

OBJECTIVE	TASK	TIMEFRAME	LEAD
	Assess environmental impacts to high-risk businesses.	Short/ medium-term	
	Site remediation works to prevent further erosion/damage e.g. bank reinstatement.	Short/long- term	Lead agency/s: Cairns River Improvement Trust/ DES/ Landholders
	reinstatement.		Support agency/s: CRC
4. Implement	Revegetation/rehabilitation in degraded/eroded landscapes on Council land.	Long-term	Lead agency/s: CRC
sustainable environmental recovery/ resilience projects.			Support agency/s: Environmental groups/ Community Groups
	Full restoration of community natural areas	Long-term	Lead agency/s: CRC
	including parks and conservation zones (not facilties as covered by infrastructure).		Support agency/s: Environmental groups/ Community Groups
	Reinstatement of fire lines and management of any new fire risk created from landscape changes.	Long-term.	Lead agency/s: CRC
			Support agency/s: DES, QFES

#### Infrastructure

#### **Objectives:**

- 1. Restoration of road and transport networks.
- 2. Rehabilitation of water and wastewater systems.
- 3. Restoration of waste processing systems.
- 4. Revision of Barron Delta flood model and resilience upgrades.
- 5. Improve drainage system resilience and failover processes.
- 6. Improve communication network capacity.
- Integrate resilience and adaptation principles (CHAS and Draft Flood Fit for Purpose Risk Assessments FFPRA).
- 8. Provide potable water security.
- 9. Improve home and business design for resilience.

#### Immediate recovery (post-impact relief and emergency repairs)

- Restoration of the Crystal Cascades raw water intake for Cairns drinking water supply.
- Restoration of electricity supply across the Cairns LGA as facilitated by receding water.
- Clearance of the Captain Cook Highway across the Barron Delta from Aeroglen to Smithfield.
- Rapid Damage Assessment of buildings and facilities across the region.
- Reconstruction of a land bridge on Casuarina Street, Holloways Beach to restore access to 55 homes isolated by the loss of road connectivity.
- Restoration of water treatment and wastewater treatment facilities.
- Restoration of Holloways and Machans Beach sewer collection networks.
- Reopening Kuranda Range Road access to the Tablelands for emergency services and essential services response teams.
- Reopening Gillies Range Road access to the Tablelands for heavy vehicles under 20m in length.
- Construction of an emergency pedestrian access bridge for Fisheries Bridge Crossing at Goldsborough Valley.
- Clearance of flooded roads from debris across the Cairns LGA.

#### Short/medium-term recovery (re-establishment, rehabilitation, and reconstruction)

- Reconstruction of Barron Gorge Road access to the Barron Gorge Hydropower facility.
- Essential services access restoration for Lake Morris Road for access to Copperlode Falls Dam.
- Restoration of access to Port Doulgas via the Captain Cook Highway.
- Restoration of sewer treatment processing and reseeding primary treatment systems.
- Rehabilitation of numerous wastewater pump stations across the LGA.
- Hard waste removal from flood impacted suburbs (800+ homes).
- Processing waste streams for recycling, recovery and disposal from collection works.
- Rehabilitation of waste processing temporary hardstand locations.
- Shoreline make safe works to address coastal erosion impacts on northern beaches.
- Construction of a 42t temporary bridge for Fisheries Bridge Crossing at Goldsborough Valley.
- Rehabilitation of critical transport network links across the Cairns LGA.
- Commencement of flood impact reviews and update of flood modelling based on flood input data.

#### Long-term recovery (restoration, rebuilding, reshaping and sustainability)

- Construction of a new bridge at Casuarina Street, Holloways Beach to replace the temporary land bridge constructed during the immediate recovery phase.
- Reconstruction of roadways impacted by significant landslips at Barron Gorge Road, Lake Morris Road and Woopen Creek Road.
- Reconstruction of numerous roads and drainage systems across the LGA to restore full service use.
- Consideration of "build back better" inputs to housing reconstruction.
- Fully revised flood model with contemporary inputs to the planning scheme and disaster management systems.
- Revision of river gauging stations, failover data collection points and monitoring for disaster response capability.

ОВЈ	ECTIVE	TASK	TIMEFRAME	LEAD
		Reconstruction of State Controlled Road Network.	2024-2026	Lead agency/s: TMR
	1. Restoration of road and transport networks			Support agency/s: NA
		Reconstruction of Local Government Controlled Road Network.	2024-2026	Lead agency/s: CRC
				Support agency/s: DESI/TMR
2.	Rehabilitation of water and Wastewater systems	Restore intake, treatment and reticulation network failures.	2024-2025	Lead agency/s: CRC
				Support agency/s: Health/ RDMW
3.	Restoration of	0	2024-2025	Lead agency/s: CRC
	waste processing systems			Support agency/s: DESI
	Revision of Barron Delta flood model and resilience upgrades	Multi-stage mapping, LiDAR, flow modelling and reporting project.	2024-2025	Lead agency/s: CRC
4.				Support agency/s: CLDMG / EMQ
		od model d resilience Based on modelling,	2026 onward	Lead agency/s: CRC
				Support agency/s: CLDMG / EMQ
	Improve drainage system resilience and failover processes	Reconstruction of primary drainage networks within the urban areas.	2024-2025	Lead agency/s: CRC
5.				Support agency/s: DESI / TMR / DAF / EMQ
		Revision of overland flow paths once underground stormwater is overcome by significant flow events. To be informed by flood model updates.	2025 onward	Lead agency/s: CRC
				Support agency/s: DESI / TMR

OBJI	ECTIVE	TASK	TIMEFRAME	LEAD
6.	Communication network capacity	Review telecommunication capacity, capability and function prior to and during an emergency event.	2024-2025	Lead agency/s: NEMA
				Support agency/s: CLDMG/QRA
7.	. Integrate resilience and Implement Coastal Hazard adaptions Adaption Strategy and principles (CHAS Flood FFPRA principles and Draft Flood to any design work and Fit for purpose implementation works as Risk Assessment required. FFPRA)		Lead agency/s: CRC	
		Flood FFPRA principles to any design work and implementation works as	2024 onward	Support agency/s: DESI / DAF / CLDMG / QRA / NEMA
8.	Potable water security provision	Advancement of the Cairns Water Security project to develop a secondary raw water and treatment system.	2024-2026	Lead agency/s: CRC
				Support agency/s: RDMW / Health
9.	Home and business design for resilience	Develop collateral and engagement program to assist in homeowner and business owners reconstruction and future resilience.	2024-2025	Lead agency/s: CRC
				Support agency/s: DHLGP

## Measures of success

#### Our new resilience

The region's ability to respond to and recover from a cyclone and/or flood event, or in this case, the combination of both events occurring almost concurrently will be improved via tactical and strategic betterment projects and programs.

#### Human and social

- Safe, affordable and sustainable housing of choice is accessible to all impacted households.
- Levels of financial security are restabilised for impacted households.
- Levels of collective wellbeing and social capital are strengthened through an increased sense of connection, cohesion and participation.
- The health and social services sector have increased capacity to deliver disaster related case coordination as required.
- Levels of individual/household resilience is increased through vulnerable cohorts being engaged in Person Centred Emergency Planning, either individually or via case work/ management services.
- Levels of community resilience is increased through at-risk populations being engaged in Local Area Community Disaster Resilience Planning processes.
- Levels of community resilience is increased by raising awareness of disaster preparedness and planning information.

#### **Economic**

- Critical essential services for businesses are restored: power, water, sewerage, connectivity, roads, supply-chains, and access for customers.
- Industry and business are aware of and have access to information on funds, grants, loans, and support available from each layer of government to address their required support.
- Number and value of grant/concessional loan programs delivered, number and value of commercial (business) insurance claims paid.
- Understanding of the economic impact on the region and opportunities to progress recovery understood and implemented.
- Tourism sector recovery achieved measured through regional (TNQ) visitor numbers, nights and expenditure versus previous results/forecast levels.
- Businesses have increased preparedness and resilience for future disaster events.
- Actions have been delivered to the satisfaction of relevant stakeholders.

#### **Environment**

- Post-event environmental damage is mitigated by actions such as recovering debris that could cause further harm, like a splitting fuel drum causing a spill, or an oil-filled Ergon transformer that washed downstream during the event.
- Reports from Queensland Health indicate no significant increase in notifiable mosquitoborne diseases in the region, as observed by Council Environmental Health Officers and the Vector team.
- State-based pest programs are supported in practical and sustainable ways, as the failure of these programs often shifts responsibility and management costs to the Council.
- Compiling and listing stockpiles and waste disposal sites allows the sharing of this
  information with program partners. Pest programs, particularly those affected by green
  waste and soil movement, are interested in both final and, to a lesser extent, temporary
  locations of these materials.
- Early reinstatement of signage by pest program agencies or Council (depending on the issue) and restricted movement areas provides early prompts to contractors and Council staff about movement restrictions and requirements in and out of areas.
- Engaging with external agencies to identify impacts early and establish practical work
  restrictions helps prioritise and rationalise efforts. Early discussions with pest programs
  during the initial recovery phase allowed for the rationalisation of movement control
  areas and reduced soil movement restrictions. The Barron Catchment could be considered
  a restricted zone rather than individual mapped biosecurity zones before the event,
  significantly reducing administrative overhead and compliance issues during recovery
  without substantially increasing pest spread risk.
- The primary spread of pest material during an event corresponds with where vegetation and debris end up from flooded areas. Sharing satellite imagery of flooding and its extent with partner agencies is valuable for guiding future surveillance activities for pest programs in the region.
- Ongoing monitoring of beachfronts for natural sand replenishment helps determine if intervention projects are needed, prioritizing natural replenishment when feasible. The ideal long-term outcomes are more resilient coastlines with increased vegetation, aligning with Coastal Hazard Adaptation Strategy goals.

#### Infrastructure

- Reconstruction and betterment of essential public infrastructure within forecast timelines.
- Coastal Hazard Adaptation Strategy and Flood FFPRA principles continue to be applied to all projects and future planning considerations, with updates as needed and where relevant.
- Delivery and/or advocacy for the delivery of tactical projects and processes listed above.

# **Stakeholders**

- Cairns residents and property owners.
- Community, business, industry, tourism sectors.
- Cairns Local Disaster Management Group.
- Queensland Reconstruction Authority.
- Queensland Department of Agriculture and Fisheries.
- Queensland Department of Communities, Housing and Digital Economy.
- Queensland Department of Transport and Main Roads.
- Bureau of Meteorology.





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