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Cover image: Wujal Wujal community building following Tropical Cyclone Jasper (courtesy: ORA)

Above image: Queensland bushfires 2023, Western Downs Regional Council, Premier Miles with Mayor Andrew Smith and QRA CEO (courtesy: QRA)



Image: Cairns Airport inundated with floodwaters following Tropical Cyclone Jasper (courtesy: QPS)

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Messages



Message from the Premier

Throughout the 2023–24 disaster season we were again reminded of Queensland's reputation as Australia's most disaster impacted state.

Communities in every corner of Queensland continue to recover from the 13 disaster events we've experienced since 1 July 2023, with the size of the recovery program from these disasters currently estimated at more than \$2.5 billion.

The impacts of bushfires, cyclones, floods and storms on residents, businesses and our environment have been immense.

In some cases, those impacts were almost beyond belief, for example the devastation of communities on the Bloomfield River was described by long-time responders as some of the worst situations they'd ever faced.

But Queenslanders are resilient. We have to be. All too often in Queensland we cop the full force of nature's fury.

That is why resilience is in our DNA.

The response to these disasters once again illustrates the deep inner-resolve of Queenslanders to stick together and dig deep when the going gets tough.

I acknowledge the losses suffered from these disasters, and the herculean efforts of our emergency services and volunteers who protected life and property, and the Queensland residents and landowners who were thrust onto the frontline.

Following the 2023–24 disaster season, the Queensland Government has prioritised the long-term recovery of impacted communities.

Queenslanders can be confident my government is committed to not just rebuilding infrastructure, local economies and the environment, but also ensuring the health and wellbeing of those affected.

Accordingly, this 2023–24 State Recovery and Resilience Plan focuses on locally led initiatives that support layered recovery over the years to come.

I have great faith in the resilience of Queenslanders, and stand resolute with those affected as we recover, together, and rebuild for the future.



Message from the Minister for Fire and Disaster Recovery and Minister for Corrective Services

An inescapable reality of life in Queensland is battling through disasters, and once again that was graphically illustrated during the 2023–24 disaster season.

Queenslanders suffered the effects of one of our wildest disaster seasons on record.

In a measure of how widespread the damage was, 66 of Queensland's 77 local government areas were activated for assistance through the Australian and Queensland Governments' jointly funded Disaster Recovery Funding Arrangements (DRFA).

Many communities were either impacted by two or more events in 2023–24, or have now suffered multiple disaster events over the past decade.

This takes a huge toll, financially and emotionally. On all of us.

And while financial assistance is vital to community recovery, it is complemented by something for which there is no formal value but is priceless: community spirit.

Our spirit is a precious commodity that manifests itself in many ways, including our emergency services first responders, and the volunteers who pitch in when lives have been turned upside down.

It's found through the efforts of those who make sure urgent supplies reach the Queenslanders who need them, essential services are restored, and vital infrastructure repairs carried out.

My heart goes out to those hardest hit by this latest wave of disasters.

Their losses are real and incredibly painful but there is comfort in the wider community's instinctive and selfless reaction to help those in need, providing immediate and meaningful assistance, and hope for brighter days ahead.

We need to learn from every disaster experienced and continue refining our approach to the recovery process.

The 2023–24 Queensland State Recovery and Resilience Plan is a framework for that progress, firming our position and course in the years ahead.







Message from the State Recovery Coordinators

As the state's lead agency for disaster recovery and resilience policy, the Queensland Reconstruction Authority (QRA) has a vital role in helping Queenslanders prepare for and recover from disasters.

We live in the nation's most disaster impacted state, and because of this we are positioned ready, always, to support affected communities.

At the heart of QRA's ethos is a recognition that building effective relationships is the bedrock for recovering from any challenge life may throw our way.

We know the value of these bonds allows us to best understand the impacts of disasters and ensure appropriate support is provided in a timely manner.

That approach bore considerable fruit in the immediate aftermath of each of the recent disaster events that impacted Queensland.

It allowed QRA to work closely with impacted local councils, state agencies and our federal counterparts, the National Emergency Management Agency, to provide a wide range of assistance for Queenslanders.

Recovery from significant disasters, however, is a marathon, not a sprint.

Lives, livelihoods and property, often which have taken decades of hard work and commitment to build up, can literally be destroyed in the blink of an eye, during these severe weather events.

It's a sobering reality to consider the sheer scope of work required, the pressures on all resources and skills, capability gaps, both the vastness and remoteness of our State, and the need to complete work safely and improve resilience.

QRA understands the parameters we're working in, and what we need to do to overcome these challenges and get communities back on their feet.

The level of destruction we've seen in 2023–24 has left Queensland bruised but never broken, and we remain focused on our ongoing recovery.

As always, Australians rally together in adversity, pushing aside differences and striving relentlessly to reach our goals.

We will emerge stronger in the wake of these disasters, as we have time and time again over the last decade.

Major General Jake Ellwood (Retd)

State Recovery Coordinator, Queensland Reconstruction Authority CEO

Ben Marcus

Assistant Commissioner Emergency Management and Coordination Command Queensland Police Service, Deputy State Recovery Coordinator

Mike Wassing

Deputy Commissioner, Deputy State Recovery Coordinator

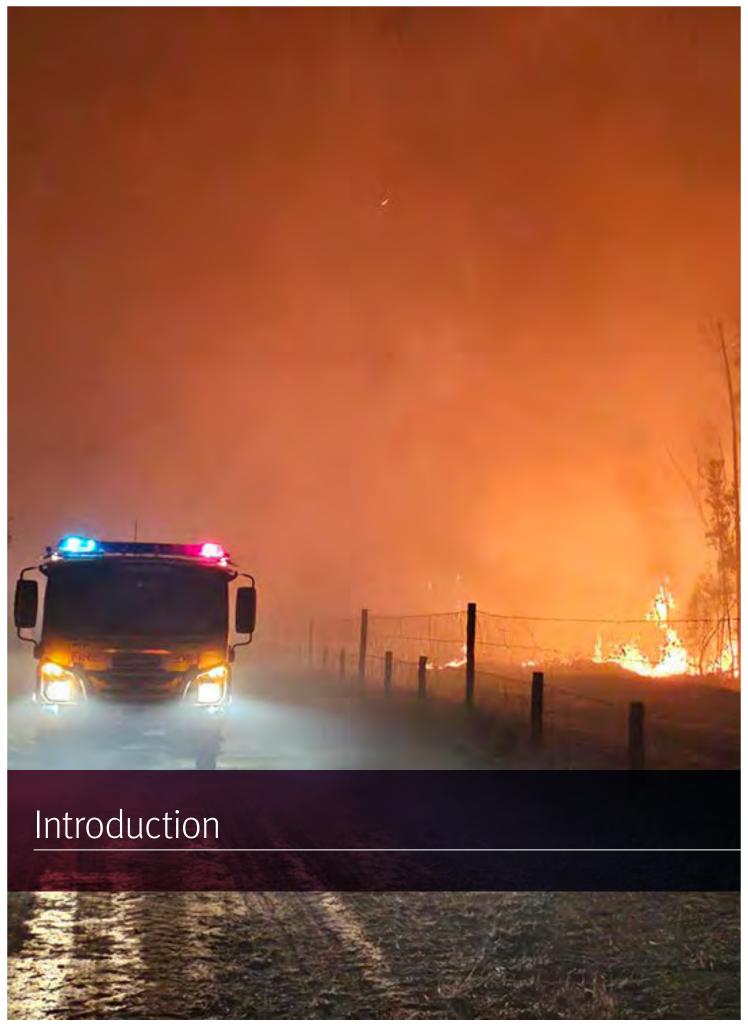


Image: Millmerran bushfires (courtesy: QFD)



Recovery from disasters can be a complex and lengthy process, with different communities recovering at different speeds. Recovery goes beyond response and immediate relief and involves a collaborative, coordinated, adaptable and scalable approach to achieve optimum community outcomes. Sometimes it's not possible to return to a 'pre-disaster normal' and it's important to acknowledge this is not a failure. All sectors of the community, individuals, families, community groups, businesses and all levels of government have a role to play.

Resilience is needed to speed up and empower recovery.

Throughout the 2023–24 disaster season, 13 disaster events impacted Queensland, including two tropical cyclones crossing the east coast, record breaking flooding in the far north, a destructive wind event in South East Queensland, severe storms, flooding and bushfire events.

Sixty-six local government areas (LGAs) were impacted and received immediate financial assistance to support disaster recovery, including personal hardship assistance, essential services safety and reconnection, reconstruction of essential public assets and counter disaster operations.

2023–24 was already challenging for Queenslanders.

Communities were experiencing increased vulnerability because of cost-of-living, housing shortages and other societal challenges. This season's events added to housing stress with almost 600 dwellings destroyed or severely damaged.

Compounding disaster events also impacted communities. Thirty-six LGAs experienced two or more events this season with many experiencing multiple events over the past five years.

Councils and state government departments are often still heavily engaged in previous recovery programs when a new disaster hits. 2023–24 saw an increase in governments partnering with traditional and non-traditional organisations to help communities. There was also an increase in council-to- council support and using non-local labour to provide services and clean-up operations.

Spontaneous volunteering, not-for-profit and non-government organisations are expanding their services from clean up and emergency relief to human and social support. Using their extensive local networks and expertise they are increasing capacity and capability at the local level. Private and charitable organisations are also filling gaps to support communities.

Increased investment in community wellbeing is needed to support people as they recover from disasters and build their capacity to face future challenges.

Queensland Recovery Plan. It outlines the recovery governance arrangements in Queensland and is developed with support from the Functional Recovery and Resilience Groups.

The 2023–24 State Recovery and Resilience Plan (the Plan) replaces multiple event-specific plans combining the 13 disaster events into a single plan. It captures the diversity, breadth and extent of disasters for the entire season.

The Plan provides a single coherent pathway to recovery from the impacts of the 2023–24 disaster events. It aims to give a clear, concise, high-level overview of what QRA, state and Australian Government departments and agencies, through councils, are doing to support the public and the environment to recover.

It includes local activities, regional recovery and resilience priorities, and state and Australian Government initiatives and funding opportunities.

The Plan takes a long-term view of recovery, using local ideas to identify common themes and inform recovery priorities for communities across the entire state.

This approach allows government departments and agencies to better coordinate, streamline delivery, address complementary issues and realise efficiencies.

Why include resilience and recovery in a single plan?

Resilience directly impacts the ability to recover successfully and quickly from a disaster. A resilient and prosperous Queensland is our goal.

Addressing resilience priorities and recovery outcomes in one document shines the light on opportunities that emerge in the wake of disaster and leads to more effective use of disaster funding and resources.

A single plan enables local, state and Australian Government departments to work together in a more integrated and coordinated manner that is not only focused on recovery but ensures we emerge stronger to face future events.

Using the Plan

The Plan will highlight:

- the common local recovery and resilience priorities
- the activities and initiatives governments are providing to help you recover and be more disaster resilient to future events
- how the Functional Recovery and Resilience Groups' Human and Social, Economic, Environment, Building, Roads and Transport – activities relate to impacts directly affecting you and your community and deliver outcomes
- what you can do to prepare for the next high risk weather season.

Image: Swift water rescue on the Sunshine Coast following rain associated with TC Kirrily (courtesy: QFD)

2023–24 disaster season events

Queensland fires

Southern Queensland Bushfires

From early September through to early November 2023, Queensland recorded a series of days with catastrophic fire conditions, including very high temperatures and extreme fire danger ratings across the state. As a result, the state experienced, at its peak, more than 1,000 separate fires, with large, fast moving grass fires impacting communities across southern and central Oueensland.

The fires caused significant destruction in areas including the Carnarvon Gorge region between Maranoa and Central Highlands, Tara in the Western Downs, Wallangarra and Dalveen in the Southern Downs and a fire in the Miriam Vale region spanning Gladstone and North Burnett.

Fires destroyed more than 60 homes with hundreds of residents evacuated. Power supply to properties was disrupted, schools and roads were closed, and hospital services were impacted because of staffing interruptions. Communities also suffered major stresses because of animal welfare and the loss of life of companion animals and livestock.

Tragically, two people died as a result of the fires.

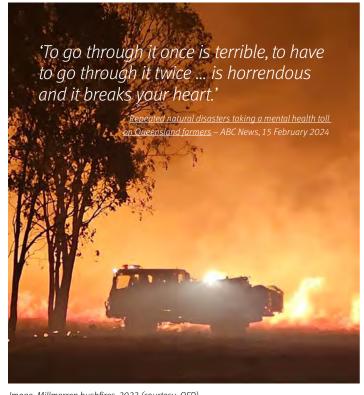


Image: Millmerran bushfires, 2023 (courtesy: QFD)

CASE STUDY RESIDENTS LOSE EVERYTHING IN THE TARA BUSHFIRES

'We could see the fire in the distance. It looked like a bomb had gone off - like a big mushroom cloud.'

Clair's home – a retro caravan she'd been renovating for her planned trip around Australia – was destroyed in the Tara bushfires in 2023.

'We were packed and ready to go. It was right at the back of our property – you could hear it coming up through the bush,'

A plane dropped water at just the right time to save her friend's house but not her caravan.

'We walked around the back and there was just black,' she said. 'My heart sank. My caravan was just a pile.'

Clair lost everything.

After the fire Clair was able to move to the Tara Showgrounds into one of the caravans the Department of Housing, Local Government, Planning and Public Works supplied for locals who'd lost their homes.

Department staff worked on-site helping people recover and access the support they needed.

'The recovery team were great,' she said.

Clair was able to buy a new caravan thanks to a **Structural Assistance Grant** and leave the Tara Showgrounds.



'You could hear the bangs from gas bottles. Planes flying over. It was like a war against a fire that had its own weather system in it.'

Clair, Tara Resident



Images: Clair, Tara resident (courtesy: DHLGPPW)



Nome and Julago Bushfire

In mid-September 2023, a fast-moving vegetation fire in Townsville threatened homes and required significant response from the former Queensland Fire and Emergency Services (QFES), Queensland Police Service (QPS) and Queensland Ambulance Service (QAS).

Property protection and backburning operations were undertaken in several locations including Nome, Yabulu, Black River and Julago.

Fire threatened 355 residential structures.

Large amounts of smoke closed the Bruce Highway and multiple roads, and impacted the rail corridor.

Aerial water bombing was needed to control the fire.

Northern Queensland Bushfires

In northern Queensland, an unseasonably dry spring, coupled with hot, dry and windy conditions led to high and extreme fire danger ratings from mid-October to early December 2023, igniting large, fast-moving grass fires across the state.

These grass fires prompted emergency alerts and warnings across Cook, Mareeba, Tablelands and Townsville.

The fires destroyed eight houses in the Tablelands. Primary producers in the impacted LGAs also reported catastrophic damage, including loss of pasture, and damage to more than 900 kilometres of fencing and more than 150 kilometres of private roads.

Mount Isa Bushfire

Hot dry and windy conditions led to high and extreme fire danger ratings from mid-to-late October 2023 igniting large, fast-moving grass fires. Extreme heat wave warnings and fire danger ratings were issued for parts of north west Queensland with temperatures exceeding 39 degrees Celsius.

The former QFES responded to a large, uncontained and inaccessible bushfire burning in the Mount Isa LGA.

The bushfire had the potential to have significant impacts on the community with life and property under threat on multiple occasions. 'Leave immediately' emergency alerts were issued.

Multiple resources were deployed across the region including strike teams with aerial bombing to help extinguish the bushfire.

Tragically, three people died in a light plane crash while undertaking fire mapping near McKinlay.

The Pines and Condamine Farms Bushfire

A week of high fire danger and low intensity heatwave conditions contributed to fires impacting communities south west of Toowoomba.

Multiple agencies including the former QFES, QPS and State Emergency Service (SES) responded.

On 19 November 2023 the former QFES issued warnings for Pines and Wattle Ridge residents to 'Leave immediately' in response to fast-moving vegetation fires.

Almost 100 properties were subject to evacuation. The Red Cross managed the evacuation centre and provided psychosocial first aid as required to impacted residents.

The Gore Highway between Karriba and Ayers Rock Road was closed for several days. Water bombing was needed to control the fire

Image: Lowmead in the Gladstone region following 2023 bushfires (courtesy: Gladstone Regional Council)

Queensland Low Pressure Trough

In late November 2023, a series of upper troughs moved east across southern Australia and enhanced shower activity across Queensland. Storms and significant rain continued across much of the state from 20 November through to the end of the month.

Significant rainfall totals impacted mainly rural and regional areas as far north as Etheridge, and as far south as Balonne. Flooding occurred from the Wallam Creek, Moonie River and Macintyre River catchments as well as from severe storms across the shire through late November 2023.

Strong river rises were still occurring along multiple rivers seven days after initial rainfall as water moved slowly through the catchments. Some rural properties in Bulloo had up to 100ml over the 12 days impacting access via local dirt and gravel roads. Properties were isolated, cut off from basic services for prolonged periods of time. In Etheridge 142mm of rain fell within three hours resulting in flash flooding.

Multiple roads across the impacted region were closed and damaged isolating townships and requiring emergency repairs. Power was impacted and waste services disrupted.

Tropical Cyclone Jasper, Associated Rainfall and Flooding (Tropical Cyclone Jasper)

Tropical Cyclone Jasper dumped **2,252mm** of rain in **one week**.

On the evening of 13 December 2023, Tropical Cyclone (TC) Jasper crossed the north Queensland coast as a category 2 system and remained near Wujal Wujal. The wettest cyclone in Australian history, TC Jasper dumped more than 2,250mm of rain during the seven days to 19 December 2023. Some areas in the tropical north Queensland coast experienced more than 500mm of rainfall in a

24-hour period. This rainfall caused significant, and in some cases record breaking flood levels.

The flooding impacted communities across the region causing large-scale inundation and evacuations. Major roads were cut between Cairns, Cooktown, Port Douglas and the community of Wujal Wujal due to flooding and landslides.

Wujal Wujal was inundated by floodwaters and the Australian Defence Force was deployed to evacuate stranded residents. Approximately 300 residents were evacuated to Cooktown and Cairns. Nearly all council buildings including the administration building, Women's Centre and Arts Centre, equipment, tools, machinery, and vehicles were destroyed.

Cairns and other airports across the region, as well as seaports, were closed due to the event. The North Coast passenger and freight rail line closed north of Townsville.

TC Jasper also impacted power and telecommunications infrastructure, with 40,000 customers without power during the peak outage and widespread damage to the electricity grid and 30,000 mobile users offline. Water supply infrastructure was also badly damaged resulting in critical water shortages necessitating immediate level 4 water restrictions. Despite residents reducing consumption by almost 30 per cent, restrictions remained in place for several weeks. Wastewater treatment plants, sewerage and waste disposal were also impacted.

Sixteen homes were destroyed and 163 suffered severe damage. Community infrastructure including the store, health facility and police station were also extensively damaged.

Impacts to agriculture, animal welfare, small business and tourism in the region were also significant. Small businesses across the region were totally inundated. Road closures impacted producers getting produce to market and prevented staff, community members and visitors accessing businesses.

Tragically, two people died as a result of the cyclone and subsequent rainfall and flooding.



Image: 5th Aviation Regiment assists in the evacuation of residents from Wujal Wujal via a Leonardo AW139 helicopter, 21 December 2023 (courtesy: ADF)

CASE STUDY TC JASPER LEAVES TRAIL OF ROAD DAMAGE

TC Jasper caused major road damage across north Queensland.

Landslips occurred on all four range roads between Cairns and the Atherton Tablelands – Palmerston Highway, Gillies Range Road, Kennedy Highway (known locally as Kuranda Range Road) and Mossman Mount Molloy Road. The Port Douglas area was also hit hard, with significant landslips and severe road damage at multiple locations on the Captain Cook Highway between Palm Cove and Mossman. Further north, the townships of Wujal Wujal and Degarra were devastated by flooding.

During the event from 13 to 28 December 2023, a total of 1,706 kilometres of state-controlled roads were closed or had access restricted in LGAs activated under the Disaster Recovery Funding Arrangements (DRFA).

As soon as it was safe to do so, Transport and Main Roads (TMR) crews assessed road damage and made urgent repairs to restore access for communities. Thousands of tonnes of debris were cleared and hundreds of geotechnical, bridge and culvert inspections undertaken. By late December 2023, all but 46 kilometres of state-controlled roads around the Cairns region had been reopened.

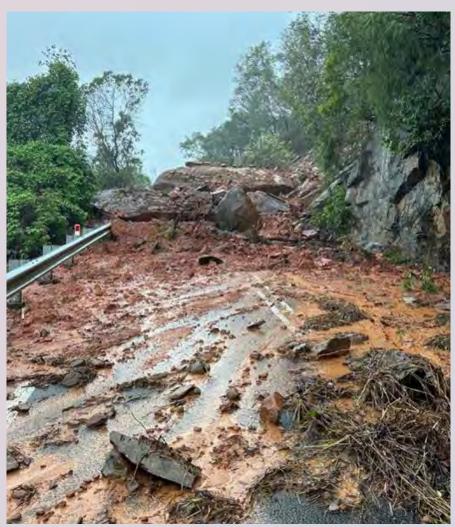


Image: Captain Cook Highway (Cairns-Mossman) landslip at Buchan North (images courtesy: TMR)



Image: Palmerston Highway major landslip



Image: Captain Cook Highway (Cairns-Mossman) emergency works

A 19-kilometre section of the Palmerston Highway – the only designated route for B-doubles and Type 1 road trains between the coast and Atherton Tablelands – was closed due to significant damage and landslips. TMR crews initially cleared large trees and debris from the road to allow access for geotechnical investigations.

TMR worked with the Queensland Trucking Association to allow permitted access to a partial alternative route for heavy vehicles to support the agricultural sector and Tablelands businesses. TMR fast-tracked emergency works on severely flood-damaged parts of the Palmerston Highway to reopen the road to all traffic via a single-lane section on 10 February 2024.

A 27-kilometre section of the Captain Cook Highway between Buchan Point and Oak Beach was closed due to significant damage. TMR crews cleared more than 120 landslips on Captain Cook Highway, including demolishing a 300-tonne boulder that had fallen onto the road at Oak Beach. The Captain Cook Highway between Buchan Point and Oak Beach reopened on 20 January 2024, with several single-lane sections remaining under traffic

control. The reopening, which was completed earlier than expected, reconnected local communities ahead of the school year and allowed freight and other critical supplies to move between Cairns and Port Douglas. Geotechnical investigations for further repairs will continue over the coming months.

Other key road links around Cairns, including the Kuranda Range Road, Gillies Range Road, Mossman Mount Molloy Road, Mulligan Highway and Shiptons Flat Road, reopened under restricted access by late December 2023.

Inspections and emergency works, including removing road hazards, repairing pavement and temporary slope stabilisation, were undertaken across the region to make damaged roads safe until full reconstruction can be completed.

Damage assessments will continue over the coming months and a significant program of reconstruction works will be required over the next two years.

The recovery works are jointly funded by the Australian and Queensland Governments through DRFA.



Mulligan Highway silt build-up



Shiptons Flat Road



Mossman Mount Molloy Road



Kuranda Range Road - landslip

Brisbane and Ipswich Severe Storms

Between 15 and 16 December 2023, severe storms impacted Brisbane and Ipswich.

Severe thunderstorm warnings were issued on 15 December across the South East Queensland region, specifically warning of the potential of damaging winds, large hailstones and heavy rainfall. The Bureau of Meteorology recorded a wind gust of 169km/h at Archerfield Airport, which was more severe than the strongest winds recorded during TC Jasper.

The storm brought down powerlines and trees, causing road closures and power outages across the south east, with 19,000 properties losing power across the region.

Tragically, one person died as a result of fallen power lines in Murarrie.

South Queensland Severe Storms and Rainfall

Between 24 December 2023 and 3 January 2024, a strong squall line of thunderstorms impacted South East Queensland, particularly the Logan, Scenic Rim and Gold Coast regions.

The Bureau of Meteorology issued 22 thunderstorm warnings — two at Standard Emergency Warning Signal level (the highest level possible for a thunderstorm) and eight at very dangerous level. Destructive winds, giant hail and locally intense rainfall of up to 571mm fell causing extensive flooding, landslips, road closures, isolation and damage to many properties. Energex reported more than 643,000 lightning strikes in a 24-hour period.

Five homes were destroyed and 133 were severely damaged.

Strong winds caused powerlines and trees to fall on homes, vehicles and across roads. More than 1,000 powerlines were brought down interrupting supply to approximately 130,000 customers. Multiple mobile communications facilities were damaged causing the loss of 3G, 4G and 5G networks resulting in landline, mobile and internet connectivity outages.

The volume of debris impacting roads, property and waterways required extensive clean-up and waste management operations. Large trees fell on houses, cars, across roads and in national parks. Heavy equipment was needed to remove damaged trees and logs residents were unable to remove themselves.

Tragically, seven people died as a result of the event.

SPOTLIGHT UNDERSTANDING THE RISK OF TROPICAL CYCLONES IN SOUTH EAST QUEENSLAND

Climate projections indicate cyclones will have the potential to travel further south and while the frequency of tropical cyclones is projected to decrease, the intensity is expected to increase.

The Severe Wind Hazard Assessment for Queensland improves the understanding of potential impacts of severe tropical cyclones on population centres and critical infrastructure in Queensland.

The assessment explored and assessed a range of scenarios that extend beyond the contemporary recollection of historic tropical cyclones in Queensland to inform decision making for rarer but more high-consequence events.

The assessment recommends preparedness activities across Queensland shift in focus from north Queensland to include the entire eastern seaboard when managing cyclone risk.

South West Queensland Flooding

Significant rain from storms between 6 and 23 January 2024 caused flooding and widespread damage to roads and essential public infrastructure in south west Queensland.

Inundation and damage caused road closures and residents and businesses were isolated for several days.

Large amounts of debris also needed to be removed.

Areas impacted included local government areas of Boulia, Bulloo, Diamantina, Paroo and Quilpie.

SHOWCASE

STAND BY GENERATOR POWERS THARGOMINDAH EMERGENCY EVACUATION CENTRE IN 2023–24

In an emergency event the Thargomindah Council Works Depot is used as the Bulloo Shire Council evacuation centre because it can accommodate its 325 residents including people with disability.

During the 2019–20 summer, Thargomindah experienced three major power outages with the longest being 20 hours.

Until recently, the Council Works Depot had no generator to provide constant electricity supply to ensure the building stays resilient during an emergency or power outage.

Bulloo Shire Council made an application to the Queensland Resilience and Risk Reduction Fund 2019–20 (QRRRF) to install a standby generator at the Thargomindah Council Works Depot.

The council received more than \$42,000 for a generator, auto change over switch and shelter to cover the generator.

QRRRF helps communities mitigate and manage the risks associated with disasters. QRRRF is funded by the Australian and Queensland Governments as part of its five-year National Partnership Agreement on Disaster Risk Reduction.

In 2019–20, 67 projects were approved to improve the resilience of Queensland communities across 53 councils, four regional organisations of councils, two Queensland government frontline agencies, a non-profit community organisation, and via Energy Queensland.



Image: Generator and shelter (courtesy: Bullloo Shire Council)

North Queensland Monsoon Trough

The Bureau of Meteorology issued an initial severe weather warning on 12 January 2024 advising a monsoon trough in north Queensland was forming and would impact the region over the following weeks.

This monsoon trough led to significant rainfall and caused flash flooding. On 15 January 2024, the Bureau of Meteorology issued a flood watch for various LGAs in north Queensland.

The final flood watch in relation to the monsoon event was issued by the Bureau of Meteorology on 22 January 2024.

Flooding in the Etheridge Shire Council area damaged road networks. A significant amount of damage was sustained to the Routh Creek bridge on the Gulf Developmental Road, which is the main link between Cairns and Normanton.

Tropical Cyclone Kirrily, Associated Rainfall and Flooding (Tropical Cyclone Kirrily)

In late January 2024, a tropical low in the central Coral Sea developed into Tropical Cyclone (TC) Kirrily, with associated heavy rain and wind gusts impacting the Queensland coast. The system developed into a category 3 weakening to a category 2 and crossed the north Queensland coast near Rollingstone, approximately 55 kilometres north of Townsville, on 25 January.

The system brought severe weather including damaging wind gusts up to 120km/h. Power outages and localised floodwaters impacted thousands around the greater Townsville area. An estimated 518 powerlines were downed, resulting in a peak of 66,000 customers without power in Townsville, Burdekin and Charters Towers. Damage to property from TC Kirrily's initial crossing, however, was minimal, and no loss of life was reported.

The system then tracked inland and weakened to a tropical low moving west and north across central and western Queensland. By the end of January, TC Kirrily moved offshore and on 2 February it moved back over land. From 4 February, TC Kirrily began to interact with another trough to the southwest and merged with this system on 6 February over south-eastern Australia.

As Kirrily moved over the tropical coast and then inland across Queensland it led to heavy falls, as well as widespread flooding for western Queensland. Towns in central Queensland, such as Kynuna in McKinlay and Warra in the Western Downs were evacuated ahead of floodwaters. In Winton all roads were cut with some properties isolated for six to eight weeks due to floodwater. TC Kirrily also brought significant rainfall to the Diamantina region, isolating towns and homesteads.

The system continued south and brought more than 300mm of rainfall overnight from 29–30 January, which triggered flash flooding in the Moreton Bay suburbs of Bray Park, Brendale, Caboolture, Morayfield and Samford. This caused damage to multiple homes and businesses. Twenty-six of the 27 homes that suffered severe damage as a result of the event were in the Moreton Bay LGA. The severe weather also caused road closures and landslides in the region.

TC Kirrily was an unprecedented weather system and a significant event because it was strong, slow-moving and long-lived. Four days after it made landfall in Townsville the weather system was causing havoc almost 1,500 kilometres away in south west Queensland. TC Kirrily affected over 40 LGAs across Queensland from Mornington and Burke in the far north west to Moreton Bay, Ipswich and the Southern Downs in the south east.

SPOTLIGHT **SWIRLnet**

Townsville residents use data from Tropical Cyclone Kirrily to better prepare for next season

As Tropical Cyclone Kirrily tracked towards Townsville in late January 2024 residents feared the worst. Hours before the cyclone crossed the north Queensland coast the Bureau of Meteorology upgraded the system to category 3. Residents were told to prepare for very destructive winds and widespread damage.

The James Cook University (JCU) Cyclone Testing Station has been measuring wind speeds and its effects on homes and buildings for almost 50 years.

In partnership with the University of Queensland, JCU developed the Surface Weather Relay and Logging Network (SWIRLnet) to study wind fields impacting communities during cyclones.

Lightweight SWIRLnet weather stations record and store detailed data including wind speed, wind direction, temperature, relative humidity and pressure.

Unlike the Bureau of Meteorology's permanent weather stations SWIRLnet's towers can be rapidly deployed into the built environment, providing real time data at a range of sites. The stations are not staffed and authorities and the public can access data remotely through the 3G and 4G network.

Six SWIRLnet towers were deployed in Townsville to collect wind data for different terrains such as for cleared land, sloping land, land adjacent to the coast, north and south of Castle Hill, in the middle of urban terrain and in semi-urban terrain.

As Tropical Cyclone Kirrily crossed the coast at Rollingstone, 55 kilometres north of Townsville, SWIRLnet data showed wind speeds in Townsville had collapsed to a category 1.

SWIRLnet was able to inform the public via council and the media about the wind speed in real time.

This allowed people to contextualise Tropical Cyclone Kirrily's 'still scary' wind gusts, re-set their risk awareness and capacity for dealing with disaster events.

SWIRLnet real time data helps communities understand and evaluate cyclone impacts and take measures to better prepare themselves and homes for the next event.



Image: Portable anemometer network for measuring wind speeds of tropical cyclones that impact the communities (courtesy: Cyclone Testing Station James Cook University)

Western Queensland Rainfall and Flooding

On 22 March 2024 the Bureau of Meteorology issued a flood watch warning for south west Queensland advising a trough would extend over the region increasing rainfall and the chances of flooding.

The trough continued to drift eastwards in the following weeks leading to significant rainfall in Balonne, Barcoo, Bulloo, Flinders, Goondiwindi, Maranoa, Murweh and Richmond.

Flooding caused extensive damage to sealed and unsealed roads isolating towns and communities. Some rural properties were cut off for long periods of time. Roadside debris clean-up was required.

Timeline of events

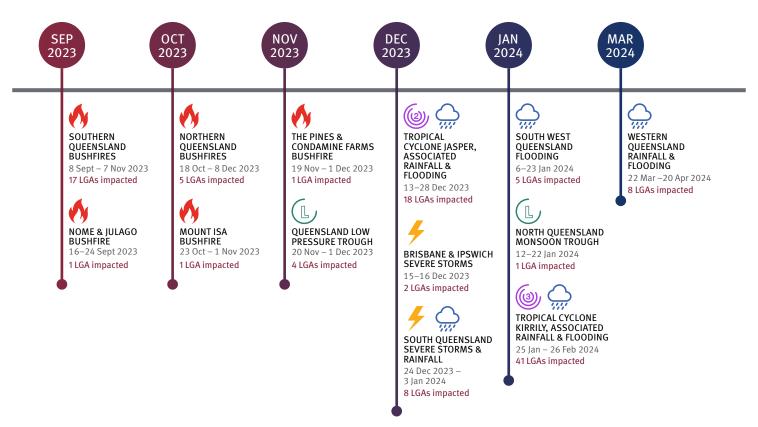




Image: Uprooted tree, south east Queensland (courtesy: QFD)

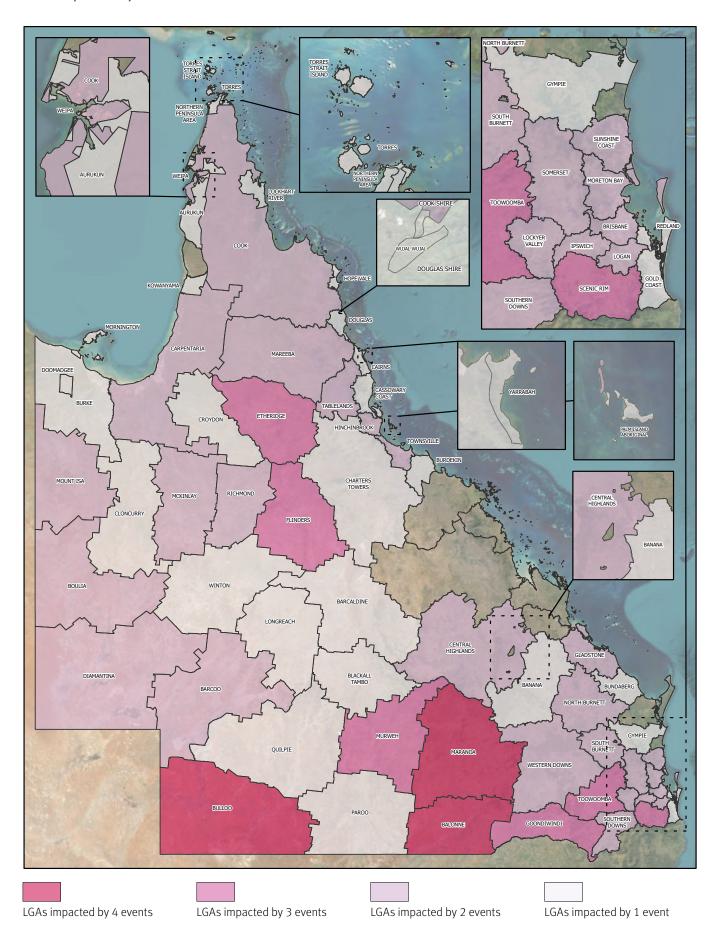


Figure 1. LGAs impacted by the 2023–24 disaster events

What are the common local government resilience and recovery themes?

LGAs impacted by the 2023–24 disaster events have identified resilience and recovery priorities for their communities. While the impacts of each event differed according to location, there are five common themes across all communities:

- · recovery capability and capacity in local government
- access to psychosocial support services to address cumulative disaster impacts
- access and assurance of resupply
- land use planning and effects on insurance and finance for individuals and business
- strengthening community awareness, responsibility and resilience to disasters.

Recovery capability and capacity in local government

The changing nature and frequency of disaster events means it is important to continuously improve and prepare for future events. A recurring theme from local governments this disaster season is continuing to build capability and capacity for response to and recovery from disasters.

Local government priorities for building recovery capability and capacity for future disaster events include:

- identifying and harnessing local recovery capabilities including local contractor capacity
- capturing lessons identified from the 2023–24 disasters to prepare for future hazards
- continuing to deliver disaster management training for individuals involved in response and recovery in local government
- conducting rehearsal exercises
- taking actions to prepare for future events including reviewing fire management plans, investigating opportunities to support bushfire mitigation and revising flood models to understand risk of flooding and inform local planning schemes.

The Australian and Queensland Governments are providing a total of \$1 million for Douglas Shire Council, Wujal Wujal Aboriginal Shire Council and Scenic Rim Regional Council to engage project managers and other skilled workers to design, coordinate and manage extraordinary recovery efforts following Tropical Cyclone Jasper and South Queensland Severe Storms and Rainfall.

Section 16A(c) of the *Disaster Management (DM) Act 2003*, requires that persons (local, district and state levels) performing functions under the Act in relation to disaster operations are appropriately trained. The Queensland Disaster Management Training Framework outlines the recovery courses and training key Queensland disaster management stakeholders need to complete to support effective performance of identified roles within disaster management. When requested, QRA provides support and workshops to help councils develop recovery sub-plans and event-specific recovery and resilience plans.

QRA will be delivering disaster funding and recovery training to local councils in quarter 3 of 2024.

Access to psychosocial support services to address cumulative disaster impacts

Access to psychosocial support services, particularly for those regions impacted by multiple disaster events was a recurring theme from local government.

Communities are reporting lower levels of personal resilience following consecutive or concurrent hazards and COVID-19. Residents report feeling a 'loss of hope', given multiple disaster events.

Of the 66 LGAs affected by the 2023–24 disaster events, more than half were impacted by two or more events. Bulloo, Balonne and Maranoa were impacted by four events with a further six LGAs impacted by three.

The need is increasing for psychological first aid support immediately following disaster events. This season there were 4,045 instances of psychological first aid (PFA) provided for Tropical Cyclone Kirrily, 4,244 instances of PFA for South Queensland Severe Storms and Rainfall and 10,891 instances of PFA for Tropical Cyclone Jasper and 1,983 instances of PFA for the Queensland Bushfires as of 31 May 2024.

A further 1,801 instances of PFA were provided via the dedicated Community Recovery Lifeline Hotline which was established during the season in response to the significant psychological impacts across affected communities.

Communities reported increased psychosocial impact because disaster events occurred during Christmas and New Year, which are peak periods for tourism. Limited warnings about the strength and scale of disaster events also contributed to increased psychosocial distress.

Some LGAs reported that the events exacerbated existing disadvantage in vulnerable groups in communities.

The Department of Treaty, Aboriginal and Torres Strait Islander Partnerships, Communities and the Arts (DTATSIPCA) is supporting communities access psychological support during response and recovery by:

- providing psychological first aid and support services in evacuation centres and recovery hubs and by outreach teams
- supporting non-government organisations such as Red Cross to deliver psychological first aid in communities impacted by disaster events
- delivering psychological first aid training to community members and leaders and customer-facing council workers
- supporting Ready Reserves deployed for disaster events to provide referral support and information to community members and assist with providing psychological first aid.

SPOTLIGHT READY RESERVES

When disasters happen in Queensland, the Community Recovery Ready Reserve (Ready Reserves) step in to support vulnerable individuals and families.

During the 2023–24 disaster season 475 Ready Reserves were deployed to help communities.

Ready Reserves are a group of public service volunteers working away from their regular roles to assist with disaster recovery. Ready Reserves are sent into a disaster area once emergency responders have declared it safe and suitable for recovery operations to begin.

Ready Reserves respond to disaster in all its forms – from floods, fires and cyclones to disease outbreaks.

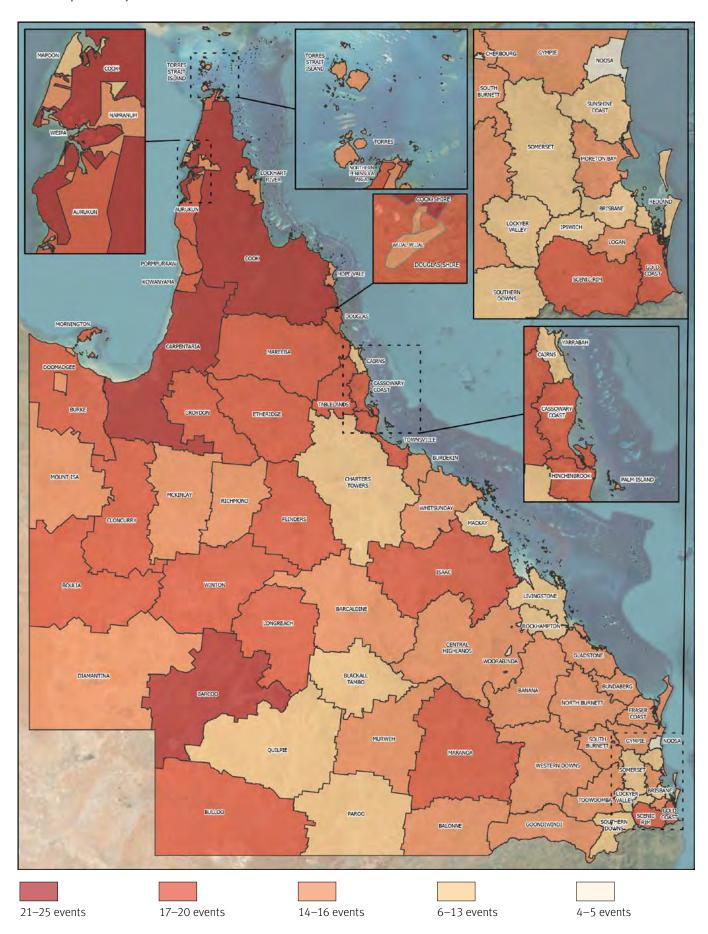


Figure 2: The number of times communities have been impacted by disaster events since 2011.

Access and assurance of resupply

Many communities were physically isolated by the disaster events, with closure of roads and rail, and widespread flooding impacting aviation access.

Communities, including those on the Bloomfield River and Cape Tribulation, were also severely impacted when their usual sea access routes were destroyed.

The physical isolation caused difficulty accessing essential medications and health services as well as food, water and fuel.

Several of the disaster events resulted in widespread power outages. The South Queensland Severe Storms and Rainfall event resulted in 130,000 households losing power, with some areas without power for up to 14 days. Approximately 50,000 households were without power during Tropical Cyclone Jasper.

Disaster events also caused outages to phone and internet services, with Optus and Telstra reporting loss of 3G and 4G services. Approximately 1.5 million customers were affected across the duration of the South Queensland Severe Storms and Rainfall event, with up to 30,000 mobile users offline during Tropical Cyclone Jasper.

The Queensland Government is supporting local government to reinstate access to communities and assure resupply by:

- coordinating DRFA packages
- restoring roads damaged by floods and bushfires
- scoping projects to provide all weather access to egress points in communities

Land use planning and effects on insurance and finance for individuals and business

The 2023–24 disaster events had a financial burden on communities, particularly for individuals and families with uninsured or underinsured properties.

Individuals reported increased stress due to the inability to obtain insurance for residential properties in some areas following previous disaster events.

Some private contractors undertaking controlled burns and other land management activities are facing insurance cost increases of over 200 per cent. This has the potential to impact land management activities resulting in worsening fire conditions.

The Queensland Strategy for Disaster Resilience 2022–2027 (QSDR) identifies actions for the land use planning system to contribute to Queensland's disaster resilience.

The Australian Government has been working closely with the insurance industry to form partnerships to provide insurance relief to Australians. In partnership with the Resilient Building Council the Australian Government has developed the Bushfire Resilience Rating Home Self-Assessment app.

Other resilience initiatives include:

- The <u>Household Resilience Program</u> assists eligible homeowners located within 50 kilometres of the coastline from Bundaberg, north to Cape York and west to the Queensland—Northern Territory border, improve the resilience of their homes against cyclones. The program is funded by the Australian Government and administered by the Queensland Government.
- The <u>Strata Resilience Program</u> aims to help bodies corporate located within 100 kilometres of the coastline from Rockhampton, north to the Torres Strait and west to the Queensland—Northern Territory border, improve the resilience of their strata properties against cyclones. The program is jointly funded by the Australian and Queensland Governments.
- The <u>Hazards Insurance Partnership</u> is a single touchpoint between the Australian Government and the insurance industry to engage on issues of disaster risk reduction and hazard insurance

CASE STUDY THE IMPACT OF EXTREME WEATHER EVENTS ON WELLBEING

Many communities across Australia experienced more than one extreme record-breaking weather event from September 2023 to April 2024.

Entire communities were evacuated, many lost their homes and tragically some lost a loved one.

Recent polling by the Climate Council reveals Queenslanders are more likely to experience one or more floods (70 per cent), heatwaves (86 per cent), and/or cyclones and/or destructive storms (57 per cent) compared to other states or territories.

'Climate whiplash' is making people increasingly anxious they will be forced to relocate from their homes and communities.

One in 10 Australians have already had to relocate because of an extreme weather event temporarily or permanently. One in three know someone who has been forced to relocate.

Queenslanders identified most strongly with this experience, with more than one in two (52 per cent) saying they had either relocated due to extreme weather or know someone who has.

An overwhelming majority (84 per cent) of Australians are worried their insurance will become unaffordable because of extreme weather events.

These compounding weather events are having a significant impact on people's mental health. Half of all Australians who have experienced disaster events reported at least some degree of negative impact on their mental health. Nineteen per cent (one in five) reported a moderate or major impact.

On a positive note, a large majority of Australians (76 per cent) have some degree of confidence in their communities' preparedness for future climate-related disaster. This could be because of the work many communities across Australia have had to do to recover from disasters in the recent past.

YouGov conducted the polling from 24–26 January 2024. The polling questions were designed to understand the impact of climate change and extreme weather events on the wellbeing of Australians.

SPOTLIGHT

BUSHFIRE RESILIENCE RATING HOME SELF-ASSESSMENT APP

Australians now have access to a free app to better prepare their home from bushfire risk and help put downward pressure on insurance premiums.

The app enables Australians to assess their site-specific risk and take action to improve their bushfire resilience.

Households can now measure the bushfire resilience of their own home through a star-rating system and receive a customised action plan to make practical, evidence-based bushfire safety improvements to their homes. As tasks are completed, their home becomes safer and the home's Resilience Rating is updated through the app.

The Resilient Building Council (RBC) received funding from the Australian Government's Disaster Risk Reduction Package, to develop the app. More than 1,200 households from bushfire impacted areas helped co-design and trial the app, undertaking actions that resulted in an average 67 per cent reduction in the likelihood of their home igniting in a bushfire.

The Bushfire Resilience Rating is calculated using the Bushfire House Loss Probability Model, bushfire information, and historical house loss data. This is the first scientific model to calculate bushfire building performance.

RBC's Resilience Ratings were developed to improve the resilience and preparedness of households who have identified bushfire risk and plan ways to mitigate the risk.

You can download the Bushfire Resilience Home Assessment app at the <u>Resilient Building Council website</u>.





Image: Bundaberg bushfire damage (courtesy: QRA)

Strengthening community awareness, responsibility and resilience for disaster events

The impacts of the 2023–24 disaster events demonstrate the need to continue to build community awareness and resilience for disasters.

Local government priorities for building community awareness and resilience for disaster events include:

- strengthening social connections through access to community recreation and sporting facilities
- providing accessible relief and early recovery information
- improving communication about accessing financial assistance, in particular ensuring information is available and accessible to people with disability, seniors, culturally and linguistically diverse people and First Nations people
- ensuring multimodal means of communication when internet and telephone services do not work
- accessing local recovery capacity at scale and speed and tightening pre-emptive planning.

DTATSIPCA is supporting provision and accessibility of relief and early recovery information including accessing financial assistance by:

- providing information about availability of existing supports and services in accessible formats across multiple channels and networks
- developing information packs
- promoting recovery support, assistance measures and service outlets through human service networks, peak bodies, posters and newsletters
- providing information, including translated and Easy Read formats, through the Community Recovery Hotline and on disaster management community support websites
- advocating for effective communication strategies that are accessible to all community members
- utilising customer insights and service thematics to continue to inform communication and service strategies.

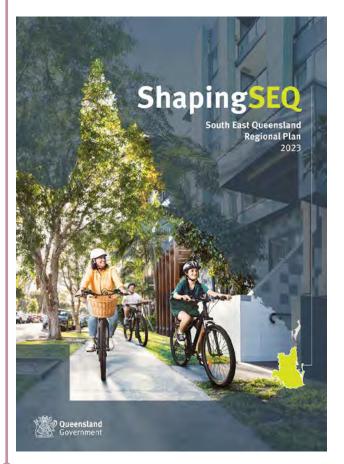
SPOTLIGHT ShapingSEQ 2023

ShapingSEQ 2023 is the South East Queensland Regional Plan encompassing the 12 LGAs of Brisbane, Gold Coast, Ipswich, Lockyer Valley, Logan, Moreton Bay, Noosa, Redland, Scenic Rim, Somerset, Sunshine Coast and Toowoomba (urban extent).

ShapingSEQ 2023 sets a long-term vision for the growth of SEQ. It includes a resilience policy maturity pathway to guide integration of natural hazard risk management and climate adaptation processes at the regional scale to provide a consistent understanding of climate and disaster risk for land use planning.

The Resilience Policy Maturity Framework identified in ShapingSEQ 2023 guides the integration of natural hazard risk management and climate adaptation processes at the regional scale to build a consistent understanding of climate and disaster risk for land use planning. This approach builds on 'doing same', 'doing better' and 'doing different' pathways from the Queensland Resilience, Adaptation Pathways and Transformation Approach by CSIRO and QRA. The Review pathway is currently the focus, which recognises the advancement in resilience and risk-reduction efforts that have occurred in recent years and focuses on continuing to implement that work into regional planning in line with the existing State Planning Policy 2017.

Later stages of the Resilience Policy Maturity Framework are around preparing for future adaptation for parts of SEQ that are, or will be, at intolerable natural hazard risk in the future. These are locations that currently are, or will be likely in the future, unable to secure property insurance and/or financing.



2023–24 disaster events in numbers

The 2023–24 disaster season



13 events



66 out of 77 councils impacted



23% of Queensland population impacted



15,740km state road network closed or restricted **2,920**km impacted by more than one event



Approximately 250,000 homes lost power



Over **195** properties destroyed Over **3,372** properties damaged



1,731 Community Recovery outreach visits conducted



21,163 instances of psychological first aid provided



475 Ready Reserves deployed



119,351 calls to the Community Recovery Hotline



62 Community Recovery Hubs established providing support to **38,322** people



\$2.5b economic impact



\$78.7m in PHAS/ESSRS paid, assisting **377,329** people



27,429 nights of accommodation booked with emergency housing assistance to support impacted residents



\$4.1m donations received



Over **\$1.6m** DRFA low interest loans



15 people died as a result of the events

Tropical Cyclone Kirrily



Over 251 properties damaged



4,030 instances of psychological first aid provided



15 Community Recovery Hubs established



66,000 homes lost power



750 Energy Queensland field crew mobilised



8,681km of state roads impacted

All figures accurate as of 20 May 2024. All funding packages and programs referenced in the Plan exclusive of GST.

Tropical Cyclone Jasper



2.2m rainfall recorded in the Cairns catchment



Approximately 300 residents evacuated to Cooktown



97% loss of treated water resulting in level 4 water restrictions (Douglas Shire Council)



941 properties damaged by flood waters



600 Energy Queensland field crew mobilised



40,000 homes lost power **65**km powerlines repaired



1,706km roads impacted



24 Community Recovery Hubs established



10,377 instances of psychological first aid provided



1.000 tonnes of waste collected from homes



49 temporary accommodation caravans deployed



30,000 people lost access to mobile network

South Queensland Severe Storms and Rainfall



571mm of rain



4,244 instances of psychological first aid provided



130,000 homes lost power **120**km powerlines repaired



1.5m mobile users impacted



1,000 Energy Queensland field crew mobilised



16 Community Recovery Hubs established



194km roads impacted

Bushfires



20 LGAs impacted



300 people evacuated



Over 147 homes destroyed



Over **450** homes lost power

23 temporary accommodation caravans deployed



729km of fencing damaged

Roles and responsibilities

Successful disaster recovery depends on clear, robust governance. Queensland's disaster recovery arrangements, shown in Figure 3, align with those articulated in the *DM Act*. They enable a collaborative approach that aims to bring together all agencies, stakeholders and resources for planning and coordinating delivery of recovery functions.

The arrangements reflect the focus on impacted communities, and the lead role of the local recovery coordinator, local recovery groups and disaster management groups in facilitating local recovery initiatives. These local groups are supported by district disaster management groups and recovery groups, and the state government through functional recovery and resilience groups.

The recovery arrangements have the capability of expanding as required to address hazard-specific events.

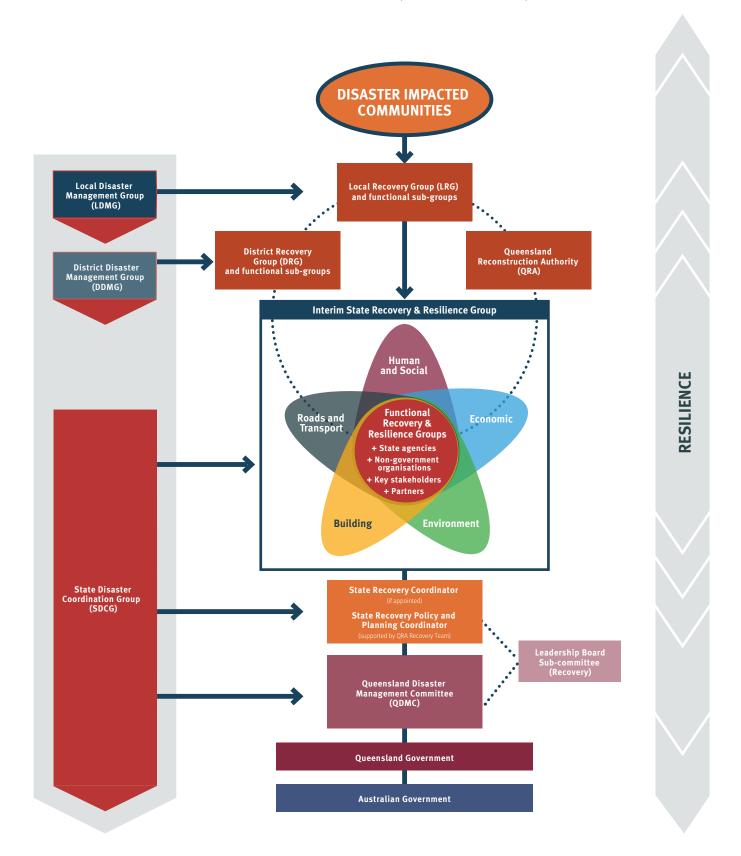


Figure 3: Queensland's disaster recovery arrangements

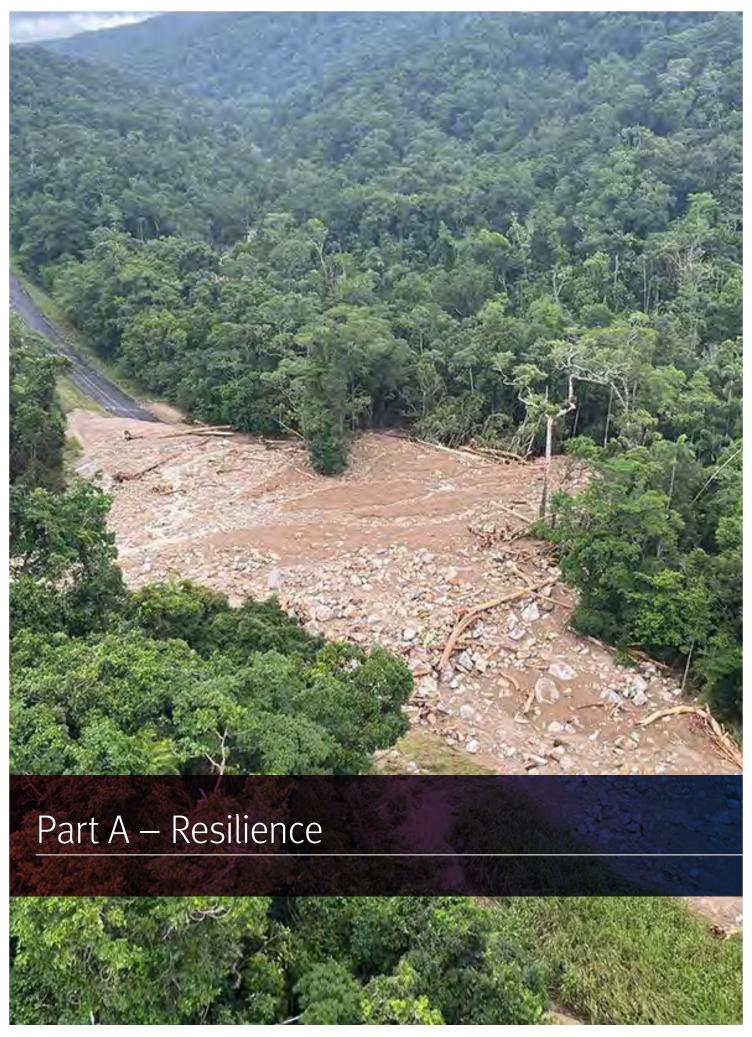


Image: Far North Queensland landslip following Tropical Cyclone Jasper (courtesy: QRA)



Image: Swift water rescue at Glenmore following rain associated with TC Kirrily (courtesy: QFD)

Queensland has experienced more than 100 significant disaster events since QRA was established 13 years ago.

In that time, QRA has collected, analysed and shared data to inform decisions about long-term resilience priorities for the state.

The Queensland Government is committed to strengthening disaster resilience to better equip communities deal with disasters.

As part of this commitment, QRA led the development of the Queensland Strategy for Disaster Resilience 2022–2027, which focuses on community-informed resilience investment and greater interagency coordination.

The strategy complements the suite of locally led regionally coordinated Regional Resilience Strategies.

More councils are using their Regional Resilience Strategies and their Local Resilience Action Plans to inform targeted evidence-based investment decisions to maximise disaster risk reduction when applying for resilience funding.

What is resilience?

A system or community's ability to rapidly accommodate and recover from the impacts of hazards, restore essential structures and desired functionality, and adapt to new circumstances.

Why invest in resilience?

Disasters such as floods, bushfires, tropical cyclones and severe storms will continue to present ongoing risks to infrastructure and the environment. Proactively investing in building resilience into the design of Queensland communities can support future recovery from disaster events.

Studies show the benefits of investing in disaster risk reduction consistently outweigh the cost of investment. A review by Reinhard Mechler on the economic efficiency of disaster risk management found, on average, for every dollar spent, \$3.70 was returned in benefits from risk reduction activities from a sample of 39 disaster risk reductions studies. Table 1 shows the full cost benefit ratio from risk reduction activities.

Hazard	Cost:benefit ratio (\$)
Flood (riverine and coastal)	1:4.6
Wind (tropical and extratropical)	1:2.6
Earthquake	1:3
Drought	1:2.2
Landslide and avalanche	1:1.5
Average	1:3.7

Table 1: Full cost benefit ratio from risk reduction activities

What does modelling tell us about disasters and climate change?

How will climate change affect Queensland?

Queensland already experiences climate extremes such as floods, droughts, heatwaves, and bushfires. Climate change is likely to worsen the frequency and severity of these events. In future Queensland can expect:

- higher temperatures
- · hotter and more frequent hot days
- harsher fire weather
- significant changes in rainfall including large reductions in rainfall in some parts of the state, and more intense downpours in others
- less frequent but more intense tropical cyclones that can extend further south than commonly observed in the historical record
- rising sea levels
- · warmer and more acidic seas.

<u>Climate Change in Queensland</u> gives further information about how climate change will affect Queensland.

SPOTLIGHT OUEENSLAND FUTURE CLIMATE

To determine what our future climate might be, scientists use global climate models to simulate the earth's climate system. The models use a set of mathematical formulae that describe the physical processes of the atmosphere, ocean, land and ice.

The Queensland Government and the University of Queensland have developed the Queensland Future Climate dashboard, which models future climate change scenarios for Queensland. The dashboard is modelled using a medium emission and a high emission estimate as these are thought to provide realistic upper and lower trajectories for estimating future climate risks.

In 2030 under a high greenhouse gas emissions scenario, Brisbane's climate is projected to be more like the current climate of Bundaberg, and the climate of Cairns more like the current climate of Cooktown.

The Queensland Future Climate dashboard is available on the Queensland Government's <u>Long Paddock website</u>.



Fire weather

Fire weather is a measure of fuel dryness and hot, dry, windy conditions.

Fire season in Queensland often begins in July and runs until October and can extend through to February. However, bushfires in Queensland can occur at any time.

According to CSIRO and the Bureau of Meteorology, there has been an increase in the length of the fire season and extreme fire weather across large parts of Australia since the 1950s leading to more frequent and larger fires, particularly in southern Australia.

Climate change is likely to result in extended fire seasons with harsher fire weather from higher temperatures and more frequent hot days.

Wind

Wind events include tropical cyclones and other severe wind events from thunderstorms such as tornadoes.

Australia's cyclone season occurs between November and April each year along the Queensland, Northern Territory and Western Australia coastlines. In Queensland, the coastal areas north of Bundaberg are most susceptible to cyclones. However, cyclones have occurred along the entire Queensland coast. The accompanying wind and rain from weakening cyclones can affect communities throughout all parts of Queensland.

CSIRO and the Bureau of Meteorology have observed a decrease in the number of tropical cyclones in the Australian region since 1982. In the coming decades Australia is projected to experience fewer tropical cyclones.

Research suggests that although tropical cyclones may become less frequent, they are likely to become more intense and reach further south. When tropical cyclones occur, the impact is likely to be amplified, through increased rainfall intensity from the tropical cyclone and higher sea levels.

Storms can consist of heavy rainfall and flash flooding, damaging winds, lighting strikes and hail. According to the Bureau of Meteorology severe storms are likely to produce any of the following:

- large hail measuring more than 2cm in diameter
- damaging or destructive wind gusts
- · heavy rainfall which may cause flash flooding
- tornadoes

Severe thunderstorms can be quite localised and develop quickly.

Thunderstorms can sometimes occur together with other weather systems such as cyclones or cold fronts. These 'compound events' can lead to a higher risk of extreme weather occurring for example extreme rainfall and damaging winds.

Flooding

There are three main types of flooding: riverine flooding, flash flooding, storm surge and tide.

Heavy rainfall events are becoming more intense, leading to a complex mix of effects on streamflow and associated flood and erosion risks, including increased risk of small-scale flash flooding. There will be a higher risk of flooding and inundation during tropical cyclones and severe storms, particularly for coastal communities, from increased intensity and increased sea levels.

Adapting to climate change

The Queensland Government has developed the Queensland Climate Adaption Strategy 2017–2030 to support government, businesses and communities manage and respond to our changing climate.

The strategy provides the overarching framework for climate adaptation planning and action in Queensland through four pathways. These pathways recognise that appropriate adaptation actions will vary across Queensland's regions, community and economy. The pathways are shown in Table 2.

Pathway	Objective
People and Knowledge	Empower best-practice climate science, education and engagement to support climate risk management within Queensland's communities.
State Government	Embed the consideration of climate adaptation into policies, regulations and procedures, and address risks to assets and services
Local Governments and Regions	Partner with local governments and other regional organisations to develop regional adaptation solutions, including embedding climate risk in planning and development decisions
Sectors and Systems	Assist sector leaders to collaborate with government agencies, local governments and other stakeholders to identify adaptation needs and to prioritise adaptation activities

Table 2: Queensland climate adaption planning and action pathways

The Queensland Climate Adaption Strategy recognises that building resilience across all sectors of the community is an important component of adapting to climate change.

SPOTLIGHT CliMate

CliMate is an application developed by the Managing Climate Variability Program for producers who seek to understand recent weather and probabilities of future weather events. The tool uses weather data, statistics and forecasts with farming system information, such as soil, water and heat.

What are local governments doing to increase resilience?

Every community is different. Local governments across Queensland have identified resilience priorities based on local needs and risks. Many of these priorities are common to all regions and include:

- identifying mitigation strategies for future events
- identifying critical lessons and implementing improvements
- reviewing modelling to understand risk
- understanding critical infrastructure failure points to increase resilience
- restoring public trust in emergency warnings and modelling capacity
- ensuring equitable access to insurance
- reinforcing disaster preparedness and resilience across the region including engagement with vulnerable communities (disability, aged care, youth, culturally and linguistically diverse, and other vulnerable groups) to understand their needs and through training for local recovery groups
- providing support and information about animals and pets during disaster events
- building partnerships to recover and build resilience in the environment
- providing access to psychosocial wellbeing community education and training
- building business and industry resilience to ensure continuity
- maximising opportunities to reconstruct road and transport assets to a more resilient standard
- providing access to financial resilience advice for individuals and businesses.

What are the Queensland Government's resilience priorities?

The interim State Recovery and Resilience Group (SRRG) has identified strategic resilience priorities to meet future challenges in disaster management. The priorities enable strategic focus at a state level to guide improvements in resilience across all levels of government and the community, preparing Queensland better for future hazards.

The state strategic resilience priorities are aligned to international, national and state frameworks for disaster management such as the Sendai Framework for Disaster Risk Reduction, the Queensland Strategy for Disaster Resilience, Recommendations from the Royal Commission into the National Natural Disaster Arrangements and the Standard for Disaster Management in Queensland.

The six state strategic resilience priorities were derived from state government departments, QRA and functional recovery and resilience groups experience with responding to disasters over the past 10 years. To address the consistently repeated challenges of recovery, these six areas were marked for increased investment and focus for whole of government.

The interim state resilience priorities are:

- building codes and land use planning
- environmental protection
- crucial linkages/infrastructure
- · supporting the vulnerable
- data sharing
- research.

Building codes and land use planning

Land use planning and building code design decisions can avoid developments and community infrastructure in areas prone to hazards.

Land use planning is an effective risk mitigation tool for disasters as it can eliminate the risk in some instances by not allowing building in certain areas where the risk is considered too high.

Building codes specify the requirements of built infrastructure to sustain disaster events. Incorporating future disaster risk in building codes enables engineering solutions to manage risk by influencing the building code to provide guidance for disaster resilient infrastructure.

Environmental protection

Environmental protection involves identifying prevention and mitigation strategies to conserve and restore the environment.

The environment contributes numerous services and functions that are critical for disaster risk reduction and climate change adaptation. For example, mangroves protect coastal areas from storm surges and wetlands store and clean water. Their preservation and restoration after disasters is critical in improving the resilience of the system.

Crucial linkages/infrastructure

Communities rely upon critical lines of communication including land, sea, air and information. They provide access to essential needs such as food, water, fuel and communication during and after disasters.

Identifying critical lines of communication and making access to them and along them more resilient improves a community's resilience in future events.

Supporting the vulnerable

Providing timely response and recovery support for vulnerable groups and engaging with them to understand their needs is essential. These groups include people with disability, seniors, people from First Nations backgrounds, people who are culturally and linguistically diverse, people experiencing homelessness and/or domestic violence.

Data sharing

Sharing data between levels of government and between departments supports continuous improvement, speeds up recovery and strengthens resilience.

Sharing experiences across the national disaster community enables us to learn from other jurisdictions, and coordinate priority focus areas for recovery and resilience for future disaster events.

Research

Research can help us to understand the impact of future disaster events and identify new effective ways to mitigate risk.

The Queensland Government is developing a Queensland Disaster Management Arrangements research framework and exploring research partnerships to support research on resilience for disaster events.

CASE STUDY FLOOD INTELLIGENCE SYSTEMS

In the face of increasing flood risks, particularly in areas such as Toowoomba and Oakey, the implementation of flood intelligent systems that provide advanced flood early warnings are crucial. These systems are vital in safeguarding communities, roads, businesses, livestock and houses from the devastating effects of flooding.

A flood early warning system operates along East and West creeks in Toowoomba, and Cooby, Gorman, Doctor, and Oakey creeks. The system uses a network of water height meters that provide real-time data on rising water levels, triggering alerts to local communities and modifying traffic light signals to prevent motorists from entering flooded areas. Residents can make informed decisions during critical moments, such as evacuating in a timely manner or securing properties. Additionally, it allows local authorities to efficiently allocate resources and coordinate emergency responses, improving the overall safety and resilience of the community.

The system operates 24/7 using data from the Bureau of Meteorology and various local rain and water level gauges. If flood is imminent, the system generates automatic notifications via SMS and email, providing a critical lead time of approximately six hours for residents to take necessary precautions.

The Toowoomba and Oakey flood early warning system exemplifies the application of flood intelligence technology, focusing on both flood forecasting and active warning dissemination. The robustness of this system is enhanced by its multiple layers of communication, including radio, backup radio, and 3G, along with dual computer servers at different locations. This multifaceted approach ensures that even in the event of a system failure, manual readings and local decision-making can take over, maintaining the system's reliability.

The Toowoomba and Oakey flood early warning system plays a crucial role in safeguarding lives and properties, making it a model worth emulating in other flood-prone regions.

CASE STUDY LIGHT DETECTION AND RANGING

Accurate and up-to-date surveys of the physical terrain are critical in developing flood studies, understanding consequences, assessing options, and operationalising warnings to provide flood intelligence that can support response and recovery efforts. Floor level data is also required to translate flood study outputs to an assessment of risk to buildings and people.

QRA is working closely with the Department of Resources and 26 local councils to capture Light Detection and Ranging (LiDAR) data to create a floor level database as part of the Australian and Queensland Governments \$31million Flood Risk Management Program.

LiDAR technology, when combined with other initiatives, contributes to the production of valuable information for communities, which can lead to more efficient infrastructure planning, improved environmental management, and better disaster response efforts.

There are four tranches of LiDAR capture with 65,652 square kilometres captured as of 12 June 2024. The program will collect LiDAR data for more than 73,000 square kilometres, an area larger than the size of Tasmania. Post-processing and quality assurance is progressing well with only tranche four left to complete.

- tranche one Goondiwindi Regional Council
- tranche two Bundaberg, Gympie, Moreton Bay, Scenic Rim, Somerset and Toowoomba LGAs
- tranche three Balonne, Gladstone, Rockhampton, Livingstone, Carpentaria, Kowanyama, Barcaldine, Longreach, Murweh, Southern Downs, Western Downs and parts of the Upper Burnett catchment including Cherbourg, South Burnett and North Burnett LGAs
- tranche four Banana, Blackall-Tambo, Central Highlands, Flinders and Maranoa LGAs.

SHOWCASE GAYNDAH WATER INTAKE PROVES RESILIENT

The Gayndah Water Supply Intake Station (intake station) sits on the Burnett River. It supplies the town's only water supporting a population of approximately 2000, as well as local primary industries.

In 2011 severe flooding damaged the intake station washing it away. It was rebuilt in the same location for \$1.2 million. In 2013, two weeks after it was recommissioned, it was re-damaged, with restoration costs estimated at \$3.8 million.

This time, instead of being rebuilt in the same location, the intake station was repaired as part of the newly established Queensland Betterment Fund. The fund allows local governments and state agencies to rebuild essential public assets to a more resilient standard to help them withstand the impacts of future disasters.

Rebuilding involved relocating the intake station above the Claude Wharton Weir and installing a new submersible-style pumping station and a new raw water rising main to the water treatment plant.

The Gayndah Water Supply Intake Station proved resilient, remaining undamaged and functional when the area was flooded again in 2015, 2016 and twice in 2017.

The Queensland Government, through QRA, established the **Betterment Fund** under the Disaster Recovery Funding Arrangements Efficiencies Framework. It is jointly funded by the Australian and Oueensland Governments.

Since 2013 more than 700 Betterment projects across Queensland have been approved with more than \$533 million allocated for Betterment programs in response to severe disasters. Other states and territories are now establishing similar programs.



Image: Damage to the Gayndah Water supply intake station (courtesy: QRA)



Image: Completed works on the Gayndah Water Supply Intake Station (courtesy: QRA)



Image: Completed works on the Gayndah Water Supply Intake Station (courtesy: QRA)

What is the Australian Government doing about recovery and resilience in Queensland?

The National Emergency Management Agency (NEMA) will continue to partner with QRA to implement a strategic approach to prioritising recovery and resilience activities, and to improve the outcomes achieved through DRFA and other non-DRFA related initiatives.

DRFA is a cost-sharing arrangement between the Australian and Queensland Governments and is intended as an emergency helping hand for individuals and communities in need following a disaster.

Non-DRFA initiatives include resilience commitments and actions based on local and regional needs to strengthen community resilience.

A key non-DRFA related initiative is Australia's first National Climate Risk Assessment and a National Adaptation Plan.

- The Department of Climate Change, Energy, the Environment and Water (DCCEEW) is providing \$28 million over two years from 2023–24 to develop a National Climate Risk Assessment and a National Adaptation Plan:
 - » The National Climate Risk Assessment will help build a shared understanding of the most significant risks facing Australia from climate change, and support governments, industry and communities to better understand their climate risk and its impacts.
 - » The National Adaptation Plan will be the blueprint for adapting to nationally significant climate risks. It will build an agreed, nationally consistent pathway that prioritises Australia's adaptation actions and opportunities.

Other non-DRFA initiatives include:

- undertaking scoping works to improve connectivity and enhance capacity of the Captain Cook Highway from the Bruce Highway (south) to the Kennedy Highway (north). The project will connect the Port of Cairns and Cairns Airport, key freight hubs in the region
- upgrading the Kuranda Range Road Corridor between Smithfield and Kuranda
- sealing sections of the Peninsula Developmental Road, including a new crossing over the Archer River
- sealing sections of several Cape York Community Access Roads that connect to the Peninsula Developmental Road.

NEMA will also continue to coordinate recovery support available through other Australian Government agencies.

Further DRFA and non-DRFA initiatives relating to each functional line of recovery are included in Part C of the Plan.

How are the Australian and Queensland Governments responding to local needs?

The five local themes identified following the 2023–24 season sit under the interim state resilience priorities of building and land use planning, crucial linkages/infrastructure, supporting the vulnerable, environmental protection, data sharing, and research. Queensland and Australian Government funding and initiatives support the priorities. Table 3 connects the local government themes with state resilience priorities and Queensland and Australian Government actions.



Image: Swift water rescue crew in the Scenic Rim responding to the South Queensland storms (courtesy: SES)

Connecting local themes and government actions

Local government themes	Interim state resilience priorities	Queensland and Australian Government DRFA actions	Australian Government actions
Recovery capability and capacity in local government	 Data sharing Research Environmental protection 	 Fund Community Recovery and Resilience Officers (QRA) Fund Resilience Recovery Project Managers for Douglas Shire Council, Wujal Wujal Aboriginal Shire Council and Scenic Rim Regional Council (QRA) Deliver disaster funding and recovery training to local councils in Q3 of 2024 (QRA) Fund clean-up and pest management activities along waterways and beaches and around community and recreational assets (QRA, DESI) 	 Review programs for opportunities to better support recovery (NEMA) Coordinate recovery and improve resilience for First Nation communities (NIAA) Fund 11 additional Indigenous rangers for flood recovery in Wujal Wujal (NIAA) Up to \$13.2M to regional delivery partners for emergency preparedness and response projects that improve the threat posed to native plants, animals and ecological communities.
Access to psychosocial support services to address cumulative disaster impacts	Supporting the vulnerable	 Coordinate DRFA packages (DTATSIPCA) Provide psychological first aid in evacuation centres, recovery hubs via outreach teams (DTATSIPCA) Deliver psychological first aid training (DTATSIPCA) Support Ready Reserves to assist psychological first aid (DTATSIPCA) 	 Deliver targeted disaster recovery and rapid response payments and services (Services Australia) Provide accessible services in remote and isolated communities (Services Australia) Ensure Australian Government agencies such as Aged Care can contribute to recovery support (NEMA)
Access and assurance of resupply	Crucial linkages / infrastructure	 Coordinate DRFA packages (TMR) Restore roads damaged by floods and bushfires (TMR) Scope projects to provide all weather access to egress points in communities (QRA) 	 Identify priority road network investments in FNQ (DITRDCA and TMR) Fund \$100M under the Better Connectivity Plan to improve resilience of communications infrastructure (DITRDCA) Deliver the National Water Grid Fund for nationally important water infrastructure projects that build resilience (DCCEEW)
Land use planning and effects on insurance and finance for individuals and businesses	 Building codes and land use planning Environmental protection 	 Coordinate QSDR actions for land use planning system to contribute to disaster resilience (QRA and DHLGPPW) Support the restoration of waterway and coastal erosion and environmental degradation, including around residential and productive agricultural areas (DESI) 	 Assess environmental impacts of a proposed action through single process under bilateral agreement (DCCEEW and Queensland Government) Implement Bushfire Resilience Rating Home Self-Assessment app (Australian Government) Contribute \$8.4M to 7 local and 3 state government coastal and estuarine risk mitigation projects along the Queensland coastline (NEMA)
Strengthening community awareness, responsibility and resilience to disasters	Data sharingSupporting the vulnerableResearch	 Provide information on supports and services in accessible formats (DTATSIPCA) Provide information through the Community Recovery Hotline Advocate for effective and accessible communication strategies (DTATSIPCA) 	 Monitor longer term impacts of disasters on tourism in FNQ (Austrade) Fund \$28M to develop Australia's first National Climate Risk Assessment and National Adaptation Plan (DCCEEW) Fund \$15.9M to establish a First Nations led climate centre focused on the Torres Strait and Northern Peninsula Area (Australian Government)

Table 3: Government responses to local priorities

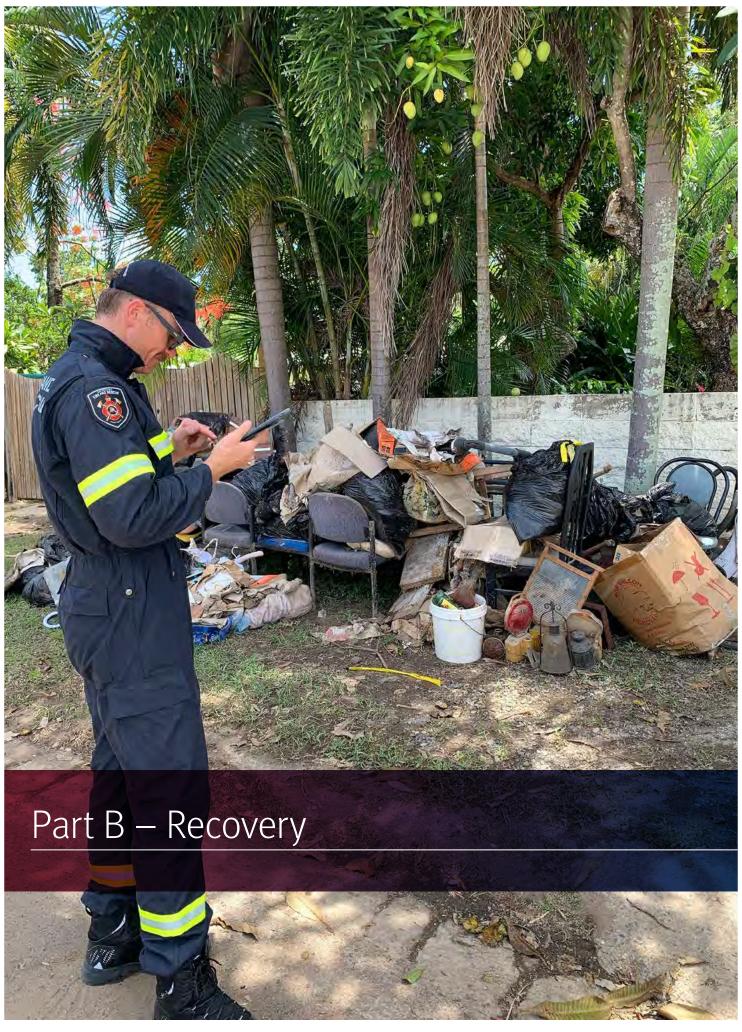


Image: Conducting initial damage assessments following Tropical Cyclone Jasper (courtesy: QRA)



Image: Bushfire damage in the Southern Downs (courtesy: QRA)

What is recovery?

Recovery is the coordinated process of supporting disaster-affected communities' psychosocial and physical wellbeing; reconstruction of physical infrastructure; and economic and environmental restoration including restoring the natural environment, associated infrastructure and heritage sites and structures, and the management of pollution and contamination.

Recovered is being able to lead a life that individuals and communities value living, even if it's different from the life they were living before the disaster event.

(Australian Institute of Disaster Resilience)

Local recovery and resilience plans

Locally led recovery

Recovery and resilience planning is the responsibility of local governments and is led by local recovery coordinators.

Councils use local recovery and resilience planning to identify priorities and to support communities in their recovery. Each council can form recovery groups that sit under the five functional lines of recovery, or they can combine one or more to form a combined group. For example Building, and Roads and Transport may be combined to form an Infrastructure Recovery Group at the local government level.

This Plan leverages the knowledge, resources, skilled employees and community connectedness that local governments have to lead recovery. It recognises the importance of communities being actively involved in their own recovery.

CASE STUDY HOLLOWAYS BEACH

TC Jasper, the wettest cyclone on record, drenched the Cairns region in December 2023, causing extensive flooding to several Cairns suburbs, including the community of Holloways Beach.

Flash flooding forced people onto roofs and into trees while members of the emergency services, Navy, SES and Surf Life Saving Queensland and community members helped evacuate and rescue more than 150 residents.

Many homes were covered in thick mud from the floodwaters and uninhabitable.

More than 200 volunteers joined the Cairns Clean Up Crew, similar to the Mud Army, to help with general clean-ups of more than 100 properties while the SES offered 'wash outs' for properties flooded by water and mud.

Council provided eligible residents in Holloways Beach with free clean-up assistance including green and hard waste removal and the removal of surrendered cars.

The weather event eroded sand from the northern beaches causing vegetation loss and damage to infrastructure.

Reconstruction projects, including road, bridge, and drainage works, were prioritised for recovery including a 100-metre long, 40-metre-wide causeway constructed in five days to reconnect 55 homes that were isolated.

A Community Recovery Hub was established at Holloways Beach to provide a central point for affected residents to access the help they need. The hub provided food, water, clothing and was where support agencies could connect with those who needed support.

Local, state and federal governments continue to support affected residents and businesses with financial assistance and grants.

While the human and social impact cannot be truly measured in dollars, significant funds contributed to provide Recovery Hubs, social and financial support, clean-ups and basic services such as emergency power, food and water to affected communities.

Council is now working on the TC Jasper Flooding Event Recovery Plan that sets out the tasks and actions to guide the community towards recovery, help establish a 'new normal' and improve lifestyles and livelihoods for everyone.





Images: Holloways Beach following TC Jasper (Courtesy: Cairns Regional Council)

Local recovery priorities

Human and social line of recovery	
Impact assessment	Identify human and social impacts on residences and communities
Access to psychosocial support services to address cumulative disaster impacts	Ensure community has access to psychosocial support services during immediate response and recovery
Access and assurance of resupply	Ensure community has access to essential services (power, telecommunications, water, sewage) Ensure community has access to essential medications and needs (food, clothing, fuel)
Accommodation services	Ensure community has access to accommodation services (emergency housing, homeless support services, temporary longer term housing) and establish processes to support residents return to permanent residences
Strengthen social connections	Ensure community members can engage safely in recreation activities and community events through reinstating public infrastructure and supporting community and sporting events
Community support services and resources	Provide support to assist vulnerable community groups
Financial support for individuals	Ensure community members can access financial hardship support for essential recovery needs
Accessibility of information	Ensure the community has access to coordinated, accurate and up to date information about the event, support services and recovery status, tailored to audience

SPOTLIGHT CHILDREN AND YOUNG PERSONS RECOVERY TASK GROUP

Following the Southern Queensland Bushfires, it became evident a focused approach was needed to address the psychological impact on school children in the affected areas.

The Chair of the Local Human and Social Recovery Group (LHSRG) suggested establishing a Children and Young Persons Recovery Task Group (CYPRTG) focusing on children. It would conduct its own meetings and have the capacity to involve additional stakeholders focused on youth-related issues not typically involved with LHSRG. Bushkids accepted the role of chairing the CYPRTG.

Using its members and connections, the CYPRTG can proficiently gather and identify emerging issues. It is also able to easily distribute relevant and timely information. For example, shortly after the bushfires, the Bureau of Meteorology issued a heatwave warning for the affected area. The CYPRTG promptly distributed the information and reminded people about the resources and training Community Recovery and Resilience Officers had given to local schools to assist during heatwaves.

Following the bushfires, the LHSRG Chair arranged for two training positions within the LGA for a Stormbirds program, which is an education program supporting the recovery of children and young people in response to change, loss and uncertainty that often results from disasters. CYPRTG will be involved in implementing the program for affected groups of children in local schools.



 ${\it Image: Education program materials (courtesy: Southern Downs \, Regional \, Council)}$



Image: Bushkids (courtesy: Southern Downs Regional Council)

SPOTLIGHT FARMERS RECOVERY TASK GROUP

The agricultural zones near Dalveen and the town of Wallangarra Jennings on the Queensland—New South Wales border were among the hardest-hit areas impacted by the Southern Queensland Bushfires.

The LHSRG recognised the specific challenges farmers faced and established a Farmers Recovery Task Group similar to the Children and Young Persons Recovery Task Group.

The task group coordinates efforts, collaborates, and creates engagement events to reach out to affected landholders while strategising for the upcoming year. Combining primary producer, rural financial counselling, and mental health support services within the group, these events attract a broader audience and address a wider range of topics than any individual service could effectively manage or promote.

The task group was also involved in a project to rebuild thousands of kilometres of community fencing lost in the fires.

Most rural residential landowners impacted by the fires were not eligible for funding assistance to rebuild and many were also inadequately insured for the large amount of fencing lost.

The project coordinated labour, materials, charitable contributions, and assistance for those who may have 'fallen through the cracks' and needed support.

The project leader is a volunteer with a disaster recovery background, first-hand knowledge of the event, and local connections.

The Farmers Recovery Task Group is jointly chaired by Queensland Health's TRACC (Tackling Regional Adversity through Connected Communities) program and Department of Agriculture and Fisheries (DAF). Its partner agencies include the Rural Financial Counselling Service, local government, University of Southern Queensland's SQNNSW Innovation Hub, Darling Downs and West Moreton Primary Health Network, Rural Aid, and a NSW-based local landcare organisation.



Image: Wallangarra Jennings , 2023 (courtesy: Southern Downs Regional Council)

Economic line of recovery	
Impact assessment	Identify business and industry impacts and issues
Tourism	Promote tourism in the region through initiatives such as marketing campaigns and supporting destination events to drive visitation
Financial support	Ensure businesses, primary producers, agricultural industry have access to immediate financial support services for clean-up, restoration and rebuilding to ensure they can reopen
Employment	Support workers to access their place of employment and return to work
Accessibility of information	Ensure business and industry support services and resources are easily accessible and meet the need of community members

Environment line of recovery	
Impact assessment	Identify the impact on the environment through activities such as water quality monitoring and collection of impact data from natural area reserves
Waste management services	Ensure waste management services are provided to enable clean up and waste disposal from affected properties and environments, balanced with landfill capacity and waste recovery
Strengthen social connections	Restore and reconnect the community with recreational assets (rail trails, fire trails, parks and gardens)
Public health and safety	Support provision of environmental health advice to affected communities and businesses
Weeds and pests	Ensure environmental restoration and protection through monitoring the prevention and spread of weeds and pests
Green environment	Prepare and implement a resilient street replacement program for trees lost in impacted areas Provide support for conservation and wildlife organisations to revegetate and restore impacted areas
Waterways	Ensure restoration, protection and monitoring of riparian, riverbanks, creek beds, tributaries and waterways including redressing erosion, stability and vegetation loss
Safe disposal of carcasses	Support safe disposal of carcasses

SHOWCASE WUJAL WUJAL WASTE

In response to Tropical Cyclone Jasper, the focus of the Department of Environment and Science (DESI) quickly turned to the management of disaster waste. In the absence of a specific coordination cell, DESI liaised directly with Wujal Wujal Aboriginal Shire Council to establish an initial waste staging area at China Camp Road. Environmental controls such as stormwater management, sumps and diversion drains, and fencing to exclude foraging wildlife were installed.

DESI also issued a waste levy exemption certificate to council exempting the payment of waste levy fees at the Springmount

Waste Management Facility in Mareeba initially until 10 March 2024, with a 12-month extension later issued.

Significant ongoing issues with Bloomfield Road due to continued inclement weather have required many agile solutions for waste removal. These have included procuring barges to access the area via water, to reducing the load sizes being transported out via road and partnering with neighbouring council areas to move the waste staging area.

DESI continues to work closely with the Wujal Wujal Aboriginal Shire Council to provide advice and support on waste and wastewater related matters, including work to design a new waste transfer station for Wujal Wujal due to commence in May 2024.



Image: China Creek Road waste staging area with skip bins (courtesy: Department of Environment, Science and Innovation)



Image: Skip bins loaded onto barge for transportation to Cairns (courtesy: Department of Environment, Science and Innovation)

Building line of recovery	
Impact assessment	Identify damage to built assets (private, state and council)
Access and assurance of resupply	Ensure community has access to essential services (power, telecommunications, water, sewage) Provide alternative public bathroom facilities where required
Restoration of public infrastructure	Restore public infrastructure (buildings, facilities, energy and water supply including sewerage services, fencing and gates, recreational assets, rail trail, schools, parks, gardens and signage) Implement effective and efficient processes to enable council-owned facilities to be cleaned, repaired and replaced

Roads and transport line of recovery	
Impact assessment	Identify damage to road and transport assets (state and council)
Access and assurance of resupply	Ensure make safe works are undertaken and roads reopened Ensure road and transport networks (local and state) are repaired and restored for use Identify, make safe and repair landslips affecting access within the state-controlled road corridor



Image: Bushfire damage in the Southern Downs (courtesy: QRA)

Local Government Association Queensland

Supporting council capability and capacity

In Queensland, local government is responsible for coordinating local disaster management arrangements to mitigate impacts in their communities. Although well versed in disaster management, when disasters strike, councils and their Local Disaster Management Groups often need additional support. That's where the Local Government Association Queensland's Council 2 Council Support Program (LGAQ C2C) provides support. It identifies, coordinates and activates assistance from unimpacted councils to assist during these events.

During the 2023–24 disaster season, the LGAQ C2C connected councils in critical need to capacity and expertise at other councils. This meant resources that already exist within the local government landscape – critical skills, equipment, personnel to help manage fatigue and more – could be deployed, making the experience as seamless as possible.

During Tropical Cyclone Jasper and the South Queensland Severe Storm and Rainfall events, LGAQ C2C deployed 33 council officers, from 14 councils – Cairns, Central Highlands, Gold Coast, Gladstone, Ipswich, Livingstone, Lockyer Valley, Mackay, Moreton Bay, Redland, Sunshine Coast, Tablelands, Townsville, Western Downs – to support Douglas, Cairns, Wujal Wujal, Scenic Rim and Gold Coast councils.

Each disaster is different and LGAQ C2C is flexible and adaptable, supporting members' critical needs. Support under the LGAQ C2C may include disaster managers, local disaster coordinators, recovery specialists, Local Disaster Coordinator Centre support staff such as logistics officers, system operators, safety advisors, civil engineers, project managers, finance personnel with understanding of disaster recovery funding arrangements, media and communications specialists, environmental health officers, and plant and equipment with or without operators such as trucks, graders and chainsaws.

The program's ability to succeed is based on the willingness of individual councils to act as one community of councils. Queensland council officers answered calls for support, sharing their skills, knowledge and expertise to assist significantly impacted councils support their communities during these challenging times. These officers not only provided immediate operational support to the impacted council, but also helped build capacity across the state by sharing their knowledge and expertise in response and recovery practices.

Their efforts strengthened the network and the capacity and capability of Queensland local government to respond and recover from events together, protecting the communities, enabling efficient recovery efforts and building a stronger skill set across councils ahead of the next disaster.

CASE STUDY C2C SUPPORT – WUJAL WUJAL

LGAQ C2C provided three types of support to Wujal Wujal Aboriginal Shire Council including:

- enhanced capacity for the Local Disaster Management Group to provide a coordinated response
- helping plan for the return of the community and keeping the community connected while displaced in several locations across Far North Queensland
- deploying an officer from Central Highlands Regional Council into community. The officer spent weeks living in a tent without power, water and sewerage to establish recovery plans and support the Local Disaster Coordinator. The officer continued to provide support remotely on returning to Emerald.

LGAQ also supported the Wujal Wujal community by providing governance advice to enable council to focus on business functions and the approaching local government elections.

Communication officers from Moreton Bay and Sunshine Coast provided remote support and in a unique situation collaborated with Douglas and Cairns councils and QRA to develop and deliver a communication strategy spanning multiple LGAs.

At various times LGAQ sent its own staff to Wujal Wujal to support the recovery.

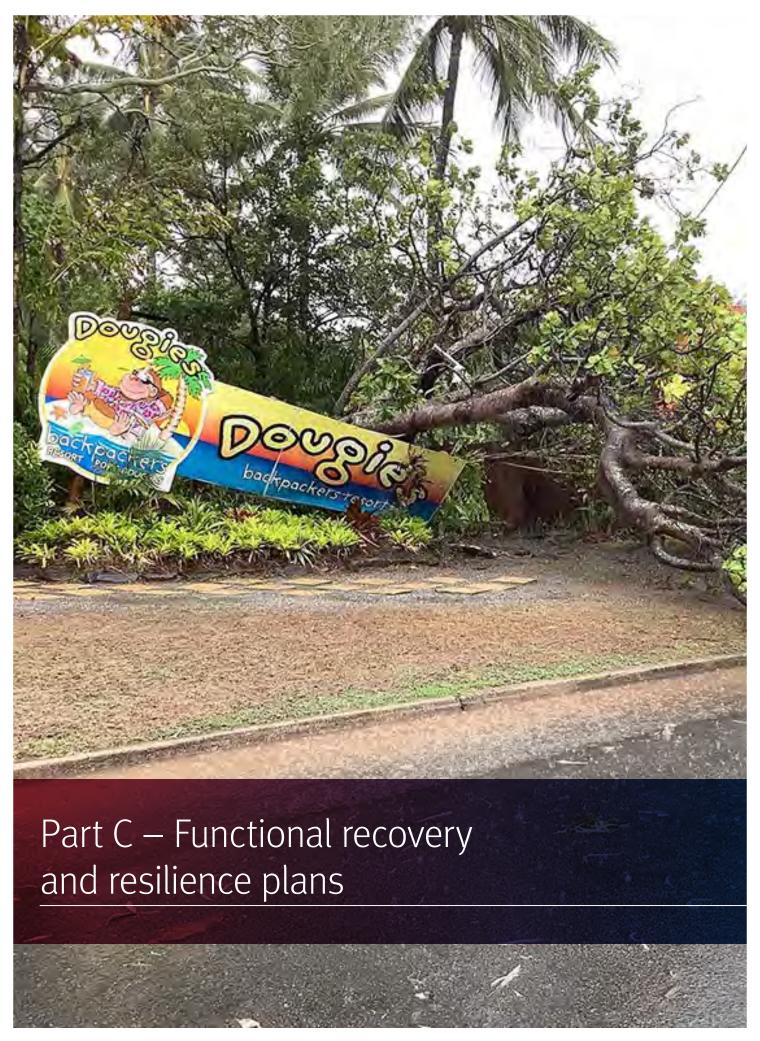


Image: Dougies Backpackers, Port Douglas following TC Jasper (courtesy: QPS)

Functional Recovery and Resilience Groups (FRRGs) coordinate and support the planning and implementation of Queensland's whole-of-community recovery activities across the five lines of recovery — Roads and Transport, Building, Economic, Environment and Human and Social — supporting local government fulfil its recovery objectives.

FRRGs leverage strong existing partnerships between state and local governments to ensure close collaboration and coordination during the management of recovery activities. Activities are in accordance with the needs and priorities identified by communities and the state and include those outlined in local recovery plans.

This part of the Plan summarises FRRG activities and outcomes to address the local and regional priorities outlined in parts A and B.



State lead agency: Department of Transport and Main Roads (TMR)

Vision

To efficiently restore network access and reconnect communities and businesses after the 2023–24 disasters. This includes the efficient delivery of value-for-money infrastructure that supports regional job opportunities, timely completion of eligible works, positive stakeholder relationships and a focus on improving resilience where complementary or betterment/resilience funding is available.

Impact summary

To 31 May 2024 a total of 15,740 kilometres of state roads have been closed or had restricted access during disaster events in LGAs activated in 2023–24 for reconstruction of public assets or counter disaster operations funding. 2,920 kilometres were impacted by more than one event.

Approximately 1,706 kilometres of state roads were impacted by Tropical Cyclone Jasper, 194 kilometres were impacted by the South Queensland Severe Storms and Rainfall, and 8,681 kilometres were impacted by Tropical Cyclone Kirrily.

As a result of record rainfall associated with Tropical Cyclone Jasper, landslips occurred on all four range roads between Cairns and the Atherton Tablelands – Palmerston Highway, Gillies Range Road, Kennedy Highway (known locally as Kuranda Range Road) and Mossman Mount Molloy Road. A 19-kilometre section of the Palmerston Highway – the only designated route for B-doubles and Type 1 Road Trains between the coast and Atherton Tablelands – was closed due to significant damage and landslips.

The Port Douglas area was also hit hard, with significant landslips and severe road damage at multiple locations on the Captain Cook Highway. A 27-kilometre section of the Captain Cook Highway

between Buchan Point and Oak Beach was closed due to significant damage. Extensive slope repairs will also be required along Kuranda Range Road after TC Jasper caused more than 30 landslips. Ongoing wet weather further damaged Gillies Range Road, with major pavement failures in two locations on the range section.

As a result of a series of severe storms across southern Queensland in late December 2023 and early 2024, numerous roads were blocked by fallen trees and debris, and there was significant damage to guardrails, traffic signals, road lighting and road signage.

Following widespread long-term flooding associated with Tropical Cyclone Kirrily across western Queensland, damage was reported on key freight routes including the Flinders and Landsborough Highways, Flinders and Landsborough Highways and Kennedy, Burke, and Wills Developmental Roads. Some damage is likely to have been exacerbated by the Mount Isa rail line being closed due to damage for approximately one month.

Recovery outcomes

While measures were investigated for urgent repairs on the Palmerston Highway, TMR worked with the Queensland Trucking Association to allow some permitted access to an alternative route for heavy vehicles to support the agricultural sector and Tablelands businesses. TMR fast-tracked emergency works to reopen the road to all traffic via a single-lane section on 10 February 2024.

TMR crews cleared more than 120 landslips on Captain Cook Highway including demolishing a 300-tonne boulder which had fallen onto the road at Oak Beach. The Captain Cook Highway between Buchan Point and Oak Beach reopened on 20 January 2024, with several single-lane sections remaining under traffic control. The reopening, completed earlier than expected, reconnected local communities ahead of the school year and allowed freight and other critical supplies to move between Cairns and Port Douglas.

Temporary slope stabilisation works have been undertaken on Kuranda Range Road to ensure safety and prevent further damage to the road while further geotechnical works are planned. The works were designed to assist in the constructability of the long-term repairs.

Following the South Queensland Severe Storms and Rainfall, TMR responded quickly to clear debris from roads, with all state-controlled roads reopening within days. Significant work is expected to be ongoing to remove the remaining fallen vegetation and debris.

Following TC Kirrily, emergency works were prioritised as roads became accessible.

A new 2023–24 season initiative was the collaborative approach adopted by the Roads and Transport and Economic Functional Recovery and Resilience Groups.

Joint meetings, co-chaired by the Directors-General from Department of State Development and Infrastructure, delivered a strategic approach to stakeholder engagement. Combining meetings delivered efficiencies and were effective in ensuring shared understanding of the impacts and approach to recovery.

Recovery will be achieved when:

- transport network access is restored, communities and industries are connected, moving and safe, and supply chains are re-established
- recovery works are completed within DRFA timeframes.

Sustainability and resilience

Infrastructure plays a critical role in connecting communities and ensuring functioning supply chains. Roads and transport infrastructure support the delivery of essential services to the community.

The state transport network exists to provide community benefits and economic development in an environmentally sustainable manner for current and future generations to continue to experience Queensland, while supporting tourism and regional development. Queensland is the most at-risk state in Australia from the impacts of extreme weather and climate change.

TMR seeks to increase resilience taking a multi-faceted approach.

- Plans for packaging of works outlined in Queensland Transport and Roads Investment Program (QTRIP) to deliver project efficiencies, which includes better value for money outcomes through delivery of complementary works.
- As roads and transport infrastructure supports the delivery of essential services to the community this is integrated as appropriate with wider state and Australian Government infrastructure and is built in accordance with changing recovery needs.
- When available seeks to access Betterment funding from jointly funded Australian and Queensland Governments DRFA for priority sites damaged by major disaster events, where building back better will minimise subsequent disaster damage and disruptions to the travelling public.
- Infrastructure is also, where possible, rebuilt to reduce
 to a reasonable degree the impact of future disasters on
 communities. This includes building with regard to local disaster
 risks and in accordance with current knowledge and practices
 for mitigating disaster impact.

A number of QTRIP initiatives build upon previous years' work to further improve the surface of roads, improve flood immunity to reduce disruptions in the wet season, and maintain or upgrade maritime infrastructure.

TMR works with local governments through the Roads and Transport Alliance – a partnership first formed in 2002 with the Local Government Association of Queensland, for the stewardship of Queensland's regional road and transport network. Under the alliance, local governments voluntarily collaborate with TMR's districts to form 17 Regional Roads and Transport Groups that make local transport infrastructure investment decisions based on regional priorities.

Action plan for recovery and resilience

A summary of the recovery and resilience activities is shown in Table 4.

Priority	Summary of recovery and resilience activities
Access and resupply – reopen critical transport routes	 Conduct emergency works to reopen critical transport routes Undertake emergency works to reinstate essential transport routes for the community and business
Access and resupply – restore essential public assets	Conduct reconstruction works to restore state roads including activities such as: Clear fallen vegetation and debris Scope reconstruction works program Develop reconstruction project estimate updates and project schedules Undertake reconstruction works Develop and implement a Roads Betterment Program (if funding is made available) Develop and finalise all DRFA funding submissions

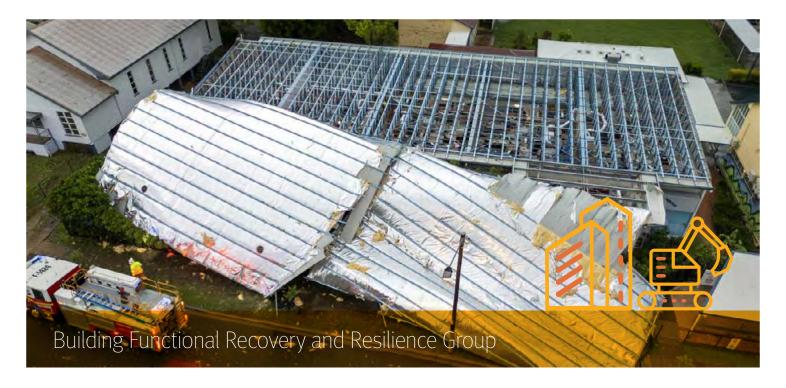
Table 4: A summary of Roads and Transport FRRG recovery and resilience activities

Non-DRFA initiatives

QTRIP is developed to reflect the funding allocated in the Australian and Queensland Governments' annual budgets, which align to both governments' policy objectives.

Many of the projects identified in QTRIP contribute to resilience outcomes.

The Department of Infrastructure, Transport, Regional Development, Communications and the Arts (DITRDCA) will partner with TMR to identify priority road transport network investments to maintain supply chain and key community access routes following significant weather events, in line with the Infrastructure Policy Statement.



State lead agency: Department of Housing, Local Government, Planning and Public Works

Vision

The vision of the Building Functional Recovery and Resilience Group (BFRRG) is to ensure recovery efforts in the built environment focus on resilience and sustainability, so the effects of future disasters are mitigated and impacts on the built environment are minimised.

The BFRRG will continue to coordinate the efficient and effective exchange of information, identifying issues and resolution strategies between government agencies, local government, building industry and insurance providers.

Impact summary

The 2023–24 season saw extensive damage to the built environment, including widespread structural damage to homes, infrastructure, and buildings across the state. The BFRRG met regularly during the severe weather events and worked together in identifying challenges and supporting their resolution by harnessing organisational expertise.

Tropical Cyclone Jasper in December 2023 contributed to most of the damage to the built environment. Specifically, homes and critical community infrastructure in Wujal Wujal were extensively damaged by the heavy rain and flooding leading to substantial recovery efforts. BFRRG members have worked closely with the community and local government to rebuild damaged public assets.

Recovery outcomes

The BFRRG continues to monitor recovery progress, standards of work and emerging issues, insurance costs, and resilience activities within the built environment. The BFRRG supports the use of resilient and sustainable materials and construction methods to building infrastructure. It also supports identification and implementation of learnings from disasters.

Prioritising recovery of the built environment with a resilience focus is critical for promoting reduction of risk exposure and fostering long-term sustainability. Focusing on restoring essential services in the recovery phase is fundamental to providing the community the ability to regain stability, resume normal activities, and rebuild confidence in the aftermath of a disaster.

Resilience measures

Access to licenced contractors and tradespeople post-disaster continues to be a challenge. In the aftermath of disaster events, there is often an imbalance between demand and availability. Issues such as transport, property access and coordination challenges further compound the difficulty of restoring essential services in affected areas.

The BFRRG promotes the Queensland Building and Construction Commission's (QBCC) Find a Local Contractor website, which assists members of community find QBCC licensed contractors in their local area. BFRRG members support the community by facilitating community access to independent safety, cleaning and building repair advice. Improving access to licensed contractors and tradespeople enhances resilience by facilitating faster responses to repairing damaged homes and essential services, allowing the community to resume normal activities.

Disaster events can often lead to a sharp rise in use of construction materials, outweighing local supply. Limited warehousing and storage capacities further strain the supply chain particularly in regional areas. The BFRRG engages with members to improve coordination challenges and reduce bottlenecks and supply chain impacts. Improved supply chain management bolsters resilience by ensuring uninterrupted access to construction materials, accelerating recovery efforts and reducing delays.

Community confidence in the strength of a building to withstand extreme events ensure a much more rapid recovery and reduced impacts from disaster events. In a nation leading first, Queensland published mandatory design, construction and maintenance requirements for a new building to be classified as a public cyclone shelter.

In response to the Severe Wind Hazard Assessment for Queensland, outlined on page 15, and in collaboration with the James Cook University Cyclone Testing Station, guidance material has been developed to assist local councils identify appropriate buildings to be used as a place of refuge during a severe wind event. Site selection and technical guidance will ensure community resilience during an evacuation.

The specifications in both the Queensland Development Code for Public Cyclone Shelters and the technical guide for Places of Refuge can be used by building designers and architects to increase the resilience of both public and private buildings.

Image: Manly State School, in Brisbane's Bayside, had its school hall roof blown off in the storms (courtesy: The Australian)

Action plan for recovery and resilience

A summary of the recovery and resilience activities is shown in Table 5.

Summary of recovery and resilience activities
Conduct thorough assessments of government-owned buildings, assets and other assets (council) to determine extent of damage to prioritise repair or reconstruction efforts
Immediately address critical issues such as structural damage and utility outages to restore essential services to government owned assets
Develop comprehensive scope of works for the reconstruction of damaged government assets
 Oversee all aspects of the reconstruction process, coordinating staff resources and managing timelines Procure necessary material, equipment and services to support reconstruction efforts Implement measures to ensure all reconstruction work meets the highest standard of quality and safety Maintain detailed records of all reconstruction activities and provide regular reports to relevant agencies
Provide support to government staff and contractors involved in the reconstruction process
Communicate regularly with government officials and community members to provide updates on progress and address concerns

Table 5: A summary of Building FRRG recovery and resilience activities

Disaster Recovery Funding Arrangements

The Australian Government will partner with the state to provide the following building recovery and resilience measures.

These are grouped against the relevant events.

Tropical Cyclone Jasper and South Queensland Severe Storms and Rainfall

A \$14.8 million Sport and Recreation Community Facilities
 Program will help eligible councils and sport and active
 recreation organisations rebuild and repair sport and recreation
 facilities impacted by Tropical Cyclone Jasper and South
 Queensland Severe Storms and Rainfall. Available for both Far
 North and South East Queensland.

SPOTLIGHT SEVERE WIND HAZARD ASSESSMENT FOR PROJECT AIR

South East Queensland is home to approximately 60 per cent of Queensland's population residing in about one million homes. These homes are designed to resist wind effects from weakened tropical cyclones but are not designed for the effects of high internal pressurisation resulting for example from a failed door or broken window, which can cause a significant increase in loads and lead to roof loss.

The City of the Gold Coast (City) has initiated a five-year initiative, Program AIR, which aims to prepare for the impacts of severe wind and tropical cyclone events by focusing on protecting critical infrastructure and services, increasing community readiness and resilience, and safeguarding the Gold Coast way of life. To achieve this, the City is focusing on three key streams – Advocacy, Information and Resilience (AIR).

The key objectives of Program AIR include:

- advocate for more resilient building design standards in South East Queensland and explore grant funding opportunities to support Gold Coast homeowners make their homes more resilient to extreme weather, including tropical cyclones
- work at both a community and individual level to increase community awareness of the risk of severe wind events on the Gold Coast and establish shelter strategies for vulnerable community members
- investigate opportunities to strengthen and utilise new and existing City-owned buildings to function as places of refuge.

Program AIR recently influenced the construction of a new community centre to ensure the building could function as a place of refuge. To achieve this, the community centre is being designed to increase the building's resilience, beyond the minimum building code requirements, and exceeds the default importance level of the design which relates to the level of consequences to people or the public. The default design is importance level 2, however this new community centre will be constructed to importance level 3 to support resilience during thunderstorm, cyclone and other severe wind events. The community centre is anticipated to be constructed by the end of 2024 and will be the first purpose-built place of refuge in the City.



Image: Stephens Street Upper Coomera (courtesy: City of Gold Coast Council)



State lead agency: Department of State Development and Infrastructure

Vision

The vision for the Economic Functional Recovery and Resilience Group (EFRRG) is for the local economy to return to pre-disaster production following the disaster season, become more resilient and prosperous. Recovery initiatives will financially support impacted businesses, primary producers, the agricultural sector, non-profit organisations, and local governments to rebuild. Recovery initiatives will also promote tourism opportunities alongside diversifying tourism offerings through resilient infrastructure development.

Impact summary

Tropical Cyclone Jasper

The full extent of TC Jasper's economic impact on our state will become evident in the months and years ahead. Inundation of commercial premises have impacted the ability of small businesses to trade. Road closures along with broader disruptions to supply chain infrastructure have resulted in significant losses, particularly to primary production. The tourism industry has also been significantly impacted with lost revenues from widespread cancellations of tourism and events bookings in addition to damage to tourism operations and tourism-related infrastructure. The event will continue to have a considerable effect on local economies as the Far North Queensland region moves from recovery phase to building resilience.

South Queensland Severe Storms and Rainfall

The main economic impacts were due to energy system disruptions and the loss of the NBN network.

The NBN loss caused disruptions to landline phones, security alarms, EFTPOS and monitored fire alarms. Disruption to these services resulted in impacts to retail and health services, along with impacts to people's safety and security, or ability to access emergency assistance.

A business impact survey was conducted to quantify the financial impacts. As of 28 March 2024, 1,290 businesses had responded to the Small Business Natural Disaster Survey (includes tourism businesses).

More than 80 per cent of respondents indicated adverse impacts on trading and 41 per cent of respondents anticipate being closed for a period of time.

Total self-estimated financial impact amount is \$47 million, approximately \$47,000 per business on average.

There are many businesses that were indirectly impacted by loss of trade due to isolation, loss of power and damage to infrastructure including the NBN and may not be eligible for DRFA grants.

Recovery outcomes

Tropical Cyclone Jasper

The main emphasis of economic recovery activities is to get the local economy back into full production, with businesses returning to normal operations, and industry supply chains re-established. A range of financial support packages and support activities (both immediate and long term) have been delivered to impacted business, agriculture and tourism industry to facilitate relief, recovery and resilience activities.

Economic recovery aims to ensure businesses are back to business as usual operations in the shortest possible timeframes.

South Queensland Severe Storms and Rainfall

A range of financial support packages and support activities (both immediate and long term) have been delivered to impacted business, agriculture and tourism industry to facilitate relief, recovery and resilience activities.

Recovery will be achieved when:

Tropical Cyclone Jasper

Resources and agriculture industries – the Palmerston Highway is restored allowing supply chains to be reestablished. TMR fast-tracked emergency works to reopen the road to all traffic via a single lane section on 10 February 2024. Following investigations and detailed design, reconstruction works will be undertaken which may have some temporary traffic impacts.

Tourism industry — visitor numbers for impacted areas return to pre-disaster levels and tourism operations are reinstated, with Queensland's tourism industry being stronger, more diversified, and resilient to future disasters.

Business – open and trading with the community having access to an adequate range of goods and services.

Sustainability and resilience

Tropical Cyclone Jasper

To provide streamlined funding access, the Queensland Government has worked with the Australian Government to evaluate funding effectiveness and develop a range of guidelines for pre-arranged off-the-shelf recovery supports.

Guidelines were developed for:

- Category D infrastructure Betterment Program
- Category C/D Extraordinary Recovery Grants for Primary Producers
- Category C/D Extraordinary Recovery Grants for Small Businesses and Non-Profit-Organisations.

These packages aim to provide flexibility (fit for purpose, fit for place and address the specific needs of the community).

The Queensland Government continues to work with the Australian Government and other jurisdictions to develop additional off-the-shelf packages and longer term reform work.

A resilience priority is to improve the resilience of small and medium businesses through harnessing learnings from responding to and recovering from disaster events. To achieve this target, financial measures and support will continue to be delivered to strengthen business and industry resilience and ability to operate and trade in line with broader economic trends. The critical role that infrastructure plays in maintaining and developing the local economy means that designing, planning for, and delivering resilient infrastructure, along with broader Queensland Government strategies to diversify and grow the region's economy will ensure Far North Queensland will be more resilient to the economic impacts of future disasters.

South Queensland Severe Storms and Rainfall

Strengthening business and industry resilience along with a focus on resilient infrastructure to minimise disruptions to the economy forms part of longer term strategies and other support measures for South East Queensland.

Action plan for recovery and resilience

A summary of the recovery and resilience activities is shown in Table 6.

Priority	Summary of recovery and resilience activities
Access to funding and information for primary producers and agricultural enterprises	 Provide advice on financial support arrangements available to primary producers including freight subsidies, disaster loans, Essential Working Capital Loans Distribute assistance measures under Category B of the DRFA including primary producer loans, essential working capital loans and freight subsidies Distribute primary producer grants under Category C/D of the DRFA Conduct impact assessments on agricultural enterprises to determine level of assistance required
Access to funding and information for sport and recreation organisations	Distribute grants to sport and recreation organisations under Category C/D of the DRFA
Access to funding and information for businesses	Coordinate an approach across government agencies, councils and chambers of commerce for contacting and supporting impacted small businesses including: Activate DRFA grants and loans Provide information on and facilitate contact with support services and grants Raise awareness of available financial support for small businesses Provide advice on financial support arrangements available to businesses
Streamlining planning approval processes for disaster impacted communities	Where eligible, support recovery from impact of an event on day-to- day operations of businesses such as supermarkets, warehouses and transport depots through declaration of temporary planning provisions under the Planning Act 2016
Tourism	Provide short to long-term financial and destination marketing support and visitor attraction incentives and support for destination events for all businesses relying heavily on tourism and events in impacted regions If Economic FRRG recovery and resilience

Table 6: A summary of Economic FRRG recovery and resilience activities

Disaster Recovery Funding Arrangements

The Australian Government will partner with Queensland to provide the following economic recovery and resilience funding and initiatives.

These are grouped against the relevant events.

Tropical Cyclone Jasper and South Queensland Severe Storms and Rainfall

- A \$13.4 Small Business Support Program includes one-onone case management focused on mental health and financial security, partnerships with eligible councils and chambers of commerce to address local support needs, and grants for eligible small businesses that have lost income due to prolonged isolation. Available for both both South East and Far North Oueensland.
- A \$3 million Rural Landholder Recovery Grants Program
 will support the extraordinary clean-up and reinstatement
 of eligible rural residential properties that do not meet the
 criteria for primary producer assistance. Available for Far North
 Queensland only.
- A \$1 million Recovery Project Manager program to support three LGAs engage project managers and other skilled workers to manage recovery efforts. Available for both South East and Far North Queensland.
- \$12 million in Local Recovery and Resilience Grants for eligible councils following Tropical Cyclone Jasper and South Queensland Severe Storms and Rainfall Event. Available for both South East and Far North Queensland.
- \$25 million in Extraordinary Disaster Assistance Recovery Grants for eligible primary producers who suffered direct damage. Available for both South East and Far North Oueensland.
- \$25 million in Extraordinary Recovery Grants for eligible small businesses and not-for-profit organisations that suffered direct damage. Available for both South East and Far North Queensland.
- A \$29.25 million Tourism Recovery and Resilience Program to support eligible LGAs following Tropical Cyclone Jasper. Available for Far North Queensland only.
- \$2.25 million to engage Cyclone Industry and Recovery Officers to support eligible primary producers following Tropical Cyclone Jasper. Available for Far North Queensland only.

Southern Queensland Bushfires

- A \$1.5 million Rural Landholder Recovery Grants Program to support eligible landholders impacted by the fires.
- A \$1.87 million Agricultural Recovery and Resilience Officers program will employ specialised resilience officers to work with industry, local governments and producers impacted by the fires.
- A total of \$1 million in Local Recovery and Resilience Grants for Western Downs Regional Council impacted by the fires.
- \$5 million in Extraordinary Recovery Grants for eligible farmers and primary producers impacted by the fires.

Non-DRFA initiatives

The Australian Government will partner with Queensland to provide the following economic recovery and resilience funding and initiatives.

These are grouped against the relevant local government theme.

Access and assurance of resupply

DITRDCA will work with the Queensland Government and industry stakeholders to improve digital connectivity in remote and isolated locations, including identifying opportunities for greater telecommunications redundancy during and immediately after disaster events. Current examples include:

- Under the Australian Government's Better Connectivity Plan, the government is providing up to \$100 million in measures to improve the resilience of communications infrastructure.
- This includes \$30 million for Round 2 and Round 3 of the Mobile Network Hardening Program and \$50 million for the Telecommunications Disaster Resilience Innovation Program.

Building community awareness for disaster events

 Austrade is partnering with stakeholders to monitor longer term impacts of disasters in Far North Queensland on the tourism sector and recommend additional recovery and resilience programs as needed.



State lead agency: Department of Environment Science and Innovation

Vision

For governments and industry stakeholders to be effective leaders and partners managing, protecting, restoring, and promoting Queensland's natural environment and cultural heritage, with a return to a pre-disaster and/or acceptable state. Based on key enablers, including applying leading scientific insights and embedding First Nations people's knowledge and leadership into these programs.

Impact summary

Events this season were wide spread and prolonged, some tracking slowly across parts of the state, impacting and having the potential to further impact environmental and cultural values across natural landscapes and resources, including World Heritage areas.

The areas impacted by Tropical Cyclone Jasper are internationally and nationally significant. The Great Barrier Reef is one of Australia's best known World Heritage sites and significantly threatened in disaster events from sediment and nutrients mobilised downstream from catchments. This, along with wave action, can cause algal blooms, bleach and limit coral growth, and smother or uproot seagrass meadows that are food sources for dugongs and turtles, and habitat nurseries for fish.

The Wet Tropics is also listed as the second most irreplaceable natural World Heritage site on earth by the International Union for the Conservation of Nature (IUCN). Furthermore, in 2012 Australia's National Heritage list recognised the Wet Tropics for its Aboriginal cultural values, including the distinctiveness of Rainforest Aboriginal traditions, their land management techniques and the technical innovation and expertise needed to process food, in particular toxic plants.

The consequence of debris and other contamination, waterway scouring, landslides and native vegetation loss, and the impacts to visitor infrastructure within areas protected for conservation and our enjoyment, is the cumulative degradation of biodiversity and healthy ecosystems. These are vital for the environment, our health and wellbeing, our livelihoods, and connection to our cultural and built heritage.

Another important consideration is to prevent further impact to the environment and the amenity of these areas. There is a risk that

re-establishing vital community infrastructure for example, creates further damage, and so we all must play a role to not spread or exacerbate impacts within vulnerable areas during regeneration and recovery.

Continued investment in identifying where erosion and environmental impact present unacceptable risk levels for the population is also vital.

Recovery outcomes

Key environment recovery outcomes:

- support education in recovery and resilience responses for the region's natural assets and enable local capacity, community engagement, and environmental and cultural stewardship
- emergency infrastructure works and decommissioning of temporary recovery sites do not generate further risk to the environment or public health
- restoration of cyclone and flood damaged landscapes and waterways improving the environmental condition and extent of native vegetation, effective ecosystem functionality and catchment drainage
- reduction in current and future impacts on functioning ecosystems and habitats, and cultural values, and better protections for vulnerable species
- maintenance of social amenity and recreational use in natural areas through infrastructure resilience and nature-based tourism opportunities
- evidence based fire management regimes and flood risk mitigations, with resilience built into restored water and flood monitoring and warning networks where possible.

Key considerations for effective recovery this season include:

- improving the coordination of impact identification and the prioritisation of short and long term recovery action
- collaborating with government and non-government stakeholders on local solutions
- minimising procedural impediments and streamlining early relief measures
- raising awareness of environmental considerations and cumulative impact
- learning from and supporting our environmental stewards
- identifying recovery effort that will see a reduction in future impact, and resilience measures for further investment.

Image: Blocked waterway following Christmas day storms, Gold Coast hinterland (courtesy: QRA)

Resilience measures

The Environment Functional Recovery and Resilience Group is focusing on several resilience measures including:

- disaster debris prevention and management in accordance with circular and regenerative economic principles
- improved landscape and biodiversity resilience
- · fire management program enhancements
- · river catchment repair and maintenance
- Great Barrier Reef water quality improvements.

SHOWCASE RANGERS JOIN WUJAL WUJAL FLOOD CLEAN-UP

Queensland Parks and Wildlife Service (QPWS) rangers have taken their specialist skills and equipment off-park to support the ongoing clean-up of Wujal Wujal following severe flooding from Tropical Cyclone Jasper.

Seven QPWS park rangers travelled on the Marine Vessel Reef Ranger from Cairns and eight QPWS park rangers drove south from Cooktown to the remote Indigenous community to clear flood debris including fallen trees, mud and general litter.

The QPWS crew spent five days in Wujal Wujal as part of clean-up efforts coordinated by the QRA and council.

QPWS Cape York Manager Nick Smith said it was rewarding to help a community in need.

'Rangers have a high level of experience using chainsaws and removing fallen or hazardous vegetation, so we were happy to take these skills into Wujal Wujal to cut up large and dangerous trees scattered through the community for safe removal by contractors,' Mr Smith said.

'We also cleared as much mud and flood debris as we could from the local sporting field and the main bridge over the Bloomfield River before our deployment ended.

'Both on and off-park, recovery from Tropical Cyclone Jasper is far from over, but it was great to get the opportunity to make a difference in such a severely impacted community.'

A QPWS vehicle remained in Wujal Wujal to assist the recovery team with the ongoing transportation of crew members for a month.

QPWS has previously provided community recovery support following significant disasters including Cyclone Yasi and Cyclone Oswald.

Clean-up and recovery works are continuing across impacted sections of Far North Queensland national parks.

Some key tourism areas, including Mossman Gorge and the Din Din Barron Falls lookout, have reopened to the public.



Image: Rangers join Wujal Wujal flood clean-up (courtesy: DESI)

Action plan for recovery and resilience

A summary of the recovery and resilience activities is shown in Table 7.

Priority	Summary of recovery and resilience activities
Identify impact of the event on the environment	Identify potential and actual environmental impacts to determine recovery requirements
Disaster waste and clean-up	Support local government, conservation, land and Indigenous groups, community service infrastructure providers and the public clean-up disaster debris and green waste within waterways, beaches and road corridors, while minimising the spread of pests and weeds and fire risk
Water quality and emissions	Support industrial, municipal and mining operations to address performance issues, and disposal and repair costs and solutions, through temporary emission licencing and site management
Native flora and fauna species and invasive species impacts	 Address risky human wildlife interactions and displaced and impacted wildlife Recovery and monitoring activities to address impacts to freshwater and marine threatened species including to water quality and habitat Manage high-risk dispersal pathways for priority pests and weeds, including nationally significant target species
Watercourses and coastlines	 Recovery activities to address riparian, streambank and beach/foreshore erosion, landslip, vegetation loss, debris accumulation, sediment plumes and downstream ecosystem impacts Support restoration of instream water or flood monitoring infrastructure damage or loss Support and advice to private landholders and for productive farmland restoration and resilience
National Parks and World Heritage listed Areas	Conduct activities to reopen national parks and World Heritage areas closed or impacted during events including: » engagement of Indigenous rangers and organisations to support recovery and clean-up activities » clear and timely messaging to visitors and commercial tour operators about the closures » systematic opening following damage and safety assessments » restoration of visitor infrastructure and pest and weed management regimes, and the protection of environmentally and culturally significant sites

Priority

Summary of recovery and resilience activities

Environment and cultural stewards

- Support the capacity for sensitive recovery of heritage place values, environmental values on state land and private protected areas, World Heritage protections, and reinstatement of ecotourism opportunities
- Work in partnership with First Nations peoples and stakeholders regarding fire management and environmentally and culturally significant sites

Build resilience for future disaster events

 Undertake risk mitigation studies to assist councils to develop flood resilience strategies and bushfire resilience strategies for future disaster events

Table 7: A summary of Environment FRRG recovery and resilience activities

Disaster Recovery Funding Arrangements

The Australian Government is partnering with Queensland to provide the following environment recovery and resilience funding and initiatives.

These are grouped against the relevant events.

Tropical Cyclone Jasper and South Queensland Severe Storms and Rainfall

- A \$51.3 million Environment Recovery Package to accelerate environmental and cultural recovery activities, including environmental investigations, clean up flood debris from waterways and coastlines, aid riparian recovery, weed and pest management, biodiversity conservation, and restoration of environmental and cultural assets in national parks throughout the most heavily impacted areas. Available for both Far North and South East Queensland.
- A \$20 million Clean-up Program for affected councils to conduct extraordinary clean-up efforts. Available for both Far North and South East Queensland.

Non-DRFA initiatives

The Australian Government is partnering with Queensland to provide the following environment recovery and resilience funding and initiatives.

These are grouped against the relevant local government theme.

Recovery capability and capacity in local government

 The Department of Climate Change, Energy, the Environment and Water (DCCEEW), is rolling out an emergency preparedness program under the Natural Heritage Trust. Funding has been provided to regional delivery partners to improve the threat disasters pose to the environment. Species, ecosystems and agricultural natural capital assets will be overlayed with extreme weather vulnerability information for the generation of preparedness and response plans that can be integrated with emergency planning arrangements, and reduce impacts in advance of, during, and post events.

Influence land use planning

- Under a bilateral agreement, DCCEEW and the Queensland Government agree to follow processes to assess environmental impacts that reduce duplication and allow a single process to assess the environmental impacts of a proposed action. It also ensures supporting governance arrangements for efficient environmental approvals where consideration under national environmental law is required.
- NEMA Coastal and Estuarine Risk Mitigation Program (CERMP) is enabling projects that reduce the impact of disasters on coastal communities driving resilience in these communities. Through the Department of Environment, Science and Innovation, funding is supporting 10 local and state government projects to construct coastal protection infrastructure, including seawalls and breakwaters, as well as investing in monitoring infrastructure and risk management and planning.
- The flagship project for Queensland is the State-wide Nearshore Bathymetry Survey for Improved Coastal Hazard Assessment, which will use airborne sensors to capture high resolution beach and seabed levels offshore from developed coasts. It will help inform development planning and evacuation decisions for vulnerable communities and also have broad value for governments in mapping coastal resources and coastal hazards, disaster modelling and for navigation purposes.

Access and assurance of resupply

- DCCEEW is committed to the National Water Grid Fund (NWGF), which is the Australian Government's water infrastructure investment program. The NWGF aims to improve water access and security by delivering nationally important water infrastructure projects that unlock potential, build resilience, and promote growth and sustainability.
- This includes investment in essential town water, dams, weirs, pipelines, water recycling and treatment plants and other water storage, distribution and scientific solutions. These projects will play an important role for currently impacted councils as well as for future disasters.



Image: SES crew ready to conduct debris clean-up in FNQ following TC Jasper (courtesy: SES)



State lead agency: Department of Treaty, Aboriginal and Torres Strait Islander Partnerships, Communities and the Arts

Vision

The Human and Social Functional Recovery and Resilience Group (HSFRRG) will continue to focus on delivering human and social recovery and resilience in accordance with the national principles for disaster recovery and Queensland Disaster Management Arrangements. This includes processing applications for financial assistance promptly to support people to rebuild. HSFRRG will work to reduce the gap between initial post-event support and long-term recovery support, and to build and nurture resilience in communities across Queensland.

Impact summary

During recent years, Queenslanders have been subjected to repeated and compounding disaster events, which have impacted on community mental health and subsequently impacted the community's ability to recover swiftly and fully. This is despite government and non-government agencies providing substantial immediate mental health support and psychological first aid during the response.

During the 2023–24 disaster season, severe weather events across the state resulted in more than 9,821 damage assessments of residential properties, identifying 2,973 homes with damage. Approximately 250,000 homes suffered power outages of varying lengths through the multiple disaster events this season. Impacts to communities included:

- evacuation of individuals and communities, causing financial hardship and psychological distress
- widespread loss of essential services including electricity, gas, water, and sewerage services causing displacement and financial hardship
- disruption to transport, logistics and supply chain impacting food and fuel availability/cost, access to health facilities and community services/activities and ability to earn income causing financial hardship
- disruption to community services and activities causing hardship and psychological distress.

Bushfires

The human and social impact from this season's bushfires was extensive. Some landholders fought fires in their communities for several weeks, and many communities were already recovering

from several years of consecutive and concurrent events, increasing stress and anxiety and exhausting local support service capacity.

HSFRRG's significant response effort included psychosocial first aid, community recovery and social supports. These were targeted through several service delivery models including Community Recovery Hubs and Pop-up Hubs. Community Recovery teams coordinated with Ready Reserves, the Salvation Army, Red Cross, Uniting Care, Lifeline, Rural Financial Counselling Service, headspace, TRACC (Queensland Mental Health) as well as mental health nurses and social workers to support the impacted communities. Three LGAs impacted by bushfires also experienced flooding events.

Tropical Cyclone Jasper and Tropical Cyclone Kirrily

Two Tropical Cyclones brought varying impacts to communities across the state, from the far north, to the south west. TC Jasper caused record-breaking flooding, large-scale isolation, and the displacement of the entire community of Wujal Wujal. TC Kirrily impacted communities across a vast geographical area, bringing heavy rainfall, strong wind, and flash flooding as well as prolonged isolation in rural and remote communities. The severity of damage, prolonged isolation and timing near the festive season exacerbated the psychological and wellbeing impacts to affected communities.

Immediate assistance was activated across a range of disaster recovery funding assistance measures for severely impacted councils, such as Counter Disaster Operations, Essential Services Safety Reconnection Scheme and the Personal Hardship Assistance Scheme.

South Queensland Severe Storms and Rainfall

This large and destructive storm system brought wind gusts in excess of 100km/h and over 570mm of rainfall, causing significant damage to homes, severe impacts to infrastructure, in particular powerlines and telecommunications, and closing roads for prolonged periods. The severity of impact, proximity to Christmas, and the reduced capacity of the sector, which was already responding to several significant events, added complexity to recovery efforts and increased the level of human and social support needs across the affected areas.

There were significant impacts to the business sector, primary producers and the not-for-profit sectors leading to an intertwined need for psychosocial supports more broadly. These members of the community also need to be provided with wrap around support.

Image: Home destroyed, Wangawallen, Christmas Day storms. (courtesy: ABC News)

CASE STUDY WUJAL WUJAL 60-DAY PLAN

After TC Jasper crossed the mainland on 13 December 2023, five days of intense rainfall fell in Wujal Wujal causing major flooding and the evacuation of almost 300 residents to Cooktown. On 20 December 2023, the Wujal Wujal LGA was declared a disaster area. The substantial damage to residential dwellings, roads and community infrastructure resulted in the displacement of the entire community, just days before Christmas, and for several months.

In recognition of the extraordinary impacts on individuals in the displaced community and the prolonged disconnection from culture and Country, the Director-General, Department of Treaty, Aboriginal and Torres Strait Islander Partnerships, Communities and the Arts commissioned a sub-committee of the HSFRRG dedicated to Wujal Wujal.

This sub-committee, taking a human-centered approach, developed a 60-day Plan to return residents to the approximately 55 homes that were not damaged by floodwaters, while work to repair homes and buildings continued. The sub-committee recognised that without quick, targeted and coordinated work across government, the impact to the wellbeing of displaced residents and future human and social recovery outcomes would be significantly diminished.

A place-based and culturally appropriate approach involved a collaborative effort across the functional lines of recovery, key support agencies and non-government organisations. This sub-committee worked tirelessly to quickly restore homes, infrastructure and services, allowing the return of the first residents home to Wujal Wujal from mid-April 2024 and restoring a connection to culture and Country they desperately needed.

The Bloomfield Valley held a Community Healing Ceremony on 7 June 2024 to take an important step toward collective healing and recovery and to acknowledge the return of residents home to Wujal Wujal.

The 60-day Plan achieved remarkable outcomes for the community including:

- All 91 homes were returned by QBuild to the Department of Housing, Local Government, Planning and Public Works for re-tenanting.
- The local store was completely refurbished and enhanced with new disability-friendly amenities and cool room storage.
- Water and sewerage services were restored.
- A new temporary modular health clinic was constructed and opened.
- Each household was equipped with any necessary whitegoods, bedding or other household items.
- Emotional, psychosocial and wellbeing supports were delivered.
- Kindy and aged care services recommenced and children were welcomed back to classroom learning.
- Roads and transport services were restored.

Recovery outcomes

The HSFRRG provides individuals and families with access to the following measures to support their recovery:

- appropriate financial support to meet their immediate needs
- clear, consistent and accessible information in relation to services and supports available
- · safe and habitable accommodation.

The HSFRRG action plan ensures:

- vulnerable populations are identified and able to access relevant supports.
- services responses are appropriate to the impacts and are delivered in a coordinated manner.
- service gaps are identified, and appropriate supports are established to address the human and social recovery support needs.

Mid and high-level recovery outcomes sought for communities impacted by disaster events during the 2023–24 season include:

- Adequate housing is available to community members at appropriate times in the recovery process.
- Community members have access and can meet health needs (including mental health) arising from the disaster.
- Community members have access to psychosocial support.
- Households, families, and individuals can act autonomously to contribute to the recovery process.
- Community members have access to education services.
- Community members have access to appropriate and coordinated social services.
- Community members feel sufficiently safe and secure following a disaster to engage in social activities and interactions with other members of the community.

The HSFRRG is addressing the profound impacts on communities following the 2023–24 disaster season by:

- providing financial assistance measures including PHAS/ESSRS and NGO-led relief programs
- providing information, advice and resources, in translated and Easy Read formats, about recovery needs and services including financial assistance, recovery hub and support service locations, financial counselling, insurance, public health, mental health, psychosocial impacts, material and practical aid, clean-up and rubbish removal, education arrangements, rural and agricultural impacts, donation management, volunteer management
- facilitating and providing short- and medium-term housing assistance or other housing products, coordination of mediumand long-term housing needs
- coordinating short-term accommodation supply including the lease of private facilities where appropriate for evacuations
- providing essential household items via financial assistance and/or registered organisations
- providing financial grants to help make homes safe and habitable. This includes collaboration to provide additional financial or practical assistance to meet the shortfall in labour or materials or to meet shortfalls in insurance claims or coverage (particularly for people not eligible for government grants)
- coordinating services and contractors including QBuild and QBCC to support repair and/or rebuild of residential dwellings
- providing psychological first aid (PFA), support services, and referrals primarily via face to face and tele-outreach as well as a follow up service to those displaced. Service offerings include PFA, referral connection, case management services, debriefing for frontline and first responders, information sessions, and attendance at community events

- engaging with relevant First Nations agencies and community stakeholders to raise awareness of issues and meet information needs
- providing information, support and referral for individuals and families from refugee and asylum seeker backgrounds
- prioritising health service resumption
- deploying mental health clinicians to evacuation centres, recovery hubs to provide mental health support to the community and broader recovery workforce, where required and work closely with Red Cross and Lifeline workers to provide information on referral pathways to specialised mental health care
- working closely with partner agencies to ensure that human and social support services are being delivered to impacted individuals, families and communities in a coordinated manner across the areas of impact
- delivering Category C DRFA packages, following Australian Government approval, to uplift and bolster available supports, targeting funding and support to the most impacted and hardest to engage community members.

Resilience measures

The HSFRRG is building and nurturing resilience in communities impacted by disaster through:

- promoting resources to support financial resilience
- representation on key local, district and state disaster management and recovery forums
- supporting local governments in the development of recovery plans
- capacity building activities to ensure the wellbeing of those supporting people affected by disaster and to develop their understanding of the recovery context to help support and lead community recovery

- capacity building to equip recovery stakeholders to address long-term psychosocial impacts and to support resilience within communities, including PFA training and other recovery training to community members, leaders, staff and volunteers
- conducting and regularly updating area-specific needs assessments to identify community strengths, assets, capacities, skills and knowledge. Ensure that program activities build on existing strengths to enhance community resilience
- continuing to raise awareness of and promote the Disaster Risk Reduction resources available to people with disability, homeless support services and the educational resources available to the emergency management sector
- managing and supporting Evacuation Centre Management Training to increase local response capacities across all councils
- supporting the establishment of local disaster resilience teams through capacity building (training), and the development of linkages across impacted areas
- supporting initiatives such as Disaster Recovery Advisors and Mentors Australia (DRAMA), a program aimed at supporting communities impacted by disasters to drive their own recovery
- promoting and supporting a community-led recovery approach based on specific needs in each impacted community.

HSFRRG will deliver Category C funding program to employ 11 Community Recovery and Resilience Officer roles across 17 LGAs. These roles will be integrated within the Human and Social Recovery Sub-group of the impacted Local Disaster Management Groups to ensure alignment and effective implementation of both council's Event Specific Local Recovery and Resilience Plan and the intent of the DRFA assistance.

The HSFRRG has also established 12 Transition Lead positions across the impacted areas to work with key stakeholders to develop and implement individual and community resilience activities in collaboration with impacted local governments.



Image: Australian Army officers and SES crews carrying out evacuations in FNQ following TC Jasper (courtesy: ADF)

CASE STUDY

NEW HOMES FOR FIRE IMPACTED RESIDENTS

Lyteesha lost everything in the Southern Queensland Bushfires.

'[The fire] wiped us completely. I can't even find the water tank because it melted,' she said. 'The fridge melted and fell over on itself. I had a gramophone and all the records melted.'

Lyteesha is now living at the Tara Accommodation Recovery Park – a housing hub for locals affected by the fires.

The Queensland Government built seven modular homes in the recovery park for impacted residents displaced by the fires.

The modular homes include a one-bedroom home, five two-bedroom homes and a three-bedroom home.

These homes are in addition to nine transportable temporary homes and two cabins that are already installed at the Tara Accommodation Recovery Park.

Since the bushfires, the Queensland Government has provided temporary accommodation for 66 households.

The Queensland Government provided \$5.16 million for the construction of these modular homes, which supported around 16 full-time equivalent construction jobs.

Queensland Government department staff are helping Lyteesha plan her next steps.

'They've been really, really good. Really supportive, really helpful and reassuring, which is what I've needed.'

Despite the fires, Lyteesha plans to return to the bush one day to build her 'ultimate house'.





'You've got a choice - is it going to break me? Or am I just going to build?' Lyteesha



'Images: Tara Accommodation Recovery Park new homes for fire-impacted residents (courtesy: DHLGPPW)

Action plan for recovery and resilience

A summary of the recovery and resilience activities is shown in Table 8.

Priority	Summary of recovery and resilience activities
Access to safe housing during and following disaster event	 Provide appropriate housing support Support people through the process of repairing and rebuilding residential property damaged by the event Provide appropriate financial support services and information for disaster affected community members and people experiencing financial hardship as a result of disruption, damage or loss of income, livelihood or possessions Provide appropriate information and support to people from culturally and linguistically diverse backgrounds that is responsive to cultural and communication needs Support access to safe and affordable credit to replace loss of household contents Provide access to information and appropriate support to assist clean-up of home environments Work with QBuild to define scope of works and estimate of cost to support repair of uninsured homes of eligible applicants to a safe and habitable status
Access to psychosocial support	 Provide psychological first aid, support services and referrals primarily via face to face and teleoutreach as well as follow up service to those displaced Support NGOs to provide psychological first aid to impacted community members at recovery hubs, during outreach and at community events and other relevant contexts Provide resources to assist communities in addressing disaster psychosocial impacts
Access to recovery information	Facilitate access to clear and consistent information regarding recovery activities
Access to education services	Provide information on school closures and alternate education continuity arrangements
Access to appropriate and coordinated social services	 Provide access to timely and appropriate physical public health related information and advice Develop and implement a public health communication strategy including provision of disaster messaging to CALD community leaders
Building community resilience	 Raise awareness and promote the Disaster Risk Reduction resources available to vulnerable members of the community Provide and promote services and resources to support community-led recovery Provide accessible resources to improve resilience and strengthen local resources to support psychosocial wellbeing and development Undertake capacity building to equip recovery stakeholders to address long-term psychosocial impacts and support resilience within communities

Table 8: A summary of HSFRRG recovery and resilience activities

Disaster Recovery Funding Arrangements

The Australian Government will partner with Queensland to provide the following human and social recovery and resilience funding and initiatives.

These are grouped against the relevant events.

Tropical Cyclone Jasper and South Queensland Severe Storms and Rainfall

 A \$22.9 million Community Health and Wellbeing Program, Community Recovery and Resilience Officers, and Flexible Funding Grants package to mitigate psychosocial impacts, help impacted individuals access financial support, builders and services, and assist NGOs with disaster preparedness and response planning. Available for both Far North and South East Queensland. A \$9.5 million Mental Health Program to provide individual and family therapeutic interventions for impacted people, with particular attention paid to vulnerable people displaced from their home, especially Aboriginal and Torres Strait Islander communities. Available for both Far North and South East Queensland.

Southern Queensland Bushfires

- A \$6.2 million Community Health and Wellbeing package to support communities activated for Personal Hardship Assistance and who experienced loss and severe damage of properties following the Southern Queensland Bushfires.
- A \$2.2 million Mental Health Program to provide individual and family therapeutic care and interventions for people impacted by the Southern Queensland Bushfires, with a focus on longer term support services and strengthening existing mental health support programs.

Non-DRFA initiatives

The Australian Government will partner with Queensland to provide the following human and social recovery and resilience funding and initiatives.

These are grouped against the relevant local government theme.

Recovery capability and capacity in local government

- NEMA will continue to coordinate other Australian Government agencies and departments with the Queensland Government to provide ongoing recovery support to Queensland's impacted communities
- NEMA will also review current programs for opportunities to better support the recovery of communities impacted by future disasters.
- National Indigenous Australians Agency (NIAA) will continue to work closely across the three levels of government, and with community and non-government organisations to contribute to coordinated recovery and improved resilience for First Nations communities. This includes ensuring local community leadership is always at the centre of long-term recovery and resilience planning.
- NIAA's current priorities in Far North Queensland centre on Wujal Wujal, specifically:
 - » working with Wujal Wujal community and key partners to coordinate and contribute to current recovery efforts and build future capacity
 - » contributing funding for an additional 11 Indigenous Rangers to assist in flood recovery efforts, and working with Wujal Wujal Aboriginal Shire Council and other stakeholders to place Community Development Program workers in employment to assist in community recovery.

Access to psychosocial support services to address cumulative disaster impacts

- Services Australia will partner with NEMA and the Queensland Government to implement and support existing communitycentred recovery efforts with the ability to deploy an on the ground or tailored service offer. Services Australia will continue to deliver government disaster recovery and rapid response payments and services that are targeted and provide accessible services for customers in remote and isolated communities.
- NEMA will also ensure other relevant Australian Government agencies such as aged care can contribute to future support in recovery, particularly impacted communities that have an aging population.

Building community awareness for disaster events

- Services Australia will deliver government disaster recovery and rapid response payments and services that are targeted and will provide accessible services for customers in remote and isolated communities.
- The Australian Government has committed \$15.9 million to design and establish a climate centre focussed on the Torres Strait and Northern Peninsula Area. The Centre will create a First Nations-led, coordinated regional response to climate change impacts, and will implement Climate Warriors who will deliver on-ground climate adaptation solutions, perform community outreach, and educate on climate matters.

Governance

QRA is committed to improving the cumulative effects of disaster funding administration for local councils, state agencies and communities.

As part of this we are recalibrating and refining our internal organisation processes, systems and functions to meet the disaster management needs of stakeholders and enhance their experience.

Key to this is a new implementation function to enhance our end-to-end disaster management grants process making the pathway for councils, departments and community stakeholders smoother and less burdensome. Ultimately this will allow quicker access to funding helping communities to recover and become more resilient.

Elements of the new implementation function include:

- refining and creating enduring guidelines to be simpler so when disaster events are activated standardised guidelines that stakeholders already understand are available
- **faster** access to disaster related funding. This involves improving requirements, processes and governance to provide confidence to turn on the disaster recovery activities sooner.
- easier reporting and analytics processes internally and externally to understand progress and community recovery
- stakeholder implementation plans to better understand timing, needs and communication of progress and recovery.

QRA will be better placed to help design grant programs to include recovery and resilience elements for Queensland and operationalise funding to stakeholders sooner. In partnership with Australian Government, state and local partners, it will help address Queensland disaster impacts as climate change continues to challenge development, prosperity and ways of living.

Evaluation of the 2023–24 exceptional disaster funding portfolio

Monitoring and evaluation is a thorough way for Queensland to demonstrate the programs we invest in are making a difference. As part of DRFA, a portion of total funding can be allocated to support QRA monitor and evaluate Category C and D exceptional circumstances packages and report to NEMA.

Over the life of this funding, key evaluation questions would seek to measure the appropriateness, efficiency and effectiveness across the 2023–24 disaster funding portfolio.

Planned monitoring and evaluation activities include:

- establishing an overarching recovery and resilience evaluation strategy
- the development of an evaluation framework and program logics for the 2023–24 disaster funding portfolio
- evaluation plans to support point-in-time assessments of programs, packages and lines of recovery
- performance monitoring and reporting tools
- continuous improvement practices, capability building and lessons management.

These activities are intended to support evaluative thinking, learning, performance improvement, decision-making and accountability. Findings will be used to support future program design and delivery, as well as build QRA's monitoring and evaluation capabilities.

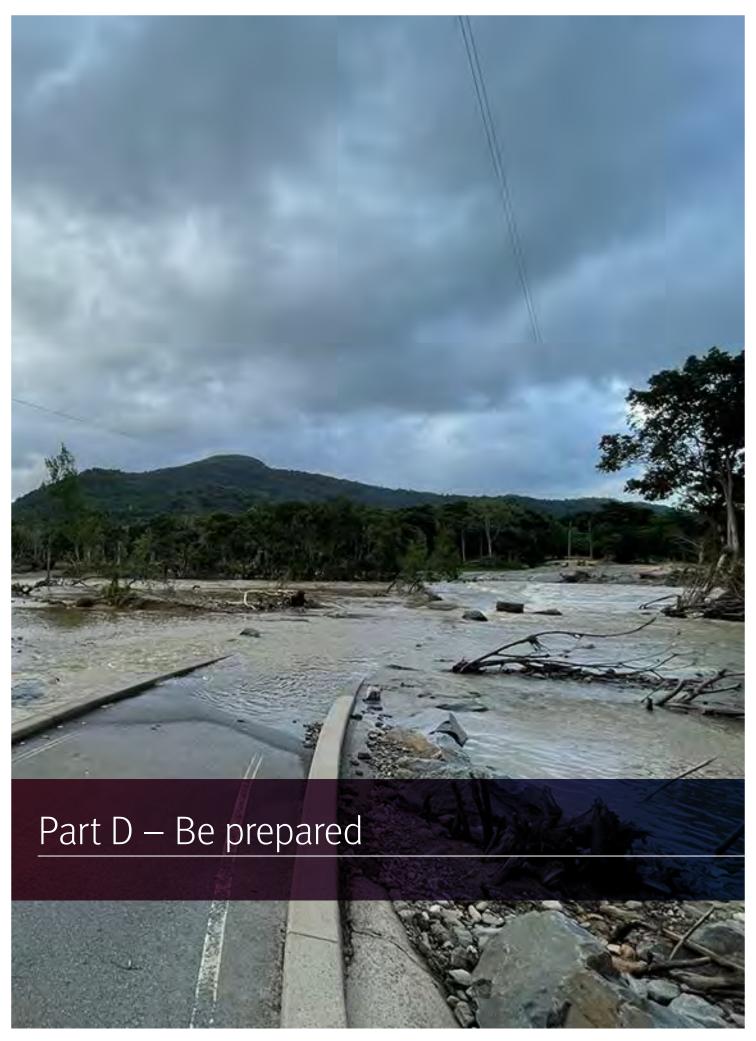


Image: Old Kamerunga Bridge, Barron River (courtesy: QRA)

Preparation is key when it comes to disasters, and the risk is different for everyone depending on their circumstances.

Every Queenslander plays a role in their own preparedness.

This part of the Plan highlights:

- · what worked well this disaster season
- processes underway to identify the key lessons from this disaster season
- ways to get ready for future events.

What worked well this disaster season?

While not exhaustive three key themes emerged:

- · Working together
- · Preparation and planning
- Self-organising

Working together

Working in new ways with traditional and non-traditional partners

In 2023–24 QRA worked with traditional and non-traditional partners in new and innovative ways. In the north the impacts of Tropical Cyclone Jasper completely isolated multiple small communities in three heavily affected LGAs. With no road access local councils needed extraordinary help to reach people and provide emergency relief and recovery.

QRA established a Far North Queensland Emergency Relief Coordination Cell (Coordination Cell) to coordinate a collaborative disaster relief effort for councils who were struggling to transition from response to recovery.

The Coordination Cell, a first in Queensland, was bespoke and located on the ground in Far North Queensland.

The collaborative effort included traditional partners such as QPS, Department of Housing, QBuild, Australian Defence Force (ADF), Department of Environment Science and Innovation, Ergon Energy and the former QFES.

Non-traditional partners included Maritime Safety Queensland, Department of Regional Development, Manufacturing and Water, Disaster Relief Australia, NEMA, Humanihut Australia and QPWS.

The Coordination Cell leveraged the collective expertise of agency liaison officers, embedded officers and QRA resources located back in Brisbane.

Maritime Safety Queensland volunteered use of their Crisis Coordination Facility in Cairns as a base for the Coordination Cell. They'd had the foresight to build the facility several years ago for moments such as this.

The Coordination Cell worked with all partners to harness resources to reach isolated communities. It needed to access different and difficult landing sites to deliver emergency relief supplies.

Using multiple barges from government and civilian businesses it delivered fuel, food, water, caravans for emergency housing, generators, clean-up equipment, waste bins and other essentials. By integrating capabilities to meet the needs of a unique situation dedicated staff from federal, state and local governments supported communities.

Queensland's State Recovery Coordinators engaged with communities daily attending community meetings and speaking to affected residents. Communities reported feeling supported QRA was on the ground.

SPOTLIGHT

DISASTER RELIEF AUSTRALIA'S NATIONAL OPERATION CENTRE TO BE BASED IN BRISBANE

Disaster Relief Australia (DRA) is playing a growing role in national disaster recovery uniting the skills and experiences of ADF veterans, emergency responders and civilian volunteers to deploy Disaster Relief Teams domestically and around the globe.

It addresses a critical need and provides the Australian, state, territory and local governments with access to a volunteer workforce skilled in incident management, damage and impact assessment, disaster mapping and debris management.

Other capabilities include work order management, spontaneous volunteer management, expedient home repairs, route clearance and property access, aerial damage assessment and community resilience building.

DRA aims to on-board an additional 5,200 volunteers by mid-2026, reducing the pressure and reliance on the ADF in disaster.

'The model of using an alternative capability to the ADF was tested over the Higher Risk Weather Season, when we requested DRA to deploy to parts of the country that had experienced significant impacts from bushfires, storms and cyclones,' Joe Buffone, NEMA Deputy Coordinator-General Emergency Management and Response said.

'We had DRA teams in the Northern Territory, North Queensland and South East Queensland over January and February — their work leading the recovery efforts after the storms in the Logan, Scenic Rim and Gold Coast councils areas was the first time non-ADF personnel were deployed by the Commonwealth as the primary non-financial disaster response.'

You can read more information about DRA's operations on the <u>DRA website</u>.

SHOWCASE ACT RANGERS, FIREFIGHTERS JOIN QPWS FIRE RESPONSE

In the lead up to the 2023 bushfire season, QPWS conducted more than 530 fuel reduction burns and other fuel reduction or hazard mitigation treatments across the state – an additional 100 burns compared with 2022.

Between August and October, QPWS responded to 210 bushfires across Queensland, 188 impacting protected areas.

For the first time in Queensland's history, QPWS received interstate support to help rangers battle fires in protected areas, and complement QPWS skills in fire management.

Rangers and rural firefighters from Canberra joined QPWS rangers in early November 2023.

The assistance from the ACT strike team allowed local crews to take a well-earned break from near-constant fire response duties.

The ACT strike team was made up of seven ACT Parks and Conservation Service rangers and four ACT Rural Fire Service volunteer firefighters.

They worked alongside QPWS, the former QFES, the Department of Agriculture and Fisheries and local landholders to fight fires and begin recovery operations in Girraween National Park.

They brought with them additional experience similar to Queensland rangers in fire management specific to protected areas, including aerial surveying, advanced and arduous firefighting, mapping and heavy-plant operations.



Image: ACT rangers, firefighters join QPWS fire response (courtesy: DESI)

Non-traditional partners bring non-DRFA solutions

As disaster events increase and the disaster season lengthens traditional government funding sources are under pressure to meet community needs.

Many not-for-profit, non-government and philanthropic organisations contributed to disaster recovery in 2023–24. They brought multifaceted networks, expertise and resources.

As a result, their capacity, capability, and desire to contribute to future recovery and resilience efforts increased. QRA and government departments will continue to find ways to include these organisations in recovery and future planning.

Deadly Inspiring Youth Doing Good (DIYDG) is an example of a not-for-profit organisation redirecting its existing resources to achieve multiple recovery outcomes.

It used its platform and networks to help the Wujal Wujal community by providing food, housing, connection and transport.

CASE STUDY

DEADLY INSPIRING YOUTH DOING GOOD

Established eight years ago to empower young people, DIYDG has been working with the Wujal Wujal community as they recover and heal from the impacts of Tropical Cyclone Jasper.

Billed as the wettest cyclone in Australian history, Tropical Cyclone Jasper devastated Wujal Wujal.

The entire community was evacuated to Cooktown and Cairns where they stayed for more than five months waiting to return.

Merrissa Nona, CEO of DIYDG, explained the Wujal Wujal community has a deep attachment to the land. 'Not being able to live or camp on the land was deeply traumatising,' she said.

The cyclone also destroyed DIYDG's offices in Manoora, Cairns.

Its young staff, many with family in Wujal Wujal, were struggling to help while also grieving the loss of their workplace and possessions.

Merrissa saw a way to help the Wujal Wujal community and the mental health of her staff.

As a community organisation, DIYDG's core business is engaging with community, prioritising need and responding immediately. Over the years it's built the

capacity and capability to take on complex projects in the health, youth justice and education space.

Being a not-for-profit, DIYDG was already set up to accept donations and could quickly pivot to help the Wujal Wujal community.

DIYDG went to work, using GIVIT and Prezzee, to make sure people got the resources – fuel, food and other essentials – they needed.

DIYDG identified non-government organisations with cooking capacity and helped make sure volunteers providing meals complied with health and hygiene measures.

It sent staff and volunteers to Cooktown and Cairns to help Wujal Wujal residents complete necessary physical, mental and emotional health checks.

DIYDG also took Wujal Wujal residents back to Country for their social and emotional wellbeing.

Merrissa hopes lessons can be learned from the disaster.

She believes not enough weight was given to the social and emotional wellbeing of the Wujal Wujal community.

Merrissa said at the start many regional Aboriginal and Torres Strait Islander organisations were missing from the conversation.

'It took a bit of convincing that we have the capacity to step up,' she said.

She's also concerned the Wujal Wujal community was not empowered to participate in their own response and recovery.

'They wanted to take responsibility for their own clean-up,' Merrissa said.

'Seeing updates on social media about the progress of the clean-up was triggering because they couldn't go back.'

Merrissa wants governments, volunteer groups and not-for-profits to get together to plan for future disasters.

'How do we best prepare to have the mechanisms in place to respond immediately.'

Merrissa believes being in the same room, listening to each other makes everyone smarter.

Ultimately it's about building community that is inclusive of everyone.

And that includes young people inspiring others to do good.

Councils working together

Regional Organisations of Councils (ROCs) advocate on behalf of their regions to solve regional issues and contribute to the future sustainability of the region.

This disaster season ROCs have demonstrated the power of a collaborative approach.

The six ROCs are:

- North Queensland Regional Organisation of Councils
- Far North Queensland Regional Organisation of Councils
- North West Queensland Regional Organisation of Councils
- South West Queensland Regional Organisation of Councils
- Central Western Queensland Remote Area Planning and Development Board
- Central Queensland Organisations of Councils

Councils and departments working together

Following a request from Douglas Shire Council, the Department of Transport and Main Roads (TMR) has been assisting with recovery works on the council-owned Cape Tribulation Bloomfield Road.

This has included embedding an experienced project manager/ engineer to support the coordination of activities and programs. Works have been undertaken to clear debris and begin stabilising landslip sites. Ongoing heavy rainfall slowed progress on repairs. Cape Tribulation Bloomfield Road remains closed, with Douglas Shire Council aiming to reopen the 4WD track by the end of June 2024.

This road and access to Cape Tribulation from the south over the Alexandra Range are two of the most environmentally sensitive roads in the Daintree.

The Wet Tropics Management Authority is advising Douglas Shire Council on reconstruction of sections along the roads.

Authority staff are also advising on the reconstruction of the main roads network inside the World Heritage area, such as on the Palmerston Highway and the Kuranda Range. The Authority is working closely with infrastructure service providers to help them resume their services while maintaining the significant natural and scenic values of the World Heritage area during the recovery process.

CASE STUDY

NORTH OUEENSLAND WATER SECTOR MUTUAL AID COORDINATION CELL

'We simply can't turn the tap on for a drink of water.'

The heavy rains from Tropical Cyclone Jasper damaged water infrastructure, reducing water supply across Douglas Shire Council. At times residents couldn't shower or drink tap water, local restaurants couldn't open, and guests cancelled hotel bookings because of unreliable water supply.

High turbidity and increased solids in the source water blocked filters in the water treatment plant, which had to be shut down and cleaned

The Department of Regional Development, Manufacturing and Water (DRDMW) activated the North Queensland Water Sector Mutual Aid Coordination Cell (MACC) to support the region's water and wastewater infrastructure recovery.

MACC is a group of water sector experts from local councils and water service providers who help each other when the need arises.

MACC supplied equipment and technical expertise to councils to manage issues with their water treatment plant and repair their water supply network.

MACC crews optimised the Mossman Water Treatment Plant to maintain water production and made temporary repairs, such as fixing burst water mains, to decrease regional disruption.

MACC is an example of all levels of government and organisations in the water industry combining their expertise, people and resources and working together to deliver for Queenslanders when they need it most

MACC also assisted Douglas Shire Council with media to inform people about the issues and the need to conserve water. Douglas Shire Council is working with the State Government and the QRA on both a short-term and long-term plan to ensure a safe and more secure water supply for Douglas Shire.



Image: South Mossman (courtesy: Douglas Shire Council)



Image: Non-potable water collection point at Wonga Beach (courtesy: Douglas Shire Council)

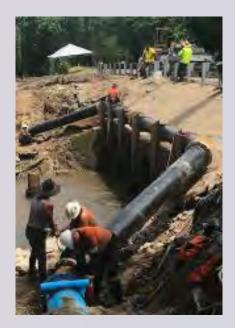


Image: Water supply outage as debris washes into treatment plant (courtesy: ABC News)

Preparation and planning

Having a plan and practicing what to do during a disaster helps effective response and recovery. Energy Queensland, TMR and several councils are examples of organisations and government prioritising disaster preparation and planning.

Energy Queensland

Approximately 250,000 Queensland homes and business lost power during Tropical Cyclone Jasper, South Queensland Severe Storms and Rainfall and Tropical Cyclone Kirrily.

Energy Queensland – Ergon Energy and Energex – prepare for these disaster events. This includes updating, testing and revising emergency management plans and training, preparing and testing employees to respond safely and effectively to emergency situations.

Immediately following the cyclones and storms Energy Queensland mobilised standby crew across Queensland. More than 2,350 field crew worked around the clock, often in heatwave conditions to safely restore power to customers.

Improved spatial technology, data management, integrated communications systems and forward strategic planning allowed Energy Queensland to confidently allocate resources and communicate plans to customers.

While the damage from the events was extensive, power was restored to all customers within 14 days via network or generation.



Image: Fallen powerlines and trees following the South Queensland storms (courtesy: QFD)

CASE STUDY ENERGY QUEENSLAND MOBILISES RESOURCES TO RECONNECT QUEENSLANDERS

Although the impacts from the disasters were unprecedented, Energy Queensland was ready.

Standby field crew were immediately mobilised to repair hundreds of crossarms, poles, transformers and kilometres of powerline.

Tropical Cyclone Jasper

- 40,000 customers lost power during the cyclone with a further 10,000 impacted because of flooding the following week.
- The worst impacted communities were Wujal Wujal, Mossman, Cairns, Northern Beaches, Daintree and Port Douglas.
- 40 poles, 255 crossarms, 13 transformers and 65 kilometres of powerline needed repairs.
- **600 field crew** from across Queensland operated out of Cairns, Port Douglas, and Mareeba.
- **Supply was restored within 10 days** by 24 December 2023 to all customers via network or generation.

South Queensland Severe Storms and Rainfall

- Wind speeds recorded during the Christmas day storms were equivalent to a category 3 cyclone.
- 130,000 customers impacted by storm damage or inundation.
- The worst impacted communities were Gold Coast, Scenic Rim, Logan (particularly Mount Tamborine, Jimboomba, Cedar Creek, Wongawallan).
- 150 poles, more than 500 crossarms and 120 kilometres of powerline needed repairs.
- **1,000 field crew** from across Queensland operated out of Beaudesert, Southport, and Berrinba depots and temporary staging points on Mount Tamborine and Jimboomba.

Tropical Cyclone Kirrily

- The worst impacts were experienced in Townsville and Burdekin including Ayr and Home Hill.
- Approximately 66,000 customers lost power.
- 750 field crew from across Queensland operated out of Townsville Home Hill depots, and a temporary staging area at Reid Park Raceway, Townsville.
- Supply restored within 6 days to all customers via network or generation by 31 January 2023.

Department of Transport and Main Roads

TMR supports and participates as appropriate in planning and preparedness activities and initiatives, including exercises across all levels of government. For example, TMR's severe weather season preparedness program is delivered annually across Queensland in October/early November prior to the onset of the severe weather

season. The program, which has now been run successfully for 13 years, enables TMR staff to learn, engage with internal and external stakeholders, and exercise disruptive event scenarios impacting the state-controlled road network. In the lead up to the 2023–24 season the program delivered 11 multi-agency exercises across the state with more than 390 attendees encompassing 22 external stakeholder organisations.

CASE STUDY

LGAO PARTICIPATES IN CROSS BORDER DISASTER MANAGEMENT EXERCISE

Each year councils facilitate exercises with their Local Disaster Management Groups to strengthen their ability to partner during times of need. Recognising that robust networks, established relationships and understanding of risk are critical to effective disaster management arrangements, QPS Emergency Management and Coordination Command facilitated a cross border exercise in November 2023 to support border councils in Queensland and New South Wales.

Southern Downs Regional Council, Goondiwindi Regional Council and New South Wales councils worked through scenarios to strengthen cross jurisdiction disaster management arrangements and collaboratively plan for future events that impact the closely connected communities.

The exercise scenario was based on a flood event commencing in New

South Wales, impacting downstream Queensland communities, before again impacting downstream New South Wales communities. Each state's arrangements, with similarities and differences, key accountable agencies, transport, access, resupply and evacuation, and cross community communication was considered.

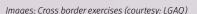
The exercise was designed to explore cross border operational support between councils, police, state emergency services, ambulance, fire management, Border Regional Organisation of Councils and the Local Government Association of Queensland.

The exercise allowed agencies involved to get a better understanding of the impacts and decision making and how resources could be shared and partnerships strengthened. Further cross border exercises are planned for 2024.













Self-organising

While waiting for government assistance during and immediately after disasters, communities worked together to save lives, offer shelter, provide essential supplies, disseminate vital information and help with clean-up. Rapid community-led actions highlighted the power of local knowledge and social connection. In the wake of the 2023–24 disaster season QRA and governments will

continue to tap into this extraordinary community spirit and include community-led groups in formalised actions following disasters.

There are many examples of communities working together and self-organising to support each other after disaster events. Cairns Clean Up Crew (highlighted in Part B of the Plan), Tamborine's Chainsaw Warriors, Deadly Inspiring Youth Doing Good, BlazeAid and Goomburra community initiative are some examples.

CASE STUDY TAMBORINE CHAINSAW WARRIORS

Tamborine Mountain was one of the worst impacted areas during the South Queensland Severe Storms and Rainfall event.

Homes and infrastructure were destroyed and large trees felled.

The sheer scale of debris was so great many residents couldn't deal with it themselves.

Adam Chanter, a maritime professional, had been living on the mountain for more than a decade.

Confident in his professional abilities and community knowledge he turned up to the first town hall meeting ready to help.

Adam wasn't alone – many locals with expertise were looking to volunteer.

One of the first things they needed to do was remove large amounts of debris and restore access.

Rather than waiting for help to arrive Adam suggested a team of local 'chainsaw warriors' could do the job.

With no power and limited mobile coverage, they used alreadyestablished informal networks of community sporting and social groups to find volunteers and residents who needed help.

They also door knocked, put up flyers with QR codes at recovery hubs, real estate agencies and sporting clubs and reached out via Facebook and social media.

Adam used the data to map volunteer capability with resident need.

'We built the platform out of need and desire,' Adam said, 'connecting volunteers with those who needed help.'

Seventy chainsaw warriors went to work helping more than 125 families who were directly impacted.

Those with engineering experience assessed the jobs and built teams around volunteer capability.

They organised on-the job training and education for volunteers who needed to use chainsaws.

Adam shared the data about affected residents with groups doing welfare checks and connected with other volunteer groups that provided donated generators to people without power, running water or sewerage.

He also liaised with Disaster Relief Australia on jobs outside his team's capabilities.

Energex invited the Chainsaw Warriors to observe their forward-facing operations at the local sports grounds. Adam said the team learnt much from seeing how they organised and engaged with affected residents.

Adam is hopeful the community will learn from the experience and improve their preparedness for the next high risk weather season.

He's also hopeful all levels of government will better integrate and resource community volunteer groups.

'If we had the capability to better support and quantify data, we would be able to mobilise and steer the services more efficiently,' Adam said. 'This approach can only be successful if it is community led and government enabled.'

Adam wants 'to be ready to be forward facing' when the next disaster strikes 'so we don't waste time'.





Images: Chainsaw warriors (courtesy: Adam Chanter)





SPOTLIGHT **BlazeAid**

BlazeAid volunteers build more than fences, they restore faith in humanity after bushfires.

The Southern Queensland Bushfires destroyed valuable summer pastures and fences, leaving an overwhelming clean-up job for farmers. Long after the smoke cleared and the ground cooled, the clean-up continued and BlazeAid stepped in.

BlazeAid is a volunteer-based organisation working with families and individuals in rural Australia after disasters such as fires and floods. They help rebuild fences and other structures damaged or destroyed.

Following the fires, BlazeAid volunteers pulled down burnt fences and erected new ones on several farms. BlaizeAid also helped farmers with their mental wellbeing.

Kevin and Rhonda Butler established BlazeAid in 2009 after the Black Saturday bushfires burnt through approximately three kilometres of fencing on their property. Hundreds of sheep escaped causing a traffic hazard. Fire trucks and other emergency service vehicles couldn't respond to the fires.

Twenty-five volunteers responded to Kevin's call for help repairing fences in a week that would have taken the Butlers three to four months to repair. The amazing response prompted the Butlers to give back to their community with BlazeAid.

BlazeAid has responded to disasters every year since 2009. In that time more than 17,500 kilometres of fencing has been rebuilt.







Images: BlazeAid volunteers fixing fences (courtesy: ABC news)



Image: The aftermath of bushfires in the Southern Downs (courtesy: QFD)

SHOWCASE GOOMBURRA COMMUNITY INITIATIVE

Nestled in the western foothills of the Great Dividing Range, Goomburra is one of four Main Range National Park visitor nodes.

The 25.5 kilometres of road heading into the Main Range and campgrounds is the only route in and out.

Following the 2019 bushfires the community decided they needed to become more disaster ready.

They used Community Hall Committee (Hall Committee) meetings to build honest and truthful relationships and plan what they needed to do

This approach enabled the Community Recovery and Resilience Officer (CRRO) to gain insight into local issues. At the first meeting the CRRO attended the community identified two upcoming recovery projects, with many more to follow.

Early initiatives included the Birdie's Tree program, providing support for community events, launching a Neighbour Day campaign, upskilling community members with online training, providing training on evacuation centre procedures and psychological first aid, and conducting first aid training in conjunction with the installation of a new automated external defibrillator at the hall. The Hall Committee successfully secured a Foundation for Rural and Regional Renewal grant to install solar panels.

In September 2022, the CRRO organised a Big Map exercise in collaboration with the Local Disaster Management Group (LDMG) and local community members at the hall, along with a follow-up Get Ready Goomburra emergency services event in November.

These activities led to the establishment of the Goomburra Disaster Group, consisting of Hall Committee members, key business owners including the campgrounds, the local QPS officer, retired personnel from the former QFES, and other interested community members.

With the CRRO and District Management Officer's assistance, the group is developing its hyper-local disaster plan, aiming to receive LDMG endorsement once it's complete.

During this process, Goomburra experienced the Southern Queensland Bushfires, which actualised their planning.

Although the plan is still underway, some initial outcomes have emerged, including securing a grant to install accessible toilets and establish a designated UHF radio channel for valley-wide communication during emergencies. They also constructed a helicopter pad at the upper end of the valley, which was used by an air ambulance in its first week of operation.









Images (courtesy: Southern Downs Regional Council)



Why is it important to capture lessons learned?

Learning from past events and their impacts helps us anticipate what's next, improve what we're doing and adjust if needed to dynamic and uncertain circumstances.

Capturing lessons learned is a part of continuous improvement helping us identify what worked well and where we could improve.

Continuous improvement increases the effectiveness of response, recovery and resilience efforts by ensuring we are able to routinely identify strengths, areas for improvement, potential best practices and critical issues.

Continuous improvement also acknowledges it is sometimes not possible to return to a 'pre-disaster normal' and recognises this is not a failing but part of a process of ongoing adaption.

The Office of the Inspector-General Emergency Management (IGEM) is conducting an enquiry into the efficacy of the Queensland Disaster Management Arrangements during the 2023–24 season with a particular focus on response.

QRA conducted a debrief focusing on the effectiveness of the interim SRRG during the 2023–24 high risk weather season.

The debrief will capture strategic and systems level reflections on the recovery phase.

The debrief report will equip the contributing agencies with the knowledge and lessons identified to prepare for the 2024–25 high risk weather season.

SHOWCASE PLANNED BURN STOPS RAGING BUSHFIRE IN ITS TRACKS

Boodjamulla National Park (Aboriginal Land) successfully prevented the spread of a major multi-state bushfire in mid-September 2023 as a result of lessons learned more than a decade ago.

In 2012 following devastating bushfires that ravaged the park historically every five years or so QPWS and the Waanyi Traditional Owners changed the way they managed Boodjamulla National Park (Aboriginal Land).

They embarked on intensive and strategic annual landscape mosaic burning.

Each year, rangers would conduct early season landscape-scale aerial burns within the national park, strategically burning to create a pattern of burnt and unburnt areas and a diverse range of spinifex ages. This reduced the scale of any bushfires while promoting and maintaining ecological resilience and diversity.

Recent fire scar mapping and analysis has shown that the mosaic burn pattern created by QPWS over the past five years significantly helped reduce impacts from a serious bushfire

after it crossed the border from the Northern Territory on 18 September 2023.

The fire had burned more than 1.6 million hectares before reaching Boodjamulla National Park (Aboriginal Land), where it met the strategically managed spinifex fuels and burn scars.

With no more continuous fuel to consume, the fire broke into smaller fragmented fronts and eventually went out on its own accord – impacting only about 3,800 hectares within the park.

Thanks to this carefully applied approach, rangers have again assisted in preventing another ecologically destructive bushfire from impacting the national park and its numerous unique cultural and natural values – such as the Riversleigh World Heritage site and habitat for the endangered Carpentarian grasswren.

QPWS is now preparing planned burn operations in the north west region for next year, and will continue repairing the damage from the March flood, with the hope of re-opening more of Boodjamulla towards the end of 2024.



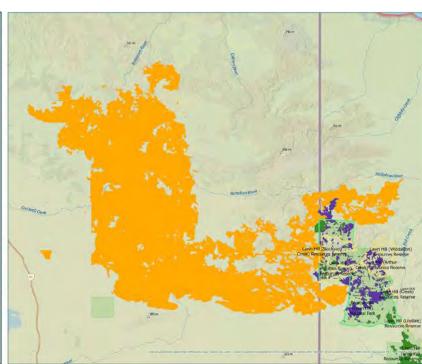


Image: Fire scar mapping (courtesy: DESI)

How to prepare

Training and communication

Councils plan to continue to deliver disaster recovery training for their staff who support recovery.

SPOTLIGHT THE RESILIENCE CANOPY

The Resilience Canopy is a not-for-profit that aims to build self-led resilience in communities by connecting them with the skills they need to lead their own future ready plans and to a network of partners who can help deliver on those plans.

The first step for communities ready to build their resilience is participating in the Resilience Canopy practitioner training. The training focuses on upskilling and mentoring a network of community resilience practitioners across Australia to lead their communities on the path to resilience building. Free training placements are available for individuals committed to applying the training within sponsored LGAs.

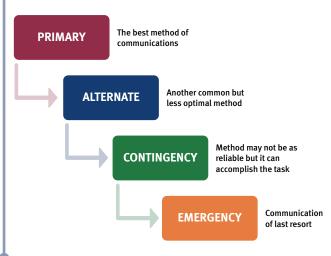
In December 2023 Gympie Regional Council hosted Resilience Canopy practitioner training. Attendees said they appreciated the training given the extreme weather events experienced over the past couple of years. Following the training they formed a local resilience community of practice which will connect with the national community of practice, the Canopy Collective.

Activation grants are available for communities to kick-start their resilience-building initiatives, which Canopy-trained practitioners can apply for on behalf of their communities once they complete the training.

SHOWCASE WHAT IS A PACE PLAN?

A primary, alternate, contingency, emergency (PACE) communications plan is a tool for helping organisations prepare for backup communications in out of the ordinary situations. A good PACE plan establishes options to use non-digital methods of communication when energy networks and telecommunications networks fail.

Every council should have a PACE communication plan as it is critical for communications to continue.



SPOTLIGHT DISASTER DASHBOARD

Local councils are the first point of call for Queenslanders seeking information at the time of a disaster. Most councils have a disaster and emergency management dashboard (disaster dashboard) on their website.

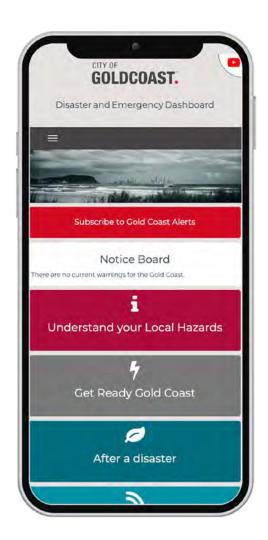
Disaster dashboards provide a single location for communities to access the most relevant and critical information relating to a disaster event.

The disaster dashboards include information about:

- weather warnings
- · evacuation centre openings and locations
- river heights
- · road conditions and closures
- power and phone outages
- school closures
- emergency news
- · helpful contacts.

One of the most important aspects of a disaster dashboard is ensuring all information on the landing page is relevant, timely and high quality. Information is available in a wide range of languages.

Some disaster dashboards such as <u>City of Gold Coast Disaster</u> <u>and Emergency Dashboard</u> also have an 'after a disaster' button directing residents to recovery plans and activities.



Get Ready Queensland

As Australia's most disaster impacted state, Queensland developed the Get Ready Queensland program following the 2011 floods. QRA has managed the program since 2017.

Get Ready Queensland is an all-hazards, community resiliencebuilding program empowering Queenslanders to be self-reliant, prepared and resilient in the face of severe weather.

Communities that work together and prepare for extreme weather, recover faster and have better outcomes economically and socially. Get Ready Queensland works across Queensland's 77 LGAs to deliver local disaster preparedness initiatives through its \$2 million grass roots grants program. This 'state-run, locally led' model aims to build capacity and support localised all-hazards, resilience-building activities and resources. It aims to support widespread preparedness efforts, enhancing community readiness and response capabilities to mitigate the impacts of disasters effectively.

The Get Ready Queensland team support localised disaster resilience initiatives by engaging regularly with representatives from each council, primarily through community of practice meetings, while also providing online tools, resources, and co-branding opportunities.

Get Ready Queensland also works alongside organisations through paid and in-kind partnership opportunities to extend the program's reach, and leverage opportunities for community reach and engagement. Suncorp has been the official sponsor of the program since 2020. The sponsorship has allowed the program to increase statewide advertising, directly supporting local governments and communities through increased awareness and a strong call-to-action. Partnerships with Metcash (IGA), Bunnings and RSPCA have also provided valuable opportunities to connect and engage with Queenslanders to build resilience.

Get Ready Queensland has three steps to get ready:

- 1. Understand your risk
- 2. Make a plan
- 3. Pack a kit

Featuring brand ambassador Johnathan Thurston, the upcoming 2024–25 campaign will focus on step 2, and will encourage Queenslanders to make a plan. However, the simple act of making a severe weather emergency plan, can influence behaviour and inspire further action across all of Get Ready Queensland's three steps, as people consider what weather could impact them where they live, and plan the specific needs of their household in the event of a disaster.

The campaign will have a strong mass media presence and will be launched during Get Ready Queensland week in October.

Be Ahead of Ready

In May 2024, Natural Hazards Research Australia, the national research centre of natural hazard resilience and disaster risk reduction, released Be Ahead of Ready.

The paper argues doing more of the same is no longer sufficient and urges Australians to transform to Be Ahead of Ready.

It suggests leading a shift from thinking about the next high-risk weather season to thinking about the next decade and beyond.

The Be Ahead of Ready initiative has undertaken research and consultation to identify big ideas to drive a resilient, safe and sustainable future.







Images: Get Ready Queensland (courtesy QRA)



Websites, tools and campaigns to prepare

- · Get Ready Queensland
- If It's Flooded, Forget It
- Queensland Government Flood website
- Queensland Government Bushfire website
- Queensland Reconstruction Authority
- QRA Funding Programs
- Severe Wind Hazard Assessment Queensland
- Bushfire Resilience Rating Home Self-Assessment
- Household Resilience Program
- Strata Resilience Program
- Hazards Insurance Partnership
- ShapingSEQ South East Queensland Regional Plan 2023
- Disaster Risk Management 2022–2060
- Climate Change Queensland
- Cyclone Resilient Building Guidance for Queensland Homes
- Queensland Climate Adaption Strategy 2017-2030
- CliMate
- Find a Local Contractor QBCC
- Voluntary Home Buy-Back program
- Flood Risk Management program
- Queensland Betterment Fund
- Queensland Government Disaster Management
- Temporary emergency housing
- Applicable events

References

- Survey results: Climate-fuelled disasters cause Australians to fear permanent loss of homes | Climate Council.
- Repeated natural disasters taking a mental health toll on Queensland farmers — ABC News
- Severe Wind Hazard Assessment Queensland
- ShapingSEQ South East Queensland Regional Plan 2023
- Queensland 2023 State Disaster Risk Report
- Reviewing estimates of the economic efficiency of disaster risk management: opportunities and limitations of using risk-based cost-benefit analysis
- State of the Climate 2022
- QFD Prepare for bushfire season
- Queensland Climate Adaption Strategy 2017–2030
- Cyclone Resilient Building Guidance for Queensland Homes
- Severe weather in a changing climate 2nd Edition
- BOM Thunderstorms webpage
- <u>NESP ESCC Thunderstorms Nov 11 2019</u>
- Queensland climate change impact summary
- United Nations Office for Disaster Risk Reduction Protecting nature to minimize disaster risk

Provide feedback on the 2023–24 State Recovery and Resilience Plan

If you have feedback or questions, please contact us.

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Image: Bushfire damage in the Southern Downs (courtesy: QRA)

Acronyms

ACT	Australian Capital Territory
AED	Automated External Defibrillator
AIR	Advocacy, Information and Resilience
BFRRG	Building Functional Recovery and Resilience Group
BOM	Bureau of Meteorology
C2C	Council to Council
CALD	Culturally And Linguistically Diverse
CRRO	Community Recovery and Resilience Officer
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CYPRTG	Children and Young Persons Recovery Task Group
DAF	Department of Agriculture and Fisheries
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DDWMPHN	Darling Downs and West Moreton Primary Health Network
DESBT	Department of Employment, Small Business and Training
DESI	Department of Environment, Science and Innovation
DHLGPPW	Department of Housing, Local Government, Planning and Public Works
DITRDCA	Department of Infrastructure, Transport, Regional Development, Communications and the Arts
DIYDG	Deadly Inspiring Youth Doing Good
DRAMA	Disaster Recovery Advisors and Mentors Australia
DRDMW	Department of Regional Development, Manufacturing and Water
DRF	Disaster Ready Fund
DRFA	Disaster Recovery Funding Arrangements
DTATSIPCA	Department of Treaty, Aboriginal and Torres Strait Islander Partnerships, Communities and the Arts
ERF	Emergency Response Fund
ERRG	Economic Functional Recovery and Resilience Group
ESLRP	Event Specific Local Recovery and Resilience Plan
ESSRS	Essential Services Safety and Reconnection Scheme
FNQ	Far North Queensland
FRM	Flood Risk Management
FRRG	Functional Recovery and Resilience Groups
FRRR	Foundation for Rural and Regional Renewal
FWIN	Flood Warning Infrastructure Network
GBR	Great Barrier Reef
GRQ	Get Ready Queensland
HSFRRG	Human and Social Functional Recovery and Resilience Group
IUCN	International Union for the Conservation of Nature

JCU	James Cook University
LDCC	Local Disaster Coordinator Centre
LDMG	Local Disaster Management Group
LGA	Local Government Area
LGAQ	Local Government Association of Queensland
LHSRG	Local Human and Social Recovery Group
LiDAR	Light Detection and Ranging
MACC	Mutual Aid Coordination Cell
MNHP	Mobile Network Hardening Program
NBN	National Broadband Network
NEMA	National Emergency Management Agency
NFP	not-for-profit
NGO	Non-Governmental Organisation
NIAA	National Indigenous Australians Agency
NWGF	National Water Grid Fund
PACE	Primary, Alternate, Contingency, Emergency
PFA	Psychological First Aid
PHAS	Personal Hardship Assistance Scheme
QAS	Queensland Ambulance Service
QBCC	Queensland Building and Construction Commission
QFES*	Queensland Fire and Emergency Services *As of 1 July 2024 QFES became QFD
QFD	Queensland Fire Department
QFRMF	Queensland Flood Risk Management Framework
QLD	Queensland
QPS	Queensland Police Service
QPWS	Queensland Parks and Wildlife Service
QRA	Queensland Reconstruction Authority
QRRRF	Queensland Resilience and Risk Reduction Fund
QSDR	Queensland Strategy for Disaster Resilience
QTRIP	Queensland Transport and Roads Investment Program
RBC	Resilient Building Council
RHF	Resilient Homes Fund
RRTGs	Regional Roads and Transport Groups
SDRA	State Disaster Relief Arrangements
SES	State Emergency Service
SRRP	State Recovery and Resilience Plan
SWIRLnet	Surface Weather Relay and Logging Network
TC	Tropical Cyclone
TDRI	Telecommunications Disaster Resilience Innovation
TMR	Department of Transport and Main Roads
114113	Department of hansport and main roads
TRACC	Tackling Regional Adversity through Connected Communities

