

Ref No: 2024-3090



**Queensland
Government**

**Inspector-General of
Emergency Management**

24 June 2024

Dear reader

Thank you for accessing the “2019 Monsoon Trough Rainfall and Flood Event, formal and independent report on the effectiveness of recovery after three years”.

In accordance with the Queensland Government Action Plan, I present the *2019 Monsoon Trough Rainfall and Flood Recovery* report.

The report was developed in consultation with partners, stakeholders, and reflects the recovery from this event as considered against the *North and Far North Queensland Monsoon Recovery Plan*. The report highlights 22 examples of good practice which contributed to ongoing improvements within Queensland’s disaster management sector.

Since 2019, there has been significant positive change in the way the State delivers recovery. It is important to note that this Report does not assess the 2019 Monsoon Trough Rainfall and Flood recovery against Queensland’s current practice. The Office of the Inspector-General of Emergency Management’s website hosts additional reports with more recent findings and lessons since this event.

The Report serves as a point in time reference that can assist in informing the ongoing transformation and advancement of recovery.

We acknowledge the commitment and support of government agencies, local government, and non-government organisations for their important contributions to establishing this reference point and the content of this report.

Yours sincerely



Alistair Dawson APM
Inspector-General of Emergency Management



2019 Monsoon Trough Rainfall and Flood Event

Formal, independent report on the effectiveness of recovery after three years

Report 1: 2023–24

Document Details

Security Classification	OFFICIAL
Security Classification Review Date	13 May 2024
Author	Office of the Inspector-General of Emergency Management
Authority	Inspector-General of Emergency Management
Version control	V1.0

Information security

This document has been classified using the Queensland Government Information Security Classification Framework (QGISC) as OFFICIAL and will be managed according to the requirements of the QGISC.

Contact for enquiries

Name: Jo Beadle, Director Disaster Management
Phone: 07 3029 8809
Email: Jo.Beadle@igem.qld.gov.au
Web: www.igem.qld.gov.au
Postal Address: PO Box 12068, George Street Brisbane Queensland 4003

Content

© State of Queensland (Inspector-General of Emergency Management) 2024

Front cover image credits:

1. Richmond-Winton Road – reconstruction works in progress (Source: Department of Transport and Main Roads)
- 2-4. Banfield Drive Sea Wall (Palm Island) betterment works in progress (Source: Queensland Reconstruction Authority)

Back cover image credits:

1. Flinders Highway (Hughenden-Richmond) 2019 Betterment works in progress (Source: Department of Transport and Main Roads)
2. Douglas Creek - remediation works (Source: Queensland Reconstruction Authority)
3. Burke Developmental Road (Normanton-Dimbulah) – completed 2019 Betterment Program works (Source: Department of Transport and Main Roads)

Acknowledgement of Country

IGEM acknowledges Aboriginal peoples and Torres Strait Islander peoples as the Traditional Owners and Custodians of this Country. We recognise their connection to land, sea and community. We pay our respects to them, their cultures, and to their Elders, past, present and emerging.

Contents

Acknowledgement of Country	3
Executive summary.....	6
Findings	9
Insights	12
Context	13
Compounding events.....	13
Impact of compounding events	14
Introduction.....	16
Authorising environment.....	16
Purpose.....	16
Scope.....	16
Out of scope.....	16
Methodology.....	16
Recovery arrangements have evolved.....	18
Queensland’s recovery arrangements.....	19
2019 Monsoon Trough State Recovery Plan	19
Recovery outcomes and activities.....	19
Progress reporting data.....	21
Recovery plans and planning	22
Continuous improvement and research	23
Human and Social Functional Recovery.....	25
Accommodation demand and challenges	29
Access to mental health services and psychological support.....	30
Child and youth mental health.....	33
Mental health recovery challenges.....	33
Economic Functional Recovery.....	35
Fast tracking economic recovery	36
Understanding aftermath stressors	39
Tourism business support.....	41
Fast tracking primary industry recovery	42
Building Functional Recovery.....	46
Supporting locally led building recovery.....	47
Banfield Drive seawall, Palm Island	49
Waiben Esplanade seawall, Thursday Island	49
Barriers to building recovery	50

Roads and Transport Functional Recovery 51

 Supply chains restored 51

 Betterment Program 52

 Flinders Highway (Hughenden-Richmond and at Nelia) 52

 Richmond-Winton Road 53

 Burke Developmental Road 53

 Isabella Creek Bridge upgrade 53

 Fast tracking roads and transportation restoration 53

Environment Functional Recovery 55

 Environmental restoration 56

 Environmental Recovery Program 57

 Nelia Train Incident 59

Appendix A: Abbreviations 60

Appendix B: Assessment of Recovery Activities 62

 Human and Social Recovery Outcomes 62

 Economic Recovery Outcomes 69

 Building Recovery Outcomes 74

 Roads and Transport Recovery Outcomes 78

 Environment Recovery Outcomes 79

Appendix C: Assessment Results 83

References 84

Executive summary

The *2019 Monsoon Trough Rainfall and Flood Review Report 3: 2018-19* (the Review Report) Recommendation 12 recommended that, “*The progress of recovery for this event be reviewed incrementally over the next 2 to 3 years, with a formal, independent report provided on the effectiveness of the recovery after 3 years*”. The Queensland Government response stated “Incremental review of the progress of recovery from this event will be reported against the North and Far North Queensland Monsoon Recovery Plan for the duration of the plan. A formal independent report on the effectiveness of recovery will be undertaken after 3 years.”

This report presents the results of the assessment of the effectiveness of the state government activities to support the recovery of the 39 local government areas (LGAs) impacted by the North and Far North Queensland Monsoon Trough from 25 January to 14 February 2019. The *North and Far North Queensland Monsoon Trough State Recovery Plan 2019-2021* (Monsoon Trough State Recovery Plan) outlines the priorities and actions across the five lines of recovery for the period 15 July 2019 to 30 June 2021. The development of event specific local recovery plans for 14 LGAs by councils was a noteworthy achievement, being the first time five Aboriginal and Torres Strait Islander councils prepared event specific local recovery plans.

The duration and geographical extent of the monsoonal flooding occurred within the context of cumulative impacts of several years of severe drought and other events impacting the LGAs. Less than one year after the event, the COVID-19 pandemic began. Subsequent concurrent and cascading disaster events, coupled with COVID-19, created compounding impacts and complex operating environments for the LGAs recovering from the 2019 Monsoon Trough event.

Data held by the Queensland Reconstruction Authority (QRA), survey responses and submissions collected by IGEM were analysed to assess the effectiveness of recovery and determine alignment between state-led recovery activities and the planned recovery outcomes. A total of 36 findings and three insights highlight key achievements and opportunities for improvement.

There was strong evidence of the Monsoon Trough State Recovery Plan’s alignment to the key questions used to evaluate the effectiveness of recovery under the Australian Government’s *A Monitoring and Evaluation Framework for Disaster Recovery Programs*. In the absence of a definition of “effectiveness” in Queensland’s legislation and disaster management doctrine, IGEM relied on the questions in this report. Consequently, it was identified that evaluation is better supported when recovery outcomes and activities are clearly defined and progress reporting data is comprehensive.

Common priorities across the 14 LGAs that prepared event specific local recovery plans were evident. Most local recovery activities were reflected in the state-led activities to support regional and local recovery. However, alignment with state-led activities was not evident for 52 local recovery objectives as presented in the plans of 13 LGAs. Wujal Wujal Aboriginal Shire Council’s event specific local recovery plan is comprehensive and reflects the community’s unique context and cultural values.

Continuous improvement in disaster management is supported by post-event evaluation, such as the independent evaluation of Townsville’s recovery process commissioned by Townsville City Council (TCC). Research about the experiences of residents, small business owners and industries after the 2019 Monsoon Trough event by the Disaster Planning and Recovery Collaborative Research Project provides evidence to support improved disaster planning to deliver accessible and inclusive services.

The collaboration between state agencies across different functional lines of recovery was especially evident in the linkages and shared projects with the Industry Recovery Officers (IROs), Rural Financial Counsellors (RFCs), Community Development Officers (CDOs) and staff of the Hospital and Health Services' (HHSs') Mental Health Services. It was observed that LGA-level recovery monitoring would benefit from consideration of complex recovery processes for densely populated and/or widespread impact areas in recovery planning.

The appointment of nine CDOs facilitated collaboration between and across local recovery providers throughout 11 LGAs. They also supported integration and coordination across community-led initiatives funded through the Disaster Recovery Funding Arrangements (DRFA) under the Community Development Program. Employing locals in key roles created trust with the community and supported advocacy for residents who required longer term recovery assistance. Funding local organisations to provide recovery services in Townsville enabled place-based services and advocacy to be delivered through established networks and referral pathways. It was noted explicit referrals need to be planned. There is an opportunity for the referrals to be supported by agency policy which enables lawful data collection and information sharing.

The partnership between key organisations enabled a responsive accommodation service for displaced Townsville residents. Partnerships between the Townsville, North West, Central West and Children's HHSs and community leaders facilitated the delivery of the Mental Health Recovery Program. Outreach mental health services worked best when delivered subtly and integrated with existing community events. The successful uptake of support occurred when soft entry modelled programs or community events were used.

The Queensland Small Business Recovery Centre (QSBRC) provided streamlined information and resources to help businesses reopen, with in-person support in Townsville and an online hub. These complemented roadshows conducted in collaboration with local, state and federal agencies to provide small business owners outside of Townsville with recovery support and advice. It was suggested increased awareness of long-term mental health risks for small business owners may inform collaborative recovery efforts across the human and social and economic lines of recovery.

The analysis revealed that adapting services to suit their context and provide service choice increased the reach of recovery measures. Co-location of assistance for mental health and economic recovery was noted to improve accessibility, however, individual engagement was preferred by small business owners in rural and remote communities.

It was observed insurance policyholder forums offered an opportunity to address concerns with building repair and rebuild difficulties. Improved awareness of ombudsman services was suggested would help overcome repair and rebuilding delays.

The North West Queensland Beef Recovery Package funded IROs and RFCs to support primary industries in 11 LGAs with navigating financial and legal matters and connect graziers with mental health services. This approach, along with collaboration with the Department of Agriculture and Fisheries (DAF), enabled reprioritisation of assistance measures to effectively address emerging community needs.

Incorporating feedback mechanisms into certain recovery operations was found to be beneficial. It enabled continuous adaptation of programs and services to better meet evolving needs.

The Department of Transport and Main Roads' (DTMR's) efficient repairs to key transport routes enabled timely restoration of supply chains. DTMR's completion of subsequent betterment works resulted in improved flood immunity and resilience of the state-controlled road network.

Collaboration and expert project selection allowed for the successful delivery of funding assistance for environmental recovery. The projects restored flood impacted areas to their previous condition and function.

Findings

1. The content and structure of subsequent state level event specific recovery plans has evolved.
2. Effectiveness is not defined in the Queensland Government's disaster management legislation and doctrine.
3. The alignment between the Monsoon Trough State Recovery Plan's recovery outcomes and the Australian Government's *A Monitoring and Evaluation Framework for Disaster Recovery Programs* is evident in the data; in particular, the outcomes are focused on sustainability and resilience which are two of the four suggested key evaluation questions for the assessment of the effectiveness of a recovery program.
4. Clearly defined recovery outcomes for associated activities enabled the evaluation of the effectiveness (based on sustainability and resilience objectives) of event specific recovery plans.
5. The evaluation of effectiveness in recovery is better supported when the activities in event specific recovery plans are specific, measurable, achievable, relevant and time-bound (SMART).
6. For 10 recovery activities there was insufficient data and information available to determine the completion of the activity against the outcomes.
7. The collection of data by responsible state agencies to demonstrate implementation progress in the event specific recovery plan could be more comprehensive, and include high-quality, relevant data, particularly when data sets are qualitative.
8. The development of 14 event specific local recovery plans by councils including five Aboriginal and Torres Strait Islander councils was a key achievement.
9. In some cases, the recovery objectives of the event specific local recovery plans and state-led activities of the Monsoon Trough State Recovery Plan did not align.
10. The Wujal Wujal Aboriginal Shire Council event specific local recovery plan was comprehensive and included activities which reflected the community's unique values.
11. The conduct of an independent evaluation of recovery process is good practice and identified improvements for recovery planning for future events.
12. Of the 36 human and social recovery activities, approximately 40 per cent were assessed as meeting the sustainability outcome regarding households, families and individuals being able to act autonomously to contribute to the recovery process.

A quarter of the activities were aligned to the sustainability outcome about the availability of adequate housing to community members at appropriate times in the recovery process.

Approximately 19 per cent of the activities were assessed as aligning to the stated resilience outcome aimed at improving the community's capacity and capability to respond to future disasters.

13. The Community Development Officers facilitated community-led initiatives and collaboration between and across local recovery providers throughout 11 local government areas.

14. Employing local people in key roles to deliver recovery services created trust with the community.

15. Funding local organisations enabled place-based recovery and advocacy services to be delivered through established local networks and referral pathways.

16. The review of human and social services delivery by the then Department of Communities, Housing and Digital Economy resulted in funding being extended for providers who continued to receive requests for recovery assistance.

17. In some instances, the coordination and integration of multiple and emerging recovery partners involving a highly diverse geographical area was challenging.

18. The partnerships between organisations provided a swift response to the accommodation demand for displaced residents in Townsville.

19. Better sharing of data would have enhanced local recovery operations.

20. Multidisciplinary teams who worked in partnership with appropriate groups and community leaders improved the mental health of those affected by the 2019 Monsoon Trough event and enhance community resilience.

21. The 25 economic recovery activities met the sustainability outcome for businesses and industries in the local economy to operate and trade in line with broader economic trends. However, only one of these 25 activities was assessed as satisfying the sustainability outcome for betterment projects to result in more resilient infrastructure.

Of the 25 economic recovery activities, 64 per cent met the resilience outcome for businesses and not-for-profit organisations to have adequate mitigation practices in place for risks and threats. The resilience outcome for the economy to be sufficiently flexible and adaptable to shocks was met by 60 per cent of the activities.

22. An increased awareness of the long-term mental health risks for small business owners could better support collaborative approaches across the human and social and economic functional lines of recovery.

23. Economic recovery assistance was provided through multiple channels to small business owners. The channels consisted of the Townsville-based Queensland Small Business Recovery Centre, an online hub and mobile support through the Back on Track roadshows.

24. Direct engagement at the local level enhanced access to recovery support.

25. Co-location of economic recovery assistance and mental health support services at community events facilitated access to recovery services for small business owners.

26. Small business owners in rural and remote communities preferred individual engagement when seeking recovery support.

27. An increased awareness of ombudsman services would better support increased autonomy for disaster impacted insurance policyholders who experience difficulties.

28. Policyholder forums with representatives from insurers, councils, the Insurance Council of Australia and the Australian Financial Complaints Authority created a mechanism to assist with addressing concerns which impeded repair and rebuild of residences and businesses.

29. Reprioritisation of assistance to meet emerging need of primary industries was supported by information sharing through North West Industry Recovery Officers and Rural Financial Counsellors.

30. Of the 14 building recovery activities, approximately 70 per cent met the sustainability outcome regarding education, health, justice, welfare and other community buildings/infrastructure to support the community.

The sustainability outcome regarding private infrastructure including residential, commercial/industrial and rural assets related to 78 per cent of the building recovery activities.

A little over a third of the building recovery activities met the resilience outcome for business and not-for-profit organisations to have adequate mitigation practices in place for risks and threats.

31. There is an opportunity to strengthen collaboration across the building and human and social lines of recovery by establishing referral pathways between recovery partners before recovery operations commence.

32. The seven activities related to roads and transport recovery met the sustainability outcome for roads and transport infrastructure to support the delivery of essential services to the community.

Over 40 per cent of the activities met the resilience outcome to rebuild infrastructure to reduce, to a reasonable degree, the impact of future disasters on communities.

33. Restoration of the supply chain and reconnection of communities by the Department of Transport and Main Roads occurred due to the efficient and timely repair of key transport routes. The majority of the repair works fall outside of the scope of this report as the state road network was reopened by 15 July 2019, with reconstruction works continuing across the state road network until 30 June 2021.

34. The \$30 million Betterment Program of the Department of Transport and Main Roads improved the flood immunity and resilience of the state-controlled road network at 10 flood prone sites.

35. Half of the 16 environmental recovery activities met the sustainability outcome for recovery actions to not generate further risks to the environment. 43 per cent of activities met the sustainability outcome for the natural environment to operate to maintain and restore healthy biodiversity and ecosystems.

Approximately 56 per cent of the environmental recovery activities met the resilience outcome to increase the understanding of the risk of future disasters on the environment and to provide the environment natural protections.

36. Strong partnerships between the then Department of Environment and Science and 17 organisations enabled the delivery of 145 environmental restoration projects, despite the challenges of vast distances and weather constraints.

Insights

1. Where appropriate, the sharing of formal evaluation reports at all levels within the Queensland Disaster Management Arrangements (QDMA) would enable entities to identify relevant findings to improve disaster management.
2. The research findings of the Disaster Planning and Recovery Collaborative Research Project highlight practical improvements to adopt universal design principles to increase support and autonomy across all disaster management phases by all industries and government and non-government sectors involved in disaster management.
3. Seeking feedback about suitable recovery measures in all lines of recovery allows programs and services to be adjusted to maintain an adaptive approach while recovery operations are underway.

Context

From 23 January to 9 February 2019, North and Far North Queensland received an extended period of heavy rainfall due to an intense, slow-moving trough and tropical low. The Gulf Country and North West Queensland, including long-term drought affected regions, received record breaking rainfall, with some locations recording accumulated totals more than four times their normal February average.

Major flooding occurred across the Flinders and Norman river basins, covering an area of over 15,000 square kilometres and caused damage to key railway lines and nearly 10,000 kilometres of fencing. Approximately 500,000 cattle died and were disposed, after becoming isolated in floodwaters and succumbing to exposure. Housing support was provided to 1800 people, following the evacuation and loss of many affected residents' homes. The 2019 Monsoon Trough event was a disaster of national significance causing catastrophic damage and losses to communities in 39 LGAs across North, Far North and North West Queensland (Queensland Government, 2019).

QRA commissioned Deloitte Access Economics to analyse the social and economic costs of the 2019 Monsoon Trough event. *The social and economic cost of the North and Far North Queensland Monsoon Trough (2019)* was published on 16 July 2019 and estimated the long-term social and economic cost of the event to be \$5.68 billion. The purpose of the report was to help provide a shared understanding of the magnitude of the event's impacts to facilitate alignment of the appropriate lines of functional recovery. The report was to be used to evaluate existing disaster recovery measures and improve disaster resilience planning. It defined and considered the direct and indirect economic and social costs of the event, drawing upon the preliminary data available as at 12 April 2019. The report also considered intangible costs for damages which are often difficult to value, such as the psychosocial costs associated with the environmental impacts.

Compounding events

In climate science, compound events can be (1) two or more extreme events occurring simultaneously or successively, (2) combinations of extreme events with underlying conditions that amplify the impact of the events, or (3) combinations of events that are not themselves extremes but lead to an extreme event or impact when combined (Seneviratne, et al., 2012).

Cascading disasters are extreme events, in which a sequence of physical, social or economic disruptions occur over time and generate secondary events of strong impact (Pescaroli & Alexander, 2015).

Concurrent disasters are defined as independent events occurring simultaneously (Inter-Parliamentary Union and the United Nations Office for Disaster Risk Reduction, 2021).

Frequent natural disasters and those events which occur concurrently or cascade can interconnect and compound disaster risks and consequences. Recognising and understanding the cumulative and chronic effects of more frequent disasters is important for those who experience a continual cycle of response and recovery (Commonwealth of Australia, 2021). Prioritising the integration of resilience into recovery measures can increase the community's capacity to cope with compounding events.

Regions in the Gulf Country and North West Queensland were long-term drought affected prior to the 2019 Monsoon Trough event. The drought was most pronounced for the LGAs of Flinders, McKinlay, Richmond and Winton, which had been drought declared since 2013

(Department of Agriculture, Fisheries and Forestry, Queensland, 2013). Drought recovery, which can vary from property to property, is often influenced by the agricultural industry, condition of properties, length and severity of drought, financial position of the business, location, land type, and amount and timing of rainfall.

Since 2011, all 39 LGAs impacted by the 2019 Monsoon Trough event had experienced at least five natural disaster events. During the year prior to the 2019 Monsoon Trough event, each of the 39 LGAs had at least one DRFA activation (Queensland Reconstruction Authority, n.d.) for the following events:

- Cape York Queensland Trough, January–February 2018
- North and North West Queensland Low and Associated Rainfall and Flooding, February–March 2018
- North Queensland Flooding, March 2018
- Severe Tropical Cyclone Nora and Associated Flooding, March 2018
- Mareeba and Tablelands Bushfires, September–October 2018
- Central Queensland Bushfires, November–December 2018
- Tropical Cyclone Owen, December 2018
- Tropical Cyclone Penny, December 2018–January 2019

After the 2019 Monsoon Trough event, 16 of these 39 impacted LGAs were also DRFA activated for other events in the same year. This included Severe Tropical Cyclone Trevor in March 2019 (14 LGAs) and the Queensland Bushfires from September to December 2019 (4 LGAs). A subsequent Monsoonal Flooding event occurred in January and February 2020, and Tropical Cyclone Esther and related flooding during February to March 2020 prompted separate DRFA activations for 22 of the 39 LGAs affected by the 2019 Monsoon Trough event.

From January 2020, all LGAs throughout Queensland were impacted by the COVID-19 pandemic. COVID-19 affected the capacity of council and agencies to deliver planned recovery operations due to restrictions preventing travel and resource constraints for business as usual operations and council service delivery. QRA worked closely with councils to understand the impacts of COVID-19 on programs and delays to scheduled works under the Betterment Program. QRA also sought early advice from the Australian Government to ensure the delivery of programs, especially for mental health and wellbeing initiatives, could incorporate advice and support for the impacts of COVID-19. This led to the Australian Government approval to use 2019 Monsoon Trough recovery initiatives established under the DRFA to also deliver COVID-19 assistance.

Impact of compounding events

Experiencing compounding events, such as the COVID-19 pandemic one year after the 2019 Monsoon Trough event, created additional recovery challenges, particularly for communities that also experienced prolonged drought. Disaster events can become difficult to distinguish when LGAs and communities experience concurrent and compounding events. Some may also find it difficult to recall specific recovery operations for the 2019 Monsoon Trough event due to the time which elapsed. As one council commented, it seemed ‘like a distant memory’.

The frequency of compounding events makes the attainment of recovery outcomes difficult to readily identify, measure and assess. Although there is sufficient data about allocated recovery funding and how it was spent, there is limited data about its impact on the recovery, recovery

outcomes and resilience of the community and industry sectors which the recovery assistance targets. Limited or incomplete pre-2019 Monsoon Trough event data, which could have served as a baseline for analysis, also impeded the evaluation of the effectiveness of recovery operations.

Introduction

Authorising environment

The legislated functions of IGEM are outlined in section 16 of the *Disaster Management Act 2003* (DM Act). The preparation of this report was conducted in accordance with those functions.

Purpose

This formal independent report accounts for the progress of recovery for this event in accordance with implementing the IGEM's recommendation 12, "The progress of recovery for this event be reviewed incrementally over the next 2 to 3 years, with a formal, independent report provided on the effectiveness of recovery after 3 years."

Scope

The Report focuses on the Monsoon Trough State Recovery Plan, which includes the 14 event-specific local recovery plans. It assesses the effectiveness of recovery led by state agencies from 15 July 2019, when the Review Report was publicly released, until the conclusion of the Monsoon Trough State Recovery Plan at 30 June 2021. The recovery activities for the 39 LGAs activated for DRFA, as outlined in the Monsoon Trough State Recovery Plan, and were yet to be completed as of 15 July 2019, are in scope.

Based on these parameters, of the Monsoon Trough State Recovery Plan's activities, 98 out of 114 were assessed to be within the temporal scope of the report.

Out of scope

The report excludes early relief and recovery activities (prior to 15 July 2019) and state level recovery operations and advice which solely supported the response to the COVID-19 pandemic from January 2020. The authorising environment for recovery and arrangements for state level recovery governance are also excluded, noting they were subsequently addressed in the *Review of Queensland's Disaster Management Arrangements (QDMA) Report 2: 2022-2023* (QDMA Review Report). Recovery activities delivered by the Australian Government are considered outside the scope of the report. As the independent review of the DRFA by the Australia Government is expected to be completed in April 2024, this report does not consider the joint Australian Government-State DRFA.

Methodology

The Report has considered the *Standard for Disaster Management in Queensland* (the Standard), focusing on Outcome 11: Recovery operations minimise the negative impacts of an event on the community and provide the support needed for recovery.

For the purposes of this report, the *Queensland Recovery Plan 2019* (the QRP 2019) definition for recovery has been applied: "disaster recovery is the coordinated process of supporting disaster-affected communities' psychosocial (emotional and social), and physical wellbeing; reconstruction of physical infrastructure; and economic and environmental restoration

(including regeneration of the natural environment, associated infrastructure and heritage sites and structures, and the management of pollution and contamination)” (The State of Queensland, Queensland Reconstruction Authority, 2019).

The Australian Government’s *A Monitoring and Evaluation Framework for Disaster Recovery Programs* provides the following key evaluation questions to assess effectiveness of recovery programs. Of these, and in the absence of a definition of effectiveness in the Queensland Government’s disaster management doctrine, the first two questions were employed by IGEM:

- To what extent did the disaster recovery program produce a sustainable community?
- To what extent did the disaster recovery program produce a resilient community?
- Was there any trade-off between achieving resilient outcomes and sustainable outcomes? If yes, how was this negotiated?
- To what extent did program activities and resources allow positive interaction among the recovery domains? (Australia and New Zealand School of Government, 2018)

The Monsoon Trough State Recovery Plan specifies sustainability and resilience outcomes for each functional line of recovery. These outcomes were used to align with the key evaluation questions to assess the effectiveness of the recovery activities. An analysis of the progress reporting data against the outcomes was conducted by using the progress reporting data supplied to the QRA by the Functional Recovery Groups (FRGs).

Limitations and constraints to conducting the qualitative and quantitative analysis to assess the effectiveness of state-led recovery activities were identified. Limitations included unavailable, incomplete, partial or inconsistent data. In some cases, the relevance of the progress reporting data was difficult to determine due to the language used to describe the implementation status of key activities. The analysis identified a noticeable data gap for impacted locations other than the Townsville LGA. It was also determined that there was insufficient progress monitoring data reported to comprehensively assess the delivery of recovery activities related to volunteer management.

Several assumptions were made to help overcome the data limitations and constraints and progress an assessment of the effectiveness of recovery operations. For example, it was assumed activities were completed in line with DRFA funding timelines. Program uptake and grant application data was used as evidence of awareness and promotion activities delivered to support individual, household and business recovery. The transition of recovery activities into business-as-usual operations was also assumed.

A survey was developed using the relevant indicators for the Standard’s Outcome 11 to elicit information from the disaster management sector about good practices, challenges and identified lessons. Relevant entities were provided the opportunity to participate in the survey and/or provide a submission.

Survey responses and submissions were used in the analysis as appropriate and relevant good practice examples and lessons identified have been highlighted. Where necessary, publicly available information and limited event-specific research was also used to gain insights into the recovery operations.

Qualitative interviews were not conducted as many areas were impacted by subsequent events, including the COVID-19 pandemic and the 2022–23 Northern and Central Queensland Monsoon and Flooding (20 December 2022 to 30 April 2023).

The delivery timeline for the Report was also impacted by subsequent events and operational requirements, such as the onset of the COVID-19 pandemic, the South East Queensland Rainfall and Flooding Event February to March 2022 Review (completed 31 August 2022) and the Review into Queensland's Disaster Management Arrangements (completed 28 April 2023). Noting the protracted period from the time of the 2019 Monsoon Trough event to the compilation of the Report, the Office of the IGEM restricted its analysis to determine the effectiveness of the recovery activities to readily available data. All FRGs have been consulted to confirm findings.

Recovery arrangements have evolved

The Report recognises that more than five years have elapsed since the 2019 Monsoon Trough event and that subsequent disaster events have resulted in the development of two further event specific state recovery plans – the *2019 Queensland Bushfires State Recovery Plan 2019-2022* and the *2021-22 Southern Queensland Floods State Recovery and Resilience Plan 2022-24*. A comparison of the *2021-22 Southern Queensland Floods State Recovery and Resilience Plan 2022-24* against the findings of this report demonstrated the incorporation of updated thinking, indicating that recovery planning continues to evolve. Recommendations made by the QDMA Review Report have the potential to further enhance state/overall recovery planning and support local government recovery planning.

The Queensland Recovery Plan 2019 (QRP 2019) established guidelines for local recovery plans, emphasising risk-informed approaches, interagency collaboration and consideration of cumulative disaster impacts. Pre-event recovery planning is emphasised and supports the implementation of the Government's response to the IGEM's *Efficacy of Recovery Governance Review Report 1: 2018-19* to better support community-led recovery.

Recovery in Queensland continues to evolve. The QDMA Review noted that Local Recovery Groups were at varying levels of maturity and recommended the importance of the prevention, preparedness and recovery phases of disaster management be elevated and better embedded within the QDMA (State of Queensland, 2023). This included establishment of the State Recovery and Resilience Group and expanding the remit of the FRGs to include resilience.

The continued focus on recovery funding is shifting as implementation of the Queensland Government's reforms in response to the QDMA Review Report create an opportunity to reconsider stronger support for local recovery planning to inform future State-led recovery plans. Involvement of local organisations and recovery partners in recovery planning helps sustain the good practices from the 2019 Monsoon Trough event. This is to be balanced with local capacity and capability and aligned to implementation of Regional Resilience Strategies.

The creation of the State Resilience and Recovery Group improves governance to support decision-makers to consider appropriate recovery measures as compounding events such as the COVID-19 pandemic create additional complexity. There are opportunities to embed the Standard in recovery planning and operations and improve guidance and investment in evaluating the effectiveness of recovery programs. A better understanding of aftermath stressors and collaborating across lines of recovery will help programs improve mental health and wellbeing and social cohesion.

Finding 1

The content and structure of subsequent state level event specific recovery plans has evolved.

Queensland's recovery arrangements

2019 Monsoon Trough State Recovery Plan

The preparation of an event specific recovery plan for the 2019 Monsoon Trough event was made after information about the impacts was known. The *North and Far North Queensland Monsoon Trough State Recovery Plan 2019-2021* (the Monsoon Trough State Recovery Plan) published in September 2019 underpinned the Queensland Government's commitment to helping impacted communities in the 39 LGAs to recover, rebuild and reconnect.

The duration and geographical extent of the 2019 Monsoon Trough event created a unique recovery problem. Within the context of the cumulative impacts of recent drought and cyclone events, the following questions were posed in the plan:

- How does Queensland recover, rebuild and reconnect communities in the North, Far North and North West regions devastated by the Monsoon Trough event?
- Which people, industries and critical infrastructure assets need to be reconnected in these regions?
- What are the shared regional priorities for recovery?
- How do we link these priorities to development plans in order to rebuild these communities?
- How can these communities be rebuilt in an efficient manner that fosters their resilience for future disaster events?

The Monsoon Trough State Recovery Plan outlines the available support delivered through the FRGs and provides a framework for councils and communities to access support, recover, restore infrastructure and the functionality of the community, and build resilience. The QRA supported the delivery of recovery and reconstruction projects by providing coordination and facilitation of communication across the five FRGs to achieve whole of community outcomes.

The QRA developed the Monsoon Trough State Recovery Plan with the support of the FRGs. Each FRG developed a comprehensive Recovery Action Plan to achieve the recovery outcomes aimed at sustainability and resilience by delivering key recovery activities. The Recovery Action Plans were delivered locally with support from the FRGs, QRA and the State Recovery Coordinator. The local recovery plans for 14 impacted LGAs were endorsed by their councils and included in the Monsoon Trough State Recovery Plan.

Recovery outcomes and activities

Achievement of the sustainability and resilience outcomes in the Monsoon Trough State Recovery Plan was to help enable impacted communities and businesses to manage their own recovery. The Australian Government's *A Monitoring and Evaluation Framework for Disaster Recovery Programs* defines 'sustainable community' and 'resilient community' as:

- A sustainable community has the capability and capacity to manage its own recovery, without government disaster-related assistance.
- A resilient community is better able to withstand a future disaster. A successful recovery process "promotes practices that minimise the community's risks to all hazards and strengthens its ability to withstand and recovery from future disasters,

which constitutes a community's resiliency" (Australia and New Zealand School of Government, 2018).

In the absence of a definition of effectiveness in Queensland Government's disaster management legislation and doctrine, the assessment of effectiveness was conducted by employing key evaluation questions provided in the Australian Government's *A Monitoring and Evaluation Framework for Disaster Recovery Programs*.

Finding 2

Effectiveness is not defined in the Queensland Government's disaster management legislation and doctrine.

The Monsoon Trough State Recovery Plan's outcomes guide how the effectiveness of recovery activities will be monitored for their contribution to the sustainability and resilience of the impacted communities. Each functional line of recovery has defined outcomes for which one or more activities may contribute to achieving effective recovery.

Finding 3

The alignment between the Monsoon Trough State Recovery Plan's recovery outcomes and the Australian Government's *A Monitoring and Evaluation Framework for Disaster Recovery Programs* is evident in the data; in particular, the outcomes are focused on sustainability and resilience which are two of the four suggested key evaluation questions for the assessment of the effectiveness of a recovery program.

Clearly defined outcomes in recovery planning help to establish what is considered essential for successful and sustained recovery. Well defined outcomes also guide the identification of the key tasks and milestones to assist with monitoring progress towards the outcomes as recovery plans are implemented. Evaluating disaster recovery programs for their effectiveness in achieving desired outcomes can identify improvements for future recovery planning and delivery of activities.

Finding 4

Clearly defined recovery outcomes for associated activities enable the evaluation of the effectiveness (based on sustainability and resilience objectives) of event specific recovery plans.

The recovery activities in the Monsoon Trough State Recovery Plan identify which State agency is accountable for performing key recovery tasks. This helps the impacted community understand the roles and responsibilities of recovery agencies and what support they can expect to access and receive. The analysis of the activities revealed that, in some cases, their clarity and relevance varied. Activities which are specific, measurable, achievable, relevant and time-bound (SMART) can better support the evaluation of effectiveness of recovery operations.

Finding 5

The evaluation of effectiveness in recovery is better supported when the activities in event specific recovery plans are specific, measurable, achievable, relevant and time-bound (SMART).

State government agencies reported through the FRGs to provide QRA with data to monitor the implementation of planned recovery activities. An assessment of each activity was conducted to determine its alignment to the relevant recovery outcomes (sustainability and resilience) as outlined in the Monsoon Trough State Recovery Plan. (Refer to Appendix B)

The detailed assessment was conducted by reviewing the progress reporting data to confirm completion of the key tasks. The results of the assessment using data and information the Office of the IGEM could access is in Appendix C of the report. The findings are presented under the relevant functional line of recovery in the report.

Progress reporting data

The analysis of progress reporting data showed over 90 per cent of the activities were delivered. DRFA funded activities without nominated completion dates in the reporting data (such as Flexible Funding Grants and the development and implementation of a Betterment program) were assumed to have been implemented by 30 June 2021. It was also assumed an activity was delivered when the information about its status was unspecified and data for a related activity was clear. For example, providing awareness of DRFA Category C grants and Category B concessional loans for not-for-profit organisations through the Queensland Rural and Industry Development Authority (QRIDA) was assumed to be implemented due to the number of applications made to access the grants and loans.

A variation in the quality of the reporting data was noted across the lines of recovery and the progress of the Monsoon Trough State Recovery Plan. For example, in some cases the data's relevance to the recovery activity was difficult to discern and in other instances the data was incomplete or omitted. For example, data regarding financial counselling was not included as it was reported on separately by Uniting Care.

In other cases, accuracy of reporting data was unclear due to inconsistent figures or descriptions. For example, the Townsville based small business recovery centre was described as the Small Business Recovery Centre, Townsville Small Business Recovery Centre and the Queensland Small Business Recovery Centre. The locations of the tourism operators who were intended to benefit from the Tourism Recovery Program were difficult to discern as reported progress data was defined by tourism regions instead of LGA boundaries.

There was insufficient or no data to assess the completion of the following 10 activities within the Monsoon Trough State Recovery Plan. These activities included public health initiatives, chronic health condition management programs, information sharing with relevant entities, volunteer engagement strategies, and environmental considerations for rebuilding efforts.

Finding 6

For 10 recovery activities there was insufficient data and information available to determine the completion of the activity against the outcomes.

In an endeavour to progress analysis based on available data and to reduce follow-up tasks for the QRA and the relevant FRG, assumptions were made about the data which was incomplete or did not provide sufficient detail to determine its relevance. Better quality reporting data is beneficial in understanding the alignment between planned and actual implementation.

Finding 7

The collection of data by responsible state agencies to demonstrate implementation progress in the event specific recovery plan could be more comprehensive, and include high-quality, relevant data, particularly when data sets are qualitative.

Recovery plans and planning

Section 57 of the DM Act prescribes that, “a local government must prepare a plan (a local disaster management plan) for disaster management in the local government’s area” as well as details of provisions to be included in the plans (State of Queensland, 2024). One council’s survey response emphasised established relationships and planning in collaboration with agencies as a means to provide clear roles and responsibilities for recovery operations. Collaborative recovery planning aligns with the Standard’s Outcome 3 (There is a shared understanding of how the impact of disasters will be managed and coordinated) and Outcome 4 (Plans outline and detail how the impact of disasters on the community will be reduced).

Under the QRP 2019, State level recovery planning for a specific event is required to consider local recovery planning and operations, and be conducted in consultation with the FRGs, other relevant state government agencies, the impacted councils and Local Disaster Management Groups (LDMGs), the Local Government Association of Queensland and impacted District Disaster Management Groups (DDMGs) (State of Queensland, 2019). Understanding local priorities helps to identify shared regional recovery priorities and how they link recovery support integration across all functional lines of recovery.

The Monsoon Trough State Recovery Plan incorporates 14 event specific local recovery plans which informed the state level plan and success measures developed by the FRGs with QRA’s support. The 14 local plans were developed by councils with the assistance of QRA’s recovery officers and locally nominated participants. For example, the Wujal Wujal Aboriginal Shire Council event specific local recovery plan was prepared with the input of elders, the art group, the community justice group and council representatives.

The 14 event specific local recovery plans were a key achievement, particularly being the first time these plans had been prepared by Aboriginal and Torres Strait Islander councils. The analysis of recovery objectives in the event specific local recovery plans against the activities of the Monsoon Trough State Recovery Plan found most local recovery operations were reflected in comparable state level activities. However, alignment was not readily identified for 52 local activities (three LGAs) to state recovery activities.

Findings 8-9

The development of 14 event specific local recovery plans by councils including five Aboriginal and Torres Strait Islander councils was a key achievement.

In some cases, the recovery objectives of the event specific local recovery plans and state-led activities of the Monsoon Trough State Recovery Plan did not align.

The QRP 2019 states that community representatives must be at the centre of planning for a community-led approach to be successful (State of Queensland, 2019). Similarly, the Standard provides that the community is to make informed choices about disaster management and acts on them (Outcome 6). This includes awareness of the support which is available to them and their eligibility to access it (State of Queensland, 2021).

The event specific local recovery plans developed by the 14 councils were community centred and reflected the recovery priorities and aspirations of their communities. For example, the event specific local recovery plan developed by the Wujal Wujal Aboriginal Shire Council reflects recovery from an individual's perspective by focusing on Ngulkurrmanka (healing), Binalmalmal (learning) and Kabanka (rising) and reflects the community's priorities and values. Inclusive planning occurred with Elders, local leaders, locally elected members and council staff. The plan features local language and imagery created by local artists and tells the Wujal Wujal community's story; how the event impacted them and their recovery aspirations.

Finding 10

The Wujal Wujal Aboriginal Shire Council event specific local recovery plan was comprehensive and included activities which reflected the community's unique values.

Continuous improvement and research

The Standard refers to continuous improvement with entities monitoring, evaluating, measuring and improving their disaster management activities. Seeking feedback, identifying and sharing lessons and formal evaluation of disaster management operations, including recovery, are mechanisms to formulate and sustain good practices. Under the QRP 2019, learnings are to be used to improve the design and delivery of subsequent disaster recovery programs, (State of Queensland, 2019) with entities conducting post-recovery evaluations to identify good practice and opportunities for improvement (State of Queensland, 2019).

In April 2021, an independent evaluation of Townsville's recovery from the event was completed for Townsville City Council (TCC). The *Townsville Monsoonal Recovery Evaluation Framework and Review of Lessons Learned* report was produced to "inform and improve continued recovery action and planning for future monsoonal or emergency events affecting the Townsville region". Evaluation participants indicated that they believed the recovery process was largely effective and well managed although they held divergent views, such as those expressed in the *Townsville Monsoonal Recovery Evaluation Framework and Review of Lessons Learned* report.

An independent evaluation post-recovery, such as that undertaken for the TCC, is considered good practice and demonstrates a commitment to continuous improvement by TCC. The sharing of formal evaluations of disaster management operations, where appropriate, could help entities to identify relevant findings to develop and sustain good practices.

Finding 11

The conduct of an independent evaluation of recovery process is good practice and identified improvements for recovery planning for future events.

Insight 1

Where appropriate, the sharing of formal evaluation reports at all levels within the Queensland Disaster Management Arrangements (QDMA) would enable entities to identify relevant findings to improve disaster management.

Disaster research can improve recovery planning and the design of recovery services. Use of research and improved data and guidance can clarify what is expected to achieve outcomes. In mid-2019, Energy Queensland identified that some people in Townsville continued to

experience housing instability and financial difficulties and suggested research be conducted to understand their experiences of impacted people (Thriving Communities Partnership, 2020).

The Disaster Planning and Recovery Collaborative Project, supported by Energy Queensland, Suncorp and Simplicit, mapped people's direct experience of the 2019 Monsoon Trough event. By promoting universal design, the research findings aim to improve support for people from disaster preparation through to long-term recovery and resilience (Thriving Communities Partnership, 2020). The project's research was conducted over two phases, with two reports published. The Phase 1 Report presents the experiences of residential individuals and small business while the Phase 2 Report features the research findings from the perspectives of first responder and frontline service providers. For example, the research found the Townsville LDMG's digital communications were effective during the event but needed to be accompanied by alternative, accessible channels. It was also considered that this LDMG could drive the creation and distribution of universally designed and accessible communications through collaboration with advocates and community organisations (Thriving Communities Partnership, 2021).

Good Practice Example: Disaster Planning and Recovery Collaborative Research Project

Corporate, not-for-profit and government partners collaborated through the Queensland Chapter of the Thriving Communities Partnership to map the experiences of impacted Townsville residents and small business owners following the 2019 Monsoon Trough event. The project applied the *National Principles for Disaster Recovery* and selected participants who experienced long-term electricity outage, needed financial or insurance support and/or experienced physical or mental health related impacts. The research produced an insight report and detailed user-experience journey maps across the entire ecosystem (all individuals, organisations, groups and actors with a role in disaster planning and recovery) to better understand the holistic experience of a community in a disaster. The project also examined the influence of macroeconomics on community resilience. The research highlighted the importance of universal design principles to provide holistic support and reduce the negative impacts of a disaster.

Research focusing on Townsville impacted residents found trauma and mental health may subconsciously be deprioritised and the impact and need for support may not be realised until six to 12 months after the event (Thriving Communities Partnership, 2020). Unless action is taken, communities may be highly vulnerable to health problems, including anxiety, depression and post-traumatic stress (Matthews, et al., 2019). The impact of cumulative trauma for people and communities who experience multiple disasters requires careful consideration as conventional concepts of recovery may no longer be relevant.

Insight 2

The research findings of the Disaster Planning and Recovery Collaborative Research Project highlight practical improvements to adopt universal design principles to increase support and autonomy across all disaster management phases by all industries and government and non-government sectors involved in disaster management.

Human and Social Functional Recovery

The health, wellbeing, social and community impacts of the 2019 Monsoon Trough event were estimated by QRA to be valued at \$2.419 billion (State of Queensland, 2019). A total of \$33 million in Personal Hardship Assistance Scheme grants were paid to assist 116,677 people. Housing support was provided to 1800 people and 64,823 people were assisted with psychological first aid. The underlying socioeconomic vulnerability of the impacted regions was considered to have been exacerbated by the human and social impacts of the event (Deloitte Access Economics, 2019).

The Monsoon Trough State Recovery Plan outlined the following Human and Social recovery outcomes:

Sustainability

- S-1** Adequate housing is available to community members at appropriate times in the recovery process.
- S-2** Community members have access and are able to meet health needs (including mental health) arising from the disaster.
- S-3** Community members have access to psychosocial support.
- S-4** Households, families and individuals can act autonomously to contribute to the recovery process.
- S-5** Community members have access to education services.
- S-6** Community members have access to appropriate and coordinated social services.
- S-7** Community members feel sufficiently safe and secure following a disaster to engage in social activities and interactions with other members of the community.

Resilience

- R-1** The community has improved capacity and capability to respond to future disasters.
- R-2** The Community Recovery Package delivered targeted support to individuals and families to recover from the Monsoon Trough event, as well as building community capacity to more effectively respond to future events.

Of the 98 activities in the Monsoon Trough State Recovery Plan, 36 related to human and social recovery. (Refer to Appendix C)

Finding 12

Of the 36 human and social recovery activities, approximately 40 per cent were assessed as meeting the sustainability outcome regarding households, families and individuals being able to act autonomously to contribute to the recovery process.

A quarter of the activities were aligned to the sustainability outcome about the availability of adequate housing to community members at appropriate times in the recovery process.

Approximately 19 per cent of the activities were assessed as aligning to the stated resilience outcome aimed at improving the community's capacity and capability to respond to future disasters.

The event provided an opportunity for the functional lead agency for human and social recovery (the then Department of Communities, Housing and Digital Economy [DCHDE]) to

trial several new arrangements and learn from their experience. DCHDE found the purchase of extraordinary support services for target groups highly successful due to their ability to effectively engage different groups and provide tailored services. The service providers leveraged other services and developed models and resources to facilitate the transition after extraordinary support services ended. For example, the advocacy of the North Townsville Community Hub (NOTCH) to highlight non-traditional disaster support models, such as community centres, succeeded in ensuring consideration of community issues and mental health for funding priorities after 30 June 2021.

Pre-existing working relationships facilitated communication and coordination between government and non-government organisations (NGOs) to support specific groups. For example, the service agreement between GIVIT and the Queensland Government enabled robust networks to be established prior to the event. GIVIT found their representation at state, district and local recovery groups assisted their recovery coordination efforts. The Australian Red Cross (ARC) Community Recovery and Development Officer's prior experience and relationship with local emergency services and regular district and local disaster management group representation facilitated engagement. ARC found the links were extended to the community and human services sector and ensured ongoing needs assessment and identification of gaps in recovery services.

The Douglas Shire Council reported multi-agency efforts improved continuity of partnerships with community members and the Douglas LDMG stakeholders. The partnerships created a strong foundation to prepare for future events. TCC highlighted the diverse range of community groups and NGOs that collaborated to deliver human and recovery support.

The Townsville LDMG Human and Social Recovery sub-group adopted strategies to consider groups that could face systemic challenges when accessing recovery services. For example, ARC noted the establishment of community taskforce groups, such as First Nations people, seniors, youth, people with disabilities, and those who are cultural and linguistically diverse (CALD), was effective in identifying their unique recovery needs. Connecting to specific community groups such as the Townsville First Nations Recovery Taskforce enabled advocacy by local recovery sub-groups to occur and influence to take place.

A \$5.25 million Community Development Program funded nine CDOs to support community-led initiatives, facilitate collaboration between and across groups and build on the strengths and capabilities of 11 impacted LGAs. The CDOs supported activities funded under the \$15.5 million Flexible Funding Grant which, where possible, complemented each other's activities to maximise grant reach in the impacted communities. The CDOs supplemented existing community development roles in areas with limited social services and the Strategic Community Reference Group, comprised representatives of each of the participating councils, supported integration and coordination across program funded initiatives.

Each CDO formed a local community reference group to provide local direction, assistance and collaboration. The groups included Aboriginal and Torres Strait Islander and CALD community representatives and identified vulnerable groups. The Townsville Human and Social Recovery Sub Group, People with Vulnerabilities Task Group, Aboriginal and Torres Strait Islander Task Group and Mental Health Task Group were established in Townsville. The Townsville CDOs worked with the People with Vulnerabilities Task Group to develop several projects including the translation of disaster resources into refugee and migrant languages. The CDOs also supported the implementation of the Person-Centred Emergency Preparedness Plan under the Disability Inclusive Disaster Risk Reduction program. The 2021 independent evaluation of Townsville's recovery highlighted the CDOs network across the region as an essential recovery component.

The CDOs facilitated information sharing and rural storytelling which was considered important to help build and strengthen community resilience. The development of a CDO Recovery Reference Group network to discuss their experiences of the 2019 Monsoon Trough event was regarded by DCHDE to be a major success and it was linked to the National Disaster CDO Community of Practice.

The delivery of some CDO activities and community engagement was impacted by COVID-19. In one instance, a remote council declined support due to their concerns about contractors entering their community. The Townsville Task Groups leading 2019 Monsoon Trough recovery activities transitioned into community-led resilience networks in mid-2020.

Good Practice Example: Carpentaria Resilience Measured

The Carpentaria CDO used community engagement activities to inform the development of the Community Development Plan and ensure the activities were community led. One on one engagement occurred with various community groups and not-for-profit organisations to ensure their agreement with information sharing as council had found this to be an effective practice. The CDO initiated the Resilience Scorecard Project to gather information on current resilience to disasters to identify required areas for improvement. Despite some delays and changes of delivery due to COVID-19, the project was completed in March 2020. Engaging with diverse community members provided valuable information about how the shire’s resilience is perceived.

Finding 13

The Community Development Officers facilitated community-led initiatives and collaboration between and across local recovery providers throughout 11 local government areas.

Trust was created by employing local people to deliver recovery services. Their services were well received due to their knowledge of the local community and in some cases their personal experience of the event. The Salvation Army’s Recovery Support Worker worked with local agencies in Townsville to provide case management with the Townsville Community Rebuild Project and provided advocacy services to assist community members. Their ongoing case management supported long-term recovery efforts. (The Salvation Army, 2021) Further information about the Townsville Community Rebuild Project is in the Building Functional Recovery section of the report.

Finding 14

Employing local people in key roles to deliver recovery services created trust with the community.

Local organisations were funded to provide generalist and financial counselling to support impacted Townsville residents. This included Family Emergency Accommodation Townsville, NOTCH, the Townsville Women’s Centre, Financial Counsellors Foundation of Australia and the Townsville Migrant Support Group. Townsville Community Law (TCL) was funded to provide advocacy support to impacted people in North Queensland and helped increase knowledge of rights and responsibilities and to improve outcomes for impacted community members.

Ongoing and continuous requests for recovery assistance prompted a review of service delivery by DCHDE. This resulted in the extension of the services of The Salvation Army, Townsville’s Women’s Centre, NOTCH and TCL until 2021. The review of psychosocial and

other support services was informed by community needs and enabled continuous improvement of Townsville’s human and social recovery operations.

Findings 15-16

Funding local organisations enabled place-based recovery and advocacy services to be delivered through established local networks and referral pathways.

The review of human and social services delivery by the then Department of Communities, Housing and Digital Economy resulted in funding being extended for providers who continued to receive requests for recovery assistance.

Good Practice Example: Disaster Readiness for the Legal Sector

TCL delivered the Disaster Readiness for the Legal Assistance Sector project which aimed to build the capacity of the legal assistance sector. A model was developed to support a comprehensive approach across the disaster phases and resilience. The project produced resources and delivered training and found that a model for disaster assistance should have four key elements:

1. Assessment of disaster legal needs (geographic, demographic and thematic needs)
2. The assessment of legal needs should inform planning between the disaster legal assistance sector and disaster governance at local, district and state levels
3. The planning outcome should be disaster legal assistance plans at the various levels
4. The provision of legal assistance should adhere to the plans.

The project found that global standards in the areas of legal assistance, human rights and disaster risk reduction and resilience are critical characteristics of a disaster legal assistance model which must be flexible, scalable, adaptable, and transferrable.

Good Practice Example: North Townsville Community Hub (NOTCH)

NOTCH is a local neighbourhood centre in Townsville’s Northern Beaches which provided psychosocial support, generalist counselling, financial counselling and advocacy support. Queensland Health (QH) also funded NOTCH to create a place-based mental health network under the Tackling Regional Adversity through Integrated Care Mental Health Program. Over a 12-month period NOTCH delivered more than 22 programs (Neighbourhood Centres Queensland, 2022). The programs focused on building coping behaviours and provided free training in psychological first aid and trauma informed practices to local organisations and community groups.

NOTCH also supported and informed key research projects such as the Disability Inclusive Disaster Risk Reduction project which implemented the Person-Centred Emergency Preparedness Plan to assist people living with disability to plan for future disasters.

COVID-19 restrictions impacted planned community connectedness activities to coincide with the event’s one-year anniversary. QRA reported the pandemic significantly impacted the delivery of some recovery activities. It also constrained volunteer recruitment efforts to build local volunteer capacity across Townsville and the region. Recovery providers from outside of North West Queensland also encountered difficulty in engaging with the impacted

communities due to the distances, cost, and community preferences for relational engagement and locally led recovery initiatives.

There was limited data and information available about planned psychosocial recovery services and projects for people who sought assistance 18 months to two years after the event. The long-term financial impacts of a disaster can be substantial. A recovery provider reported that having funding available for greater than two years was beneficial. For example, the ‘Always There’ fund assisted people who did not immediately seek assistance and, in some cases, sought help more than two years after the event.

The Disaster Planning and Recovery Collaborative Research Project found recovery is often a ‘financial maze’ for residents. Financial literacy and the ability to self-advocate and technical knowledge, such as that relating to architecture and construction, may influence an individual’s decision making ability. Often, they may have limited capacity to engage in complex processes. People impacted by policies and processes that lack flexibility to adapt to a disaster event may be more vulnerable to financial hardship (Thriving Communities Partnership, 2020). DCHDE noted a correlation between the compounding effects of multiple disasters and the longer a client takes to initiate a support request and a considerable increase in the complexity of their recovery needs.

The Human and Social Functional Recovery Group reported a unique challenge in coordinating and integrating new and constantly emerging recovery partners and supporting agencies over a highly diverse geographic area. Further, QRA reported an increased coordination effort was required to ensure a cohesive approach and collaboration across all activities over a prolonged period of time, while TCC reported the lack of a unique identifier for impacted residents precluded their ability to monitor data about the number of displaced households.

Finding 17

In some instances, the coordination and integration of multiple and emerging recovery partners involving a highly diverse geographical area was challenging.

One council reported the overwhelming number of people from outside of the community and supports offered. They suggested communication between departments as an improvement area and engagement activities with council would be better coordinated through a single contact point such as the LDMG or a recovery officer. Another council in a rural region identified navigating the myriad of support services that arrived in their region was challenging and they reported a preference for service providers recognised and trusted by the community.

Accommodation demand and challenges

The Monsoon Trough State Recovery Plan provides that the human and social line of recovery is responsible for adequate housing being available to community members at appropriate times in the recovery process. The widespread impacts of the event across Townsville’s housing sector required specific efforts in temporary housing, rental assistance, homelessness, and insurance. The demand for accommodation required a swift and coordinated response with relevant organisations such as the Real Estate Institute of Queensland, Residential Tenancies Authority and Tenants Queensland. Displaced residents were assisted with medium and long-term accommodation and private rental assistance products such as bond loans and rental grants. Over 800 housing assistance requests were responded to on a case-by-case basis and over 1800 people were supported.

Good Practice Example: Townsville Rental Recovery Hub

In Townsville, a Rental Recovery Hub established and operated by the then DCHDE in partnership with the Residential Tenancies Authority, the Real Estate Institute of Queensland and Tenants Queensland (Residential Tenancies Authority, 2019) worked well to support private tenants, landlords and real estate agents. As a single service point, agents and renters accessed joined-up, coordinated advice and brokerage assistance to resolve housing needs until it closed on 27 September 2019. A collaborative case management approach provided 492 residents with support and information about finding short to medium term rental accommodation, preserving tenancies, rights and responsibilities in tenancy matters, dispute resolution and property repairs.

Finding 18

The partnerships between organisations provided a swift response to the accommodation demand for displaced residents in Townsville.

Access to affordable and emergency housing was identified as one of the most difficult issues to manage following the event. The 2021 independent evaluation of TCC’s recovery found housing and homelessness issues persisted a year after the event. Barriers to providing support included difficulty in reaching people experiencing homelessness and identifying appropriate solutions for short and long-term accommodation. A survey of recovery-focused organisations showed approximately 40 per cent of the respondents believed people who are homeless could have been better supported.

Limited data was available to determine the extent and duration of the housing difficulties experienced by impacted households in Townsville, including those who lived in their damaged homes. Trends and general intelligence were used for awareness of the degree of displacement at any point in time. TCC reported system disparities and privacy regulations as limiting their data collection about displaced residents. The Townsville Human and Social Recovery subgroup noted the absence of a pre-event collaborative data strategy as a further constraint on establishing a single point of truth for data about displaced residents.

The QDMA Review Report identified improved communication and information sharing as key themes by participants of a roundtable discussion about privacy and confidentiality. Agency policy restrictions were identified as a barrier to effective information sharing to ensure stakeholders and the community can prepare for and respond to disasters. A better understanding of the *Information Privacy Act 2009 (Qld)* could have improved data sharing between agencies and recovery partners and remove restrictions in agency policies.

Finding 19

Better sharing of data would have enhanced local recovery operations.

Access to mental health services and psychological support

The Monsoon Trough State Recovery Plan acknowledges the cumulative impact of many years of drought and that the 2019 Monsoon Trough event profoundly affected the wellbeing of community members (State of Queensland, 2019). Additionally, in remote locations, such as western Queensland, geographical challenges require long travel distances to access

services. Visible barriers to accessing healthcare for recovery included poorer connectivity between towns to health services and higher cost of health services. The invisible barriers include cultural differences and attitudes towards health care, and social isolation which, in some instances hid the need for a community member to access mental health or domestic violence support services (State of Queensland, 2022). Regional communities in Queensland report a 54 per cent higher suicide rate than capital cities with rates almost twice the national rate in very remote regions (Mental Health Select Committee, 2022).

The Western Queensland Public Health Network (WQPHN) reported that hesitancy to seek help early for psychosocial and mental health stressors is attributable to social capital depletion in most remote western Queensland communities, widely acknowledged 'bush' stoicism, and a greater degree of stigma. Many who accessed support services commissioned by WQPHN did not link the stressor they experienced to the monsoonal flood and/or drought.

QH implemented the Mental Health Recovery Program to improve the health of those affected by the event and enhance community resilience. The program consisted of multi-disciplinary Mental Health and Recovery teams activated from April 2019 to June 2021 (State of Queensland, 2022).

Highlights of the program include:

- Screening more than 1400 people and providing approximately 64,800 instances of psychological first aid.
- Birdie Tree Roadshows in schools and childcare centres saw children and young adults oriented and trained in resilience and natural disasters.
- Over 10,000 people attended 740 community engagement events across all HHSs.
- The 'Small Talk, Big Difference' program was introduced by the Royal Flying Doctor Service (RFDS) and QH in June 2020 to promote and encourage better connections to support mental health and wellbeing for monsoon-impacted communities in rural and remote areas.
- More than 75 training guides and resources focusing on resilience and mental wellbeing were produced.

Good Practice Example: Cloncurry Shire Council community wellbeing events

Cloncurry Shire Council delivered a range of community wellbeing events in 2019 and 2020 which included weekend workshops for stakeholders to discuss mental health, health, relationships, and children's mental health. Participation rates were monitored and feedback and suggestion for future events were sought from attendees. More than 3000 people attended the events. Representatives of the RFDS and/or the North West HHS provided information resources and advice to event participants. This 'softer' engagement approach which enabled flood affected people to seek advice and assistance was considered positive.

RFDS and North West HHS representatives who attended the Tom Curtain "We're Still Here Tour" noted over 100 people visited the stall and approximately 25 USBs containing mental health information were distributed primarily to older men who were graziers. The team also spoke with 15 teenage/early adult Aboriginal and Torres Strait Islander people. Several discussions with parents of young children led to copies of the Birdie's Tree books being provided.

The Mental Health Recovery Program is considered to have worked well due to its reach, participation rates and people who received clinical intervention. QH reported their Disaster Recovery Team successfully collaborated with different partner groups and community

champions. They considered the program's success would not have been possible without their local area partners. A rural council also reported access to services worked well for mental health and wellbeing issues due to the event.

Mental health teams engaged with stakeholders and communities and provided clinical treatment. QH reported the teams ensured the cultural needs for Aboriginal, Torres Strait Islander and CALD groups were met. Training in skills for psychological recovery and education about services delivered by the Mental Health Recovery Program was delivered across community events, hubs, health services and partner agencies. By early 2020, training to assess suicide risk was delivered to over 1500 nursing staff in impacted communities.

Good Practice Example: Trauma reprocessing therapies and screening measures

The severity and duration of the ongoing psychological impacts experienced by some community members prompted QH to provide specialist mental health support. Mental health clinicians from Townsville provided treatments based on trauma reprocessing therapies. The interventions were found to be highly beneficial in treating trauma symptoms for Townsville community members. Symptoms of depression, anxiety and stress were reportedly reduced by establishing clinically sensitive, validated screening measures to collect pre and post treatment efficacy data. Client feedback was also positive and wellbeing improved without medication-based interventions. QH identified two major lessons: following an event ensure community members have access to clinicians skilled in providing trauma reprocessing therapies, and establishing clinically sensitive and validated screening measure is beneficial in tracking the efficacy of the treatments.

The pandemic and the associated uncertainty prompted QH to revise and adapt the program. Telehealth, telephone calls and emails were used to provide counselling services during COVID-19 restriction periods. Timely recruitment of QH staff was challenging, particularly for central west Queensland. Despite resource constraints, the Rural Minds workshops were delivered in many North Western LGAs, including the Burke and Flinders Shires. The workshops focused on proactive, preventative practices to maintain and improve mental health and wellbeing (Rural & Remote Mental Health, n.d.). QH indicated subcontracting a non-government provider such as the RFDS or a fly in and out model could be considered for a future comparable event.

McKinlay Shire Council reported their community was well serviced with professional mental health providers. Flinders Shire reported mental health awareness as an ongoing concern and were cognisant of the right balance of services and made concerted efforts to reduce the stigma associated with the words 'mental health'. Cloncurry Shire Council reported community members continued to self-refer to the North West HHS and RFDS although they noted the number of people accessing the services was not shared.

Good Practice Example: Community insights about recovery and resilience

The Cloncurry Shire's CDO developed a wellbeing needs analysis survey for primary producers to assess their current needs and investigate the impact of the pandemic. The survey results were used to plan ongoing recovery and inform planning for future long-term resilience. The survey was completed by 47 per cent of Cloncurry's community. Events and workshops were delivered based on the survey feedback about recovery and resilience needs. Of the respondents, 58 per cent indicated they did not believe steps could be taken to mitigate the risks from future disaster events. The Cloncurry CDO shared the survey with the McKinlay, Winton, Flinders and Richmond Shire councils which adopted it to form a north west regional response. The needs analysis survey became a valuable tool to assist

the planning and delivery of long-term recovery outcomes by providing insights into community needs.

Child and youth mental health

Multiple recovery partners delivered services and implemented initiatives to address the mental health needs of children and young people during recovery from the event. The Townsville HHS developed a child and youth mental health program which included individual and family clinical work and education and support for play groups, day care facilities and schools. The Richmond Shire Council conducted a workshop to develop skills for working with children who have experienced trauma. The WQPHN commissioned Outback Futures to work with staff of the Mount Isa School of the Air to support students and parents. Challenges were experienced in providing support services for children who lived in western Queensland and attended boarding schools elsewhere. Assisting this vulnerable group remained challenging as they were outside the impacted postcodes.

The Birdie's Tree education resources were extensively used across the impacted LGAs. Training in the Birdie's Tree resources started with the Townsville Child and Youth Mental Health Service Clinician and three Early Intervention and Parenting Clinicians. Birdie's Tree books were translated into Townsville's six most widely spoken languages. Multiple channels and methods were used to promote and deliver the Birdie's Tree resources and the preparatory training. An Aboriginal and Torres Strait Islander artist was engaged to develop an electronic version of Birdie's Trees suitable for Aboriginal and Torres Strait Islander communities. The Children's Health Queensland HHS also assisted the TCC to translate the Birdie's Tree books into the languages of Townsville's CALD community.

Good Practice Example: Rural and remote mental health and disaster resilience

In November 2019, the WQPHN and the RFDS under the Western Alliance for Mental Health (WAMH) hosted the North West Queensland Flood Recovery Mental Health Summit in Cloncurry to review the recovery efforts and the suitability of mental health and wellbeing supports for impacted communities. Diverse stakeholders from the health and other relevant sectors, state and federal government agencies, community representatives, leaders from council and NGOs attended the Summit and committed to a second summit a year later. DAF's Industry Recovery Officers reported collaboration between mental health providers in North West Queensland improved after the first Summit in 2019. Concerns about regional mental health remained despite many residents, businesses and primary producers recovering.

The *Summit Narratives and Report* presents the key themes, findings and six recommendations. It highlights the opportunity to plan and prepare for locally-led mental health service models which use trusted linkages to support longer term recovery. The Summit's key themes were found to align to those emerging from communities across Australia and reviews such as IGEM's Review Report and inquiries such as the 2020 Royal Commission into National Natural Disaster Arrangements (Western Queensland Public Health Network & Royal Flying Doctor Service, 2020). Summit participants indicated a preference for locally-led disaster recovery by people and services willing to connect communities through consistent, trusted linkages which evolve and mature.

Mental health recovery challenges

QH reported WAMH continued to be an effective vehicle to provide a coordinated and collaborative approach to addressing mental health issues for government and relevant NGOs

working in western Queensland. Initial access to mental health services was prompted when people dealt with other primary health concerns. However, informal evidence indicated an uptake in support services which was attributed to increased presence, choice, and access to community engagement activities. Combining 2019 Monsoon Trough and drought funding to support community events with a wellbeing component worked well. Soft entry approaches through community events were considered successful.

The reluctance of community members in rural and remote areas to seek recovery assistance was challenging. The QH and the RFDS ‘Small Talk, Big Difference’ campaign encouraged help seeking behaviour and was considered successful. In contrast, although the Central West HHS successfully contacted impacted individuals 18 months after the event, people who needed the mental health service remained reluctant to provide their details.

Finding 20

Multidisciplinary teams who worked in partnership with appropriate groups and community leaders improved the mental health of those affected by the 2019 Monsoon Trough event and enhance community resilience.

Good Practice Example: Winton’s ‘Gems of the West’

The Winton Neighbourhood Centre, several community groups and allied health services identified a need to enhance recovery support. This prompted the ‘Gems of the West’ full day event which incorporated mental health and wellbeing and separately addressed the needs of women and men. Local businesses, artists and allied health services provided stalls. More than 200 women attended a luncheon which enabled them to access the complimentary services of mental health clinicians, general practitioners, make-up artists, hairdressers, and massage therapists. The women were encouraged to invite their husbands and partners to the evening barbeque where a guest presenter discussed mental health and depression and informed them about local financial and health services. The event allowed vulnerable people and those referred by neighbours and friends to be followed up with regular check-ins and assistance. Twelve months after the 2019 Monsoon Trough event, regular check-in and property visits continued to be welcomed.

Economic Functional Recovery

The economy of the 39 affected LGAs was valued at \$40 billion in the year before the 2019 Monsoon Trough event. Over 17,000 small businesses operated in the affected area, experiencing an estimated \$44.8 million in direct impacts and \$116 million in disruption costs. The total number of insurance claims lodged was over 27,300 and their combined value was \$1.132 billion. Primary production experienced an estimated \$432 million in damage and disruption, with livestock losses of up to 500,000 cattle and 30,000 sheep. The damage to on-farm infrastructure included 10,000 kilometres of fencing, 1000 kilometres of water pipelines and 15,000 kilometres of on-farm roads. Rail closures also caused an estimated \$320 million in losses of mining revenue. The closure of the Mount Isa rail line caused major delays and disruptions to mining activity which subsequently affected the flow-on supply chain (Deloitte Access Economics, 2019). The damages to critical supply chain infrastructure also included the silting of the Karumba Port which restricted maritime product movement.

The economic recovery was hard to conceptualise due to the scale of the economic losses. The cost estimates were conservative as impact assessment was ongoing and intangible social and environmental impacts may affect communities over the longer term. Often, the reported impacts do not comprehensively reflect the total economic impact of the event. For example, insurance claims data to be collected on a particular disaster event can take up to three years (Deloitte Access Economics, 2019).

The planned sustainable recovery outcomes were:

- S-1** Businesses and industries in the local economy operate and trade in line with broader economic trends.
- S-2** Betterment projects result in more resilient infrastructure.

The resilience recovery outcomes were:

- R-1** Business and not-for-profit organisations have adequate mitigation practices in place for risks and threats.
- R-2** The economy is sufficiently flexible and adaptable to shocks.

Of the 98 activities in the Monsoon Trough State Recovery Plan, 25 related to economic recovery. (Refer to Appendix C)

Finding 21

The 25 economic recovery activities met the sustainability outcome for businesses and industries in the local economy to operate and trade in line with broader economic trends. However, only one of these 25 activities was assessed as satisfying the sustainability outcome for betterment projects to result in more resilient infrastructure.

Of the 25 economic recovery activities, 64 per cent met the resilience outcome for businesses and not-for-profit organisations to have adequate mitigation practices in place for risks and threats. The resilience outcome for the economy to be sufficiently flexible and adaptable to shocks was met by 60 per cent of the activities.

Recovery operations post-January 2020 have been excluded from this assessment and analysis as the recovery services to assist small businesses and primary industry were expanded from this time to include COVID-19 pandemic advice and support. This expansion, while logical and practical made it difficult to clearly determine the effectiveness of these services to support the prescribed recovery outcomes.

Fast tracking economic recovery

Employers are key to economic recovery. The Disaster Planning and Recovery Collaborative Research Project found employers often played a significant role in the recovery of their employees by providing financial security through consistent income, flexible work arrangements and other supports. State agency led efforts focused on fast tracking small business recovery. This involved providing affected business owners with banking and insurance certainty and creating opportunities for local suppliers and skills to participate in the economic recovery process. Banking and insurance certainty also helps business owners plan their own recovery (State of Queensland, 2019).

When providing psychological first aid, Lifeline referred people to the National Debt Helpline (Financial First Aid) to provide financial counselling. Rural Financial Counsellors were also available. The Mount Isa to Townsville Economic Zone (MITEZ) reported the provision of early financial assistance and information about how to access support was beneficial. However, the readiness of business owners to access support services varied. Initially, there was strong resistance by many small business owners to access support as they considered themselves to be less impacted than others. They also referred to not previously receiving 'hand outs' and not intending to in the future. Research indicates an aversion to business owners accepting what is perceived as 'charity'. One implication of the aversion is a tendency for business owners to draw on their personal finances which may create a longer-term financial vulnerability (Thriving Communities Partnership, 2020).

Building financial capability and creating strong referral pathways for financial counselling and legal and mental health services helps mitigate socioeconomic hardship. Restoring businesses can be complex as returning to operations often involves making significant decisions which impact staff, family and customers (Thriving Communities Partnership, 2021). Business owners may be unaware of the impact on their livelihoods until they reopen their businesses. Business owners may also become overwhelmed if supply chains do not operate at the same level as before the event (Thriving Communities Partnership, 2021).

More than 290 businesses in North and Far North Queensland were assisted with grants to repair flood damage and build resilience for future events. The Queensland Small Business Recovery Advisory Council (QSBAC) guided implementation of the \$10 million Small Business Disaster Recovery Grant Program and designed, developed and delivered the Small Business and Industry Support Program to ensure it met local needs. QSBAC consisted of representatives of the TCC, the Townsville Chamber of Commerce, Townsville Enterprise Limited, Townsville Business Development Centre, Housing Industry Association, Master Builders Association Queensland, MITEZ, Regional Development Australia, Priceline Pharmacy, Fairfield Central and the Queensland Small Business Champion (Queensland Government, 2019).

Disputes occurred between some landlords and tenants about responsibility for repair and restoration works of leased premises and payment or discounting of rent while repairs were conducted. At the time a support service like the Office of the Queensland Small Business Commissioner did not exist. An environmental scan by Department of Employment and Small Business and Training (DESBT) of the mental health challenges small business owners could face over the next two years prompted legal services to be included into the Small Business and Industry Support Program. DESBT conducted a follow up survey of small businesses in affected areas in November 2019. Proactive engagement with small businesses helped the relevant entities monitor the extent to which business recovery was fast-tracked. Better understanding of the mental health stressor of operating a business was identified and the QSBRC sought to address some of the barriers to accessing services. Adopting a longer-term

perspective to economic/business recovery and acknowledging the risk to mental health and wellbeing helped identify practical support for business owners.

Finding 22

An increased awareness of the long-term mental health risks for small business owners could better support collaborative approaches across the human and social and economic functional lines of recovery.

The QSBRC assisted business owners with grant applications and provided a location for them to conduct their business. The Townsville based QSBRC was complemented by an online hub which promoted the reopening of businesses and provided promotional resources for reopening. Many businesses benefited from the QSBRC’s support (Thriving Communities Partnership, 2020). Business owners were encouraged to use the “Go Local” initiative to help promote their products and services and encourage residents to shop locally. Eligible businesses were also offered access to volunteer business experts through the Mentoring for Growth Program which was accessed by more than 200 small business owners by January 2020.

QSBRC became a key information hub for economic recovery agencies as information gathered through other recovery activities was shared across recovery partners. For example, representatives of QRIDA in the north west and Townsville attended QSBRC on a fortnightly basis until late 2019 to support information sharing across lines of recovery and to maintain awareness of emerging recovery needs across the areas of operations.

Good Practice Example: Queensland Small Business Recovery Centre

Establishing a place-based service simplified access to information and advice for many small business owners. The QSBRC in Townsville facilitated economic recovery by providing expert advice and support to impacted local small business owners. It focused on helping turn small business recovery into long-term growth and provided positive ongoing support services. The Disaster Planning and Recovery Collaboration Project noted it was the first time an innovative centre was set up and reactions from businesses were overwhelmingly positive (Thriving Communities Partnership, 2021).

Good Practice Example: Back on Track roadshows

QSBRC developed and delivered “Back on Track” roadshows in partnership with local, state and federal agencies and local industry bodies. These roadshows visited the most impacted communities in North West Queensland. Connecting regional small businesses with experts enabled promotion of recovery assistance measures such as loans, grants, disaster preparedness, climate adaptation and mental health support. The mobile support model also provided opportunities for recovery agencies to hear the challenges small businesses faced (Queensland Government, 2019).

Finding 23

Economic recovery assistance was provided through multiple channels to small business owners. The channels consisted of the Townsville-based Queensland Small Business Recovery Centre, an online hub and mobile support through the Back on Track roadshows.

It was reported that many business owners erroneously thought they were ineligible for some grant programs and assistance due to their reliance on peer-to-peer information. Despite the success of QSBRC, it was less effective for businesses located outside of the Townsville central business district or for those who were unable to attend during business hours. It was suggested that including an outreach service as part of the QSBRC to provide printed information and grant application forms for business owners with poor internet access or digital literacy would be beneficial.

Uptake of underutilised grants and other assistance was encouraged through engagement activities to impacted businesses in the same LGA. For example, a three-day outreach program conducted in March 2020 in Ayr, Ingham and Charters Towners engaged with 37 businesses who had not sought the assistance of the QSBRC, resulting in referral of a further 24 small businesses. In November 2020 a two-day Back on Track Better Business Roadshow was delivered in Winton in collaboration with Better Business Outreach to encourage businesses to seek further support. Direct engagement at local levels enhanced access to recovery support. For example, uptake of Go Local funding increased following QSBRC meetings with all council representatives.

Grant and hardship programs continued to be important and business mentors with disaster training were a valued resource. However, research found barriers to access financial assistance included the length and complexity of some applications and a lack of alignment between financial assistance and insurance offerings which complicated decision making or caused lengthy delays in receiving financial assistance (Thriving Communities Partnership, 2020).

The place-based recovery centre or hub and online portal helped establish a ‘single source of truth’ and facilitated recovery agency collaboration and coordination. The co-location of mental health services with small business recovery assistance at community events simplified service access for small business owners. Feedback to state Functional Recovery Groups indicated rural and remote small businesses prefer face-to-face interactions instead of seeking support in groups.

Findings 24-26
Direct engagement at the local level enhanced access to recovery support.
Co-location of economic recovery assistance and mental health support services at community events facilitated access to recovery services for small business owners.
Small business owners in rural and remote communities preferred individual engagement when seeking recovery support.

Access to economic recovery support by the small business community in North West and Far North Queensland varied. From October to December 2019, 16 outreach visits to towns including Winton, Ingham, Townsville, Cloncurry, Mount Isa, Charters Towers, Julia Creek, Richmond, Giru, Hughenden, Ayr, Port Douglas, Georgetown, Croydon, Normanton, Karumba and Burketown (Queensland Government, 2019) provided information to 165 business owners. A survey of roadshow attendees highlighted the services they required most. Of the respondents, 65 per cent reported having relevant disaster and resilience plans in place or commencing their plans (State of Queensland, 2020).

Although the mobile support model was considered successful, a rural council reported business owners were unable to leave their premises to attend workshops. The council also reported that their feedback to federal and state agencies in this regard was not accepted. There were reports

of Townsville business owners seeking to have economic recovery planned for their local context. Use of existing networks and local organisations is preferred and when included in recovery planning the organisations can assume a stronger role in recovery.

A Small Business Recovery and Resilience Champion was appointed to work with small businesses, small business partners, and local, state and federal agencies to support the resilient and adaptive growth of small businesses impacted by the event (Department of Employment, Small Business and Training, 2020). The Small Business Recovery and Resilience Champion played a key role in the Back on Track roadshows and the feedback they received informed the development of support strategies for regional small businesses. Specialised support services were developed by the Small Business Recovery and Resilience Champion working in consultation with the QSBRAAC.

Working alongside the Small Business Recovery and Resilience Champion, the Queensland Small Business Champion liaised with insurance brokers, encouraging them to educate small businesses about the different types of insurance, claim lodgement and escalation processes. The Queensland Small Business Champion also advocated for changes to business interruption and business continuity insurance to the National Small Business Commissioners' Group, and referred several Townsville based small business complaints to the Australian Financial Complaints Authority (AFCA). In May 2020, the part-time Queensland Small Business Champion role was replaced with a Queensland Small Business Commissioner.

Understanding aftermath stressors

The Insurance Council of Australia (ICA) is the representative body for the general insurance industry and is a member of the State Disaster Coordination Group and State level Economic and Building Functional Recovery Groups. ICA's Catastrophe Declaration enabled extra resources to accelerate insurance claims processing. The insurance claims for vulnerable customers were prioritised. ICA's community engagement strategy was considered successful by the then Department of Energy and Public Works. Six policyholder meetings were hosted in Townsville and more than 500 consultations were arranged to assist with resolving claim issues.

TCC also brought together building industry organisations and insurance providers to establish agreed standards and expectations for insurance claim processing and repair works across the LGA. The 2021 independent evaluation of Townsville's recovery reported insurance 'friction' as a major contributor to reducing the pace of the recovery outcomes. Barriers to appropriate business insurance cover included complex contracts and documents, a lack of awareness of products to suit their needs and the perceived unaffordability of flood insurance options. Some business owners who purchased insurance through brokers did not receive the policy coverage they requested (Thriving Communities Partnership, 2020). People with previous experience managing insurance claims or who accessed expert advice or someone to act on their behalf experienced less insurance 'friction' (National Mental Health Commission, 2021). In some instances, people may have accepted inferior outcomes to avoid costs and further stress arising from ongoing disputes and delays (Thriving Communities Partnership, 2020).

The Office of the Queensland Small Business Commissioner reported reinsurance became inaccessible due to increased premium costs and refusal from the insurers which can create a legal liability for the business. It was reported that some businesses successfully appealed their insurance decision with AFCA despite reports that AFCA's services were not widely known. AFCA is a financial industry ombudsman service established to resolve complaints about financial firms such as insurance companies and banks. AFCA provides independent and impartial dispute resolution services that are free for consumers and small businesses and works with financial firms to help them improve their processes and industry service

standards. AFCA’s Ombudsman conducted onsite meetings to assist with factual issues arising from insurance claims in relation to this event.

AFCA reported receiving 233 complaints, 229 of which were general insurance complaints and four related to banking. Over half of the complaints related to denial of a claim and over a quarter concerned delay and poor service issues. Complainants advised AFCA of no contact by their insurer, uncertainty about who to contact, unreturned telephone calls and uncertainty about next steps. AFCA noted that community forums and meetings with AFCA, ICA and insurer representatives helped to ease pressure and dramatically improved the mental health and wellbeing of policyholders by helping them to understand the way forward, their options and time frames.

Research in Townville also indicated people were unaware of recourse to take issues to the relevant ombudsman if they were unhappy with an outcome (Thriving Communities Partnership, 2020). It was suggested that increased education and awareness of insurance dispute resolution and review mechanisms, such as AFCA, would enable policyholders to be properly informed, enhance their capability to navigate insurance matters and reduce the negative impacts on their mental health and wellbeing.

Finding 27

An increased awareness of ombudsman services would better support increased autonomy for disaster impacted insurance policyholders who experience difficulties.

The Disaster Planning and Recovery Collaborative Research Project found strata titled property was a highly complex insurance scenario for residents and business owners, particularly regarding common areas (Thriving Communities Partnership, 2021). Dealing with their insurance company and body corporate created delays to finalising claims which impacted repair and rebuilding timeframes.

Good Practice Example: Mental Health Research into Aftermath Stressors

The National Mental Health Commission in 2020 commissioned the *Our Stories Beyond the Disaster* report to capture the experiences of people impacted by the 2019/2020 bushfires in southern New South Wales and the 2019 Monsoon Trough event. The purpose of the research was to inform the development of the National Disaster Mental Health and Wellbeing Framework. The research found that in addition to stressors related to exposure to a disaster event, aftermath stressors have significant detrimental impacts on the mental health and wellbeing of those affected by disasters (National Mental Health Commission, 2021). The aftermath stressors are often interconnected and compounding.

Insurance emerged as one of the most frequently identified stressors. While some research participants were uninsured due to unaffordable insurance premiums, most who were insured described their negotiations with insurers as frustrating, consuming, exhausting and an unjust experience which was protracted, diminished their sense of wellbeing, and affected their relationships. Research participants described insurance processes as inconsistent, burdensome and additional stress through:

- Difficulty in proving losses
- Being asked to sign incorrect documents
- Feeling caught between insurers and the trades people they had engaged
- Limited or no notice to attend the property to repeatedly provide access to assessors and tradespeople.

The then Department of Energy and Public Works identified meeting early with ICA and working more closely with councils as a lesson from the 2019 Monsoon Trough event. The independent evaluation of Townsville’s recovery identified insurance in general, and insurance jobs (repairs and/or rebuilds) taking longer than needed as areas for improvement. Further, direct community engagement with the insurance industry could facilitate service improvements and better inform policyholders, while feedback from forums could help target the efforts of economic recovery partners to fast-tracking business recovery, rebuilding, and returning people to their homes and businesses.

Finding 28
<p>Policyholder forums with representatives from insurers, councils, the Insurance Council of Australia and Australian Financial Complaints Authority created a mechanism to assist with addressing concerns which impeded repair and rebuild of residences and businesses.</p>

The available information indicated that the experiences and reflections of economic recovery varied across the impacted region. Councils with enhanced staff capability found using their system and networks worked well. For example, Cassowary Coast Regional Council’s Business and Industry Liaison Coordinator was well informed of business and related information and disseminated it to the community through an established network. This liaison officer responded to queries and referred business owners to the most appropriate recovery agency.

The business recovery grants were largely successful and the QSBRC was highly valued. The employment of full time recovery officers was considered to have worked well for economic recovery in the Flinders Shire. In rural communities, in-person assistance was considered to have improved access to funding assistance. For example, the Carpentaria Shire Council noted a better uptake when QRA staff visited and spoke directly with affected businesses. A disaster district in a rural region also noted the value of their engagement with QRA as it enabled the DDMG’s local knowledge of the district to be used to accelerate recovery efforts.

Etheridge Shire Council noted field officers supporting grant applicants worked well. They found tailored small business assistance packages with on the ground support for business viability was successful. From an industry perspective, the level of assistance available instilled confidence of a forward recovery pathway and that industry had the capacity to continue to operate.

Torres Shire Council noted all recovery projects were undertaken by local businesses, thereby providing local people with employment and training for apprentices which helped to further grow the local skills base. The commissioning of local service providers for mental health services and holding community events in local areas provided an injection of much needed funds in western Queensland. GIVIT purchased needed items locally to help ensure people’s needs were met while also supporting local businesses.

Tourism business support

As a key economic driver for many of the impacted areas, it was critical for the tourism sector to be restored as quickly as possible after the event. The Monsoon Trough State Recovery Plan focused on recovery outcomes to increase visitor numbers and generate tourism spend, particularly for impacted regional areas. For tourism operators who required greater assistance, it was planned to maintain visitor numbers and tourism spend until June 2021 (State of Queensland, 2019).

A \$5 million Tourism Recovery Program was delivered to support economic recovery in impacted tourism-reliant areas. The program was implemented to the target community, which was defined as “tourism-related businesses and individuals in the affected areas”, by the then Department of Innovation, Tourism Industry Development and the Commonwealth Games (DITID) with administrative support from QRA (State of Queensland, 2022).

This consisted of four programs:

1. Event Resilience and Sustainability Program
2. Tourism Business Resilience Program
3. Outback Tourism Education Program Expansion
4. Regional Queensland Tourism Product and Expanded Infrastructure Program.

DITID adopted a streamlined and responsive approach, utilising existing governance arrangements and considered the diverse stakeholder needs across the Tourism Recovery Package. This allowed rapid engagement for the initiatives and demonstrated the effectiveness of pre-existing relationships between state agencies, community groups and business organisations for successful program governance and engagement (State of Queensland, 2022). However, a coastal council reported an initiative to restore confidence in the tourism market was developed by DITID in partnership with Regional Tourism Organisations but did not involve the council.

Tourism promotional campaigns by councils such as Flinders Shire Council’s ‘Don’t turn your back on the Outback’ were considered successful. Councils such as Carpentaria Shire Council attended tourism forums and conferences to promote their region and developed a tourism strategy. Winton Shire Council initiated the \$300 ‘Winton Buy Local Card’ from the balance of the Australian Government’s Carcass Disposal Grant to support local businesses impacted by the town’s isolation and reduced visitor numbers (Winton Shire Council, 2020). In November 2019, grants to support small business owners were extended to include Etheridge LGA. At the same time, these grants were also extended to Charters Towers LGA after significant lobbying by council and graziers in the north east quadrant of the region.

Good Practice Example: Discover Carpentaria

The ‘Discover Carpentaria’ website (www.discovercarpentaria.com.au) was launched in July 2021 to promote tourism and increase visitation rates in the area. It was built by the Local Government Association of Queensland, providing information on events, shops, businesses, schools, community groups and activities available within Carpentaria. A supplementary Instagram page was also developed to further support the website to encourage visitors to the area. The website was considered a success due to the availability of resources for potential new community members and generation of new website visitors.

Fast tracking primary industry recovery

The then Department of State Development Manufacturing, Infrastructure and Planning worked with state agencies, councils and industry stakeholders to identify and fast-track a range of immediate and ongoing economic recovery activities. A \$22 million North West Queensland Beef Recovery Package was delivered by DAF to assist primary producers and related industries across 15 LGAs. The package distributed funding across the following programs:

- Flood Freight Subsidies Restocking Agistment Scheme

- Extended Concessional Loans for Primary Producers
- Industry Recovery Officers (IROs) and Rural Financial Counsellors (RFCs).

An evaluation of the package, as necessitated under DRFA, concluded that in addition to meeting economic objectives, the implementation of IROs met human and social recovery objectives, and the concessional loans enabled primary producers to undertake landscape remediation and meet environment recovery objectives (State of Queensland, 2022).

Flood Freight Subsidies Restocking Agistment Scheme

The Flood Freight Subsidies Restocking Agistment Scheme provided subsidies of up to \$50,000 per property, per year. The program evaluation found the 64 approved subsidies reflected a much lower than expected rate of engagement. Feedback indicated producers did not intend to restock or introduce agistment stock because of poor seasonal conditions and pasture growth impacting feeding. In June 2020, the scheme's remaining funds were reallocated to extend the IRO program.

Insight 3

Seeking feedback about suitable recovery measures in all lines of recovery allows programs and services to be adjusted to maintain an adaptive approach while recovery operations are underway.

Extended Concessional Loans for Primary Producers

In response to the impacts to the primary industry, concessional loans for eligible primary producers were increased from \$250,000 to \$1 million. This increase aimed to reduce recovery timeframes and distress levels, offsetting extraordinary costs and enabling the completion of recovery activities. However, the limited uptake of only six loans was considered to have been due to primary producer hesitancy to accumulate further debt.

Industry Recovery Officers and Rural Financial Counsellors

Five North West Queensland IROs and four part-time Coastal IROs were deployed six months after the event to assist primary industry owners with access to advice, funding and support services. Three RFCs were contracted to support 11 LGAs with grant applications, financial analysis and negotiations, legal and accounting referrals, and mental health and welfare matters. IROs ensured awareness of QRIDA grants to rebuild businesses and supported completion of applications for producers. IROs also assisted RFCs and QRIDA by streamlining processes between recovery partners and livestock owners. Collectively, IROs and RFCs recorded close to 15,000 primary producer engagements (State of Queensland, 2022).

IROs coordinated local training, events and workshops which provided complete information, advice and skills development opportunities to aid economic recovery. Broader recovery efforts were strengthened by IROs assisting DAF beef extension officers to plan and deliver key events and enabling them to focus on delivering animal production, pasture recovery and business resilience outcomes to industry.

IROs were an important information conduit for councils and CDOs. Collaboration between IROs and CDOs was highly beneficial and many worked together to enhance social cohesion in rural areas. IRO attendance at social events allowed connection to graziers and connecting graziers to mental health services and the RFDS. For example, the Flinders IRO connected with graziers when third parties raised welfare concerns and were successful in gaining consent to attend their property with mental health support staff.

IROs received mental health training and DAF considered that the IRO program and Beef Recovery Package delivered positive mental health outcomes for primary producers. Following the 2019 event, graziers self-initiated contact with support service providers such as Saint Vincent de Paul, in contrast to the previous seven years of drought. Personal relationships with the IROs created trust which enabled the focus to shift from personal mental health advice to community mental health. IROs conveyed feedback from graziers to ensure mental health activities focused on emerging issues and mental health providers leveraged the IRO and RFC workshops.

To ensure as many eligible producers as possible accessed available recovery support, the initial six month contract with the Queensland Farmers' Federation, which employed the Coastal IROs, was extended to 28 February 2020. Coastal IROs provided support and referrals for grant applications and supported growers to utilise appeal processes and connect with programs such as the Riparian and Coastal Recovery Package.

Key success factors for IROs and RFCs

IROs were employed from the local communities and were locally based. IROs cited this as a key success factor. Their direct experience and knowledge of the event was advantageous and, coupled with their local knowledge, elevated their engagement capabilities. Impact surveys, meetings, formal and informal networks, and informal surveys of industry members determined the key recovery issues and primary producer needs. The action learning cycle for continuous improvement used by IROs was beneficial. IROs and the DAF and Queensland Farmers' Federation program managers unanimously reported their services were well-received and beneficial to community members.

The affiliation between DAF and IROs was also conveyed as critical for exposure and engagement with community networks. Primary producer feedback reinforced the significance of their collaboration and DAF was consistently nominated as their preferred information provider. IROs described their role as tailored, responsive and adaptable, using DAF's progress reporting data to monitor and reprioritise community needs as they developed (State of Queensland, 2022). Their flexibility and ability to pivot as required was key to the IRO program's success.

RFC engagement played a vital role in providing primary producers and small business operators with the capacity for sustainable recovery. The package expanded the reach and availability of information under the existing RFC program. Evidence suggested that without this support, financial assistance may have been delayed or inaccessible for some community members. Establishing the capacity to offer alternative economic recovery solutions for primary producers could further enhance the value of RFC activation under subsequent programs (State of Queensland, 2022). RFCs also worked closely with mental health providers and provided referrals if they identified any mental health issues with their clients.

Good Practice Example: Economic recovery and climate adaptation – Surviving and Thriving in the Grazing Game

Primary producers and DAF extension staff assisting with recovery identified a need to improve herd recording systems and financial record keeping procedures. The 'Surviving and Thriving in the Grazing Game' workshops were developed by the Rural Financial Counselling Service North Queensland to help beef primary producers who had accessed financial assistance. The business workshops focused on improving financial literacy and recordkeeping. The first of the 16 workshops was held for Richmond and Julia Creek beef producers in November 2020. Private advisors, consultants, government and natural resource management extension officers also participated. The workshop included a session to teach how to correctly interpret Bureau of Meteorology climate forecasts to support property decision making, such as when to invest in pasture improvement or capital infrastructure as a result of collaborating with the Northern Australia Climate Program. Feedback from the workshop attendees indicated they would implement changes as a result of their attendance at the workshop (FutureBeef, 2021).

Good Practice Example: Collaboration across lines of recovery

During Winton's recovery it was identified that bringing sheep back to the shire required the next generation of shearers. However, shearing was a fundamental skill that would need to be taught. The CDO and IRO collaborated to deliver a one-week shearing workshop at Goolma Station. The owners allowed the team to use the sheep shearing quarters, shed, and a couple of hundred sheep were made available for the Australian Wool Industry teachers, inspectors and shearers to teach 15 young adults shearing skills. By the end of the week, all 15 students were competently shearing sheep. Students also learned the importance of wool handling, correctly skirting fleeces, using paddles to separate shorn pieces and to use the wool press.

By March 2020, IROs and RFCs became Agricultural Coordination Officers to support response to the pandemic while continuing to support 2019 event recovery. The evaluation of the North West Queensland Beef Recovery Package recognises several good practice examples that illustrated positive outcomes IROs achieved for the community (State of Queensland, 2022).

Finding 29

Reprioritisation of assistance to meet emerging need of primary industries was supported by information sharing through North West Industry Recovery Officers and Rural Financial Counsellors.

Building Functional Recovery

The 2019 Monsoon Trough event caused widespread impacts to residential properties, commercial businesses and public assets, at an estimated cost totalling \$2 billion in both insured and uninsured damages. Impacted residential properties sustained the highest direct costs which were estimated to be \$1.46 billion. The event damaged 3369 residential properties, with 37 per cent assessed as uninhabitable and 63 per cent with minor damage. Of these, almost 3300 flood damaged properties were in Townsville, being an estimated 10 per cent of the total housing stock (Australian Broadcasting Corporation, 2019).

The cost to commercial businesses that sustained property and asset damages was estimated to be \$402 million. At that time, ICA reported receiving 2458 commercial property claims with a total value of \$225 million.

The extensive damage to water and sewerage networks included controls, mains, access points and electrical assets. TCC reported damage to 21 bulk mains, 310 reticulation mains and inundation damage to pump stations. The event also impacted the Burdekin Falls, Eungella, Julius and Teemburra dams. While some of the reconstruction costs for public assets were covered by public asset insurance, an additional cost of approximately \$14.5 million was estimated for direct restoration of water and sewerage infrastructure.

Further direct costs of approximately \$50 million were required to repair damage sustained to state-owned frontline public assets, as well as community and recreational assets. Approximately 765 state-owned frontline assets, such as social housing, schools and police stations required restoration works at an estimated cost of \$30 million. Additionally, restoration works to community and recreational assets, including public parks, reserves, playgrounds and sporting facilities, were estimated to cost at least \$20 million (Deloitte Access Economics, 2019).

The Monsoon Trough State Recovery Plan outlined the following recovery outcomes for the building line of recovery:

Sustainability

- S-1** Infrastructure that relates to education, health, justice, welfare and any other community infrastructure/ buildings that support the community (private or public owned assets).
- S-2** Private infrastructure including residential, commercial/ industrial and rural assets.

Resilience

- R-1** Infrastructure is rebuilt, to reduce to a reasonable degree, the impact of future disasters on communities.

Of the 98 activities in the Monsoon Trough State Recovery Plan, 14 related to building recovery. (Refer to Appendix C)

Finding 30

Of the 14 building recovery activities, approximately 70 per cent met the sustainability outcome regarding education, health, justice, welfare and other community buildings/infrastructure to support the community.

The sustainability outcome regarding private infrastructure including residential, commercial/industrial and rural assets related to 78 per cent of the building recovery activities.

A little over a third of the building recovery activities met the resilience outcome for business and not-for-profit organisations to have adequate mitigation practices in place for risks and threats.

Supporting locally led building recovery

The Building Recovery Group (BRG) is responsible for providing resources and supporting local and district recovery groups (State of Queensland, 2018). Its role also includes providing impacted residents with information and advice about the repair or rebuild of their properties. During the recovery operations, information was provided to support both residents and contractors to guide rebuilding. The BRG maintained consultation with built environment stakeholders, peak industry bodies and industry to support local recovery efforts. The BRG members operated cohesively in their support of the local recovery groups and ensured collaboration, integration of information and resolution of activities when required.

Supply chain issues such as the shortage of stone benchtops in the Townsville region were escalated to BRG members. Departmental representation at local recovery group meetings was considered beneficial in the development of recovery plans and provision of technical advice. The capability and capacity of the LDMGs to manage built infrastructure recovery through their robust local networks was considered to have worked well and few issues required escalation to the BRG.

TCC reported approvals for the rebuild of Townsville's damaged housing stock were fast tracked under the streamlined assessment process of the *Townsville City Plan 2014*. Private certifiers assessed the building works for the residential and commercial repairs and fit-outs to ensure compliance with council and building standards. QRA conducted five Damage Assessment and Reconstruction Monitoring (DARM) operations to monitor and support reconstruction and building recovery in the Townsville, Palm Island and Burdekin LGAs (Queensland Reconstruction Authority, n.d.). The verified information was provided to impacted councils, all five functional recovery groups and other relevant State agencies and stakeholders, such as the insurance and building industries to inform where recovery efforts were needed.

Good Practice Example: Townsville Flood Disaster Reconstruction Local Supplier Directory

The Townsville Economic Recovery Taskforce and Local Recovery and Resilience Group created a portal to connect local businesses with rebuilding projects. The Townsville Flood Disaster Reconstruction Local Supplier Directory was launched in June 2019 to build the resilience of the local business community and ensure their employees gained new rebuilding skills. The directory enabled insurers, panel providers and residents to connect with product and service suppliers to assist with long-term rebuilding (City of Townsville, 2019).

The Queensland Building and Construction Commission's (QBCC's) public information role about the safe management of rebuilding and repair was considered to have worked well and enabled informed choices within the community. Rebuilding and repair safety messages were coordinated through multiple channels and also leveraged community events. For example, 'stay safe' flyers were distributed at 'Barbie in the Burbs' council events, council libraries and the Townsville Rental Recovery Hub. Information on how consumers could protect themselves from unlicensed contractors and reduce the risk of receiving defective work was included. The campaign was also shared across local government, functional recovery group and State agency online platforms.

Good Practice Example: North Queensland Flood Register

A publicly accessible register of licenced, qualified building and trade professional was established to facilitate the community's access to contractors. The North Queensland Flood Register was hosted on the QBCC's website, allowing licensed contractors, asbestos removalists and electrical tradespeople to register their availability to support the repair and reconstruction of damaged built assets. As a result, 647 tradespeople and contractors registered their availability. The register was promoted through social media and complemented information resources to assist residents with finding an appropriately vetted contractor. The effectiveness of the register led to its incorporation into standard building recovery practice for subsequent disaster funding events.

Good Practice Example: Proactive QBCC Compliance

The Queensland Audit Office's assessment of the effectiveness of the QBCC's regulation of the building industry highlighted their proactive compliance in Townsville following the 2019 event. The QBCC recognised the increased risk of residents using unlicensed builders, receiving defective works and lacking the protections afforded by a legal contract or insurance policy following such a flood event. Implementation of the QBCC's disaster response plan delivered effective compliance outcomes through an intense, proactive work program which resulted in 196 site visits. The visits identified 19 suspected unlicensed contractors and an excluded individual carrying out (or offering to carry out) building work. A further 52 contractors were provided advice about QBCC licensing requirements. The proactive compliance approach received positive feedback from licensed contractors (Queensland Audit Office, 2020).

Throughout 2020, the QBCC continued to use social media to target homeowners with information on how to engage a licensed contractor, how to rebuild after a natural disaster and how to spot a 'dodgy' contractor. The North Queensland Flood register was also promoted through social media channels and complemented the tools and information to assist residents to find a contractor vetted and licensed by the QBCC.

Good Practice Example: Townsville Community Rebuild Project, "Making a House a Home Again"

The Townsville Community Rebuild Project, "Making a House a Home Again", was a two-stage interagency initiative which commenced in October 2019 with the aim of addressing structural concerns and facilitating assistance for Townsville residents unable to repair their impacted properties. Over two years 14 organisations were coordinated to help 47 vulnerable households with psychological support and home repairs. The project also created a pathway for residents ineligible for adequate government assistance (State of Queensland, 2022).

The Townsville Community Rebuild Project started as a committee chaired by the Combined Churches Townsville. The first stage was a pilot managed by The Oasis Townsville in partnership with The Salvation Army. The Oasis Townsville is a referral and support hub for military veterans. Stage one was the repair of five houses in five weeks before the December 2019 festive season. This was achieved through the efforts of 40 veteran volunteers and 17 civilian volunteers. The Salvation Army's part-time Recovery Support Worker was the case worker for project participants and made referrals for psychosocial support, legal assistance, insurance advice and replacement of home contents.

Rebuilding and repair works slowed and project timelines were extended with the onset of the COVID-19 pandemic. QBCC site visits to facilitate building repair advice were limited. By March 2020, QRA's DARM process continued to ensure building recovery plans and priorities remained underpinned by the impact assessment data. The work of the QBCC in supporting residents, including visits to jobsites, also continued, thereby helping to ensure issues were identified and concerns were addressed with appropriate advice.

The extension of the Salvation Army's Recovery Support Worker until 30 June 2021 enabled them to continue their valuable case work support in collaboration with the state government and the Townsville Community Rebuild Project. The DCHDE Community Recovery Team and GIVIT collaborated to help cover the funding shortfalls for residents rebuilding their homes who lacked the financial means. GIVIT assisted 53 rebuild projects referred by the then DCHDE to the value of \$808,779.

Banfield Drive seawall, Palm Island

Damage to Banfield Drive left the main connecting road between the Palm Island community, airport and Butler Bay areas and the seawall at risk of collapse, with erosion and scouring exposing a sewer main. Almost \$800,000 of Betterment funding was allocated for Palm Island Aboriginal Shire Council to reconstruct the seawall (Queensland Reconstruction Authority, 2021). Consideration of complex risks was required, including the tidal nature of the adjacent creek, protection of the exposed sewer pipe, and transport of materials to the island. Reconstruction efforts were compromised by subsequent events, including Tropical Cyclone Imogen and Severe Tropical Cyclone Niran in 2021. The project was regarded as a success, substantially contributing to the local economy and engaging up to 10 local Indigenous employees at any one time until restoration works were completed in June 2021.

Waiben Esplanade seawall, Thursday Island

Projects to restore and enhance the resilience of two sections of the Waiben Esplanade Seawall on Thursday Island were also completed through Betterment funding of \$2 million (Australian Government, 2020). The works were important for the community as the seawall mitigates erosion and provides protection against storm tide and flooding events. Contracting local businesses to deliver the projects provided income to local residents. The projects commenced and maintained trafficability and access to essential services, with no disruption to fishing as boat trailer space was provided. Torres Shire Council reported the importance of maintaining access as fishing is a critical food source, given the expense of remote living and for cultural connections to the ocean.

Barriers to building recovery

The independent evaluation of Townsville recovery identified major issues that delayed or interrupted recovery for the community. It noted changes to building approvals and building codes affected recovery. However, it noted that building houses that are less flood resistant did not support a strong recovery and increased the damage and cost of future events. The report also identified the need for ongoing financial and psychosocial support for people with damaged homes.

The Disaster Planning and Recovery Collaborative Research Project found some insurance companies were perceived to have underquoted, leaving residents out of pocket for repair costs. It also found that many insured people were unaware of the option to obtain their own quote (Thriving Communities Partnership, 2020). Delays between funding and rebuilding and delays accessing materials and qualified tradespeople also inhibited timely recovery. Roof repairs needed to be resolved before internal repair works could commence (Australian Broadcasting Corporation, 2019). A recovery organisation reported some community members lost deposits to tradespeople for repairs not undertaken. Townsville Community Law legal services helped residents navigate insurance disputes.

QRA identified the absence of an explicit referral pathway for local recovery partners to the Townsville Community Rebuild Project. A referral pathway enables community members to receive information, assistance options and ongoing support, particularly for people with properties yet to be repaired or made habitable.

The sharing of personal data and information between recovery partners is critical to the performance of an effective recovery system. Reliable data helps identify vulnerable people and helps agencies collaborate through established referrals.

Finding 31
There is an opportunity to strengthen collaboration across the building and human and social lines of recovery by establishing referral pathways between recovery partners before recovery operations commence.

Roads and Transport Functional Recovery

Queensland's transportation infrastructure and road networks sustained widespread damage. A total of 6420 kilometres of state roads were impacted by road closures and access restrictions. Damage costs of the Monsoon Trough event were approximately \$104 million for state roads. A further \$30 million was spent on betterment works on state roads. Damage costs for council-managed roads was over \$442 million.

Critical transport routes such as the Mount Isa Rail Line and the Flinders Highway, which connect the north west region to the east coast, were inaccessible. Their closure disrupted freight and resource transportation, delayed damage assessments, restricted the accessibility of critical supplies and services and isolated some communities. Over 300 kilometres of the Mount Isa Rail Line track required repair or replacement, including works to restore more than 200 sites of extreme erosion and major works at the location of a freight train derailment in Nelia that occurred in early February 2019. Information about the environmental remediation for the Nelia derailment site is outlined in the environmental recovery section of the report.

The Monsoon Trough State Recovery Plan provided the following Roads and Transport recovery outcomes:

Sustainability

S-1 Roads and transport infrastructure supports the delivery of essential services to the community.

Resilience

R-1 Infrastructure is built to reduce, to a reasonable degree, the impact of future disasters on communities.

Of the 98 activities in the Monsoon Trough State Recovery Plan, seven related to roads and transport recovery. (Refer to Appendix C)

Finding 32

The seven activities relating to roads and transport recovery met the sustainability outcome for roads and transport infrastructure to support the delivery of essential services to the community.

Over 40 per cent of the activities met the resilience outcome to rebuild infrastructure to reduce, to a reasonable degree, the impact of future disasters on communities.

Supply chains restored

DTMR completed the emergency works on the Flinders Highway critical transport route in 13 days. Despite the scale of the impacts, urgent works were completed to ensure damaged infrastructure was repaired as quickly as possible, while essential transport routes were reopened within 13 weeks.

Finding 33

Restoration of the supply chain and reconnection of communities by the Department of Transport and Main Roads occurred due to the efficient and timely repair of key transport routes. The majority of the repair works fall outside of the scope of this report as the state road network was reopened by 15 July 2019, with reconstruction works continuing across the state road network until 30 June 2021.

The time to restore transport corridors to a safe condition directly affects supply chains. Restoring supply chains is a key enabler for economic recovery, and delays in roads and transport recovery can impact employment. Works on key transport routes impacted by the event were fast tracked. However, a survey respondent reported planning for longer term logistic alternatives for a comparable future event would have been beneficial.

Torres Shire Council advised of challenges due to transport network disruptions, barging constraints, and inaccessible unsealed roads that restricted access to sites and services. They reported road network restoration is a critical priority which may need to occur prior to the availability of financial assistance. Other issues commonly experienced by councils which delayed completion of works included material shortages, availability of contractors, and access to equipment. The difficulty in balancing public expectations of the road network recovery timeline was reported by a council.

The majority of repairs to locally managed roads were funded by the Reconstruction of Essential Public Assets (REPA) category of DRFA. However, the available data was limited and assessment of the effectiveness of recovery works for this report was inconclusive.

Betterment Program

The \$100 million Queensland Betterment Program administered by QRA in 2019 facilitated resilience enhancement projects for critical infrastructure damaged by the event. DRFA activated local governments and state agencies were able to apply for a contribution of up to \$5 million towards betterment works designed to rebuild public infrastructure to a greater standard and increase resilience for future events. The program successfully delivered 108 projects in 35 LGAs.

Upon the successful reopening of the Mount Isa Rail Line, DTMR developed and implemented a \$30 million Betterment Program to improve the flood immunity and resilience of the state-controlled road network. DTMR identified 10 flood-prone sites for improvement, (Australian Government, 2020) where the additional investment would reduce future flood damage and road closures.

Finding 34

The \$30 million Betterment Program of the Department of Transport and Main Roads improved the flood immunity and resilience of the state-controlled road network at 10 flood prone sites.

Flinders Highway (Hughenden-Richmond and at Nelia)

The 150-kilometre stretch of the Flinders Highway from Richmond to Julia Creek was cut when flooding washed away entire sections of the road pavement. A temporary detour to facilitate access, including for heavy freight vehicles, was established via the Landsborough Highway and Winton-Hughenden Road. Reconstruction works began in late September 2019 to repair

flood-damaged pavement sections of the highway in the Hughenden to Richmond and Richmond to Julia Creek sections, with rehabilitation commencing on other sections in October 2019. This critical transport route also benefited from two betterment projects. Key works included stabilising damaged pavement and repairing shoulders and drainage works to reduce the risk of damage in future floods. Over 20 kilometres of the highway were reconstructed or improved prior to the next wet season in December 2019.

Richmond-Winton Road

Flood immunity and resilience projects were implemented at three locations along the Richmond-Winton Road, which is a critical transportation link connecting several major towns in North West Queensland and a vital detour when the Kennedy Developmental Road in central Queensland is impassable due to flooding. In addition to the 2019 Monsoon Trough disaster repairs, DTMR invested more than \$8 million in betterment works to enhance resilience on the Richmond-Winton Road. This included installing concrete batters, pavement resilience works and in-situ stabilisation, and sealing a previously unsealed 10-kilometre section of road (Queensland Reconstruction Authority, 2021).

Burke Developmental Road

Investing in resilience improvements to build back better on key Queensland transport routes provided benefits, with Burke Developmental Road in North West Queensland withstanding heavy rainfall during the 2021 wet season. This road is a critical link between Normanton in the Gulf of Carpentaria and Dimbulah near the coast. A total of \$5.1 million in betterment funding was spent in addition to the 2019 Monsoon Trough disaster repairs. Works started in April 2020 and were completed in November 2020. Works included sealing a road section adjoining an existing sealed section of road and strengthening the road's surface. The resilience of the Burke Development Road was tested when Tropical Cyclone Imogen and the associated low-pressure system produced 327 millimetres of rainfall over an eight-day period at Normanton Airport in January 2021. Subsequent assessment of the road found the betterment works performed well as it remained operational and a reconstruction cost of up to \$1 million was avoided.

Isabella Creek Bridge upgrade

DTMR identified Isabella Creek Bridge on Endeavour Valley Road as a priority site in the 2019 Betterment Program and completed betterment works to mitigate flood disruptions before the 2020–21 wet season. Endeavour Valley Road is a critical access and supply route in Far North Queensland, connecting the remote Indigenous community of Hope Vale to Cooktown. Isabella Creek Bridge is frequently inundated by flooding during significant rain events and isolates Hope Vale. It was impacted when flooding associated with Tropical Cyclone Penny washed away the bridge deck surface in December 2018 and was subsequently re-damaged by the 2019 Monsoon Trough event. In January 2020, the Isabella Creek Bridge's damaged timber decking was replaced. A specially formulated concrete mixture that is more resilient to flood events was used to resurface the bridge's decking, with work commencing in mid-September 2020 and completed by mid-December 2020 (Queensland Reconstruction Authority, 2021).

Fast tracking roads and transportation restoration

DTMR districts successfully managed competing priorities in delivering betterment and repair works while also delivering the Queensland Transport and Roads Investment Program and

additional projects under the COVID-19 stimulus program. To expedite staff employment for damage assessment and recovery project management in disaster districts, DTMR established a 'Contract Administration Services Panel' Standing Offer Arrangement. The Longreach DDMG noted the majority of the significant road damage within the Winton LGA was restored and repaired in a timely manner. An extension of time was required for the reconstruction and associated betterment project on the Landsborough Highway due to a gravel supply issue in central west Queensland. Additionally, COVID-19 restrictions impacted repair works for Indigenous communities. Collaboration between local and state governments and other proponents resulted in pragmatic road repair solutions. Etheridge Shire Council highlighted the crucial role of strategic road networks in restarting impacted economies and bringing a sense of normality to regional areas.

Good Practice Example: Expediting damage assessment

DTMR identified a need to more quickly employ staff to assess damage and manage disaster repair projects following the completion of recovery activities. A Standing Offer Arrangement for a 'Contract Administration Services Panel – New roles for NDP Project Management and Damage Assessment' was established to expedite the process for future events.

Environment Functional Recovery

The environmental damage over the impacted region reportedly created implications for the likely recovery of agriculture, tourism and the ecosystem. Large amounts of sediment were disturbed and entered local waterways. Streambank retreat was estimated to have been up to 40 metres in some areas, including the loss of riparian vegetation. Coastal areas, including those surrounding the Great Barrier Reef, lost large areas of sand and coastal habitat, however, there is no available information about the 2019 Monsoon Trough event's direct impact on the Great Barrier Reef. Repeated prior flooding events following the 2011 Queensland floods stressed the seagrass beds, particularly along the coastline between Townsville and Gladstone. The then Department of Environment and Science (DES) monitored the impact of the event on turtle and dugong populations (Deloitte Access Economics, 2019).

Following the event, the impacted region was considered at risk of pest and weed outbreaks which could further damage the agricultural sector and environment (Deloitte Access Economics, 2019). There is no available information about any such outbreaks following the event.

The Monsoon Trough Recovery Plan outlined the following recovery outcomes:

Sustainability

- S-1** Pollution impacts to the environment are avoided or minimised.
- S-2** Recovery actions do not generate further risk to the environment.
- S-3** Natural environment operates to maintain or restore healthy biodiversity and ecosystems.
- S-4** Protection and management of parks, forests and the Great Barrier Reef for the enjoyment of current and future generations.

Resilience

- R-1** Restoration of flood impacted areas to a more resilient landscape.
- R-2** Reduced environmental issues following disaster events, due to more effective planning and preparedness by government, industry and community.
- R-3** An increased understanding of the risk of future disasters on the environment and of the environment providing natural protections.

Of the 98 activities in the Monsoon Trough State Recovery Plan, 16 related to environment recovery. (Refer to Appendix C)

Finding 35

Half of the 16 environmental recovery activities met the sustainability outcome for recovery actions to not generate further risks to the environment. 43 per cent of activities met the sustainability outcome for the natural environment to operate to maintain and restore healthy biodiversity and ecosystems.

Approximately 56 per cent of the environmental recovery activities met the resilience outcome to increase the understanding of the risk of future disasters on the environment and to provide the environment natural protections.

Environmental restoration

All impacted national parks and state forests reopened by September 2019, except for the camping area at Alligator Creek in Bowling Green Bay National Park which required wastewater treatment system repairs. The construction of a new sewerage treatment plant at this site allowed the camping area to reopen by March 2020. The assessment of damaged infrastructure in national parks and state forests was completed in the Central and Northern regions of the Queensland Parks and Wildlife Service and on island national parks by September 2019. By December 2019, works on island national parks apart from Magnetic Island were complete.

The 2019 Monsoon Trough event impacted mining and industrial site operations and reportedly resulted in potentially contaminated water being discharged from 22 sites. DES worked with mining and industrial operators to ensure recovery actions were environmentally safe and to assess any non-compliance. Temporary emission licences were issued to help operations resume and comply with environmental approvals. Four temporary emissions licences and two clean-up notices were issued to ensure adherence to the remediation action plan for a watercourse impacted by a mining discharge. Additionally, four penalty infringement notices were issued and paid, and an environmental protection order remained in force with operators progressing towards compliance.

DES completed a prioritised inspection program of heritage-listed locations and provided technical advice in August 2019, supporting the partial demolition of key facilities at Cluden Racecourse. Further technical advice was provided to enable a development application to refurbish the racecourse's partially demolished facilities and construct a new jockey/steward change room.

All displaced high-risk animals were reported as relocated by September 2019. Implementation of carcass disposal activities for deceased livestock and wildlife by local governments were completed in accordance with the Carcass Disposal Strategic Management Plan led by DAF.

DES reported their participation in the Townsville Local Recovery Group worked well to support local environmental recovery operations. DES provided coordinated assessment and advice about environmental issues such as water quality, and sewage and waste management, pollution management and clean-up operations. Assessment and advice were also provided to other LGAs as required.

TCC reported their capacity to integrate environmental and sustainability service delivery with staff, contractors and environmental NGOs as a strength. In particular, TCC highlighted the considerable capacity, capability and resilience of their staff and contractors and their contribution to improving TCC's environmental recovery knowledge.

The independent evaluation of Townsville's recovery noted there is an opportunity for state and federal agencies to better understand the complexity of environmental recovery issues. A stronger emphasis to 'build back better' and mitigate environmental damage and loss such as erosion management was also suggested.

DES reported the monsoonal weather conditions from November to April each year limits the time to safely conduct on-ground works. In the 2019 Monsoon Trough event, recovery partners had limited time to design the restoration projects and administer approvals. Meanwhile, contractors needed to complete major earthworks under sustained unpredictable weather conditions. The remote locations of some sites, limited availability of a suitably skilled workforce in the regions and COVID-19 restrictions were identified as additional challenges. DES identified that expediting a reconnaissance program for future events would help alleviate the compounding time pressures on recovery partners and contractors.

Environmental Recovery Program

DES administered a \$46 million Environmental Recovery Program to assist with the rehabilitation and restoration of impacted riverine and coastal environments. The Program consisted of 145 projects which were delivered by one project manager and 17 Program partners, including natural resource management (NRM) bodies, councils and River Improvement Trusts. DES developed supportive relationships with Program partners which ensured the successful administration of the Program. The knowledge DES acquired by managing the Program contributed to an improved understanding of the processes and procedures to support waterway rehabilitation.

An expert Assessment Panel comprising Director level representatives from DES, QRA, the then Department of Regional Development Manufacturing and Water, DAF and the then federal Department of Agriculture, Water and Environment assessed the Program's project applications. This approach provided transparency and oversight of project selection.

DES found consideration of project funding over two phases, being 1) reconnaissance/urgent works and 2) on-ground works, was highly effective as it enabled time and resources to determine priorities and better understand the scopes of works. It was reported that the Program partners valued the rapid reconnaissance to assess environmental impacts as it improved their understanding of the on the ground impacts. COVID-19 restrictions placed considerable pressures on the Program partners to negotiate safe practices and to coordinate the supply of materials for on-ground works during the limited dry season window (Queensland Reconstruction Authority, 2021). Almost half of the projects were completed before the 2020-21 wet season despite the constraints.

Finding 36

Strong partnerships between the then Department of Environment and Science and 17 organisations enabled the delivery of 145 environmental restoration projects, despite the challenges of vast distances and weather constraints.

Weeds and Pest Management Program

A Weeds and Pest Management Program administered by DES and DAF under the Environmental Recovery Program aimed to help prevent the proliferation of weeds and pests and to increase the resilience of ecosystems and producers in the region. The Program was delivered in two parts:

1. Emergency Response Program for Parthenium Weed
2. Regional Invasive Species Program (Queensland Reconstruction Authority, n.d.).

The Emergency Response Program for Parthenium was allocated \$100,000 and was contracted via DAF as an urgent recovery activity in the Flinders LGA to address parthenium weeds before seeding occurred. The investigation and alert phases to determine the extent of infestation and inform the community of the issue were completed by December 2019. The Program's completion date was extended from May 2020 to 30 June 2021 due to COVID-19 restrictions delaying the operational phase.

The Regional Invasive Species Program, implemented through NRM organisations, was allocated a total of \$4.1 million for 22 invasive weed and pest species projects across the Northern Gulf, Southern Gulf and Desert Channels regions. Weed species projects received 79 per cent of the funding and achieved the management of Rubbervine thickets, Parkinsonia, Mesquite and other significant invasive plants. The remaining 21 per cent of funding targeted

pest management projects involving a combination of aerial shooting and baiting, ground baiting and trapping to control feral animals. A six-month extension was granted as a result of COVID-19 impacts, with works completed in December 2021.

Riparian and Coastal Recovery Program

DES administered a \$43 million Riparian and Coastal Recovery Program to identify environmental impacts and rehabilitate, stabilise and restore riverine, wetland, riparian and coastal environments. The Program was delivered in two stages:

- Stage 1 Reconnaissance and urgent riparian works
- Stage 2 Recovery works.

Urgent works were considered critical for repairs to prevent further erosion or environmental risks. Reconnaissance for high priority sites by regional NRM bodies, local governments and river improvement trusts was completed by December 2019 and involved consultation with relevant stakeholders in the region. Of the 42 projects which received funding of approximately \$9.1 million, 25 were urgent works.

The Stage 2 recovery works were informed by the research, mapping and data collection completed in Stage 1. Approximately \$21.1 million was allocated for 38 projects across riparian areas of North and Far North Queensland to prevent sediment reaching the coastal waters of the Great Barrier Reef lagoon and the Gulf of Carpentaria.

Following completion of the Program, DES engaged an external evaluator to assess the environmental, social and economic outcomes. The evaluation provided insights about the Program outcomes and process to support the continual improvement. The evaluation noted limitations such as the lack of data about the condition of the environment prior to the event. It also noted the challenges in determining the long term outcomes of the Program which were expected to occur beyond the end of the Program.

The evaluation ranked the effectiveness of the Program's design elements as high. It highlighted that the completion of all projects was achieved within their extended timeframes. The Program was found to have effectively prioritised areas for the greatest positive impact, implemented planned activities and identified and managed risks to a high extent. The effectiveness of governance and communication during implementation was rated as moderate due to mixed views for the question of whether more assistance was required.

Good practice example: Evaluation of the Riparian and Coastal Recovery Program

An independent evaluation of the Riparian and Coastal Recovery Program focused on Program process and outcomes to support the continual improvement of Program design for future events. A comprehensive logic model, based on a theory of change, mapped the Program process from the Program inputs, to activities, to the expected social, economic and environmental outcomes. This model underpinned the evaluation. DES validated the theory of change and key evaluation questions. The survey results and site interview discussion insights were the primary data sources for the evaluation.

The evaluation report made five recommendations to improve future Program design:

1. To further support disaster resilience outcomes, it was recommended a more holistic, comprehensive approach should be taken. It was suggested assessing the resilience of project outputs would ensure the solutions meet future needs under a changing climate.

2. Efficiencies could be achieved by providing greater technical guidance to the recovery partners. Specifically, guidance for the planning and approvals process, engaging with contractors, the design of environmental works and the measuring and reporting of project outputs.
3. Engagement of more diverse stakeholders, particularly during planning and evaluation, would invest in greater community resilience. Future programs should encourage, develop and maintain strong and continuing relationships with First Nations stakeholders. Integrating broader community stakeholders and encouraging greater community engagement and education, particularly in proactive stewardship and riparian resilience practices should also form part of future programs. Further, the design of future programs should consider a more comprehensive approach to disaster recovery, greater stakeholder engagement, clearer communication and governance processes, and a focus on long-term sustainability and resilience.
4. The evaluation recommended that a greater focus on the sustainability of outcomes is embedded in future programs to ensure long-term maintenance and monitoring periods are built into the scope of activities. Program design should allow for appropriate timing of on-ground works, and resilience and sustainability benchmarks, criteria or requirements are embedded into program guidelines.
5. Development of a Queensland-specific framework to improve natural disaster recovery and resilience in the Queensland region which embeds the aforementioned recommendations could expedite program roll out and provide greater confidence in the resilience and sustainability of future programs.

Nelia Train Incident

A stowed freight train containing materials including zinc, lead and copper anode, was impacted by flood waters and derailed near Nelia, approximately 50 kilometres east of Julia Creek. Recovery works included the construction of a 1.2 kilometre rail deviation. An environmental action plan was implemented, to allow environmental remediation works to progress and to also reduce the impact of an extended recovery timeframe.

Salvage and clean-up operations were required to be controlled, environmentally safe and not cause further environmental damage. A comprehensive recovery plan was implemented to address the environmental impact and ensure the safety of the surrounding community. The plan involved a coordinated effort between Queensland Rail, Pacific National, Glencore (product owner), QH, DAF, DTMR and DES.

Contaminated material was removed from the site and affected areas were remediated. Extensive sampling was carried out to determine the extent of contamination, and remediation action plans were developed for areas outside of the rail corridor. Key stakeholder engagement about clean-up progress included residents, landholders and the McKinlay Shire Council. A local liaison officer was appointed to provide updates, address concerns and ensure the wellbeing of the Nelia community. Long-term monitoring plans were also established to track the effectiveness of remediation efforts and assess any potential long-term impacts.

Throughout the recovery process, regular communication and collaboration among stakeholders ensured all aspects were addressed effectively. DAF was closely involved to assess the risk to livestock and the food chain. By April 2021, DES continued to lead the coordination of remediation activities while DAF continued monitoring to ensure the long-term safety of livestock. Additional revegetation activities were undertaken in advance of the wet season to promote ecological recovery.

Appendix A: Abbreviations

AFCA	Australian Financial Complaints Authority
ARC	Australian Red Cross
BRG	Building Recovery Group
CALD	Culturally and Linguistically Diverse
CDO	Community Development Officer
COVID-19	The illness caused by the SARS-CoV-2 virus
DAF	Department of Agriculture and Fisheries
DARM	Damage Assessment and Reconstruction Monitoring
DCHDE	Department of Communities, Housing and Digital Economy
DDMG	District Disaster Management Group
DES	Department of Environment and Science
DESBT	Department of Employment, Small Business and Training
DHPW	Department of Housing and Public Works
DITID	Department of Innovation, Tourism Industry Development and the Commonwealth Games
DM Act	<i>Disaster Management Act 2003</i>
DRFA	Disaster Recovery Funding Arrangements
DTMR	Department of Transport and Main Roads
FRG	Functional Recovery Groups
HHS	Hospital and Health Service
ICA	Insurance Council of Australia
IRO	Industry Recovery Officer
LDMG	Local Disaster Management Group
LGA	Local government area
MITEZ	Mount Isa to Townsville Economic Development Zone
Monsoon Trough State Recovery Plan	<i>North and Far North Queensland Monsoon Trough State Recovery Plan 2019–2021</i>

NEMA	National Emergency Management Agency
NGO	non-government organisation
NOTCH	North Townsville Community Hub
NRM	natural resource management
Office of the IGEM	Office of the Inspector-General of Emergency Management
QBCC	Queensland Building and Construction Commission
QDMA	Queensland's Disaster Management Arrangements
QDMA Review Report	<i>Review of Queensland's Disaster Management Arrangements (QDMA) Report 2: 2022–2023</i>
QH	Queensland Health
QRA	Queensland Reconstruction Authority
QRIDA	Queensland Rural Industry Development Authority
QSBAC	Queensland Small Business Recovery Advisory Council
QSBRC	Queensland Small Business Recovery Centre
RFC	Rural Financial Counsellor
RFDS	Royal Flying Doctor Service
Sendai Framework	<i>Sendai Framework for Disaster Risk Reduction 2015-2030</i>
SMART	specific, measurable, achievable, relevant and time-bound
TCC	Townsville City Council
the IGEM	the Inspector-General of Emergency Management
the QRP 2019	<i>Queensland Recovery Plan 2019</i>
the Review Report	<i>2019 Monsoon Trough Rainfall and Flood Review Report 3: 2018–19</i>
the Standard	Standard for Disaster Management in Queensland
WAMH	Western Alliance for Mental Health
WQPHN	Western Queensland Public Health Network

Appendix B: Assessment of Recovery Activities

Human and Social Recovery Outcomes

Sustainability

- S-1** Adequate housing is available to community members at appropriate times in the recovery process.
- S-2** Community members have access and are able to meet health needs (including mental health) arising from the disaster.
- S-3** Community members have access to psychosocial support.
- S-4** Households, families and individuals can act autonomously to contribute to the recovery process.
- S-5** Community members have access to education services.
- S-6** Community members have access to appropriate and coordinated social services.
- S-7** Community members feel sufficiently safe and secure following a disaster to engage in social activities and interactions with other members of the community.

Resilience

- R-1** The community has improved capacity and capability to respond to future disasters.
- R-2** The Community Recovery Package delivered targeted support to individuals and families to recover from the Monsoon Trough event, as well as building community capacity to more effectively respond to future events.

Recovery Activity	Completed	Outcome	Did the recovery activity produce a sustainable community?	Did the recovery activity produce a resilient community?
Provision of student counselling, support services and referral through Guidance Officers, School Chaplains and other relevant staff, as well as additional support and assistance to teachers and Principals in the affected areas.	Last reported ongoing at June 2020	Community members had access to education services Students have access to counselling services	Activity delivered and meets S-5 and S-3.	Activity delivered and meets R-1.

Recovery Activity	Completed	Outcome	Did the recovery activity produce a sustainable community?	Did the recovery activity produce a resilient community?
Raise awareness and provide access to personal financial assistance through activation of PHAS and ESSRS through DCDSS.	Reported complete at March 2020 and ongoing at April 2021	Households, families and individuals were enabled to effect their own recovery through appropriate income sources.	Recovery activity delivered and meets S-4	
Provide awareness of: – Interest free loans to people in hardship through Good Shepherd Microfinance;	Reporting ceased March 2020	Households, families and individuals were enabled to effect their own recovery through appropriate income sources.	Recovery activity delivered and meets S-4	
Provide awareness of: – DRFA Category C grants and Category B concessional loans available to not-for-profit organisations through QRIDA.		Households, families and individuals were aware of appropriate income sources available to effect their own recovery.	Recovery activity delivered and meets S-4	Activity delivered and meets R-1.
Coordinate the distribution of donated funds locally through charitable organisations.	Ongoing at April 2021	Households, families and individuals were enabled to effect their own recovery through appropriate income sources.	Recovery activity delivered and meets S-4	
Provide awareness of: – Energy Hardship Programs available through energy retailers		Households, families and individuals were enabled to effect their own recovery through appropriate income sources.		
Provide awareness of: – Insurance support available through the ICA		Households, families and individuals were enabled to effect their own recovery through appropriate income sources.		

Recovery Activity	Completed	Outcome	Did the recovery activity produce a sustainable community?	Did the recovery activity produce a resilient community?
Provide awareness of: – Financial service provider issue resolution available through the Financial Ombudsmen		Households, families and individuals were enabled to effect their own recovery through appropriate income sources.		
Provide awareness of: – Financial counselling services available.	Complete in June 2020	Households, families and individuals were enabled to effect their own recovery through appropriate income sources.	Activity delivered and meets S-4	
Provide Emergency Housing Assistance for displaced residents through DHPW of: – Temporary and short-term accommodation	Activity outcome marked “Complete” at September 2019 Reporting closed out at March 2020	Residents had access to safe and secure accommodation and were aware of the housing support available.	Activity delivered and meets S-1	
Provide Emergency Housing Assistance for displaced residents through DHPW of: – Medium to longer term accommodation as appropriate	Activity outcome marked “Complete” at September 2019 Reporting closed out at March 2020	Residents had access to safe and secure accommodation and were aware of the housing support available.	Activity delivered and meets S-1	
Provide Emergency Housing Assistance for displaced residents through DHPW of: – Information and advice to tenants and landlords through a Rental Recovery Hub established in Townsville	Activity outcome marked “Complete” at September 2019 Reporting closed out at March 2020	Residents had access to safe and secure accommodation and were aware of the housing support available.	Activity delivered and meets S-1	
Provide Emergency Housing Assistance for displaced residents through DHPW of:	Activity outcome marked “Complete” at September 2019	Residents had access to safe and secure accommodation and were	Activity delivered and meets S-1	

Recovery Activity	Completed	Outcome	Did the recovery activity produce a sustainable community?	Did the recovery activity produce a resilient community?
– Awareness of the Bond Loans and Rental grants available to assist individuals and families to enter the private accommodation market.	Reporting closed out at March 2020	aware of the housing support available.		
Provide EHCG as a contribution towards replacing or repairing essential household contents through the PHAS administered by DCDSS.	Last reported ongoing at March 2020	Households, families and individuals were supported to return safely to their residential dwelling.	Activity delivered and meets S-4.	
Coordinate the provision of donated goods to replace essential household contents through charitable organisations.	Last reported ongoing at March 2020	Households, families and individuals were supported to return safely to their residential dwelling.	Activity delivered and meets S-4 and S-7.	Activity delivered and meets R-1.
DCDSS to administer and provide: – SAG as a contribution towards replacing or repairing damaged dwellings through the PHAS	Reporting closed out March 2020	Households, families and individuals were supported to return safely to their residential dwelling.	Activity delivered and meets S-1, S-4 & S-7	
DCDSS to administer and provide: – Financial assistance as a contribution towards safety inspections and repairs to residential essential services through ESSRS	Reporting closed out March 2020	Households, families and individuals were supported to return safely to their residential dwelling.	Activity delivered and meets S-1, S-4 & S-7	
DCDSS to administer and provide: – Support through case management of vulnerable grant recipients.	Reporting closed out March 2020	Households, families and individuals were supported to return safely to their residential dwelling.	Activity delivered and meets S-1, S-4 & S-7	
Define scope of works and provide estimate of cost for SAG applications through DHPW.	Reporting closed out March 2020	Households, families and individuals were supported to return safely to their residential dwelling.	Activity delivered and meets S-1, S-4 & S-7	

Recovery Activity	Completed	Outcome	Did the recovery activity produce a sustainable community?	Did the recovery activity produce a resilient community?
Coordinate the provision of psychosocial and practical supports lead by DCDSS in conjunction with non-government organisations.	Reported as "ongoing" at April 2021	Community members had access to psychosocial support.	Activity delivered and meets S-3	
Referrals to existing personal support and generalist counselling services.	Reported as "ongoing" at April 2021	Community members had access to psychosocial support.	Activity delivered and meets S-3 and S-7	Activity delivered and meets R-1
Establishment of local case coordination mechanisms (as required).	Reported as "ongoing" at April 2021	Community members had access to psychosocial support.	Activity delivered and meets S-6	Not applicable
Additional outpatient services; theatre lists and other services to ensure provision of services to those affected (in addition to services provided to meet acute needs following the disaster).	Reported as "ongoing" at April 2021	Community members had access and were able to meet health needs (including mental health) arising from the disaster.	Activity delivered and meets S-2	Not applicable
Public Health Units working with local councils to manage public health risks to the community.	Reported as "ongoing" at April 2021	Community members had access and were able to meet health needs (including mental health) arising from the disaster.	Activity unable to be assessed due to lack of data.	
Patients with existing chronic health conditions receiving regular care have their needs assessed and treatment plans modified accordingly.	Reported as "ongoing" at April 2021	Community members had access and were able to meet health needs (including mental health) arising from the disaster.	Activity unable to be assessed due to lack of data.	
Implement mental health recovery programs to disaster-affected communities, including individuals, carers, families, and volunteers, with mental health services and emotional wellbeing support.	Reported as "ongoing" at April 2021	Community members had access and were able to meet health needs (including mental health) arising from the disaster.	Activity delivered and meets S-2 and S-3.	Activity delivered and meets R-1 and R-2.

Recovery Activity	Completed	Outcome	Did the recovery activity produce a sustainable community?	Did the recovery activity produce a resilient community?
Provision of information regarding availability of existing supports, services and additional community recovery services.	Complete at March 2020	Community members had access to appropriate and coordinated social services.	Activity delivered and meets S-1, S-2, S-3, S-4, S-5, S-6 & S-7	Not applicable
Provide: – PHAS and ESSRS grants information and mapping data thereof to QRA	Complete at March 2020	Community members had access to appropriate and coordinated social services.	Activity delivered but no alignment to recovery outcomes. Unable to assess.	
Provide: – Awareness of one-off grants and low-interest loans for not for profit organisations affected by the flooding (QRIDA).	Complete at March 2020	Community members had access to appropriate and coordinated social services.	Activity delivered and meets S-4	Not applicable
Use current disaster management structures to inform and influence local planning on effective volunteer engagement and management – to result in shorter lag time between the response and the start of volunteer recovery activities.	Reporting closed off at March 2020 – (status still marked as “Ongoing”)	The community has improved capacity and capability to respond to future disasters and strengthen resilience.	Nil data – unable to assess effectiveness	
Local government will work with its partners in the community and map the capabilities of their local volunteers.	Reporting closed off at March 2020 – (status still marked as “Ongoing”)	The community has improved capacity and capability to respond to future disasters and strengthen resilience.	Nil data – unable to assess effectiveness	
The RBDM will provide free replacement life event certificates to those people who have had their certificates lost, damaged or destroyed in a declared disaster area.	Output first reported in September 2019 with no change prior to close out in March 2020	Communities can act autonomously to direct and contribute to their recovery process.	Activity delivered and meets S-4	

Recovery Activity	Completed	Outcome	Did the recovery activity produce a sustainable community?	Did the recovery activity produce a resilient community?
Provision of funds for Community Development Officers in most of the significantly impacted communities to support community-led initiatives, facilitate linkages, collaboration and partnerships between and across groups, support and enable recovery and resilience planning and focus on building upon the strengths and capabilities of the affected communities.	Output first reported in September 2019 Ongoing as at April 2021	Communities can act autonomously to direct and contribute to their recovery process.	Activity delivered and meets S-4 and S-6	Activity delivered and meets R-1 and R-2
Flexible Funding Grants are available for projects aimed at driving recovery, building awareness and resilience within the most disaster affected LGAs.	Ongoing as at April 2021	Communities can act autonomously to direct and contribute to their recovery process.	Activity delivered and meets S-4	Activity delivered and meets R-1 and R-2

Economic Recovery Outcomes

Sustainability

- S-1** Businesses and industries in the local economy operate and trade in line with broader economic trends.
- S-2** Betterment projects result in more resilient infrastructure.

Resilience

- R-1** Business and not-for-profit organisations have adequate mitigation practices in place for risks and threats.
- R-2** The economy is sufficiently flexible and adaptable to shocks.

Recovery Activity	Completed	Outcome	Did the recovery activity produce a sustainable community?	Did the recovery activity produce a resilient community?
Support small businesses with tools and resources to facilitate economic recovery and resilience, including: •Establishing a small business recovery centre;	Marked “Complete” at September 2019 Marked “Ongoing” until June 2020	Fast-tracked small business recovery was supported.	Activity delivered and meets S-1	Activity delivered and meets R-1 and R-2
Support small businesses with tools and resources to facilitate economic recovery and resilience, including: •Raising awareness of availability of counselling services;	Marked “Complete” at September 2019 Marked “Ongoing” until June 2020 (#2, #3, #4)	Fast-tracked small business recovery is supported.	Activity delivered and meets S-1	Activity delivered and meets R-1 and R-2
Support small businesses with tools and resources to facilitate economic recovery and resilience, including: •Establishing a rental recovery hub to assist real estate industry;	Marked “Complete” at September 2019 Marked “Ongoing” until June 2020 (#2, #3, #4)	Fast-tracked small business recovery is supported.	Activity delivered and meets S-1	Activity delivered and meets R-1 and R-2
Support small businesses with tools and resources to facilitate economic recovery and resilience, including:	Ongoing at April 2021	Fast-tracked small business recovery is supported.	Activity delivered and meets S-1	Activity delivered and meets R-1 and R-2

Recovery Activity	Completed	Outcome	Did the recovery activity produce a sustainable community?	Did the recovery activity produce a resilient community?
<ul style="list-style-type: none"> •Implementing Go Local campaign; 				
<p>Support small businesses with tools and resources to facilitate economic recovery and resilience, including:</p> <ul style="list-style-type: none"> •Developing and implementing a Skilling Queenslanders for Work package to assist in the clean-up and rebuilding of Townsville and surrounding areas. 	Last reported as “Ongoing” at June 2020	Fast-tracked small business recovery is supported.	Activity delivered and meets S-1	Activity delivered and meets R-1 and R-2
Develop communications tools for businesses to ensure information is available to small businesses, including Aboriginal and Torres Strait Islander-owned businesses.	Ongoing at April 2021	Fast-tracked small business recovery is supported.	Activity delivered and meets S-1	Activity delivered and meets R-1 and R-2
Disseminate information to local governments to provide options for approval processes (e.g., temporary local planning instruments).	Reporting closed out at September 2020	Streamlined processes reduce red tape and boost local government recovery.	Activity delivered and meets S-1	Activity delivered and meets R-2
Work with insurance and banking sectors to ensure compassionate and fair dealings with affected businesses.	Last reported ongoing at June 2020	Businesses are provided with certainty on banking and insurance matters and can plan for their own recovery.	Activity delivered and meets S-1	Activity delivered and meets R-1 and R-2
Ensure councils and other agencies are provided relevant information – including legislative requirements – for tendering processes.	Reported as complete at March 2020 and June 2020	Local suppliers are afforded the opportunity to participate in and are engaged with the economic recovery process.	Activity delivered and meets S-1	Activity delivered and meets R-1 and R-2

Recovery Activity	Completed	Outcome	Did the recovery activity produce a sustainable community?	Did the recovery activity produce a resilient community?
		Build local skills and deliver jobs and revenue for local industry and businesses.		
Ensure local suppliers have relevant information and support to maximise their opportunities to gain government work/contracts.	Reported as complete at March 2020 and June 2020	Local suppliers are afforded the opportunity to participate in and are engaged with the economic recovery process. Build local skills and deliver jobs and revenue for local industry and businesses.	Activity delivered and meets S-1	Not applicable
Support tourism recovery by: •Tourism and Events Queensland (TEQ) to develop and implement a marketing campaign to promote the region to key domestic markets.	Complete at June 2022	Increase in visitor numbers and generation of tourism spend.	Activity delivered and meets S-1	Not applicable
Support tourism recovery by: •Develop and implement resources to support tourism businesses.	Complete at June 2022	Increase in visitor numbers and generation of tourism spend.	Activity delivered and meets S-1	Activity delivered and meets R-1
Support tourism recovery by: •Support iconic events in impacted areas.	Complete at June 2022	Increase in visitor numbers and generation of tourism spend.	Activity delivered and meets S-1	Not applicable
Facilitate the identification and analysis of additional economic stimulus opportunities highlighted by local governments and other stakeholders.	Complete at September 2020	Economic recovery is fast-tracked.	Activity delivered and meets S-1	Activity delivered and meets R-1 and R-2

Recovery Activity	Completed	Outcome	Did the recovery activity produce a sustainable community?	Did the recovery activity produce a resilient community?
Work with industry to seek contributions and/or discounted materials/supplies to support targeted recovery efforts.	Last reported as "Ongoing" at June 2020	Business recovery is fast-tracked.	Activity delivered and meets S-1	Not applicable
Establish key working groups to facilitate recovery, including: <ul style="list-style-type: none"> • a supply chain working group to facilitate a streamlined framework for industry to access necessary transport permits; 	Reporting closed out at June 2020 Status: Was completed, has re-emerged as an issue during COVID-19 at the time of reporting. This will be closed off and no longer reported on under Monsoon but may be used to inform COVID-19 impact reporting.	Supply chains are re-established and business operations can return to normal.	Activity delivered and meets S-1	Activity delivered and meets R-1 and R-2
Establish key working groups to facilitate recovery, including: <ul style="list-style-type: none"> • a fencing, restocking and agistment working group. 	Complete as reported at September 2019	Supply chains are re-established and business operations can return to normal.	Activity delivered and meets S-1	Activity delivered and meets R-1
Facilitate other key supply chain solutions, including dredging to address siltation issues at Karumba Port.	Complete as reported at September 2019	Supply chains are re-established and business operations can return to normal.	Activity delivered and meets S-1	Not applicable
Queensland Government program and project owners to investigate opportunities to support recovery.	Last reported as "Ongoing" at June 2020	Government programs and activities complement economic recovery priorities.	Activity delivered and meets S-1	Activity delivered and meets R-1 and R-2

Recovery Activity	Completed	Outcome	Did the recovery activity produce a sustainable community?	Did the recovery activity produce a resilient community?
Implement small business grants program to assist with business plans, re-training and coaching, additional financial counselling and advisory services, and explore new options for sustainability and resilience – funded under DRFA.	Complete at September 2020 and January 2021	Small business owners are provided a helping hand to provide a range of services to boost recovery and increase resilience.	Activity delivered and meets S-1	Activity delivered and meets R-1 and R-2
Implement a range of initiatives to boost tourism and support tourism operators in the impacted areas – funded under DRFA.	Complete at April 2021	Tourism numbers and money spent in impacted regions remain steady.	Activity delivered and meets S-1	Activity delivered and meets R-1 and R-2
Enhanced concessional loans – funded under DRFA.	Complete at September 2020	Primary producers can apply for loans of up to \$1 million, providing financial certainty and stability.	Activity delivered and meets S-1	Not applicable
Enhanced freight subsidies scheme – funded under DRFA.	Reported as closed for new applications at April 2021	Primary producers can afford to restock their depleted herds.	Activity delivered and meets S-1	Not applicable
Industry Recovery Officers and Financial Counsellors – funded under DRFA.	Last reported as “This program will conclude 30 June 2021” at April 2021	Primary producers are provided the support they need to boost resilience and sustainability.	Activity delivered and meets S-1	Activity delivered and meets R-1 and R-2
Provide assistance measures to mitigate river erosion impacts – funded under the DRFA.	Last reported as “ongoing” at March 2020 – reporting continued under Environment recovery line	Environment recovery will complement recovery and resilience of primary producers.	Activity delivered and meets S-1 and S-2.	Not applicable

Building Recovery Outcomes

Sustainability

- S-1** Infrastructure that relates to education, health, justice, welfare and any other community infrastructure/ buildings that support the community (private or public owned assets).
- S-2** Private infrastructure including residential, commercial/industrial and rural assets.

Resilience

- R-1** Business and not-for-profit organisations have adequate mitigation practices in place for risks and threats.

Recovery Activity	Completed	Outcome	Did the recovery activity produce a sustainable community?	Did the recovery activity produce a resilient community?
Finalise detailed building assessments on government building infrastructure.	Complete at September 2019 "Ongoing" from March 2020 to September 2020 Complete at January 2021	Development of a Prioritisation plan to allow government services to recommence (from alternate locations if required).	Activity delivered and meets S-1	Not applicable
Develop communication strategy for building and electrical health and safety messages.	Complete at September 2019	Residents and contractors make informed workplace health and safety decisions when undertaking repair work.	Activity delivered and meets S-1 and S-2	Not applicable
Facilitate community access to independent safety, cleaning and building repair advice.	Complete at September 2019	Residents are able to make informed decisions when preparing their homes for repair work or occupation.	Activity delivered and meets S-2	Not applicable
Facilitate community access to independent building repair advice.	Complete and reporting closed out at	Residents are able to make informed decisions when engaging	Activity delivered and meets S-2	Not applicable

Recovery Activity	Completed	Outcome	Did the recovery activity produce a sustainable community?	Did the recovery activity produce a resilient community?
	June 2020 and at September 2020	contractors to undertake repair work.		
Establish and promote a register of licensed building contractors and tradespeople. On closure of the register, enquires are directed to the 'Find a Local Tradie' search on the QBCC website.	Complete and reporting closed out at June 2020 and September 2020	Residents and insurance companies are confident repair work will be conducted by an appropriately licensed contractor. Residents and insurance companies can easily select local contractors to support economic recovery of the region.	Activity delivered and meets S-1 and S-2	Activity delivered and meets R-1
Deployment of building inspectors and compliance officers to conduct compliance observations and provide information to homeowners and licences about rebuilding after a flood.	Complete and closed out at June 2020 and September 2020	Residents and contractors are able to make informed decisions to ensure repair work undertaken meets compliance standards.	Activity delivered and meets S-2	Activity delivered and meets R-1
Support the development and implementation of local built infrastructure recovery plans.	Complete and closed out at June 2020 and September 2020 Note: Originally marked as complete at September 2019 and then "Ongoing" in December 2019 and March 2020	Recovery plans are underpinned by a strong evidence base and impact assessment data to establish regional rebuilding priorities and fast-track recovery.	Activity delivered and meets S-1 and S-2	Activity delivered and meets R-1
Determine the repair/rebuild approach for community assets.	Ongoing at April 2021	Develop a repair/rebuild plan to allow for community access to recovery funds. Clean-up and restoration of flood damaged community and	Activity delivered and meets S-1	Not applicable

Recovery Activity	Completed	Outcome	Did the recovery activity produce a sustainable community?	Did the recovery activity produce a resilient community?
		recreational facilities to achieve social recovery outcomes by ensuring leisure, sport and artistic activities are part of the fabric of the community.		
Develop and implement a recreational assets and community facilities recovery program.	Ongoing at April 2021	Develop a repair/rebuild plan to allow for community access to recovery funds. Clean-up and restoration of flood damaged community and recreational facilities to achieve social recovery outcomes by ensuring leisure, sport and artistic activities are part of the fabric of the community.	Activity delivered and meets S-1	Not applicable
Review identified Damage Assessments and Reconstruction Monitoring (DARMSys).	Complete at September 2020	Residents are able to access validated data reflecting the progress of infrastructure recovery.	Activity delivered and meets S-2	Not applicable
Provide advice to regulators on the recovery of built infrastructure as a result of learnings from the Monsoon Trough event.	Last reported "ongoing" at September 2020 Note: Q4 (June 2020) Status: 1. Recovery activities are on track to achieve the projected outcome. 2. Complete.	Any identified improvements from disaster events will be provided to the appropriate entities as part of the 2019-20 BRG preparedness activities.	Activity delivered and meets S-1 and S-2	Activity delivered and meets R-1
Maintain consultation with built environment stakeholders, peak	Complete as at September 2020 with	Information shared amongst relevant parties to allow informed actions to be taken.	Activity delivered and meets S-1 and S-2	Activity delivered and meets R-1

Recovery Activity	Completed	Outcome	Did the recovery activity produce a sustainable community?	Did the recovery activity produce a resilient community?
industry bodies and industry to support locally-led recovery.	work to continue as BAU			
Investigate and address relevant insurance policy issues and ensure a compassionate response to affected businesses; working with the Insurance council of Australia and Economic Recovery Group.	Complete at June 2020 and September 2020	Insurers are responding to customers experiencing hardship in a fair, timely and compassionate manner – providing residents with certainty to allow for their own recovery planning.	Activity delivered and meets S-1 and S-2	Not applicable
Align infrastructure development programs and activities (where possible) to complement economic reconstruction priorities.	Complete at September 2020	Relevant infrastructure program and project owners investigate opportunities to support recovery priorities.	Activity delivered and meets S-1 and S-2	Not applicable

Roads and Transport Recovery Outcomes

Sustainability

S-1 Roads and Transport infrastructure supports the delivery of essential services to the community.

Resilience

R-1 Infrastructure is rebuilt to reduce, to a reasonable degree, the impact of future disasters on communities.

Recovery Activity	Completed	Outcome	Did the recovery activity produce a sustainable community?	Did the recovery activity produce a resilient community?
Flinders Highway reconstruction works.	Complete at September 2019	Critical transport route restored.	Activity delivered and meets S-1	Activity delivered and meets R-1
Flinders Highway betterment works.	Completed	Critical transport route resilience improved.	Activity delivered and meets S-1	Activity delivered and meets R-1
Review existing Queensland Transport and Roads Investment Program (QTRIP) capital works plans to accommodate the Natural Disaster Program.	Completed	Essential public assets restored.	Activity delivered and meets S-1	Insufficient data from documents to enable assessment
Scope reconstruction program of works.	Completed	Essential public assets restored.	Activity delivered and meets S-1	Insufficient data from documents to enable assessment
Develop project delivery plans to achieve key tasks.	Completed	Essential public assets restored.	Activity delivered and meets S-1	Insufficient data from documents to enable assessment
Undertake reconstruction works.	Completed	Essential public assets restored.	Activity delivered and meets S-1	Insufficient data from documents to enable assessment
Develop and implement a Betterment program.	Completed	Betterment program to improve the disaster resilience of flood damaged essential public assets.	Activity delivered and meets S-1	Activity delivered and meets R-1

Environment Recovery Outcomes

Sustainability

- S-1** Pollution impacts to the environment are avoided or minimised.
- S-2** Recovery actions do not generate further risk to the environment.
- S-3** Natural environment operates to maintain or restore healthy biodiversity and ecosystems.
- S-4** Protection and management of parks, forests and the Great Barrier Reef for the enjoyment of current and future generations.

Resilience

- R-1** Restoration of flood impacted areas to a more resilient landscape.
- R-2** Reduced environmental issues following disaster events, due to more effective planning and preparedness by government, industry and community.
- R-3** An increased understanding of the risk of future disasters on the environment and of the environment providing natural protections.

Recovery Activity	Completed	Outcome	Did the recovery activity produce a sustainable community?	Did the recovery activity produce a resilient community?
Stakeholders effectively engaged, consulted and assisted, including land managers, local government and industry.	Complete at September 2019 and December 2019	Locally led environment recovery is supported.	Delivered and meets S-1 and S-2	Delivered and meets R-3
Work with mining and industrial operators to assess non-compliance, issue temporary emission licences and ensure recovery actions are environmentally safe.	Complete/ongoing at September 2019 Complete at January 2021	Mining and industrial operations are back in operation and fully compliant with environmental approvals. Penalties incurred where appropriate.	Delivered and meets S-1, S-2 and S-3	Delivered and meets R-3
Ensure national parks and state forests are assessed and re-opened as soon as it is safe to do so; in consultation with local tourism and business operators.	Complete at March 2020	National parks and state forests reopened to the public.	Delivered and meets S-4	

Recovery Activity	Completed	Outcome	Did the recovery activity produce a sustainable community?	Did the recovery activity produce a resilient community?
Support the development and implementation of local environment recovery plans.	Complete at March 2020	Coordinated recovery planning, issues management and activities.	Delivered and meets S-2	Activity delivered and meets R-2
Prioritisation of advice and environmental approvals or exemptions that support road rebuilding, port dredging, beach sand replenishment activities, and rebuilding and rectification of coastal infrastructure and heritage valued places.	Complete at March 2020	Rapid recovery actions are supported by local and state government agencies and individuals, while protecting environment and heritage values.	Insufficient data to determine	
Work with responsible parties for the Nelia Train Incident – to ensure recovery action carried out is environmentally safe and the community is well informed of impacts and response.	Reported as ongoing at April 2021	Salvage and clean-up operations are controlled, environmentally safe, and do not cause further unnecessary damage to the environment.	Delivered and meets S-1 and S-2	Delivered and meets R-3
Conduct ecological assessment and recovery actions for impacted native wildlife; including monitoring and reporting for turtle and dugong strandings through the StrandNet database.	Last reported as ongoing at June 2020 Reporting closed out at June 2020	Impacts to native wildlife and associated habitats minimised.	Delivered and meets S-3 and S-4	Delivered and meets R-3
Rebuild and/or repair of remote damaged automated stream gauging and water quality stations and associated infrastructure via DRFA funding.	Last reported as ongoing at June 2020 Reporting closed out at June 2020	Critical state water management infrastructure restored.	Delivered and meets S-3	Delivered and meets R-2 and R-3
Progress arrangements for the use and sharing of data and satellite	Complete at December 2019	Effective and timely use and sharing of data and satellite imagery to support fit for purpose	Delivered and meets S-2, S-3 and S-4	Delivered and meets R-2 and R-3

Recovery Activity	Completed	Outcome	Did the recovery activity produce a sustainable community?	Did the recovery activity produce a resilient community?
imagery to assist with post-event response and recovery activities.		Queensland requirements (further to the International Charter for imagery provision during natural disasters).		
Assessment, prioritisation and restoration of damaged infrastructure in national parks, state forests and protected marine areas via DRFA funding.	Ongoing at April 2021	Critical protected area infrastructure restored.	Delivered and meets S-2 and S-4	
Assess impacts to privately managed conservation areas (nature refuges) and provide Queensland Government assistance measures where required.	Complete at March 2020	Restoration of damage to nature refuges.	Delivered and meets S-3	Delivered and meets R-3
Weeds and pest management programs via approved DRFA funding. Part A: parthenium control program for Flinders is an urgent recovery activity to ensure weeds are addressed before seeding occurs. Part B: package of works implemented through relevant regional NRM organisations for ongoing integrated control of pests and weeds.	Last reported as ongoing at April 2021 Programs were extended beyond the original scheduled completion date of 30 June 2021	Minimise the impact of pest and weed seed spread.	Delivered and meets S-2, S-3 and S-4	Delivered and meets R-1, R-2 and R-3
Provide assistance measures through DRFA funding to: – work with local landholders to identify environmental impacts through improved mapping/data	Last reported as ongoing at April 2021 Programs were extended beyond original	Landscape, streambank and coastal erosion mitigated and further erosion risks minimised.	Delivered and meets S-2, S-3 and S-4	Delivered and meets R-1 and R-3

Recovery Activity	Completed	Outcome	Did the recovery activity produce a sustainable community?	Did the recovery activity produce a resilient community?
collection and implement urgent streambank and riparian works (Stage 1); – address coastal erosion; – work with local landholders to address additional streambank and riparian works informed by mapping/data collection (Stage 2).	scheduled completion date			
Landscape remediation actions included as part of the Category D Exceptional Circumstances Package: North West Queensland Beef Recovery Package.	On track at December 2019 – REPORTED ON UNDER ECONOMIC SECTION	Damage to grazing land remediated.	Delivered and meets S-2	Delivered and meets R-1

Appendix C: Assessment Results

Recovery activities for each line of recovery

Human and Social	Economic	Building	Roads and Transport	Environment	<u>Total</u>
36	25	14	7	16	98

In-scope recovery activities which met sustainability and recovery outcomes

	Human and Social	Economic	Building	Roads and Transport	Environment	<u>Legend</u>
S1	25%	100%	71.43%	100%	18.75%	0%-25%
S2	8.33%	4%	78.57%		50%	26%-50%
S3	13.89%				43.75%	51%-75%
S4	41.67%				37.50%	76%-100%
S5	5.56%					
S6	8.33%					
S7	19.44%					
R1	19.44%	64%	35.71%	42.86%	12.50%	
R2	8.33%	60%			25%	
R3					56.25%	

	Human and Social
S1	25.00%
S2	8.33%
S3	13.89%
S4	41.67%
S5	5.56%
S6	8.33%
S7	19.44%
R1	19.44%
R2	8.33%

	Economic
S1	100.00%
S2	4.00%
R1	64.00%
R2	60.00%

	Building
S1	71.43%
S2	78.57%
R1	35.71%

	Roads and Transport
S1	100.00%
R1	42.86%

	Environment
S1	18.75%
S2	50.00%
S3	43.75%
S4	37.50%
R1	12.50%
R2	25.00%
R3	56.25%

References

- Australia and New Zealand School of Government. (2018, May). *National monitoring and evaluation for disaster recovery programs*. Retrieved from Australian Disaster Resilience Knowledge Hub: <https://knowledge.aidr.org.au/media/5967/a-monitoring-and-evaluation-framework-for-disaster-recovery-programs-v2.pdf>
- Australian Broadcasting Corporation. (2019, August 1). *Townsville flood repair delays leave hundreds displaced six months on*. Retrieved from ABC: <https://www.abc.net.au/news/2019-08-01/townsville-floods-hundreds-displaced-six-months-later/11370062>
- Australian Government. (2020, March 27). *Joint media release with the Hon. Cameron Dick MP - \$21 million tick of approval for Queensland infrastructure resilience projects*. Retrieved from Ministers for the Department of Home Affairs: <https://minister.homeaffairs.gov.au/davidlittleproud/Pages/approval-qld-infrastructure-resilience-projects.aspx>
- Australian Government. (2020, July 6). *Joint media release with the Hon. Mark Bailey MP - Queensland boosts regional resilience on flood-prone roads*. Retrieved from Ministers for the Department of Home Affairs: <https://minister.homeaffairs.gov.au/davidlittleproud/Pages/queensland-resilience-flood-prone-roads.aspx>
- City of Townsville. (2019, June 28). *Portal to connect local businesses with rebuild projects live now*. Retrieved from City of Townsville | News & Publications | Media Releases: <https://www.townsville.qld.gov.au/about-council/news-and-publications/media-releases/2019/june/portal-to-connect-local-businesses-with-rebuild-projects-live-now>
- Commonwealth of Australia. (2021). *Australian Disaster Resilience Handbook Collection First Edition 2021: Systemic Disaster Risk*. Australian Institute for Disaster Resilience. Retrieved from https://knowledge.aidr.org.au/media/9228/handbook_systemic_disaster_risk_2022-03-17_v11.pdf
- Deloitte Access Economics. (2019). *The social and economic cost of the North and Far North Queensland Monsoon Trough*. Deloitte.
- Department of Agriculture, Fisheries and Forestry, Queensland. (2013). *Queensland Drought Situation as at 28th June 2013*. Retrieved from <https://data.longpaddock.qld.gov.au/Drought/2013/20130628.pdf>
- Department of Employment, Small Business and Training. (2020). *State of Small Business 2019–20*. Retrieved from <https://www.publications.qld.gov.au/ckan-publications-attachments-prod/resources/fc2ff16d-b180-41db-85ae-dc3c100753af/state-of-small-business-report-2019-20.pdf?ETag=7a7685838b4b80ca9f8f9a809233765e>
- FutureBeef. (2021, February 26). *From surviving to thriving in the North West*. Retrieved from FutureBeef | News: <https://futurebeef.com.au/from-surviving-to-thriving-in-the-north-west/>
- Inter-Parliamentary Union and the United Nations Office for Disaster Risk Reduction. (2021). *Disaster Risk Reduction to achieve the Sustainable Development Goals | A toolkit for parliamentarians*. France: Inter-Parliamentary Union and the United Nations Office for Disaster Risk Reduction. Retrieved from

<https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwjp1qDqormEAXV71DQHHRBC6gQFnoECBAQAQ&url=https%3A%2F%2Fwww.ipu.org%2Ffile%2F12697%2Fdownload&usg=AOvVaw0ez0XFt9WQWjwRKyBlmxlb&opi=89978449>

- Matthews, V., Longman, J., Berry, H., Passey, M., Bennett-Levy, J., Morgan, G., . . . Bailie, R. (2019). Differential Mental Health Impact Six Months After Extensive River Flooding in Rural Australia: A Cross-Sectional Analysis Through an Equity Lens. *Frontiers in Public Health*, 7. doi:10.3389/fpubh.2019.00367
- Mental Health Select Committee. (2022). *Inquiry into the opportunities to improve mental health outcomes for Queenslanders | Report No. 1, 57th Parliament*. Retrieved from <https://documents.parliament.qld.gov.au/tp/2022/5722T743-64F1.pdf>
- National Mental Health Commission. (2021). *Our Stories Beyond the Disaster | 2021*. Retrieved from <https://www.mentalhealthcommission.gov.au/getmedia/5221a681-0530-475b-8396-c8fc51c1ac3d/Our-Stories-Beyond-the-Disaster-Research-Report>
- Neighbourhood Centres Queensland. (2022). *North Townsville Community Hub receives Highly Commended Resilient Australia Health and Wellbeing Award (Qld)*. Retrieved from Neighbourhood Centres Queensland: <https://ncq.org.au/north-townsville-community-hub-receives-highly-commended-resilient-australia-health-and-wellbeing-award-qld/>
- Pescaroli, G., & Alexander, D. (2015, March). A definition of cascading disasters and cascading effects: Going beyond the "toppling dominos" metaphor. *Planet@Risk*, 3. Retrieved from https://www.researchgate.net/publication/277220856_A_definition_of_cascading_disasters_and_cascading_effects_Going_beyond_the_toppling_dominos_metaphor
- Queensland Audit Office. (2020). *Licensing builders and building trades | Report 16: 2019–20*. Retrieved from https://www.qao.qld.gov.au/sites/default/files/2020-06/Licensing%20builders%20and%20building%20trades%20%28Report%2016%E2%80%942019%E2%80%9320%29_0.pdf
- Queensland Government. (2019, July 15). *2019 Monsoon Trough Rainfall and Flood Review QUEENSLAND GOVERNMENT RESPONSE*. Retrieved from Queensland Parliament, Online Tabled Papers: <https://cabinet.qld.gov.au/documents/2019/Jul/ResMonTr/Attachments/Response.pdf>
- Queensland Government. (2019, September 5). *The Queensland Cabinet and Ministerial Directory*. Retrieved from Small business recovery on the agenda: <https://statements.qld.gov.au/statements/88304>
- Queensland Government. (2019, October 21). *The Queensland Cabinet and Ministerial Directory*. Retrieved from Getting small business back on track across Queensland: <https://statements.qld.gov.au/statements/88664>
- Queensland Reconstruction Authority. (2021, May 18). *Isabella Creek Bridge upgrade completed*. Retrieved from Queensland Reconstruction Authority: <https://www.qra.qld.gov.au/news-case-studies/case-studies/isabella-creek-bridge-upgrade-completed>
- Queensland Reconstruction Authority. (2021, November 9). *Environmental Recovery Program delivers following 2019 Monsoon*. Retrieved from Queensland Reconstruction Authority: <https://www.qra.qld.gov.au/news-case-studies/case-studies/environmental-recovery-program-delivers-following-2019-monsoon>

- Queensland Reconstruction Authority. (2021, July 9). *Palm Island seawall repaired after monsoonal damage*. Retrieved from Queensland Reconstruction Authority | Case Studies: <https://www.qra.qld.gov.au/news-case-studies/case-studies/palm-island-seawall-repaired-after-monsoonal-damage>
- Queensland Reconstruction Authority. (2021, May 4). *Richmond–Winton Road a focus for resilience works*. Retrieved from Queensland Reconstruction Authority: <https://www.qra.qld.gov.au/news-case-studies/case-studies/richmond-winton-road-focus-resilience-works>
- Queensland Reconstruction Authority. (n.d.). *About DARM*. Retrieved from Queensland Reconstruction Authority: <https://www.qra.qld.gov.au/darm/about-darm>
- Queensland Reconstruction Authority. (n.d.). *Activations*. Retrieved from Queensland Reconstruction Authority: <https://www.qra.qld.gov.au/disaster-funding-activations/activations>
- Queensland Reconstruction Authority. (n.d.). *Weeds and Pest Management Program*. Retrieved from Queensland Reconstruction Authority: <https://www.qra.qld.gov.au/recovery/recovery-operations/2019-north-and-far-north-queensland-monsoon-trough/exceptional/weeds#:~:text=The%20objective%20of%20the%20Weeds,of%20the%20Monsoon%20Trough%202019.>
- Residential Tenancies Authority. (2019, February 25). *Rental Recovery Hub to boost Townsville flood response*. Retrieved from Residential Tenancies Authority: <https://www.rta.qld.gov.au/news/2019/02/25/rental-recovery-hub-to-boost-townsville-flood-response>
- Rural & Remote Mental Health. (n.d.). *Rural Minds*. Retrieved from Rural & Remote Health | Our Programs: <https://rrmh.com.au/our-programs/rural-minds/>
- Seneviratne, S. I., Nicholls, N., Easterling, D., Goodess, C. M., Kanae, S., Kossin, J., . . . Zhang, X. (2012). *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation*.
- State of Queensland (Inspector-General of Emergency Management). (2021). *Standard for Disaster Management in Queensland*. Retrieved from <https://www.igem.qld.gov.au/sites/default/files/2021-07/Standard%20for%20Disaster%20Management%20in%20Queensland%202.1.1.pdf>
- State of Queensland (Inspector-General of Emergency Management). (n.d.). *Review of Queensland's Disaster Management Arrangements (QDMA) | Report 2: 2022-2023*. Retrieved from https://www.igem.qld.gov.au/sites/default/files/2023-06/Review%20of%20Queensland%27s%20Disaster%20Management%20Arrangements%20%28QDMA%29_0.pdf
- State of Queensland. (2024). *Disaster Management Act 2003*. Retrieved from Queensland Legislation: <https://www.legislation.qld.gov.au/view/html/inforce/current/act-2003-091>
- The Honourable Shannon Fentiman, Minister for Employment and Small Business and Minister for Training and Skills Development. (2019, October 21). *Getting small business back on track across Queensland*. Retrieved from Ministerial Media Statements: <https://statements.qld.gov.au/statements/88664>

- The Honourable Shannon Fentiman, Minister for Employment and Small Business and Minister for Training and Skills Development. (2019, September 5). *Small business recovery on the agenda*. Retrieved from Ministerial Media Statements: <https://statements.qld.gov.au/statements/88304>
- The Salvation Army. (2021). *North Queensland monsoon and floods/Townsville floods | 18 month progress report - February 2019*. Retrieved from https://www.salvationarmy.org.au/scribe/sites/auesalvos/files/documents/publications-and-resources/SALV760_Townsville_Floods_2020_-_18_Month_Progress_Report_v2.pdf
- The State of Queensland (Department of Employment, Small Business and Training). (2020). *2019–2020 Annual Report*. Retrieved from <https://www.publications.qld.gov.au/ckan-publications-attachments-prod/resources/c3bd40a2-8065-4f5c-8e47-4482a8cbe477/desbt-annual-report-2019-20.pdf?ETag=0cac889a58076e30c8d021d042dd0fdf>
- The State of Queensland (Queensland Health). (2022). *Rural and Remote Health & Wellbeing Strategy 2022-2027 | Handbook*. Retrieved from https://www.health.qld.gov.au/__data/assets/pdf_file/0020/1142066/Rural-and-Remote-Health-and-Wellbeing-Strategy-2022-2027.pdf
- The State of Queensland (Queensland Reconstruction Authority). (2019). *North and Far North Queensland Monsoon Trough | State Recovery Plan 2019-2021*. Retrieved from <https://www.qra.qld.gov.au/sites/default/files/2020-03/Monsoon-Trough-2019-State-Recovery-Plan.pdf>
- The State of Queensland (Queensland Reconstruction Authority). (2019). *Queensland Recovery Plan | Sub-plan to the Queensland State Disaster Management Plan*. Retrieved from <https://www.qra.qld.gov.au/sites/default/files/2019-08/Queensland-Recovery-Plan-update-August2019.PDF>
- The State of Queensland (Queensland Reconstruction Authority). (2022). *Evaluation Report | Mental Health Recovery Program | Community Recovery Package | North and Far North Queensland Monsoon Trough 25 January 2019 – 14 February 2019*. Retrieved from <https://aidrmed-prod.s3.amazonaws.com/prod/evaluations/648b43f7-2062-4b85-88aa-3017155264b7/Mental%20Health%20Recovery%20Program%20MT.pdf>
- The State of Queensland (Queensland Reconstruction Authority). (2022). *Evaluation Report | North West Queensland Beef Recovery Package | Community Recovery Package | North and Far North Queensland Monsoon Trough 25 January 2019 – 14 February 2019*. Retrieved from <https://aidrmed-prod.s3.amazonaws.com/prod/evaluations/81f74c96-e0c6-4757-b023-34f12ab3dc06/Beef%20Recovery%20Program%20MT.pdf>
- The State of Queensland (Queensland Reconstruction Authority). (2022, November). *Evaluation Report | Tourism Recovery Program | Community Recovery Package | North and Far North Queensland Monsoon Trough 25 January 2019 – 14 February 2019*. Retrieved from <https://aidrmed-prod.s3.amazonaws.com/prod/evaluations/5d1d65e8-6331-42ae-b578-e2bad36f390d/Tourism+Recovery+Program+MT.pdf>
- The State of Queensland (Queensland Reconstruction Authority). (2022). *Palm Island and Townsville Regional Resilience Strategy*. Retrieved from https://www.qra.qld.gov.au/sites/default/files/2022-08/palm_island_and_townsville_regional_resilience_strategy.pdf

- The State of Queensland. (2018). *Queensland State Disaster Management Plan*. Retrieved from https://www.disaster.qld.gov.au/__data/assets/pdf_file/0021/337233/Queensland-State-Disaster-Management-Plan.pdf
- The State of Queensland, Queensland Reconstruction Authority. (2019). *Queensland Recovery Plan | Sub-plan to the Queensland State Disaster Management Plan*. Retrieved from <https://www.qra.qld.gov.au/sites/default/files/2019-08/Queensland-Recovery-Plan-update-August2019.PDF>
- Thriving Communities Partnership. (2020). *Disaster Planning and Recovery Collaborative Research Project | Phase 1 Report*. Retrieved from http://thriving.org.au/files/Projects/Disaster%20Planning%20and%20Recovery%20Collaborative%20Research%20Project/Web%20Version%20Final%20Report%20-%20Phase%201/TCP_Disaster%20Relief%20Report%20Phase%201%20Final_Low%20Res.pdf
- Thriving Communities Partnership. (2021). *Disaster Planning and Recovery Collaborative Research Project | Phase 2 Report*. Retrieved from <https://www.thriving.org.au/files/Knowledge%20Hub/Disaster%20Planning%20and%20Recovery%20Collaborative%20Research%20Project%20Phase%202%20Report%20copy-compressed.pdf>
- Western Queensland Public Health Network & Royal Flying Doctor Service. (2020). *North West Flood Recovery and Resilience Summit | November 30 2020, Julia Creek – NW Queensland | Summit Narratives and Report*. Retrieved from <https://www.wqphn.com.au/uploads/documents/WQPHN%20Publications/SST024%20OPHN%20Summit%20Narratives%20and%20Report-Dec2020-v3.pdf>
- Winton Shire Council. (2020). *Annual Report 2019-2020*. Retrieved from <https://www.winton.qld.gov.au/downloads/file/1261/19-20-annual-report>

PAGE INTENTIONALLY LEFT BLANK

OFFICIAL

Inspector-General of Emergency Management



Office of the Inspector-General of Emergency Management

Phone (07) 3029 8813
Email info@igem.qld.gov.au
Web www.igem.qld.gov.au
Postal address PO Box 12068 George Street Brisbane Qld 4003

