

crisis response

Restoring Public Services in the
Immediate Aftermath of a Disaster



The Queensland Experience: Immediate Response to Floods and Cyclones

Graeme Newton

Chief Executive Officer

Queensland Reconstruction Authority

Queensland Reconstruction Authority



**Recovery and Reconstruction:
The Queensland Experience**

IPAA WA

19 March 2014

Graeme Newton, CEO

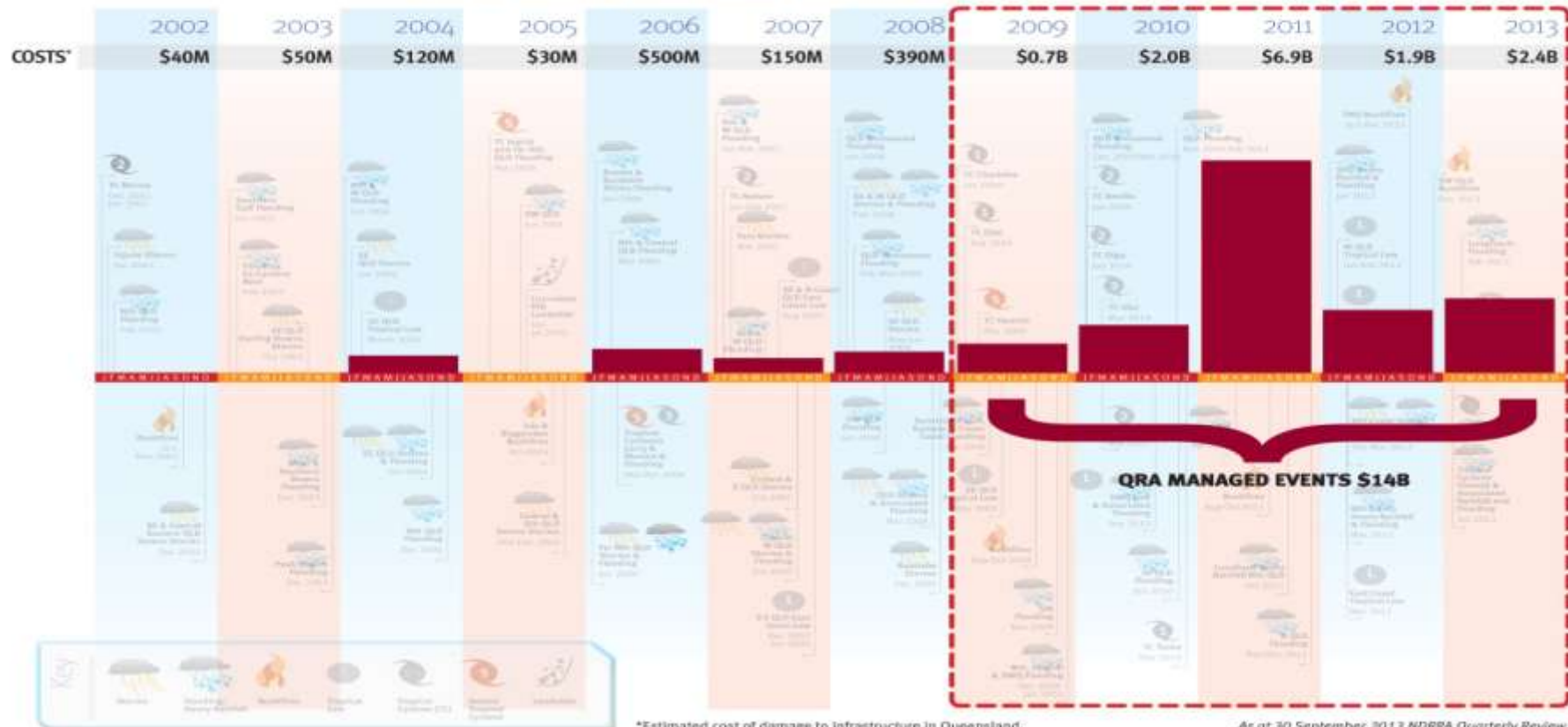
Overview

- Scale of events
- First response
- Inter-agency cooperation
- Queensland Reconstruction Authority
- Damage assessment
- Resilience projects
- Growth of capabilities





Over a decade of natural disaster events in Queensland



Scale of Disasters – Km²



Chile earthquake 2010
300,000 km²



Japan earthquake 2011
140,000 km²



New Zealand
earthquake 2011
5,800 km²



Exxon Valdez oil spill 1989
28,000 km²



Wildfires during 2010
Russian heatwave
8,800 km²



Pakistan floods 2011
114,500 km²



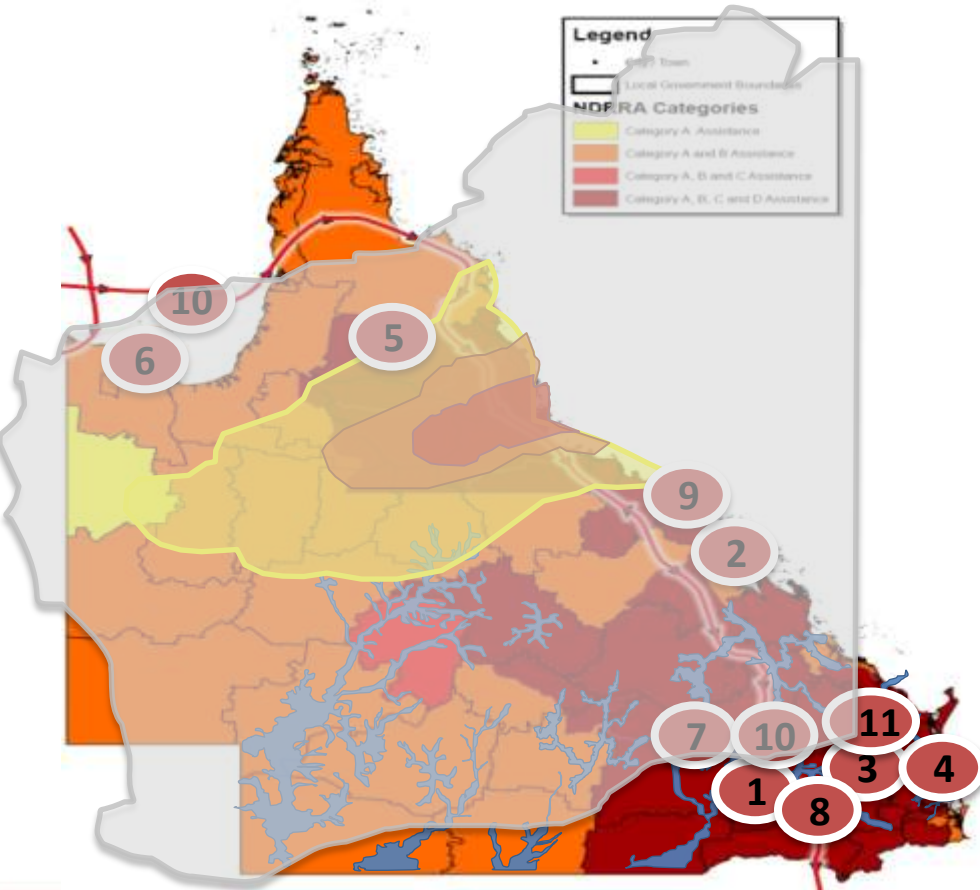
Hurricane Katrina 2005
144,840 km²



Australia floods 2010
850,000 km²

Source: The Year that Shook the Rich: A review of natural disaster in 2011.

The Brookings Institution – London School of Economics Project on Internal Displacement.



Statistics

Queensland population – 4.6 million

Queensland area – 1.73 million km²

Disaster events

- | | |
|----------------|---|
| 1. Dec 10 | Rainfall & SE/W flooding |
| 2. Dec 10 | Tropical Cyclone Tasha |
| 3. Jan 11 | Flash flooding Toowoomba & Lockyer Valley |
| 4. Jan 11 | Brisbane/Ipswich flooding |
| 5. Jan/Feb 11 | TCs Anthony & Yasi |
| 6. Feb 11 | Monsoonal flooding |
| 7. Apr 11 | Maranoa flooding |
| 8. Feb 12 | South West flooding |
| 9. Mar 12 | Townsville storm |
| 10. Jan 2013 | TC Oswald & flooding |
| 11. Feb/Mar 13 | Central & Southern QLD Low |

2014 – 3 activated events so far



Scale of impact

















Scale of impact

	2010/11 events	2011/12 events	2013 events
LGAs disaster activated	73	65	58
Residential properties affected	136,000	1,400	4,300+
State road network affected (km)	20,610	10,890	7,655
State rail network affected (km)	4,748	4,180	2,800
Schools affected	411	7	339
Other government buildings affected	4,381	135	99
Homes & businesses without power	480,000	9,000	390,000
National parks affected	162	22	267 (Includes other protected areas managed by DNPSR)



















Queensland Flood Recovery Plan

Phase ONE: post-impact and early recovery

- Provision of outstanding response activities and immediate recovery operations.
- Development of strategies, engagement and consultation with supporting agencies.
- Upon completion, recovery efforts focus on medium and long-term recovery and reconstruction objectives.

Phase TWO: recovery and reconstruction

- Execution of functional activities and delivery of resources and services to recover and rebuild.
- Monitoring of recovery activities and adjustment of functional recovery plans.
- Development of strategies to enhance resilience to risk of future events.

Phase THREE: transition

- Outstanding recovery tasks will be handed over to departmental management arrangements.
- Progressive handover of recovery responsibilities to appropriate State and Local Government agencies, NGOs and industry sectors.

Queensland Reconstruction Authority

Ensure Queensland effectively and efficiently recovers from the impact of disaster events

- Established under its own Act of Parliament
- Reports to Board and Minister responsible for reconstruction
- Coordinate reconstruction
- Prioritise infrastructure and services
- Administer NDRRA and ensure value-for-money outcomes
- Build disaster resilience
- Implement Commission of Inquiry findings as needed



Governance Model

Total Program 2010 – 2013

\$14B



Australian Government



**Aust
National
Audit
Office**

75%

National
Partnership
Agreement

25%

Cwlth NDRRA Determination

Queensland Reconstruction Authority
(Queensland Reconstruction Authority Act)

QRA VTM Model / Qld Guidelines

Local
Governments

Dept Transport
& Main Roads

Dept Housing &
Public Works,
Education, Health,
Fire & Emerg Svcs

QRAA

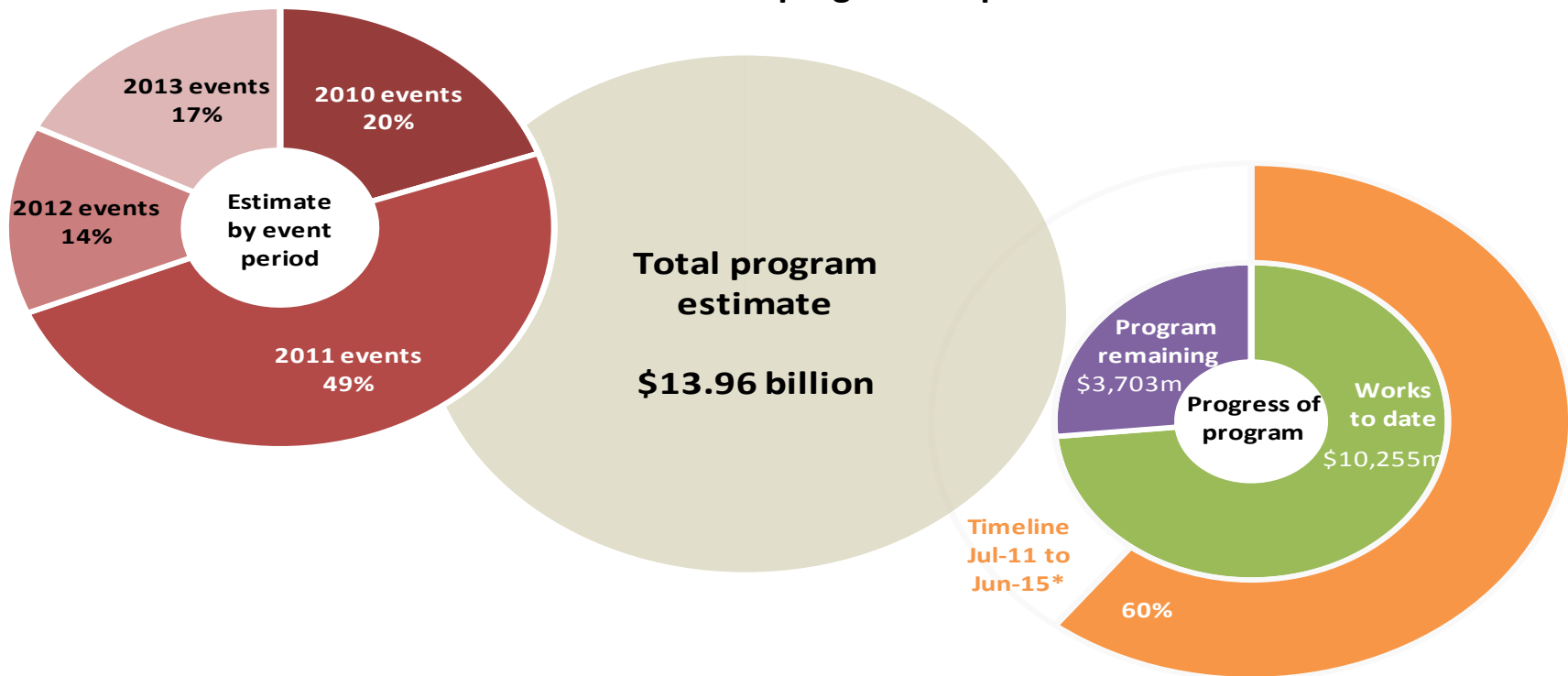
Dept of
Communities

Construction Contractors

Individuals and
Businesses

**QLD
Audit
Office**

Reconstruction program snapshot



* Proportion of allowable time passed for delivery of total program since 1 July 2011 (following the Authority's establishment) to data reporting date of 30 November 2013

Source: the Authority, 30 September 2013 NDRRA Estimates Review & 6 January 2014

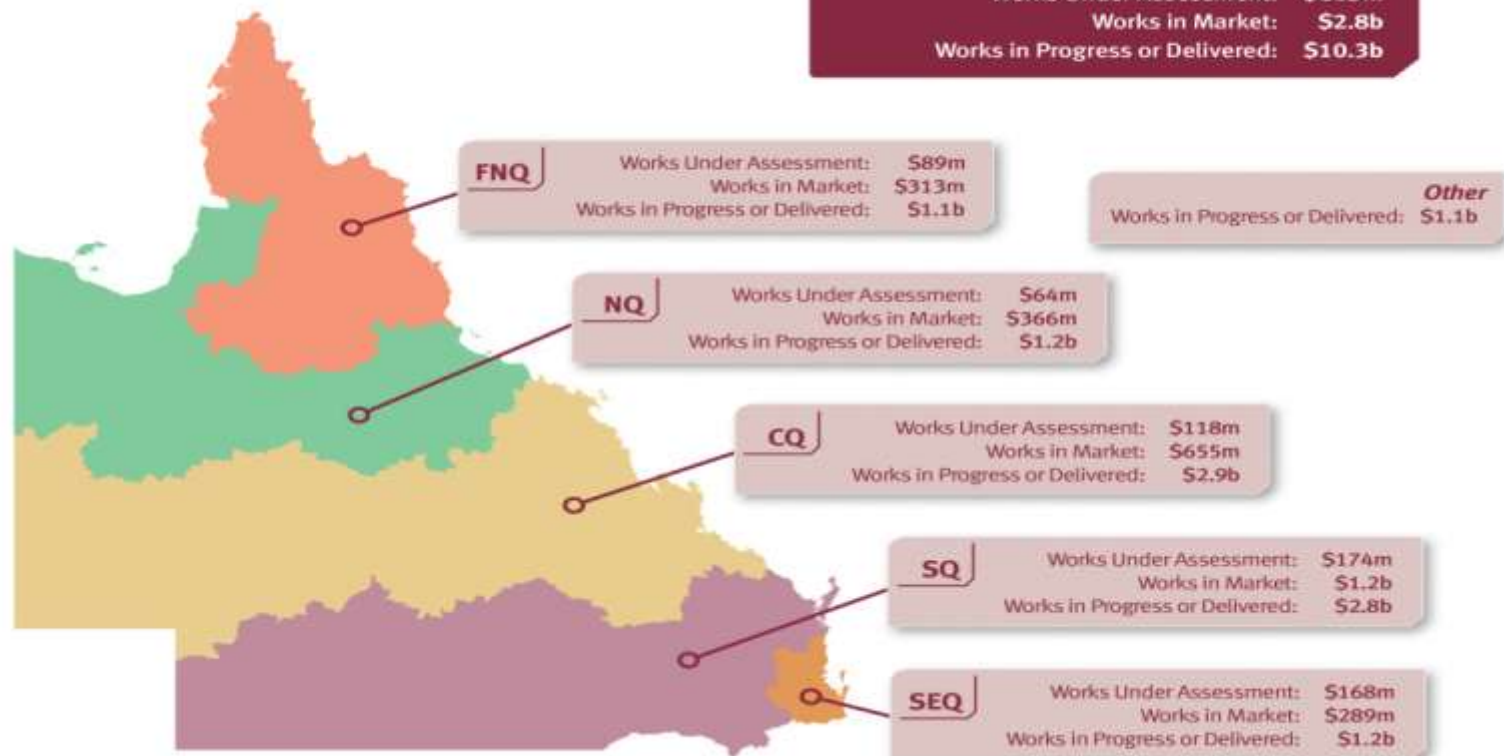
State-wide Program Estimate: **\$13.96b**

Pipeline of works

Works Under Assessment: **\$613m**

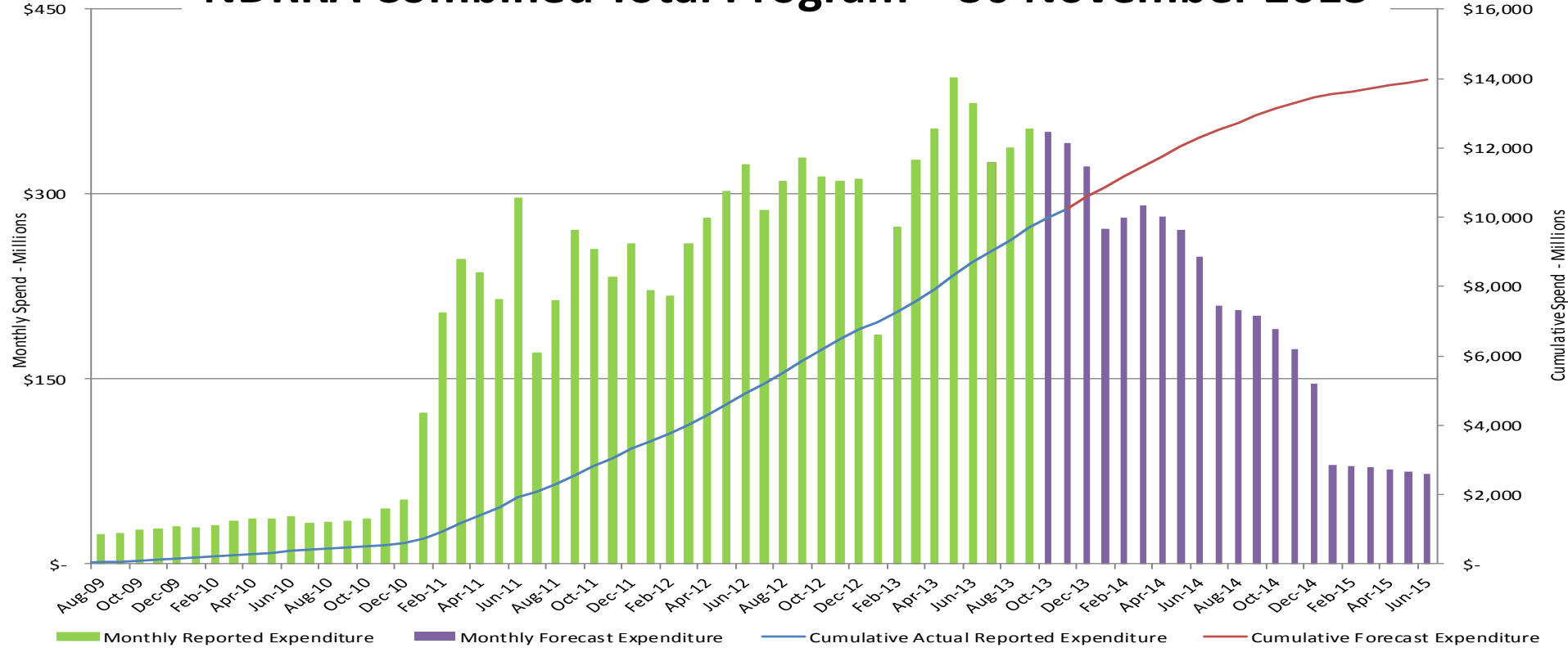
Works in Market: **\$2.8b**

Works in Progress or Delivered: **\$10.3b**



As at January 2014

NDRRA Combined Total Program – 30 November 2013



Source: the Authority, 30 September 2013 NDRRA Estimates Review & 6 January 2014

Damage Assessment & Reconstruction Monitoring

DARMSys™



- State-of-the-art, Damage Assessment and Reconstruction Monitoring (DARM) system to assess & audit reconstruction.
- Real time data available to Disaster Management Centre & Recovery Agencies.
- Pilot program: April 2011. Deployed operationally through 2011 and Feb 2012 floods
- Enables street-by-street, house-by-house assessment through affected communities
- An “audit of reconstruction progress” & helps provide targeted assistance to most vulnerable.

















Queensland Reconstruction Authority

	Brisbane	Ipswich	Total
Flooded Affected Suburbs	67	73	140
Total Assets	6,711	2,503	9,214
No Damage / Replaced	4,815	884	5,699
Minor Damage	1,824	930	2,754
Moderate Damage	850	410	1,260
Severe Damage	1,150	328	1,478
Totally Destroyed	794	361	1,155
Asset Replacement	881	311	1,192
Accommodation	1,762	871	2,633

Refer Appendix

Goodna Map Area



Goodna – Flood Extent



- NODAMAGE
- MINOR
- MODERATE
- SEVERE
- TOTAL



Goodna – October Assessments

DARM October 2011





Goodna – still with Rubbish in Property

DARM October 2011

Extending DARMsys™ to infrastructure damage:

Following disaster events of 2013, enhancements made to allow spatial data and supporting photographic evidence of damage to local government roads and infrastructure to be captured accurately via hand-held device in the field.

- Integrated with other systems – seamless method of monitoring damage and assessing rebuilding requirements
- Streamlined approach can be adapted based on disaster event and monitoring requirements.
- Reduces red tape and speeds processing time for



The screenshot shows a software interface titled 'Control Signoff'. It contains a table with columns for 'Item ID', 'Item Name', 'Status', 'Start Date', 'End Date', and 'Action'. The table lists various items related to road reconstruction, such as 'Road 1', 'Road 2', 'Road 3', 'Road 4', 'Road 5', 'Road 6', 'Road 7', 'Road 8', 'Road 9', 'Road 10', 'Road 11', 'Road 12', 'Road 13', 'Road 14', 'Road 15', 'Road 16', 'Road 17', 'Road 18', 'Road 19', 'Road 20', 'Road 21', 'Road 22', 'Road 23', 'Road 24', 'Road 25', 'Road 26', 'Road 27', 'Road 28', 'Road 29', 'Road 30', 'Road 31', 'Road 32', 'Road 33', 'Road 34', 'Road 35', 'Road 36', 'Road 37', 'Road 38', 'Road 39', 'Road 40', 'Road 41', 'Road 42', 'Road 43', 'Road 44', 'Road 45', 'Road 46', 'Road 47', 'Road 48', 'Road 49', 'Road 50', 'Road 51', 'Road 52', 'Road 53', 'Road 54', 'Road 55', 'Road 56', 'Road 57', 'Road 58', 'Road 59', 'Road 60', 'Road 61', 'Road 62', 'Road 63', 'Road 64', 'Road 65', 'Road 66', 'Road 67', 'Road 68', 'Road 69', 'Road 70', 'Road 71', 'Road 72', 'Road 73', 'Road 74', 'Road 75', 'Road 76', 'Road 77', 'Road 78', 'Road 79', 'Road 80', 'Road 81', 'Road 82', 'Road 83', 'Road 84', 'Road 85', 'Road 86', 'Road 87', 'Road 88', 'Road 89', 'Road 90', 'Road 91', 'Road 92', 'Road 93', 'Road 94', 'Road 95', 'Road 96', 'Road 97', 'Road 98', 'Road 99', 'Road 100'. The status column shows various colors (red, green, yellow, orange) indicating different levels of completion or risk.



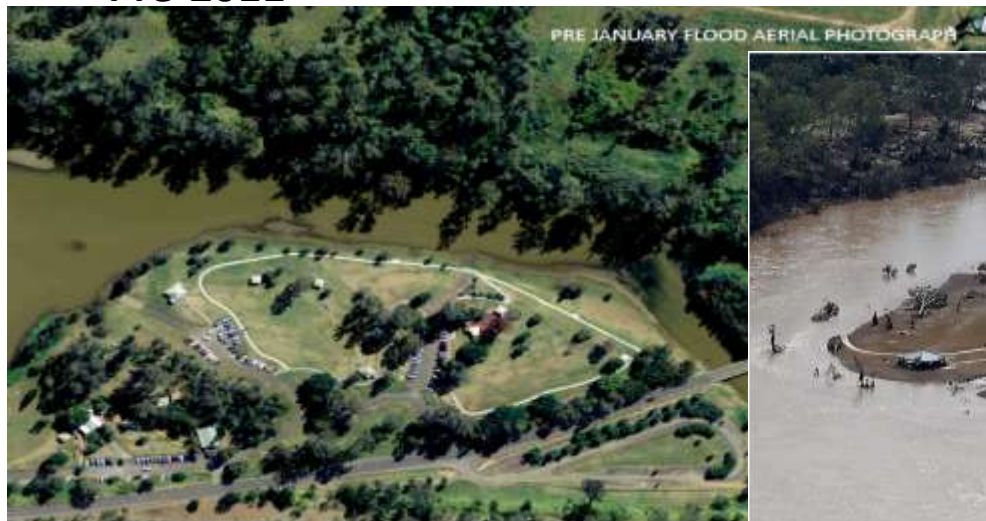
Council Signoff



Authority Signoff

Damage and re-damage

Pre-2011



January 2011



Re-damage 2013





Queensland Betterment Fund

Queensland Betterment Framework

Building it back better and increasing resilience

Local Government Essential Public Assets:

- improve safety
- improve access & utility
- reduce the costs of future disaster events
- provide demonstrated benefits for the community.

"We know these disasters will happen again and again in Queensland and we have to increase the resilience of our communities. The \$40 million in this Budget going towards betterment will be matched by the Commonwealth so we can make a start on the many projects local councils want to undertake to improve resilience."

- Premier Campbell Newman, June 2013

"This is smart use of your money. We don't need to reinvent the wheel with these projects, but we do need to find ways to make what we've got stronger and less susceptible to flooding."

- Minister for Community Recovery and Resilience David Crisafulli, August 2013

Queensland Betterment Framework

- \$80 million joint Federal/State Betterment Fund.
- 48 councils applied for 1,434 betterment projects.
- Oversubscribed – Est. total value of projects \$1.19B.
- Projects include:
 - stronger roads
 - drainage
 - water and sewage treatment plants
 - bridges and culverts
 - \$400 million additional requests to fund upgrades to State Government assets.
- 32 Councils approved for 220 projects.

Gayndah Water Supply Intake

- Situated on the Burnett River
- Provides the town's only water supply
- Supports a population of approximately 2000 & local primary industries.
- Severely damaged in 2011 and rebuilt for approximately \$1.22M
- New jetty, raw water intakes, pumps and water discharge main destroyed again in 2013



Damaged in 2011 (\$1.22M REPA)

Betterment project

- Build a new submersible style pumping station and intake at a new location upstream at Claude Wharton Weir
- Build a new raw water rising main to the Water Treatment Plant.

Estimated REPA component	\$2,634,118
Council contribution:	\$50,000
Betterment Fund :	\$1,195,782
Total cost for the project:	\$3,879,900



Re-damaged in 2013 (\$2.6M REPA)

Betterment – positive results

Palm Island – Upper Mount Bentley Road

- Provides only access to telecommunications tower located at the peak of Mount Bentley
- Tower provides Palm Island with the only form of communication with the mainland
- Essential to maintaining contact with emergency services and police

Betterment project

- Replace washed out gravel with concrete surface on steepest part of road – reduce maintenance and improve access

Estimated REPA component **\$358,447**

Betterment Fund : **\$438,998**

Total cost for the project: **\$797,445**

Betterment – Palm Island Aboriginal Shire Council



Repeated damage in 2010, 2012 and 2013



Following Cyclones Dylan and Fletcher 2014

Strengthening Grantham



- Designated Reconstruction Area under legislative powers
- Fast tracked processes
- Authority and Council developed Master Plan & Development Scheme
- Construction begun on first stage June 2011
- People were in new homes by Christmas 2011.





Strategic projects

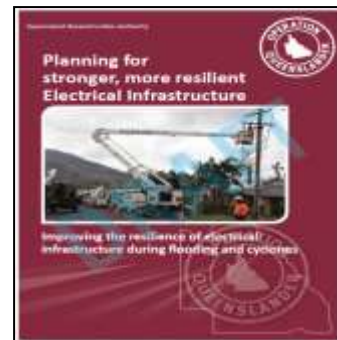
Rebuilding Grantham together

Floodplain management

Rebuilding in storm tide prone areas

Wind resistant housing

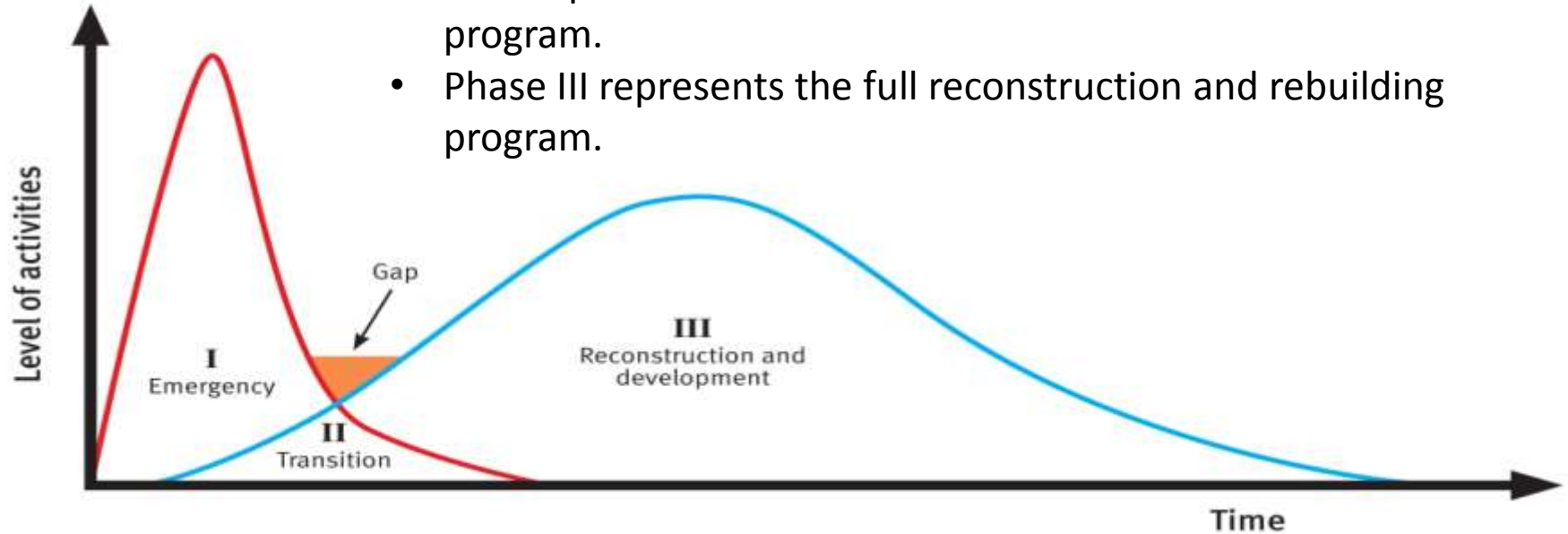
Planning for stronger, more resilient electrical infrastructure



Benefits of ongoing focus on reconstruction to aid recovery

- Global good practice – normalising recovery and reconstruction into standard operations of government
- Existing financial management, assurance and damage assessment processes – fast activation of reconstruction activities
- Ability to ramp-up resources as needed
- Ability to provide comprehensive reporting – benefits in terms of accessible public information
- Reduces 'gap' between relief effort and reconstruction

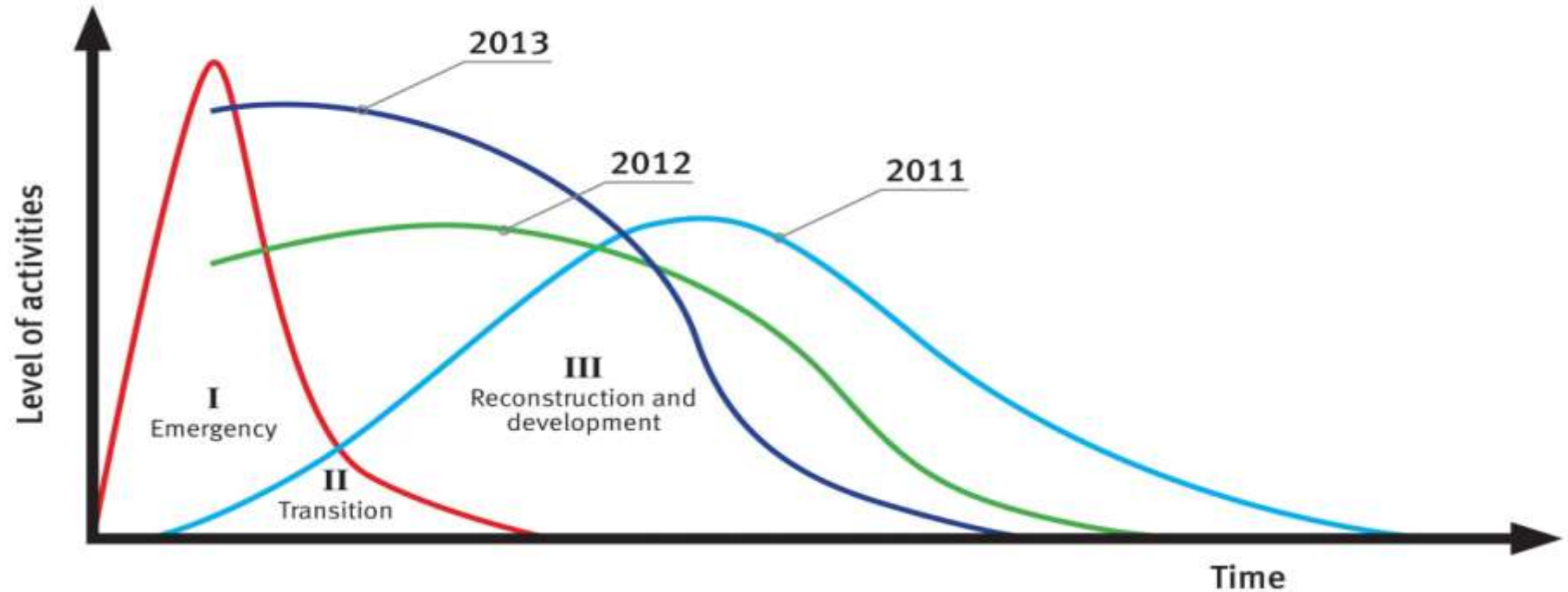
- Phase I is the emergency relief effort.
- Phase II is the transition from an emergency to a full-scale reconstruction program. This phase is identified as the critical phase for the success of the whole reconstruction program.
- Phase III represents the full reconstruction and rebuilding program.



Growth and progress in Queensland's reconstruction capability and activity 2011-2013

- Reduced time to commence reconstruction – less time and money spent on establishment
- Improved damage assessment
- Agreed processes and systems - no surprises for delivery agents
- Existing regional engagement and support
- Reconstruction and resilience considered during recovery.

Queensland's reconstruction capability and activity 2011-2013



Queensland Reconstruction Authority



“The challenge of recovery is to institutionalise urgency, i.e. to embed the drive for extraordinary results into government practices.”

- Asian Development Bank & The World Bank. 2011.

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Conference Themes



LOOKING
WITHIN



REACHING
OUT

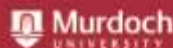


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