



Environment, Reconstruction and Building Community & Environmental Resilience

Presentation to the EIANZ Environmental Management in Crisis & Recovery

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Outline

- Key Messages
- Significance of the Qld Environment
- Summary of environmental impacts
- Connection to Operation Queensland
- Policy & Operating Context
- Examples of Multiple Outcomes



Key Messages

- Environment management actions occur in key parts of the flood management cycle
 - Prepare
 - Respond
 - Recover
- Natural assets mitigate the impacts of disasters
- Greater resilience, means less rebuild, and this means less demand on natural resources
- Multiple outcomes have been achieved
- Natural Environment recovery funding is not available under standard NDRRA arrangements

Significance of Queensland's Environmental Assets

- Economic – underpins tourism industry
- Social –escape from cities
- Intrinsic environmental values – World Heritage Values
- Well being and quality of life
- Healthy ecosystems are a benefit for community safety and resilience

Summary of Environmental Impacts from Disaster Events

- Movement of eroded and hazardous material to waterway, estuary and marine ecosystems
- Coastal erosion
- Cassowary & mahogany glider habitat
- Damage within protected areas
- Spread of plant & animal pests
- Impacts of flooded and damaged infrastructure - roads, water treatment, sewage schemes and coal mines



Links to Operation Queensland

The State Community, Economic and Environmental Recovery and Reconstruction Plan

- Mission – *“Reconnect, rebuild and improve Queensland, its communities and economy.”*
- Principles - Operating within ESD framework
- Strategic Objectives
 - ✓ Improve resilience
 - ✓ Enhance preparedness
- Environment Line of Reconstruction – whole of government / portfolio approach



Policy & Operating Context

Key Elements

- NDRRA funding arrangements
 - Rebuilding to contemporary engineering standards
 - Betterment – subject to business case
- Regulatory
 - no exemption from legislative requirements

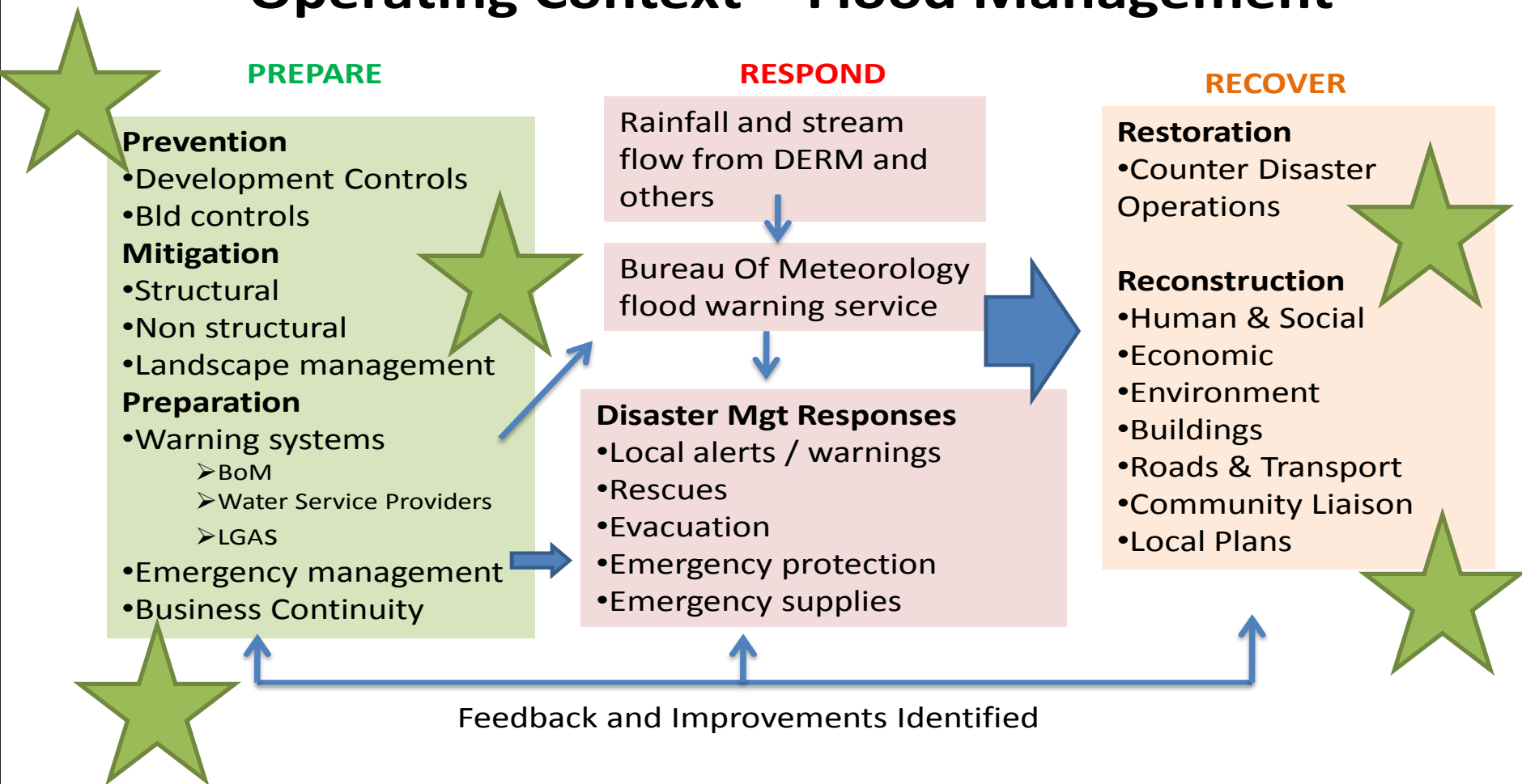
NATIONAL PARTNERSHIP
AGREEMENT FOR
NATURAL DISASTER
RECONSTRUCTION AND
RECOVERY

Council of
Australian
Governments

An agreement between

- the Commonwealth of Australia and
- the States and Territories, being:
 - ♦ The State of Queensland

Operating Context – Flood Management



Delivering Resilience

An Integrated Approach

- ✓ Greater resilience means less rebuild and less demand on natural resources
- ✓ Landscape restoration and Environmental management are key contributors to Community Resilience



QldRA Achievements

- **Rebuilding Guidelines**
 - ✓ Storm-tide prone areas
 - ✓ Wind resistant housing
 - ✓ Stronger, more resilient electrical infrastructure
- **Rebuilding Grantham Together**
– Development Scheme
- **Floodplain Management Guidelines**
 - ✓ Interim measures for existing planning schemes
 - ✓ Measures for future planning schemes



QldRA Achievements

- ✓ Resources for Reconstruction
- ✓ Damage Assessment & Reconstruction Monitoring
- ✓ Resilience guideline

Queensland Reconstruction Authority

Operation Queenslander

The State Community,
Economic and Environmental Recovery
and Reconstruction Plan 2011–2013



Resources for Reconstruction

Ensuring that we have the people and material resources we need to reconstruct Queensland

Discussion Paper No 1
September 2011

Queensland Reconstruction Authority

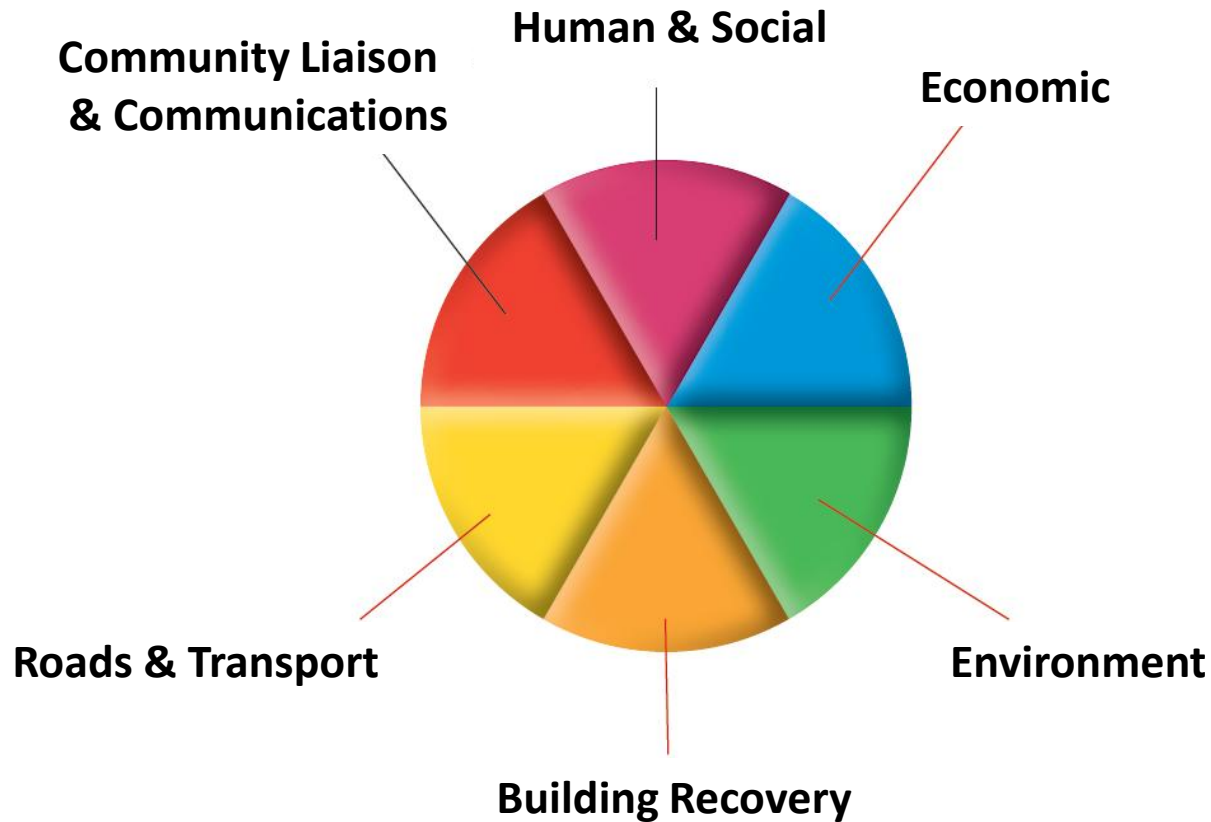


Rebuilding a stronger, more resilient Queensland

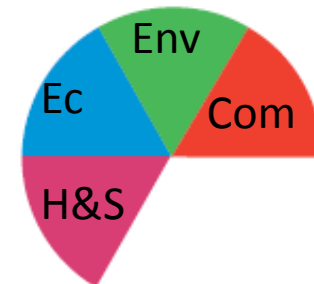


The capacity to prepare for, withstand, respond to and recover from disasters

Lines of Reconstruction (LoR) Case Studies

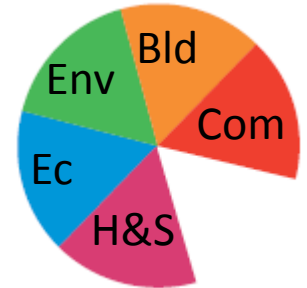


Lockyer - Somerset



- Waterways stripped bare and eroded, vegetation destroyed, hillsides slipped, mud and debris scattered everywhere
- Flood recovery undertaken by Local Councils, Green Army, SEQ Catchments, and community groups focused on debris clean up, stabilisation of degraded banks, revegetation of riparian areas
- One site involved significant bank stabilisation reduce sediment movement and to return farm to production with indigenous group doing debris cleanup & reveg as part of a training program

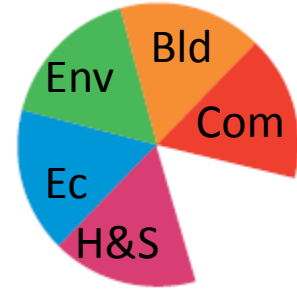
Hull Heads & Tully Heads Asbestos Clean Up



- Hull Heads & Tully Heads severely impacted
- Adjacent to key natural assets
- Asbestos material everywhere
- QBuild, CCRC and contractors responded immediately to
 - Protect people
 - Provide a safe rebuilding area
 - Protect the environment



Storm Surge Guidelines



•Tully Heads and Hull Heads were the hardest hit areas from storm surge as a result of Severe Tropical Cyclone Yasi

•Planning for stronger, more resilient North Queensland – Part 1: Rebuilding in storm tide prone areas offers guidance on design considerations, site planning and the best materials to use

• Better built form outcomes by using this guideline will have significant environmental benefits for North Queensland’s tropical climate

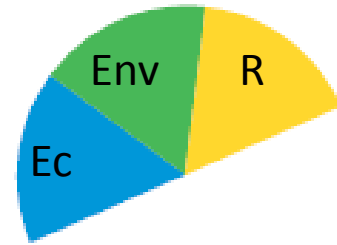


Following STC Yasi



Following recovery

Cunningham's Highway

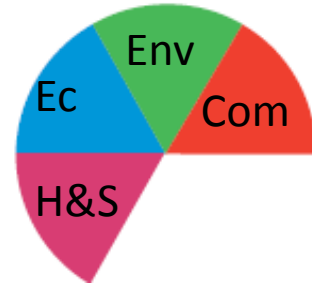


- Road embankments along the Cunningham's Highway were damaged due to land slips, resulting in severe safety issues to road users and impacts on National Park – particularly at Clayton's Gully
- Clayton's Gully is an important wildlife corridor which provides a link between rainforest ecosystems and lower eucalypt forest
- Traditional approach would have increased erosion
- Mimicked natural gully - existing rocks and boulders
- Outcome
 - ✓ Improved safety measures
 - ✓ Improved flood resistance
 - ✓ Improved wildlife crossing

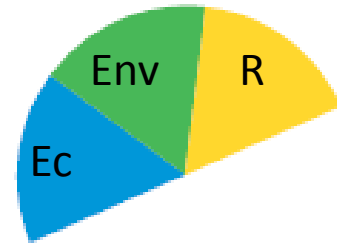


Voluntary Suspension Traditional Hunting

- Turtle and dugong populations impacted due to lack of food source (sea grass impacts)
- Traditional owners concerned about the impacts from extreme events and human activity
- Nywaigi and Girramy tribes have suspended traditional hunting of turtles and dugong as a way of directly supporting Great Barrier Reef



Fish Friendly Culvert Design



- More than 500 culverts and bridges impacted
- State Govt developed a statewide response
- Revised code of compliance and guidelines
- Result to date is 30 network reconstruction projects with improved fish passage



SUMMARY

Operating Context – Flood Management

PREPARE

Prevention

- Development Controls
- Bld controls

Mitigation

- Structural
- Non structural
- Landscape management

Preparation

- Warning systems
 - BoM
 - Water Service Providers
 - LGAS
- Emergency management
- Business Continuity

RESPOND

Rainfall and stream flow from DERM and others

Bureau Of Meteorology flood warning service

Disaster Mgt Responses

- Local alerts / warnings
- Rescues
- Evacuation
- Emergency protection
- Emergency supplies

RECOVER

Restoration

- Counter Disaster Operations

Reconstruction

- Human & Social
- Economic
- Environment
- Buildings
- Roads & Transport
- Community Liaison
- Local Plans

Feedback and Improvements Identified

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Further information...

- www.qldreconstruction.org.au
- www.premiers.qld.gov.au
- www.derm.qld.gov.au
- www.deedi.qld.gov.au

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