

Developing a National Strategic Plan for Flood Warning Infrastructure

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Overview

- Background
- Flood infrastructure issues
- Hazards Services Taskforce
- Flood Warning Infrastructure Working Group
- Strategic planning
- Planning approach
- Progress



Total Flood Warning System

- Bureau provides riverine flood forecasting and warning services
- Prime responsibility for flash flood warnings lies with states, territories and local government where appropriate
- Data which underpins services is collected by the Bureau and a range of other organisations

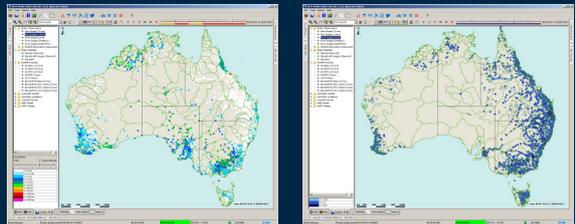


The Components of the Total Flood Warning System
Manual 21 Flood Warning
Australian Emergency Manuals Series



Flood warning observation network

Rainfall gauges – 5000 (50 per cent Bureau) River gauges – 3000 (5 per cent Bureau)




Collaborative approach

- Working Group made up of senior officers from state and territory emergency service agencies and relevant water agencies
- Bureau of Meteorology Chair
- Attorney-General's Department Co-Chair
- National Flood Risk Advisory Group as observer
- Technical Advisory Groups made up of state and territory representatives and relevant experts
- Bureau provides project management and technical expertise
- Jurisdictions responsible for preparing their own plans



National Flood Warning Infrastructure Plan

A **risk-based** national Flood Warning Infrastructure Plan, based on individual jurisdictional plans, which outlines:

- Functionality and condition assessment of flood warning infrastructure
- Gaps in infrastructure and knowledge
- Issues and opportunities
- Priorities, strategies, actions
- Conformance with national technical standards and transition plans

Terms of Reference provided in the Hazards Services Taskforce Report



Common themes identified in jurisdictional baseline reports

- Networks have evolved not designed
- Priority is water monitoring vs. flood warning
- Ownership ambiguous
- Multiple owners for equipment at the one site
- Lack of systematic reviews in some jurisdictions
- Gaps in the network
- Weakness in back-end infrastructure
- Reliance on manual gauges
- In most cases last significant investment was Modernisation and Extension Program (2012) (except Qld and Vic)



Flood risk assessment current status

- Flood risk assessment approaches vary
- Level of detail not always adequate
- Coverage incomplete
- Range of scales of assessment
- Scenario based assessments have used historic floods at the regional/state scale
- Likelihood assessments at the catchment scale
- Residual risk assessment incomplete
- Classification of risk unclear
- Flood hazard assessment but not full risk assessment
- NERAG applied to varying degrees

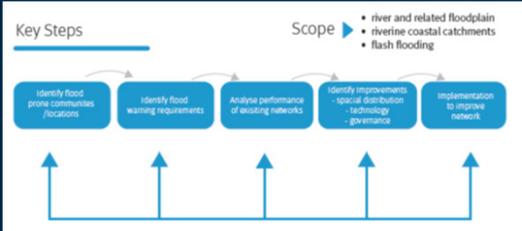



Planning approach

Key Steps

Scope

- river and related floodplain
- riverine coastal catchments
- flash flooding




Planning principles

- Risk assessments consistent with interjurisdictional agreements, including in principle consideration and application of NERAG (based on individual content and need)
- The risk assessment approaches will be fit for purpose and based on a review / analysis of experience in each jurisdiction.
- There will be cross-reference with the work of the Standards TAG.
- Any improvements in the flood warning infrastructure will be to a performance requirement. There is a real time (or near real time) visibility of data to relevant local councils, emergency response agencies and the Bureau
- There is strong engagement and collaboration to promote / deliver, for example
 - Increased understanding and sharing of flood data and information
 - Shared opportunities for improvement of networks and response tools / approaches
- Risk assessments, reviews and improvement plans are considered on a catchment basis
- Continuous improvement over time.



The National Flood Warning Infrastructure Plan



The National Flood Warning Infrastructure plan will be a consolidation of best practice approaches in each jurisdiction and will align to the Bureau of Meteorology's flood warning network strategy.



Next steps -> October 2017

- May-Mid July**
 - Consultant develops methodology
 - TAG members (jurisdictions and Bureau) develop business rules/templates
- Mid July - Mid Sept**
 - Jurisdictions evaluate their capacity to complete a plan noting knowledge gaps and other relevant issues
- Mid Sept - end Sept**
 - A report prepared for the Working Group on the gap analysis and the methodology
- Oct 17**
 - Report to the Working Group and provide an update on the method and the capacity of jurisdictions to complete a plan by 2018



Progress and benefits

- Clarification of scope
- Agreement on planning principles
- Inventory of current flood warning infrastructure
- Consultant engaged to progress with review of current flood risk analysis approaches, documenting gaps in knowledge and recommendation of a best-practice approach
- Planning business rules in development
- Infrastructure plans will increase the visibility of current flood risk and flood warning service and flood warning infrastructure requirements
- Robust evidence base for prioritization of infrastructure need into the future
- Significant opportunity



Thank you

Questions?