



Future Data Collection Requirements

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Australian Government

Bureau of Meteorology

Introduction

- Water information program
- Water regulations 2008 and data delivery
- Modernisation funding
- Future direction



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The big eight water scarcity factors

Growing urban demand

Irrigation demand

Expanding plantations

Bushfire recovery impacts

The environmental flows imperative

Expanding farm dams

Uncapped groundwater extraction

Drying and warming climate



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Water information mandate

- 10-year Australian Government program began July 2007
- \$450m funding
 - 120 new staff + systems + research and development
 - Funding support for data providers
- Legislative backing
 - *Water Act 2007*
 - Water Regulations 2008



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Water information functions

1. Set standards for water data.
2. Collect primary information from water data holders and build a national repository.
3. Provide a range of value-added water information products and services for the nation.
4. Assist water data collecting agencies to modernise their observing systems.
5. Invest in water information research and development



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Water Regulations 2008

- Water Regulations
 - 240 named persons in 8 categories
 - 10 categories of information
 - Data delivery timeframes – hourly, daily, annually
 - Electronic information in your database management system
- Water Data Transfer Format (WDTF)
- <http://www.bom.gov.au/water/regulations/regulations.php>



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Provider data

Streamflow and river heights

Diversions and return flows

Groundwater levels

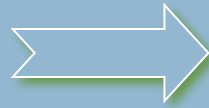
Water quality

Storage levels

Water use and restrictions

Entitlements, permits, trades and allocations

Various spatial data layers



AWRIS



Information products

Dynamic

REPORTING SERVICES

FORECASTING SERVICES

Static

NATIONAL WATER ACCOUNT

NATIONAL WATER RESOURCE ASSESSMENT

Climate DB

Geofabric

Hydrology DB



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Water Data Transfer Format (WDTF)

- Under Water Information Research and Development Alliance, CSIRO and the Bureau have developed the Water Data Transfer Format (WDTF):
 - XML format.
 - Based on Open Geospatial Consortium standards.
 - Version 1.0 to be released in October.
 - Aims to improve water data interoperability.
- International adoption WaterML 2.0



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Data delivery statistics

- 3,600 communications, with more than 700 individuals
- Received 3.6 million individual files
- Over 170 gigabytes of data
- 80% Hydstra / 15% Water Data Transfer Format
- We have received approximately 180,000 files in ad-hoc format
- 65 % named organisations have commenced data delivery



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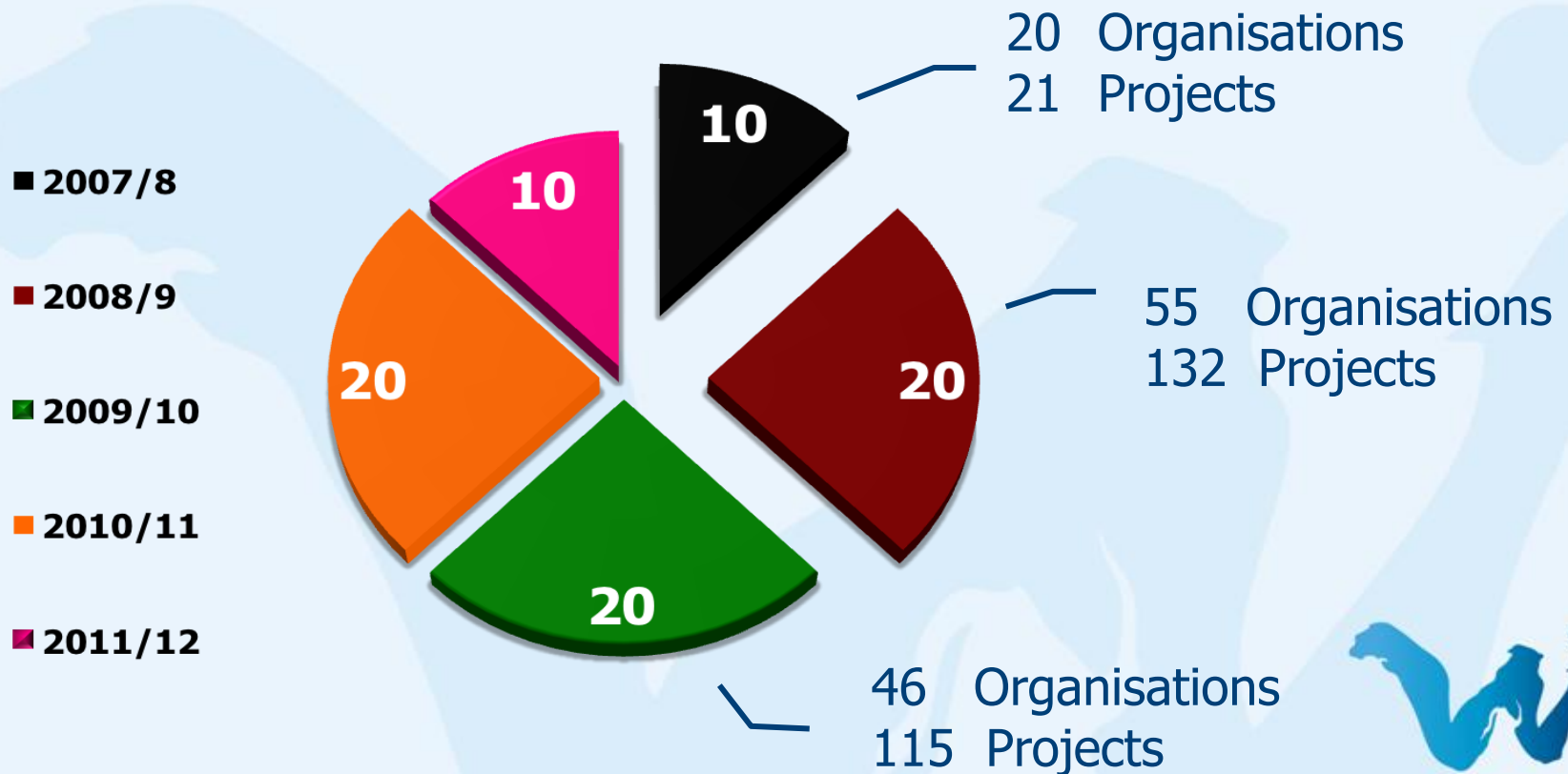
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Modernisation and extension of hydrologic monitoring systems

- \$80m over 5 years for 'persons' named in Regulations 2008
- 'M&E' program funding priority:
 - improve the quality, currency and coverage of water monitoring
 - simplify the task of data delivery to the Bureau
 - spatially-enable water information
- Informed by Strategic Water Information Monitoring Plans (SWIMPs) in each jurisdiction.



Program funding profile (\$m/a)





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Future direction

- Continue to promote adoption WDTF
- Alignment of M & E investment with SWIMP
- Network extension
 - Accounts
 - Water balance
 - Hydrological prediction
- Water information standards



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Thank you...

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