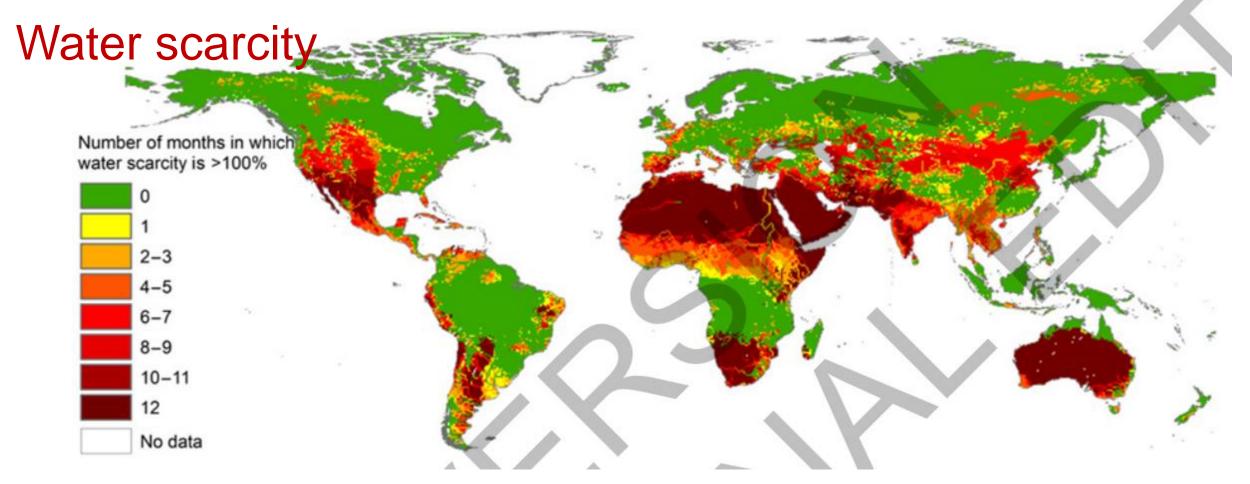


Water scarcity management in Australia: Key features and lessons learned

Lucía Gamarra, Senior Partnerships and Impact Officer Friday 19 October



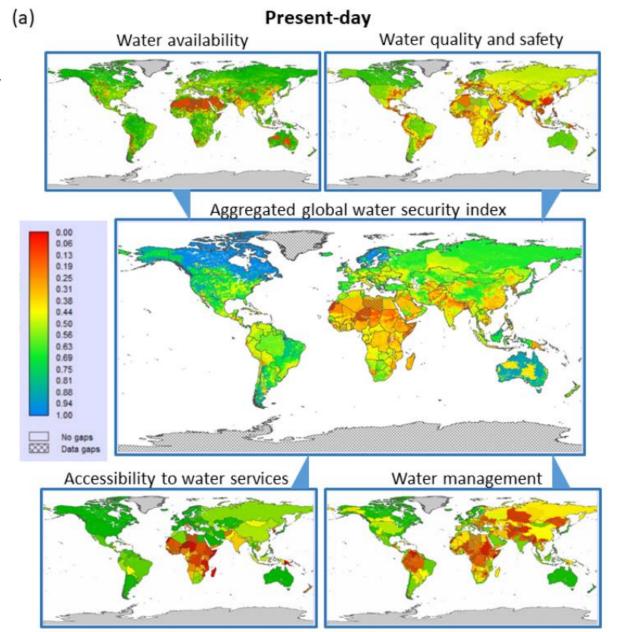
Australia – water partners for development



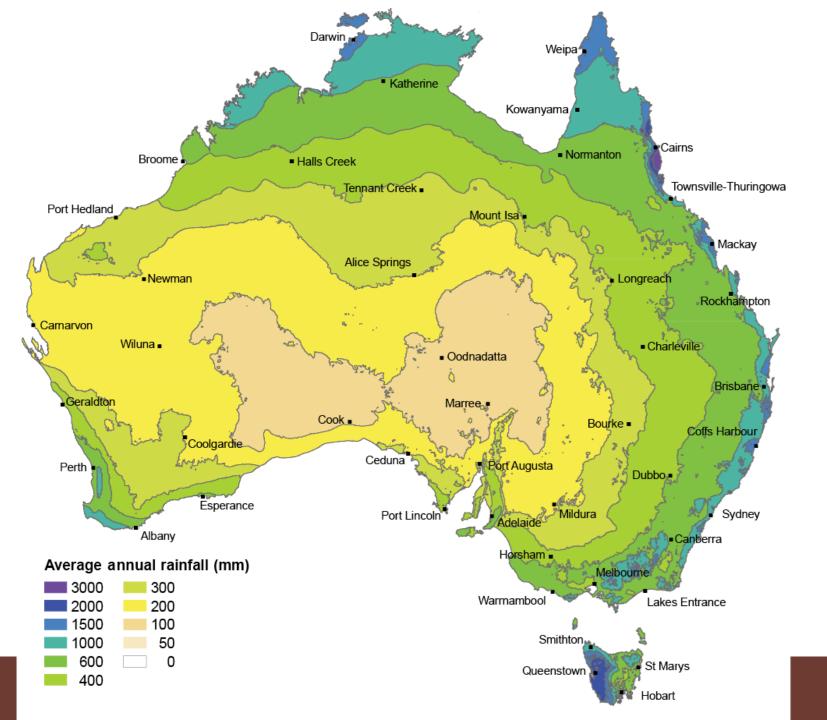
The number of months per year with severe water scarcity (ratio of water demand to availability > 20 1.0).

Reproduced from Mekonnen and Hoekstra, 2016, cited by Chapter 4 IPCC WGII Sixth Assessment Report 2022.

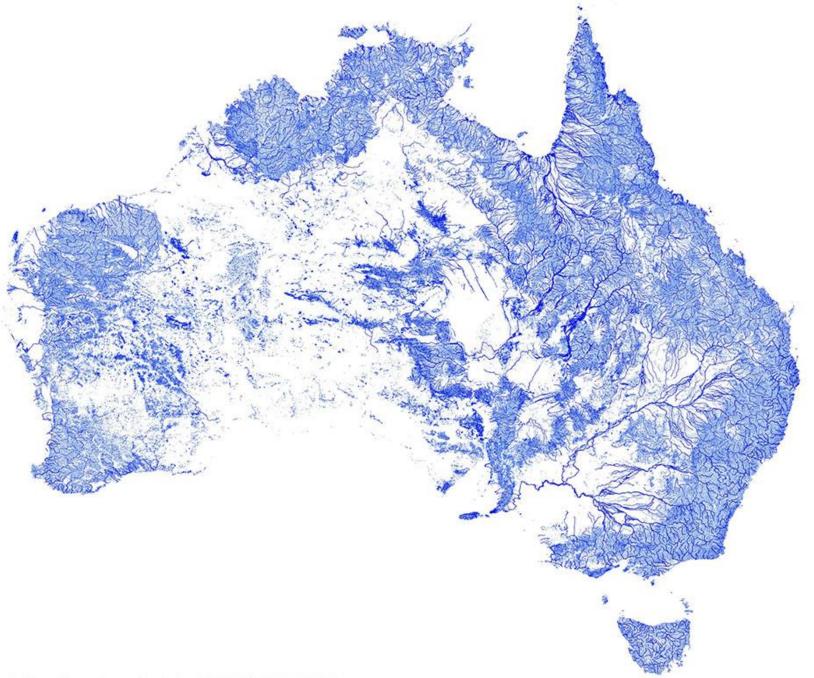
Water security



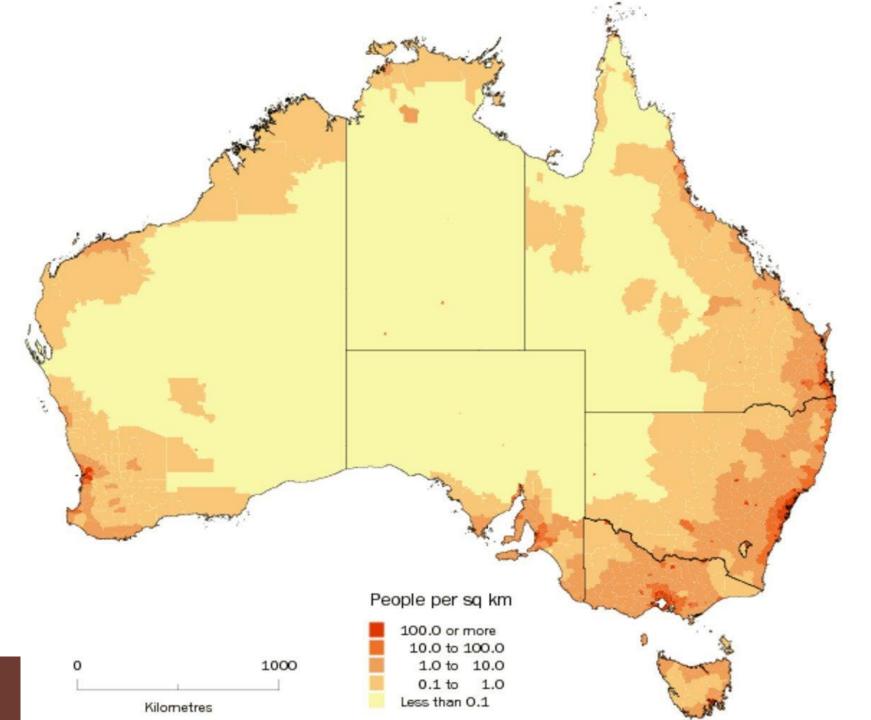
Reproduced from Gain et al., 2016, cited by Chapter 4 IPCC WGII Sixth Assessment Report 2022.



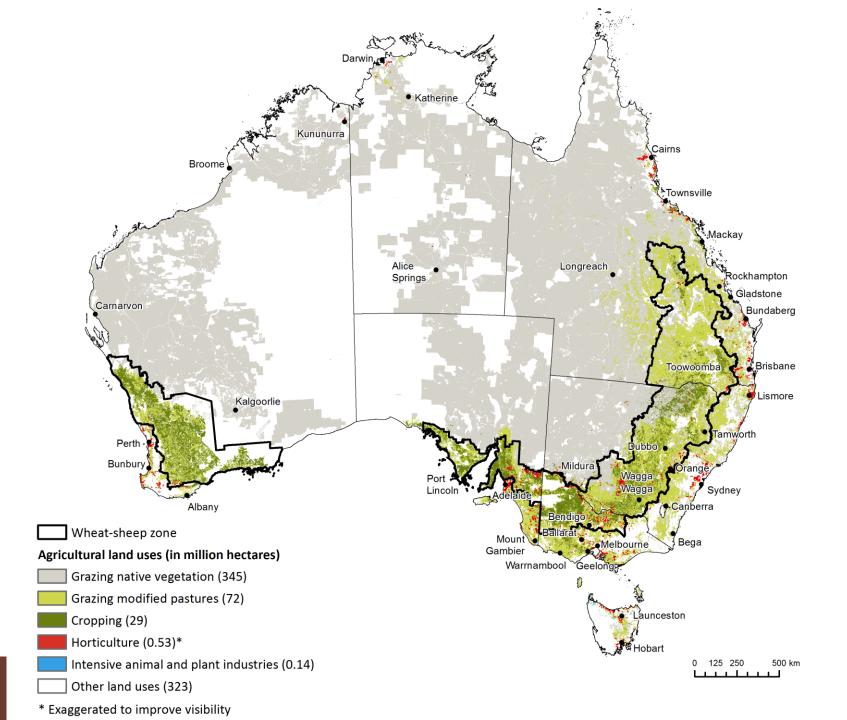
Average annual rainfall



Stream networks



Population density



Agriculture

Drought and water shortage in Australia

Northern tropical

Murray-Darling Basin

Tasmania

SE Coastal

Arid central desert

Arid central desert: Extremely limited water resources with very few people, industry and almost no irrigated agriculture

Murray Darling Basin - an agricultural issue: Has many large water storages, few people and fully developed irrigated agriculture that has caused overallocation of the Basin water resources

Perth - an urban issue:

Current challenges on supplying domestic water – 2 x desalination plants built and treated effluent used to recharge groundwater

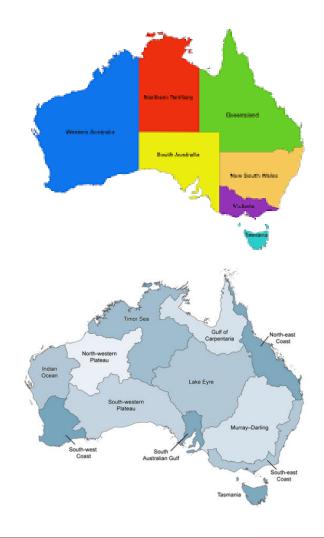
Coastal cities (Melbourne, Sydney, Brisbane) - an urban issue: 50% of population live in these cities - reliable local catchment water resources insufficient – desalination plants built

Key features of Australia's Water Management

Policy and legislation (National Water Initiative & New Federal Water Act, 2007)

Planning framework (Regional Water Resource Management Plans & Basin Plan, 2012)

Management framework (knowledge, entitlements, metering, compliance)



OBJECTIVES Increase productivity & efficiency of Australia's water use Ensure the health of river and groundwater systems **IMPROVING** TRANSFORMING REFORMING MODERNISING WATER ALLOCATION INSTITUTIONAL ENVIRONMENTAL WATER PRICING MANAGEMENT **ARRANGEMENTS** Separating water resource management, standard setting, Consumption-based pricing Providing water for the service delivery & regulatory Establishing secure, tradable enforcement roles environment entitlements Full cost recovery Independent price regulation Increasing environmental share Developing water trading in over allocated systems & markets Ensuring urban water authorities Transparent cross-subsidies & are sufficiently large & bench-

Australian Water Reform

IMPROVING WATER INFORMATION & KNOWLEDGE

COMMUNITY & STAKEHOLDER INPUTS

Water metering

Integrating river basin

management

Water registers

Water accounting

Undertaking water planning

Monitoring ground-& surface water

their removal where possible

Varying implementation in

urban & rural areas

Model development

Investment in water research

marked to be financially viable & efficient

Devolution of irrigation water

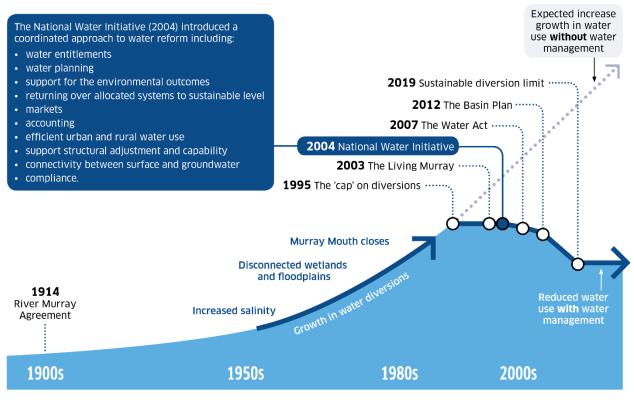
authorities to local bodies that

are responsive to irrigators

Adopting a Water Act and a cap on water use



History of water reform in the Basin



Key lessons

- Know your context
- Act early
- Balance ecological, social, cultural and economic concerns
- Building blocks
- Integrated approaches
- Adaptable and flexible management systems



Thank you







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