

Responding to water scarcity – policy comparative analysis between Australia and the countries of the Mekong

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Australia

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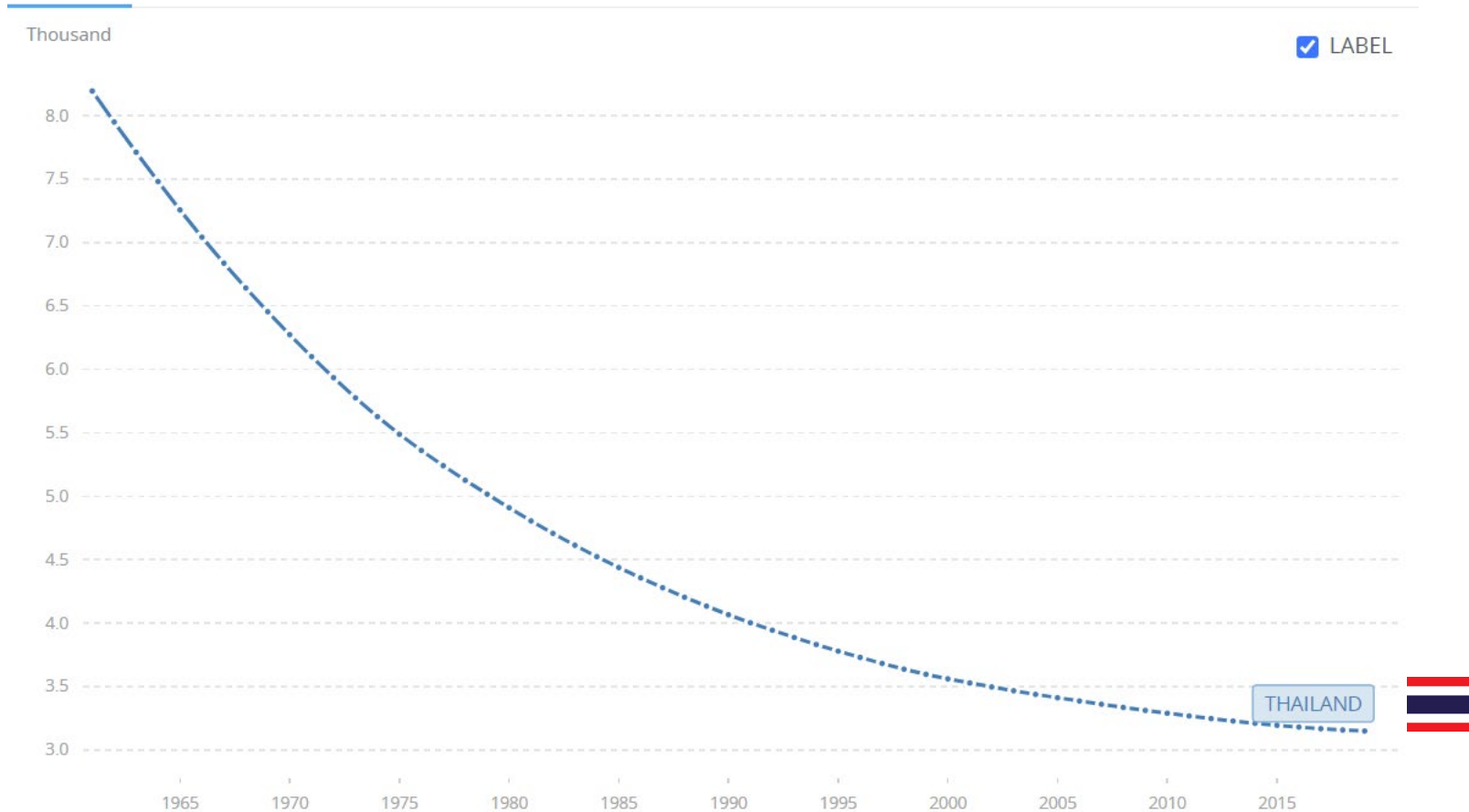


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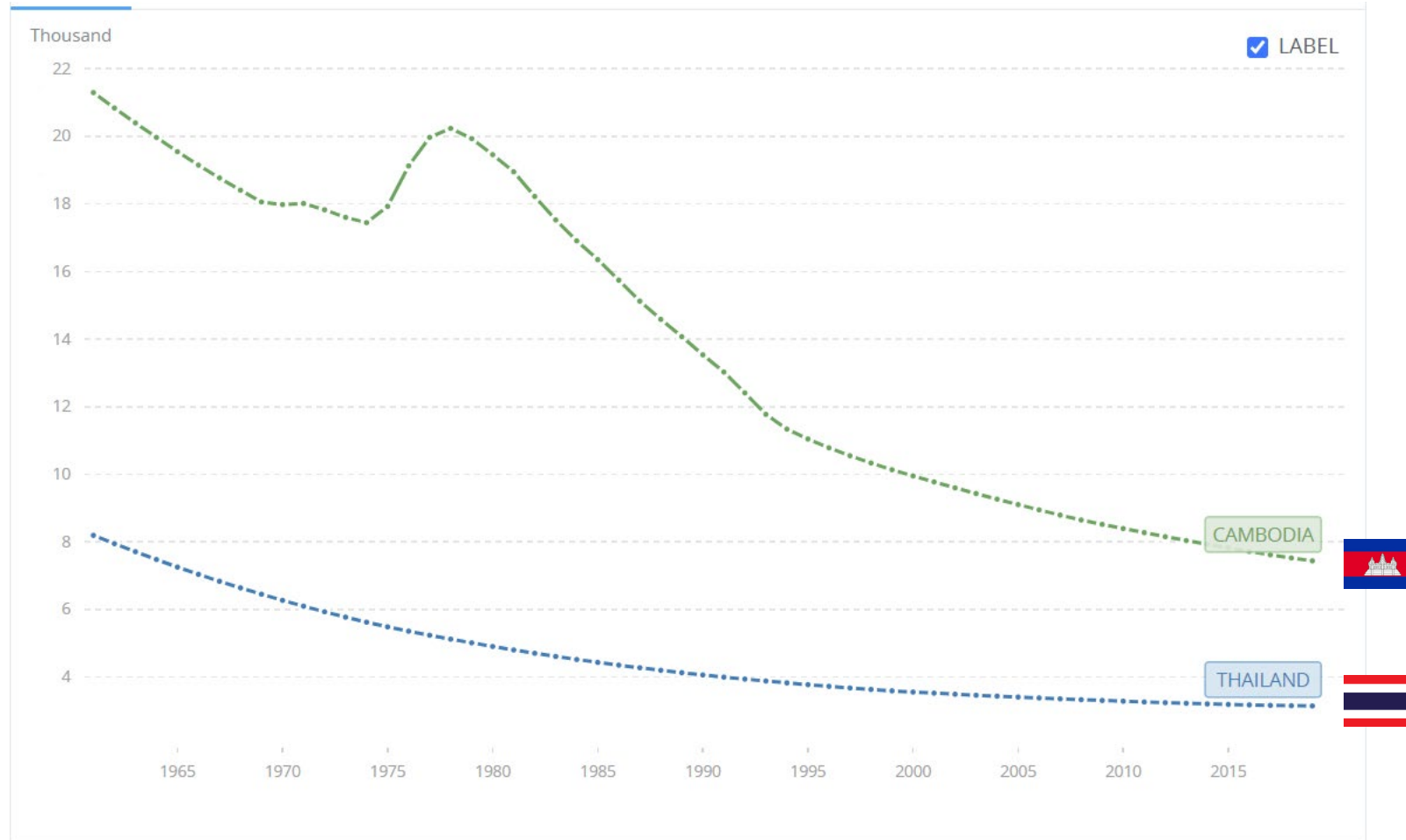
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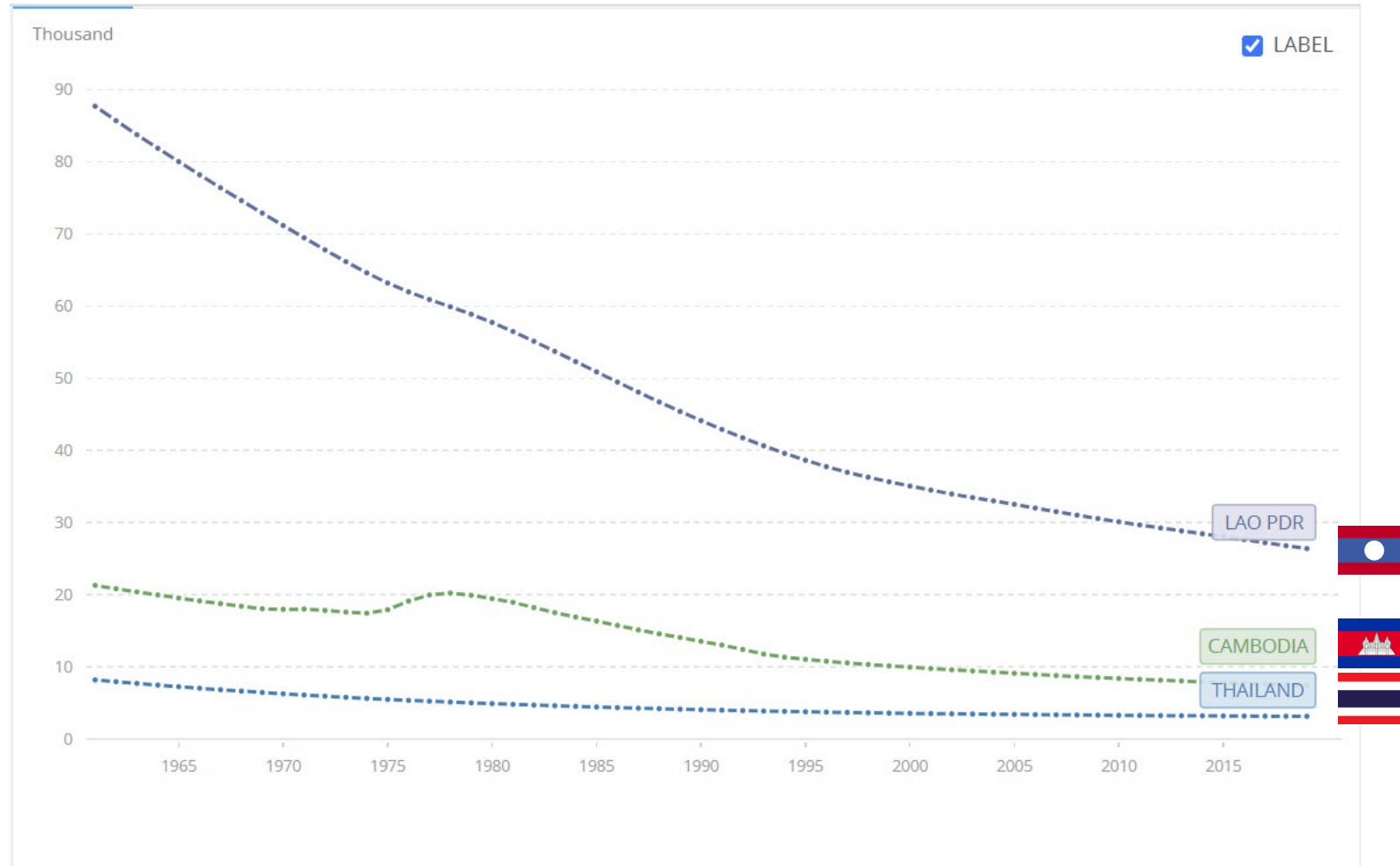
Water scarcity is a major challenge across Asia with water availability per capita decreasing in Thailand...



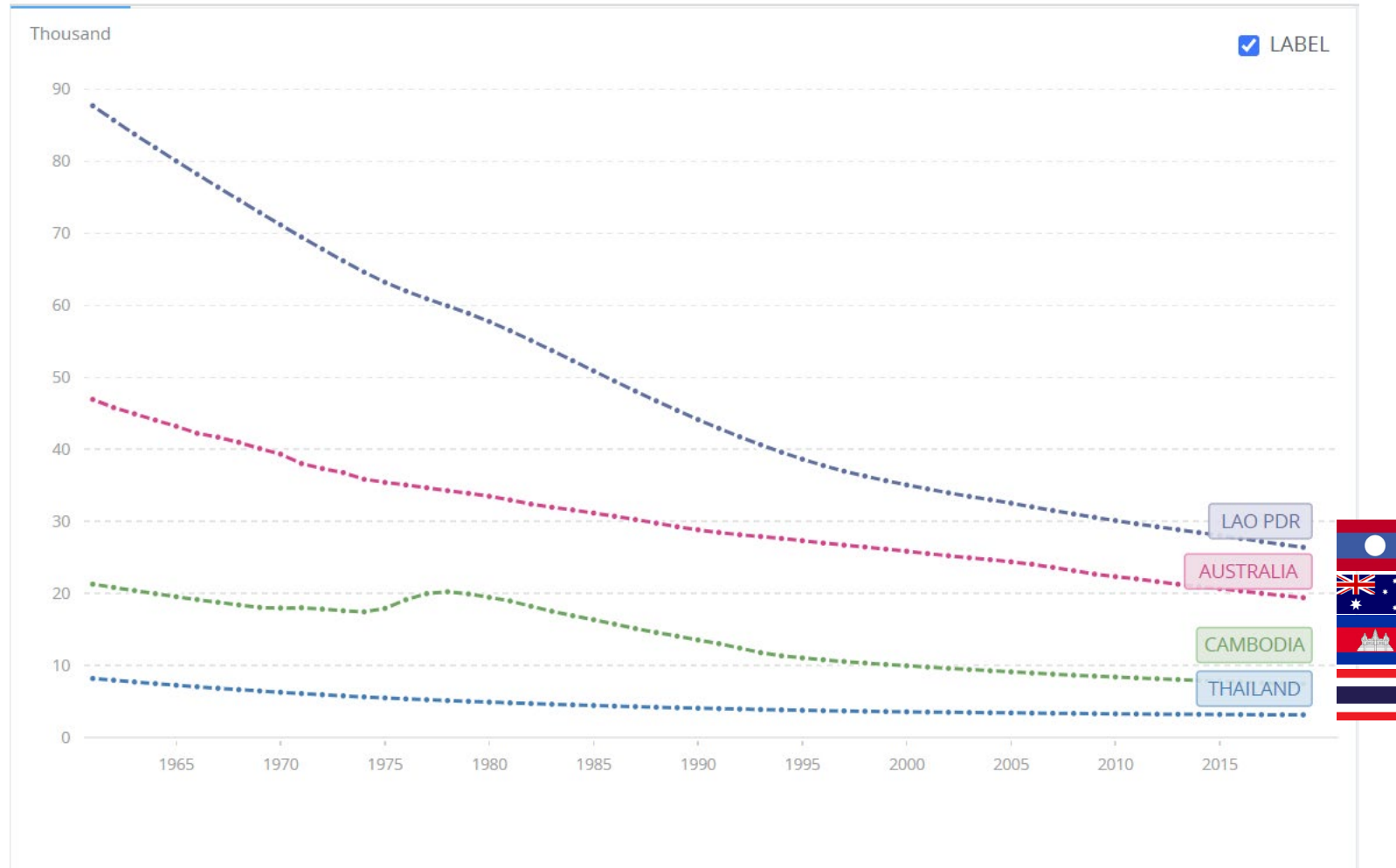
...Cambodia...



... Lao PDR...



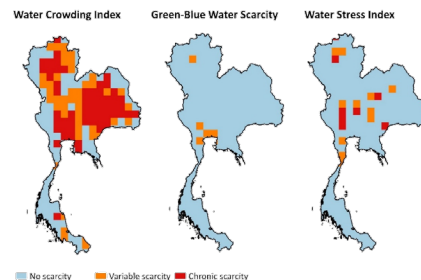
... and Australia



In response, a regional analysis of water scarcity and country responses has been undertaken to inform design of a regional water scarcity program

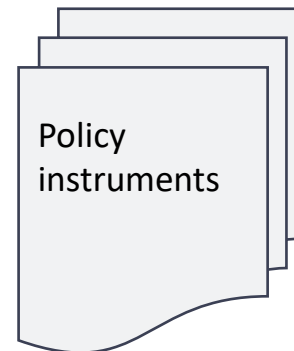
Context

What is the nature of water scarcity across 10 case study countries?



Response

How do case study countries manage water scarcity?



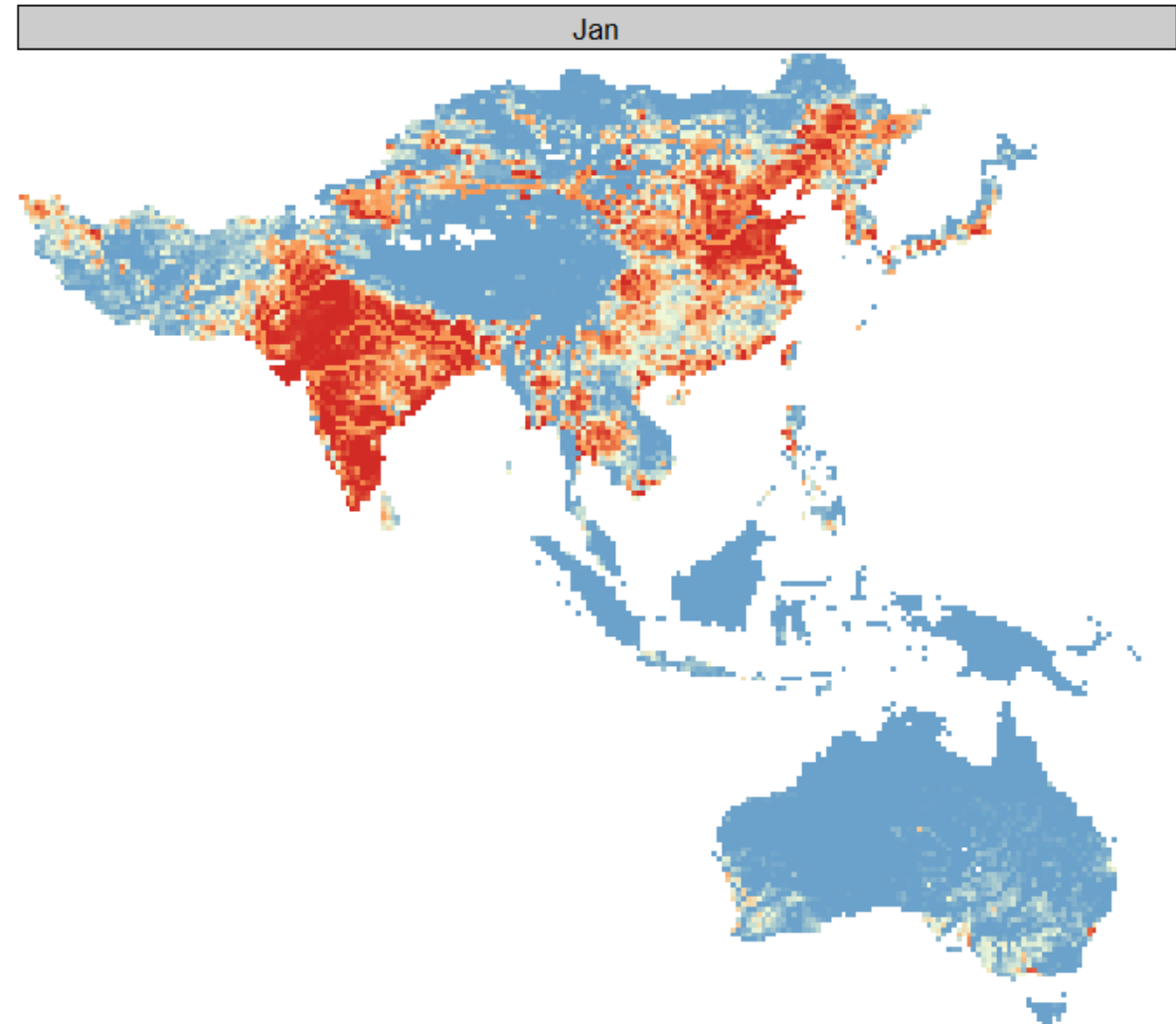
Comparison

Compare responses for countries with similar water scarcity problems



Cambodia, Thailand, Lao PDR and Australia experience highly variable water availability

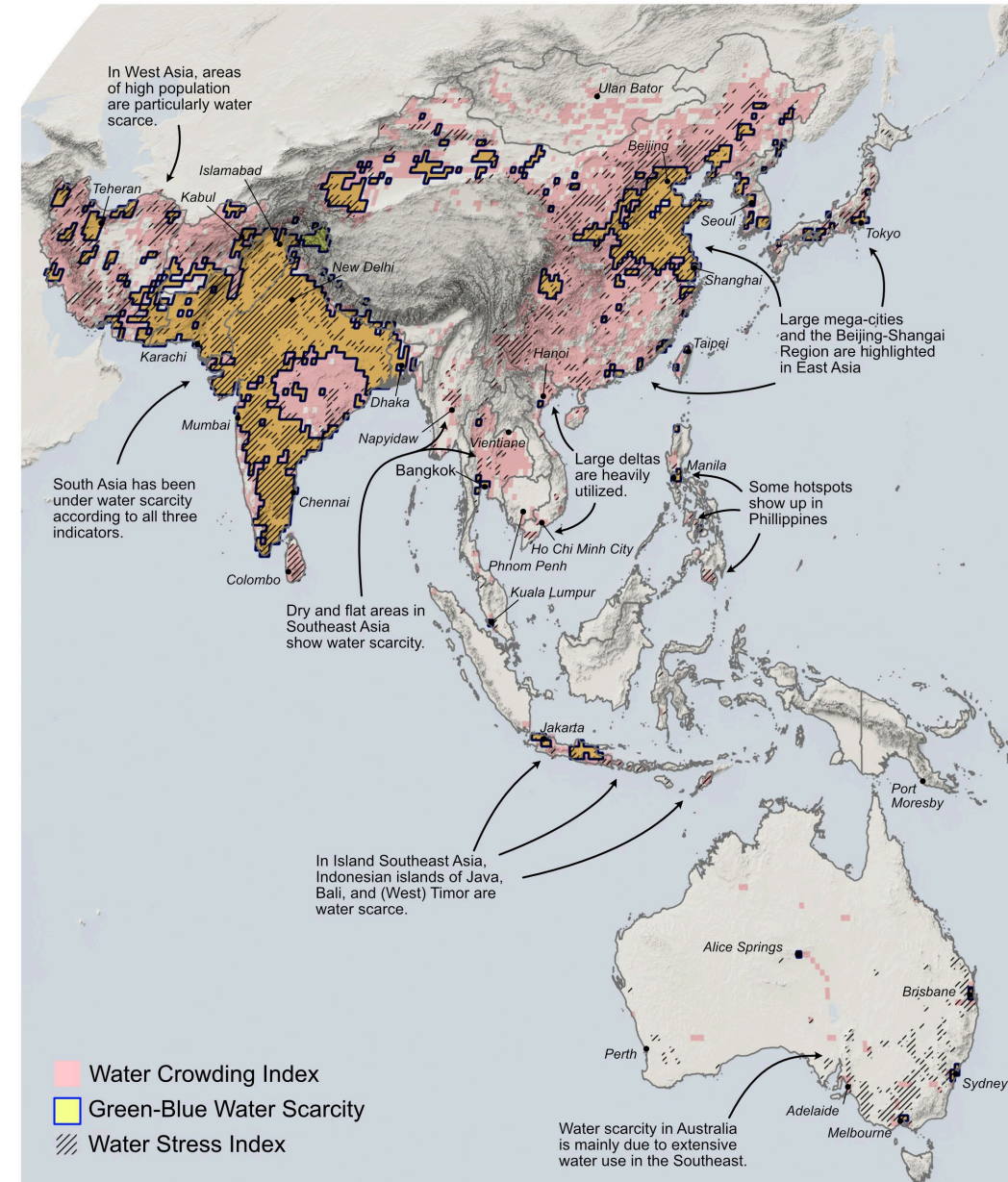
- Seasonal scarcity
- Inter-annual scarcity
- Drought



(Source: Ketelsen et al, 2022)

Water scarcity in all four countries is focused on areas of high water use

- Population centers (e.g. Hanoi, Bangkok, Sydney)
- Agricultural areas (e.g. Mekong delta, Murray Darling Basin)
- More of an issue in Thailand, Vietnam and Australia
- Localised challenge in Cambodia and Lao PDR



Poor water quality can be a cause of water scarcity as the water may not be fit for the intended purpose

- Asia is a global hotspot for untreated wastewater discharges into the freshwater environment
- Water scarcity due to poor water quality occurs across all four countries of the lower Mekong basin, albeit with high spatial variability.
- For example, in Lao PDR water quality is primarily an issue in the vicinity of the urban/industrial centres of Vientiane, Savannakhet and in the vicinity of the large commercial irrigation areas of Savannakhet
- In the more economically developed Thailand, poor quality water occurs widely across the country due to a high level of industry and dense population centres
- Australia has had challenges with fish kills in the Murray Darling Basin



Vietnam (Source: www.theguardian.com/)



Australia (Source: www.smh.com.au/)

Australia's management of water scarcity

National and MDB specific policy and legislation



2004 National Water Initiative – a water reform blueprint agreed to by the states and territories
Water Act (2007) – a legislative framework to ensure that the Murray-Darling Basin is managed in the national interest.

MDB-scale planning frameworks



Murray Darling Basin Agreement (initially established in 1915)
The Murray Darling Basin Plan
Regional Water Resource Plans for all surface and groundwater resources in the MDB basin

Building blocks to enable water scarcity management



Understanding of water availability and water use
Water access entitlements
Metering of water use
Compliance and enforcement

Specific interventions and tools



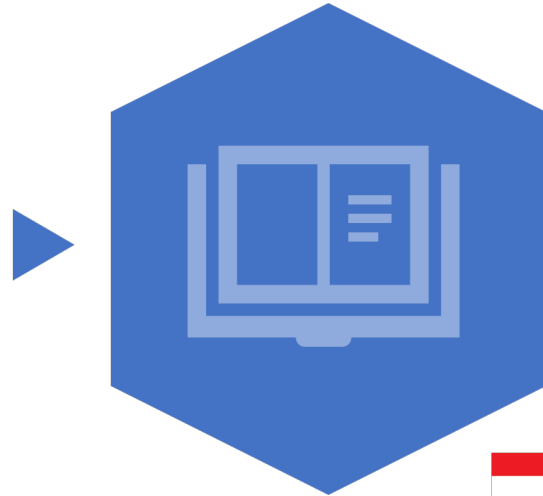
Pricing and cost recovery
Water market and trade
Water use efficiency infrastructure improvement programs
Water buy-back program
Urban drought restrictions

Key pillars of Australia's management of water scarcity (with a focus on the Murray-Darling Basin)

Thailand's management of water scarcity

20 year Master Plan on Water Resources Management

Established strategic goals and six workplans including a water security framework



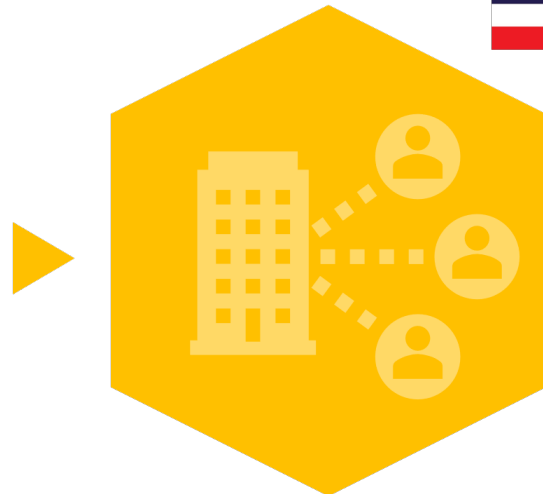
Legal underpinning

The Act on Water Resources and accompanying decrees



Creation of central agency to manage water

Office of National Water Resources created to integrate coordination across agencies



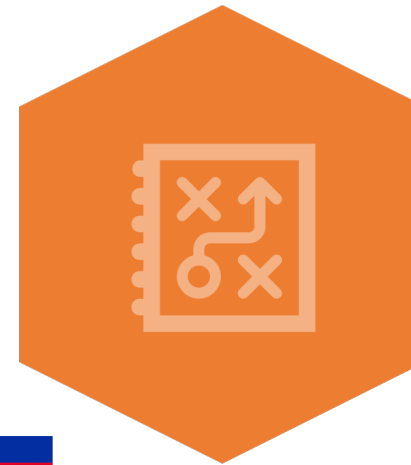
Innovation

Modernise water information collection and water resource planning

Cambodia's management of water scarcity

Overarching water related instruments

Law on Water Resource Management (2007) and supporting laws, decrees and policies



Supporting strategies

Sector strategies for water management and climate change strategic plan for water resources

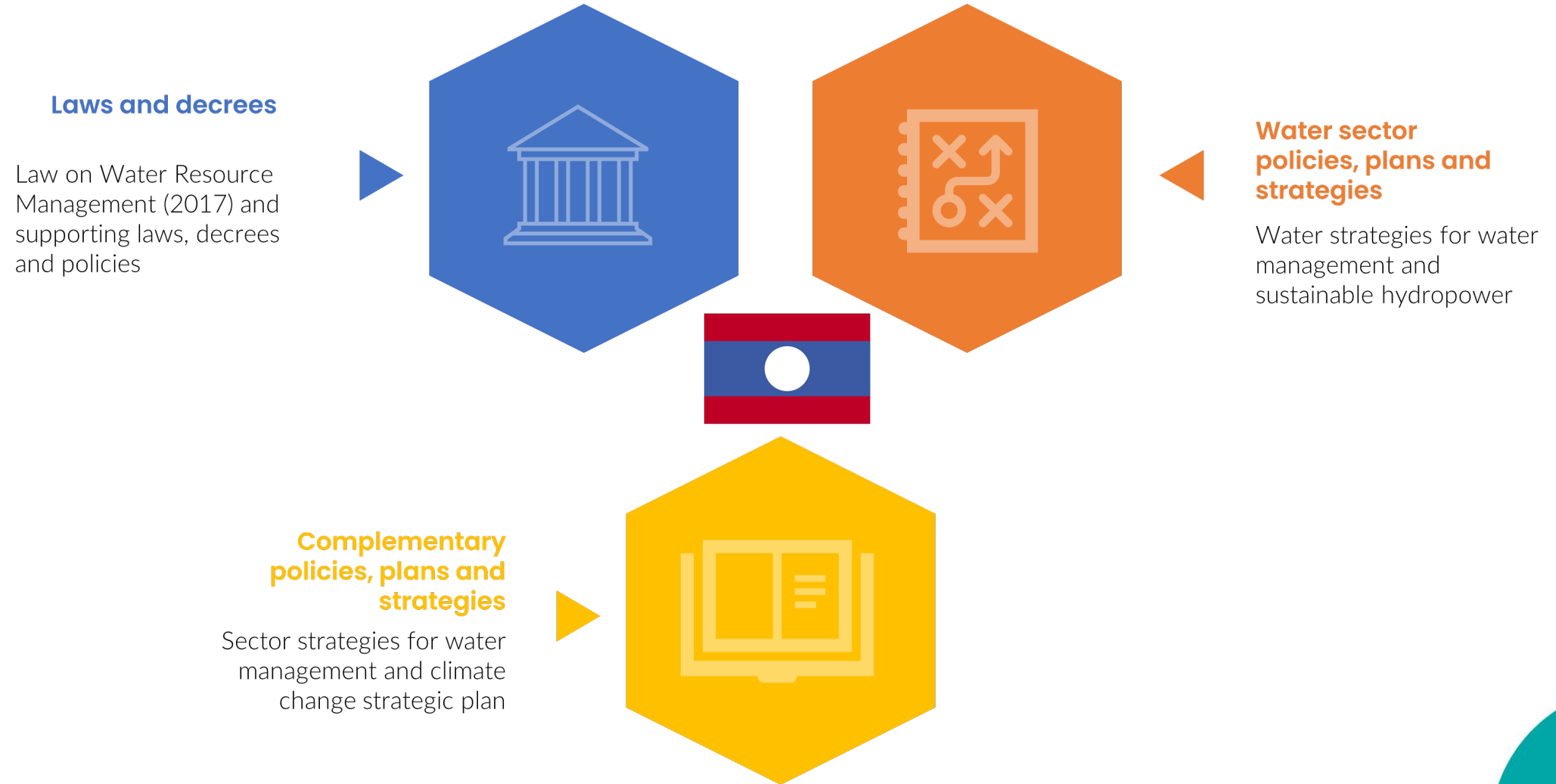


Local scale instruments

Farmer Water User Committees



Lao PDR's management of water scarcity



Common lessons for management water scarcity

Once a river system, or a country's water resource, have become overallocated, restraining water use is difficult and costly – **so act early**

Achieving water security is a long-term task with no simple fix - need to **balance ecological, social, cultural and economic concerns**

A **set of building blocks** need to be in place to be able to effectively manage water scarcity – understanding of water availability and use (water accounting); metering of water use; water access entitlements; and compliance enforcement

Approaches to managing water scarcity need to be **integrated and operate and link across scales**

Achieving water security will likely lead to winners and losers and governments may need to fund **appropriate structural adjustments**

Adaptable and flexible management systems are required to ensure **climate change** is considered

Thanks to partner organisations



Food and Agriculture
Organization of the
United Nations

THE
AUSTRALIAN
WATER
PARTNERSHIP

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Thai Water
Partnership



CDRI
Cambodia Development Resource Institute

RMCG

RPF

To contact further

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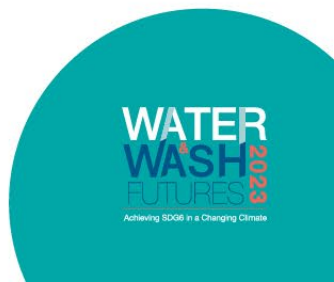
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Local scale instruments



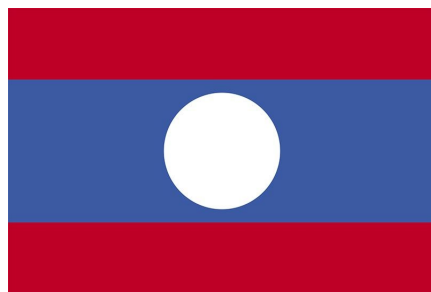
Farmer Water User Committees

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Complementary policies, plans and strategies

strategies for water management and climate change strategic plan

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