



Addressing increasing water scarcity in the Asia Pacific Region

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Australia



Food and Agriculture
Organization of the
United Nations

**WATER
&
WASH** 2023
FUTURES

Achieving SDG6 in a Changing Climate

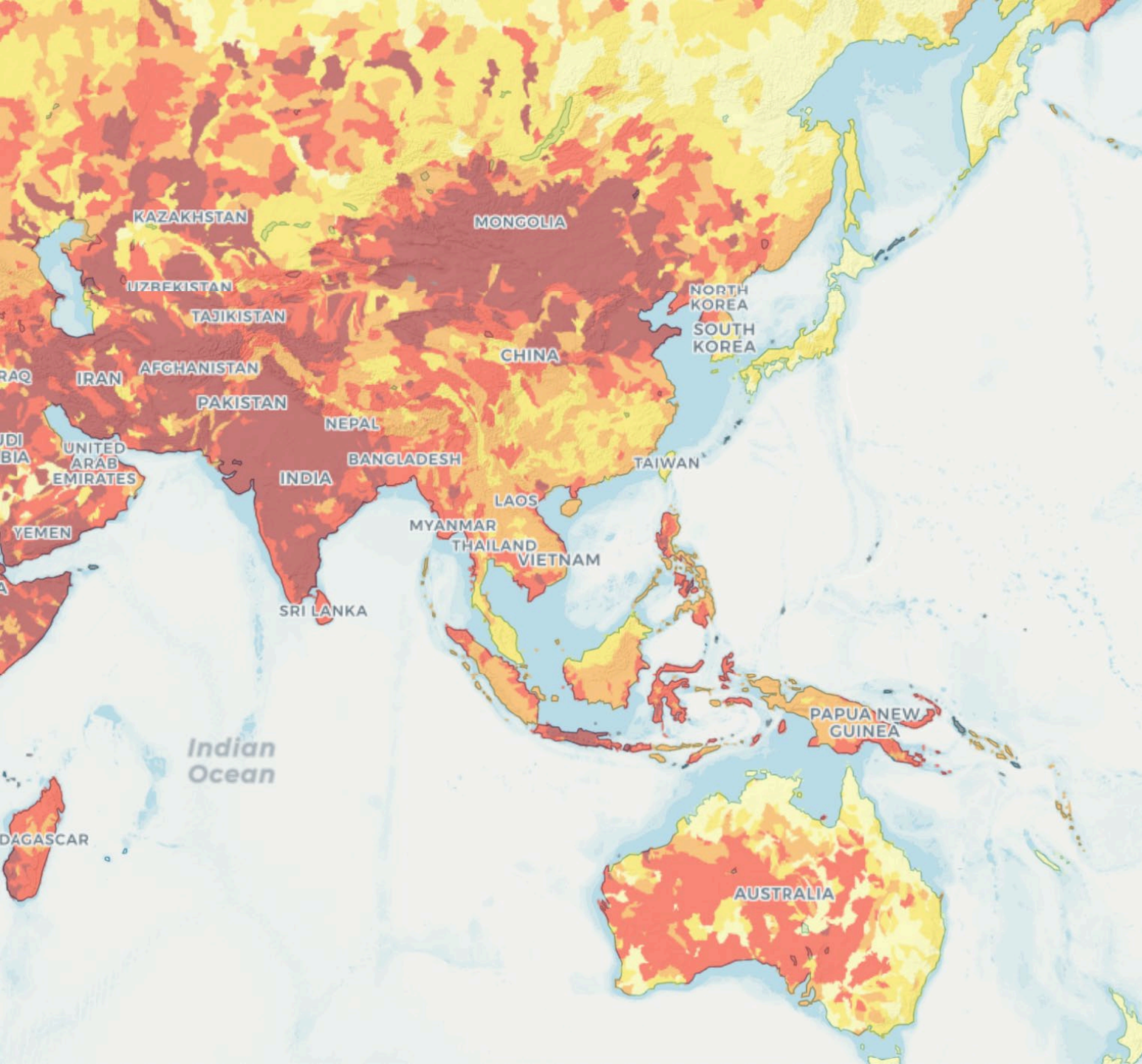


#WaWF23

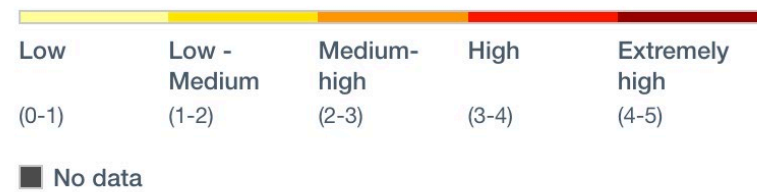
Defining Water Scarcity

<p>TOO LITTLE WATER</p> <p>Low natural precipitation and runoff conditions which induce low per capita water availability and general water scarce conditions.</p>	<p>TOO VARIABLE WATER</p> <p>Seasonal and inter-annual variability in precipitation produces highly variable water availability regimes and drives drought incidence.</p>
<p>OVER-UTILISATION</p> <p>Utilisation of water resources for domestic and agricultural purposes exceeds water availability or causes water quality issues.</p>	<p>POOR QUALITY</p> <p>Quality of water resource does not suit the required quality of water users and reduces effective availability of water for some or all uses, depending on degree of pollution.</p>

(Source: Ketelsen et al, in publication)



Overall Water Risk



The Asia-Pacific Water Scarcity Program



Australian Government
Department of Foreign Affairs and Trade



Food and Agriculture Organization
of the United Nations

- Designed to support countries in taking **practical steps** to address and manage water scarcity in a changing climate.
- Seeks to improve **the integration and engagement of all water using** sectors in water management
- Directly supports countries in their efforts to achieve **SDG6**
- Based on **extensive scoping activities between 2019 and 2022**

WSP Overarching objective: achieve sustainable use of water resources in all target countries.

1. **ENHANCE DATA** and assessment of water resources and use across all sectors.

2. **IMPROVE POLICY** to establish conditions for sustainable water management in all sectors, including provision of e-flows.

3. **PROMOTE WATER ALLOCATION** that is rational, equitable and transparent.

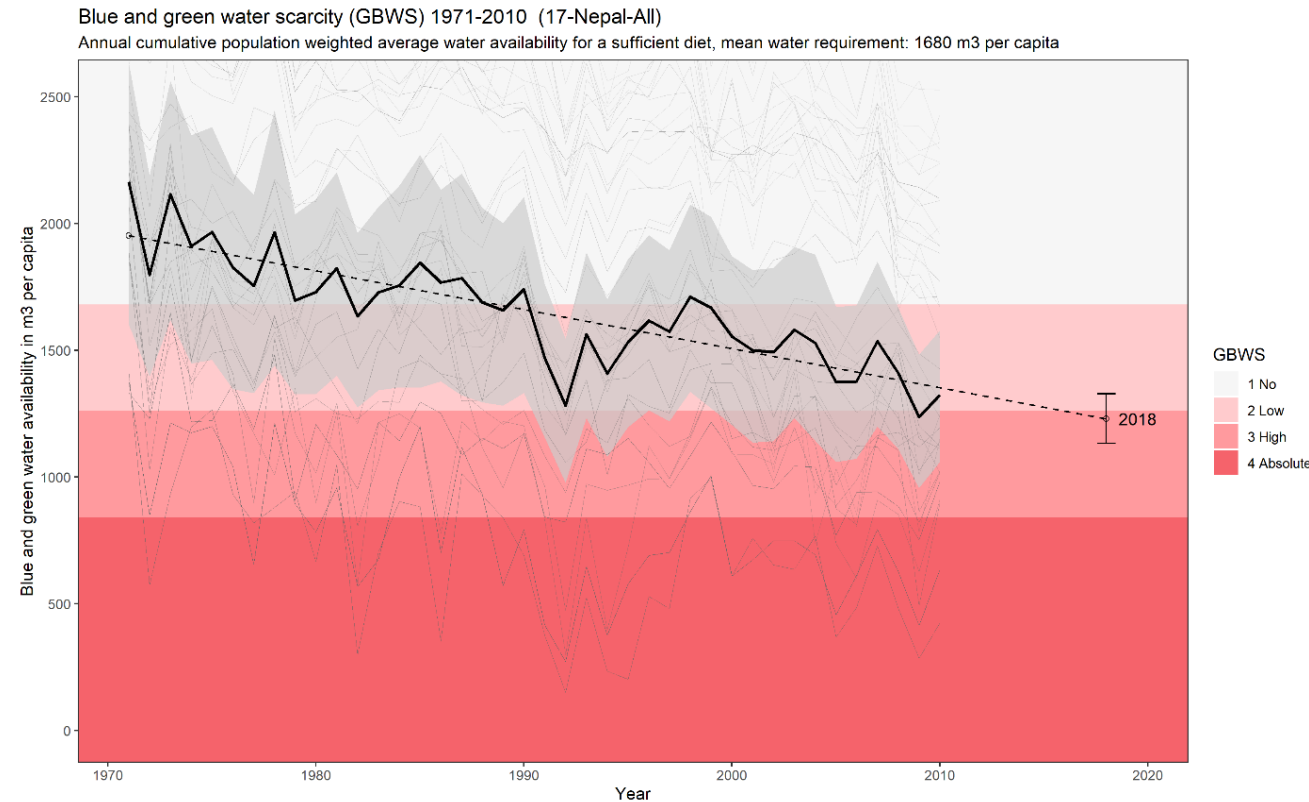
4. **CHANGE PRACTICE** at farm and scheme level to enhance productivity within sustainable consumption limits.

5. **SUPPORT REGIONAL COOPERATION** on water scarcity management.

WSP scoping activities

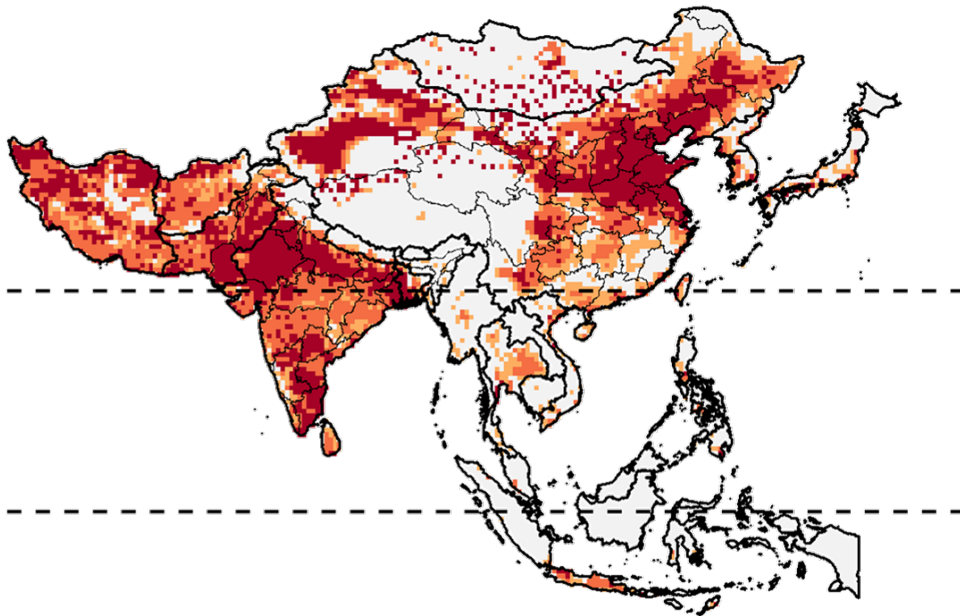


- Regional scale modelling and mapping of the trajectories of water scarcity at country and river basin level
- **Review of policies and governance of water scarcity/water management in the region**
- Review of modelling capacity and the use of models for water resources policy development and implementation
- **Scoping study of water tenure in Asia**
- Development of tools to manage water scarcity with associated training (Real Water Savings in Agriculture)



Understanding water scarcity as a policy challenge

- Review of water policies and governance was undertaken to understand where water scarcity is, or is emerging, as a major policy challenge across sectors
- Examined the nature of water scarcity in 10 case study countries - Bangladesh, Cambodia, Nepal, Thailand, Vietnam, Laos, Fiji, Indonesia, Australia, Myanmar



Key observations

- Seasonal water scarcity predominates during the dry season
- Groundwater over-abstraction is rising in some areas
- Water quality is declining rapidly across the region due to agricultural and urban runoff.
- Water scarcity management varies across the region
- Water quality issues need attention and political commitment
- Countries not yet facing severe water scarcity have an opportunity to establish frameworks for water sharing

Upcoming publication!

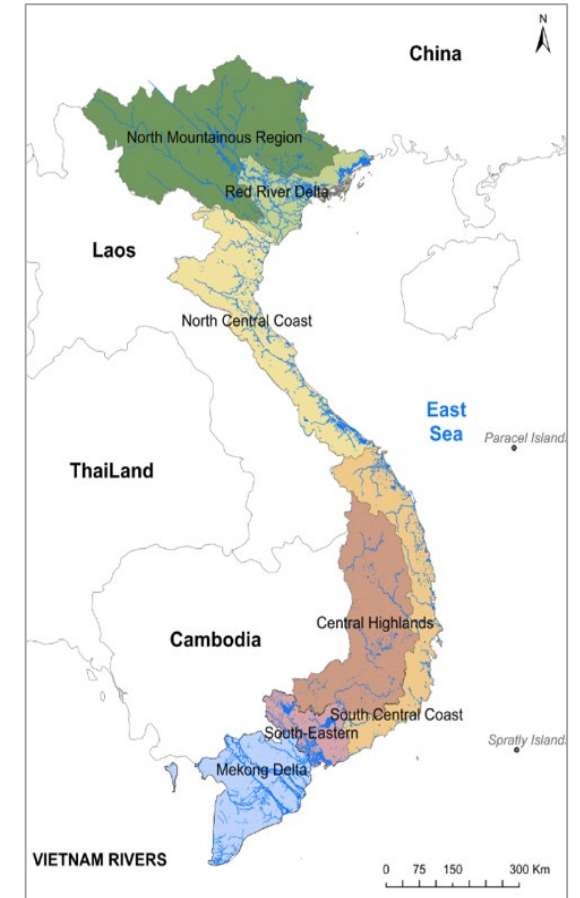
MANAGING WATER SCARCITY IN THE ASIA- PACIFIC

**Trends, experiences, and recommendations
for a resilient future: Summary for
Policymakers**

Prepared for the Australian Water Partnership by AMPERES

Understanding water tenure

“the relationship, whether legally or customarily defined, between people, as individuals or groups, with respect to water resources” (Hodgson, 2016).



Benefits of a water tenure approach



HOLISTIC: SHOWS THINGS AS THEY ARE



SENSITIVE AND NUANCED APPROACH



NON-PRESCRIPTIVE



EXAMINATION OF IMPLEMENTATION AND ENFORCEMENT



LINKAGE TO WATER SECURITY



POLICY COHERENCE (LAND, FORESTS, FISHERIES, WATER...)



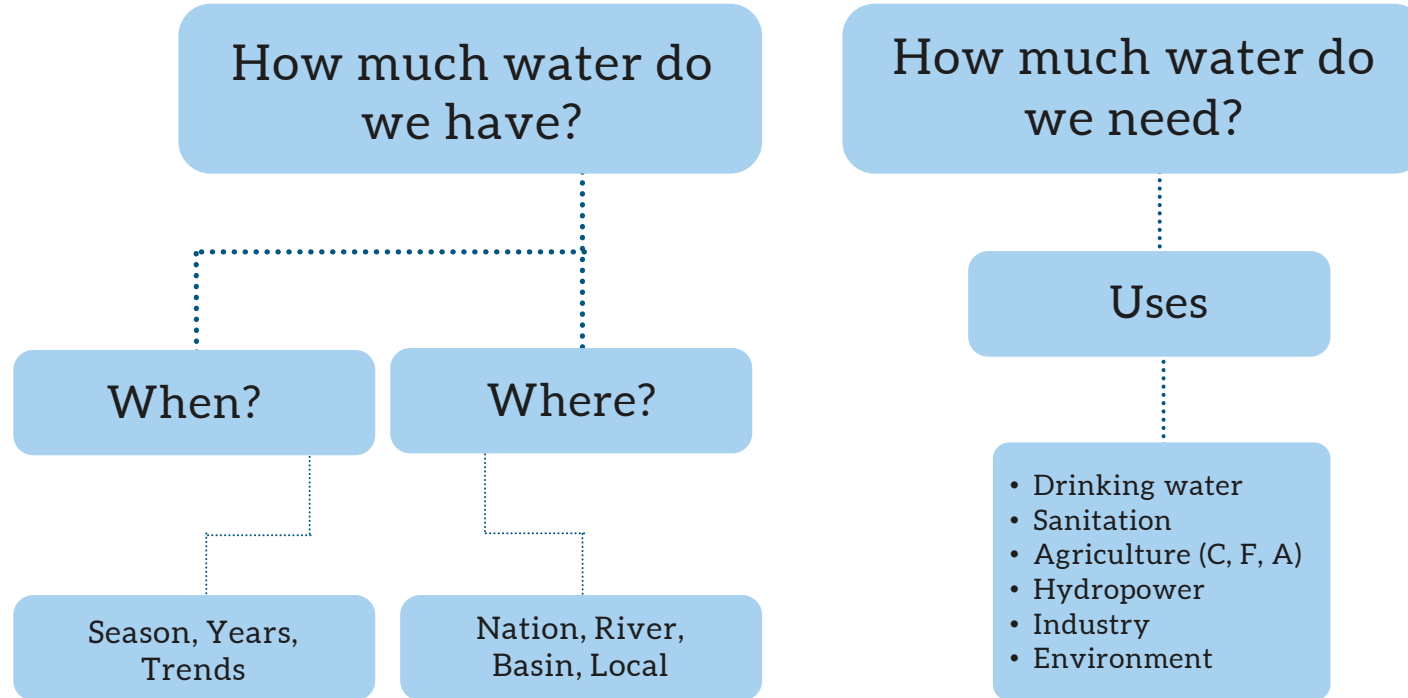
MULTI-DISCIPLINARY



FOCUS ON USERS

Tenure arrangements deriving from formal law	Tenure arrangements not deriving from formal law
Traditional land based formal water rights	Customary water tenure
'Modern' long-term, permit based formal water rights	Religious law water tenure
Regulatory licenses (short-term)	Informal (illegal or tolerated) water tenure
Agency control	Assumed water tenure
Water supply contracts (for irrigation/industry)	Impossible water tenure
Commonhold water tenure (e.g. a water user organization)	Unrecognized water tenure
Investment contracts	Other
<i>De minimis</i> small scale uses (e.g. drinking, subsistence)	
Declared/exempt commercial uses	
Reserves/minimum flow requirements	
Other	

Water Accounting



Water Balance

-

=

+

Now

Future

Moving Forward: Water Scarcity Program

1. Establish a **National Multidisciplinary Working Group**
2. Country-led development of a **Water Accounting Roadmap**
3. Country-led development of a **Water Allocation Framework**
4. Development of national **Water Scarcity Action Plan**
5. Establish a **Regional Cooperative Platform**



WSP Partnerships



Food and Agriculture Organization of the United Nations



FutureWater



UNSW SYDNEY



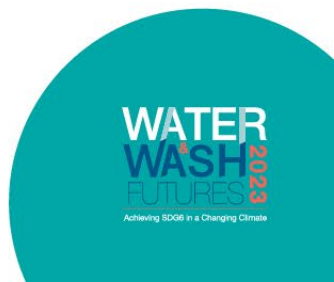
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AMPERES



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