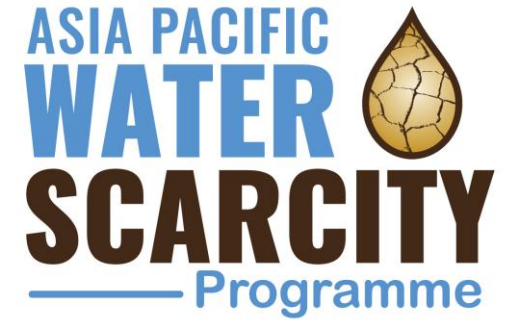




Food and Agriculture
Organization of the
United Nations



The Asia Pacific Water Scarcity Programme (WSP)

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Regional Office for Asia and Pacific

Defining water scarcity



TOO LITTLE WATER

Low natural precipitation and runoff conditions which induce low per capita water availability and general water scarce conditions.

TOO VARIABLE WATER

Seasonal and inter-annual variability in precipitation produces highly variable water availability regimes and drives drought incidence.

OVER-UTILISATION

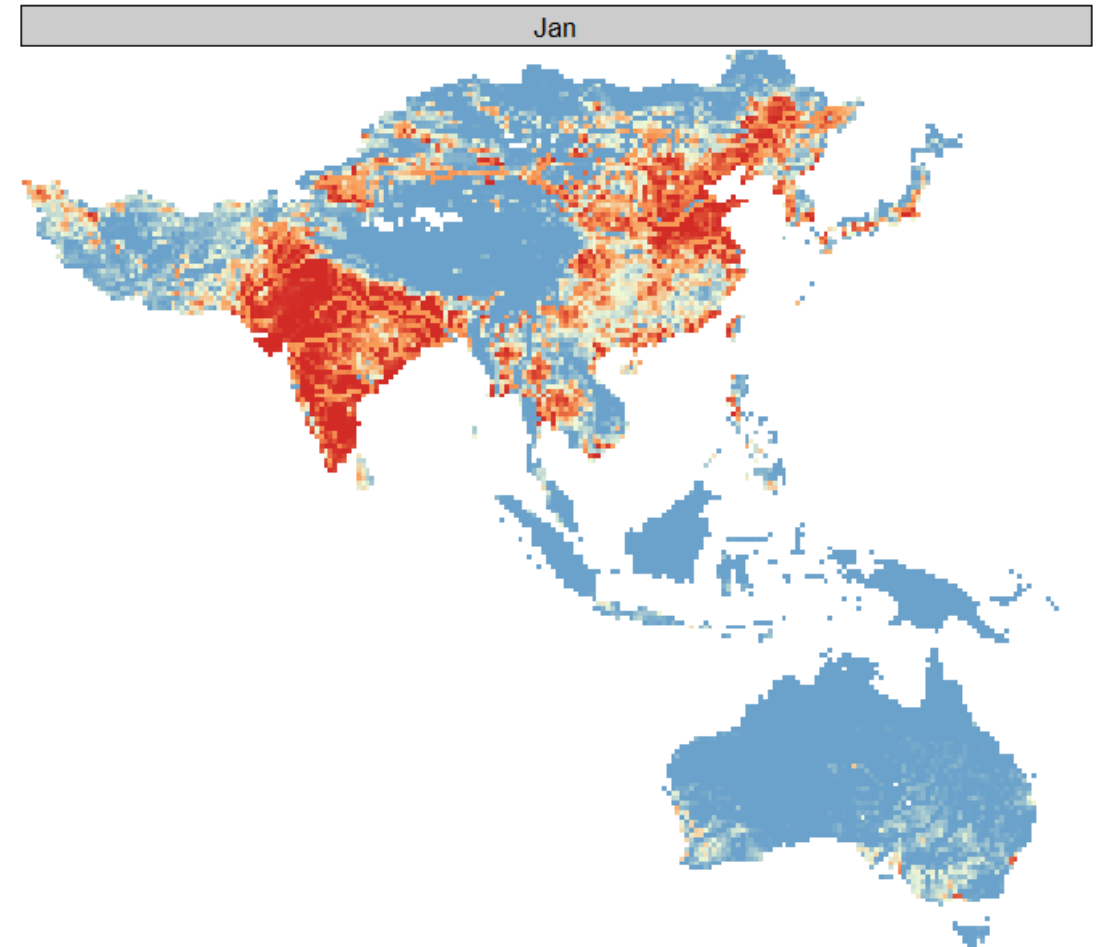
Utilisation of water resources for domestic and agricultural purposes exceeds water availability or causes water quality issues.

POOR QUALITY

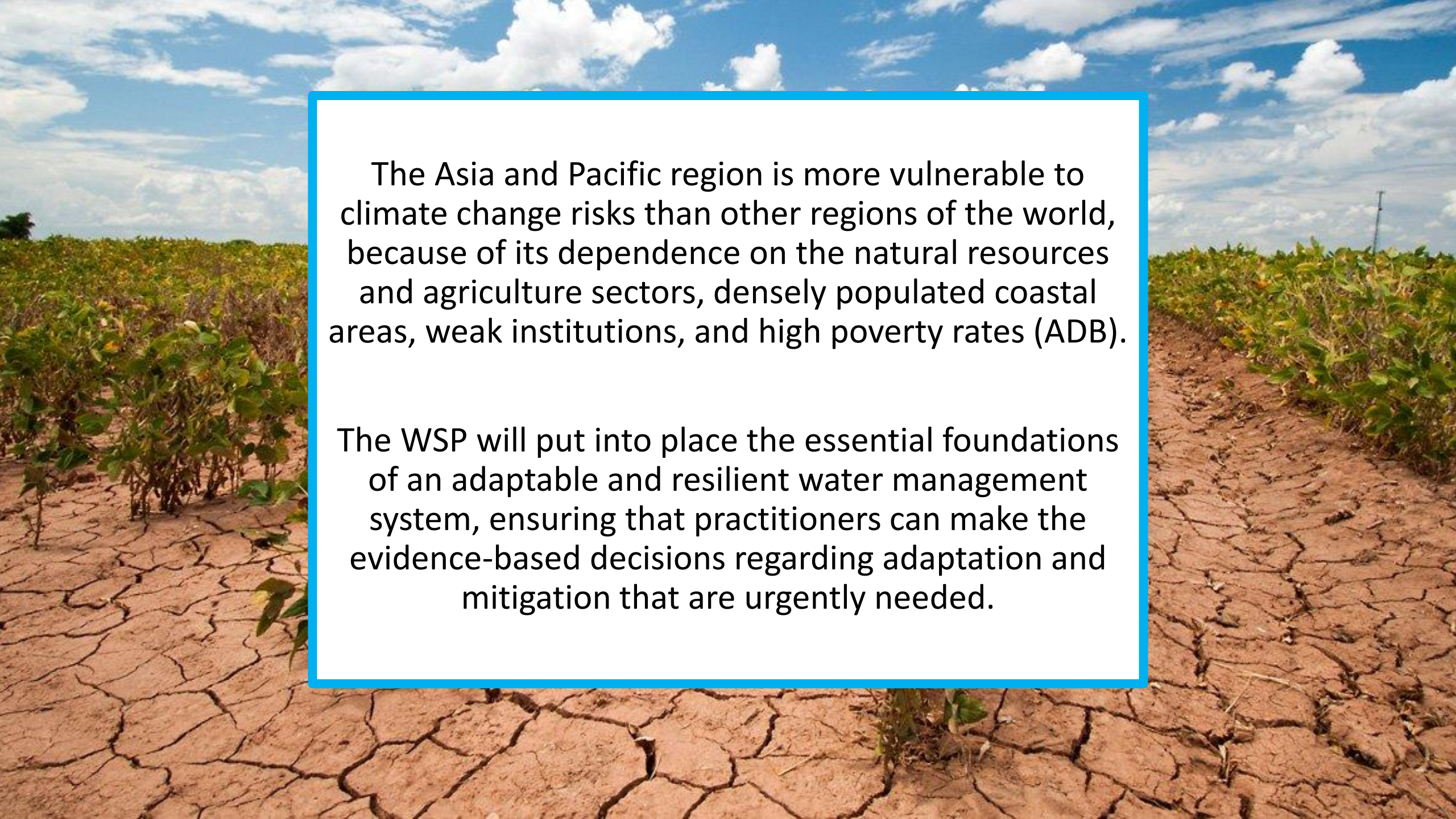
Quality of water resource does not suit the required quality of water users and reduces effective availability of water for some or all uses, depending on degree of pollution.

Water Scarcity in Asia Pacific

- Majority of the Asia Pacific population lives under some kind of water scarcity
- Water scarcity exhibits strong seasonality
- Scarcity is worsening, driven mainly by population and economic growth
- Climate change exacerbates scarcity but is not a key driver of it



Monthly average scarcity

The background image shows a field of young green plants growing in a dry, cracked soil. The sky is bright blue with scattered white clouds. A utility pole is visible in the distance on the right side.

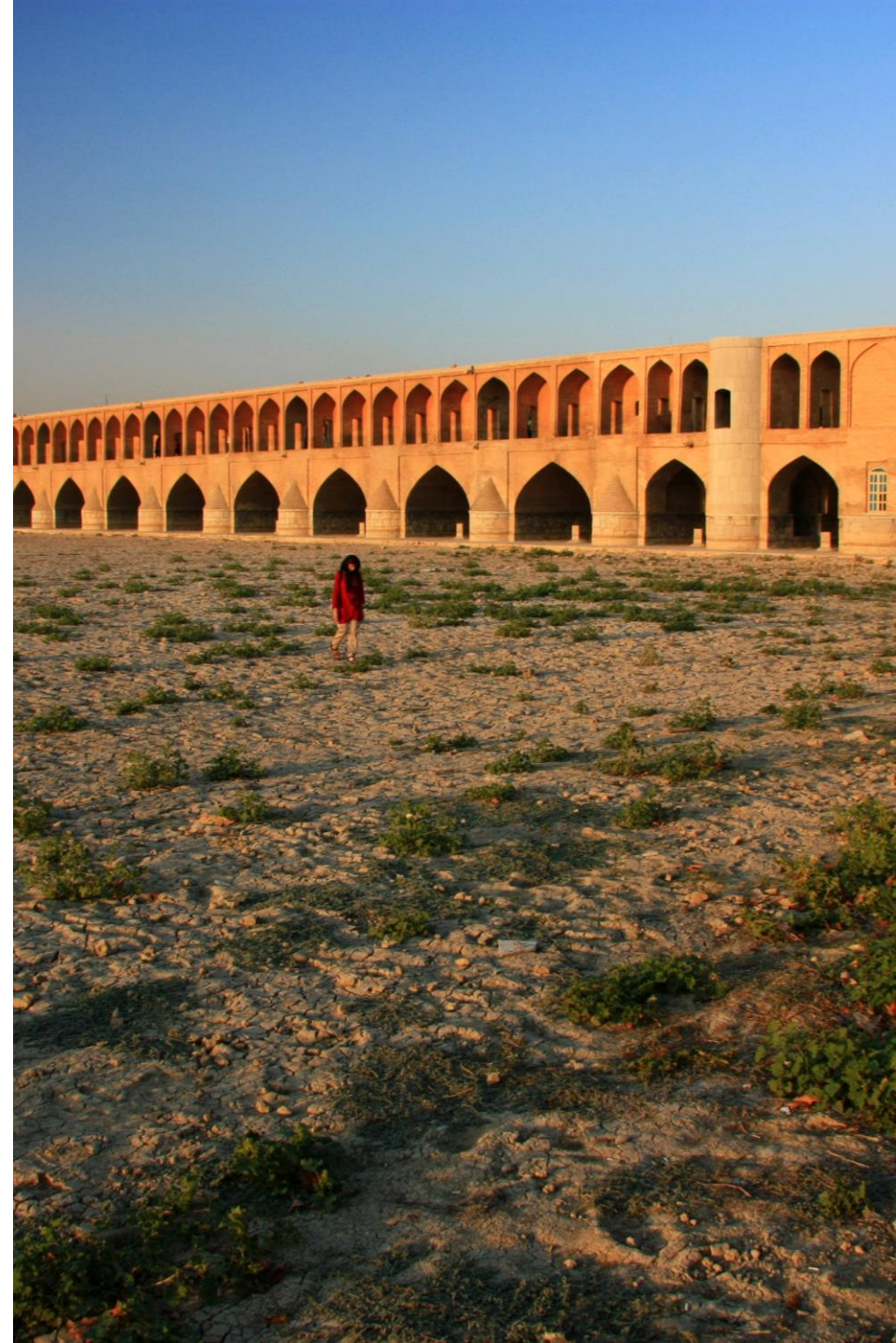
The Asia and Pacific region is more vulnerable to climate change risks than other regions of the world, because of its dependence on the natural resources and agriculture sectors, densely populated coastal areas, weak institutions, and high poverty rates (ADB).

The WSP will put into place the essential foundations of an adaptable and resilient water management system, ensuring that practitioners can make the evidence-based decisions regarding adaptation and mitigation that are urgently needed.

Overview

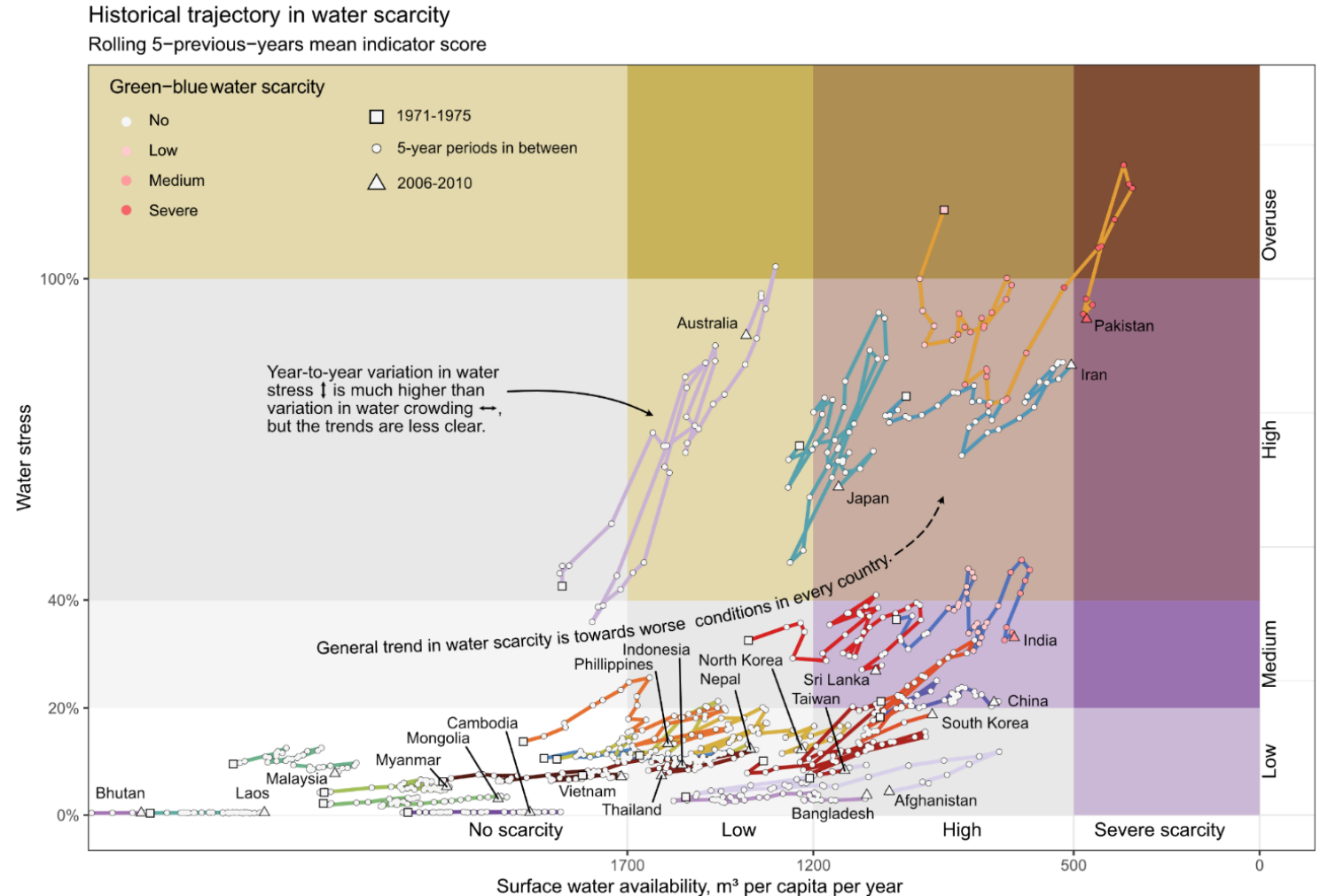


- The Asia Pacific Water Scarcity Programme (WSP) operates at both national and regional levels
- The WSP is **country-led** and designed to support countries in taking data-led and practical steps to address and manage water scarcity in a changing climate.
- The overall objective is to achieve **sustainable use of water resources in the Asia Pacific** and prepare countries to adapt to a future with worsening water scarcity.
- The WSP supports countries in their efforts towards **SDG6 Water and Sanitation** and all other water-dependent SDGs
- The WSP is based on **extensive scoping, establishment and technical activities** carried out between 2019 and 2022.



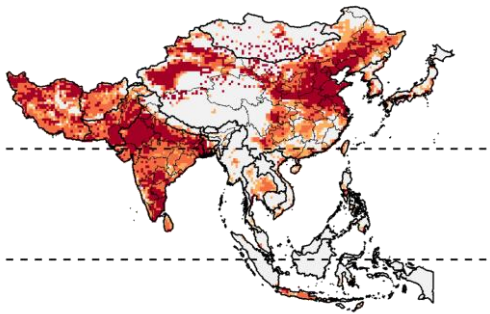
Establishment and Scoping Activities

- Regional scale modelling and mapping of the trajectories of water scarcity
- Review of policies and governance related to water scarcity management
- Review of modelling capacities in Asia
- Development of new practitioner tools 'REWAS' and 'Follow the Water'

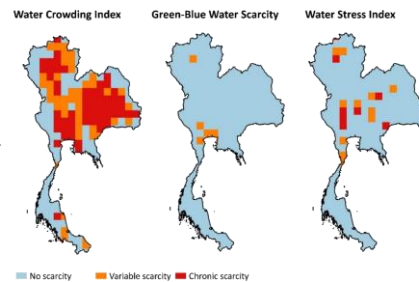


Regional approach to water scarcity analysis

1. How does water scarcity vary throughout Asia?

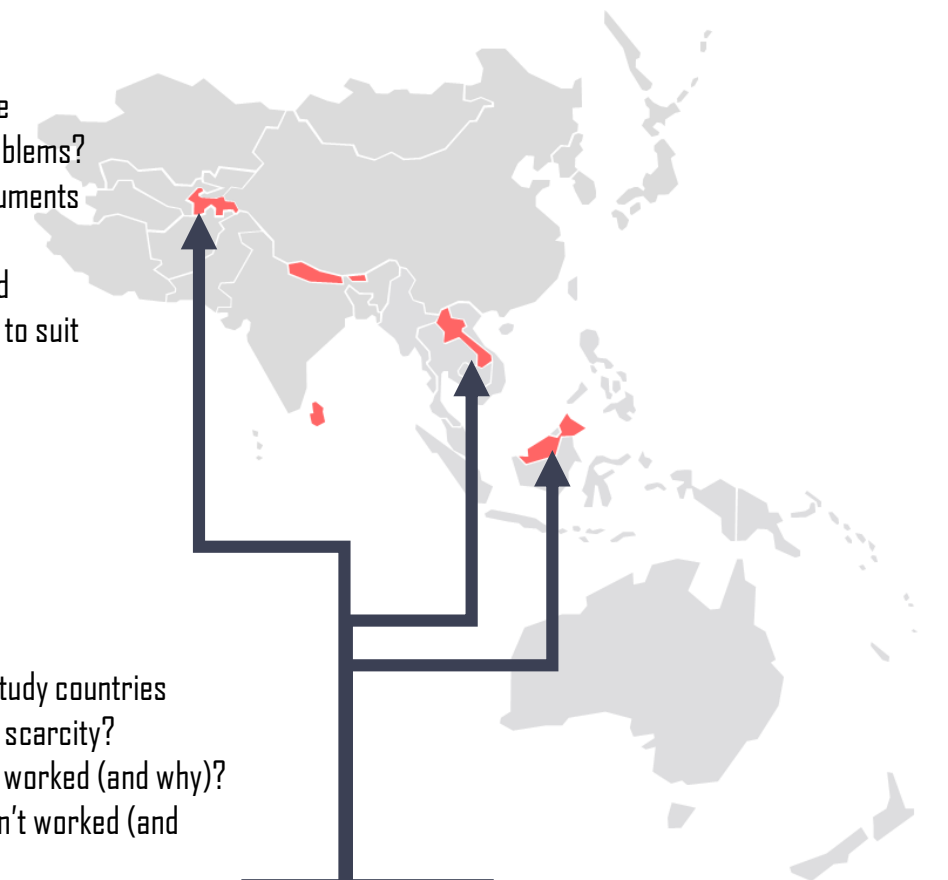
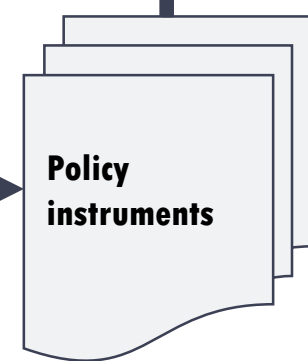


2. What is the nature of water scarcity in 10 case study countries?
(Bangladesh, Cambodia, Nepal, Thailand, **Vietnam**, Laos, Fiji, Indonesia, Australia, Myanmar)



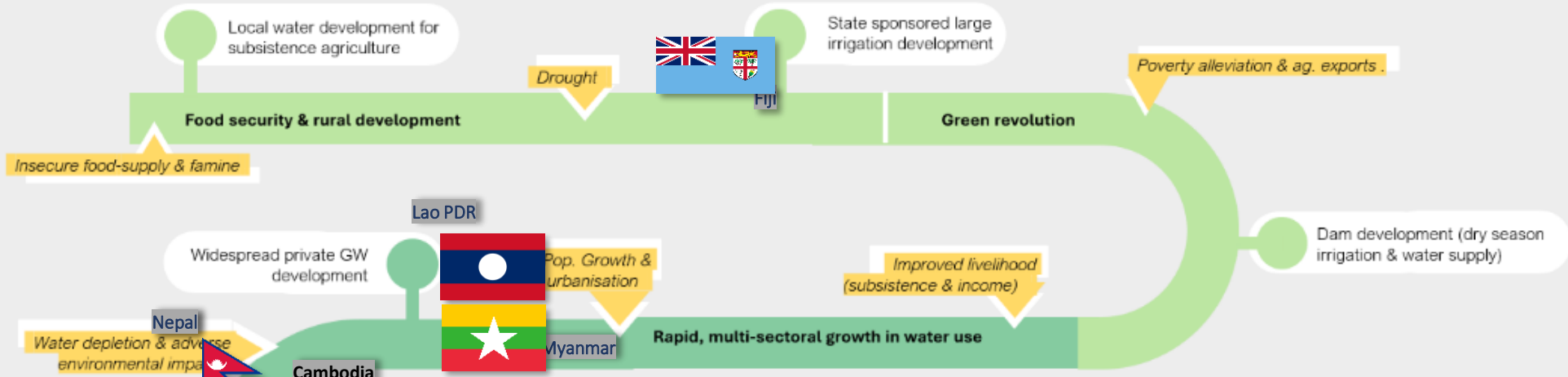
4. Which other countries face similar water scarcity problems?
How can good policy instruments & successful management experiences be shared and adapted from one country to suit another?

3. How do case study countries manage water scarcity?
• What has worked (and why)?
• What hasn't worked (and why)?



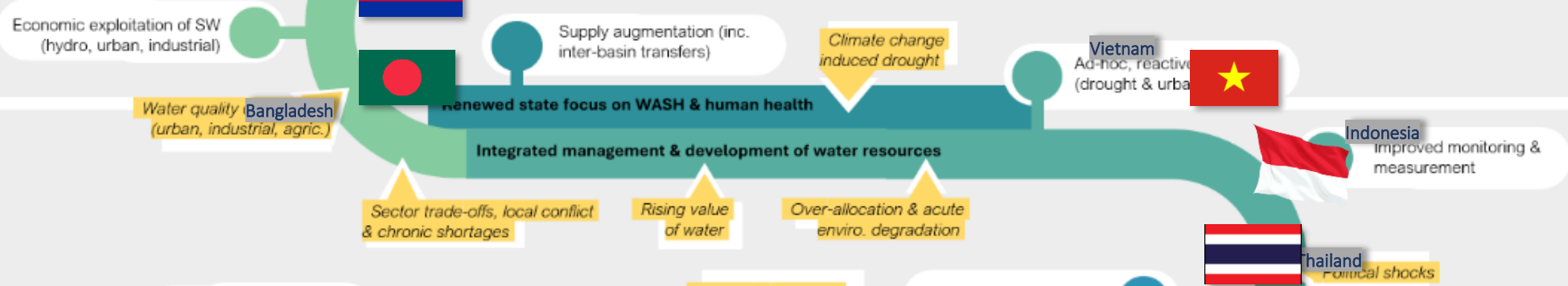
[A] STATE-LED IRRIGATION DEVELOPMENT

(increasing water demand)



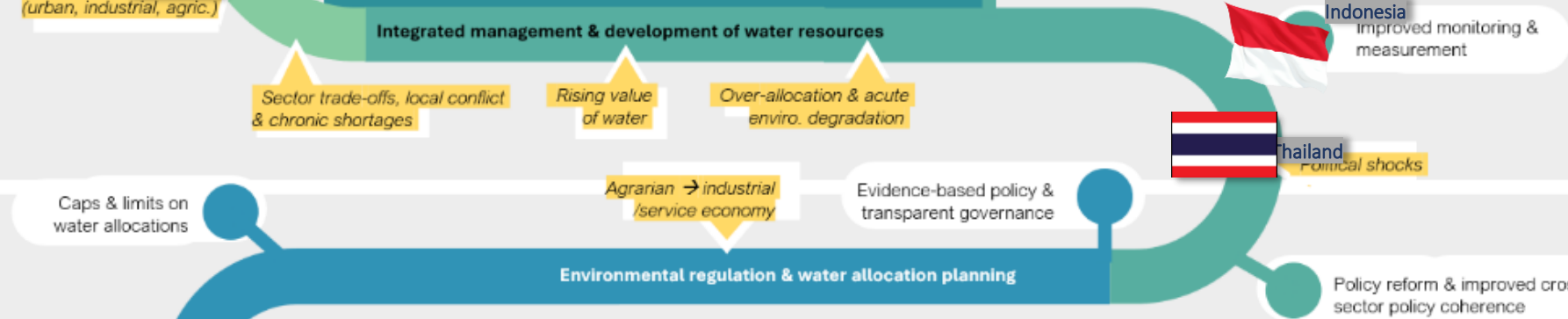
[B] MULTI-SECTOR DEVELOPMENT

(increasing water competition)



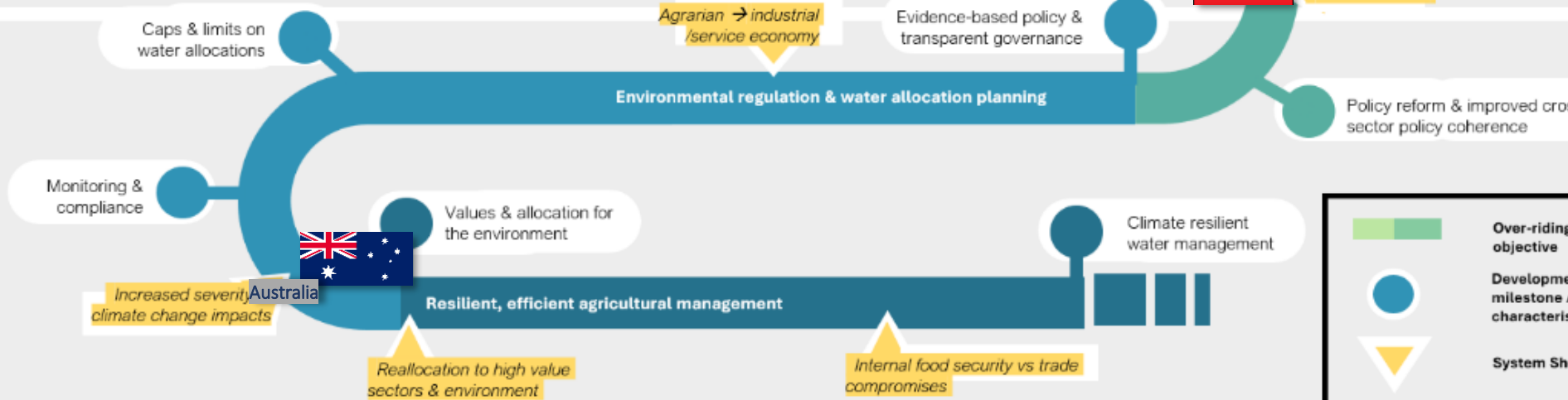
[C] IWRM

(Coordinated management)



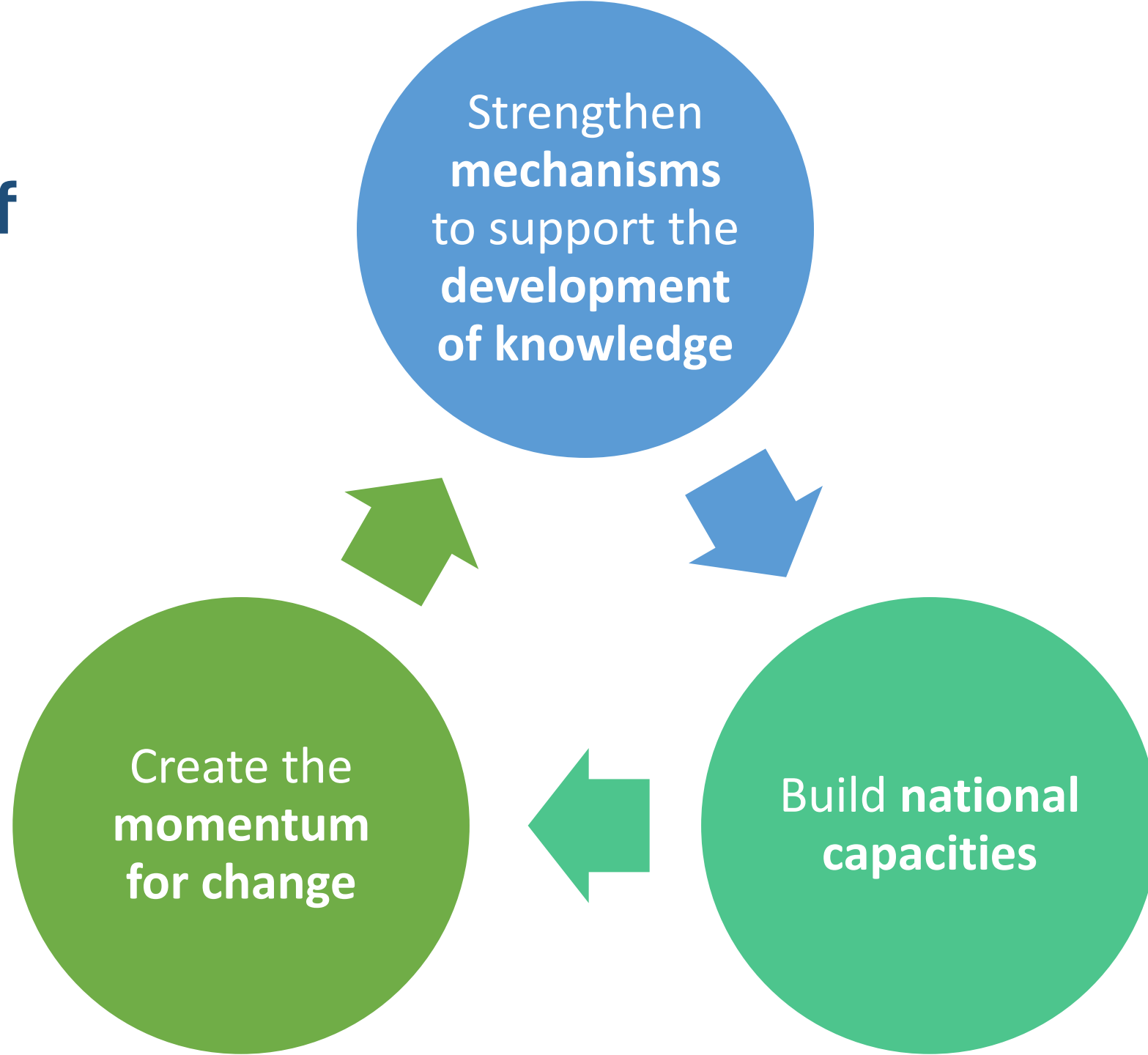
[D] SUSTAINABLE WATER MANAGEMENT

(Balanced economic, social & environmental outcomes)



	Over-riding policy objective
	Development milestone / characteristic
	System Shocks

WSP Theory of Change



WSP Framework

1

Develop practical capacity in routine **water accounting**

2

Develop **water allocation** frameworks and processes

3

Work with **farmers and water managers to adapt** to water scarcity

4

Support a **Regional Cooperative Platform**

Technical tool development

- Real Water Savings in Agricultural Systems (REWAS) is a simple to use and pragmatic tool that evaluates the impact of field scale crop-water interventions at larger scales
- Developed to overcome misconceptions with respect to water savings
- An associated REWAS Guidance Document provides a full inventory of the interventions, and their impact on basin hydrology
- Extensive training is ongoing

FAO Boosts Iranian Experts' Knowledge of Agricultural Water Saving, Water Productivity

TEHRAN (FAO) - The Food and Agriculture Organization of the United Nations (FAO), as part of its multilateral project to support Iran in reducing the agriculture water consumption in the Lake Urmia basin, equips Iranian experts with the requisite knowledge and skills to implement the advanced approach of Real Water Savings (REWAS) in the agriculture sector.

Like many other Asian nations, and due to projected population growth, economic development and associated water demands, the country is expecting to experience growing water scarcity over the following years.

In these circumstances, and considering a growing body of evidence revealing that many of the traditional water saving technologies are ineffective, FAO and the Urmia Lake Restoration Program (ULRP) link arms, providing an eLearning opportunity for Iranian officers and researchers from the Ministry of Agriculture Jihad, the Ministry of Energy, ULRP and a number of academic institutions, on using REWAS. This training enables Iranian experts to estimate real water savings and water productivity in the Urmia Lake basin, and evaluate the impact of field-scale crop-water interventions on basin-scale water savings, more accurately.

The eLearning program is provided by FutureWater research and consulting organization under the FAO Water Scarcity Initiative for Asia and the Pacific.



“REWAS provides the decision-makers with an insight of water flows at the farm, irrigation system, and basin scale. It leads to a higher awareness of the factors involved in achieving real water savings and improving the water productivity of the agricultural sector,” said Jonna van Opstal, Water Productivity Expert at FutureWater, who

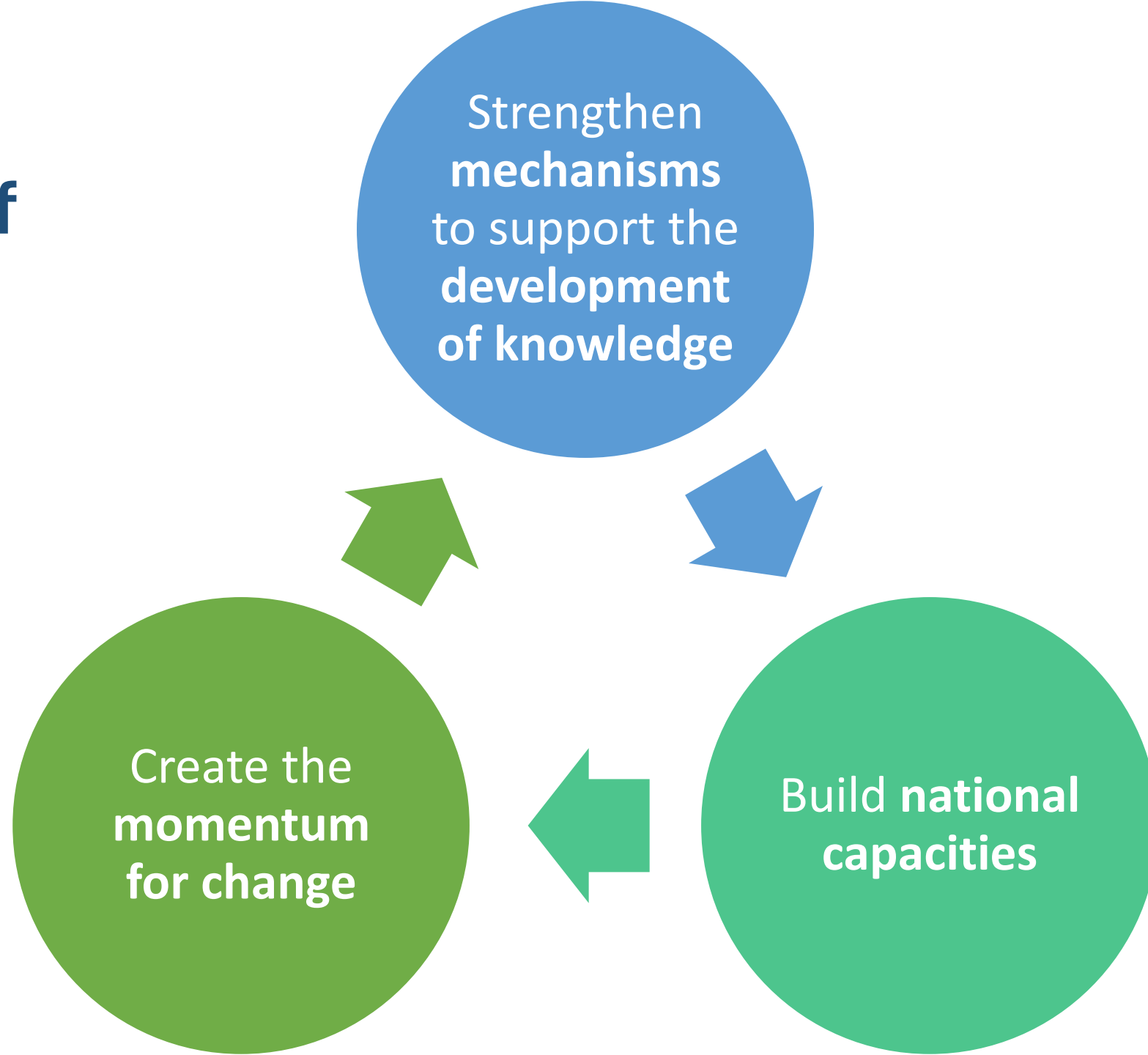
also led this virtual training.

“REWAS is using the concept of ‘following the water.’ In this approach, drainage, runoff and percolation to the groundwater are no longer considered as ‘losses,’ because downstream users often use these recoverable waters. This concept resolves a paradox in the water sector where more efficient technologies are expected to reduce water demands, but in reality, lead to higher water consumption and exacerbating the water scarcity problems,” added van Opstal.

As per this expert, adopting such an approach can stop the false belief that high-tech irrigation methods (e.g. drip irrigation) save high amounts of water. It likewise supports the development of better water governance, which can regulate the expansion of unsustainable irrigated areas by evaluating real water savings.

FAO, being the lead UN agency in promoting climate-smart agricultural and sustainable r in its Member Countries in dev policies, measures and i addressing the risks and thre sector and rural communities

WSP Theory of Change



Project Activities 2023 - 2024



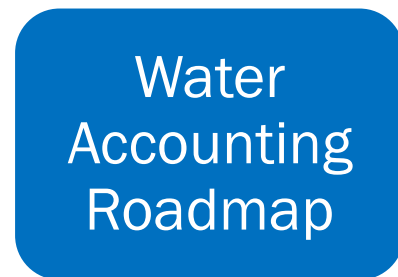
1. National Consultations
2. Analysis of water tenure
3. Establishment of a **National Multidisciplinary Teams (NMT)** and NMT development of national **Water Scarcity Action Plan (WSAP)**
4. Country-led development of a **Water Accounting Roadmap**
5. Country-led development of a **National Water Allocation Framework**
6. **Water Accounting Practitioner Guide** to assist practitioners in the Asia Pacific Region
7. Establish a **Regional Cooperative Platform (RCP)** the project will host a **Regional High-Level Technical Workshop** and a '**Regional Water Scarcity Symposium**' to support regional cooperation and south-south learning and exchange



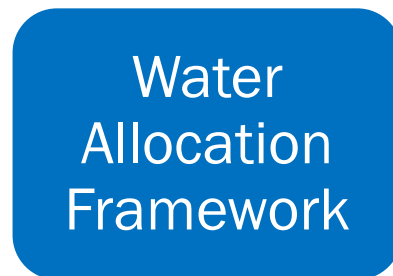
Outputs of Consequence



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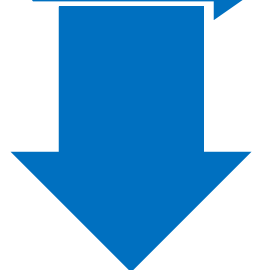
- Review of existing work on water accounting
- In-country training in water accounting
- Assess impact of climate change on water availability and demand
- Explore potential to utilize **remote-sensing** for water accounting
- Conduct water accounting in pilot basins (learning by doing)
- Quantify the required investments to fill capacity gaps



- Review existing water allocation policy
- Assess impact of climate change on water availability and demand
- Water rights and water tenure
- Simple scenario modelling to 2100 (incl. climate)
- Multi-stakeholder workshop to discuss modelling results



- Commitment to act at high political level
- Capacity development needs
- Basin caps on water use
- Specification of environmental flows
- Investment strategies



Regional Cooperative Platform (Pillar 4)

Create a space for sharing both successes and failures, new knowledge and expanded partnerships

Establish a regional training team to build regional capacities

High level political and policy dialogue for south-south cooperation

- Regional High Level Technical Workshop 2023 (Bangkok)
- Regional Water Scarcity Symposium 2024 (Hanoi)



WSP Partnerships



UNSW
SYDNEY



FutureWater

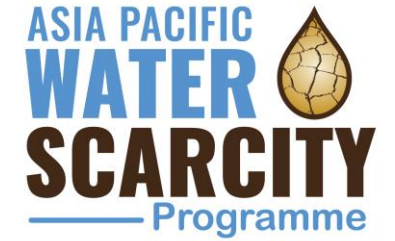


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Thank you

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