WaterGuide

A Framework for improving water resource management in the Jordan Valley

International River Symposium

Huw Pohlner & Amy Syvrud | 22 October 2019

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22nd International RIVER SYMPOSIUM
EXCELLENCE – COLLABORATION – INTEGRATION

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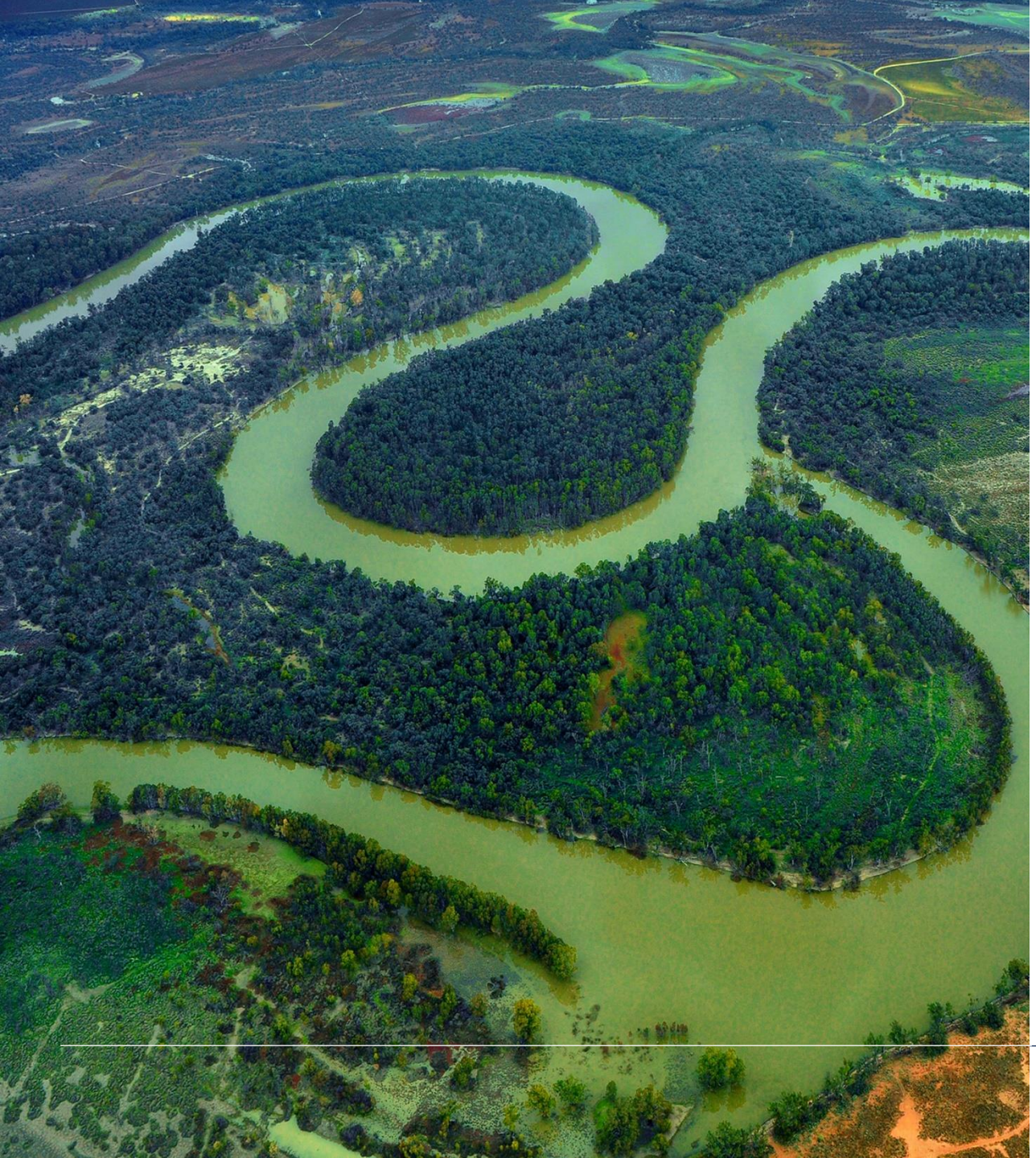

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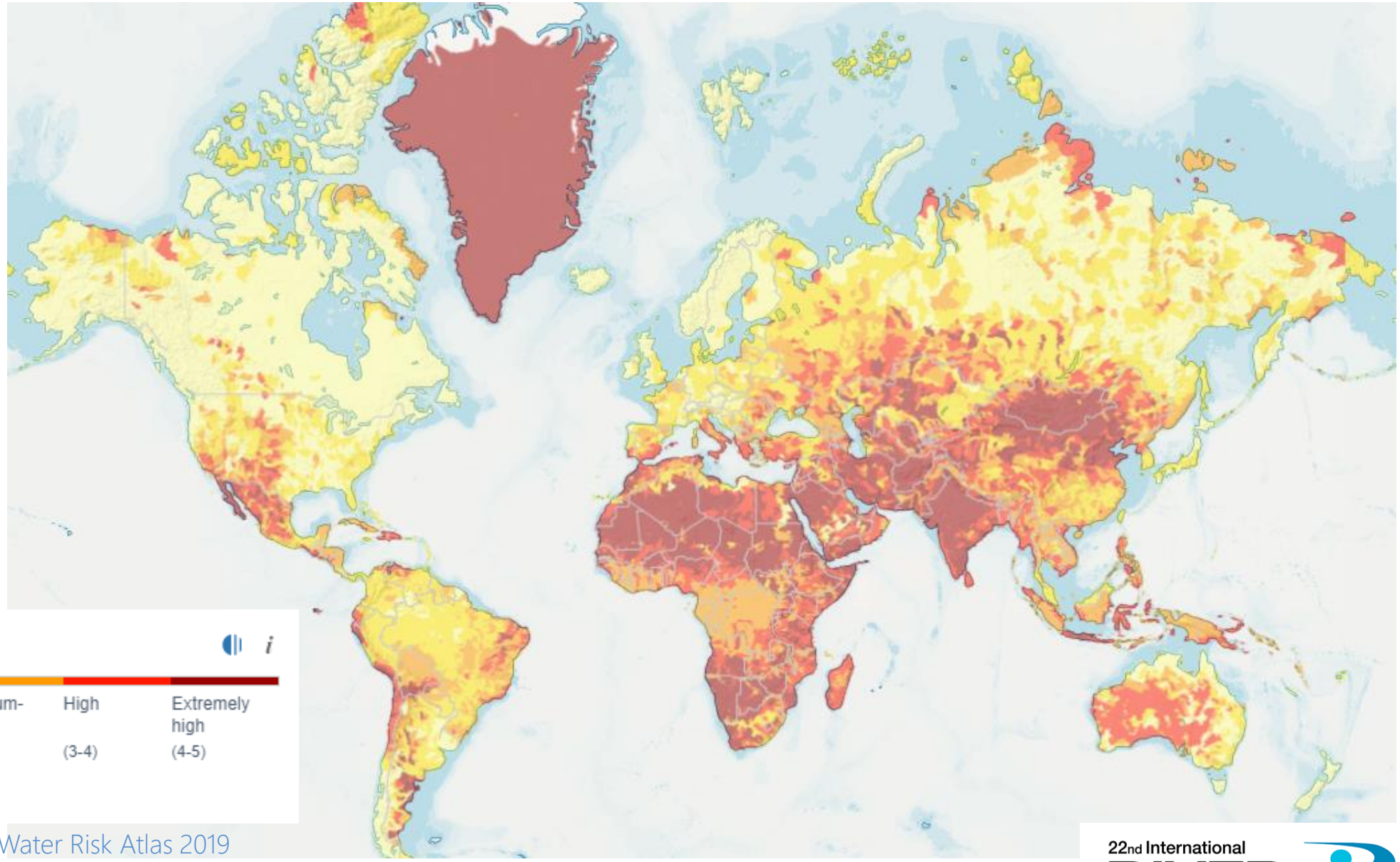
About us

At Aither, we are passionate about driving beneficial change. Through our range of services, we strive to help our clients make decisions that contribute to economic growth and sustainable development.

We primarily work in the water markets, water utilities and natural hazards and resources sectors. In these sectors, we provide strategy, policy and economics advisory services.

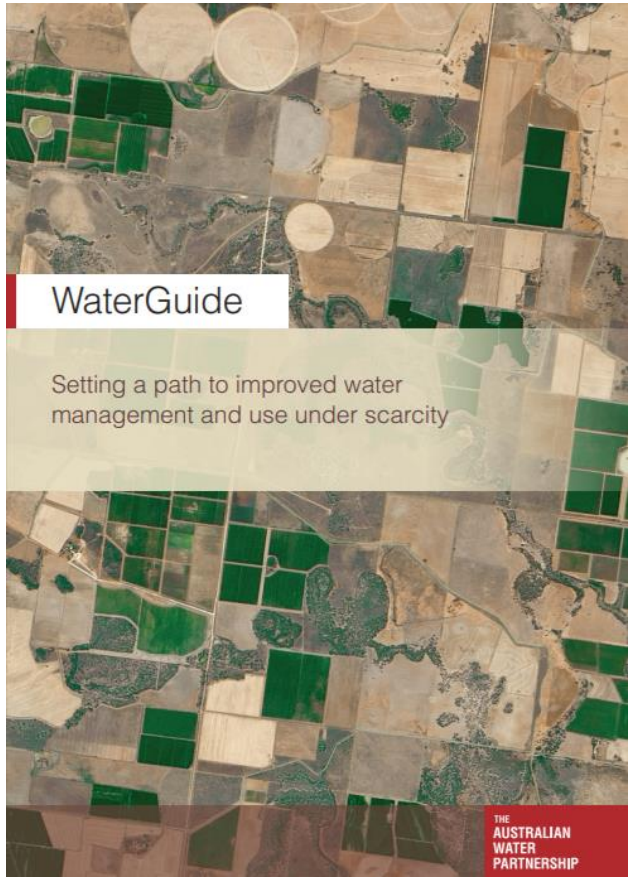
We are enthusiastic about our work and how we can contribute towards positive outcomes in our sectors. It is our belief that government and the private sector can each contribute to better public and private results and we have the drive, skills and networks to help influence and achieve these outcomes.



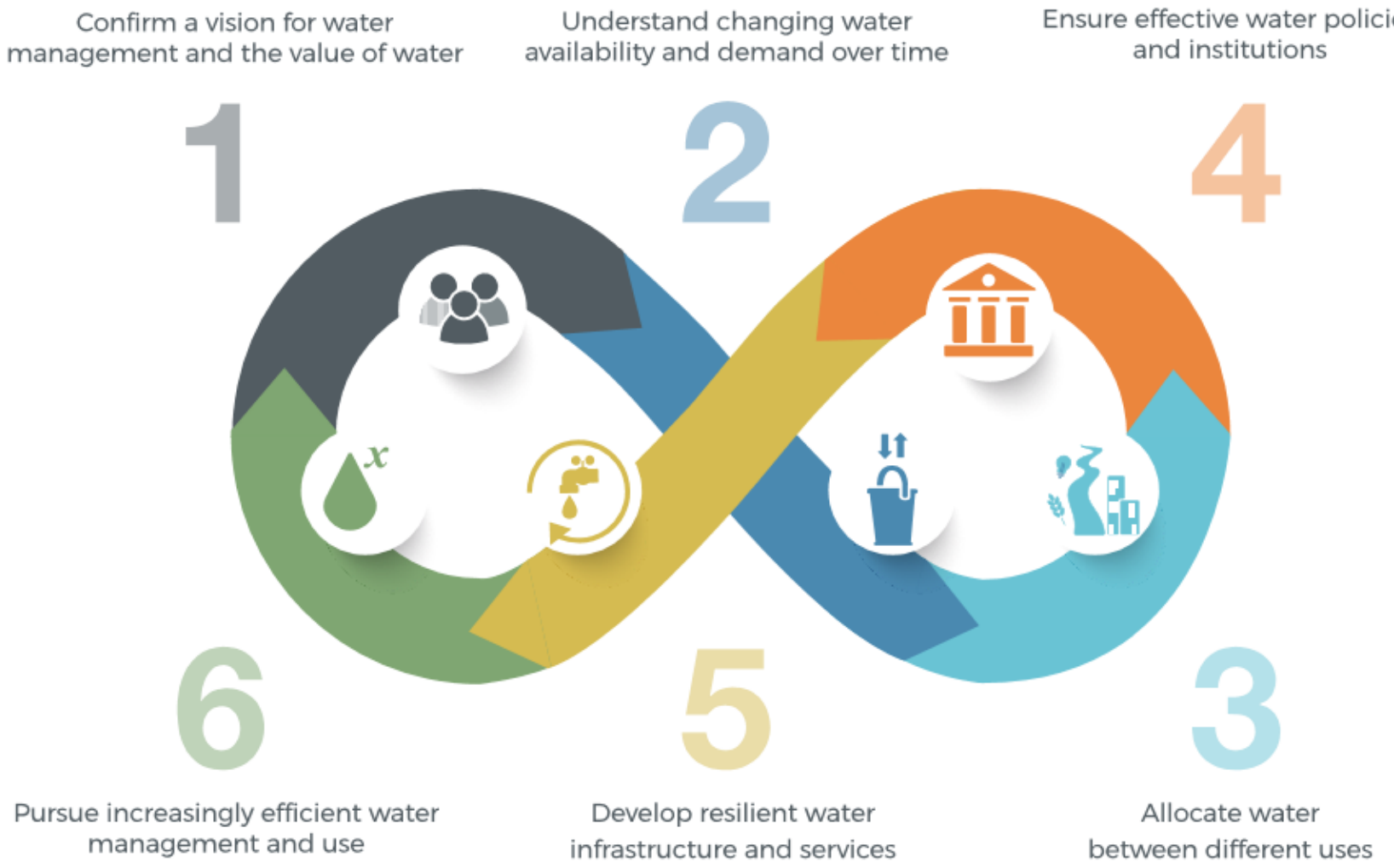
Source: WRI Aqueduct Water Risk Atlas 2019

WaterGuide

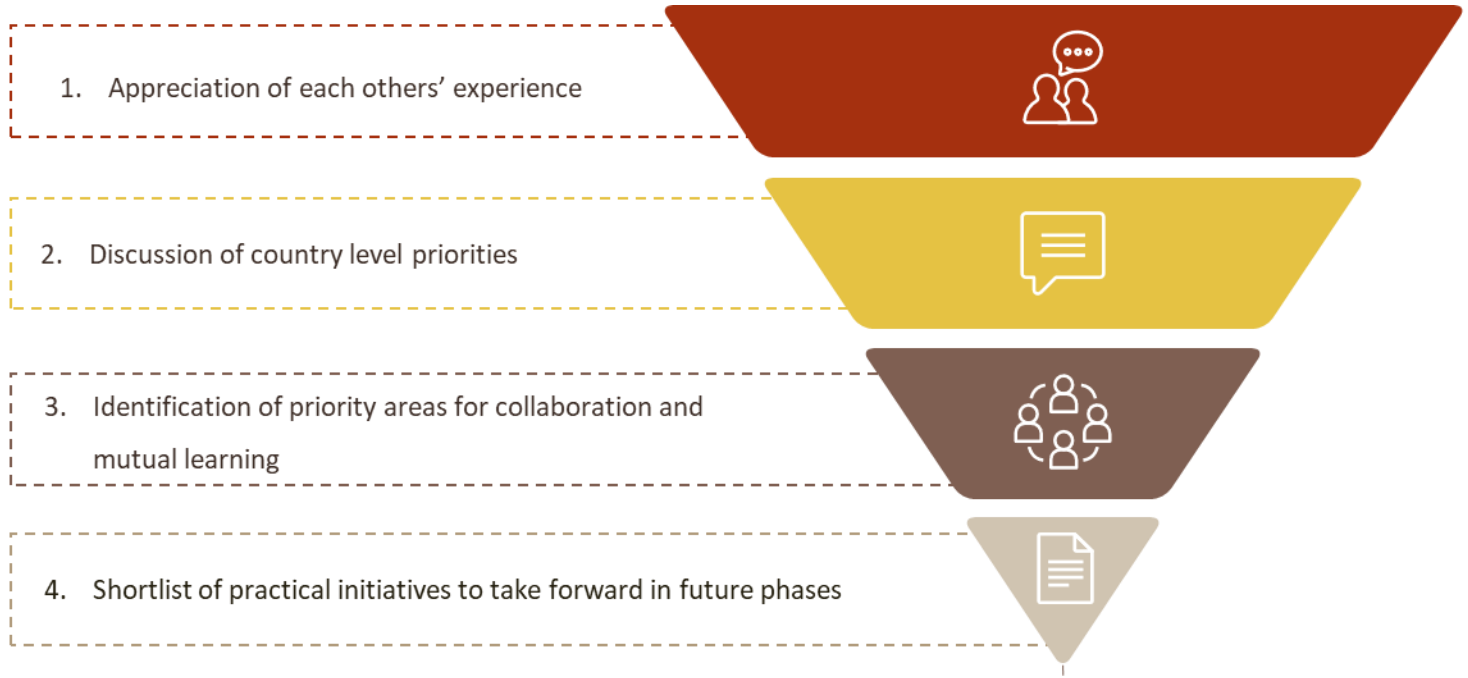
A framework for improved management and use of scarce water resources



WaterGuide framework



Putting WaterGuide into practice



Investible projects that can be presented to donors or investors

Greater efficiency and effectiveness in delivery of existing policy priorities and projects

Improved understanding of the portfolio and sequence of policy interventions, management arrangements and infrastructure investments that are most likely to deliver desired outcomes

Jordan WaterGuide Dialogue

POSTED ON 29 SEPTEMBER 2017 | CATEGORIES: DROUGHT, JORDAN, WATER SCARCITY | NO COMMENTS YET

AWP Partners and DFAT recently conducted a mission to Jordan on the topic of managing water scarcity that involved the first application of the recent AWP publication WaterGuide. WaterGuide, published in March 2017, was prepared by Huw Pohlner and Will Fargher of Aither for AWP at the request of the Australian Department of Foreign Affairs and Trade, as a part of AWP support provided to the World Bank/UN High-Level Panel on Water.

In April 2017, the Jordanian Minister of Water and Irrigation, HE Dr Hazim El-Naser, approached AWP to request Australian assistance to '*define a set of potential activities, drawing inspiration from the WaterGuide, including a country diagnostic of challenges and opportunities for reform and pro-active management, identifying policy priorities and potential innovative approaches on water scarcity and drought management*'. This was the first formal WaterGuide-related approach to the Australian Government since the publication of the report.

A delegation of Australians visited Amman, Jordan for a five-day scoping mission in August 2017. Will Fargher, Chris Arnott and Huw Pohlner (Aither), and Rob Vertessy (Global Change Advisory) were joined by Tony Slatyer (Special Adviser on Water to DFAT), Miles Armitage (Australia's Ambassador to Jordan), and Ger Bergkamp

Australia Extends Water Management Expertise

Water authorities from Iran and Australia met in a two-day conference titled "Water Guide Dialogue" in Tabriz, East Azarbaijan Province, late last week, to discuss Iran's water crisis. Given Australia's successful experience in setting efficient water policies in the battle against drought and its climatic similarity to Iran, the dialogue was held to make use of the country's expertise in the field, IRNA reported.

Will Farker, the head of Australian delegation, underlined the strong effect of water on both political and economic affairs, and suggested involving the private sector in water management programs both in the industrial and household sectors.

"What has remained from the country's water resources should be tactfully monitored and controlled," he said.

"Large-scale agriculture with limited water has been a radical challenge in Australia too, but what we do is to make a balance between consumption and preservation."

Farker concluded that a comprehensive plan should be devised to cover all embattled water resources, including lakes, ground and surface waters as well as wetlands.

What has remained from the country's water resources should be tactfully monitored and controlled.

"The plan will be challenged even if only one of the lakes dries up due to inaction or carelessness," he said.

Jalal Kalantari, assistant deputy for legal and international affairs at the Foreign Ministry, said the major problem in water management plans implemented so far is that they are not integrated. Pointing to the sensitivity of water scarcity in Iran and the main role of public in curbing the issue, Kalantari said the society will not care about the growing problem until they personally feel the effects of drought on their own and the next generation's lives. Iran is a semi-arid country that has long been struggling with drought. Yet, about 92% of the country's water resources are used up by unsustainable and wasteful farming practices.

Experts predict that the country's water scarcity will hit crisis level by 2025, when renewable water will be less than 1,000 cubic meters per capita, down from 2,000 cubic meters in 1950.

They say if water consumption patterns do not change in the near future, many parts of the country will turn into barren desert and entire towns and villages will become uninhabitable.

The event held on Jan. 6-7 was a follow up of "Governance and Public Policy" conference held in Sharif University of Technology in Tehran on Friday.

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WaterGuide and the Australian experience on scarcity and drought visited Baja California

AITHER and ARCOWA consultancies, supported and sponsored by the Government of Australia and the Australian Water Partnership (AWP), visited our country from 15 to 19 January, in order to present the tool: WaterGuide, a guidance document designed and based on decades of the Australian experience on the management and efficient use of water

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Application in Jordan

Phases I – III completed

Phase IV under consideration

- **Phase 1** (July-Dec 2017): Initial policy dialogue; establishment of Jordan-Australia Water Reform Collaboration
- **Phase 2** (Jan-June 2018): Refinement of priorities for collaboration; preparation of bridging project scopes
- **Phase 3** (July-Dec 2018): Completion of bridging projects
- **Next phase** (TBC): Completion of detailed work on priority projects

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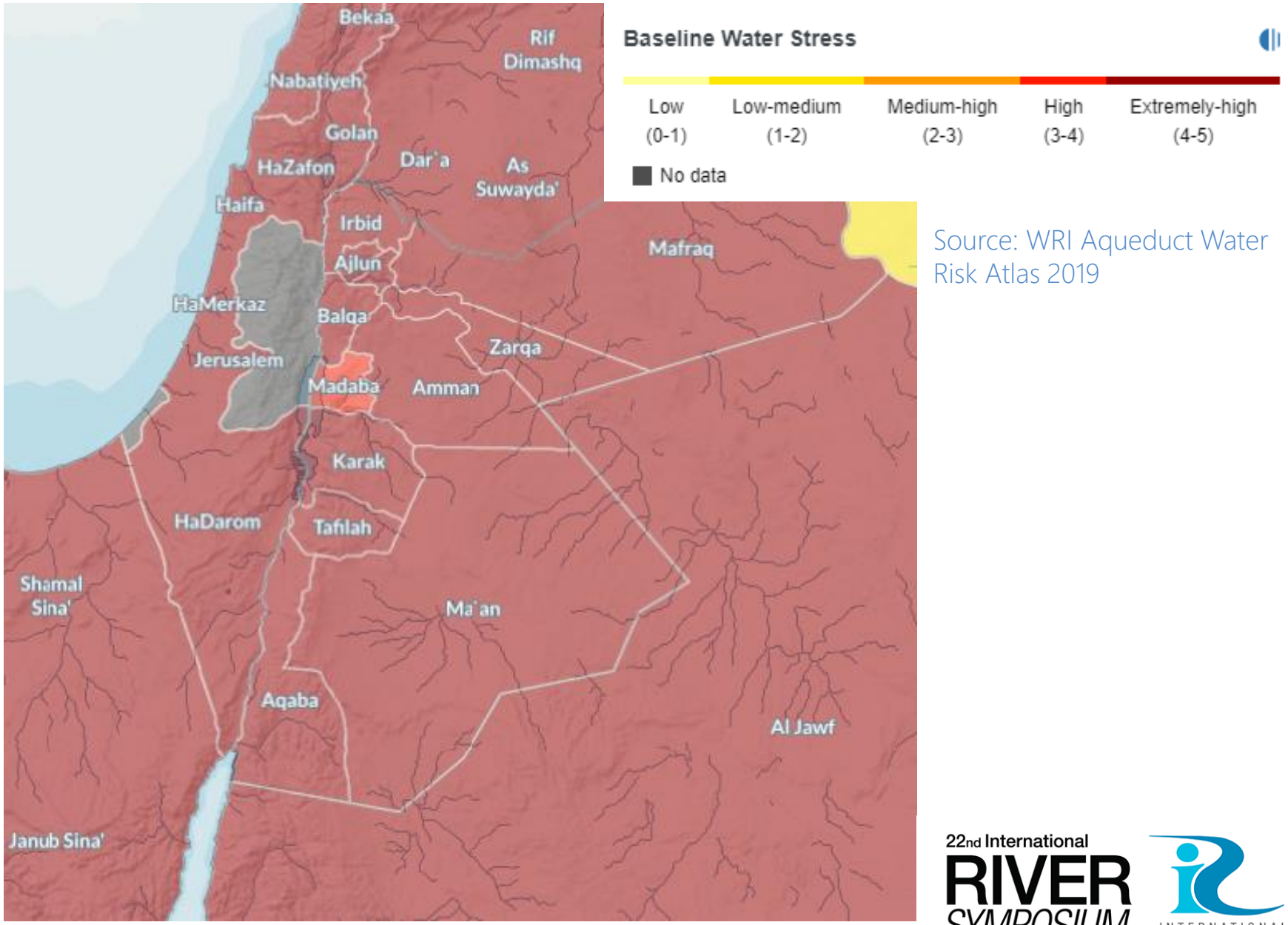
Water stress in Jordan

Current situation



Source: WRI Aqueduct Water Risk Atlas 2019

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Challenges in the Jordan Valley

Water stress, inefficiency and inflexibility

- Continuous development of water resources
- Increasing demand from population growth and growth in industries
- Severe droughts and increasing variability
- High levels of evaporation and leakage
- Poor enforcement and high water theft
- Lack of storage
- Billing based on quotas rather than use
- Quotas tied to crop type

Challenges in the Jordan Valley

Need for improved water allocation and use

- Water quotas (i.e. allocations) for irrigation have been reduced multiple times over the past two decades in the Jordan Valley
- Irrigators face uncertain and inflexible water allocation and supply, limiting investment and agricultural transformation
- Agricultural produce is not easily exported from Jordan and the domestic market suffers from oversupply of some commodities
- Irrigation water tariffs have not been increased in decades and water is not valued as an input to production

Tackling the challenge in the Jordan Valley

Tariff reform and water markets

- Jordan Valley Authority interested in investigating tariff increases to support improved levels of service and encourage efficient use

- Aither and JVA have conducted an initial feasibility study on tariff design and water market development

Assessing feasibility of water markets

Market pre-conditions

Water scarcity

Water variability

Connectivity

Sufficient number of users

Different water demands amongst users

Increasing or changing demand

- These pre-conditions are present in the Jordan Valley
- However, while opportunities for markets exist, further work on water management fundamentals is required

Assessment of tariff structure and levels

Tariff redesign

- Tariff redesign is likely to be readily possible and beneficial, but the following is required:
    - revised objectives for water tariffs
    - alignment and consistency with changes in the approach to providing bulk versus local irrigation water services
    - staged tariffs to minimise impacts
    - welfare concerns addressed by other areas of policy
- Successful implementation requires both short- and long-term goals and a commitment to practical action

Insights from WaterGuide implementation

- The need for improved water policy and management is well recognised
- Options for improving water-related investment, management and use are available
- Challenge is in designing pragmatic ways in which to overcome constraints (information, social, political, financial, capacity)
- Structured dialogue shows promise in supporting issues diagnosis, and identification of priority actions
- Provides opportunity for engagement with diverse stakeholders, invites discussion of challenges, weaknesses and priorities in water management, and enables sharing of experiences
- In the process of implementing WaterGuide, decision makers have flagged using this approach to inform benchmarking, investment mapping, loan effectiveness evaluation, development of reform road maps, and to drive integration of efforts across projects and teams

Thank you

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