



CRC for  
Water Sensitive Cities



Australian Government  
Department of Industry,  
Innovation and Science

**Business**  
Cooperative Research  
Centres Programme

# The world's water sensitive cities starts here. ✓

[watersensitivecities.org.au](http://watersensitivecities.org.au)





# Why we exist



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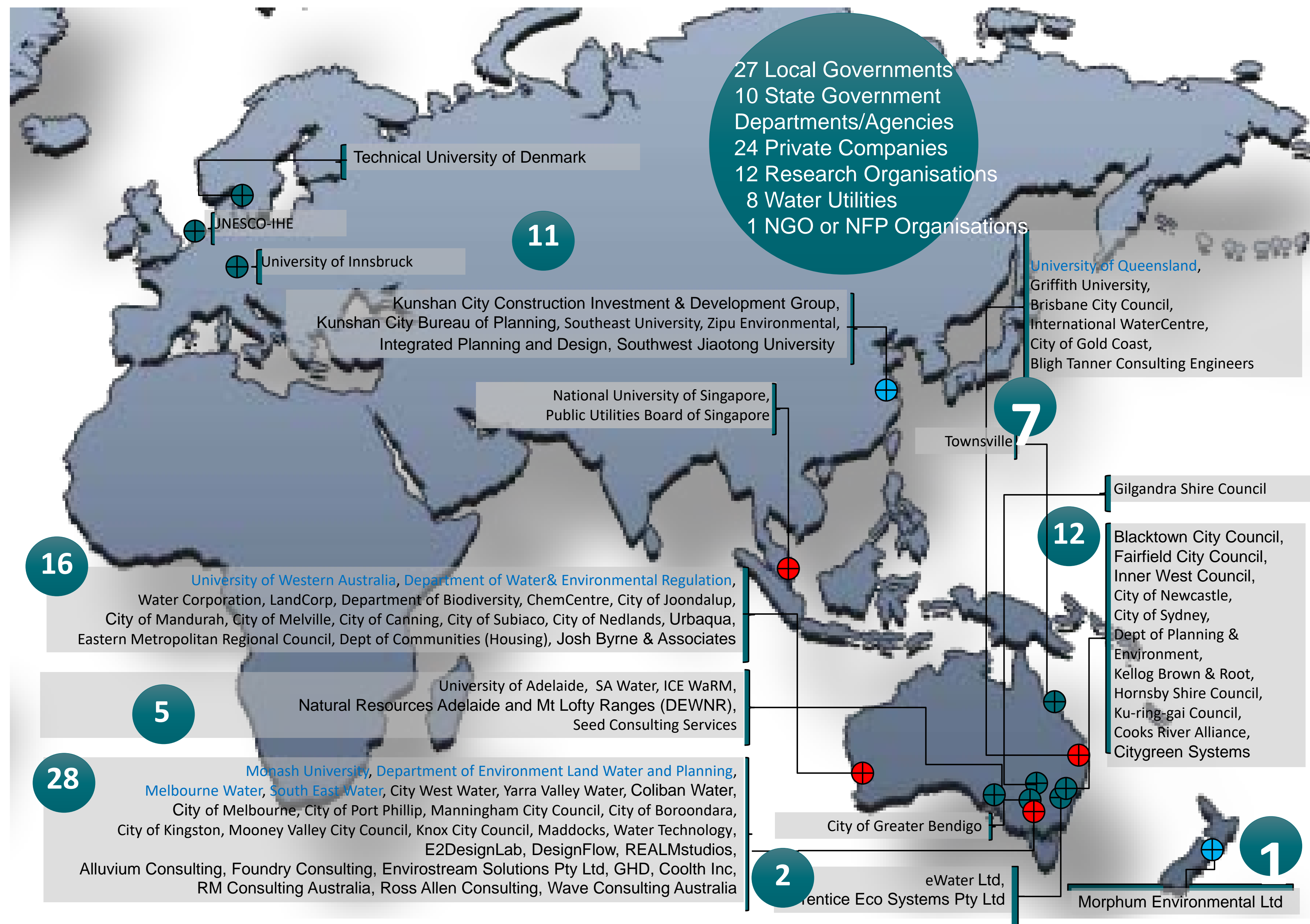
The Cooperative Research Centre for Water Sensitive Cities (CRCWSC) was established in July 2012 to help change the way we build our cities by valuing the contribution water makes to economic growth and development, our quality of life and to the ecosystems of which cities are a part.

<https://watersensitivecities.org.au/about-the-crcwsc/>



## 82 Partners

share the passion and commitment for creating water sensitive cities. One of the many strengths of the CRCWSC is the large number of organisations that have invested not only in the development of solutions but to the application and utilisation of the solutions to effect positive change in the real world.





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# International Engagement

[watersensitivecities.org.au](http://watersensitivecities.org.au)



Brasil

Lebanon

Ghana

Ethiopia

South Africa

India

China

Singapore

Indonesia

Fiji

New Zealand





中国昆山  
Kunshan China



The CRCWSC, AWP and the Victorian Government present:

## Sponge City Trade Mission to Kunshan, Jiangsu Province, China



# City of Kunshan to be China's first CRC Incubator City for Water Sensitive Design and Technology

Date Published

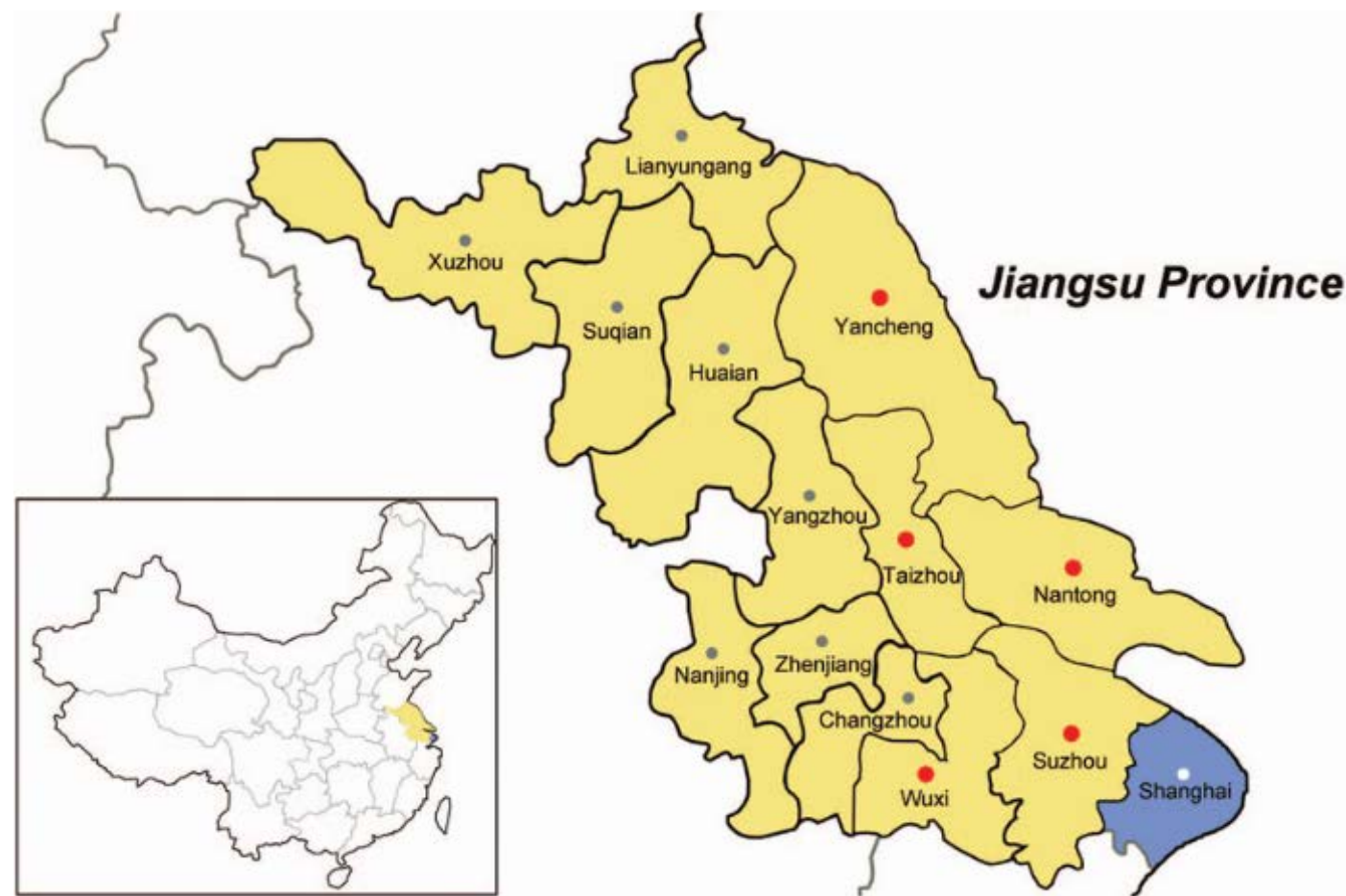
21st Jan 2014

On Friday 17 January in Kunshan, China, a three-party Memorandum of Understanding (MoU) between the CRC for Water Sensitive Cities (CRCWSC), the Kunshan City-construction Investment and Development Company (KCID) and the Planning Bureau of the City of Kunshan was signed. The MoU represents a combined commitment by the two Kunshan City agencies for city planning and city construction to “extensively use their future projects as incubators of new planning, design concepts and new technologies that are generated out of the CRCWSC and thus providing the opportunity to test research concepts and findings at a city-scale”.



**Article & Video:** <https://watersensitivecities.org.au/content/crcwsc-receives-top-industry-award-innovation/>

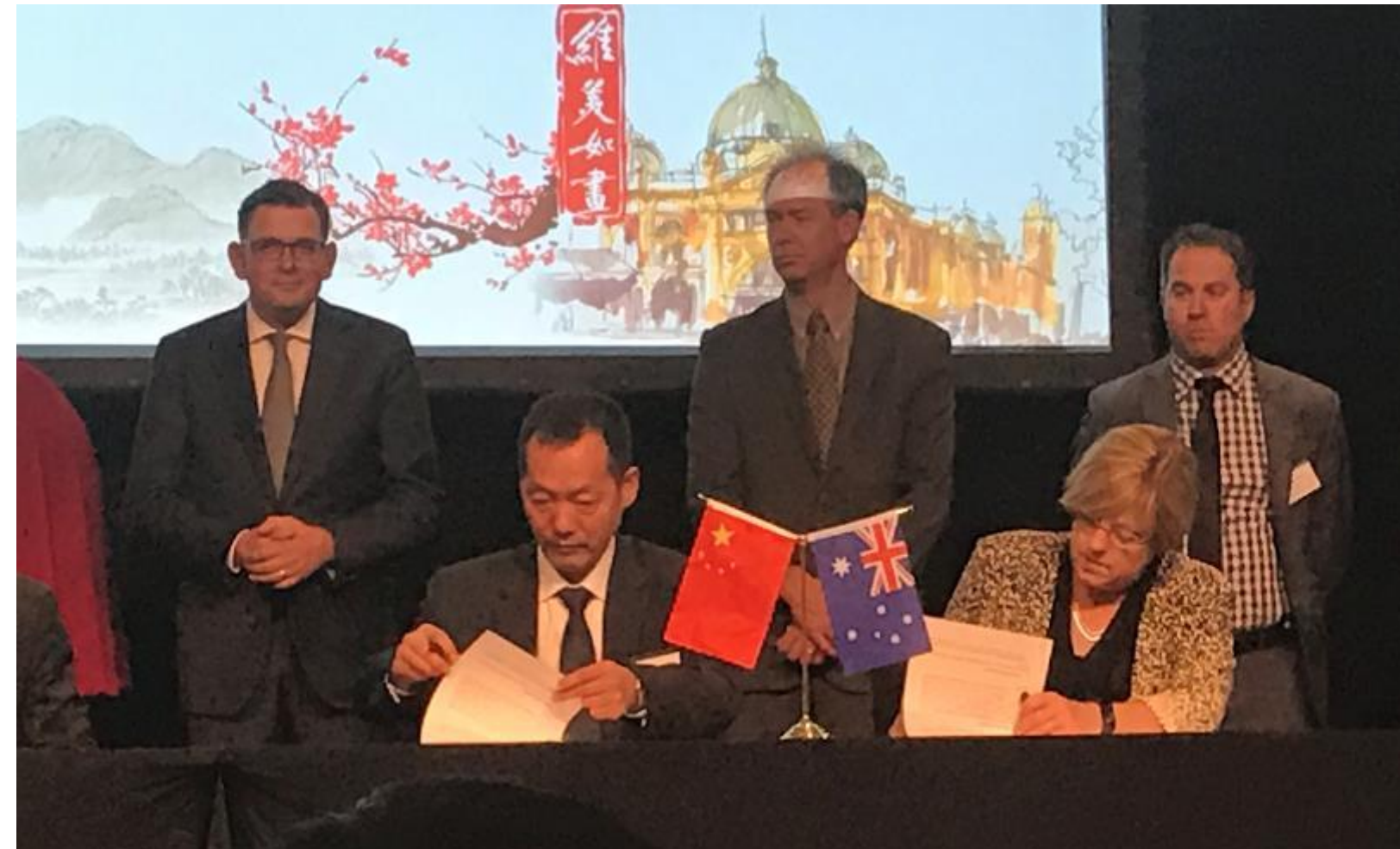




On Thursday 23 March, the Victorian Government and the Jiangsu Provincial Government reaffirmed their commitment to strengthen Victoria–Jiangsu cooperation in improving urban water management, with the two governments signing a Memorandum of Understanding (MoU) recognising that good urban water management is a foundation of the liveability of our cities.

**Article:**

<https://watersensitivecities.org.au/content/crc-water-sensitive-cities-support-jiangsu-province-ecological-sponge-city-initiative-china/>



The first sod on the Jiangsu–Victoria Sponge City Innovation Park was turned in the City of Kunshan (in China) on 10 April 2018. The Hon. Richard Wynne MP (Victorian Government Minister for Planning) and Tony Wong (CEO for the CRC for Water Sensitive Cities) joined other dignitaries from China and Victoria for the event.

**Article & Video:**

<https://watersensitivecities.org.au/content/fly-through-our-vision-for-the-jiangsu-victoria-sponge-city-innovation-park/>



Victoria's Water Minister visits China



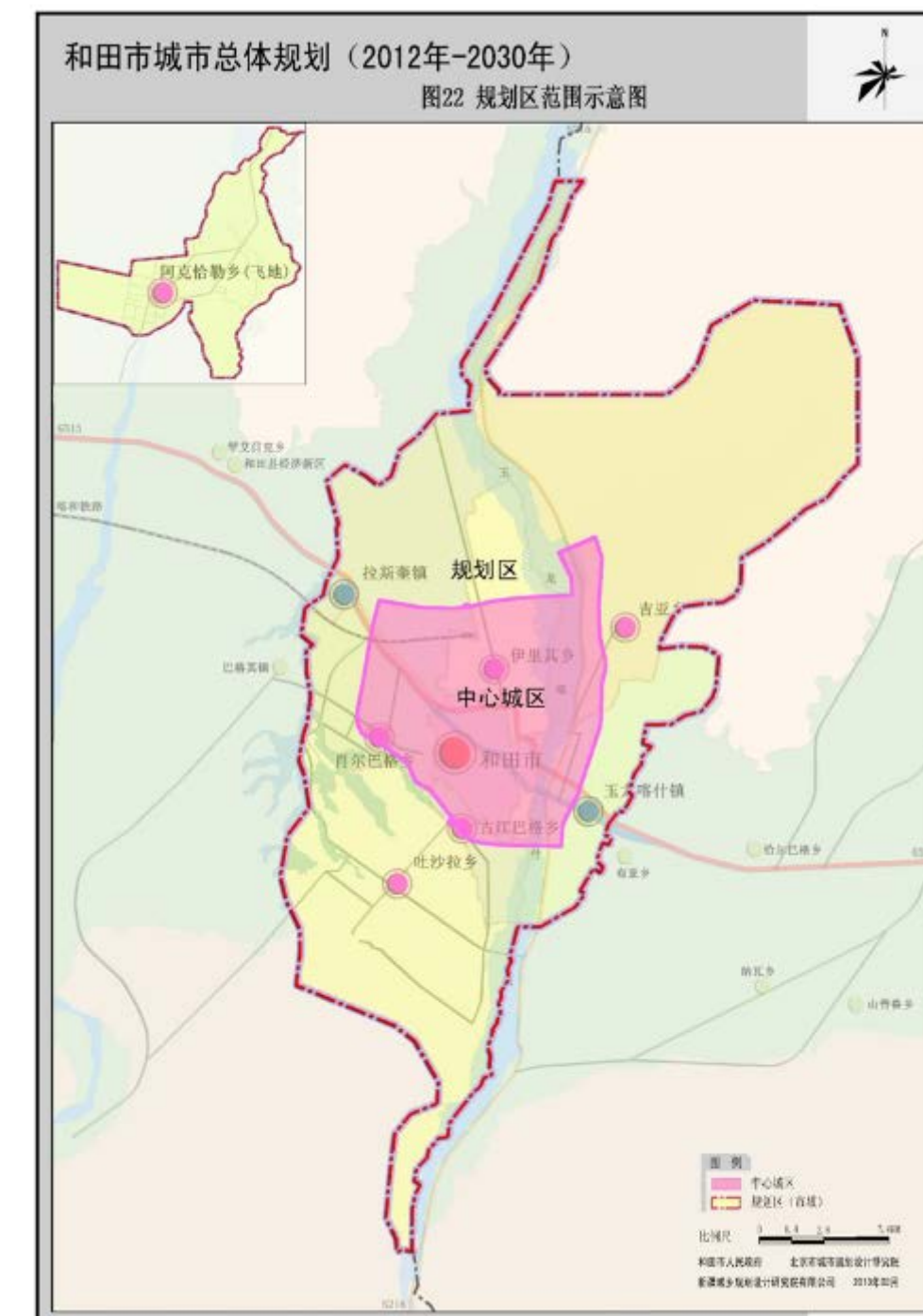




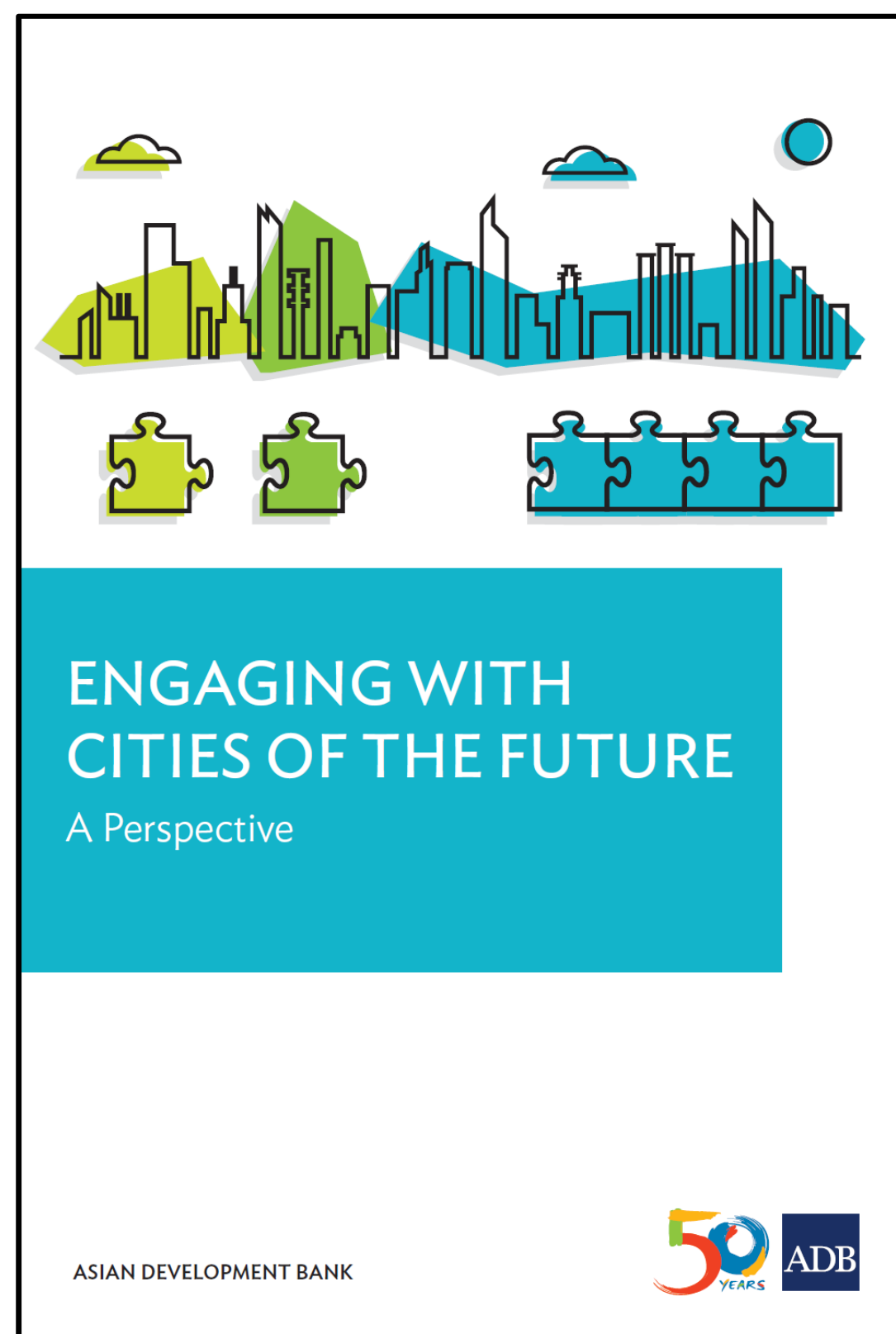
## Hetian

The rapid assessment undertaken by the CRCWSC team of the **water security vulnerability of the City and the critical inadequacies of the existing water services** identified opportunities to position and transition Hetian City into a water sensitive city with key attributes of water sustainability and resilience to climate change, and to promote greater liveability and ecological civilization outcomes from incorporating water ecological landscapes into the urban design of the city.

This vision presents great opportunity to develop Hetian City into **a model Chinese Sponge City for desert environment** and demonstrate to the Chinese government that the current concept of Sponge City goes beyond just stormwater management that is often narrowly understood and practiced by the Chinese industry.





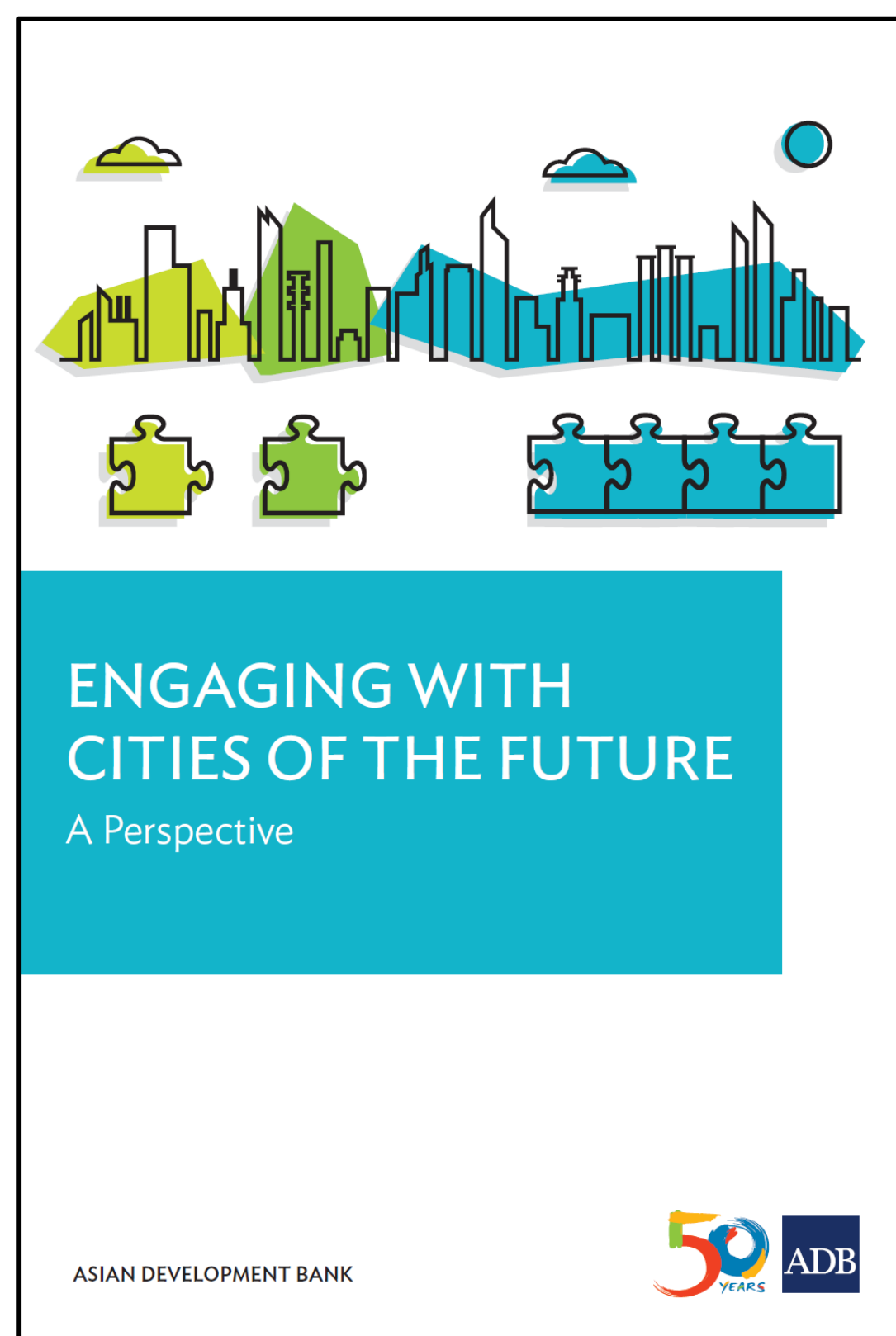


This publication, *Engaging with Cities of the Future: A Perspective*, provides insights into this new type of engagement drawing from work in six cities in the region. The approach emphasized by the Future Cities TA project eschews traditional paradigms of working solely on one sector and instead emphasizes cross-sectoral and thematic collaboration, identifying relevant knowledge and financial resources both within and outside ADB to strengthen the relationship at the city level, support holistic growth, and ensure livability in the future.

- **Greater Suva Area**
- **Mandalay, Myanmar**
- **Ho Chi Minh City, Vietnam**
- **Bandung, Indonesia**
- **Makassar, Indonesia**

**ADB Blog:** <https://blogs.adb.org/blog/how-developing-cities-can-meet-challenges-21st-century>





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The Urban Water Supply and Wastewater Management Investment Program is the core project of the Future Cities approach in the GSA.

## Greater Suva Area

### Conceptualizing a New Project with a Center of Excellence

The core project for Future Cities in the GSA is the Urban Water Supply and Wastewater Management Investment Program, which is expected to provide about 4,500 wastewater connections to both formal and informal areas. However, those in more isolated or hard-to-service locations are not included. This opened up an opportunity that was seized by CRCWSC, especially after assessing the challenges and needs of the GSA through the urban diagnostics they prepared. They concluded that piloting an innovative water-sensitive approach could benefit such informal urban communities. It supplements the core project while also already broadening the pipeline, as envisioned by the Future Cities approach.

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The RISE project will be the first ADB project born from the Future Cities approach and it emphasizes how the approach can lead to tangible solutions.



ADB Blog: <https://blogs.adb.org/blog/testing-new-water-security-approach-urban-slums>

- RISE is an action-research program working at the intersections of health, environment, and water and sanitation.
- RISE is trialling a new water sensitive approach to water and sanitation management in 24 informal settlements across Makassar, Indonesia and Suva, Fiji.
- Working with communities, governments, local leaders and partner institutions, RISE is co-designing location-specific solutions that integrate green infrastructure, such as constructed wetlands, to strengthen the whole-of-life water and sanitation cycle.
- Underpinned by the emerging discipline of 'planetary health', RISE success will be measured by the health and well-being of residents – particularly children under five years of age – and the ecological diversity of the surrounding environment.

## Suva



## Makassar





# THE AUSTRALIAN WATER PARTNERSHIP

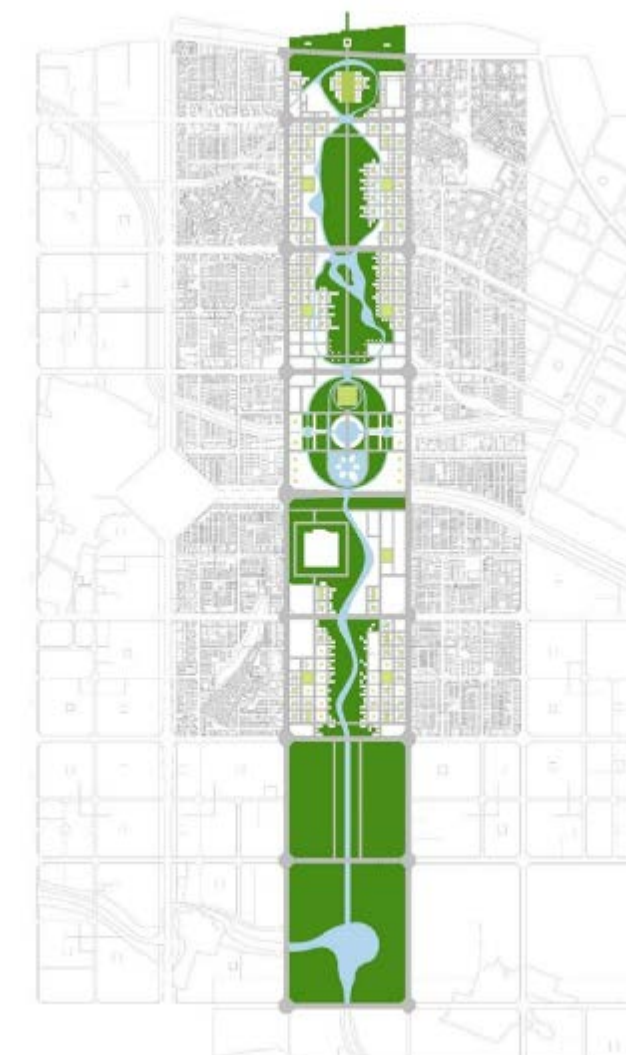
## Andhra Pradesh – Australia Water Sensitive Cities Partnership



## Amaravati Partner: AP CRDA

### FACTS AND FIGURES

Area	217 Sq KM
Existing Settlements	25
Projected Population	3.5 Million
Projected Employment	1.5 Million
Gross Density	16,200
Parks and Public Facilities	within 5-10 minute walking distance
Open Spaces & Recreational Zone	30% area reserved for
River Front	> 20+ km
Road Length	600 Km



## Vijayawada Partner: AP DMAUD & Vijayawada Municipal Corporation

To demonstrate a retrofit of water sensitive drainage, showcasing sustainable drainage and multiple benefits of nature based solutions.

### Vijayawada city too under flood threat

DECCAN CHRONICLE | P.N. SRINAVASA RAO

Published Dec 4, 2015, 7:07 am IST

Updated Feb 23, 2016, 2:43 pm IST



The Centre had allotted Rs 1,000 crore for a storm water drain project.





## THE AUSTRALIAN WATER PARTNERSHIP

### Andhra Pradesh – Australia Water Sensitive Cities Partnership



## Amaravati

- Strong partnership formed at multiple levels within AP CRDA
- Establishing multiple in-country networks for strategic industry engagement and capacity building phases
- CRCWSC invited onto an expert panel at a Dec 2017 Amaravati Deep Dive workshop and led reporting on water issues to the AP Chief Minister. Relationships with Foster and Partners, CLC Singapore also cultivated

### Deliverables

Water Sensitive City opportunities plan delivered

Concept designs and guidelines delivered  
Training delivered

Tender design delivered

Design manual delivered  
Training activities delivered

#### 1. City Level Water Sensitive Urban Design Principles for Amaravati (1 month – by 31 Mar)

- Review of Amaravati master plan and ABC Waters approach
- Confirmation of operating water and development platform levels
- Strengthen master plan with practice principles for drainage infrastructure and whole-of-city water management strategy
- Seek opportunities for water cycle and urban design integration (water supply, sewerage & drainage)

#### 2. Concept design of water sensitive urban design elements (3 months – by end May)

- Develop typologies and guidelines for drainage infrastructure, streetscapes, waterways, opens space and public realm
- Three day training and familiarisation of these outputs for AP CRDA and consultants
- Review of Govt precinct works plan to identify and scope implementation opportunities

#### 3. Support of tender design by local AP companies (2 months – by end July)

- Support local consultant in the tender design of drainage infrastructure and associated green infrastructure
- Review detailed design and technical “for construction” drawings

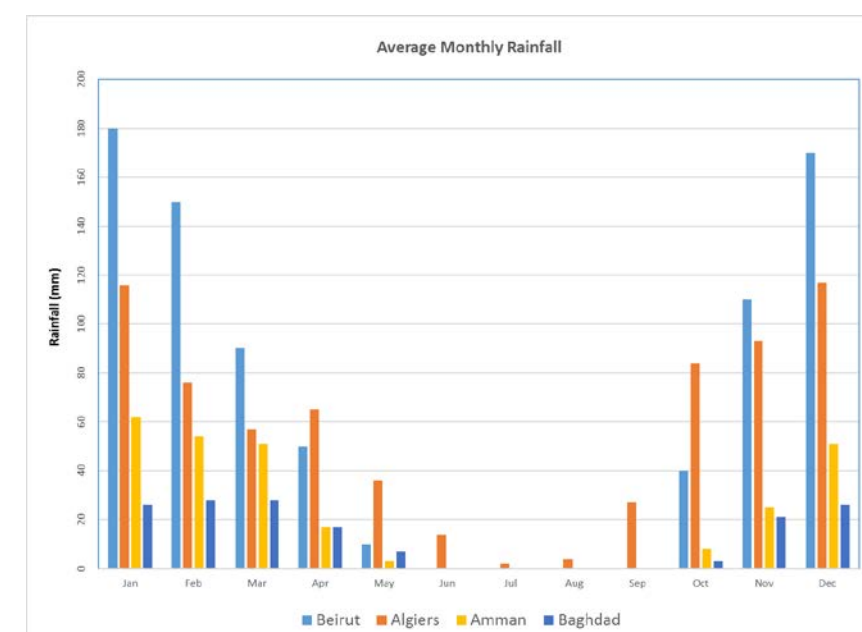
#### 4. Design manual and training to implement water sensitive techniques (by end Dec)

- Develop Engineering Procedure design manual
- Builds local capacity to transfer approach's to other precincts
- Can include hosting of tours of WSUD in Australia.

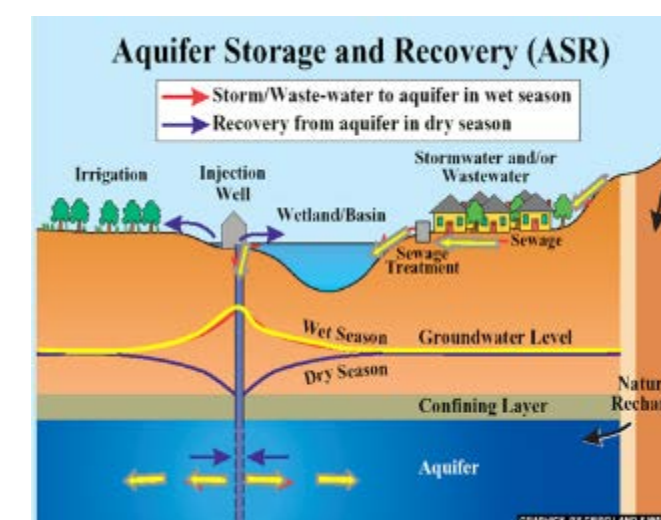




## 1. MENA (Middle East and North Africa) Water Scarcity Strategy



- Water resources management aspects related to groundwater (protection and artificial recharge).
- Financing and opportunities for the private sector to increase and diversify funding sources.

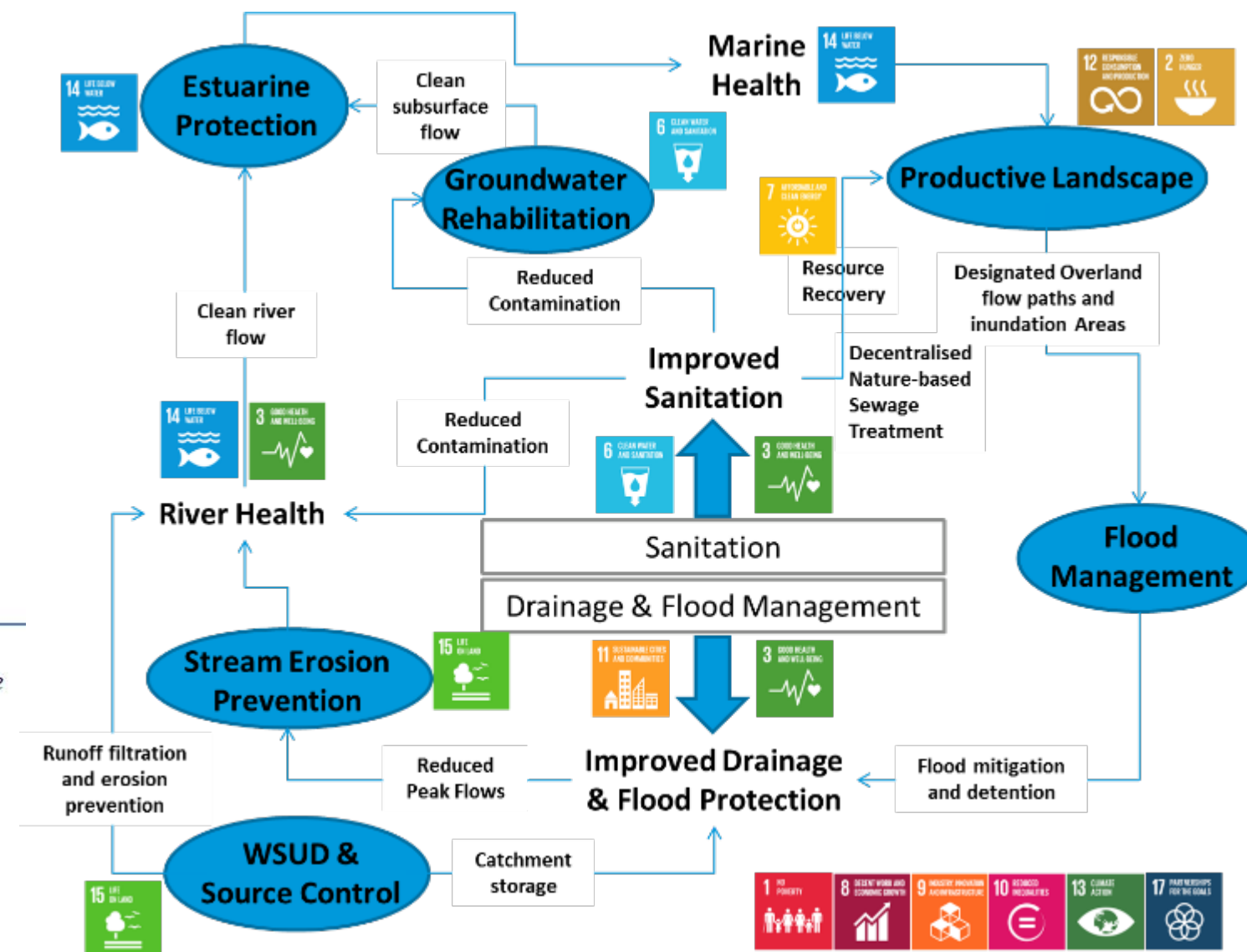


## 2. IUWM South-to-South Knowledge Exchange

- Supporting the preparation and delivery of a World Bank IUWM study tour to Brazil. The study tour will showcase operational experiences in Teresina and São Paulo in discussion with relevant experts.
- Follow-up facilitation of South-to-South Knowledge Exchange include development of in-country demonstrations of IUWM in Ghana, Ethiopia and Indonesia

## 3. Pacific Island Water Scarcity Strategy





## Key steps in operationalising SDGs

Projects need one or more focal SDG but can have a greater reach. We simply need to:

1. Understand context-specific linkages amongst SDGs
2. Identify opportunities for creating multiple outcomes and relative priorities
3. Adopt a combination of structural and non-structural approaches
4. Prioritise outcomes where synergies are not available
5. Foster co-financing/co-development stakeholder partnerships

## Key Messages

- The Sustainable Development Goals are interconnected and cities and towns concentrate and magnify many of the key challenges captured in them.
- We cannot ignore the interconnections and interplays of the SDGs and they manifest differently in developed and developing country contexts. There are synergies but also unintended consequences in actions directed at individual goals.
- Specific regional context will determine the relative significance of the interconnections and synergies of the SDGs and associated targets; contemporary spatial and infrastructure planning, and urban design, provide the integrative platform for context-specific solutions in harnessing the synergies of individual SDG initiatives



## Fifth Asia-Pacific Forum on Sustainable Development: *Transformations towards sustainable and resilient societies*

- Preparation of 2019 Future of Asia Pacific Cities Report
- **Water for Sustainable Development of the Cities (WSDC)** is engaging all five sub-regions of Asia and the Pacific through city and water networks. The collaborative civil society movements in the region will demonstrate in a decade the new capacity of the regional networks and the policymakers at the city/municipal level in: (i) developing/implementing policies and strategies, and (ii) packaging the normative and enabling documentations (for example, through guidelines and data accounting tools) towards improved, sustainable and resilient infrastructure and inclusive societies in cities of Asia and the Pacific.

