

Achieving Water Security and Resilience in Asia Pacific: Asian Water Development Outlook 2020

World Water Week at Home
26 August 2020

PROGRAM

8:00–8:05

Welcome remarks

Tom Panella, Chief of Water Sector Group, Asian Development Bank

Keynote with main messages on AWDO history, partnerships, and AWDO 2020

8:05–8:35

Brief reflection on AWDO's key dimensions (KD), focusing on respective KD-specific findings and associate policy recommendations

Speakers

- Mark Pascoe, International WaterCentre
- Mike Bak, Korea Institute of Civil Engineering and Building Technology
- Dave Wiberg, International Water Management Institute

AWDO's governance and financing aspects – findings and policy recommendations

Xavier Leflaive and Maria Salvetti, Organisation for Economic Co-operation and Development

Case Study: Karnataka, India – Policy in action through AWDO application

P. S. Rao, Advanced Centre for Integrated Water Resources Management

8:35–8:45

Q&A Session and Closing Remarks

Moderator: Ravi Narayanan, Chair of Governing Council, Asia-Pacific Water Forum

Asian Water Development Outlook (AWDO) 2020

ADB Water Sector Flagship Publication



AWDO 2020 Contents

1. Key Dimensions of Water Security (KD)

- KD1: Household Water Security (rural)
- KD 2: Economic Water Security
- KD 3: Urban Water Security
- KD 4: Environmental Water Security
- KD 5: Water-Related Disasters Security

2. Finance and Governance and Water Security

3. Policy in Action – ADWO 2020 Country Cases Studies: India, PRC, Thailand and Timor-Leste

AWDO 2020 Objectives

- Provide an overview and communication tool on water security for Asia and the Pacific
- Inform and guide policy reforms and investments
- Show water security progress - 2013, 2016, 2020

AWDO 2020 Partners

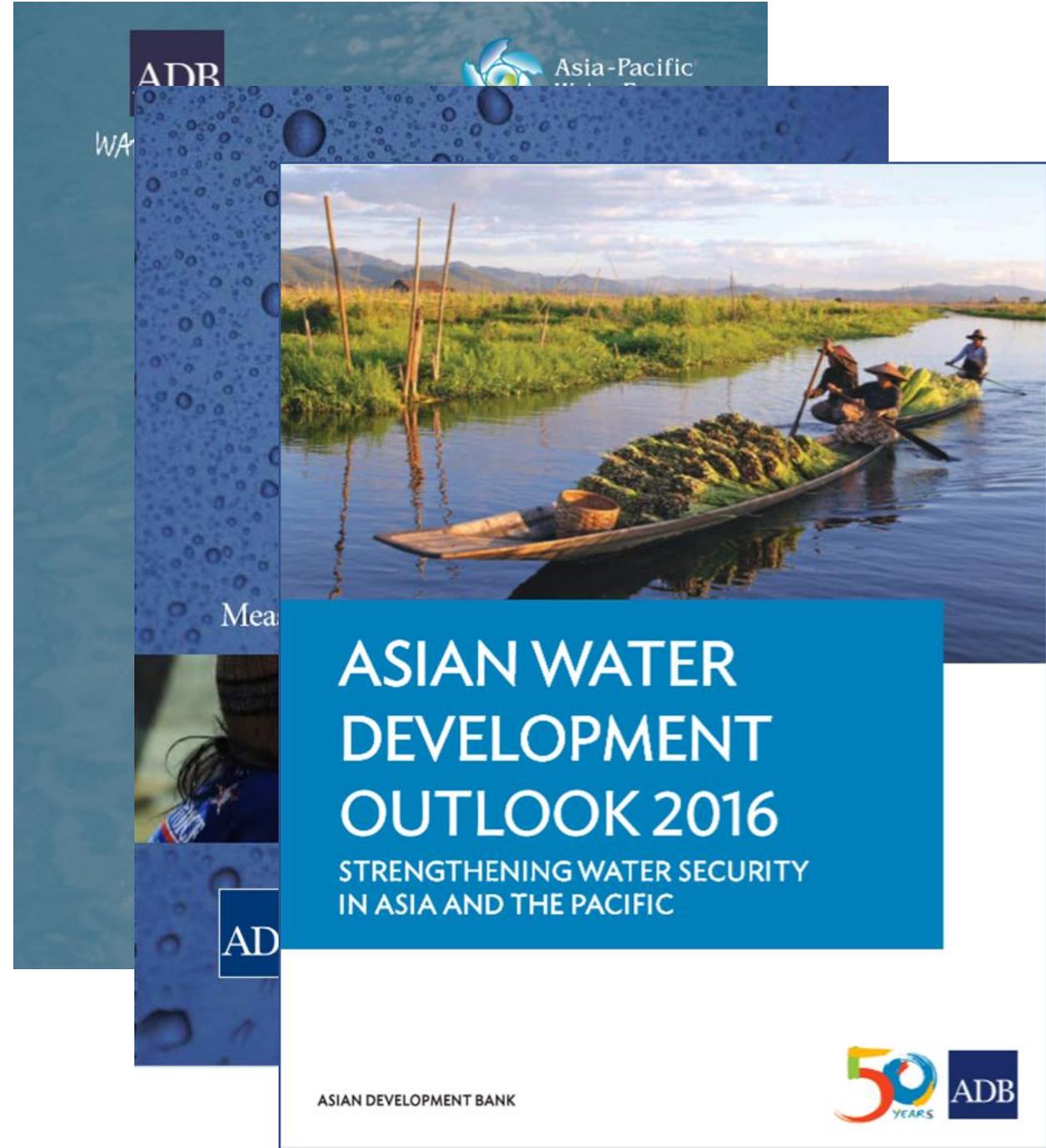
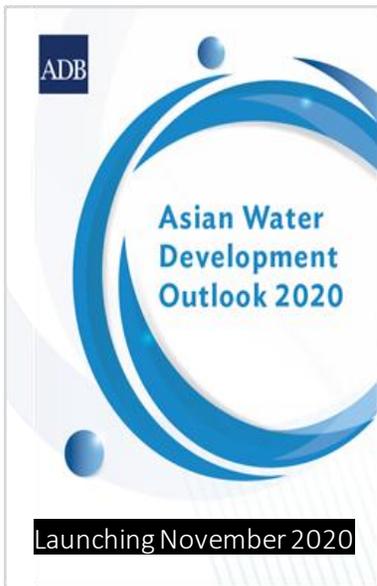


ADB and Water Security

- 2007** – ADB in cooperation with Asia Pacific Water Forum embraced Water Security for AWDO
- 2013** – Developed the first methodology to quantify National Water Security
- 2016** – Improved the methodology and tracked progress

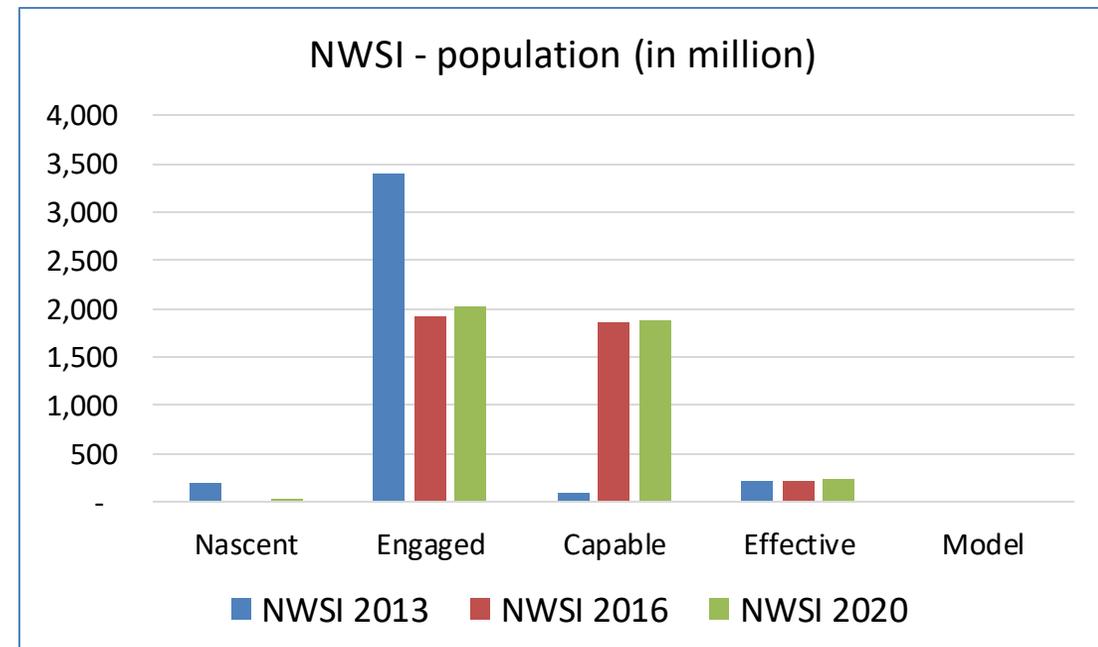
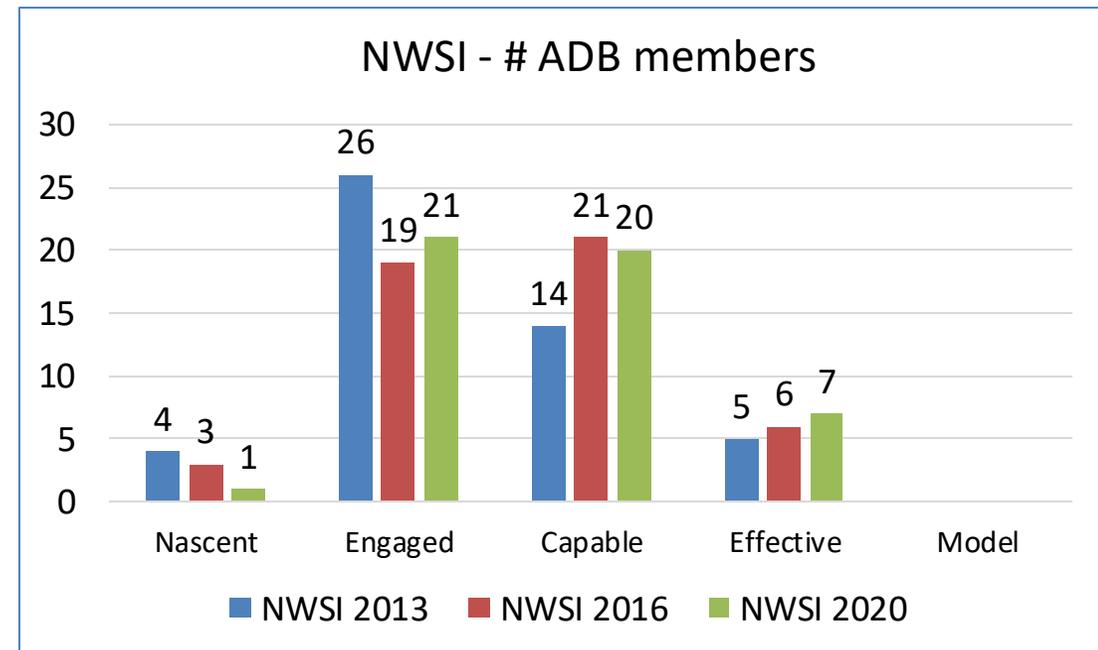
New in AWDO 2020:

- **Improved methodology**
 - KD1 focused rural households
 - KD5 includes risk and resilience
 - New databases (all public)
- **Finance and Governance**
 - Sections by OECD
- **Country Case Studies** (Thailand, Karnataka, PRC, Timor-Leste)
- **Future Risk Framework** (e.g. climate change, health)
- **Living AWDO Website**
 - Ongoing Knowledge and Policy in Action



Number of ADB members and people in development stages 2013 – 2016 – 2020

- Positive trend – several ADB members have improved from the Nascent and Engaged Rating to the Capable and Effective Rating
 - PRC from Engaged to Capable (2013-16)
 - India from Nascent to Engaged (2013-16)
- However, many people are still living in Nascent and Engaged stages of Water Security







KEY DIMENSION 1

RURAL HOUSEHOLD WATER SECURITY

RESULTS:

- KD1 now measures only rural household water supply and includes 4 sub indicators
 - although only a relatively small volume of water, KD1 has huge social and health impacts
- KD1 is closely linked with the “for all” principle of the SDGs
- The Maldives has made the greatest improvement since 2013 because of their increased access
- While their scores have remained low, India, Nepal and Cambodia have all shown strong improvements in their access to sanitation and Lao PDR has shown the most improvement in water supply
- Most of the countries that have regressed in KD1 were in the Pacific

RECOMMENDATIONS:

- A holistic systems strengthening approach is needed and focusing on a single element will not achieve SDG 6
- For example, many countries have comprehensive WASH policies but have severely inadequate resources (both capital and human resources) to implement them.
- Systems strengthening should specifically include:
 - Better engagement and empowering of socially vulnerable groups
 - Addressing the severe shortage of human resources and capacity
 - Locally appropriate solutions are needed, particularly in the Pacific

KEY DIMENSION 1

- Access to Water Supply
- Access to Sanitation
- Health Impacts
- Affordability





KEY DIMENSION 3

URBAN WATER SECURITY

RESULTS:

- KD3 primarily measures safely managed and affordable water and sanitation services in urban and informal settlements to sustainably achieve desired, (and ideally agreed), outcomes
- 5 countries Nascent – 4 in the Pacific (Marshall Islands, Micronesia, Nauru, Papua New Guinea) and 1 in South East Asia (Timor-Leste), in total 1.7 million people in urban areas
- Despite major investments, level of urban water security has remained about the same in the period 2013 till 2020 due to urbanization. In total 600 million urban people still do not have adequate access to water supply and sanitation services.

RECOMMENDATIONS:

- Increased attention on Pacific and South Asia including affordable water supplies.
- View wastewater, stormwater and rainwater as a resource
- More integrated solutions and leapfrogging opportunities
- Improved attention to future risks and management of issues including urban growth, non-revenue water, water consumption (and efficiency), energy use costs, climate change
- Improved management of data and information, including systematic updating and improve monitoring and evaluation
- Future AWDO editions could benefit from more precise urban definitions, clarity on informal settlement inclusion and quantification of “future security” risks

KEY DIMENSION 3

- Access to Water Supply
- Access to Sanitation
- Affordability
- Drainage/floods
- Environment





KEY DIMENSION 4

ENVIRONMENTAL WATER SECURITY

RESULTS:

- Majority of countries show only moderate changes in KD4 from 2016 – 2020
 - most of these changes were declines
 - these countries represented all regions
- The performance of eight countries improved mainly due to a higher score for the Environmental Governance sub-index
 - these countries also represented all regions

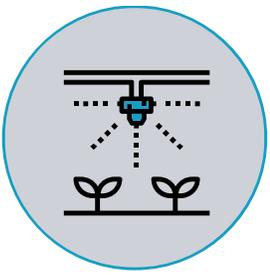
RECOMMENDATIONS:

- The health of aquatic ecosystems is under considerable pressure
- It has been difficult to compare countries because of lack of data; remote sensing products under development will continue to improve monitoring
- There is a risk in traditional/grey infrastructure without environmental protocols that may boost one dimension of water security while impacting another; healthy ecosystems are not just something for rich countries
- The twin pressures of short-term human alterations and longer-term impacts of climate change will affect how ecosystems function throughout the region

KEY DIMENSION 4

- Catchment and Aquatic System Health
- Environmental Governance





KEY DIMENSION 2

ECONOMIC WATER SECURITY

RESULTS:

- Economic water security is a measure of the assurance of adequate water to sustainably satisfy a country's economic growth and accommodate economic losses due to water-induced disasters.
- Changes to economic water security take years of planning and policy prioritization to achieve.
 - East Asia has showed the greatest advancement thanks to decades of policy and investment prioritization on food and water security.
 - Some members in Central Asia also benefit from investments in infrastructure that help mitigate lower natural water availability.
- Most regions have been relatively stable or shown minor improvements since 2013.
- Despite limited progress, increasing stress on water resources is shown with declining scores for countries in each region since 2016, and the greatest challenges in the Pacific Islands.

RECOMMENDATIONS:

- Enhance water resources monitoring, measurement and data availability.
- Improve water productivity by ensuring that adequate water is available when and where it is needed.
- Apply Integrated Water Resources Management and ensure adequate storage and distribution systems that can both help mitigate and adapt to climate changes and sectoral reallocation.

KEY DIMENSION 2

- Broad Economy
- Agriculture
- Energy
- Industry





KEY DIMENSION 5

WATER RELATED DISASTER SECURITY

RESULTS:

- Water-related Disaster Security is a national-level assessment of risk to water-related disasters—comprising Climatological (drought), Hydrological (flood), and Meteorological (storm) risks—based on assessments of the scale of the hazard, the exposure, the vulnerability, and the capacity of the nation.
- Capacity across Asia-Pacific has increased slightly while Vulnerability has decreased slightly from the first reporting of KD5 in 2013—both are signs of progress
- The East Asia region has shown the most progress in reducing Risk recently while the Pacific is the most challenged by Water-Related Disaster in recent years
- Drought is the most prominent Risk out of the three Hazard categories across Asia-Pacific

RECOMMENDATIONS:

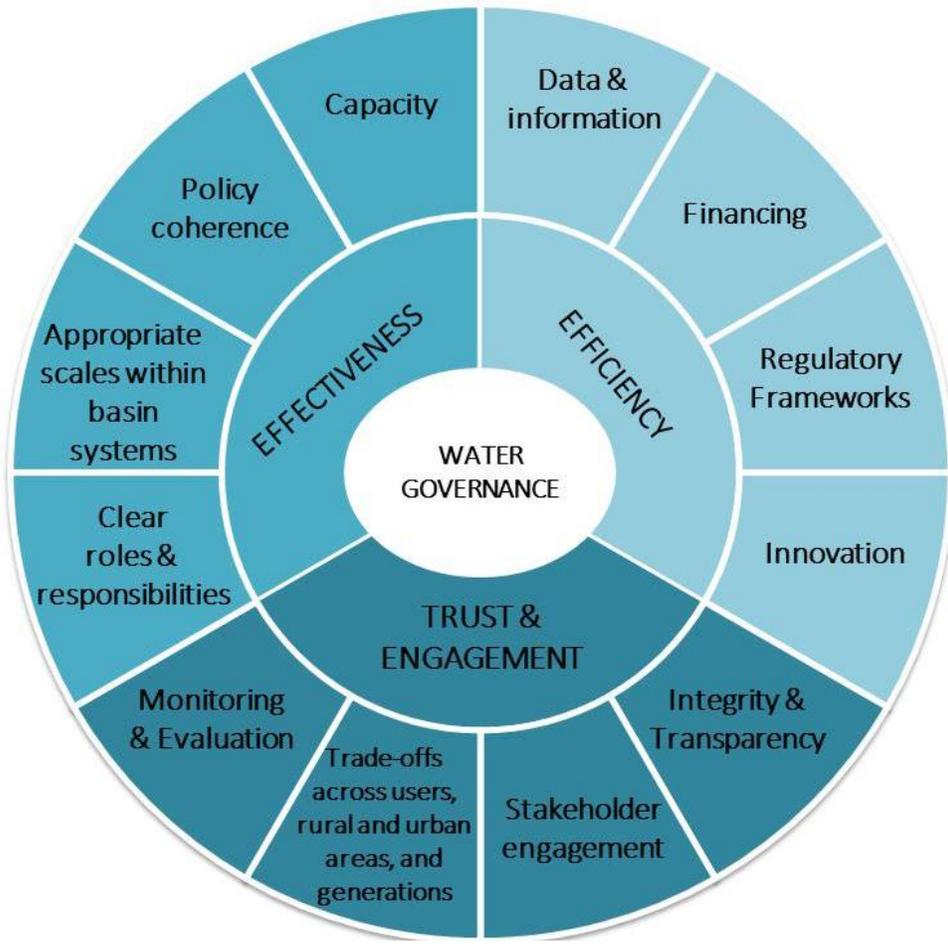
- Enhance international efforts for standardized data collection of disaster impacts, in particular, gathering gender-disaggregated data
- Promote a gender-responsive approach to disaster risk reduction and climate change adaptation
- Adhere to international agreements like the Hyogo and Sendai frameworks and promote cooperation in reducing the risks of water-related disaster

KEY DIMENSION 5

- Climatological risk / drought
- Hydrological risk / flooding
- Meteorological risk / storms



GOVERNANCE AND WATER SECURITY



Source:
www.oecd.org/governance/oecd-principles-on-water-governance.htm

RESULTS:

- Most countries have an overarching water policy framework and coordination mechanisms in place
- Limited implementation of water-related policies due to capacity constraints and funding gaps
- Insufficient data and monitoring constrains water policies evaluation
- Limited uptake of water policy instruments to manage trade-offs
- Limited use of economic instrument to manage water resources
- Limited scope and effectiveness of regulatory frameworks: water services focus
- Limited uptake of integrity practices and tools

RECOMMENDATIONS:

- Strengthen the implementation and monitoring of water-related disaster
- Adopt water policy instruments to manage trade-offs
- Adopt water economic instruments to manage water resources and generate associated sustainable funding
- Address capacity and data gaps
- Develop further stakeholder engagement in water decision making
- Mainstream integrity and transparency practices across water policies, institutions and governance frameworks

FINANCE AND WATER SECURITY

PROJECTED INVESTMENT NEEDS:

- Water supply and sanitation
 - Most countries will need to allocate between 1 and 2% of GDP to invest in water supply and sanitation infrastructure over the period 2015-2030
 - Outliers: Afghanistan, Nepal, Pakistan, Timor Leste
- Flood risk exposure
 - Afghanistan, Bangladesh, Cambodia, Kyrgyz Republic, Tajikistan and Viet Nam may all have flood risks exceeding 6% of GDP in 2030
- Irrigation expansion and efficiency improvements. Driven by:
 - Growing populations
 - Changes in dietary preferences
 - The effects of climate change

SOURCES OF FUNDING:

- Public taxes are the main source of finance for water-related infrastructure
- Official Development Assistance remains a low share of investment in water infrastructure and may not be targeting those countries who need it most
- Water supply and sanitation tariffs are under-utilized, although affordability acts as a barrier in selected countries



FINANCE AND WATER SECURITY

POLICY OPTIONS:

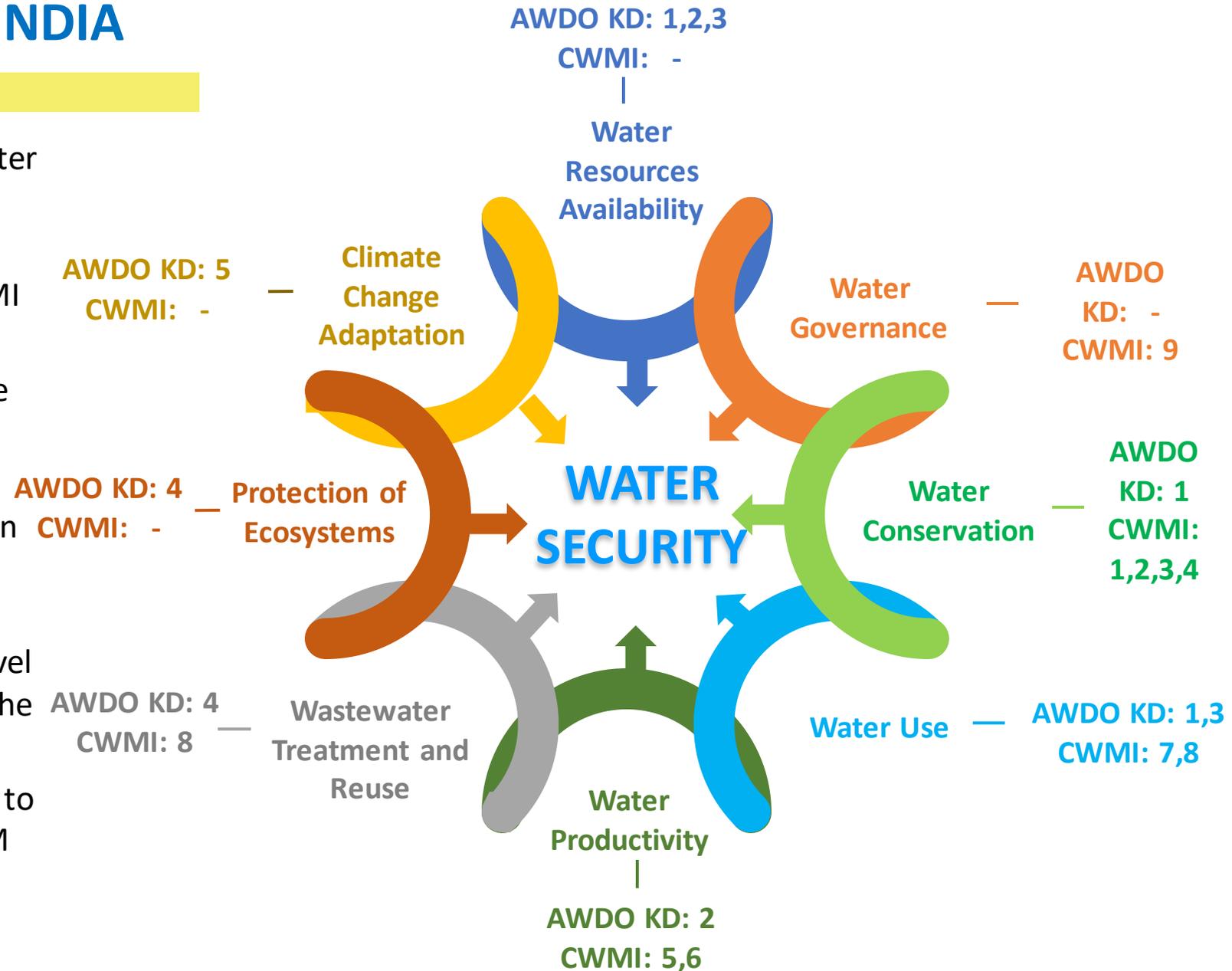
- Make the best use of available assets and financial resources
 - Enhance the operational efficiency of service providers
 - Build capacity for economic regulation
 - Encourage connections with central systems when these are available
 - Strengthen capacity and monitoring
- Minimize future investment needs
 - Develop climate-resilient plans to future-proof the water sector
 - Support plans with realistic financing strategies
 - Encourage policy coherence across water policies and other policy domains
 - Manage water demand and strengthen water resources allocation practices
 - Develop cost-effective flood risk mitigation strategies
 - Exploit innovation in line with adaptive capacities.
- Harness additional sources of finance
 - Ensure tariffs for water services reflect the costs of service provision
 - Consider new sources of finance from users and beneficiaries
 - Leverage funds to crowd-in commercial finance

*It is not all about
more money.*



CASE STUDY: KARNATAKA, INDIA

- India's NITI Ayog developed a Composite Water Management Index (CWMI)
- ACIWRM applied AWDO methodology for Karnataka state (province) and mapped CWMI indicators against AWDO indicators
- Index was very handy to shape the new State Water Policy - articulating several aspects of water sub-sectors with priority
- Karnataka started streamlining data collection and setting up a database (KWRIS) for easy compilation of water security index
- Will explore to compute at river sub-basin level and district (sub-provincial) level and adapt the index further for local realities
- AWDO exercise was a good tool/opportunity to galvanize all departments/agencies for IWRM
- A separate detailed report is published as Karnataka Water Development Outlook (KWDO)



Discussion

