



# ADB Business Opportunities Water Sector Group

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# ADB Countries with High Baseline Water Stress



## Extremely High Water Stress

- India
- Pakistan
- Turkmenistan

## High Water Stress

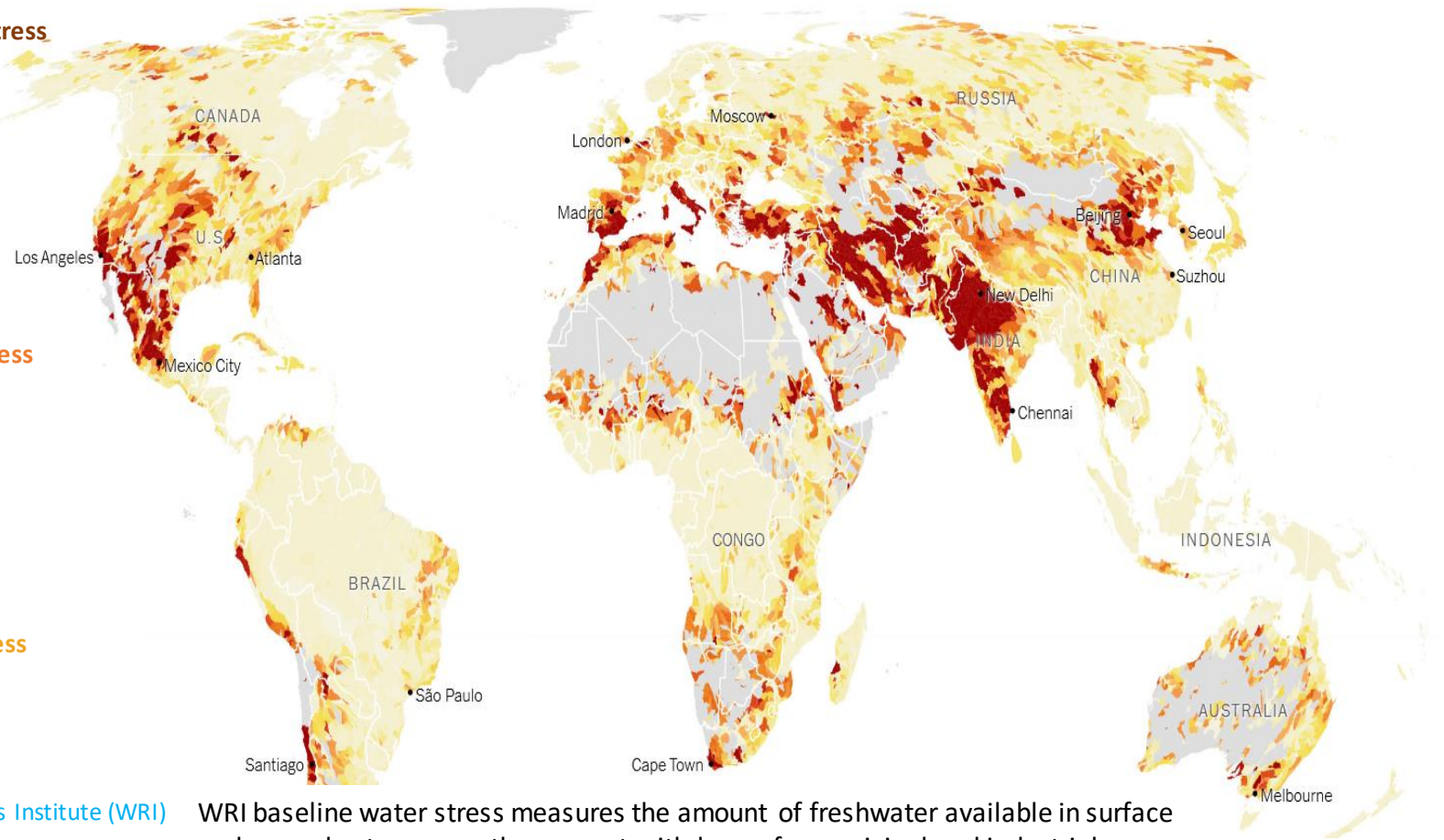
- Uzbekistan
- Afghanistan
- Armenia
- Kyrgyzstan
- Nepal

## Medium-High Water Stress

- Thailand
- Azerbaijan
- Australia
- Tajikistan
- South Korea
- Mongolia
- China
- Kazakhstan

## Low-Medium Water Stress

- Philippines
- Georgia



World Resources Institute (WRI)

WRI baseline water stress measures the amount of freshwater available in surface and groundwater versus the amount withdrawn for municipal and industrial uses. Higher values indicate higher water risk.

# Water challenges for achieving SDG6: Clean water and sanitation: Key Facts

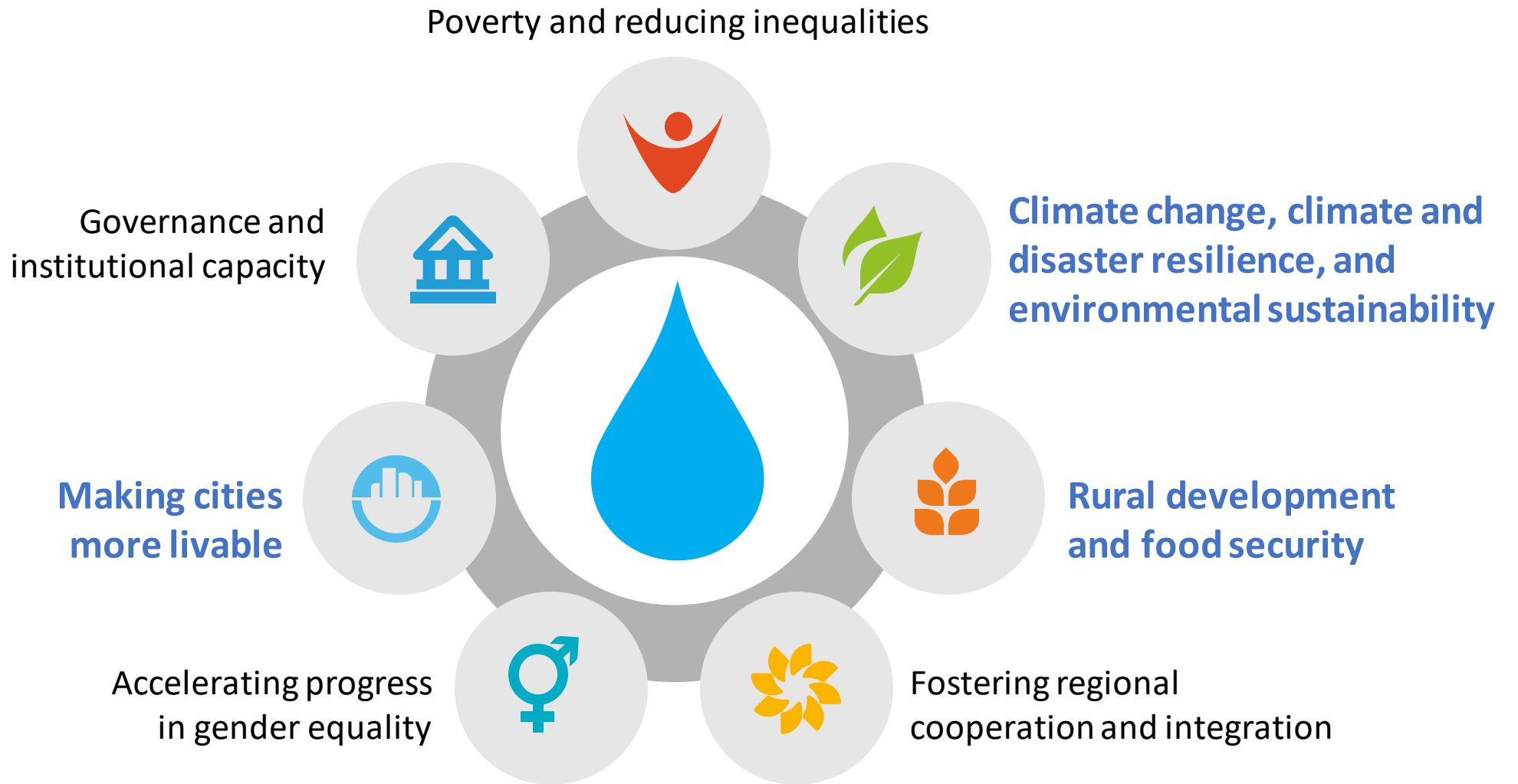
- Worldwide
  - 4.5 billion people lack basic sanitation
  - 2.1 billion people no access to safe drink drinking water
- Asia and the Pacific
  - 1.13 billion people lack basic sanitation
  - 312 million people no access to safe drink drinking water
- Worldwide Insufficient funds

Required: \$114 billion investments/year

  - available: less than \$5 billion (donor funds)
  - public funds are not enough
  - private finance (total: \$157.2 billion): only 1.36% (\$2.14 billion) invested in water & sanitation (2012-2017)

# 1 | Overview of ADB's Water Sector

# Strategy 2030: Seven Operational Priorities



**Holistic and Integrated Approach**

# Innovation and Trends Across the Water Portfolio



## Technology and data

GIS, decision support systems, supervisory control and data acquisition (SCADA), wireless sensor and pressure management, solar powered wastewater treatment, reuse of wastewater, remote sensing/ satellite

**NEP:** Mechanized Irrigation Innovation Project - sustainable groundwater pumping system for large-scale network, \$0.5M TRTA WFPF support



## Integrated projects, climate resilience, environment

stronger urban and rural linkages, environmental conservation, sponge cities for flood management, disaster and climate resilient infrastructure

**PRC:** Henan Dengzhou Integrated River Restoration and Ecological Protection Project – designed with upstream and downstream linkages and urban-rural integration, \$0.1M TRTA WFPF support



## Governance, performance and capacity building reforms

water user associations, regulatory reforms, tariff policy, non-revenue water reduction, private sector management, performance-based urban governance incentives, river basin and water resources management institutions

**PAK:** Khyber Pakhtunkhwa Water Resources Development Project – training farmers and water users association on water conservation and climate-smart irrigation, \$0.3M TRTA WFPF support

# Innovation and Trends Across the Water Portfolio



## Focus on asset management

asset management plans developed, sustainable financing and cost recovery, application of remote sensing and other technology, planning and budgeting,

**IND:** Cauvery Delta Sustainable Irrigation and Flood Project – water resources information system and asset management system to monitor and prioritize O&M of water infrastructure, \$0.2M WFPF support



## Innovative financing and transaction mechanisms

results based lending, sector development programs, local currency, bonds, prepaid metering, public private partnership, DBO contracts

**KIR:** South Tarawa Water Supply Project – 5-year O&M contract for water supply network and desalination plant, \$0.12M TRTA WFPF support



## Nature-based Solutions

sustainable management and use of nature for tackling socio-environmental challenges

**VIE:** Secondary Green Cities Development Project - integrates green features in urban drainage, flood protection works using environmentally-friendly materials, \$0.3 M TRTA WFPF support

# Water is the primary medium through which we will feel the effects of climate change\*

- The WSG is reviewing ADB operational experience, policy guidelines and international best practice to create a knowledge product for water sector climate change adaptation and mitigation.
- The KP, *“Asia-Pacific Water Resilience and Climate Change Approach 2030”*, will develop a work plan to further integrate climate change into WSG operations and DMC investment planning and policy development.
- The WSG will upscale its climate change and resilience operations and resources to (i) prepare and implement projects, (ii) build awareness and capacity for staff and DMC counterparts, and (iii) knowledge management.
- The WSG will expand its partnerships and external engagement to leverage knowledge and resources to strengthen its climate change program with IFIs and knowledge and development partners, and through events such as the Global Adaptation Summit in January 2021 and COP 26 in November 2021.

\*UN Water

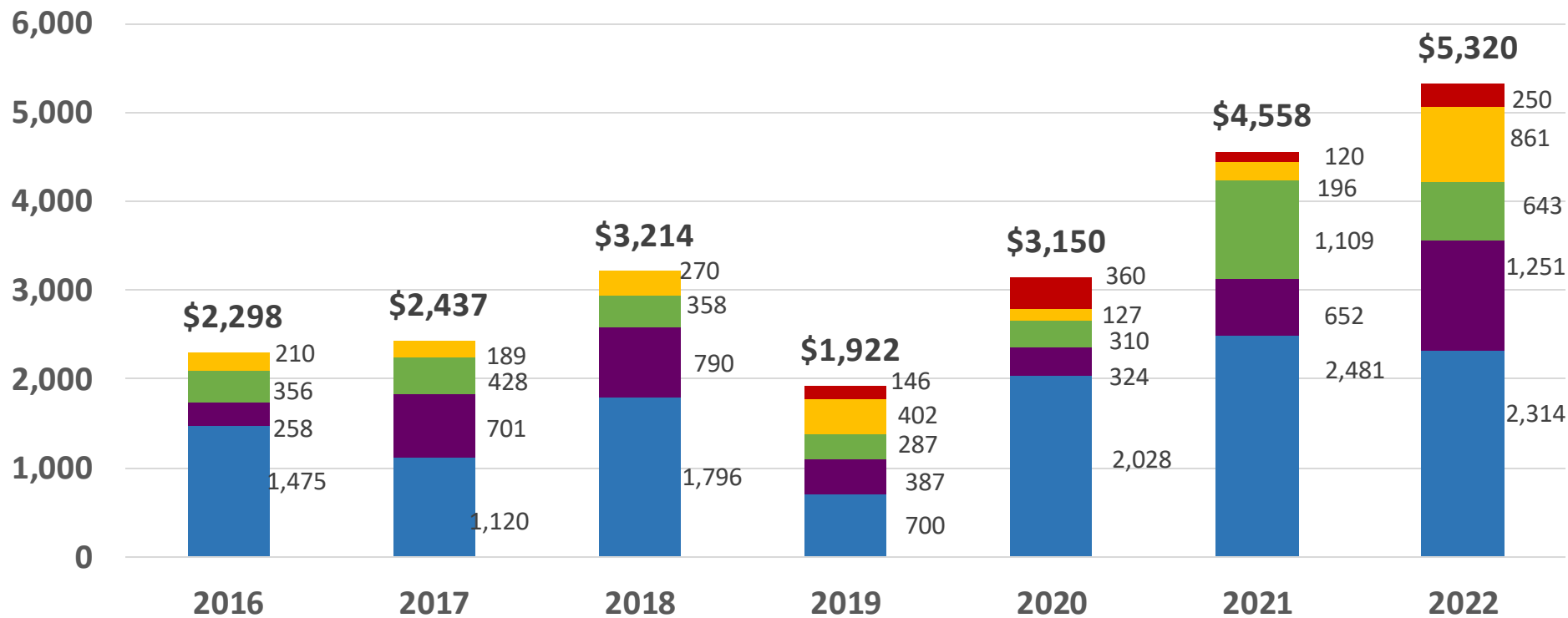




# **2** | **WSG Operations and Achievements**

# WSG Lending History and Pipeline by Subsector

(in \$ Million)

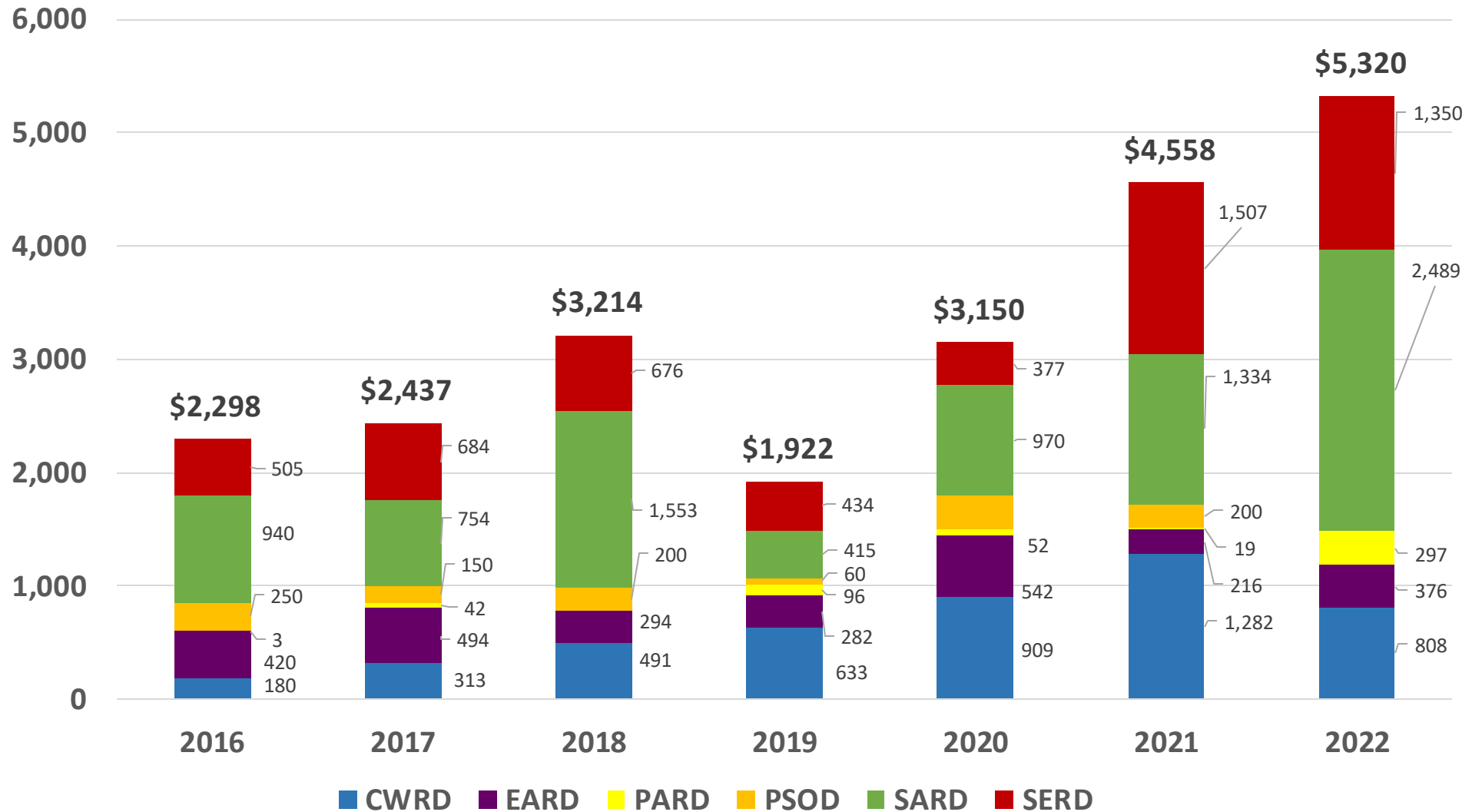


- Hydropower
- Water resources management
- Flood risk management
- Irrigation and drainage
- Water supply, sanitation, and wastewater management



# WSG Lending History and Pipeline by Operational Department

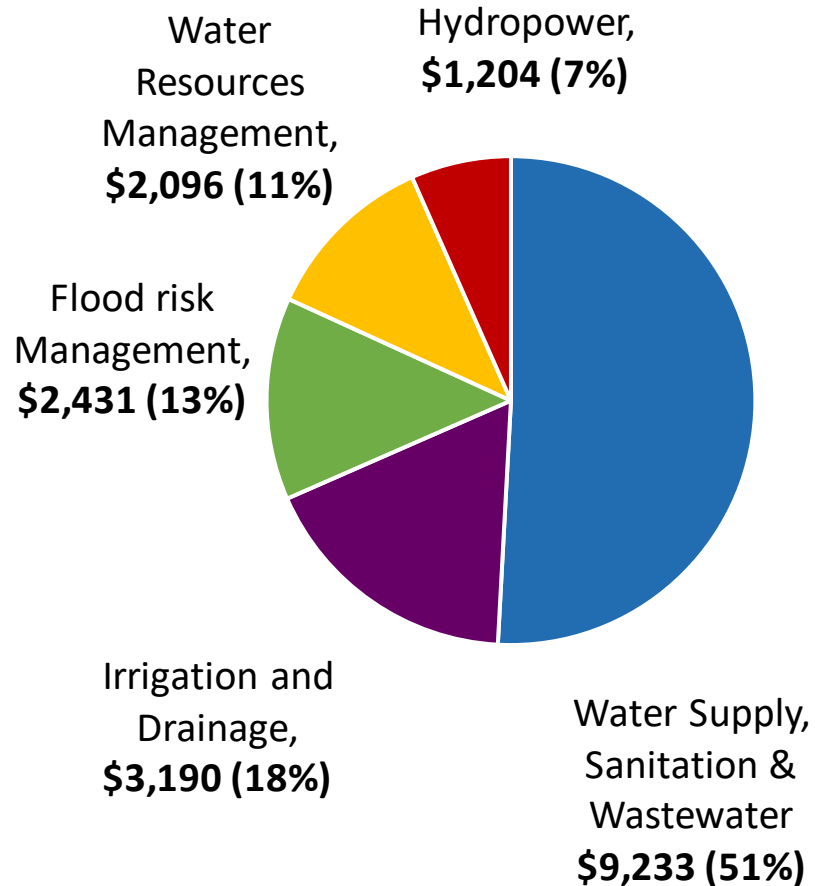
(in \$ Million)



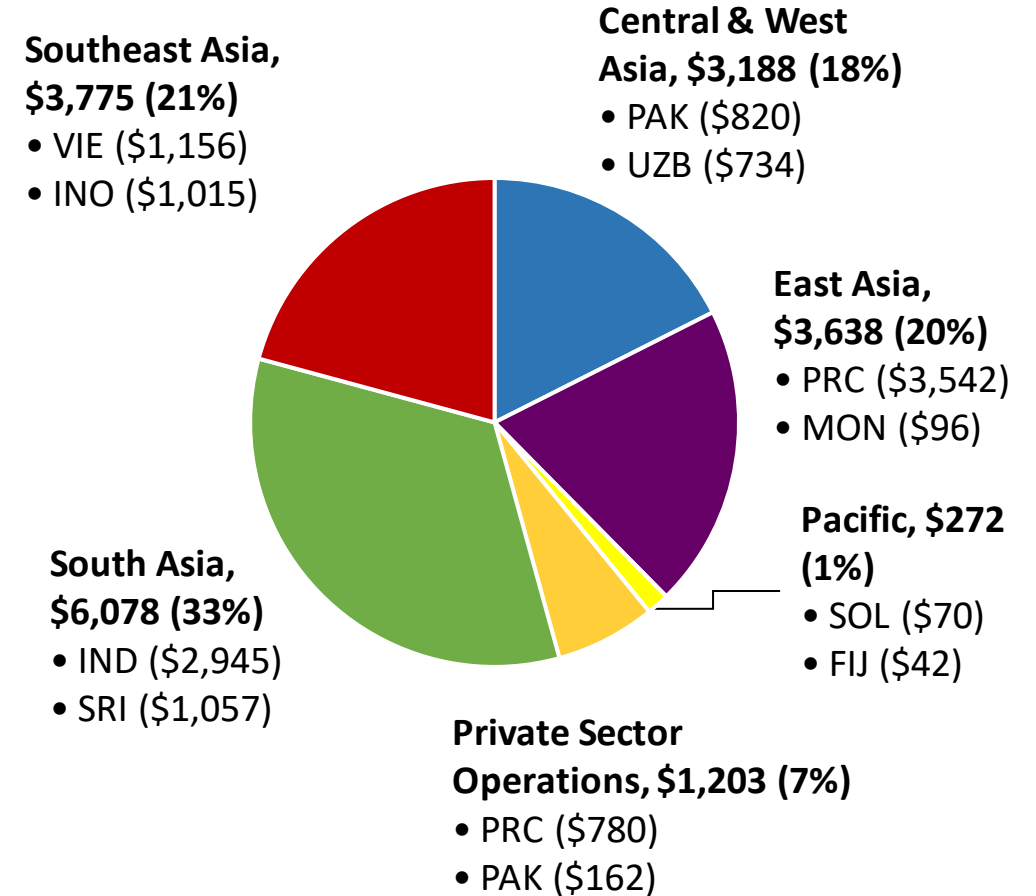
# ACTIVE WSG PROJECTS

(in \$ Million, as of July 2020)

## BY SUBSECTOR






## BY OPERATIONS DEPARTMENT



# **3** | **Water and Sanitation Rebuilding and Resilience post-COVID-19**






# Upscaling Water, Sanitation, Hygiene (WASH) + Health

## New Water and Health Advisory Team

-  **New community of practice** composed of ADB knowledge and operational department staff
-  **Provide guidance** to integrate and upscale WASH and Health outcomes
-  **Lead knowledge management** to improve understanding of WASH and health issues and share technology and policy developments to support transition to the “new normal”



## Initiatives for WASH + Health

-  Regional KSTA on Mitigating the Impact of COVID-19 through Community-Led Interventions (JFPR, \$2 million)
-  Regional KSTA on Strengthening Integrated and Effective Water and Health Outcomes in Asia and the Pacific (JFPR, \$2 million, 2020)
-  India Project Grant on Infection Prevention and Control of COVID-19 through WASH Services Improvement for Integrated Pandemic and Disaster Risk Management for the Urban Poor in Chennai (JFPR, US \$2 million)
-  Nepal Project Grant on Improving Preventive Hygiene Behaviors in 4 municipalities (JFPR, US\$ 5 million)
-  Strengthening Water, Sanitation and Hygiene Practices and Hygiene Behavioral Change in the Pacific (\$5 million, 2020)



# Water and Disasters and COVID-19

## ADB Alignment with HELP Principles to Address Water-related DRR Under COVID-19 Pandemic

### HELP Principles

### ADB Activities

**Principle 1:** Enhance leaders' awareness



Engaged firm for developing risk communication plans

**Principle 2:** Integrate risk management



Revising disaster policy to include pandemics

**Principle 3:** Provide clean water, sanitation and hygiene (WASH)



Expanding WASH program within ADB and developed a new Water and Health Advisory Team

**Principle 5:** Protect scarce medical resources



Providing \$48 million technical assistance funds for emergency supplies

**Principle 9:** Finance DRR actions under COVID-19



Providing \$20 billion COVID-19 response package

**Principle 10:** Strengthen global solidarity and international cooperation



Coordinating with HELP and other IFIs

- ❄️ The UNESCAP Asia-Pacific Disaster Report 2019 estimates average annual losses for floods, cyclones and tsunamis at \$180 billion – Asia-Pacific most affected for losses and fatalities
- ❄️ COVID-19 presents the challenge of simultaneously addressing the pandemic while also responding to water-related disasters
- ❄️ ADB is a founding member of the High-Level Experts and Leaders Panel on Water and Disaster (HELP), which prepared 10 Principles to Address Water-related DRR under the COVID-19 Pandemic
- ❄️ International Online Conference to Address Water-related DRR under the COVID-19 Pandemic with the ADB President and VPKM
- ❄️ ADB Contingent Disaster Financing revised to include Health - 8 PARD countries have disbursed for cyclone and COVID-19
- ❄️ ADB disaster co-occurrence project design: Integrated Pandemic and Flood Resilience for the Urban Poor in Chennai, India



# How does the COVID-19 Pandemic affect the water sector?

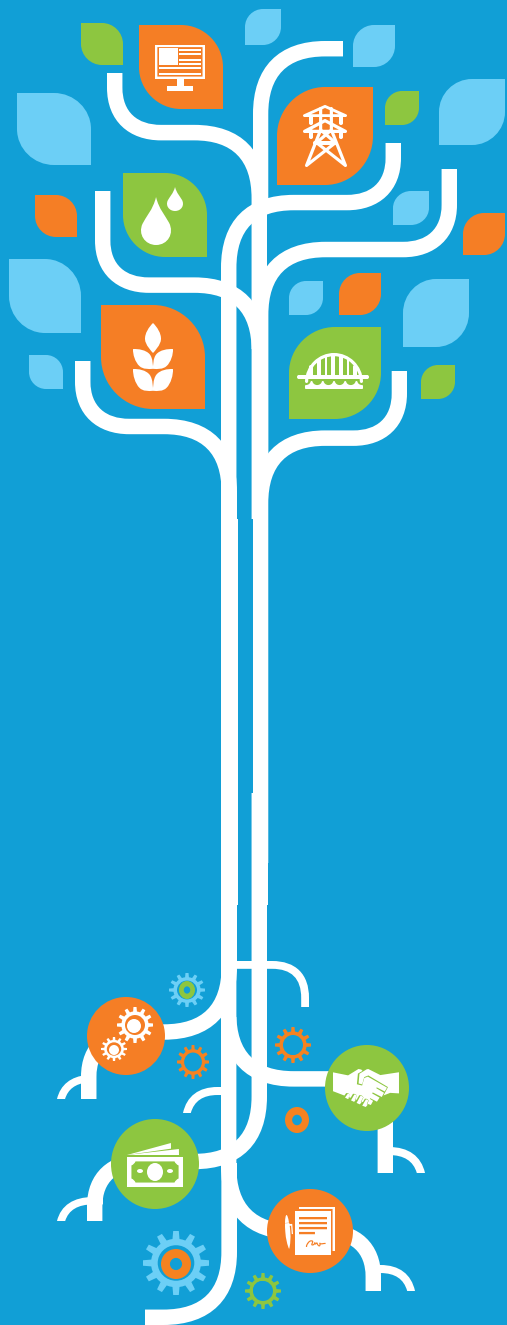
- ❗ In Asia-Pacific, 165 million people lack access to basic drinking water, 370 million to basic sanitation, and 50 million practice open defecation. Asia's poorest people with the worst service access, many living in informal settlements, have been highly affected by COVID-19, which can create pandemic hotspots.
- ❗ Utilities are having to prioritize continuous and inclusive services and upscale WASH activities which may come at the expense of billing/operating revenue.
- ❗ Demand changes - large industrial/commercial water use declines and domestic use increases affecting revenues due tariff differentials for cross-subsidy. Increased and continuous use of full domestic networks may lead to increased leaks and NRW.
- ❗ O&M and CAPEX projects (routine and rehab) deferrals due to lack of revenue and quarantine with possible knock-on effects of increased failure risk and increased loss of revenue from system enhancements.
- ❗ Water service providers and irrigation staff needing access to PPE and to be classified as essential staff, so they can report to work especially during emergencies.
- ❗ Supply chains interruptions (materials, equipment) for operations potentially compromising service.
- ❗ Increased interest from DMCs in water quality monitoring and use of wastewater for COVID-19/contagion detection, which is being mainstreamed in the developed world.
- ❗ Lack of mobility affecting migrant labor for irrigated agriculture (harvest, field planting, maintenance)
- ❗ Agricultural supply chains interrupted and produce not reaching markets and perishing in the field.





# The New Normal and Associated Water Sector Investments

- Increased and more inclusive WASH and wastewater infrastructure and service delivery targeting the poor and vulnerable in low-income communities and informal settlements; decentralized and community-specific WASH service delivery
- Strengthening linkage between WASH and health: enhance support towards behavioral change to ensure public health is improved not just service delivery and wastewater-based epidemiology; multistakeholder approach.
- Acceleration of the digital utility: (i) reliable and effective high-level and digital solutions and technologies for monitoring and operations, including automation and remote-control to ensure service delivery; (ii) automated billing systems, cashless (mobile), E-commerce to increase revenue collection; and (iii) improved communication with customers
- Building capacity and strengthening financial sustainability of water service providers and support tariff reforms and operational efficiency to strengthen financial health. Emergency funds and financial assistance to maintain operations.
- Increased safe and resilient water service provision – robust and integrated safety and emergency plans, crisis management and preparedness, use of personal protective equipment (PPE) for workers
- Building resilience to absorb shocks and stresses due to pandemics, disasters, and climate change by e.g., implementing holistic approach in improving service delivery and public health across water supply, sanitation, flood and solid waste management and solid waste management at city level.
- Prioritize resumption of critical capital works and infrastructure maintenance and inspections. More resilient future infrastructure designs to withstand shocks and minimize operations and maintenance needs.
- Diversification and localization and of supply chains to ensure availability of necessary inputs.
- Irrigation and drainage modernization, diverse crop mixture, food production closer to the markets (e.g., urban farming), focus on internal markets and resource reuse, import substitution.
- A green and nature-positive recovery: design green infrastructure investments, green jobs.



# THANK YOU!

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