



ADB Business Opportunities Water Sector Operations in South Asia

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ADB Countries with High Baseline Water Stress

Extremely High Water Stress

- India
- Pakistan
- Turkmenistan

High Water Stress

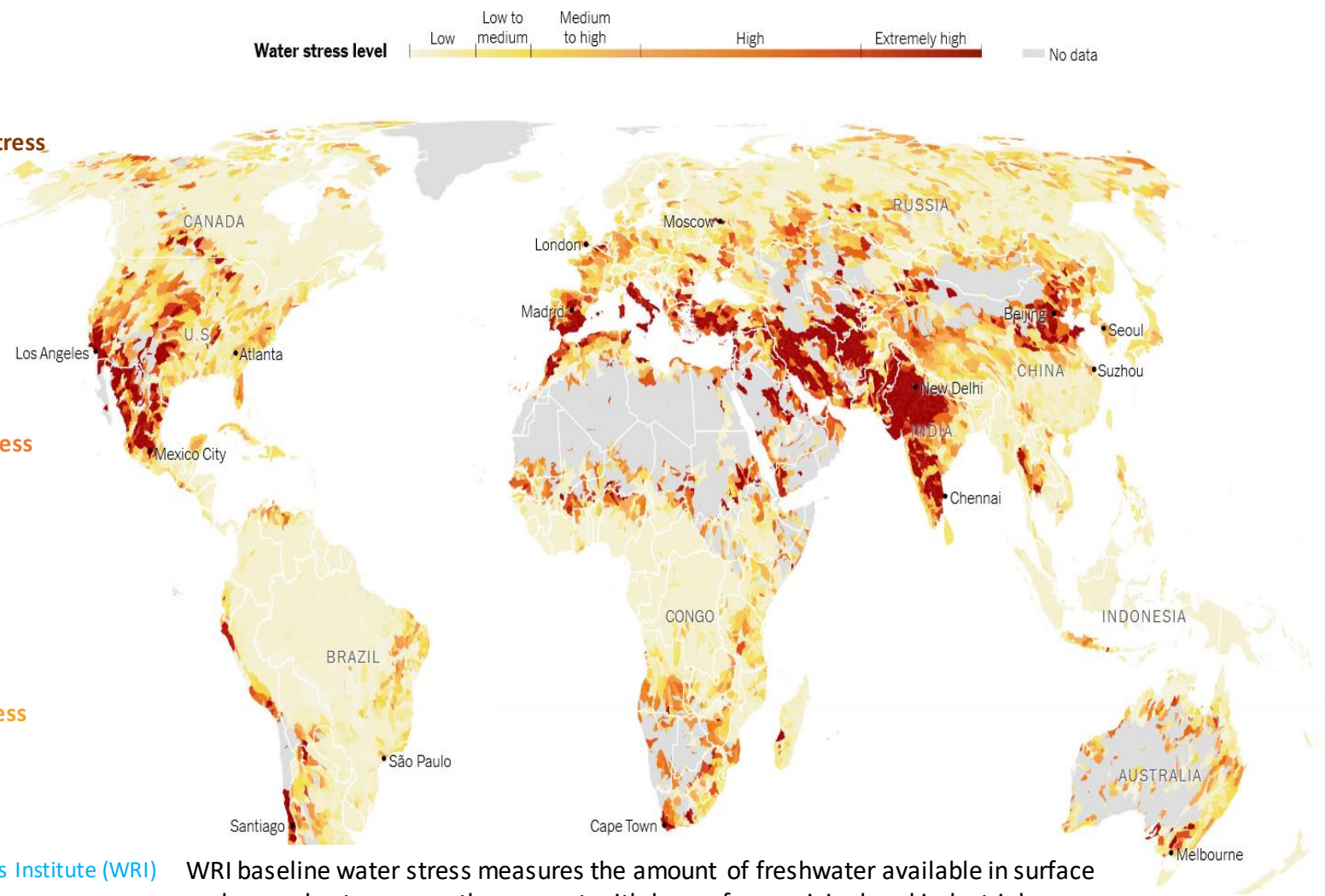
- Uzbekistan
- Afghanistan
- Armenia
- Kyrgyzstan
- Nepal

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WRI baseline water stress measures the amount of freshwater available in surface and groundwater versus the amount withdrawn for municipal and industrial uses.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

Asia's Looming Water Crisis

- Urbanization
- Increasing and competing demand
- Access to water supply and sanitation
- Deteriorating water quality
- Food security
- Increasing extreme weather events and climate change
- Governance and capacity



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



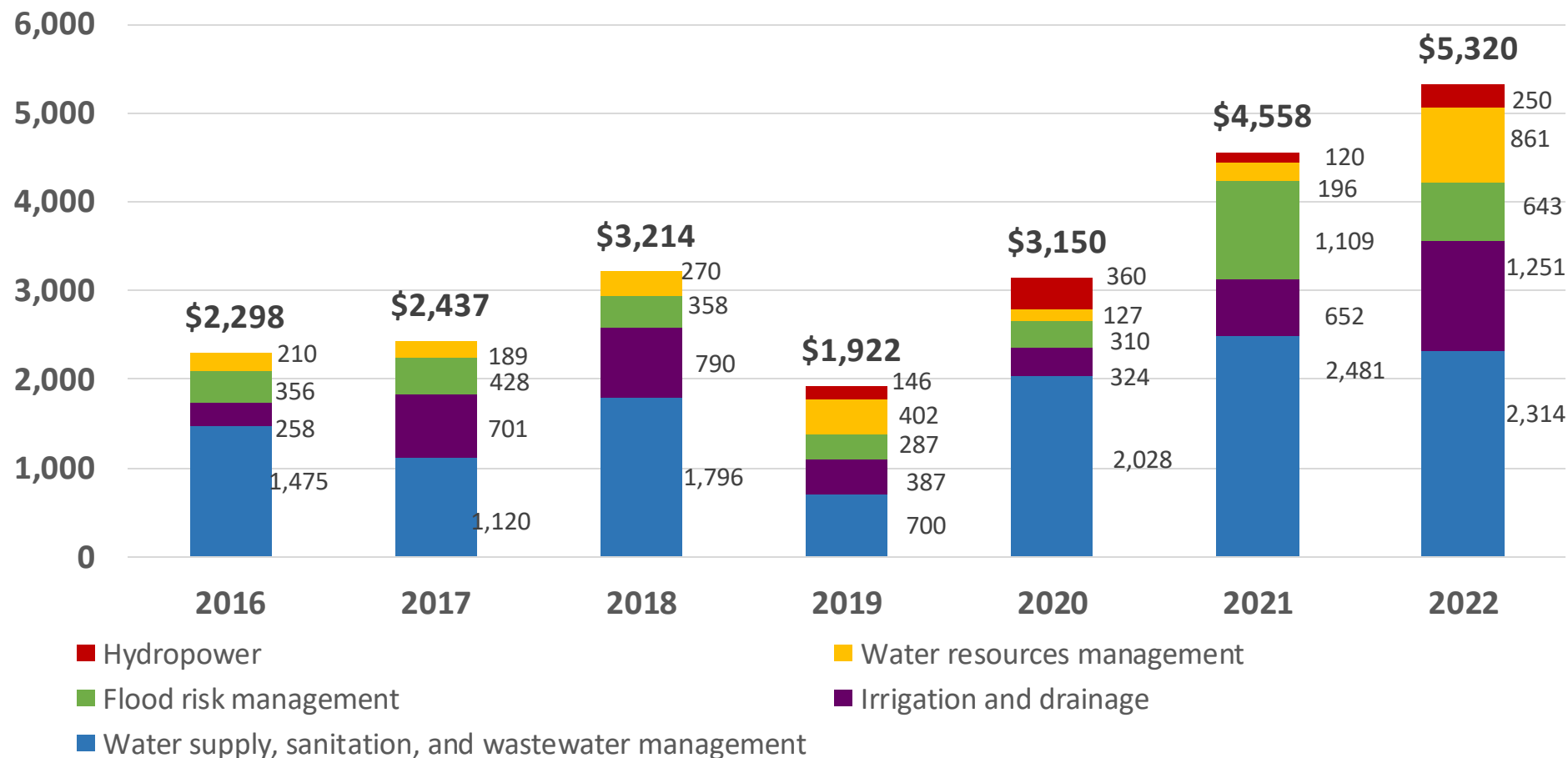
Nature-based Solutions

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

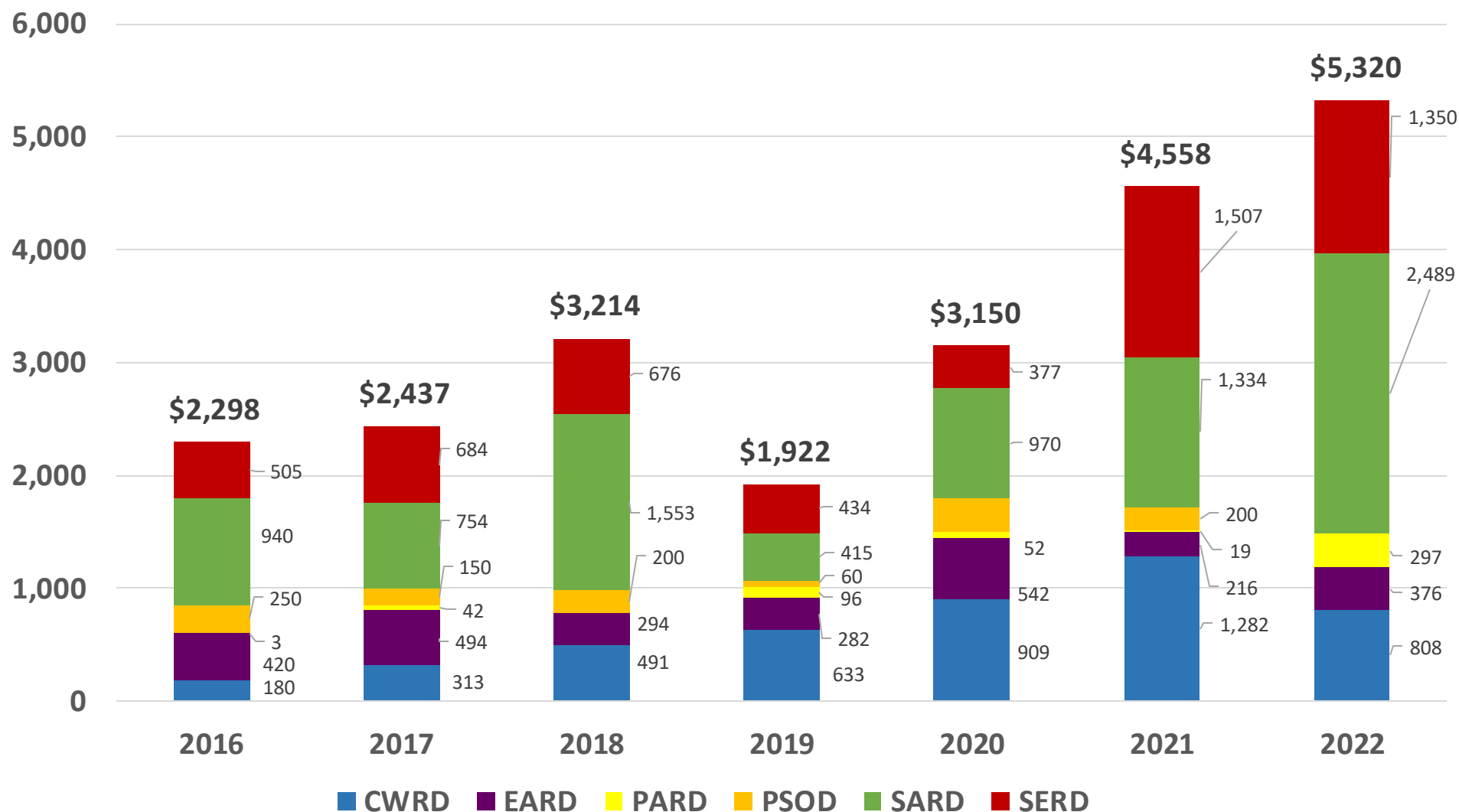
WSG Lending History and Pipeline by Subsector

(in \$ Million)



WSG Lending History and Pipeline by Operational Department

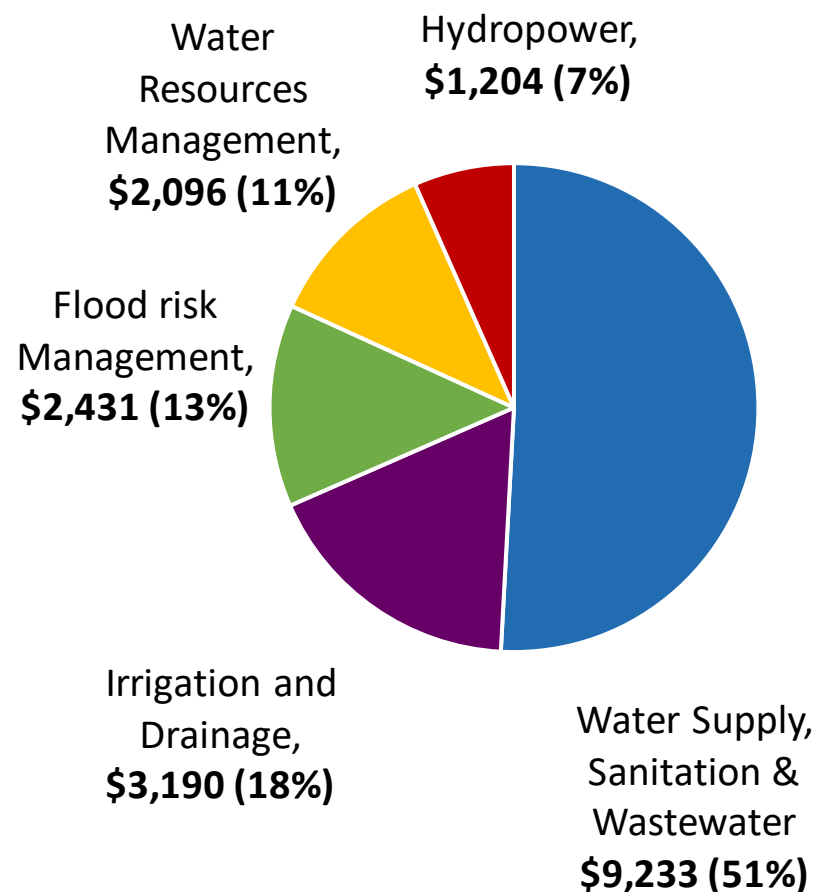
(in \$ Million)



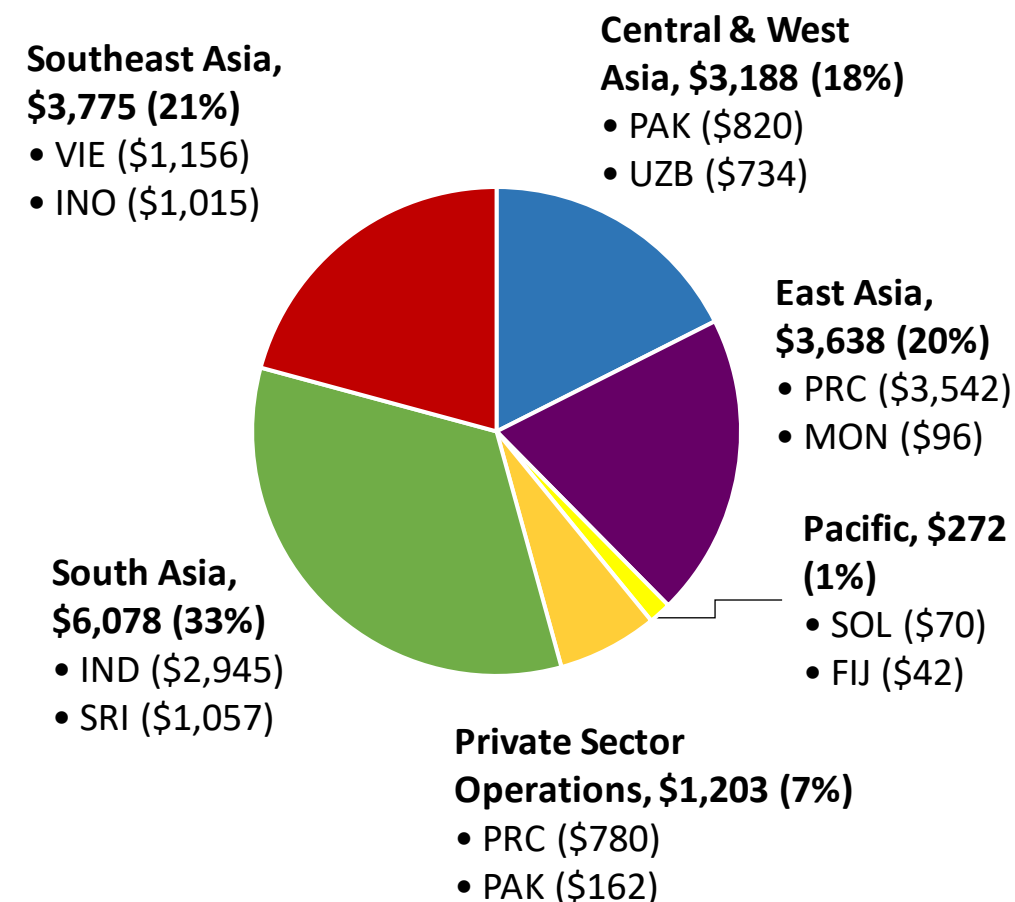
ACTIVE WSG PROJECTS

(in \$ Million, as of July 2020)

BY SUBSECTOR



BY OPERATIONS DEPARTMENT





2020 Water Sector Group Project Commitments

South Asia

| Department | DMC | Project Title | Total Water Component |
|------------|-----|--|-----------------------|
| South Asia | IND | Madhya Pradesh Urban Services Improvement Project - Additional Financing | 270.0 |
| | IND | Rajasthan Secondary Town Development Sector Project | 300.0 |
| | BAN | Khulna Sewerage System Development Project | 160.0 |
| | BHU | Phuentsholing Township Devt Project-Additional Financing | 26.0 |
| | BAN | Irrigation Management Improvement Project-Additional Financing | 13.5 |
| | NEP | Priority River Basins Flood Risk Mgt Project | 50.0 |
| | BAN | Flood and Riverbank Erosion Risk Management Investment Program (Tranche 2) | 150.0 |



2021 Water Sector Group Project Commitments

South Asia

| Department DMC | Project Title | Total Water Component |
|----------------|--|-----------------------|
| BAN | Climate and Disaster Resilient Small-Scale Water Resources Management Project | 65.0 |
| IND | Maharashtra Sustainable Coastal Protection and Management Investment Program (Tranche 2) | 50.0 |
| BHU | SASEC Green Power IP- Tranche 1 | 120.0 |
| SRI | Integrated Water Productivity Improvement Project (PRF) | 10.0 |
| IND | Agartala City Urban Devt Project | 39.0 |
| IND | Kerala Urban Water Supply Improvement Project | 125.0 |
| BAN | Dhaka Environmentally Sustainable Water Supply Project-Additional Financing | 180.0 |
| IND | Visakhapatnam–Chennai Industrial Corridor Development Program - Tranche 2 | 70.0 |
| IND | Integrated Urban Flood Management for the Chennai-Kosasthalaiyar Basin Project | 245.0 |
| IND | Jharkhand Urban Resilience and Livability Improvement Project | 110.0 |
| NEP | Second Kathmandu Valley Water Supply Project | 180.0 |
| BHU | Water Flagship Program | 20.0 |
| IND | Uttarakhand Urban Sector Development Infrastructure Project | 120.0 |

2022 Water Sector Group Project Commitments

South Asia

| Department | DMC | Project Title | Total Water Component |
|------------|-----|--|-----------------------|
| South Asia | BAN | Ganges-Kobadak Irrigation Project | 180.0 |
| | IND | Ara Canal Water Productivity Improvement Project | 321.0 |
| | IND | Andhra Pradesh Rural Water Supply Project | 150.0 |
| | NEP | Mechanized Irrigation Innovation Project | 67.0 |
| | SRI | Integrated Water Productivity Improvement Sector Project | 135.0 |
| | IND | Karnataka Integrated and Sustainable Water Resources Management Investment Program-Phase 2 | 200.0 |
| | SRI | Mahaweli Water Security Investment Program-Tranche 3 | 93.0 |
| | NEP | Urban Development Project | 50.0 |
| | BAN | Secondary Towns Water Supply and Sanitation Project | 150.0 |
| | BAN | Dhaka Sewerage System Development Project | 300.0 |
| | BAN | Second Coastal Towns Environmental Infrastructure Improvement Project | 98.0 |
| | IND | Jamrani Drinking Water Multipurpose Project | 320.0 |
| | IND | Support for Project & Institutional Development for Urban Development Department and Public Health Engineering Department in Assam | 4.3 |
| | IND | Tamil Nadu Urban Flagship Investment Program - Tranche 3 | 125.0 |
| | IND | Chittagong Water Supply Project | 200.0 |
| | IND | Remodeling/ Renovation of Old Rural Water Supply Schemes of Himachal Pradesh | 96.2 |



India: Additional Financing of Madhya Pradesh Urban Services Improvement Project

Improving water supply and sanitation services in small towns

Issues:

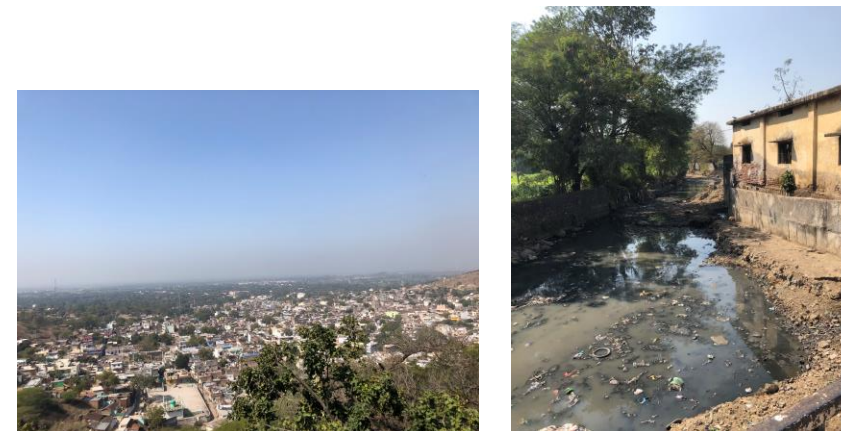
- limited technical, financial & institutional capacities of urban local bodies of low-income state
- low water supply service coverage with intermittent operations, weak water pressures, and risk of wastewater infiltration leading to inefficiencies and potential health risks
- untreated wastewater discharged into local environments, compromising livability of the towns and creating health and safety hazards

Solutions:

- physical and nonphysical investments
- universal coverage of improved water supply services; improving integrated stormwater and sewage management services; and 10-year O&M by private sector
- institutional strengthening and capacity development of local government and Madhya Pradesh Urban Development Company

Innovation and Value Addition:

- promoting inclusiveness by supporting low-income state and small urban local bodies
- introducing integrated urban development approach
- establishing knowledge partnership with Bill & Melinda Gates Foundation
- introducing information technology-based project management and monitoring system



| | |
|-----------------|-----------------------------------|
| Approval | : September 2020 |
| Completion Date | : November 2027 |
| Modality | : Sovereign sector loan (project) |
| Total cost | : \$385.7 million |
| - ADB | : \$270.0 million |
| - Government | : \$115.7 million |



Bangladesh: Khulna Sewerage System Development Project

First Sewerage Intervention in Bangladesh for Citywide Inclusive Sanitation

Issues:

- Increasing volume of sewage clogging drains and discharged in rivers
- No organized sewage collection and treatment system
- Limited technical, financial & institutional capacities on sewerage system

Solutions:

- Establish centralized sewerage system, including two sewage treatment plants (80 MLD), 269km sewer network, and 27,000 property-level sewer connections
- Establish fecal sludge treatment plant (160 KLD), with Khulna City Corporation undertaking collection and transfer to the site, and KWASA managing treatment
- Enhance institutional capacity on sewerage services, including training programs and project management, facility-specific O&M manual and SCADA system
- Improve public awareness on sanitation and hygiene

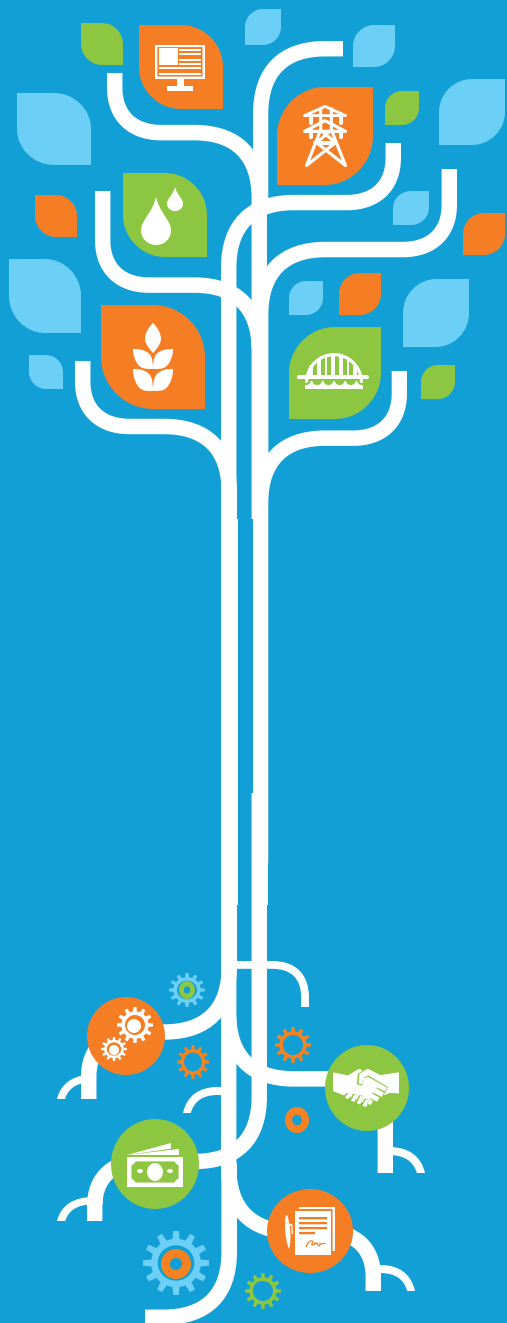
Innovation and Value Addition:

- *City-wide inclusive sanitation* - establishing both centralized sewerage system and fecal sludge treatment plant
- *Technology and innovation* - SCADA system and a comprehensive GIS database linked with a computerized hydraulic model for better O&M
- *Holistic support to Khulna city* - following the water supply project, supporting for sewerage system



| | |
|---------------------|-------------------------|
| Approval | : September 2020 |
| Completion | : December 2027 |
| Total costs | : \$275 million |
| ADB | |
| - regular loan | : \$50 million |
| - concessional loan | : \$110 million |
| GOB | : \$115 million |

Executing Agency: Khulna Water Supply and Sewerage Authority (KWASA)



BUSINESS
OPPORTUNITIES

THANK YOU!

ADB