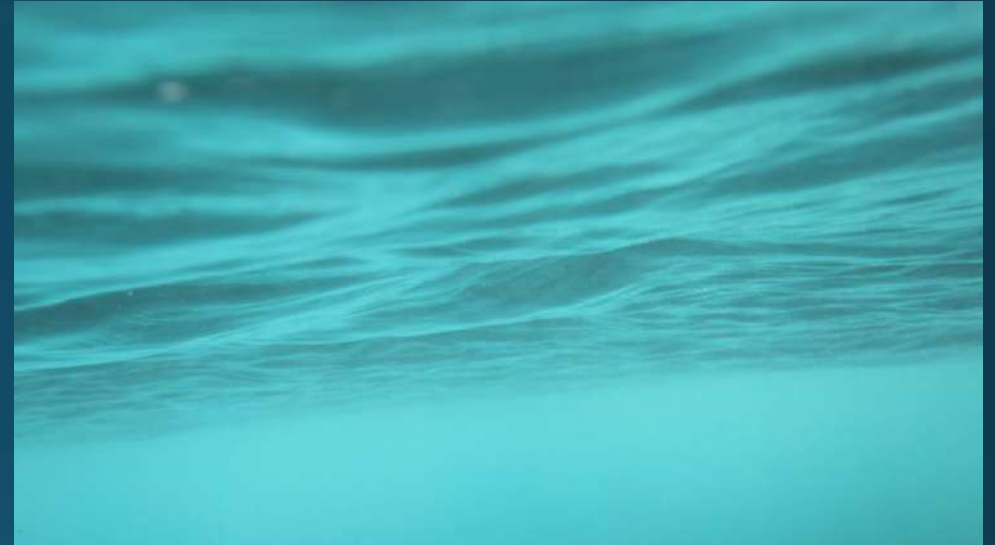


Jennifer Sara, Global Director
World Bank Water Global Practice

Singapore International Water Week 2022



WORLD BANK GROUP
Water

Water Global Outlook

“Identify the most severe risks on a global scale over the next 10 years”

■ Economic ■ Environmental ■ Geopolitical ■ Societal ■ Technological



Source: World Economic Forum Global Risks Perception Survey 2021-2022

A shifting narrative

Millennium
Development
Goals (MDGs)
2000-2015



Sustainable
Development
Goals (SDGs)
2016-2030

Paris
Agreement



5

KEY SYSTEMS
generate

90%
of GHG emissions



Energy



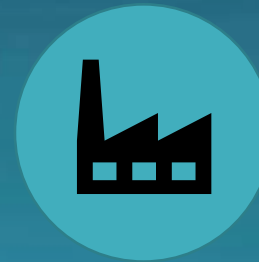
Agriculture,
Food, Water,
and Land



Cities

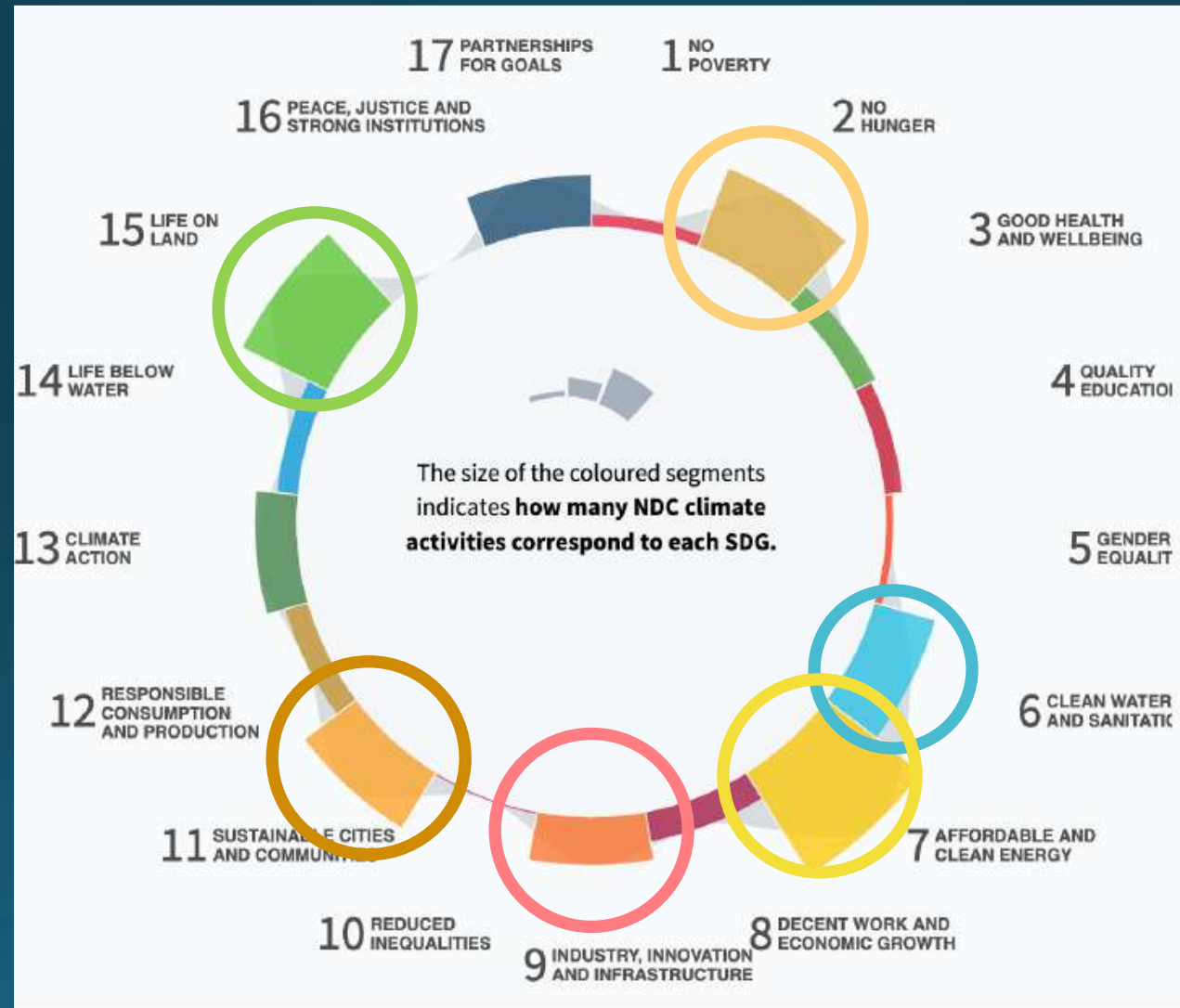


Transport



Manufacturing

Water is central to climate change adaptation and mitigation

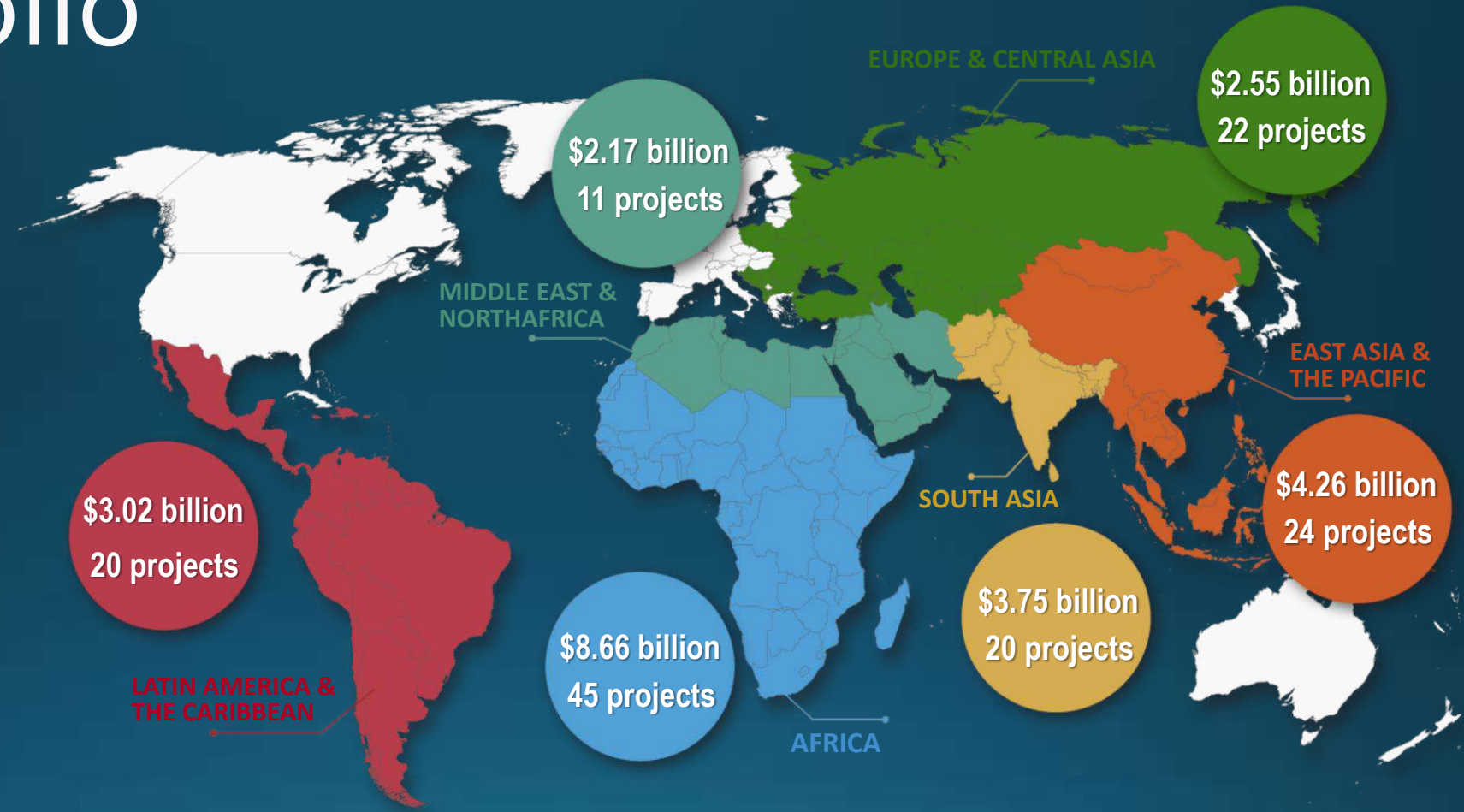


Our Vision: A Water Secure World for All

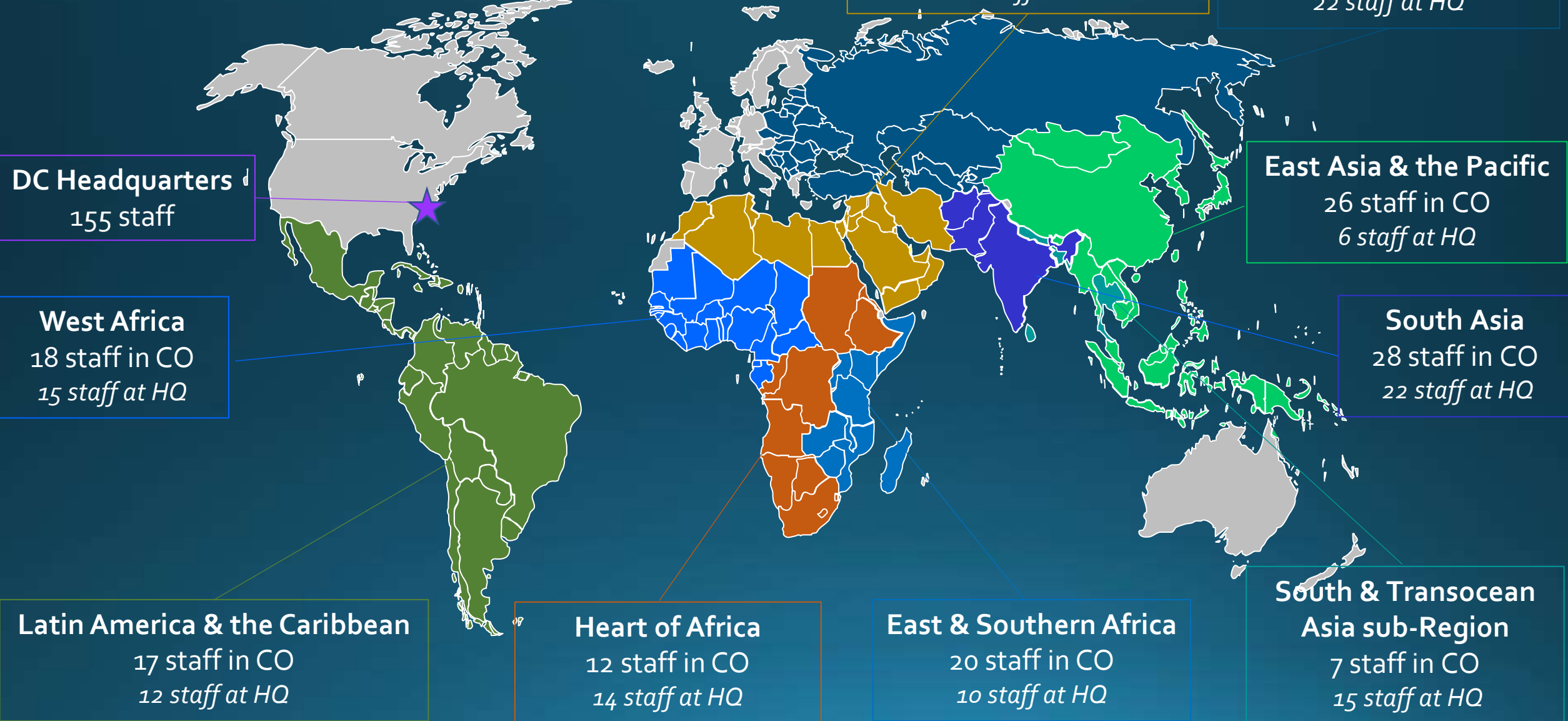


Our portfolio

- \$24.41 billion in investments across 142 projects
- Influence at least \$13.84 billion in other water-related lending
- 102 analytical studies (including 86 active ASAs) for evidence-based policy
- 308 staff in 69 countries with 50% in country offices.



Where we are



DC Headquarters
155 staff

West Africa
18 staff in CO
15 staff at HQ

Latin America & the Caribbean
17 staff in CO
12 staff at HQ

Heart of Africa
12 staff in CO
14 staff at HQ

East & Southern Africa
20 staff in CO
10 staff at HQ

Middle East & North Africa
11 staff in CO
12 staff at HQ

Europe & Central Asia
14 staff in CO
22 staff at HQ

East Asia & the Pacific
26 staff in CO
6 staff at HQ

South Asia
28 staff in CO
22 staff at HQ

South & Transocean Asia sub-Region
7 staff in CO
15 staff at HQ

What we do

Some transformational and innovative examples

Water for public health

Wastewater epidemiology for COVID-19 detection



Building resilience through storage

Promoting integrated systems scale approach to storage

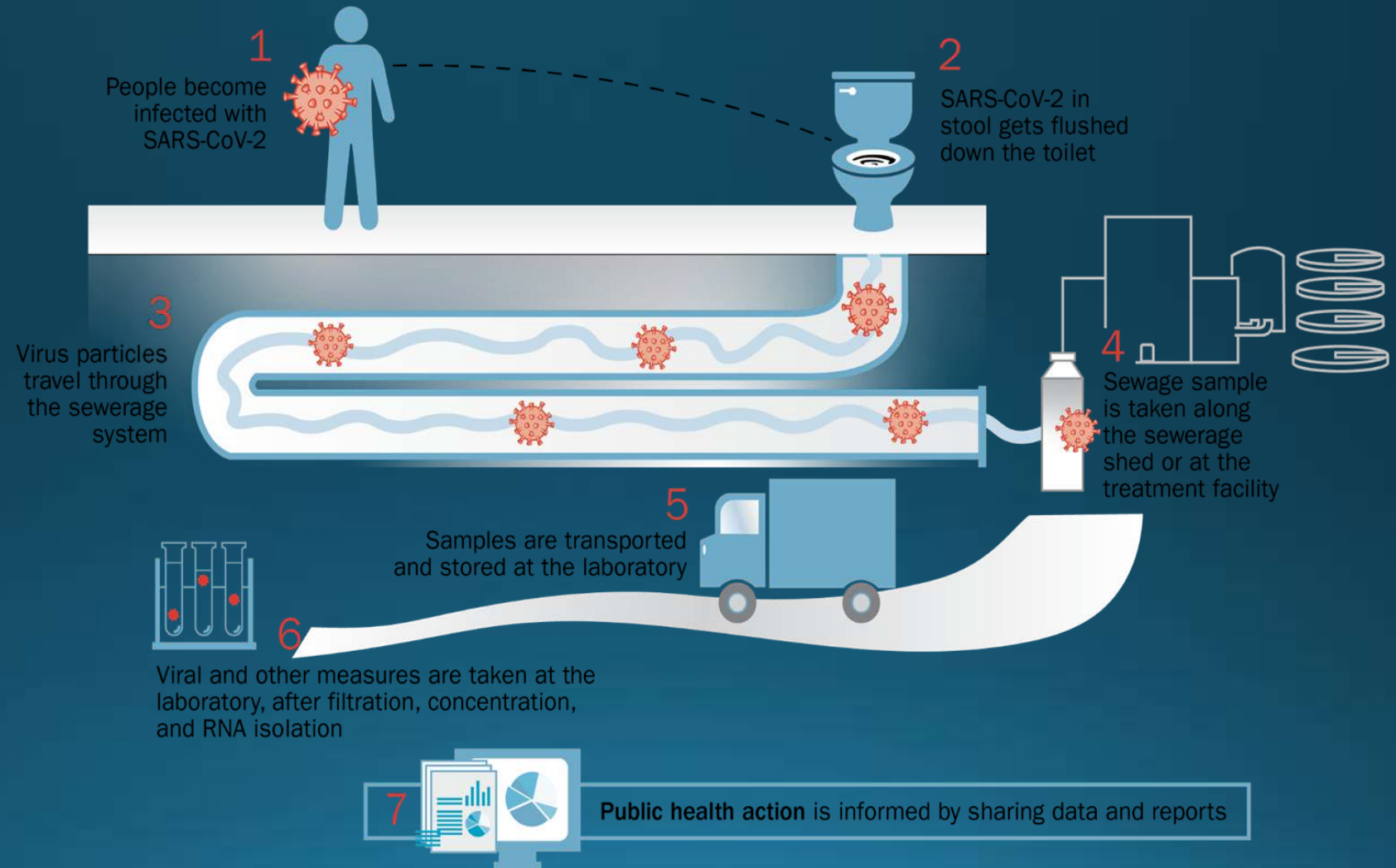
Water for cities' economic growth

Promoting water security in cities through circular economy approaches

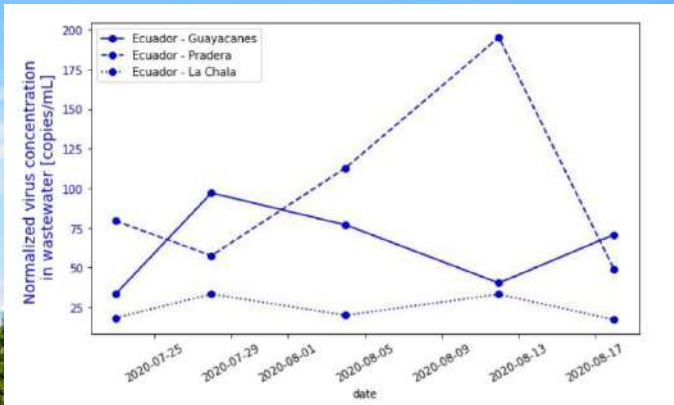


Water for Public Health: Wastewater Epidemiology for COVID

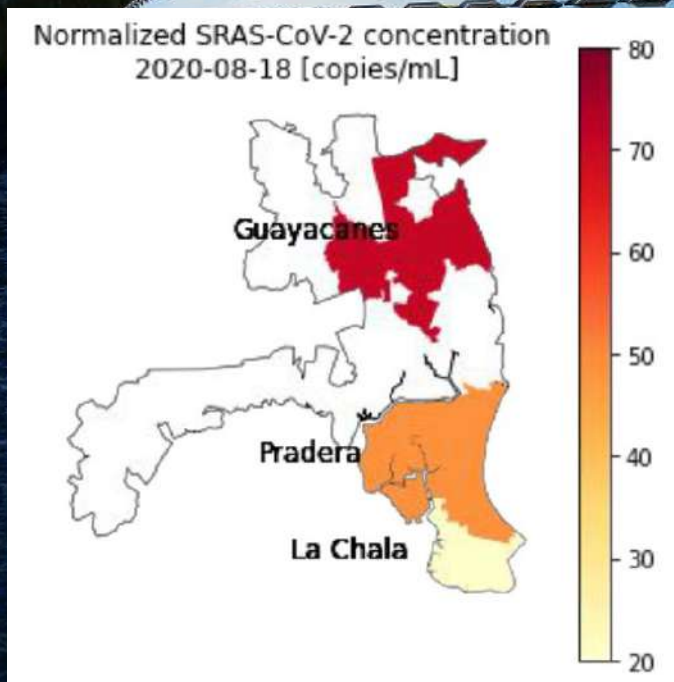
- Wastewater testing uses the same methods as for clinical testing—RT-qPCR. Minute levels of virus can be detected.
- Testing can be performed on any water sample. Wastewater treatment plants, along sewerage networks, open trenches, etc.



Case of Guayaquil, Ecuador - Results



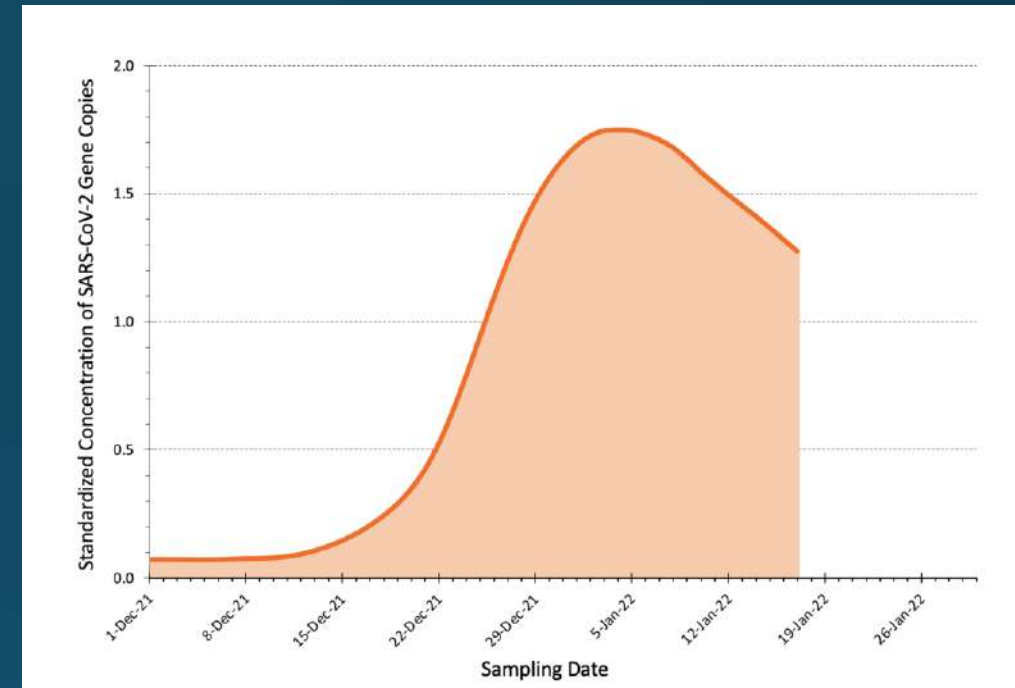
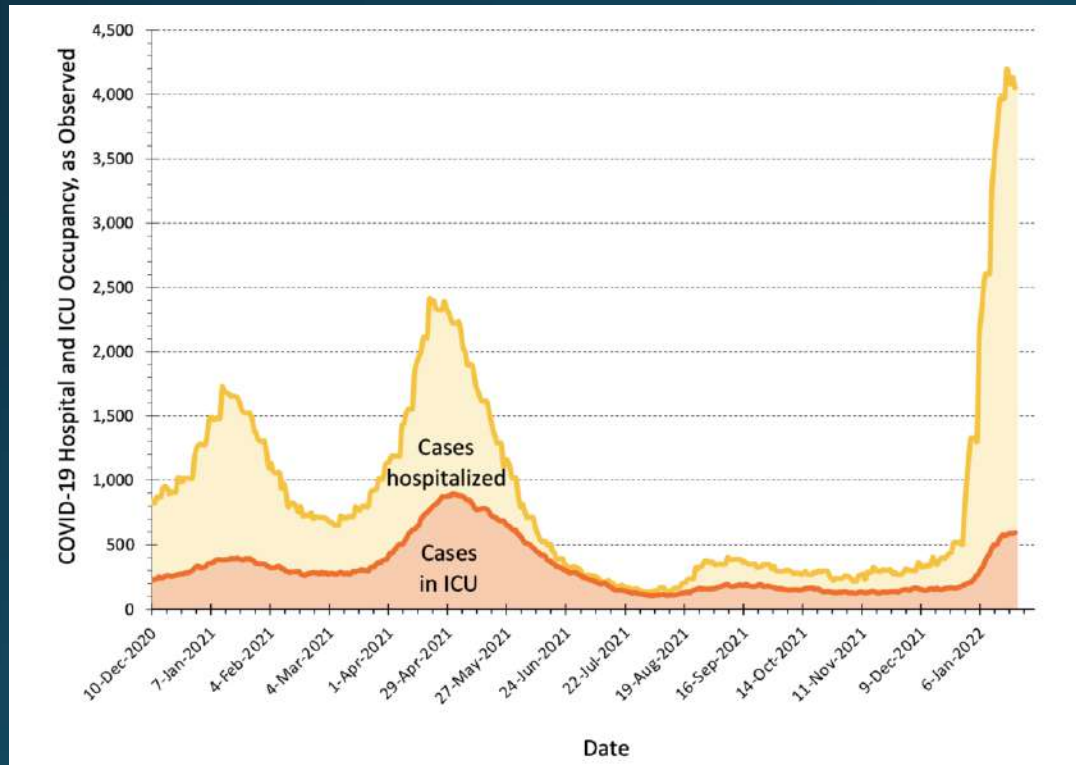
- Weekly sampling from 3 locations (53% of population) over 6 weeks
- All samples confirmed positive
- ESPOL had experience with clinical samples, but needed capacity building for a complex matrix such as wastewater
- Work was presented to COE Cantonal, which expressed strong interest in wastewater data
- 1 year contract signed to implement wastewater testing → 5 sampling locations to be increased to 10



Case of Ontario, Canada

Ontario's premier announced reopening plans on January 22, 2022

- Hospitalization was still increasing.
- Clinical case testing has limited ability to measure the wave.



- Ontario's wastewater for SARS-CoV-2 was decreasing: the mean viral load in wastewater had likely peaked two weeks before → 80 WWTPs covering over 10 million people

Water for Economic Growth: Water Secure Cities

SECURE

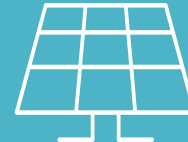
Diversification of water supply options
Universal Access: SDG 6.1/6.2
Efficient use
Regulation
Demand management



INTEGRATED

CIRCULAR

Climate risks mitigation and adaptation
Water and energy use optimization
Pricing
Pollution reduction and regeneration of natural systems
Sustainable and efficient resource use



GREEN

RESILIENT

Forward-looking
Expands menu of water supply options
Implements smart water policies and technologies



RESILIENT

INCLUSIVE

Protection against flood risks
Water-related challenges in informal settlements
Participatory decision-making

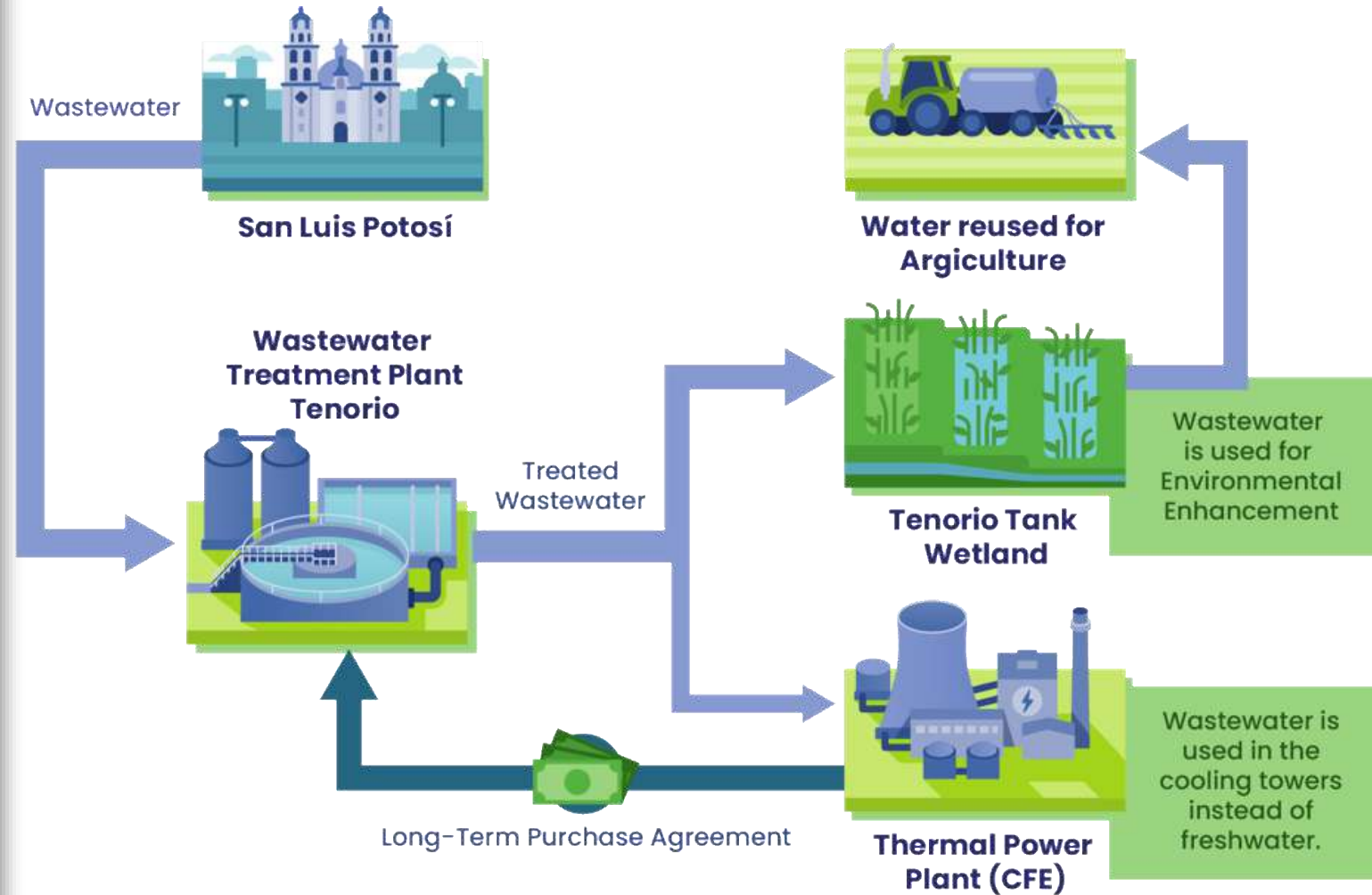


INCLUSIVE

Water Secure Cities: San Luis Potosí, Mexico

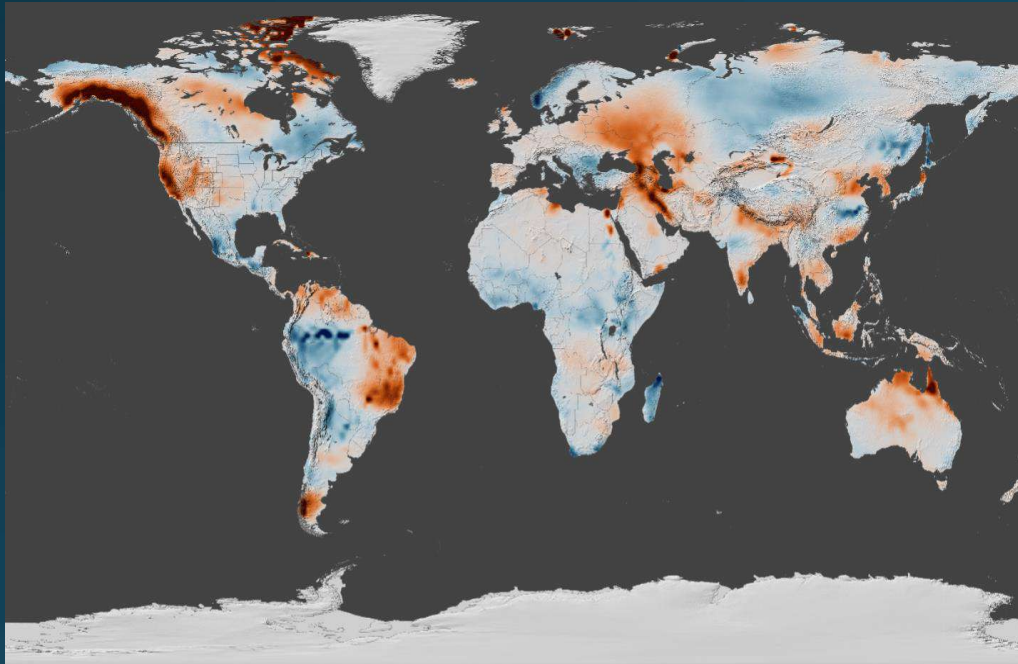
Applied the Water in Circular Economy and Resilience (WICER) Framework

- **Challenge:** over-extraction from aquifer & low WW treatment capacity
- **Objective:** restore the aquifer, diversify water sources for non-potable uses, increase treatment of WW, improve water efficiency in agriculture
- **Benefits:**
 - Treated WW for power plant is 33% cheaper
 - Extra revenue for WWT covers almost all O&M costs
 - Farmers receive better water quality => agriculture production increase
 - Aquifer has been restored and groundwater extraction reduced
 - Wastewater is treated

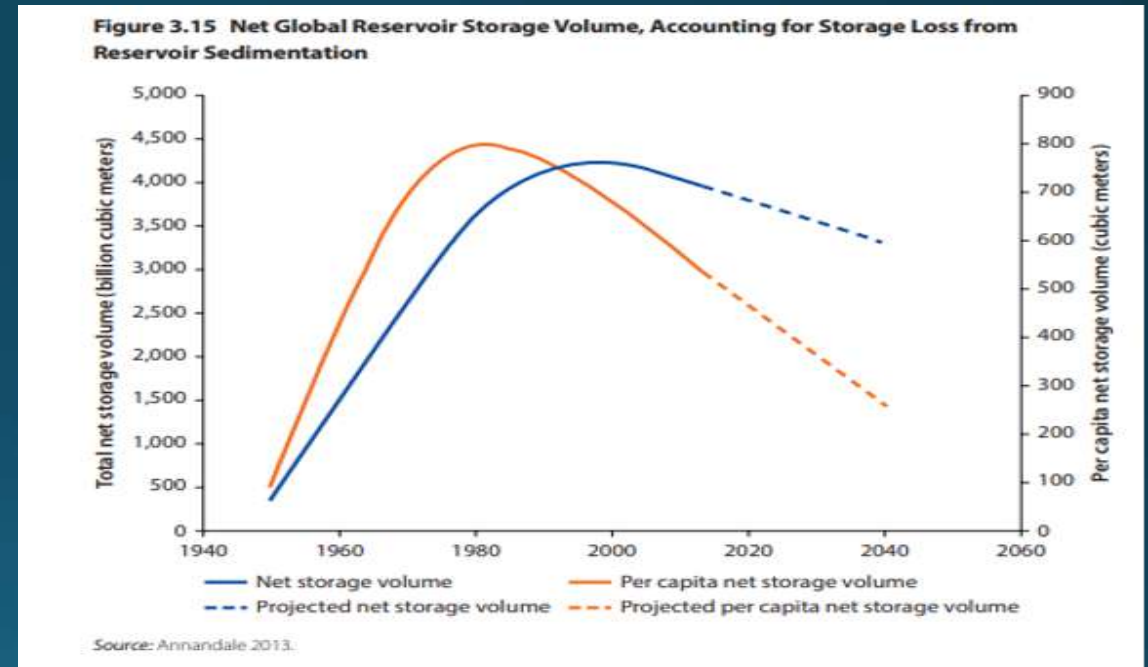


Building Resilience through Water Storage

Reduction in Natural Water Storage

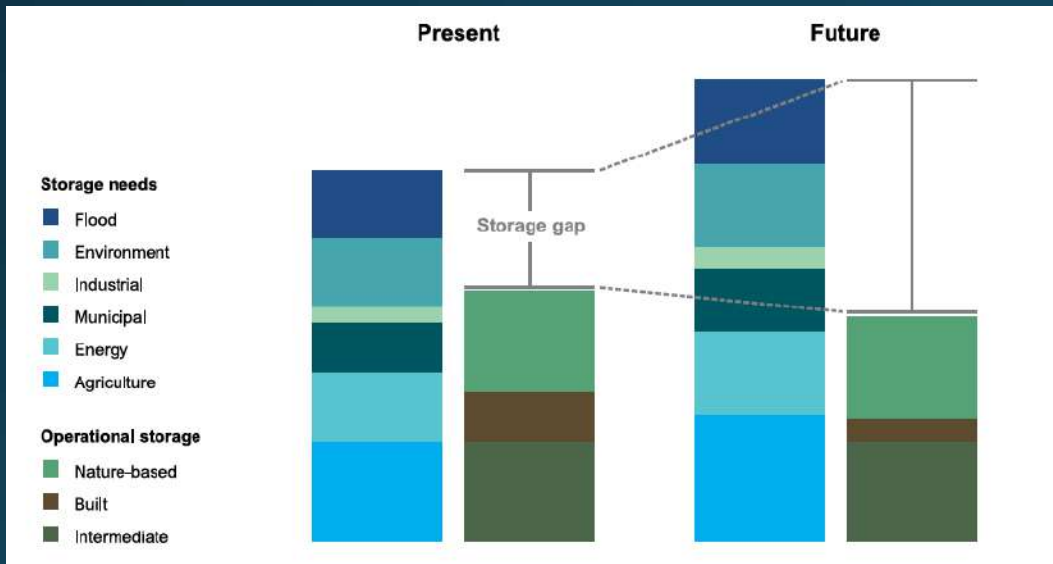


Decline in Built Water Storage



Building Resilience through Water Storage

A Growing Water Storage Gap



A More Strategic Approach



Multipurpose Approach: *to maximize development returns. Using single storage types to create benefits across sectors*



Systems Scale: *Planning and managing storage as a system, instead of a project-by-project approach*

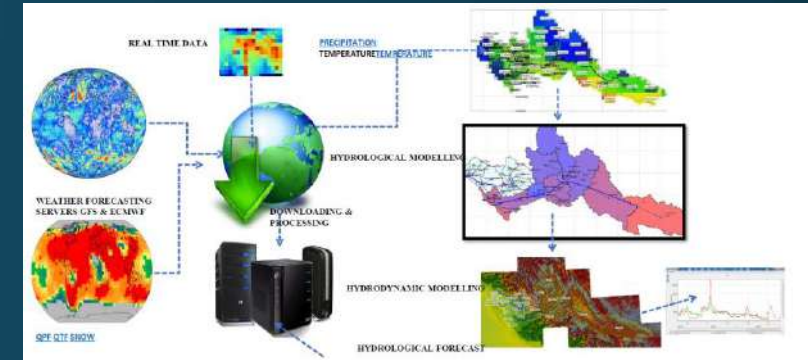


Outcomes Focused: *Storage provides services that support development outcomes*



Nature Based Solutions: *recognizing and managing our largest storage accordingly*

Building Resilience through Water Storage: The Case of India



Dam Rehabilitation and Improvement Project I (\$350m) and II (\$250m)

National Hydrology Project (\$350m)

National Groundwater Management Improvement Project (\$450m)



Conclusions

