



# Online **ADB Sanitation Dialogue 2021**

## ACCELERATING INCLUSIVE SANITATION

12–22 April 2021

### How-to Series:

## Leveraging the Links between Water, Sanitation, Hygiene, and Health

Facilitator: Bronwyn Powell

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# Outline

- ① **Introduction and welcome** – Vivian Castro-Wooldridge, ADB
- ① **Insights on WASH and Health** - Kate Medicott, WHO
- ① **Review of existing integration and future opportunities** – Bronwyn Powell
- ① **WASH and Health in practice examples**
  - ① Pakistan Urban Water - Kiyoshi Nakamitsu
  - ① Bangladesh Urban Health Project - Vickie Antonio
  - ① Inclusive and pro-poor development for WASH and Health - Wendy Walker
- ① **Small group discussions**
- ① **Feedback and closing**

# Objectives

## Participants will:

- Reflected on the value of water and sanitation infrastructure for health, hygiene impact and reducing the burden of disease
- Review and have a better understanding of the roles and responsibilities of different sectoral actors working in WASH and Health, how they can complement each-other and the various entry points for integration
- Hear and learn from sector specialists and peers
- Understand ADB's commitment to WASH and Health

## Warm up questions

***1. What are major health issues associated with lack of adequate WASH?***

Type your response into Mentimeter [ [Add LINK](#) ]

***2. What are you hoping to learn from this workshop session?***

Type your response into Mentimeter [ [Add LINK](#) ]



# Water, Sanitation, Hygiene and Health: a review of existing integration and future opportunities

Sanitation Dialogue

Bronwyn Powell  
15 April 2021



ASIAN DEVELOPMENT BANK

# Outline

- WASH and Health - sanitation risks
- Entry points and project examples for integrating WASH & Health
- Challenges
- Opportunities



# Focus on sanitation-related health issues



One gram of human faeces contains roughly:  
10,000,000 viruses  
1,000,000 bacteria  
1,000 parasitic cysts  
100 parasitic eggs



Use of toilets contains faeces and is an essential first step  
BUT  
Pathogen exposure needs to be managed along the whole service chain to reduce risk



It is difficult to measure and comparing **health impacts** linked to improved sanitation due to complex host-pathogen interactions and variable exposure risks.

*“While the magnitude of direct health impacts is uncertain, it is generally accepted that inadequate sanitation and exposure to faecal pathogens affect health, and there is growing evidence that the burden of disease may be higher due to long term effects of environmental enteropathy and stunting” Mills et al. 2018*

# Water & sanitation related global burden of disease



**Diarrhea** = main cause of death and disability-adjusted life year (DALY) losses

- 820,000 deaths
- 50 million DALYs per year globally



**Acute respiratory infections** = 2<sup>nd</sup> biggest contributor (pre-COVID-19 2016 figures)

- 370,000 deaths
- 17 million DALYs per year globally

Health outcome	WASH exposure
Ascariasis	Sanitation
Cancer	Drinking water
Diarrhoeal diseases	Drinking water, sanitation, hygiene behaviours
Hookworm disease	Sanitation
Musculoskeletal diseases	Drinking water
Protein-energy malnutrition	Drinking water, sanitation, hygiene behaviours
Respiratory infections	Hygiene behaviours
Schistosomiasis	Drinking water, sanitation, hygiene behaviours, WRM
Trachoma	Sanitation, hygiene behaviours
Trichuriasis (whipworm)	Sanitation

Source: Prüss-Ustün, A. W. (2019). Burden of disease from inadequate water, sanitation and hygiene for selected adverse health outcomes: An updated analysis with a focus on low and middle-income countries. *International Journal of Hygiene and Environmental Health*, 765-777.



# Handwashing with soap...

**Reduces diarrheal  
disease between  
23-40%**

**Reduces  
respiratory  
illnesses in the  
general population  
by 16-21%**

**Reduces children's  
school absenteeism  
by 29-57%**



Globally only 20%  
people wash hands  
after direct contact  
with feces



Hand hygiene is  
a key measure  
to prevent  
SARS-CoV-2  
infection

# Sanitation in the urban environment presents particular health challenges

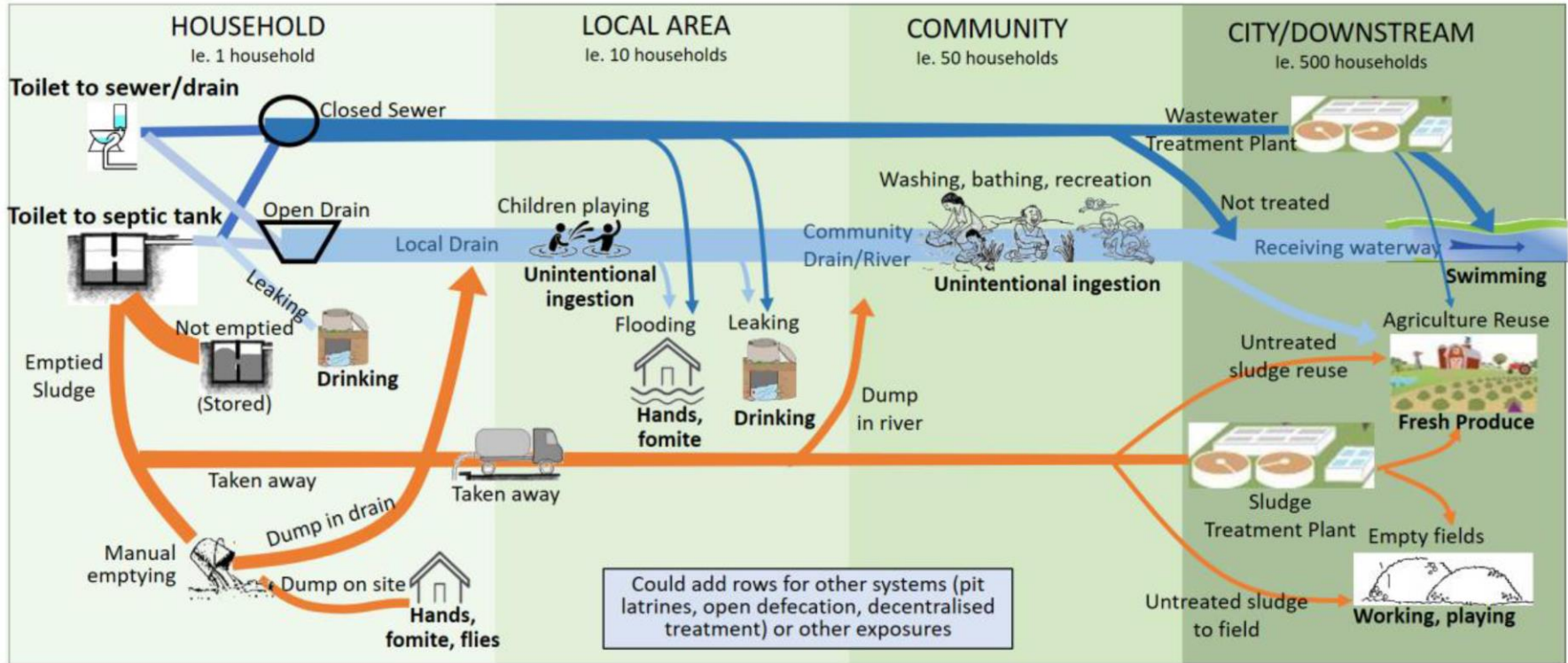


# Sanitation in the urban environment presents particular health challenges

- Higher population densities and space constraints
- Higher rates of renting
- Complex sanitation service chains
- Need for toilets to serve multiple households in high density areas
- Greater attention needed to meet needs of vulnerable groups (including women and girls)

ALSO - complex and interconnected pathways from excreta to human exposure in urban environments with poor sanitation

# Possible exposure points in urban environments to sanitation related pathogens



Source: Mills et al. (2018) Faecal Pathogen Flows and Their Public Health Risks in Urban Environments: A Proposed Approach to Inform Sanitation Planning. *Int. J. Environ. Res. Public Health* 2018, 15, 181

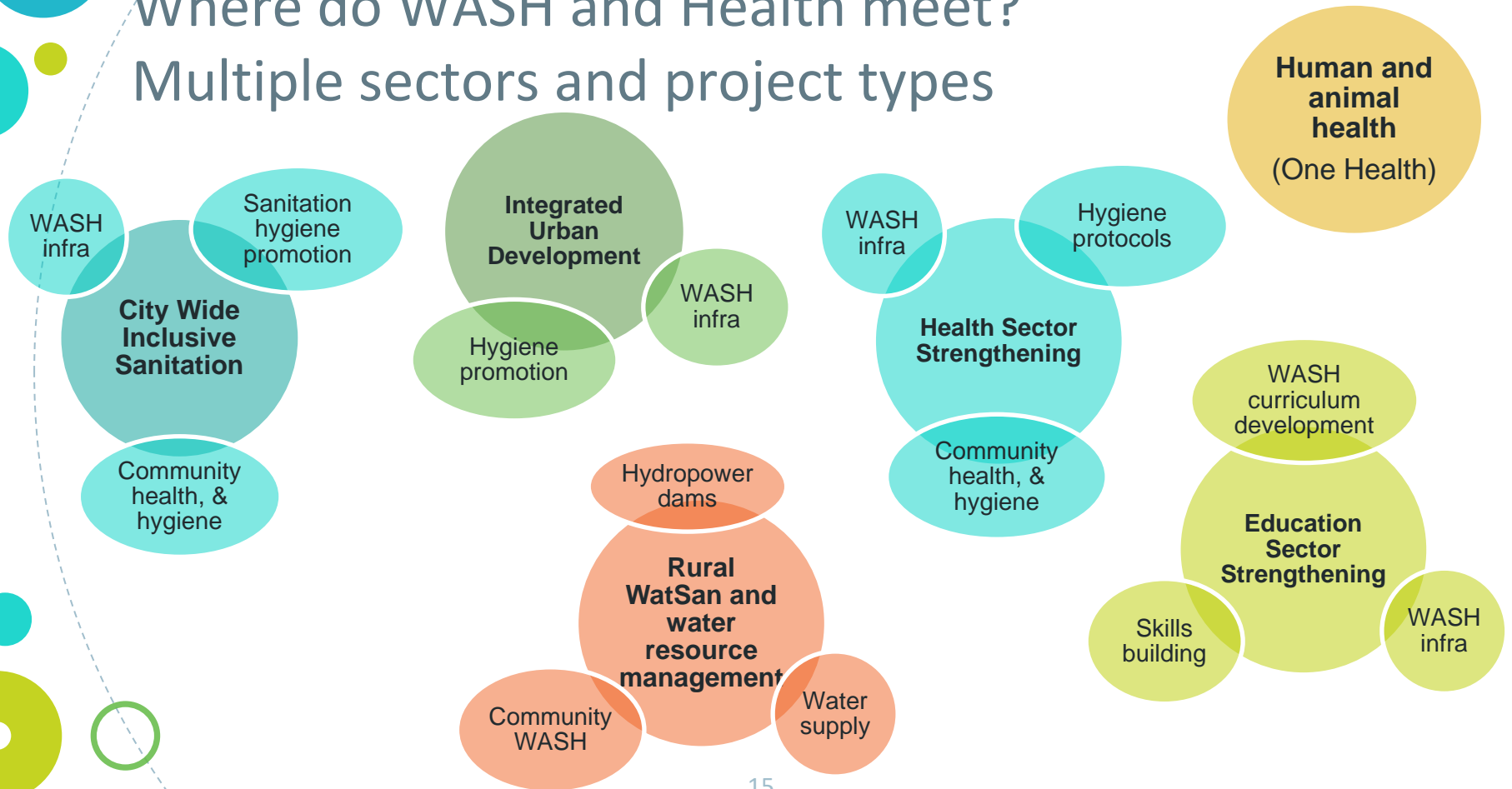
# Sanitation and health considerations in CWIS

- Tools available for faecal sludge and exposure point mapping (Shit Flow Diagrams, SaniPath etc.) and sanitation planning (Sanitation Safety Plans)
- Roles and responsibilities of different agencies (municipality/ council, Public Works, Ministry of Health, public environmental health departments)
- Sanitation investments should be coordinated with water and hygiene initiatives
- It is important to consider health risks to exposures in the household, local community and downstream locations

Research is still underway that to link pathogen exposure risks along the sanitation service chain in urban environments

# Where do WASH and Health meet?

## Multiple sectors and project types



Water, sanitation and hygiene is a pre-condition to good health & social and economic participation

Access

**Water and sanitation  
infrastructure**

**Well-targeted infrastructure designed and built**

- Needs focused, pro-poor targeted
- Operations and Maintenance prioritized to ensure quality and continuity of services
- Infrastructure quality ensured with sustainability considerations addressed

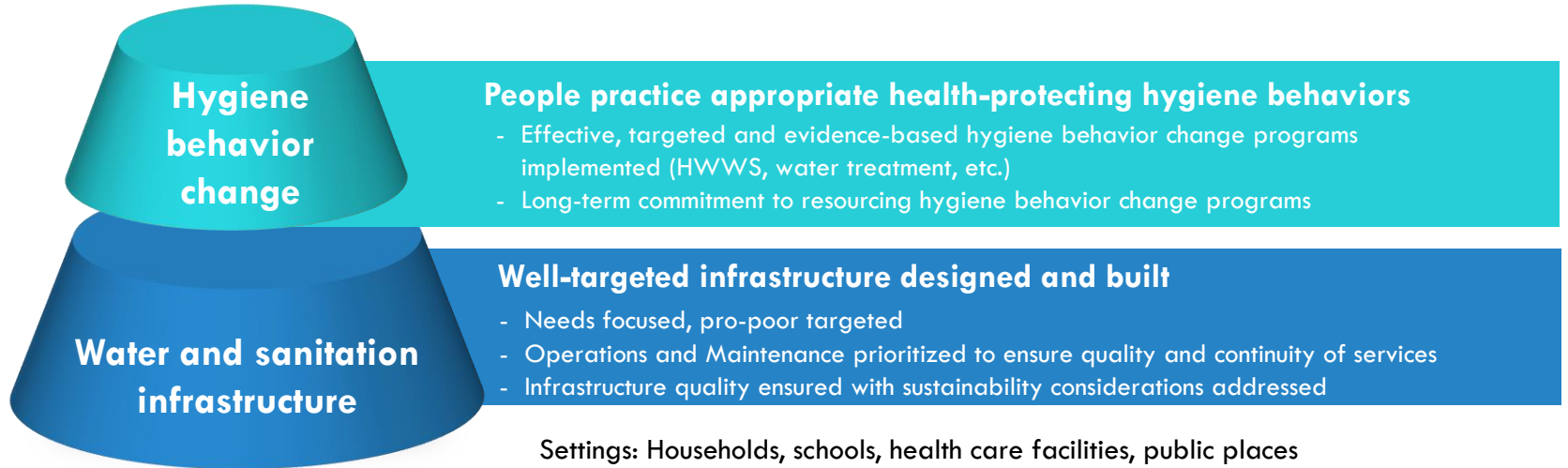
Settings: Households, schools, health care facilities, public places

Water, sanitation and hygiene is a pre-condition to good health & social and economic participation

Use

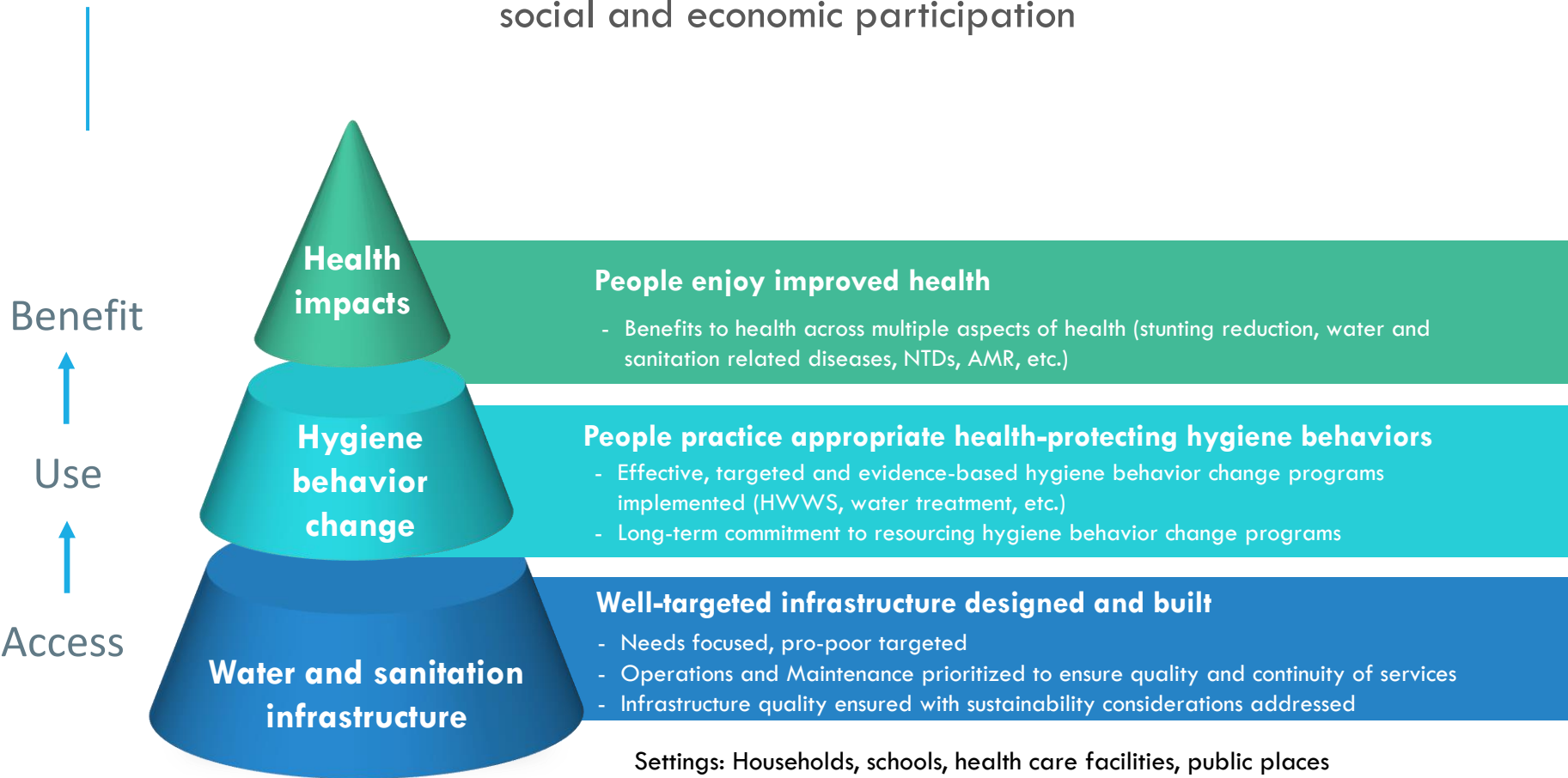


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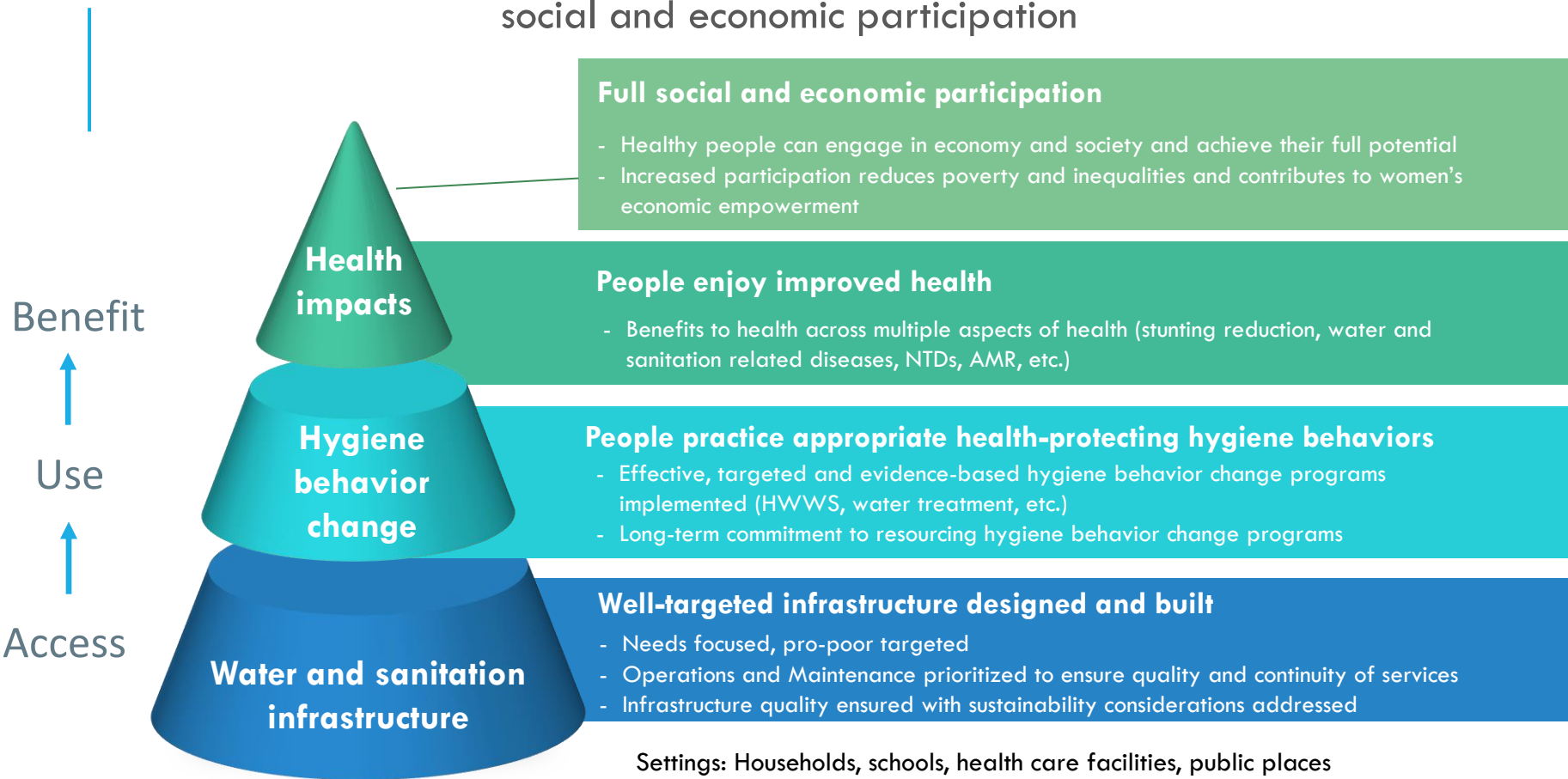




# Water, sanitation and hygiene is a pre-condition to good health & social and economic participation



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# Implementation **opportunities** and challenges with **WASH AND Health integration**

- Infrastructure projects typically include ‘**software**’, non-structural component at policy, institutional strengthening or community level, however these are usually small.
- **Level of integration and multi-sectoral approaches** is dependent on the WASH enabling environment, scale of engagement and development priorities.
- There are **multiple entry points to improving WASH and health integration**: project concept and assessment stages; policy, strategy and regulations; monitoring and evaluation; human capacity development.
- **Addressing sustainability and O&M issues** will make a big difference to ensuring essential services and improved health outcomes

# Implementation opportunities and **challenges** with **WASH AND Health integration**

- **Preventative health often falls through the gaps** between water and sanitation access (infrastructure provision) and curative health (primary healthcare) in both policy and institutional arrangements
- **Barriers to multi-sectoral work include:** sectoral silos; high transaction costs of cross-ministerial coordination; lack of coordination platforms; unclear delineation of roles, especially with respect to safe sanitation
- **Sanitation and hygiene behaviour change programs lack sufficient focus.** There are often insufficient skilled personnel to design and implement effective programs. Hygiene programs are rarely evaluated.
- **Recognize broader human health benefits of WASH** through systems approaches considering not only water-borne diseases, but also AMR, stunting, NTDs, climate change related health.<sup>1</sup>



Thank you

