

WASH and One Health Network: Making links between zoonoses, food production, and WASH

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WASH - One Health Objectives

- To **establish a network** of international and transdisciplinary collaborators
- To develop proposal(s) for **capacity building and research** by building on the network activities
- To create a space for a **science-policy dialogue**

Activities



Regular engagement through **thematic seminars** (~4 seminars)



Scoping study examining One Health-WaSH interfaces (1-3 studies)



Online **workshops** to develop research (and capacity building) proposals



Network and seminar synthesis reports



Policy brief(s) and/or review(s)

Water, Sanitation and Hygiene

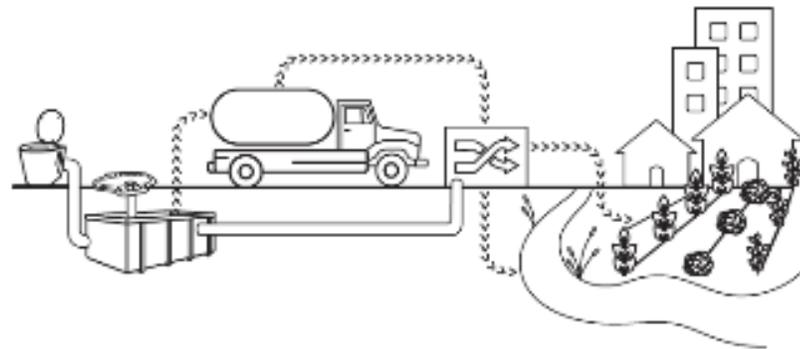
Safe drinking-water

Improving water sources, household water treatment and safe storage



Sanitation

Separate human excreta from human contact at all steps of the sanitation service chain.



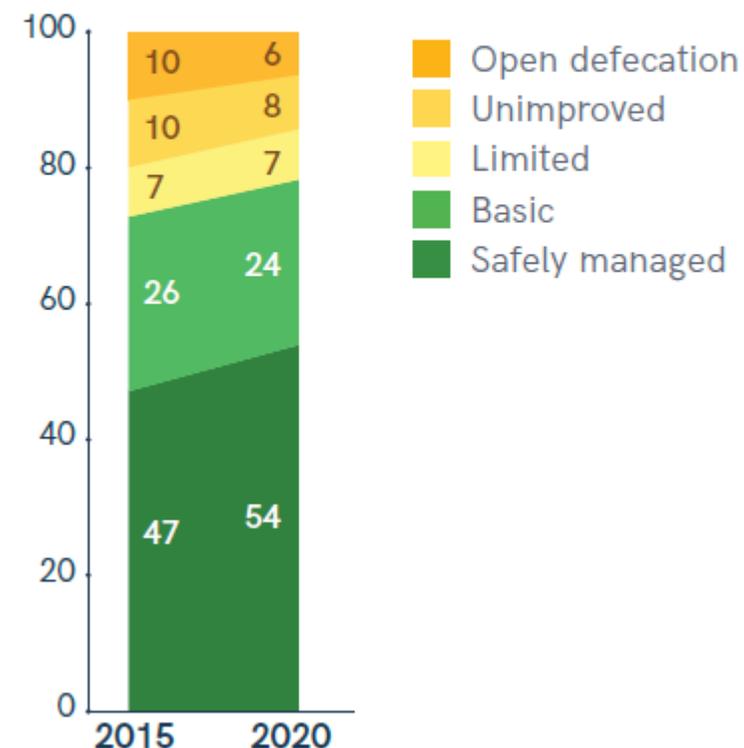
Hygiene: mostly hand washing with soap at critical times, sometimes broader MHM, food hygiene, environmental hygiene



Exposure to human faeces and diarrheal disease

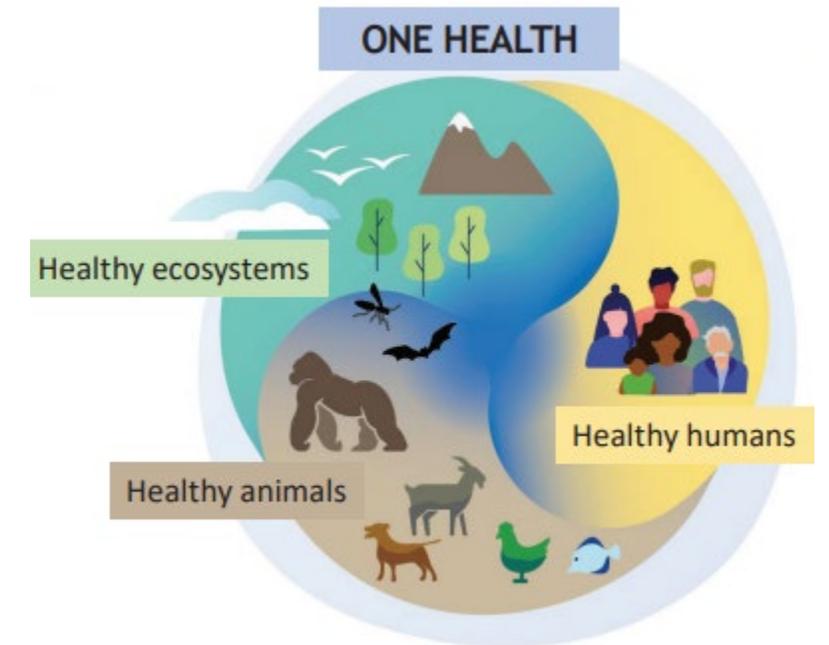
- Nearly half the world's population lacks safely managed sanitation services
- 1.9 billion lack basic sanitation services, 494 million defecate in the open
 - → **Widespread exposure to human faeces and related health risks**
- Children under 5 years of age are disproportionately affected by inadequate WASH: 13% of all deaths and 12% of all DALYs in this age

Nearly half the world's population lacked safely managed sanitation services in 2020



One Health

- Approach that aims to sustainably balance and optimize the health of people, animals and ecosystems
- Recognizes the health of humans, domestic and wild animals, plants, and the wider environment (including ecosystems) are closely linked and inter-dependent
- Inter-sectoral, and work at different levels



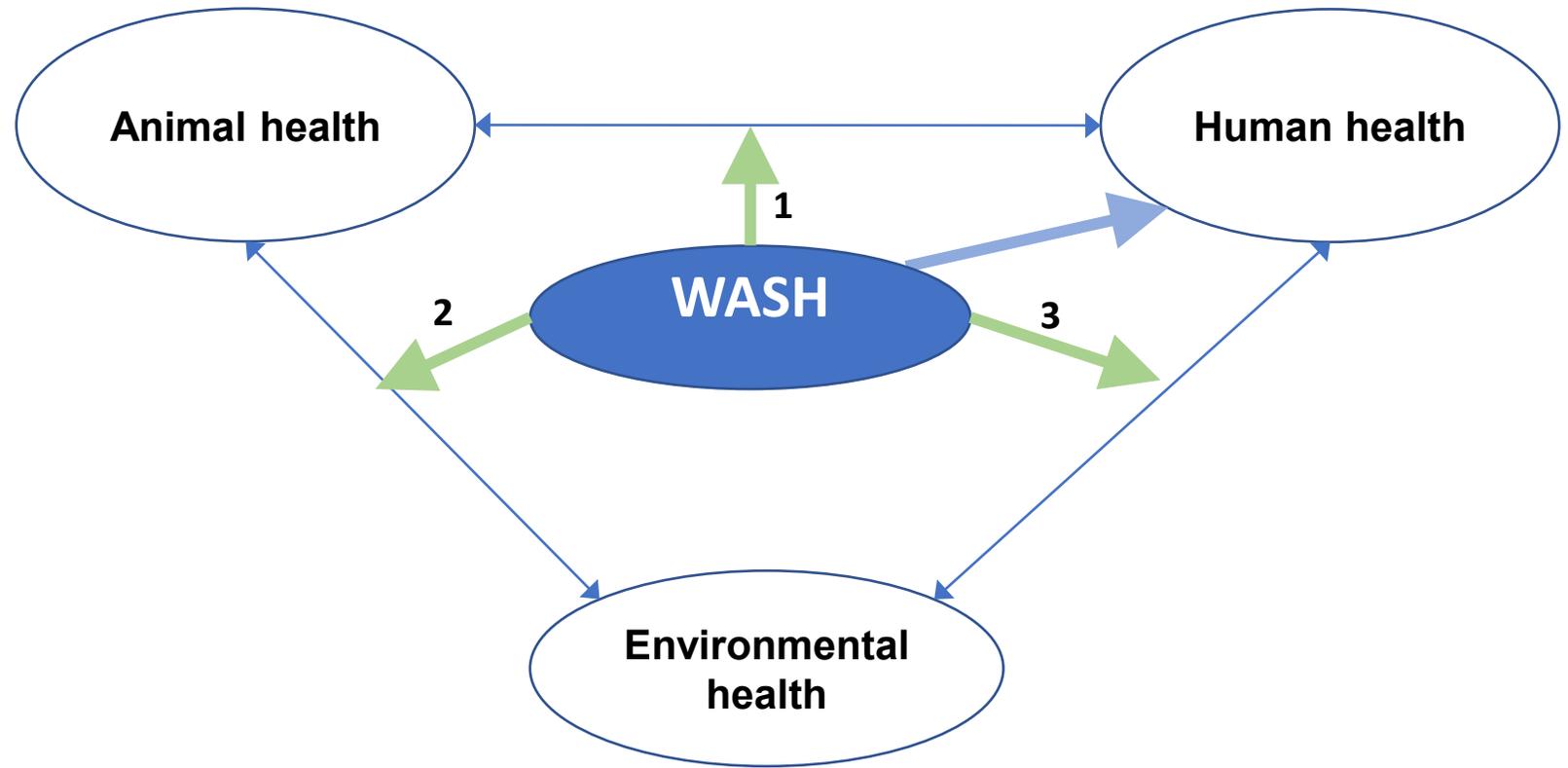
Joint Tripartite (FAO, OIE, WHO)
and UNEP Statement, 2021

Exposure to animal faeces and zoonotic disease

- Worldwide, food animals produce 4 x more faecal matter than humans (poultry, cattle and sheep...)
- In HIC, exposure via animal food production
- In LMIC, exposure in food systems and the domestic environment
 - 50% of households in Southeast Asia and Africa have domestic livestock
 - Livestock as source of livelihood and food → **Health benefits**
 - Close proximity between animals and humans → **Health risks** in household, community and beyond (food consumers)



What is the WASH and One Health connection?



Conventional WASH:

Protect human health through access to water, sanitation and hygiene (focus on human excreta)



Additional WASH measures to support One Health:

1. Reducing pathogen transmission between animals and humans through complementary sanitation/hygiene measures (protecting both animal and human health)
2. Reducing environmental load and enhancing resource recovery from animal excreta
3. Reducing environmental load and enhancing resource recovery from human sanitation systems

Why is this important?

- Large burden of diarrheal disease of both human and animal origin
- Global emergence of AMR
 - WaSH interventions are considered crucial among actions required to curb the global emergence of antimicrobial resistance (AMR) in humans, animals and the environment
 - Improved access to WASH will reduce the spread of infectious disease, the subsequent use of antibiotics and the spread of AMR.

Recent WASH trials found no or little impact on diarrhoea and child stunting

- 3 high quality RCTs
 - WASH-B Kenya, Bangladesh
 - SHINE Zimbabwe
- High-burden rural settings
- Interventions
 - Household water chlorination
 - Latrine improvements
 - Handwashing with soap
 - /+Nutrition

→ Why?

- Incomplete community coverage and use
- Continued exposure to animal & child faeces
- Poor food hygiene
- Lack of continuous water supply
- Limited effectiveness of chlorination against key pathogens (cryptosporidium)
- Short timeframe

What is being done?

- WHO Guidelines on Sanitation and Health (2018): Sustainability and health impacts through coordination with other interventions, water supply, hygiene, animal waste, child faeces
 - But, One Health is rarely applied in the WASH sector
- Many gaps in understanding complex transmission pathways and behaviours

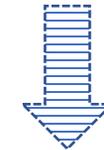
Conclusions

- Animal faeces in domestic environment expose young children to diarrhoea, enteric infections, growth impairment etc. → BUT are not typically addressed by WASH/sanitation sector
- One Health practitioners do not often formally work with ‘WASH’ interventions
- One Health approach to WASH is needed: cross-sectoral action for risk-based prioritization and coordination of interventions

WaSH (Water Sanitation Hygiene)



WASH (Water Animals Sanitation Hygiene)



A One Health approach for WASH

(or “Upgraded WASH to enhance One Health outcomes?”)

Upcoming activities

- Webinars:
 - AMR
 - Environmental dimensions of One Health

Thanks for your attention

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FORMAS 



Discussion brief on the Clean and Green framework:

<https://www.sei.org/wp-content/uploads/2017/08/sei-2019-brief-cleangreenv2.pdf>