WASH for accelerating progress on NTDs – new frontiers

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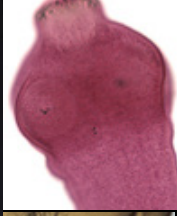
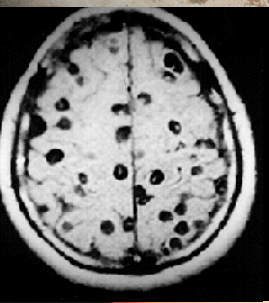












Neglected Tropical Diseases

- **20** infections (viruses, bacteria, protozoa, helminths)
- **1bn** people affected
- **149** countries

Double link between WASH & NTDs

- **Prevention:**
  - Access & use of sanitation
  - Safe water supply (drinking & hygiene)
  - Water source, wastewater & solid waste management
  - Hygiene practices

- **Treatment & care:**
  - Water for facility-based & self care
  - Hygienic conditions for surgery
  - Accessibility of WASH services for people with impairments/ carers
  - Prevention of stigma-based exclusion

WASH and helminths

Ascaris lumbricoides

- Eggs excreted in *human (& dog) feces*
- Eggs ingested by new host

Hookworm

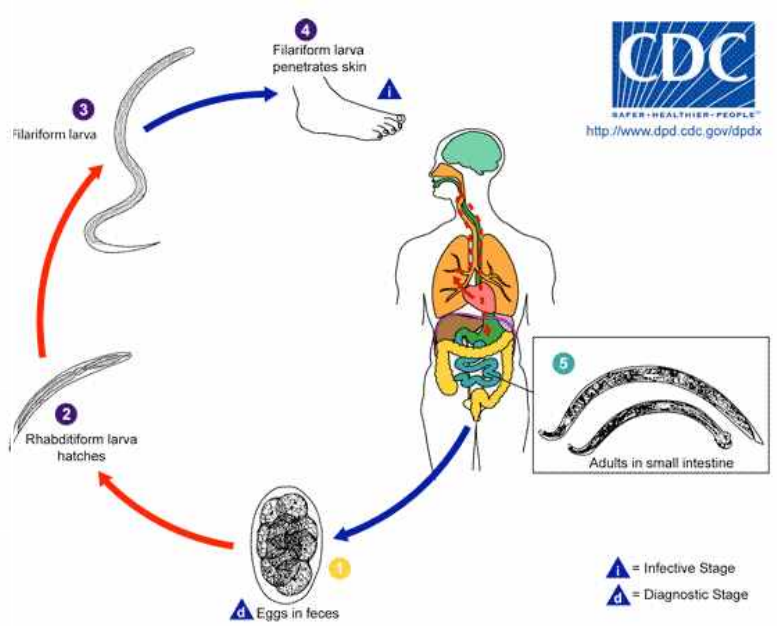
- Eggs excreted in *human feces.*
- *A. duodenale* through skin & ingestion
- *N. americanus* through skin only

Trichuris spp.

- Eggs excreted in *human feces*
- Eggs ingested by new host

Schistosoma

- Eggs excreted in *feces or urine*
- Eggs mature in snails before release of cercariae that infect through skin



WASH and helminths

Ascaris lumbricoides

- Eggs excreted in *human (& dog) feces*
- Eggs ingested by new host

Hookworm

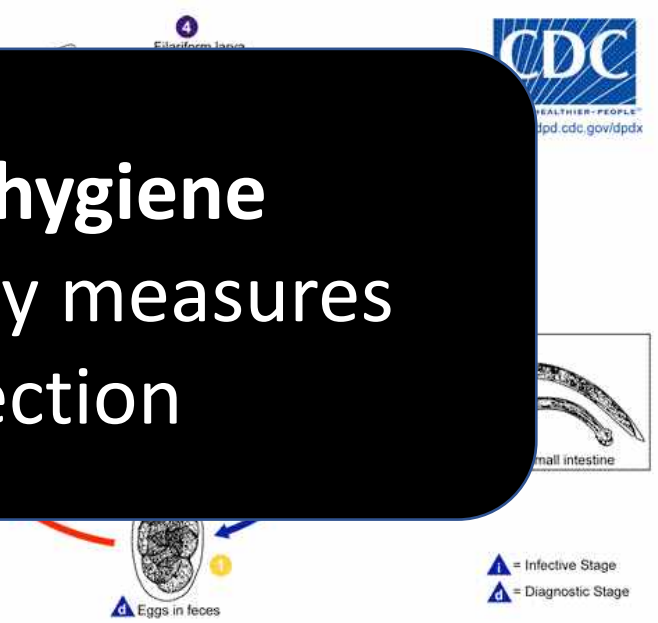
- Eggs excreted in *human*

Water, sanitation & hygiene interventions are primary measures for preventing infection

Trichu

Schistosoma

- Eggs excreted in *feces or urine*
- Eggs mature in snails before release of cercariae that infect through skin



The ‘new’ frontiers

1. *Control* vs *Elimination* – what interventions are needed?
2. Are current interventions sufficient?
3. Are interventions reaching those most affected?
4. Joint action

1. Control vs elimination

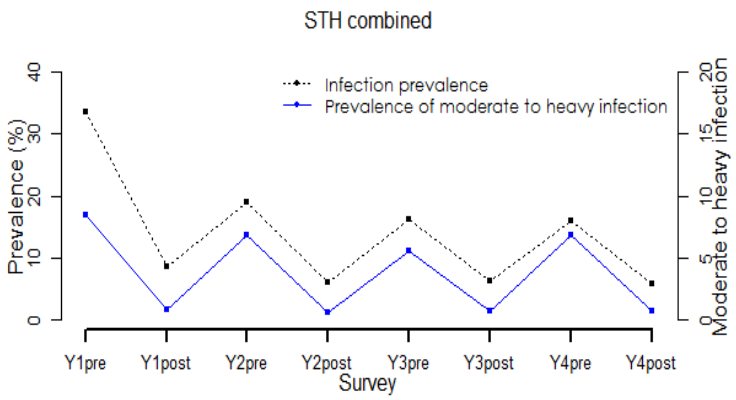
- Growing global ambition – interrupting transmission (and ultimately, elimination)
- Key challenge:
  - rapid re-infection
  - ‘favourable’ environmental conditions
  - persistence in the environment

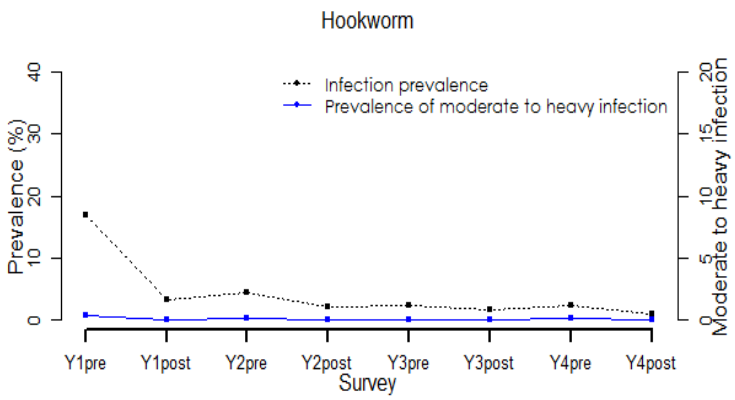
Reinfection & Environmental persistence

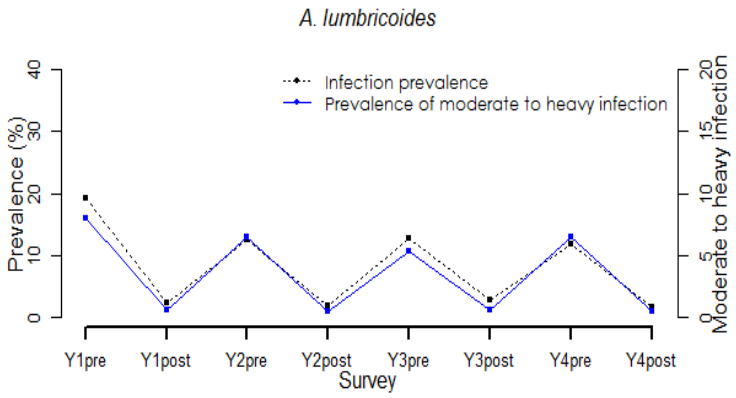
	Post-MDA reinfection @1yr	Persistence
Ascaris lumbricoides	94%	Soil: Unembryonated eggs: up to 15 years; viable up to 6 years; Sludge: >15 months. Most common helminth in wastewater/sludge (therefore food crops)
Hookworm	57%	Infective larvae: 3-4 weeks in favourable conditions.
Trichuris spp.	82%	Eggs viable for up to 5 years in sludge
Schistosoma	?	Cercariae in freshwater can remain infective for 1-3 days; eggs in the environment or in human host survive 1-2 weeks

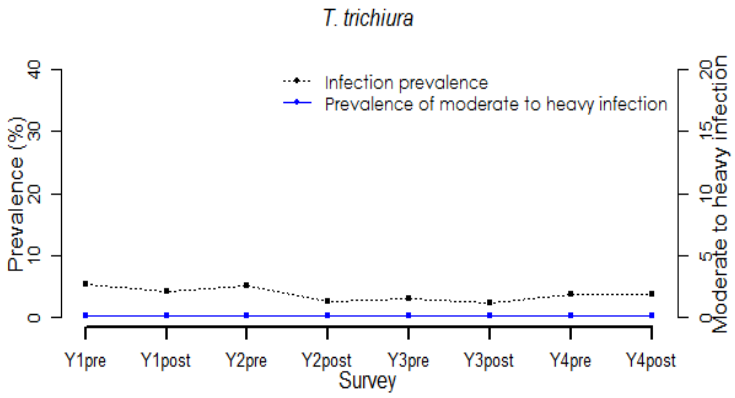
Reinfection ("bounce back") - STH

Infection prevalence (%) and prevalence of moderate to heavy intensity of STH infections from Y1 pre-MDA to Y4 post-MDA based on 59 schools (source: Kenya MoH)



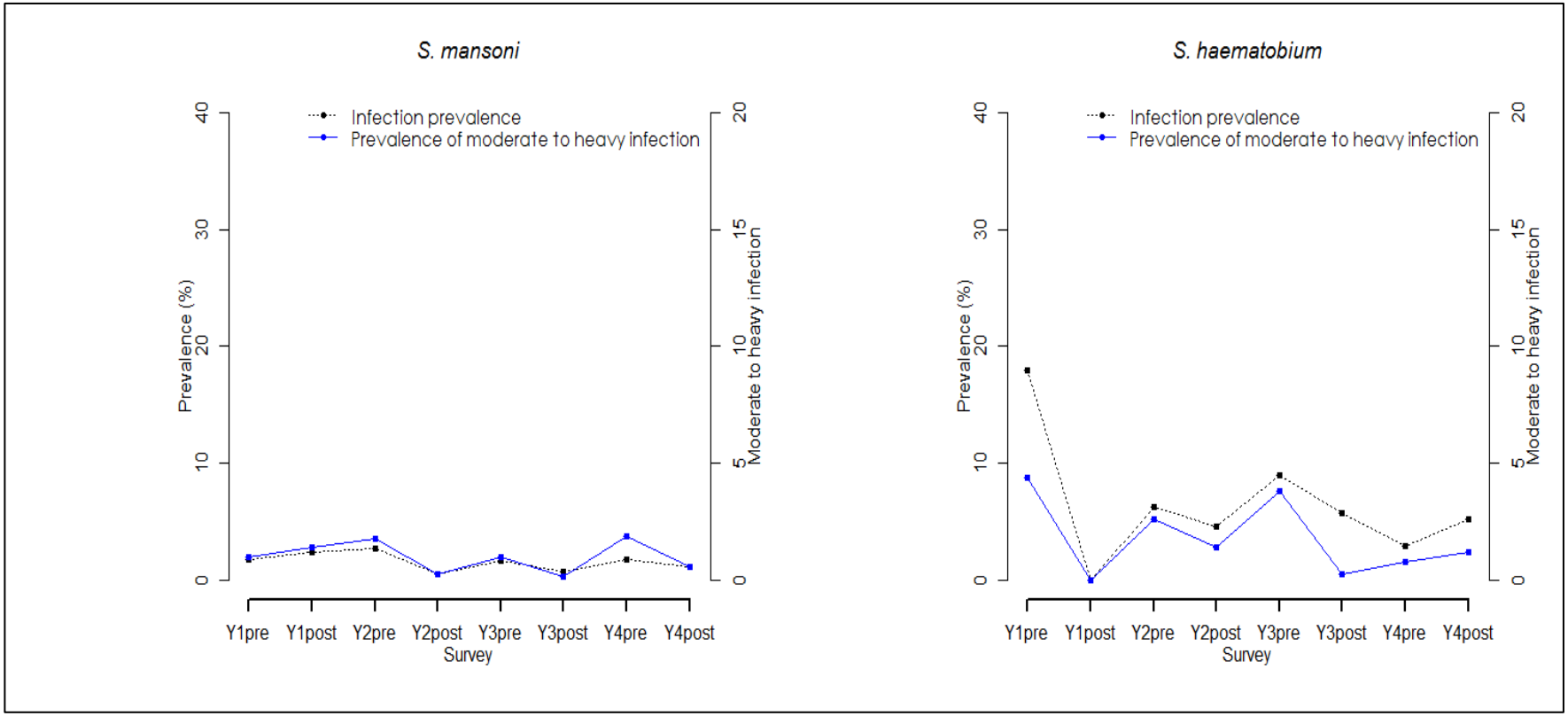






Reinfection ("bounce back") - SCH

Infection prevalence (%) and prevalence of moderate to heavy intensity of schistosome infections from Y1 pre-MDA to Y4 post-MDA based on <u>59 schools</u> (source: Kenya MoH)



Interrupting STH transmission
(Brooker et al, 2015)

- Feasible in situations of:
  - low intensity of transmission
  - supportive household environments
  - strong health systems
  - availability of suitable delivery platforms and in-country funds

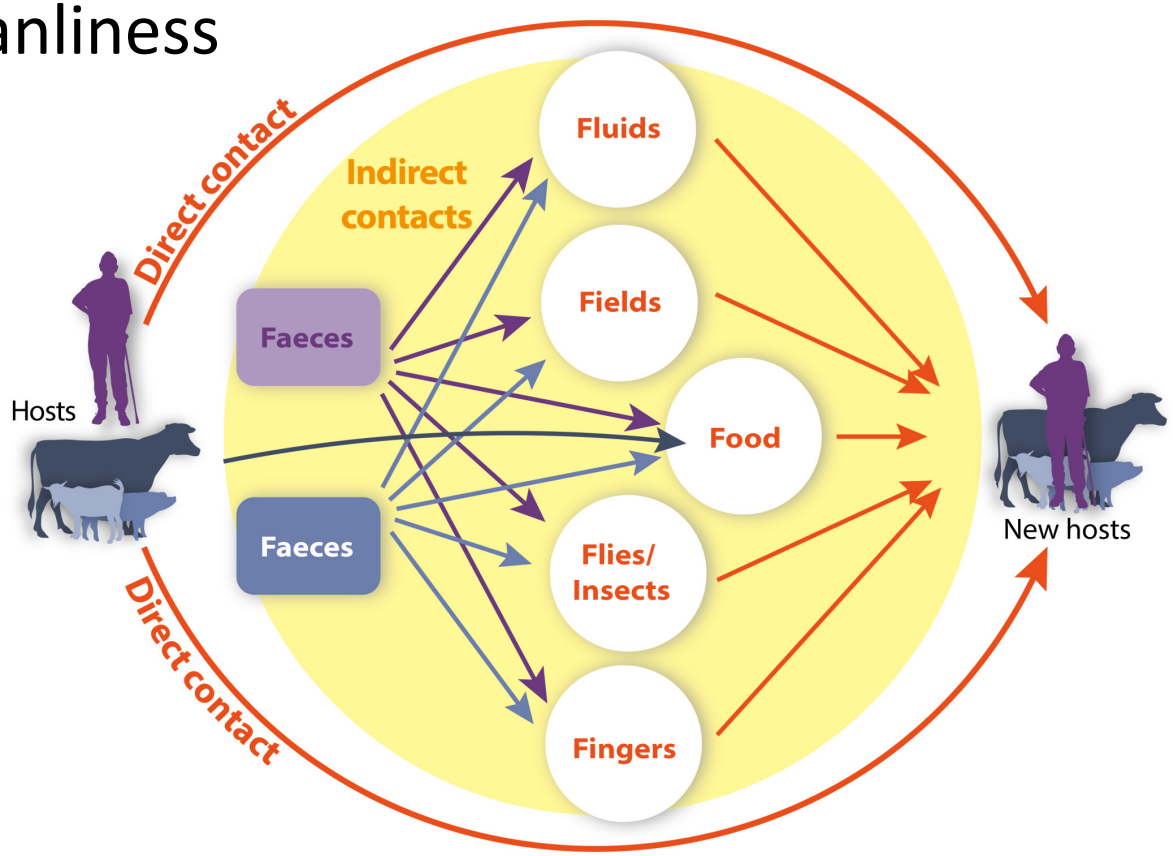
“To achieve local elimination of STH, an intersectoral approach to STH control will be needed.”

2. Are current interventions sufficient?

- ‘Improved sanitation facilities’: hygienically separate excreta from human contact
- Impact studies often look at presence of household toilets to assess risk levels (consequently, these may find that those living in HHs with toilets don’t necessarily have lower morbidity)

Toilet ≠ Sanitation

- Access ≠ use
- Extra-household exposures (school? Food?)
- Toilet quality/cleanliness
- Child faeces
- Animal vectors
- Animal carriers
- Hygiene
- Fecal sludge –
  - Collection
  - conveyance
  - disposal/reuse



New JMP ladder for sanitation

SERVICE LEVEL	DEFINITION
SAFELY MANAGED	Use of improved facilities that are not shared with other households and where excreta are safely disposed of in situ or transported and treated offsite
BASIC	
LIMITED	
UNIMPROVED	
OPEN DEFECATION	

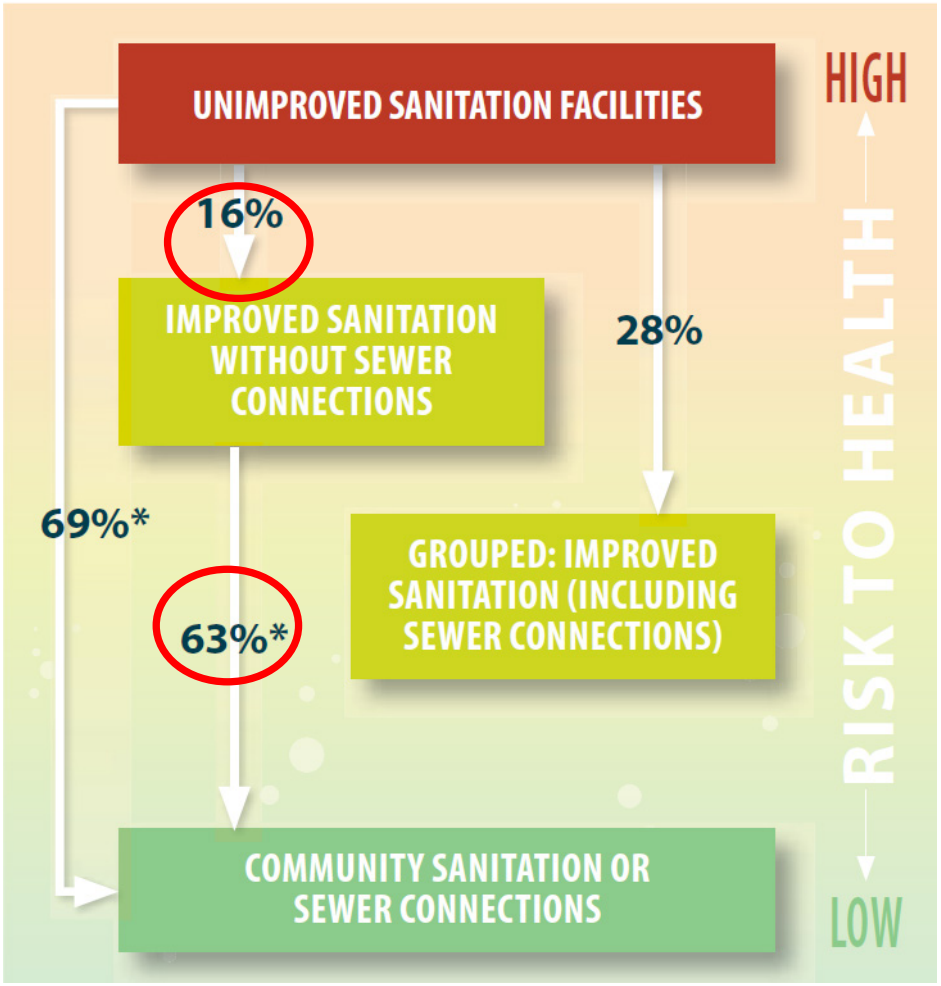
SDG 6.2.1

SDG 1.4.1

SDG 6.2.1

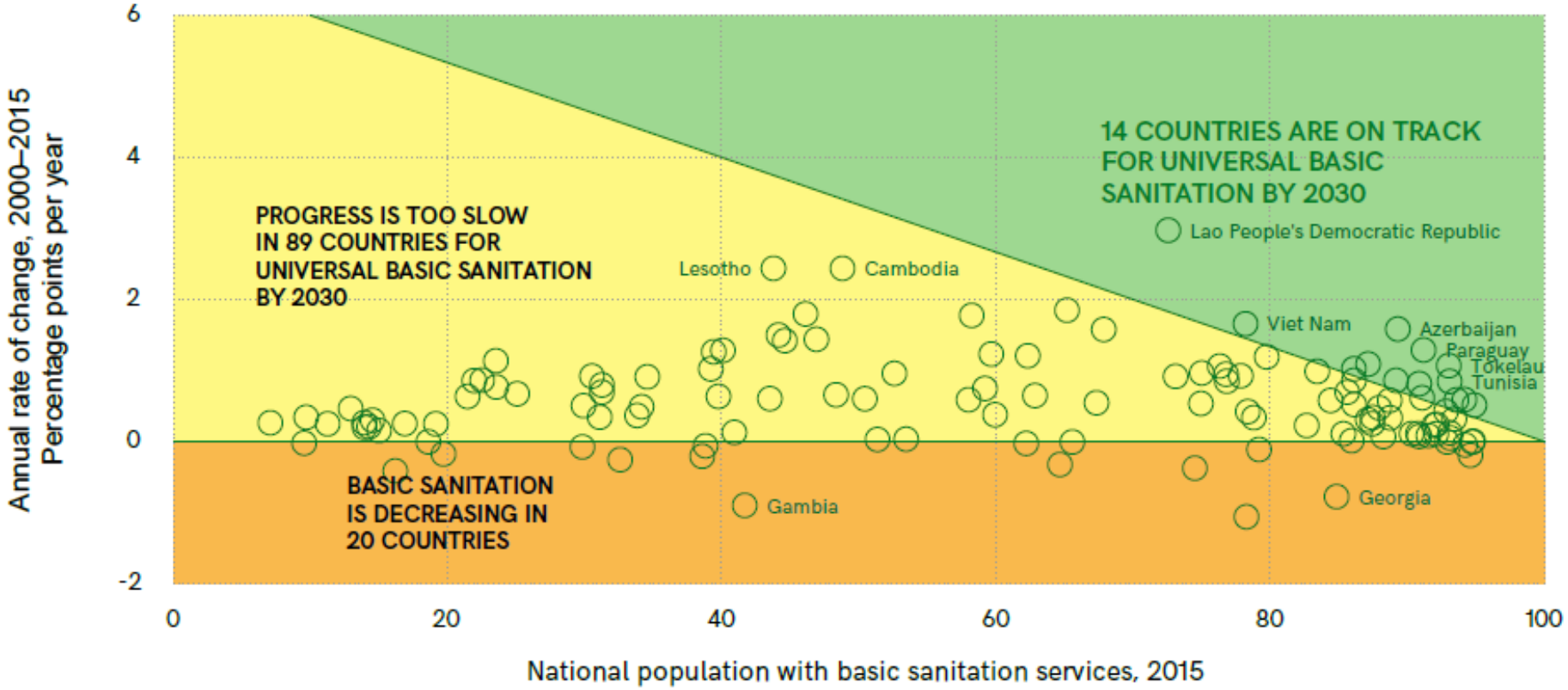
World Health Organization

Why “safely-managed”?



World Health Organization

Just 1 in 10 countries below 95% coverage on track for universal basic sanitation by 2030



World Health Organization

New JMP ladder for hygiene

SDG 6.2.1 SDG 1.4.1

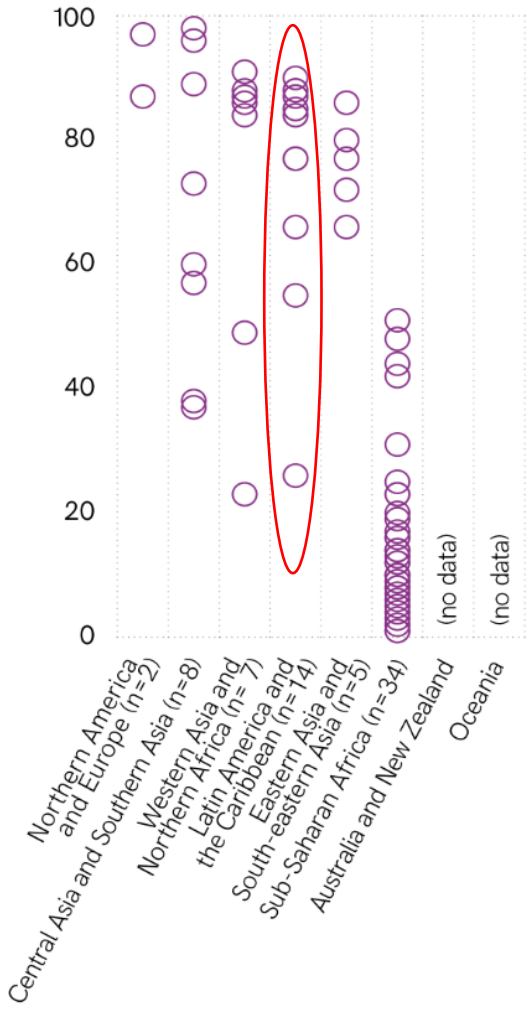
SERVICE LEVEL	DEFINITION
BASIC	Availability of a handwashing facility on premises with soap and water
LIMITED	Availability of a handwashing facility on premises without soap and water
NO FACILITY	No handwashing facility on premises

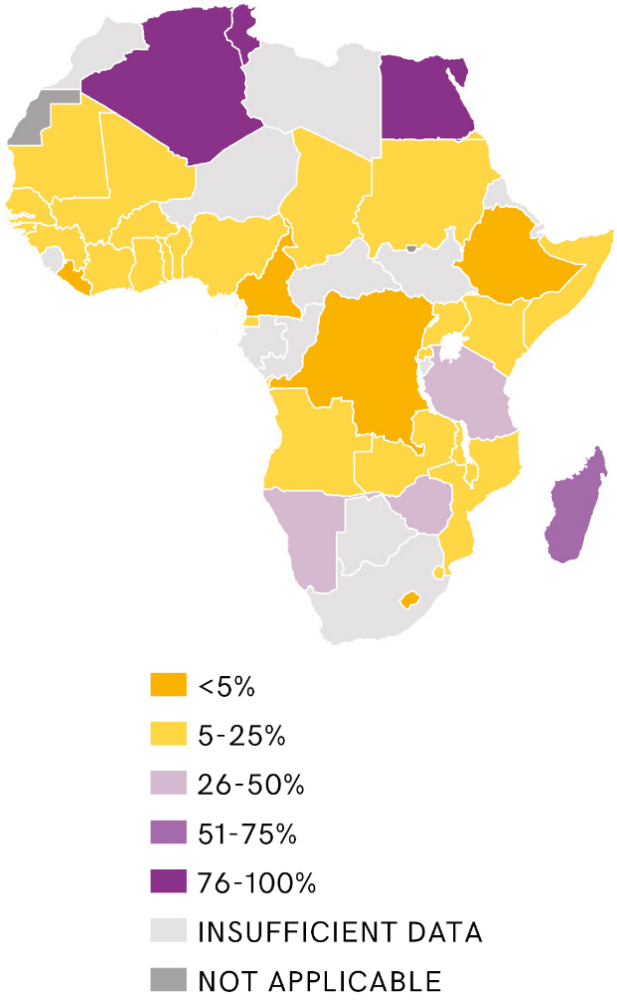
Note: *Handwashing facilities may be fixed or mobile and include a sink with tap water, buckets with taps, tippy-taps, and jugs or basins designated for handwashing. Soap includes bar soap, liquid soap, powder detergent, and soapy water but does not include ash, soil, sand or other handwashing agents.*

World Health Organization

New estimates for handwashing (2015)

- Estimates available for 70 countries (2 out of 8 regions)
- Regional coverage varied from 15% in SSA to 76% in WANA
- In LDCs just 27% of the population had basic facilities with soap and water available
- In 34 out of 38 African countries less than 50% used basic handwashing facilities
- Many high income countries lacked data

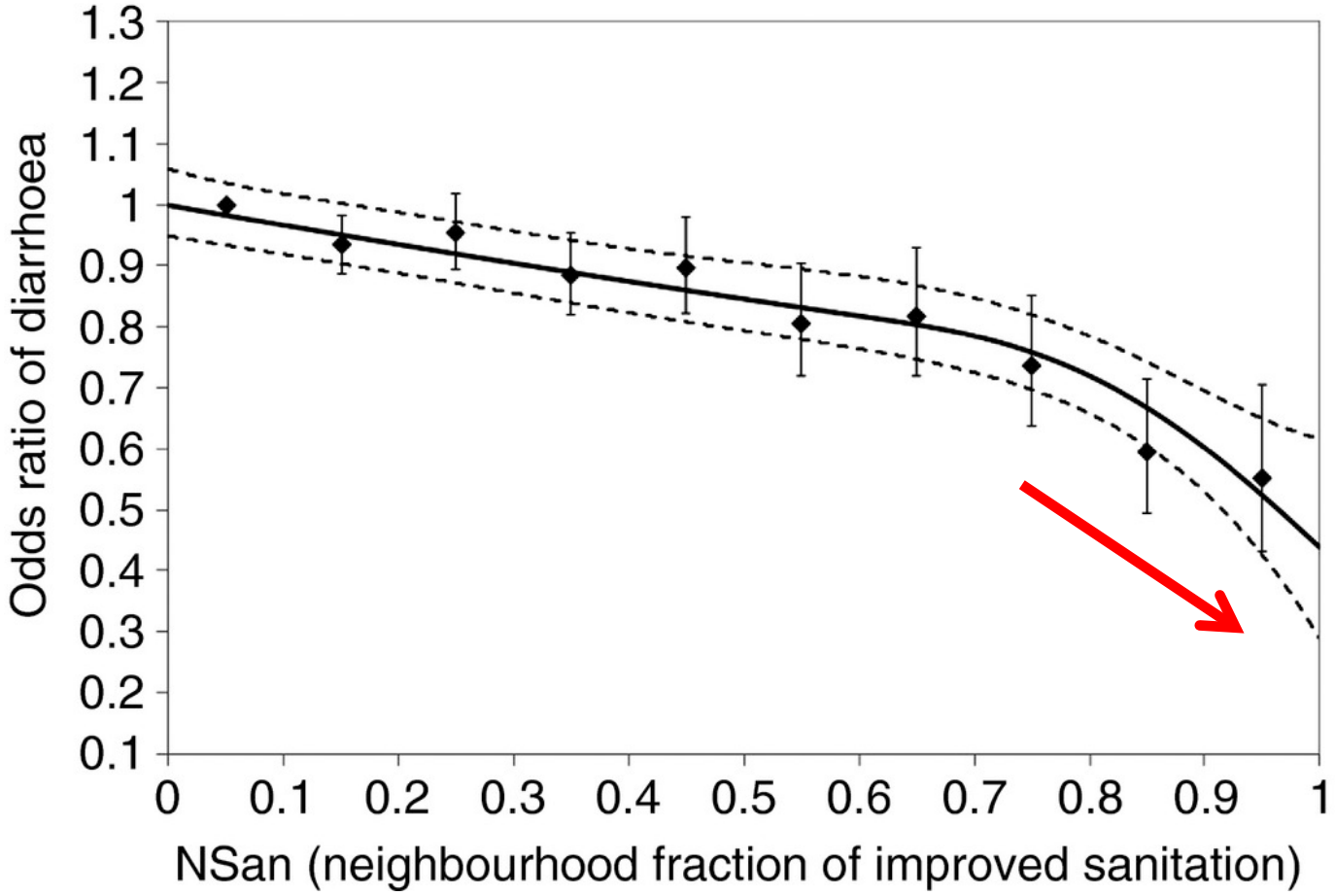




World Health Organization

Sanitation thresholds?

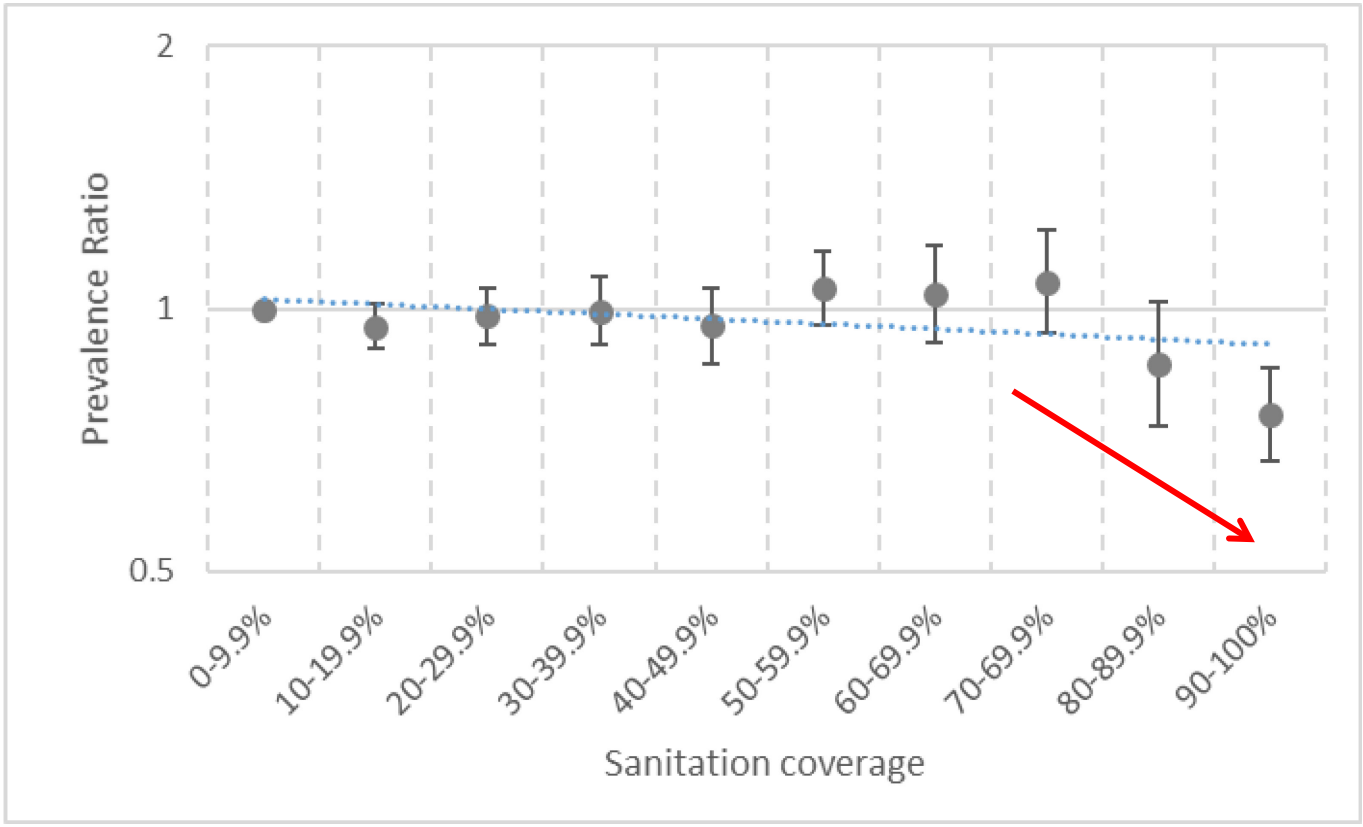
Sanitation and diarrhoea



Jung et al. 2017.

Sanitation thresholds?

Sanitation and trachoma



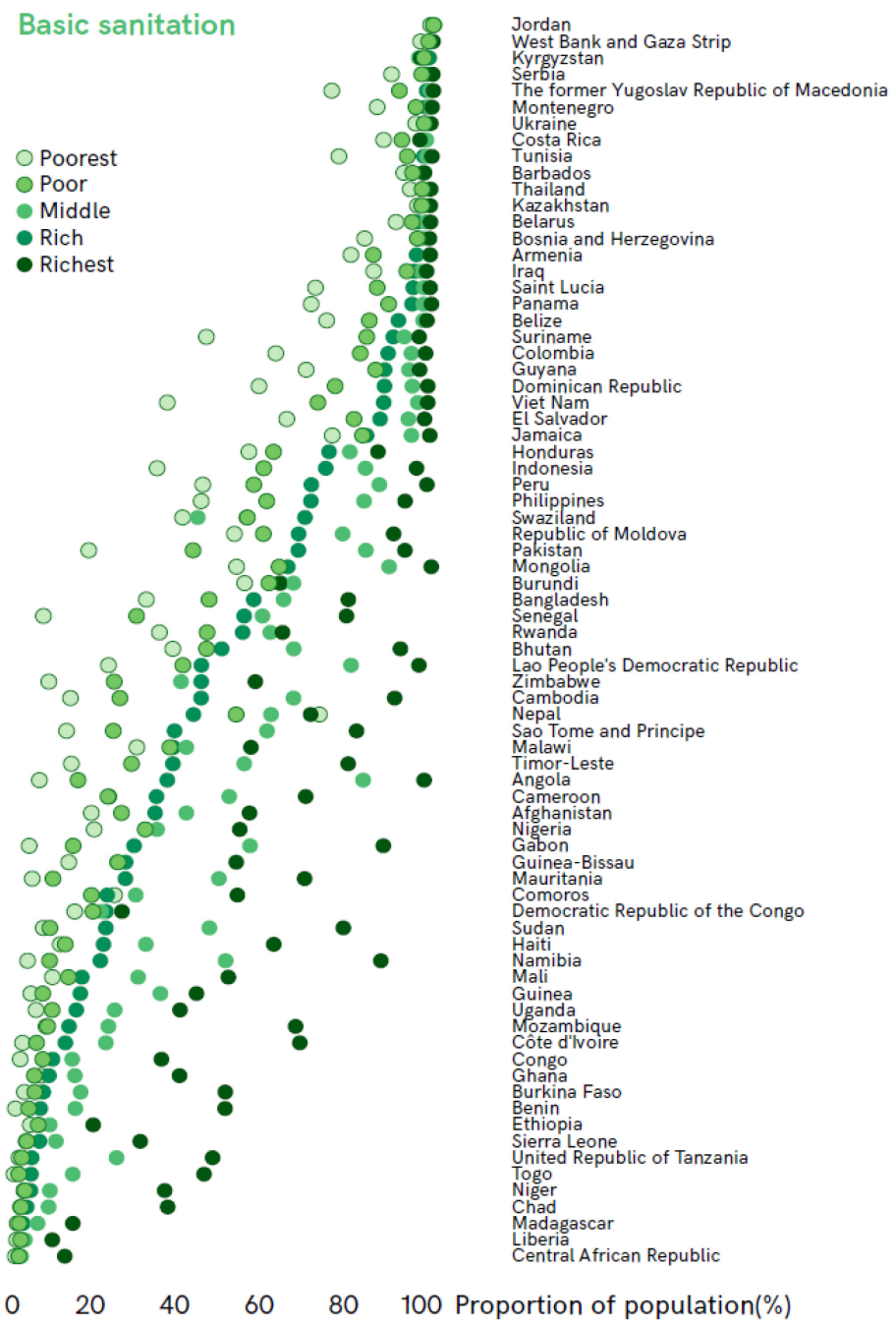
Garn et al. 2017

3. Are interventions reaching those who are most affected?

THE BEST FRAMEWORK

CONTROL & ELIMINATION
OF NEGLECTED TROPICAL DISEASES

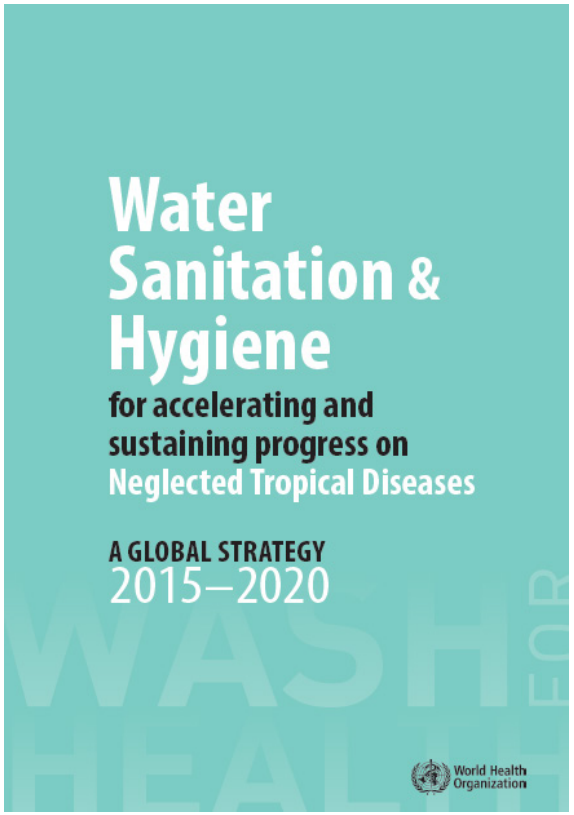
The poorest are more likely to be affected by NTDs and less likely to have access to quality WASH services



World Health Organization

4. Joint action

The Global Strategy on WASH & NTDs



VISION

Accelerated and sustained achievement of the NTD roadmap milestones, particularly among the poorest and most vulnerable, through better targeted and joint WASH and NTD efforts.

Improve awareness of the co-benefits of joint WASH and NTDs action by sharing experience and evidence from improved delivery.

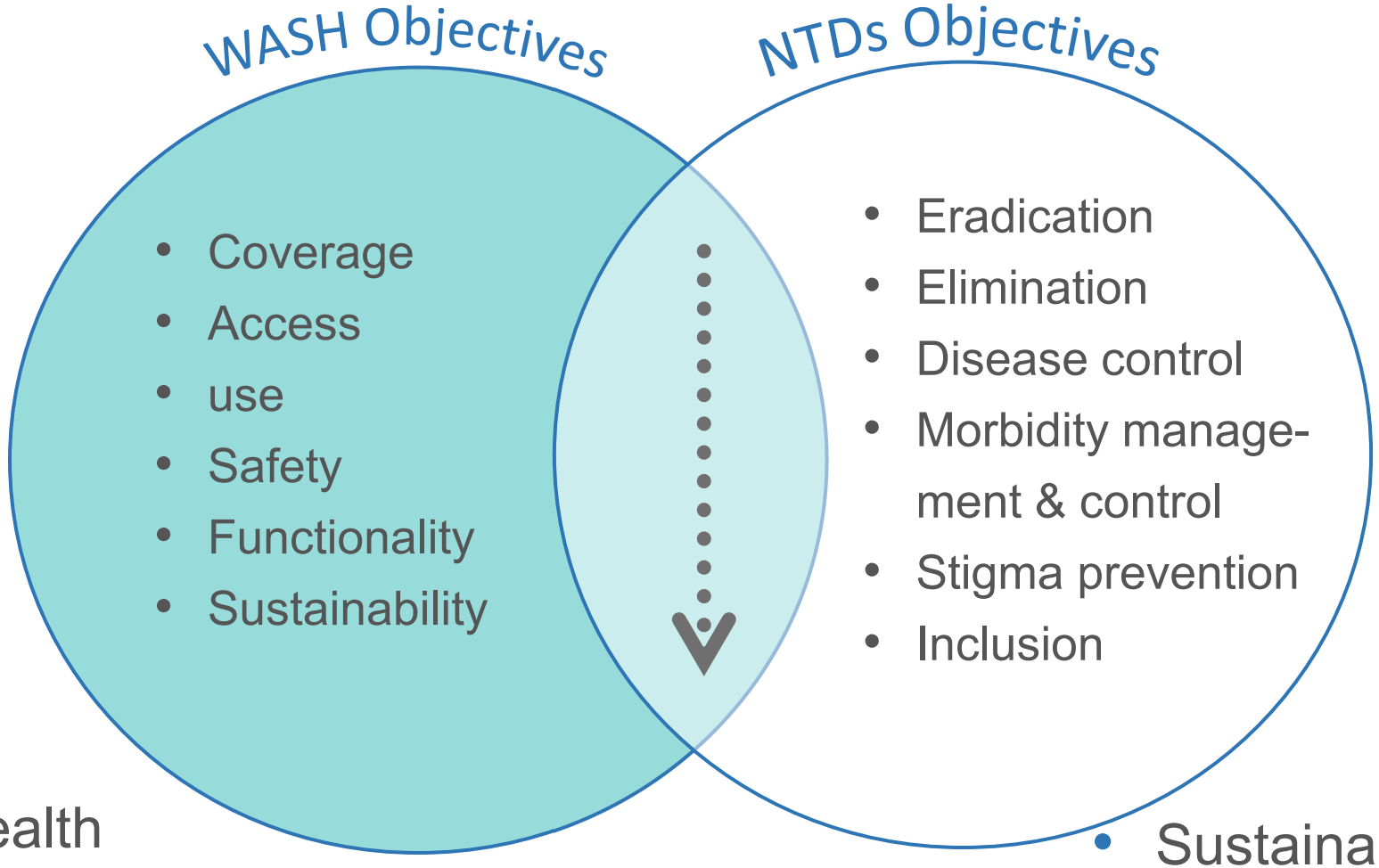
Use WASH and NTDs monitoring to highlight inequalities, target investment, and track progress.

Strengthen evidence on how to deliver effective WASH interventions for NTD control and elimination and embed findings in guidance and practice.

Plan, deliver and evaluate WASH and NTDs programmes with mutual inputs from WASH, health and NTDs stakeholders at all levels.

World Health Organization

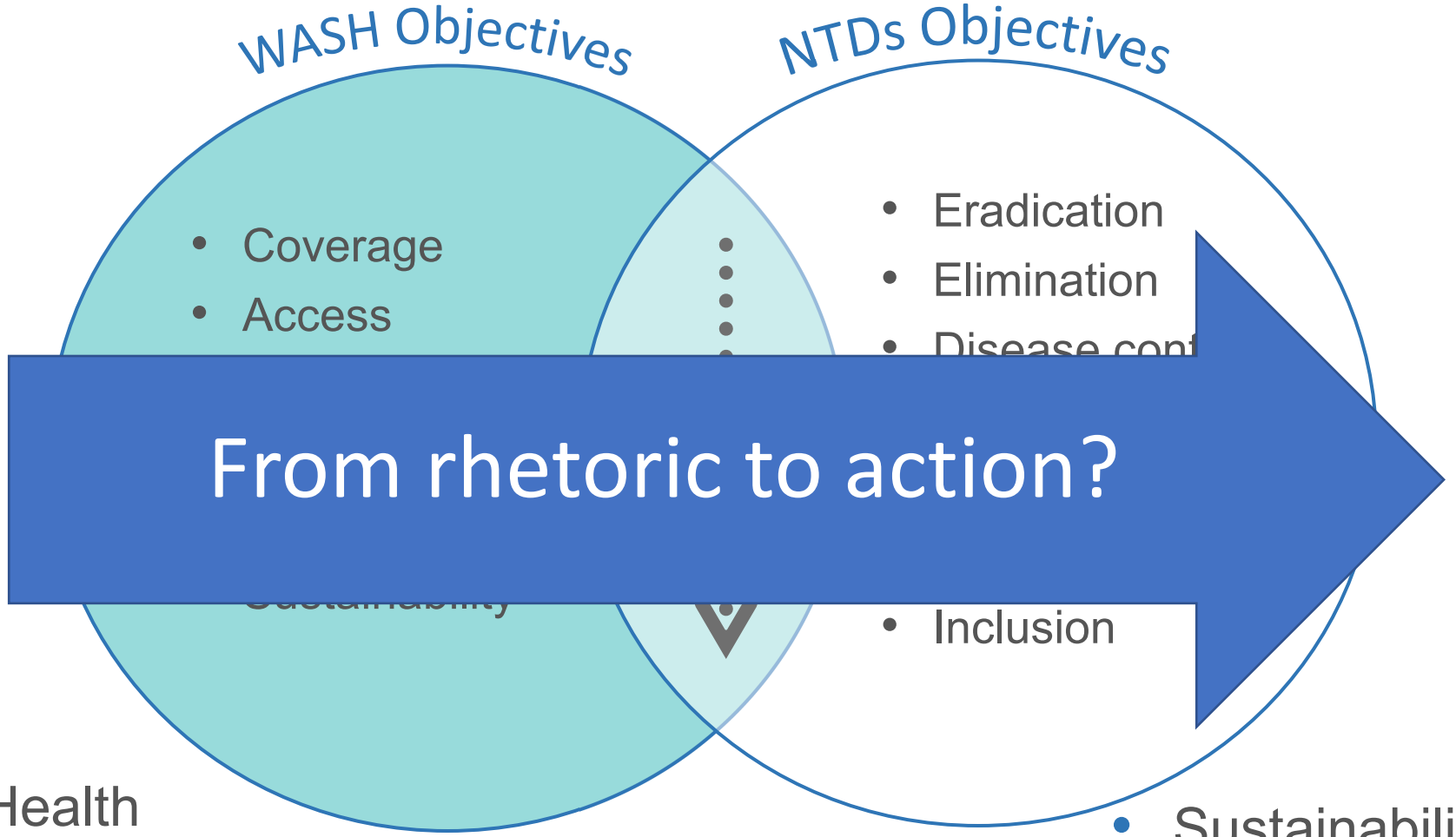
Collaboration supports common goals



- Health
- Sustainability
- Shared prosperity and equity

World Health Organization

Collaboration supports common goals



- Health
- Sustainability
- Shared prosperity and equity

World Health Organization

WASH-NTDs toolkit – Making collaboration simpler

NEGLECTED TROPICAL DISEASE NGO NETWORK
A global forum for nongovernmental organizations working together on NTDs

World Health Organization

<u>Purpose:</u> Support stakeholders working to tackle NTDs through a comprehensive, intersectoral approach, to:

- Build partnerships with ministries and organizations responsible for delivering similar interventions
- Build a programme management structure that supports accountability and achieving shared objectives
- Take a comprehensive approach to behaviour change and strategic communication
- Build local capacity at each stage of the process
- Pursue approaches that work alongside and support clinical and public health interventions for NTD control

1. Setting the scene & getting started: WASH and the BEST Framework, setting the programme vision
2. Building partnership: why and how to collaborate?
3. Situation analysis: gathering and using information for planning
4. Planning and programme design: steps in adaptive planning, financial planning, “planning for the end”
5. Implementation, monitoring and evaluation

Tool example - Shared indicators

Priority indicators identified & Proposed Metrics
PROCESS
NTD sector National and District masterplans include WASH activities, targets, and indicators
Water, sanitation and hygiene are referenced and operationalized throughout NTD program strategies and plans (within targets, activities and monitoring) - Self reported by NTD program coordinator
COMMUNITY
Community members have basic knowledge of hygiene practices
Maternal head of household has knowledge of critical hand hygiene moments - Question posed to maternal head of household
Hand washing with soap and water following toilet use and before eating
Handwashing station with water and soap is present in or near sanitation facilities and where food is prepared or consumed, and accessible to all household members - Observational (consider height of station & ease of use for household members)
Presence of a functioning, clean toilet for household use.
Toilets are not broken and can be used by all household members - observational (consider the physical structure of the facility, and staff/student age, disability, etc.)
SCHOOL
An improved water source is located on site and available for all children at school through-out the year.
An improved water source is on premises and water points are accessible to all users during school hours -self reported by students & staff, & observational (consider location and physical structure or water source)
Presence of a functioning, clean toilet for staff and student use.
Toilets are not broken and can be used by all staff and students - observational (consider the physical structure of the facility, and staff/student age, disability, etc.)

Disease Specific Indicators

Soil Transmitted Helminths (n=13)	**Children wear basic footwear** % of children wearing basic footwear among all children	2.23	77	69
	Hand washing before eating hand washing station with water and soap being present in or near where food is prepared or consumed, and accessible to all household members (consider height of station & ease of use for household members)	1.62	77	77
	Community members have basic knowledge of hygiene practices maternal head of household has knowledge of critical hand hygiene moments and thorough cooking - Question posed to maternal head of household	2.15	77	75

The logframe as tool for collaboration

DRAFT- Monitoring and Evaluation logical framework
Behaviour and Environmental (B & E) components components of NTD control and elimination programs

KEY	
⊘	Not currently collected
○	These indicators may not yet be collected at national levels. These are new or adapted Global Goal 6 indicators. In the scenario were a country is not yet collecting this information the NTD program would need to either directly collect this information or advocacy for inclusion into WASH MIS.
✓	Already collected by the WASH sector at district/national level. This implies that trachoma programs would **not** be directly responsible for collection of the data but would necessitate obtaining this information from the entities responsible information in the trachoma edemic districts.
	Identified core joint WASH/NTD programatic indicator. [NNN Delphi survey 2016]
	Disease specific joint indicator

COMMUNITY OUTCOME	**Outcome Indicator 1 [B]**		Source	**Assumptions**	**NOTES**
	selection of possible behavioural outcome indicators		WASH sector routine data- see selection of indicators below.	(wording from NNN survey)-**"Hand washing with soap and water following toilet use and before eating."** Monitoring actual behaviour is difficult - the presence of soap and water at a designated place has been shown to be a robust proxy indicator	(consider height of station & ease of use for household members)
	1.1 Identified core joint WASH/NTD programatic indicator				
	% Percentage of population with 'basic' hand/ face washing facilities with soap (or ashe) and water at home	○			
	1.1.1		Source	**Assumptions**	**NOTES**
	% of households with soap and water at a hand/ face washing facility commonly used by family members.	○	WASH sector routine data		(consider height of station & ease of use for household members)
	1.1.2		Source	**Assumptions**	**NOTES**
	% of households with soap and water at a hand/face washing facility in or near sanitation facility and accessible to all household members	○	WASH sector routine data		(consider height of station & ease of use for household members)
	1.1.3 (STH specific core joint WASH/NTD programatic indicator)		Source	**Assumptions**	**NOTES**
	% of households with soap and water at a hand/face washing facility in or near food preparation area and accessibele to all household members	○	WASH sector routine data	(STH specific wording from NNN survey)- Hand washing before eating	(consider height of station & ease of use for household members)
	1.2 Identified core joint WASH/NTD programatic indicator		Source	**Assumptions**	**NOTES**
	% of population in endemic area who have basic knowledge of hygiene practices	⊘	**Survey**- This would be collected in any planned program surveys including but not limited to (coverage sureys, impact evaluations, and surveillance) Country programs may also have mechanisms in place to collect on a more frequent basis.		Maternal head of household has knowledge of critical hand hygiene moments - Question posed to maternal head of household
	1.2.1		Source	**Assumptions**	**NOTES**
	% of respondents with knowledge of importance of washing with soap to prevent disease	⊘			Other possible determinants for hygiene behavior can be measured by questions related to other antecedants for behaviour such as opportunity to access, supporting environment, motivation, and percieved risk. See "NTDs/ WASH formative research protocol" for other possible behavioral survey or monitoring questions
	1.2.2		Source	**Assumptions**	
	% of respondents with knowledge of critical times to wash (hands, face, body) with soap	⊘			
	1.3 (trachoma specific core joint WASH/NTD programatic indicator)		Source	**Assumptions**	**NOTES**
	% of children with clean faces (free of dirt and/or nasal and occular discharge) among all children	⊘	**Survey**- This would be collected in any planned program surveys including but not limited to (coverage sureys, impact evaluations, and surveillance) Country programs may also have mechanisms in place to collect on a more frequent basis.	It is recognized that this is an imperfect measurement of hygiene aspects of trachoma control. This specific indicator emegred as a the prefered programatic measure in terms of both, importance and feasibility, in the NNN led joint WASH and NTD indicator process conducted in 2015 and 2016.	
	Outcome Indicator 2 [E]:		Source	**Assumptions**	**NOTES**

Conclusion

- Strong imperative for joint action **on both sides**
- Helminth community can play important part in ensuring WASH service **targeting** to sustain treatment gains
- Good examples exist of effective joint action to learn from and implement
- Joint agenda for evidence:
  - Need for understanding impact of well-executed WASH interventions on **transmission pathways**
  - Importance of documenting **what** is being delivered and how well – toilets? Or sanitation +use + behaviour change – so we can trace what happens to waste

Thank you for your attention