

# Global monitoring of wastewater management



Preparation Workshop on  
the  
*Asia Wastewater  
Management  
Partnership(AWaP)*

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**SDG6. Ensure availability and sustainable management of water and sanitation for all**

**Target 6.3:** By 2030, **improve water quality** by reducing pollution, eliminating dumping and minimizing hazardous chemicals and materials, proportion of **untreated wastewater** and substantially **increasing recycling and reuse** globally

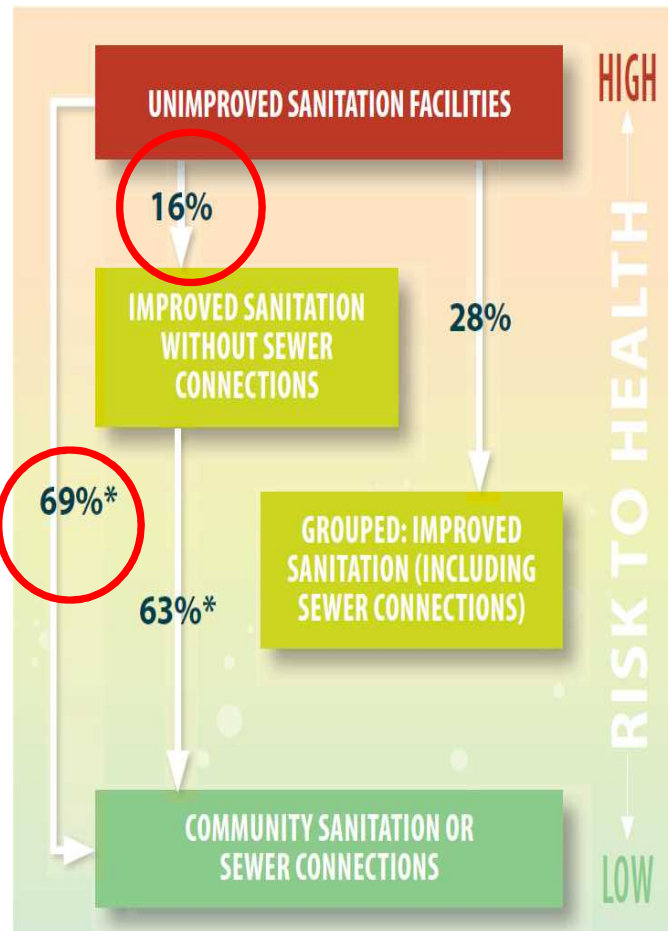
Indicator 6.3.1: proportion of treated

# Sustainable Development Goals...

- Tools of global governance
  - Measuring progress for the global community
  - Informing global investments
- SDG calls for: sustainability (economic, social and environmental) in development under good governance
  - Huge opportunities
  - Tremendous challenges (incl. monitoring)...resources
- SDG monitoring: capturing the SDG ambitions
  - Not to dumb down the targets: full potential of indicators...use all available data sources
  - Preparing the work of major revision of indicators



# MDG to SDG ambitions: sanitation monitoring to ensure public health

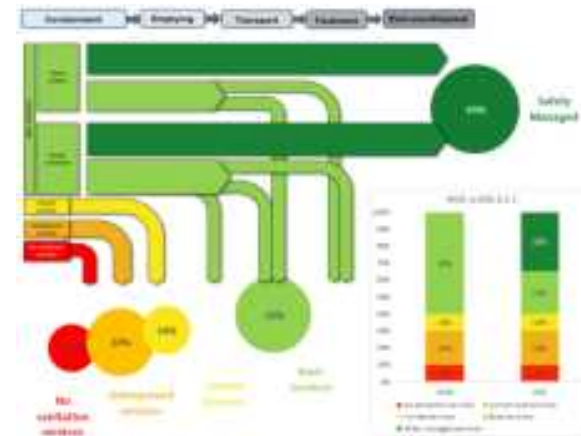


2014 WHO burden of diarrhoeal disease estimate

- 6.2.1: use of safely managed sanitation services (Tier I) only tells a partial story
- 6.3.1: go beyond household use and onsite management, to follow the full sanitation chain to know what happens to excreta, and how it is safely managed throughout the chain and treated or safely reused

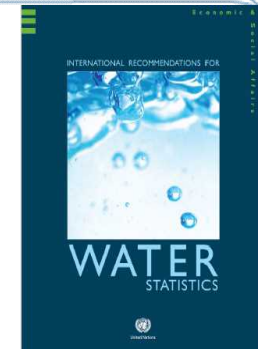
# Sanitation chain monitoring: 6.2 & 6.3

- 6.3.1: Proportion of wastewater safely treated
- 6.2.1: Proportion of population using safely managed sanitation services
- Commonalities:
  - Mass flow/balance approach
  - Onsite and off-site treatment
- Differences:
  - 6.2 includes open defecation and unimproved
  - 6.3 combines households with economic/industrial (pretreatment of hazardous wastewater)
  - 6.3 includes more on treatment relevant for reuse



# Aligned to international standards...tier II

- ✓ **System of Environmental Economic Accounting (SEEA)**
  - Environmental accounting framework: treatment categories, definitions, methods for emissions to water
- ✓ **International Recommendations for Water Statistics (IWRS),**
  - **Onsite safe management comes from 6.2.1 (tier I)**
  - **Industrial wastewater: estimate using inventories of industries (ISIC rev4)...compliance monitoring, without evidence wastewater untreated**



# Wastewater monitoring...

Types	Sub categories	Monitoring methods
Municipa	<ul style="list-style-type: none"> <li>• On-site (safe containment:               <ul style="list-style-type: none"> <li>• Flush to septic tanks</li> <li>• Flush to pits</li> </ul> </li> <li>• Onsite (safe removal/transport:               <ul style="list-style-type: none"> <li>• septic tanks</li> <li>• sewer connections</li> </ul> </li> <li>• Off site connections               <ul style="list-style-type: none"> <li>• Commercial (including schools)</li> <li>• Industrial (non-hazardous)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Reprocessing of 6.2.1 estimates refining for performance (compliance to standards), versus technology (secondary or higher treatment)</li> <li>• For commercial/industrial: using wastewater generation based on economic outputs and assumptions</li> </ul>
Non-municip	<ul style="list-style-type: none"> <li>• Industrial and commercial requiring pre-treatments</li> </ul>	<ul style="list-style-type: none"> <li>• Compliance to permitted discharges</li> <li>• Estimates based on economic outputs</li> </ul>

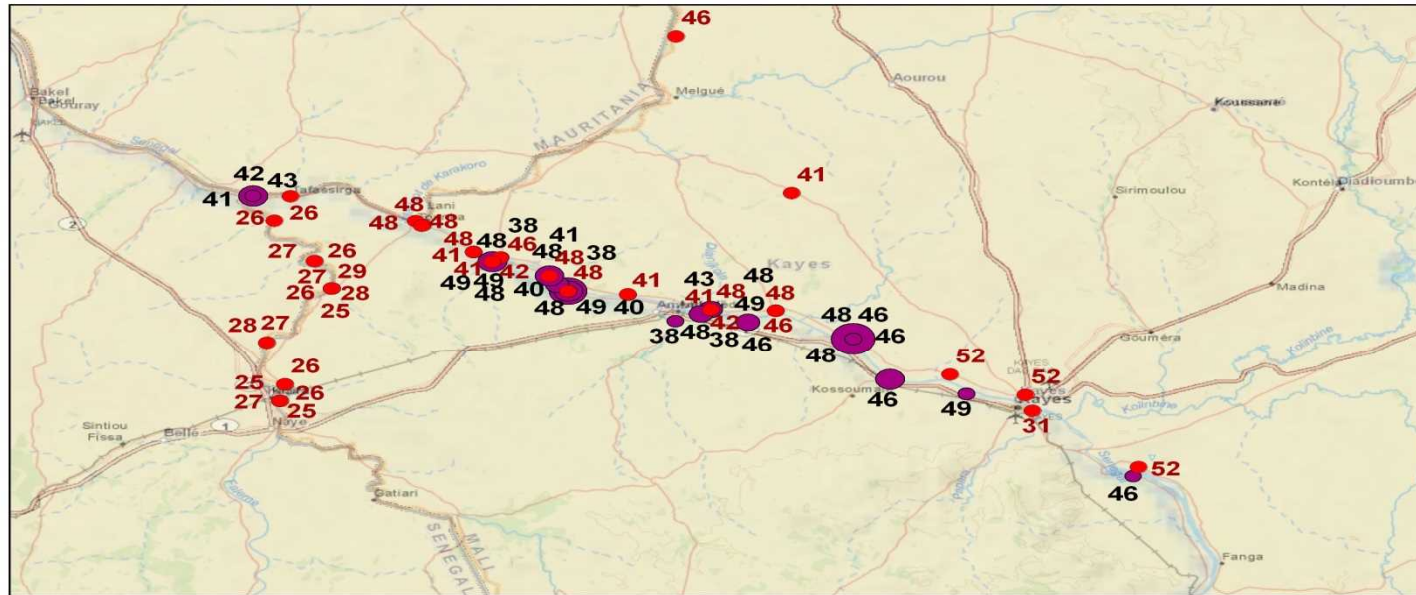
# Next steps...towards a 6.3.1 baseline

- April – now
  - Reanalysis of 6.2.1 data (baseline published in June 2017), and desk review
  - Additional baseline data collection/compilation
  - Additional pilots for country and regional specificity
- Dec 2017 – April 2018
  - Continuation of pilot and additional data collection works
  - Baseline fixing and country consultation
- Ready for inclusion into SG's report in 2018
- Baseline report third quarter 2018



# Geospatial data in cholera mapping (2010)

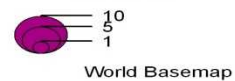
## Mali: Epidémies de choléra de 2005 et 2008



### Cas en 2005

- Cas de 2005
- World Basemap

### Nombre de cas en 2008



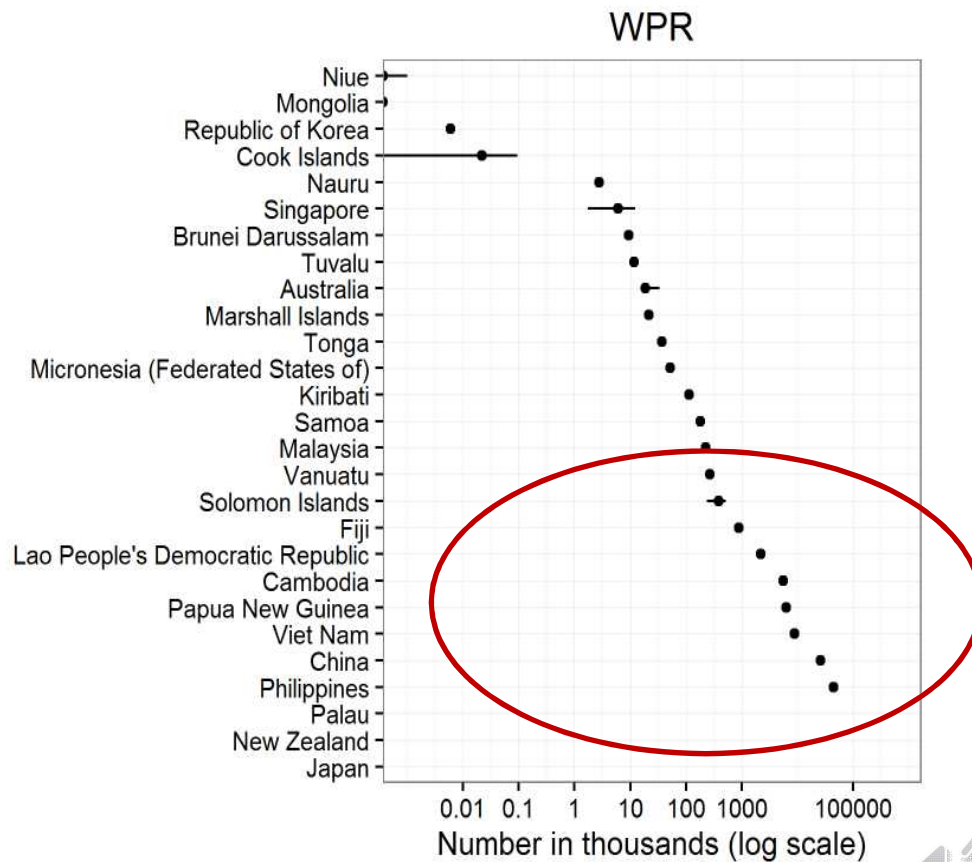
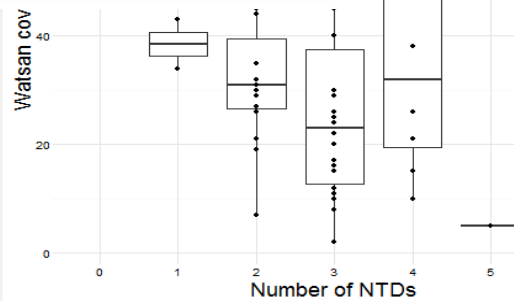
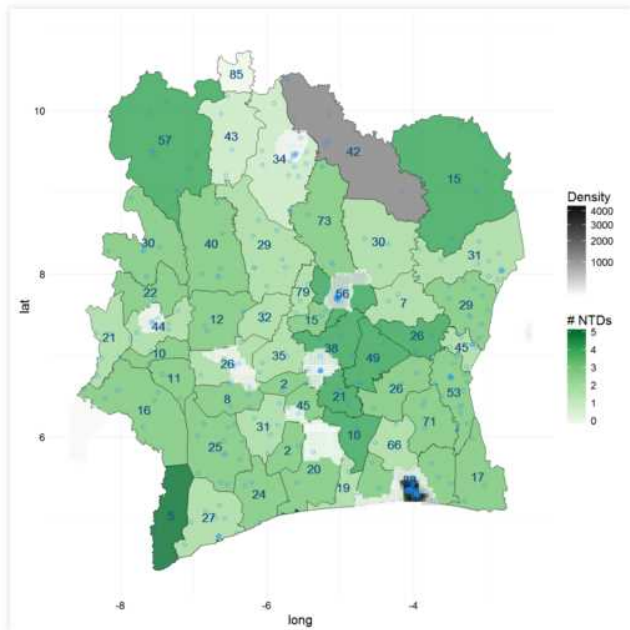
Les valeurs sur la carte représentent les semaines où les cas ont été enregistrés  
Rouge: 2005  
Noir: 2008

Cholera outbreaks in Mali along the main river: combining geospatial DHS data and cholera data



# Neglected Tropical Diseases: WASH inequality (2016) ... work on disaggregation (geospatial data)

NTD endemicity higher in clusters of lower WASH access: serious issue in many PIC

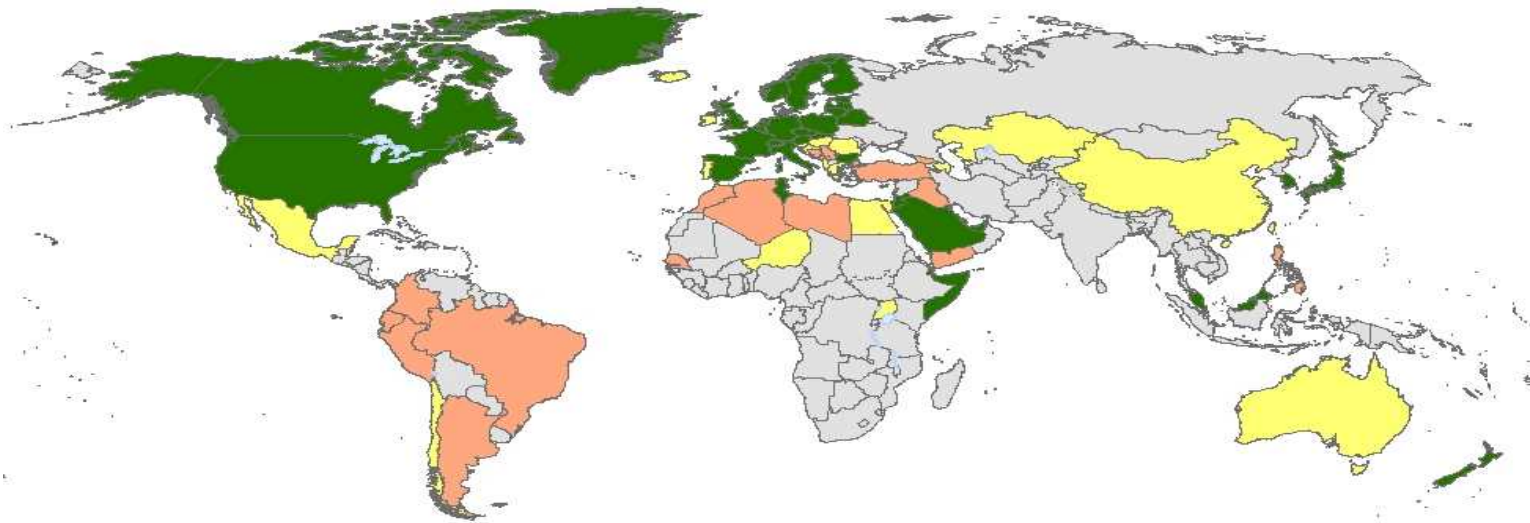


# Wastewater monitoring pilots

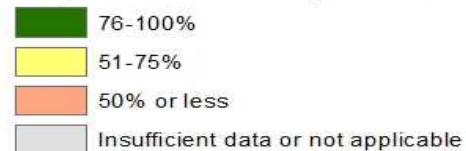
- GEMI (UN Water integrated monitoring for SDGs)
  - Jordan, Peru, Senegal, Uganda, Netherlands
- WHO pilots
  - China (municipal/cities 80%, others being collected),
  - Philippines (household 4%, non-household 5%)
  - Vietnam (12% household, non-household 13%)
  - Fiji (expected soon)
  - Samoa or one other Pacific Islands (expected soon)
- Upcoming WW monitoring activities: Brazil, Bangladesh, India, EUROSTAT countries etc.
- **With AWaP?**

# Global preliminary status for SDG6.3.1?

In 21 of the 84 countries with data,  
municipal wastewater safe treatment level is 50% or less



Proportion of municipal wastewater safely treated, 2015



# Vietnam Pilot: WHO-JICA collaboration

	WHO	JICA
Objective	<ul style="list-style-type: none"> <li>Evaluate the current situation of wastewater and faecal sludge management</li> <li>Propose a method of wastewater and sludge that is safely treated, also proportion reused and recycled.</li> </ul>	<ul style="list-style-type: none"> <li>To validate and test feasible monitoring methodologies</li> <li>To identify difficulties, gaps and important issues to conduct the monitoring activities related to 6.3.1 in Vietnam and do feed-the refinement of the monitoring methodology proposed for the indicator of SDG 6.3.1 by WHO.</li> </ul>
Expected outcomes	<ul style="list-style-type: none"> <li>Assessment: legislations, frameworks etc.</li> <li>Situational analysis &amp; propose method</li> </ul>	<ul style="list-style-type: none"> <li>Propose various methods depending on capacity of countries in monitoring generation and treatment of wastewater</li> </ul>
Timeline	August – December 2017	October 2017 – April 2018

# Points for discussion (1)

- SDGs is a transformative agenda
  - Country driven
  - Extremely ambitious development agenda
  - Sustainability is key
  - Leave no one behind is foundational
- SDGs set global level...national adaptation aligning with national priorities
- Indicators will define the SDG ambitions
  - Not to dumb down the targets or SDG aspirations
- National–global alignment is important: G, T and I
- Risk management – safe management (climate?)



## Points for discussion (2)

- SDG6...sustainable management: are risk management part of targets and monitoring frameworks?
- Climate resilience – can we ensure continuity of services and sustainable developments?
- What needs to be done differently to ensure sustainable management of wastewater programming and monitoring?
- Resource issues – how can we ensure we capture good ideas into planning and implementations?
- Collaboration with AWaP

THANK YOU

Formulation of the SDG resolution has been truly transformational...

To achieve its aspirations we have to be transformational once again...the key is to have an ambitious monitoring system?

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World Health  
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