SDGs targets 6.2 and 6.3 – A draft monitoring framework

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Overview

• The indicators of SDGs targets 6.2 and 6.3

PART A: Wastewater from households and non-hazardous economic activities
• Sanitation service chain
• A draft monitoring framework

PART B: Wastewater from hazardous economic activities
• A inventory of industries
• A draft monitoring approach
Components of target 6.3

Wastewater monitoring establishes causes of poor water quality

Water quality monitoring verifies progress on wastewater management

Water quality
SDGs – Targets 6.2 and 6.3

- **6.2.1** Population with **Safely Managed Sanitation** services including a hand washing facility with soap and water

- **6.3.1** % Safely **treated wastewater** (from household and economic activities)

- **6.3.2** % of **water bodies** with **good** ambient water quality
6.2 - Safely managed sanitation (definition)

**Indicator 6.2.1:** % of population using safely managed sanitation services (including a handwashing facility with soap)

**Definition:** Population using a improved sanitation facility, which is:
- not shared with other households and where
- excreta is safely disposed in situ or
- (transported) and treated offsite.
<table>
<thead>
<tr>
<th>MDG/SDG</th>
<th>Service Ladder</th>
<th>Progressive Realisation</th>
<th>Monitoring Ladder</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SDG 6.2</strong></td>
<td>Safely Managed Sanitation (GTS)</td>
<td>Going beyond hygienic separation of excreta from human contact, including transport and treatment</td>
<td>All developed countries, some developing countries</td>
</tr>
<tr>
<td><strong>MDG 7c</strong></td>
<td>Basic sanitation</td>
<td>Private improved sanitation</td>
<td>Most developing and some developed countries report</td>
</tr>
<tr>
<td></td>
<td>Shared sanitation</td>
<td>Improved sanitation facility</td>
<td>Most developing and some developed countries report</td>
</tr>
<tr>
<td></td>
<td>Unimproved sanitation</td>
<td>Fixed point defecation</td>
<td>All countries report (applies to developing countries)</td>
</tr>
<tr>
<td></td>
<td>No services</td>
<td>Open defecation</td>
<td>All countries report (applies to some countries)</td>
</tr>
</tbody>
</table>
SDG monitoring needs to go beyond monitoring usage of household toilets to address safe management of excreta along the sanitation chain.
... and capture particular issues of different sanitation systems.
<table>
<thead>
<tr>
<th>Type of system</th>
<th>% of population (P)</th>
<th>Of which safely disposed insitu (_S)</th>
<th>Of which Treated at treatment plants (_T)</th>
<th>Safely managed (SM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wastewater in piped sewers</td>
<td>PSP</td>
<td>% PS_T</td>
<td>% PS_T</td>
<td>PSP * PS_T</td>
</tr>
<tr>
<td>Fecal sludge in onsite sanitation</td>
<td>PON</td>
<td>% ON_T</td>
<td>% ON_S</td>
<td>PON * ON_T</td>
</tr>
<tr>
<td>Total basic sanitation</td>
<td>PSP + PON</td>
<td>% ON_S</td>
<td>% ON_S</td>
<td>Total safely managed</td>
</tr>
</tbody>
</table>

**Shared**
- SH

**Unimproved**
- UN

**Open defecation**
- OD

**Total non-basic sanitation**
- (SH + UN + OD)

**Total basic sanitation + total non-basic sanitation**
- 100%
... but, looking at treatment only is not sufficient. Through unsafe management, there are losses along the sanitation chain.
<table>
<thead>
<tr>
<th>Type of system</th>
<th>% of population (P)</th>
<th>Of which Contained (C)</th>
<th>Of which Safely disposed in situ (S)</th>
<th>Of which Emptied for transport (E)</th>
<th>Of which Transported &amp; delivered to treatment plants (D)</th>
<th>Of which Treated at treatment plants (T)</th>
<th>Safely managed (SM)</th>
</tr>
</thead>
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<td>PSP</td>
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</tbody>
</table>

Total basic sanitation: PSP + PON

<table>
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<tr>
<th>Total non-basic sanitation (SH + UN + OD)</th>
<th>Total safely managed (SMSS)</th>
</tr>
</thead>
</table>

| Total basic sanitation + total non-basic sanitation | 100%                         |

CONTAINMENT | EMPTYING | TRANSPORTATION
Framework outputs (6.2.1)

JMP 2015 (MDGs)
- Safely managed services (SMSS): 74%
- Basic services (BSS): 9%
- Shared services (SHS): 11%
- Unimproved services (USS): 6%
- No sanitation services (NSS): 6%

Projected to 2015 with JMP disaggregated data (SDGs)
- Safely managed services (SMSS): 30%
- Basic services (BSS): 44%
- Shared services (SHS): 11%
- Unimproved services (USS): 11%
- No sanitation services (NSS): 6%
<table>
<thead>
<tr>
<th>Treatment Level</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High (reuse for food production)</td>
</tr>
<tr>
<td></td>
<td>Medium (disposal on land or water bodies – not for food production)</td>
</tr>
<tr>
<td></td>
<td>Low exposure (long ocean outfall or groundwater recharge)</td>
</tr>
<tr>
<td>Advanced treatment</td>
<td>Safely managed</td>
</tr>
<tr>
<td>Tertiary treatment</td>
<td>Safely managed ¹</td>
</tr>
<tr>
<td>Secondary treatment</td>
<td>Not safely managed</td>
</tr>
<tr>
<td>Primary treatment</td>
<td>Not safely managed</td>
</tr>
<tr>
<td>No treatment</td>
<td>Not safely managed</td>
</tr>
</tbody>
</table>

¹ where only advanced N,P removal then classed as ‘not safely managed’
² where disposal is in proximity of bathing areas then classed as ‘not safely managed’
Conclusions

• Provides an simple graphical overview of the sources and safe and unsafe sinks of wastewater

• Allows flexibility for decision makers on how to transition from unsafe to safe depending on the context, priorities and resources.

• Builds on existing MDG monitoring (JMP)

• There is no indicator for safe reuse – but disposal/reuse categories for ‘safely treated’ captures ‘safe reuse’. 
6.3 - Safely treated wastewater

- Generation
- Pre-treatment/On site treatment
- Transport
- Treatment at Centralised WWTP
- Disposal/Reuse

PART A
- Sewer
- Municipal WWTP

PART B
- Hazardous
- Non-Hazardous

Households
- Economic activities
6.3 - Safely treated wastewater (definition)

Indicator 6.3.1: % Safely treated wastewater

Definition:
• PART A: The fraction of wastewater carried through a sewer network to a designated location and treated at a treatment plant to an agreed level; or
• PART B: The proportion of hazardous wastewater pre-treated at source before discharge to a sewer or the environment.
## Industrial discharge - methodology

Data required

<table>
<thead>
<tr>
<th>Industry type/water use</th>
<th>Size of Industry/effluent generated</th>
<th>Discharge to:</th>
<th>Hazardous/Non-hazardous</th>
<th>Discharge Compliance*</th>
</tr>
</thead>
<tbody>
<tr>
<td>All establishments</td>
<td>By effluent flow, water consumption, or employees</td>
<td>Sewer / environment</td>
<td>ISIC, Red List or local EPA permit</td>
<td>Yes / No</td>
</tr>
</tbody>
</table>

\[
\text{Hazardous effluent complying*} = \frac{\text{Hazardous effluent generated}}{\text{Hazardous effluent generated}}
\]

* National discharge permits
Thank you!