Water and Sanitation Global Monitoring – to 2015 and beyond
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Health impacts: WASH related deaths

FIGURE 3 Percentage of deaths attributable to WASH-related disease or injury
Source: Prüss-Üstün et al. (2008)
2.2 million dead children every year

<table>
<thead>
<tr>
<th>Disease or injury</th>
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</thead>
<tbody>
<tr>
<td>1 Lower respiratory infections</td>
</tr>
<tr>
<td>2 Diarrhoeal diseases</td>
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<tr>
<td>3 Unipolar depressive disorders</td>
</tr>
<tr>
<td>4 Ischaemic heart disease</td>
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<tr>
<td>5 HIV/AIDS</td>
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<tr>
<td>...</td>
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<tr>
<td>11 Tuberculosis</td>
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<tr>
<td>12 Malaria</td>
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</table>
MDG target and indicators

MDG 7 Target 7c:

- *Halve, by 2015, the [1990] proportion of people without sustainable access to safe drinking water and basic sanitation.*

MDG indicators:

- *Proportion of the population that uses an improved drinking water source (urban and rural).*

- *Proportion of the population that uses an improved sanitation facility (urban and rural).*
The MDG drinking-water target was met in 2010

Trends in global drinking water coverage, 1990-2010, projected to 2015

WHO/UNICEF JMP, 2012
Two billion people gained access to an improved drinking-water source

JMP 2012 report (page 4): “…it is likely that the number of people using safe water supplies has been over-estimated”

![Population by Water Source](chart.png)

- **Improved sources**
  - 1990: 4.0 Billion
  - 1995: 4.5 Billion
  - 2000: 5.1 Billion
  - 2005: 5.6 Billion
  - 2010: 6.1 Billion

- **Unimproved sources**
  - 1990: 1.3 Billion
  - 1995: 1.2 Billion
  - 2000: 1.1 Billion
  - 2005: 0.9 Billion
  - 2010: 0.8 Billion
Nationally representative drinking-water quality information remains unavailable.

There are practical challenges to obtaining comparable nationally representative estimates for drinking-water safety.

Collecting drinking-water quality information for all countries is prohibitively expensive.

Rather than attempting to globally assess quality, JMP decided to increase the robustness of its estimates by gathering more user-based data and promote harmonization.
Disparities continue to exist

Regional and country averages mask huge disparities

Drinking water coverage in selected countries in sub-Saharan Africa and urban/rural coverage among poorest and richest households in Sierra Leone (per cent)

Source: JMP 2012, and Sierra Leone DHS, 2008
Progress does not benefit all equally

The poorest 40 per cent of the population in Southern Asia have barely benefited from improvements in sanitation

Southern Asia: Sanitation coverage trends by wealth quintiles, based on population-weighted averages from three countries, 1995-2008


WHO/UNICEF JMP, 2012
Those at the bottom of the ladder: Total, urban and rural populations in LDCs
Monitoring water quality

• Studies suggest that many improved sources do not provide safe drinking-water.
• JMP conducted a Rapid Assessment of Drinking-Water Quality (RADWQ) pilot in five countries (Ethiopia, Jordan, Nicaragua, Nigeria and Tajikistan).
• Aggregated results of non-compliance with WHO's microbiological standards show:
  – Piped supplies: 11%
  – Handpumps: 31%
  – Protected springs: 37%
  – Protected dug wells: 57%
Impact of microbiological contamination on global estimates

• JMP: 783 million people don’t use an improved drinking-water source.

• Applying aggregated findings for non-compliance with microbiological standards of RADWQ (five countries) to global JMP estimates results in 1.8 billion people without access to ‘safe’ drinking water*.

• These are very rough estimates, extrapolating findings of five countries to the entire developing world.

* JMP’s own calculations, confirmed by UNC paper
Monitoring water safety

The definition of safe:
Safe drinking-water “does not represent any significant risk to health over a lifetime of consumption, including different sensitivities that may occur between life stages.” (WHO, 2004)
Monitoring water safety

Robust and ongoing independent surveillance of national health-based targets

Nationally adapted broader suite of chemicals (e.g. see RADWQ report)

Nationally adapted priority chemicals (e.g. As, F)

E. coli

Thermotolerant coliforms

Improved/unimproved

World Health Organization
The cart before the horse?

Who’s driving this?
GLAAS objectives: 2012 Report

- To **identify drivers and bottlenecks to progress** towards MDG 7 target C (and national targets)

- To serve as a **repository of global data** for decision-makers
GLAAS Products

Biennial Report

Regional highlights

Country + ESA templates (support for SWA HLM)

Country data repository

Ongoing research

Tracking national financial flows into sanitation and drinking-water
GLAAS method

• Use of existing data (e.g. JMP, OECD-Creditor Reporting System, World Health Statistics, etc.)

• Perform detailed survey of countries through WHO regional offices and regional facilitators (e.g. WSA)
  – Questionnaire distribution through health and water ministries
  – Regional partners and country focal points identified
  – National data collection and validation workshops
  – 75 countries participated in 2012 GLAAS

• Perform detailed survey of external support organizations (ESAs)
  – Development aid amounts, priorities, future funding
  – 24 external support agencies participated in 2012 GLAAS
GLAAS Implementation in countries

Global

- Often a collaborative effort: GLAAS country focal point, ministries, WHO Regional Offices or Regional facilitator, international partners (WSP/CSO, UNICEF/SWA)
- Collaborative 2009 CSO/GLAAS questionnaire used to assess two year trends

Country-level

- Good practice: sensitization workshop, stakeholder consultation, validation (external stakeholders and reference to supporting documents)
GLAAS data analysis

135 multiple choice questions; 300 pages of narrative responses; many other quantitative responses to WSH targets, human resources and financial data

Approach:

1. Assessment of key determinants of progress
2. Comparison of data across geographical, economic, sectoral and urban/rural (patterns?)
   (e.g. targeting of aid; lack of financing in SSA)
3. Identification of data relationships
   (e.g. capacity to absorb financing vs sufficiency of funds)
4. Placing the results in context
   (analysis of narrative responses, external data, experts, follow-up interviews)
Data presentation: the "dashboard"

While financial resources for sanitation and drinking-water have increased in some countries, total funding is reported to remain inadequate, especially for sanitation (Figure 3.10).

![Maps and bar charts showing sanitation and drinking-water adequacy of financing in 2011.](image)

**FIGURE 3.10** Are financial flows sufficient to meet MDG targets?

Sources: 2011 GLAAS country survey (74 respondents); 2008–2010 CDO and GLAAS country survey.
Data presentation: Key messages

KEY MESSAGES

- Despite the global financial crisis, the total amount of development aid for sanitation and drinking-water increased by 3% from 2009 to 2010, to US$ 7.5 billion. Non-concessional lending for sanitation and water increased from US$ 2.5 billion in 2009 to US$ 4.4 billion in 2010.
- Only 7% of sanitation and drinking-water aid is directed at the maintenance of systems and services.
- Development aid for sanitation and drinking-water to fragile and conflict-affected states increased by 50% from US$ 580 million in 2007 to US$ 840 million in 2010 and increased from a low of 5% of total WASH aid in 2004 to 11% of total WASH aid in 2010.
- Only half of sanitation and drinking-water aid is targeted at regions where 70% of the global uninsured live: the sub-Saharan Africa, southern Asia and South-eastern Asia MDG regions.
- Aid for basic systems comprised 28% of aid for sanitation and water in 2010, an increase from 19% in 2005.
- Opportunities exist for increasing alignment with country priorities through sector budget support, which is currently used for less than 5% of WASH disbursements.
Findings: Globally, progress is being made...

Countries report strong progress in adopting and publishing WASH sector policies

Increased use of WASH reviews for planning

Nearly 80% of countries recognize the right to water, and over 50% the right to sanitation
but... progress towards achieving national targets is slow.

Country self-reporting shows a high level of target setting and policy development, however, **perceived financing and output levels are insufficient to meet national targets.**
On sanitation, some countries need more funding and could spend it – while others do not spend their allocations.
WASH investment programming is improving

Trend 2009 - 2011
Household contribution to overall WASH funding is likely to be high.

Sources of funding for sanitation and drinking-water, inclusive of household tariff and self-supply (4 countries, US$ 10.1 billion)
Donor finance can be a very significant proportion of WASH funding

### Donor finance (as % of government finance)

<table>
<thead>
<tr>
<th>Country</th>
<th>Donor finance</th>
</tr>
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<tbody>
<tr>
<td>Madagascar</td>
<td>26</td>
</tr>
<tr>
<td>Honduras</td>
<td>39</td>
</tr>
<tr>
<td>Kenya</td>
<td>41</td>
</tr>
<tr>
<td>Afghanistan</td>
<td>46</td>
</tr>
<tr>
<td>Yemen</td>
<td>46</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>63</td>
</tr>
<tr>
<td>Lesotho</td>
<td>67</td>
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</table>

Despite the global financial crisis, external support for WASH increased from 2008 to 2010.
Revenues do not cover operating costs

One third of countries indicate that revenues cover less than 80% of operating costs for urban utilities (Figure 3.11).

**FIGURE 3.11** Are operation and minor maintenance costs for utilities covered by user fees?

*Source: GLAAS 2011 country survey (66 country respondents)*
A deficient human resource base

Countries report insufficient staff to operate and maintain urban and rural drinking-water systems (Figure 4.1).

**FIGURE 4.1** Is there sufficient staff to operate and maintain urban and rural drinking-water systems?

*Source: 2011 GLAAS country survey (67 country responses)*
Donors are not funding maintenance/replacement of existing services

Is the balance between funding new services and maintaining existing ones right?

FIGURE 6.14 Breakdown of development aid among project objectives, 2010 (11 ESAs with disbursements of US$ 1.7 billion)

Source: 2011 GLAAS ESA survey
Monitoring & evaluation

- Evidence-based decision-making requires information

Countries report that only 42% of urban/rural sanitation and drinking-water sectors are informed by reliable information monitoring systems.

Is there a national information system used to inform decision-making?
Beyond 2015

- The MDG period comes to an end in 2015.
- There is an opportunity to build on the MDG process and maintain the momentum – there is also an opportunity to apply lessons learned.
- WHO and UNICEF have used the JMP platform to set in motion a process of target and indicator development.
Aim of the process

- Formulate a menu of options of targets and indicators for global monitoring of access to safe drinking water, sanitation and hygiene – to be integrated into future development goals.

- Attempt to reflect the principles of the human right to safe drinking-water and sanitation in goals, targets or indicators.

- Identify comprehensive global sector monitoring indicators to be measured by the GLAAS.

- Establish how all indicators will be monitored after 2015.
Water
Sanitation
Hygiene
Hand washing, MHM

Reflecting the principles of the HRTWS

HRTWS principles
Quality/Safe
Reliable
Sufficient quantity
Accessible
Affordable
Dignity

Public institutions
Schools/health centers
Geographic/urban/rural/slums
Ethnicity/Caste/Religion/Stigma
Households/population

Gender
Age
Disability

World Health Organization
Berlin consultation: Consensus points

- Improve rather than replace existing monitoring system

“An improved system of monitoring should be purpose-driven, universal (relevant to all), comparable internationally but harmonized with country systems, easily understood and communicated, internally consistent, compelling and cheap, and should reward progress (progressive realization).”

Report of the first Consultation on Post.2015 Monitoring (Berlin, 3-5 May 2011)
Working groups established

- Drinking-water – Leads: WaterAid with IRC
- Sanitation – Lead: World Bank/WSP
- Hygiene – Lead: USAID
- Equity and non-discrimination – Lead: OHCHR
SCOPE

• One **simple, inspirational goal**, articulated around **universal use** of water, sanitation and hygiene

• Targets should focus primarily on **outcomes**

• Targets should reflect the **human rights to water and sanitation** and the concept of **progressive realization** of the rights

• The targets should reflect an aspiration to both an **increase in the number of people** using water, sanitation and hygiene, and **improvements in their level of service**; both are considered **progressive realization**

• Targets are global and must therefore be relevant to **all countries**
SCOPE (cntd)

• Targets should look beyond the home to services and facilities in **schools and health centres**

• There must be a focus on the **poor, disadvantaged and excluded**

• There must be a focus on the elimination of inequalities and inequities

• The scope of the targets **does not imply a limit** on the scope in terms of what ideally needs to be regularly monitored and reported on in water, sanitation and hygiene; a longer list of recommended parameters is presented in addition to those in the targets, for consideration at future reviews and updates
**Ladder concept: options for post-2015 monitoring of progressive realization**

<table>
<thead>
<tr>
<th>Water</th>
<th>Sanitation</th>
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</table>
|       | **“Safe management of excreta”**  
(containment, extraction, and transport to a designated disposal or treatment site, safe re-use at the household or community level) |
| **“Intermediate”**  
(on premises, discontinuity <2 days in 2 weeks, E coli <10/100 ml) | |
| **“Adequate”**  
(pit latrine, sewer or septic tank, shared by no more than 5 families or 30 persons) | |
| **“Basic”**  
(not on premises, “improved” source, <30 min collection time) | |
| | **No open defecation**  
No one practices defecation in bush or field or ditch; no excreta deposited on the ground and covered with a layer of earth or wrapped and thrown away; no defecation into surface water |

**Progressive realization expressed in terms of access and service levels for drinking water and sanitation**
Proposed global target dates for universal coverage

2025 No more open defecation

2030 Basic water, adequate sanitation, hand washing and menstrual hygiene management in schools and health facilities, basic water at home, handwashing at home

2040 Adequate sanitation at home
DEFINITIONS ARE CRITICAL

Example: Basic drinking water at home
Households are considered to have a basic drinking-water service when:

• In rural areas, people use water from an ‘improved’ source (existing JMP definitions)
• In urban areas, people use piped water into dwelling, yard or plot, or a standpipe/public tap or a tubewell/borehole
• People use water with a total collection time of 30 minutes or less, including queuing
DEFINITIONS ARE CRITICAL

Example: Intermediate drinking water at home

Households are considered to have intermediate drinking water service when they:

• use water from **an ‘improved’ source** (pre-2015 JMP definitions in rural areas; piped water into dwelling, yard or plot, or a tubewell/borehole in urban areas) **located on their premises**, which

• delivers an **acceptable quantity** of water with only **moderate levels of discontinuity** (non-functional for no more than 2 days in the last 2 weeks),

• water quality at source meets a threshold of **less than 10 cfu E. coli/100ml year-round**, and

• the water point is **accessible to all household members** at the times they need it.
Summary targets

Target 1:
• By 2025 no one practices open defecation, and inequalities in the practice of open defecation have been progressively reduced

Target 2:
• By 2030 everyone uses a basic water supply and handwashing facilities at home, all schools and health care centres provide all users with basic water supply and adequate sanitation, handwashing facilities and menstrual hygiene management facilities, and inequalities in access to all these services have been progressively reduced
Summary targets (cntd)

Target 3:
- By 2040, everyone uses adequate sanitation at home, the gap in access to an intermediate water supply at home has been reduced by half, the excreta of at least half of schools, health centres and households with adequate sanitation are safely managed, and inequalities in access to all these services have been progressively reduced.

Target 4:
- All water, sanitation and hygiene services are delivered in an affordable, accountable, financially and environmentally sustainable manner.
Example of an indicator (Target 3, drinking water)

Percentage of population using an intermediate drinking water service

• Percentage of households using an improved source on premises with discontinuity less than 2 days in the last 2 weeks; with less than 10 cfu \(E.\text{coli}/100\text{ml}\) year round at source; accessible to all members of the household at the times they need it.
Thank you for your kind attention.

www.who.int/water_sanitation_health

www.wssinfo.org