



**Issue 158 | August 22, 2014 | Focus on WASH and Monitoring**

This issue contains 15 articles and reports published so far in 2014 that discuss monitoring of WASH access and services at a national or international scale. The sources for the studies and reports include the UNC Water Institute, George Washington University, The World Bank, the World Health Organization, and others.

**ARTICLES/REPORTS BY PUBLICATION DATE**

**Global Monitoring of Water Supply and Sanitation: History, Methods and Future Challenges.** *Int. J. Environ. Res. Public Health*, Aug 2014. J Bartram. ([Link](#))

The experiences of the Millennium Development Goals period generated important lessons about the strengths and limitations of current approaches to define and monitor access to drinking water and sanitation. The methods that the Joint Monitoring Programme (JMP) uses to track access and progress are based on analysis of data from household surveys and linear regression modelling of these results over time. These methods provide nationally representative and internationally comparable insights into the drinking water and sanitation facilities used by populations worldwide, but also have substantial limitations: current methods do not address water quality, equity of access, or extra-household services. Improved statistical methods are needed to better model temporal trends. This article describes and critically reviews JMP methods in detail for the first time. It also explores the impact of, and future directions for, international monitoring of drinking water and sanitation.

**Measuring the Safety of Excreta Disposal Behavior in India with the New Safe San Index: Reliability, Validity and Utility.** *Int. J. Environ. Res. Public Health*, Aug 2014. M Jenkins. ([Link](#))

Methods to assess household excreta disposal practices are critical for informing public health outcomes of efforts to improve sanitation in developing countries. The authors present a new metric, the Safe San Index, to quantify the hygienic safety of a household's defecation and human feces disposal practices in India, where behavioral outcomes from ongoing public expenditures to construct household sanitation facilities and eliminate open defecation are poorly measured.

**Rural:Urban Inequalities in Post 2015 Targets and Indicators for Drinking-Water.** *Sci Total Environ*, Aug 2014. R Bain. ([Abstract](#))

The apparent stagnation at around 95 percent of drinking-water coverage in urban areas stems in part from relative population growth—over the last two decades more people gained

access to improved water in urban areas. There are calls for setting higher standards in urban areas that would exacerbate the already extreme rural disadvantage. Instead of setting different targets, health, economic, and human rights perspectives, the authors suggest that the focus should be kept on achieving universal access to safe water (primarily in rural areas) while monitoring progress toward higher service levels, including greater water safety (both in rural and urban areas and among different economic strata).

**Examining the Influence of Urban Definition When Assessing Relative Safety of Drinking-Water in Nigeria.** *Sci Total Environ*, Aug 2014. E Christenson. ([Abstract](#))

The objectives of this study were to: examine the influence of the urban extent definition on water safety in Nigeria; compare the frequency of thermotolerant coliform contamination and prevalence of sanitary risks between rural and urban water sources of a given type; and investigate differences in exposure to contaminated drinking water in rural and urban areas. Results suggest that different targets for urban and rural water safety are not justified and that rural dwellers are more exposed to unsafe water than urban dwellers.

**Comparison and Cost Analysis of Drinking Water Quality Monitoring Requirements versus Practice in Seven Developing Countries.** *Int. J. Environ. Res. Public Health*, July 2014. J Crocker. ([Link](#))

Monitoring activities were characterized in Cambodia, Colombia, India (three states), Jordan, Peru, South Africa, and Uganda according to water sector responsibilities, monitoring approaches, and marginal cost. Across seven study countries, few distinct approaches to monitoring were observed, and in all but one country monitoring relied on fixed laboratories for sample analysis. This is the first study to look quantitatively at water quality monitoring practices in multiple developing countries.

**Foreign Assistance: Briefing on U.S. International Water-Related Assistance,** July 2014. U.S. Government Accounting Office (GAO). ([Link](#))

Congressional requesters asked GAO to review the U.S. government's international water-related assistance. This report presents initial observations regarding U.S. agencies' funding for international water-related assistance and the extent to which the agencies complied with congressional spending requirements; roles and responsibilities of U.S. agencies providing international water-related assistance; staffing; and coordination and collaboration among agencies.

**How and Why Countries are Changing to Reach Universal Access in Rural Sanitation by 2030.** *The Water Blog*, July 2014. E Perez. ([Link](#))

The proposed JMP WASH post-2015 goals call for universal access to basic improved sanitation by the year 2030. Using primarily small scale project approaches that have failed to deliver sustainable sanitation service delivery—especially for the poor—most countries have not yet achieved the more modest MDG sanitation goals. However, many countries have already started working to achieve the goal of universal access by taking steps to make the transformational changes needed to stop doing “business as usual” in their sanitation programs.

**Data and Monitoring in the Indian Rural Water and Sanitation Sector: A Review of Current Status and Proposed Ways Forward.** *Journal of Water, Sanitation and Hygiene for Development*, July 2014. A Cronin. ([Abstract](#))

This paper reviews progress on monitoring and evaluation of WASH programs in rural India, focusing on government programs and the related data and monitoring initiatives. The current

state of the WASH sector is presented and discussed in terms of progress across geographical, wealth, and social groupings. Though progress has been made, key challenges include data quality, reliability, standardization, availability, reach to all social groups, and scaling up with quality services.

**Monitoring Country Progress in Water and Sanitation**, June 2014. The World Bank.

[\(Link\)](#)

Monitoring Country Progress in Water and Sanitation (MAPAS) is a regional initiative aimed at providing governments with a systematic framework for assessing and monitoring their performance in reaching national targets in water supply and sanitation services. MAPAS reveals the major bottlenecks hindering the achievement of national targets and the reform actions required to efficiently convert funding into quality, sustainable water supply and sanitation services for a country's population.

**Muddying the Water? Assessing Target-Based Approaches in Development Cooperation for Water and Sanitation.** *Journal of Human Development and Capabilities*, 15(2-3) 2014. M Langford. [\(Abstract\)](#)

The authors critically analyze two early periods of target setting together with the most recent incarnation of the Millennium Development Goals. In so doing, they identify two stories concerning the utility of such a turn to metrics: the first is a perennial and at times justified optimism in target setting, and the second is a more cautionary tale about the dangers of measurement and its tendency to gloss over challenging but significant issues. In addition, they offer some brief conclusions on the implications for the post-2015 agenda and some potential measurement alternatives.

**Progress on Drinking Water and Sanitation: 2014 Update.** WHO/UNICEF Joint Monitoring Programme on Water Supply and Sanitation. [\(Link\)](#)

This 2014 update report is split into three sections. The first section presents the status of and trends in access to improved drinking water sources and sanitation. The second section provides a snapshot of inequalities in access. The final section presents efforts to strengthen monitoring of access to safe drinking water and sanitation services under a post-2015 development agenda.

**Why "Improved" Water Sources are Not Always Safe.** *WHO Bulletin*, Jan 2014. A Shaheed. [\(Link\)](#)

Existing and proposed metrics for household drinking-water services are intended to measure the availability, safety, and accessibility of water sources. However, these attributes can be highly variable over time and space and this variation complicates the task of creating and implementing simple and scalable metrics. Given the complexity of the topic and current knowledge gaps, international metrics for access to drinking water should be interpreted with great caution. We need further targeted research on the health impacts associated with improvements in drinking-water supplies.

**Geographical Inequalities in Use of Improved Drinking Water Supply and Sanitation across Sub-Saharan Africa: Mapping and Spatial Analysis of Cross-Sectional Survey Data.** *PLoS Medicine*, Apr 2014. R Pullan. [\(Link\)](#)

Findings in this study identify important geographic inequalities in the coverage of access to improved water sources and sanitation that were previously hidden within national statistics. The accuracy of these findings depends on the accuracy of the data on water supplies and sanitation provided by household surveys, on the researchers' definitions for improved water

supplies and sanitation, and on their statistical methods. Nevertheless, these findings confirm that to achieve universal coverage of access to improved drinking-water sources and sanitation, strategies that target the areas with the lowest coverage are essential.

**Measuring Disparities in Sanitation Access: Does the Measure Matter?** *Trop Med Intl Health*, Jan 2014. R Rheingans. ([Link](#))

Initiatives to monitor progress in health interventions like sanitation are increasingly focused on disparities in access. The authors explored three methodological challenges to monitoring changes in sanitation coverage across socio-economic and demographic determinants: confounding by wealth indices including water and sanitation assets, use of individual urban and rural settings versus national wealth indices, and child-level versus household-level analyses. Among the conclusions: wealth indices estimated with water and sanitation assets are highly correlated with indices excluding them but can overstate disparities in sanitation access, and estimates and disparities in household-level coverage of improved sanitation can underestimate coverage for children under 5.

**Trends in Access to Water Supply and Sanitation in 31 Major Sub-Saharan African Cities: An Analysis of DHS Data from 2000 to 2012.** *BMC Pub Health*, 14:208 2014. M Hopewell. ([Link](#))

Based on Demographic and Health Surveys data, cities appeared to be making the most progress in gaining access to water supply and sanitation (WS&S) along metrics that reflect specified targets of the MDGs. Nearly half of the cities, however, did not make progress in reducing open defecation or the time spent collecting water. This may reflect that the MDGs have led to a focus on “improved” services while other measures, potentially more relevant to the extremely poor, are being neglected. This study highlights the need to better characterize access, beyond definitions of improved and unimproved, as well as the need to target resources to cities where changes in WS&S access have stalled, or in some cases regressed.

-----  
WASHplus Weeklies highlight topics such as Urban WASH, Indoor Air Pollution, Innovation, Household Water Treatment and Storage, Hand Washing, Integration, and more. If you would like to feature your organization's materials in upcoming issues, please send them to Dan Campbell, WASHplus Knowledge Resources Specialist, at [dacampbell@fhi360.org](mailto:dacampbell@fhi360.org).



---

**About WASHplus** - WASHplus, a five-year project funded through USAID's Bureau for Global Health, supports healthy households and communities by creating and delivering interventions that lead to improvements in access, practice and health outcomes related to water, sanitation, hygiene (WASH) and indoor air pollution (IAP). WASHplus uses at-scale, targeted as well as integrated approaches to reduce diarrheal diseases and acute respiratory infections, the two top killers of children under five years of age globally. For information, visit [www.washplus.org](http://www.washplus.org) or email: [contact@washplus.org](mailto:contact@washplus.org).