

Post-2015 WASH targets and indicators

A review from a Human Rights Perspective

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ABBREVIATIONS

CFU	Coliform Forming Unit
DHS	Demographic Health Surveys
ESRs	Economic and Social Rights
GC	General Comment
GDP	Gross Domestic Product
HH	Household
ICT	Information and Communication Technologies
JMP	WHO/UNICEF Joint Monitoring Programme
LGAs	Local Government Authorities
MDGs	Millennium Development Goals
MHM	Menstrual Hygiene Management
MICS	Multiple Indicator Cluster Survey
NGDOs	Non-Governmental Development Organizations
OHCHR	Office of the United Nations High Commissioner for Human Rights
PCA	Principal Component Analysis
SDGs	Sustainable Development Goals
UN	United Nations
UNICEF	United Nations Children's Fund
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization
WPM	Water Point Mapping
WRM	Water Resources Management

EXECUTIVE SUMMARY

The Sustainable Development Goals (SDGs) will be built on the former Millennium Development Goals (MDGs), and they will converge with the post-2015 agenda in one global development agenda beyond 2015. In the Water, Sanitation and Hygiene (WASH) sector, different consultations have been conducted in recent years, and of primary importance has been the process led by the WHO/UNICEF Joint Monitoring Programme (JMP). It takes already existing monitoring mechanisms as starting point, and makes use of the principles underlying the human right to water and sanitation as guidance for the formulation of new targets and indicators.

The aim of this work is twofold. First, it analyses the JMP post-2015 WASH targets and indicators, from a human rights perspective. Second, the report focuses on challenges and recommendations for a local level implementation of this monitoring proposal.

This research builds on a combination of relevant literature review and specific local experience from four case studies, namely the district of Kibondo (Tanzania), the districts of Homa Bay and Suba (Kenya), the municipality of Manhica (Mozambique), and the municipality of San Sebastián de Yalí (Nicaragua). All these case studies have been implemented by IS.UPC in collaboration with ONGAWA, UNICEF Kenya Country Office, UN Habitat-Mozambique and other local stakeholders.

A review of the Post-2015 proposal

The review first focuses on the proposed targets, and it specifically compares them with the MDG-related target, calling attention to their fundamental improvements according to the human rights framework: it is noteworthy their focus on universal access instead of improving just a few lives; the inclusion of targets beyond the household, their potential to monitor progression/retrogression in all nations not just the poorest, and their contribution in order to promote the progressive realization of these rights. It also points out shortages and impreciseness from a human rights perspective; They are outcome focus, thus no structural or process issues might be targeted and little attention is paid to States obligations; it is considered that they are vague according to disparities reduction and the situation of specific groups; and their approach to progressive realization only consider the idea of progress on water and sanitation service level but do not capture progressive realization in relation to maximum available resources.

Second, supporting indicators are discussed in depth, and the analysis is guided by the four fundamental considerations defined in the proposal: the levels of service, the new settings beyond the household, a reduction of inequalities and sustainability issues. The idea is to evaluate the actual influence of the normative content of the human rights to water and sanitation in indicators' development. It is evident that the human rights normative content has been taken into account in the levels of service, but with some deficiencies. For instance, more attention should be paid to adequately include acceptability or affordability issues. And despite the underlying idea of "progressive realization" when improving the service level from basic to intermediate, the approach adopted by the JMP proposals does not provide sufficient inputs to monitoring this essential human rights obligation. The importance of setting the focus beyond the households has also been highlighted in a rights context, and the new proposal incorporates schools and health centres as core information sources accordingly. However, it is not clear why some improvements related to services monitoring are considered at household level but not in the schools and health centres and vice versa. The proposal also deals with the challenge of non-discrimination and equality issues. It is imperative to design a methodology to measure inequalities, considering different inequities spheres and the inclusion of menstrual hygiene management issues as a relevant aspect to dignify women and girls. But measuring those human rights principles demands a context based approach in order to tailor the strategy to countries'

particularities. More efforts are also needed to avoid the perpetuation of some forms of discrimination.

In sum, the proposal is a significant step forward (in relation to MDGs) towards a monitoring framework where human rights elements are promoted, though it is noteworthy that few but significant flaws still remain unaddressed.

Challenges, opportunities and recommendations related to the local implementation of the proposal

At local level, there is an urgent need to improve the evidences in which decisions are made. The JMP framework has a great potential in this regard, but so far the debate has focused on national monitoring systems. Many challenges exist when moving to decentralised contexts. Methodologies for field data collection; appropriateness and usefulness of global indicators and targets; the institutional framework for monitoring mechanisms; and the potential uses of the data at local level are “hot spots” in this regard.

As regards the methodology for field data collection, more research is needed on valid sampling techniques to achieve reliable estimates at lowest administrative level. In relation to the fine-tuning of targets and indicators to cope with the specificities of the local level, it emerges as an opportunity to foster participation of local stakeholders and engage them in the monitoring framework. The institutional monitoring framework also poses challenges: local duty bearers need capacity development in the process of collecting, analysing and defining priorities; the rotation of Local Government Authorities (LGAs) technical staff is an obstacle to ensure the sustainability of local capacities; a lack of resources for data collection is common; and the lack of decision-making support systems adapted to local level, to transform data into useful outputs for targeting and prioritization objectives, undermines the usefulness of any monitoring initiative. Finally, lack of affordable and simple mechanisms for data update results in out-of-date and useless information. And where data is updated, it should be presented in a user-friendly format to improve and ease data interpretation. A variety of tools and methodologies exists for this purpose, such as rankings, links of planning indicators to possible remedial actions, and priority maps.

In all, one may conclude that the JMP post-2015 proposal, in charge of monitoring WASH targets in SDG agenda, is a great step forward and emerges as an excellent opportunity to demonstrate that human development and human rights’ approaches can benefit each other mutually to improve international and local monitoring systems.

1. RATIONALE

1.1. PURPOSE OF THE RESEARCH

The purpose of this work is twofold. First, the report offers an in-depth assessment of the WHO/UNICEF Joint Monitoring Programme Post-2015 proposal for monitoring the Water, Sanitation and Hygiene (WASH) sector from a Human Rights perspective. Second, it analyses challenges and recommendations for the implementation of this global monitoring initiative at the local level.

In 1990, WHO and UNICEF launched the Joint Monitoring Programme for Water Supply and Sanitation (JMP) to report on progress in access to water-supply and sanitation services. Since 2000, the Programme has been in charge of monitoring target C of the Millennium Development Goal (MDG) 7, a target specifically related to water and sanitation issues. During the 2010–2015 period, the JMP has provided the platform through which debate around the post-2015 goals, targets and indicators definition for the WASH sector, although this is not the only ongoing consultation process about the way water-related issues should be included in post-2015 agenda¹. And it is not clear that JMP proposal will be the one finally adopted. However, due to their relevant role in the sector, it is likely to significantly influence the technical design of the final proposal. It is noted that a more holistic approach to the water cycle requires paying attention to broader water issues beyond water, sanitation and hygiene, such as water resources management (WRM) and wastewater/water quality management. Hence these interlinked elements are somehow contained in GC15 (United Nations, 2002)², and different authors have pointed out their relevance in human rights content (Brooks, 2007; Cahill, 2005; Human Rights Council, 2013). The focus of this report is, however, on WASH-related issues, in coherence with the JMP post-2015 main task.

It is noteworthy that the JMP was not created for monitoring human rights, although it is true that the Programme includes outcome indicators that may be used to assess the status of the population's enjoyment of the rights from a human rights perspective (Green, 2001; Riedel, 2006). Therefore, while such indicators are highly relevant for human rights monitoring, they are not enough to determine the actual state of these rights in a given country (Green, 2001), as no information is provided about duty bearers based on structural and/or process indicators (Roaf, Khalfan, & Langford, 2005). In all, according to the first objective of the report, the review of the post-2015 WASH proposal focuses on analysing access (outcome) targets and indicators taking into account the human rights conceptual framework, instead of considering them as human rights indicators (see section 4). The approach adopted in this section is similar to the one proposed by Flores et al (2013), rather than to other initiatives which focus is on

This report offers an in-depth assessment of the WHO/UNICEF Joint Monitoring Programme Post-2015 proposal for monitoring the WASH sector from a Human Rights perspective, and analyses challenges and recommendations for the implementation of this global monitoring initiative at the local level

¹ There are different working streams in this sense: the Open Working Group, the High-Level Panel of Eminent Persons on the Post-2015 Development Agenda, the UN System Tasks Team on the Post-2015 UN Development Agenda or national, regional and global and thematic consultations. See "The Final Post 2015 Water Thematic Consultation Report" for an in-depth review of different consultations about water related issues and Sustainable Development Goals. <http://www.worldwewant2015.org/water>

² See article 23 about the obligation to protect the human right to water. It requires State parties to prevent third parties from polluting and inequitably extracting from water resources. Article 28 about the obligation to fulfil affirms that State parties should adopt integrated strategies and programmes to ensure that there is sufficient and safe water, including different aspects related to water resources management as reducing depletion of WR through unsustainable extraction, diversion and damming among other. Article 44 about violations also pays attention to this issues

monitoring a human right in its broad spectrum (Backman, Hunt, & Koshla, 2009; Riedel, 2006; United Nations, 2004).

The JMP contributions to monitoring the sector at the national, regional and global level are unquestionable, as it has considerably improved both the processes and approaches, and it has strengthened the comparability of water and sanitation outcomes over time and within countries. However, one important shortcoming is related to the scale in which estimates are produced because they cannot be exploited to assist Local Government Authorities (LGAs) with local planning (Giné Garriga & Pérez Foguet, 2013). The potential of the JMP framework has not been transferred to the decentralized level. Undoubtedly, methodologies and usefulness of information need to be revised and adapted to local contexts if there is a willingness to fully develop its potential.

Taking this background into account and considering the purpose of the research, the report is structured as follows. Section 2 describes the recent history of monitoring frameworks that have been developed during last decades. The methodological approach adopted in this review is outlined in Section 3. It provides background information about the case studies in which we partially base our assertions. The main part of the report is Section 4, in which post-2015 targets and indicators are thoroughly discussed, from a human rights perspective. Section 5 presents the challenges and recommendations to adapt the post-2015 proposal at local level. The document closes in Section 6 with a summary of main findings and concluding remarks.

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2. FRAMEWORKS FOR MONITORING WATER AND SANITATION: A HISTORY

The concepts “water service” and “sanitation service” focus on the delivery of water and sanitation to people. They therefore encompass the hardware to deliver water and sanitation, i.e. the system. But they also take into account the quantity of water of a given quality accessible by users (Moriarty et al. 2011), or the safety of a facility that is easily accessible and sustainably operated at the household level (Potter et al., 2011).

Taking as a point of reference these definitions of “service”, the term “service level” has been widely discussed and used to categorize and differentiate between qualities of service, typically through a set of defined and measurable indicators. This Section outlines the recent history of monitoring frameworks that were developed during last decades.

2.1. ASSESSMENT OF THE QUALITY OF SERVICE (1991)

One of the earliest approaches to water service monitoring was introduced by Lloyd and Bartram (1991), who stated that “the focus on increased coverage needs to be amplified to include improvement of the quality of service”. They proposed a strategy to survey progressive improvement of service quality in terms of health risk reduction, and the surveillance framework included a short list of indicators: 1) coverage, measured by the type of supply; 2) continuity, measured by hours per day and days per year that water is supplied; 3) quantity, measured by volume supplied per capita; 4) sanitary risk, measured by an *E. coli* count scale combined with sanitary inspection, and 5) cost, measured by the regular tariff paid per household (Lloyd & Bartram, 1991).

2.2. THE WATER SERVICE LEVEL (2003)

In 2003, Howard and Bartram reviewed the requirements for water from a health perspective, and derived a figure of an acceptable minimum to meet the needs for consumption and basic hygiene (G. Howard & Bartram, 2003). Different levels of service were summarized along a scale of linked indicators that included distance and time to the waterpoint and source reliability. On this basis, they defined the basic requirements that any water service should meet in order to sustain good health, and linked each increase in level (from no access to optimal access) to a decrease in associated health risk. This study confirmed a rapid decrease in water consumption as fetching time increases, and a poor hygiene behaviour in households with diminished water quantity available (S. Cairncross & Feachem, 1993).

2.3. THE WHO / UNICEF JOINT MONITORING FRAMEWORK (2006)

The UNICEF / WHO Joint Monitoring Programme for Water Supply and Sanitation (JMP) has been in charge of producing regular reports on the coverage and status of drinking-water and sanitation, and it is by large the most well-accepted monitoring strategy in current use. The coverage figures in assessments prior to 2000 referred to “safe” water supply and “adequate” sanitation, but consistent definition of “safety” and “adequacy” remained elusive (Joint Monitoring Programme, 2000). To improve on the comparability of data, the JMP formulated a set of core questions (Joint Monitoring Programme, 2006). Its expanded use worldwide in regularly conducted household surveys would produce more accurate estimates at country and regional levels. The harmonized definitions of coverage are technology-based. More specifically, the JMP assumes that certain types of technology are safer or more adequate than others; and consequently the terms “safe” and “adequate” are replaced with “improved”. The following water technologies are treated as improved: piped water to the dwelling, plot or yard, public standpipe, borehole with hand pumps, protected (lined) dug well, protected spring and rainwater collection. A water service ladder with three different rungs is proposed to describe the incremental progress in service delivery: “unimproved”, “improved” and “piped” (Joint Monitoring Programme, 2008). With regard to sanitation, a wide range of technologies might be in place, particularly for settings where low-cost solutions are required. Instead of distinguishing between technologies, the excreta disposal system is considered adequate as long as it is private (but not shared / public) and hygienically separated human excreta from human contact (Joint Monitoring Programme, 2008). As a result, “improved” sanitation is defined to include a house connection to a sewer or septic tank, a pour-flush latrine, a simple pit latrine and a ventilated improved pit latrine. In much the same way as with water supply, sanitation coverage is ultimately presented as a four-step ladder that distinguishes between “open defecation”, “unimproved”, “shared” and “improved sanitation”. Only population with access to improved water supply and sanitation is considered to be “covered”.

In addition to these regular coverage reports, and in response to the call for water quality measurements, the JMP piloted the introduction of quality tests in monitoring programmes through the Rapid Assessment of Drinking Water Quality (RADWQ) protocol (G. Howard, Ince, Schmoll, & Smith, 2012). The RADWQ initiative demonstrated the technical feasibility of water quality surveillance, but it also showed that such monitoring at large scale was economically not viable at a global level. Alternatively, Water Safety Plans were promoted as a standard feature of ensuring sustainable access to safe drinking-water (Joint Monitoring Programme, 2010).

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2.4. A HUMAN RIGHTS FRAMEWORK FOR WATER AND SANITATION (2010)

In 2010, the UN General Assembly and the UN Human Rights Council recognized water and sanitation as a human right (United Nations, 2010a, 2010b). These human rights have been interpreted by Irujo (2007) as the rights to the supply of these services³. In this sense, the recognition of water and sanitation as human rights provide new elements that should be taken into account when monitoring the levels of service. The approach to the monitoring of water and sanitation as rights-related outcomes is primarily fed by the previous proposals and frameworks, as some authors suggest (Flores et al., 2013). On the one hand, there are common issues of concern as availability or physical accessibility or quality. On the other hand, there are criteria and elements that arise directly from the human rights approach (affordability, acceptability, equality, non-discrimination). As analysed in this work, human rights perspective strongly influences SDGs targets and indicators, as opposed to the MDGs framework in current use.

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2.5. THE DOMESTIC WATER SERVICE LADDER (2011)

In 2011, the International Water and Sanitation Center (IRC) continued the ladder metaphor and developed domestic service delivery ladders for water and sanitation.

A five-rung water ladder was proposed, ranging from “no-service” to high service level (Moriarty et al., 2011). The ladder is based on categorizations of four indicators: quantity -measured in terms of litres per capita per day (lpcd) -, quality -referred to both microbial and chemical quality of the water, -, accessibility –referred to the ease with which people can get water - and reliability –measured as the extent to which the service performs according to expectations-. As regards sanitation, the authors suggested different service levels to distinguish between excreta and urine management, grey water, and solid waste. The ladder for excreta and urine management comprises four levels, two of which represent different types of acceptable service and two represent a limited or below standard service, which do not meet basic norms and do not properly merit the description (Potter et al., 2011). The proposed service indicators include accessibility, use, reliability and environmental protection.

2.6. POST-2015 GLOBAL MONITORING OF DRINKING-WATER, SANITATION AND HYGIENE (ONGOING)

Today, an ongoing consultative process is debating a consolidated proposal of targets and indicators for the post-2015 monitoring framework. Specifically, the objectives of this consultation include a revision of the strengths and weaknesses of the MDG targets in current use, a discussion about the relevance to future targets and monitoring of the human right to water and sanitation, and the development of new targets and indicators for use by 2015.

The specific objective of this work is to review the post-2015 monitoring proposal developed by JMP from a human rights perspective.

³ Irujo statement is in relation to the human right to water. The authors have extrapolated it to the human right to sanitation.

3. METHODOLOGY

This research builds on a combination of relevant literature review and specific local experience from four case studies. Details about the methodological are explained hereinafter.

3.1. LITERATURE REVIEW

An extensive literature review has been conducted about three main topics: i) the present JMP post-2015 global monitoring proposal: goals, targets and indicators, ii) the human rights to water and sanitation-related literature: normative and cross-cutting criteria, obligations and human rights methodologies for indicators definition, and iii) other WASH sector related documentation: different frameworks for monitoring WASH issues, and local level case studies for implementing monitoring mechanisms, etc.

First and foremost, and of outstanding relevance, is i) the JMP website, specifically the section about post-2015 monitoring which includes the proposal and the core documentation that have been reviewed⁴; and ii) the UN Special Rapporteur on the human right to safe drinking water and sanitation website⁵. Relevant documents published by other international organizations have also been widely used as a reference to better understand the human rights approach, in which base a critical review. Finally, other grey literature and academic publications have been consulted to deepen the analysis.

The OHCHR explicitly recognized that human rights instruments offer little guidance as the scope and content of the term sanitation, and that the contour of the human rights framework to sanitation remains imprecise

3.1.1. The human right to water and sanitation framework

Prior to the analysis of the post-2015 targets and indicators, a brief outline of the human rights framework is necessary. General Comment 15 (United Nations, 2002) is a milestone when interpreting the human right to water from a legal perspective. It is important to highlight that sanitation is not explicitly considered in this document. Some authors consider that the scope and core content of the right remain ill-defined in GC15 (Cahill, 2005), so the Office of the United Nations High Commissioner for Human Rights (OHCHR) began a work to clarify core inaccuracies (United Nations, 2007). In OHCHR report is explicitly recognized that “human rights instruments offer little guidance as the scope and content of the term sanitation” and that “the contour of the human rights framework to sanitation remains imprecise”. The appointment of an independent expert on the issue of human rights obligations related to access to safe drinking water and sanitation (United Nations, 2008) has been a relevant attempt to continue the work of clarification through her annual reports. It is important to point out that the UN Special Rapporteur regularly refers to “rights” to water and sanitation instead of using a singular noun, avoiding expressing sanitation as a co-right with water. Taken into account her approach, they will be treated as different human rights in this document.

When talking about the human right to water, the GC15 is an indispensable reference: “The human right to water entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses”⁶. It introduces the normative criteria of the human right to water: availability, quality, acceptability, physical accessibility and affordability (or economic accessibility). Special Rapporteur

⁴ <http://www.wssinfo.org/post-2015-monitoring/overview/>

⁵ <http://www.ohchr.org/en/Issues/WaterAndSanitation/SRWATER/Pages/CatarinaDeAlbuquerque.aspx>

⁶ General Comment 15, Article 2

gathers up these five normative criteria in her reports (United Nations, 2010) so those will be considered in this document as a reference of the human right to water normative content.

Sanitation has been considered the poor sister of water for decades. UN Special Rapporteur has tried to reduce this gap and focused the first year of her mandate on exploring and clarifying the scope and content of the human right to sanitation (United Nations, 2009). There are other important documents in this sense (COHRE WaterAid COSUDE and UN-HABITAT, 2008; M. Langford, Bartram, & Roaf, 2014). She provides a definition of sanitation based on rights dimensions. According to her report “sanitation can be defined as a system for the collection, transport, treatment and disposal or reuse of human excreta and associated hygiene. States must ensure without discrimination that everyone has physical and economic access to sanitation, in all spheres of life, which is safe, hygienic, secure, socially and culturally acceptable, provides privacy and ensures dignity” (United Nations, 2009). Therefore, the right to sanitation possesses specific qualities that demand unique attention, in comparison with the right to water. It is true that the normative content of the human right to sanitation could be borrowed from the human right to water, considering availability, physical accessibility, affordability, quality and acceptability as the five normative criteria. However, caution is necessary to consider differences among these human rights normative content when they refer to water or to sanitation. Even more, “it is important to approach this framework with a degree of flexibility, recognizing that some elements may be understood under multiple categories depending on the perspective of the reader” (United Nations, 2009)

Sanitation has been considered the poor sister of water for decades

On the other hand, both rights share some key elements according to the human rights framework:

In terms of the cross-cutting criteria, non-discrimination and equality, access to information and participation, accountability and sustainability are habitually considered. Because of its influence on SDGs, special attention will be paid to non-discrimination and equality issues.

The rights to water and sanitation, like any human right, impose three types of obligations on States parties: obligations to respect, obligations to protect and obligations to fulfil.

Water and sanitation are Economic and Social Rights (ESRs). One of the basic treaty obligations is to take steps to the progressive realization of these rights using the maximum of available resources. “The concept of progressive realization is premised on the recognition that fulfilling ESRs obligations requires economic resources and the financial constraints faced by many developing countries may make simultaneous and immediate fulfillment of all ESR rights obligations impossible” (Sakiko Fukuda-Parr, Lawson-Remer, & and Randolph, 2008). Therefore, progressive realization, depends on both i) ESR outcomes that people enjoy (results on ‘right holders’) and ii) policies to achieve such outcomes (conduct of duty bearers -mainly States-).

3.2. REGIONAL SETTING

In parallel to the literature review, three different East African settings and one from Central America has been selected as initial case studies to validate research findings, namely the district of Kibondo (Tanzania), the districts of Homa Bay and Suba (Kenya), the municipality of Manhica (Mozambique), and the municipality of San Sebastián de

Yalí (Nicaragua). Each study's specific characteristics according to sampling design and data collection key features are briefly summarized in Table 1.

Table 1 Sample design and data collection

Case Study	Adm. Division	Data collection (Nº HH)	Key features
Kibondo District (Kigoma Region/Tanzania)	20 wards	3656	<ul style="list-style-type: none"> - Data collection was undertaken primarily by ONGAWA in 2010 - Households were selected through stratified sampling, being the sampling plan designed to achieve representative estimates at ward level - In addition to HHs, 986 improved waterpoints were audited
Homa Bay and Suba Districts (Nyanza Province /Kenya)	5 divisions in each district	1157 in Homa Bay, 1215 in Suba	<ul style="list-style-type: none"> - Data collection was undertaken primarily by UPC-GRECDH in collaboration with UNICEF Kenya Country Office and other local stakeholders, in 2011 - Households were selected through stratified sampling, being the sampling plan designed to achieve representative estimates at division level - In addition to HHs, 254 / 240 waterpoints were audited, and 85 / 75 schools and 35 / 19 health centres were visited in Homa Bay and Suba respectively.
Manhiça Municipality (Maputo Province/ Mozambique)	18 bairros	1229	<ul style="list-style-type: none"> - Data collection was undertaken primarily by UPC-GRECDH in collaboration with UN Habitat - Mozambique and other local stakeholders, in 2012 - Households were selected through stratified sampling, being the sampling plan designed to achieve representative estimates at bairro level - In addition to HHs, 228 waterpoints were audited, and 16 schools and 2 health centres were visited
San Sebastián de Yalí Municipality (Jinotega Department/ Nicaragua)	75 communities	1657	<ul style="list-style-type: none"> - Data collection was undertaken primarily by ONGAWA in collaboration with UPC-GRECDH, the Municipality of San Sebastian de Yalí and other local stakeholders, in 2012 - The sampling Plan was undertaken to produce representative estimates at community level. Each of the 75 communities was divided into two subgroups: i) households not being served by a community-managed water supply system, and ii) households with self-provision. - In addition to HHs, 60 drinking water systems managed by rural committees were audited

4. FINDINGS

Global monitoring through targets and indicators is a powerful mechanism to assist governments to develop the necessary laws, policies, strategies and programs. In a sense, those aspects that are not stressed in targets are not going to be measured through appropriate indicators, and they will be rarely prioritized in decision-making. Against this background, the post-2015 proposal is broad in scope, and particularly, it has been guided by four fundamental considerations: reducing inequalities, the levels of service, the settings beyond the household and sustainability issues (Joint Monitoring Programme, 2013a). For clarity purposes, the report structures the review of the proposed targets and indicators on the basis of these pillars.

In brief, Table 2 summarizes JMP targets proposal, which is based on experts consensus⁷ (Joint Monitoring Programme, 2013a). Each target is related to a specific time horizon (Target 1: 2025 / Target 2: 2030 / Target 3: 2040). Sanitation, water and hygiene issues are considered in the targets, but not all of these three sectors are explicitly targeted in each time horizon. Moreover, three different settings are proposed, i.e. the household, the school and the health centre, and they are separately specified in each target for the different WASH dimensions. Figure 1 visualizes all these relations in a simple way, linking targets, sectoral focus and targeted settings. Targets are measured using a set of supporting indicators. Joint Monitoring Programme (2013a) classify them into headline indicators and sub-indicators⁸, as presented in Table 3. The post-2015 targets are analyzed in following Section, and steps forward and limitations are highlighted. Supporting indicators are revised in Section 4.2.

The proposed targets towards the post-2015 development agenda represent an advance in several issues, according to the human right to water and sanitation framework

4.1. TARGETS

To put targets and indicators in a functional framework, measurability issues are essential, although from a rights perspective, experts recall that this argument can be used to hide a lack of political willingness to focus on certain issues (United Nations, 2012). Langford (2010) even reveals that “targets could be used to avoid human rights commitments and perpetuate violations”.

Therefore, it is first observed that the proposed targets towards the post-2015 development agenda represent an advance in several issues, according to the human right to water and sanitation framework. First of all, Millennium Development Goals (MDGs) have been largely criticized due to its narrow focus on improving just the lives of some people. Particularly, Target 7c of MDGs, the one related to drinking-water and sanitation, aimed to “halve, by 2015, the proportion of people without sustainable access to safe drinking-water and basic sanitation”. It is worth mentioning that the new agenda sets the target of universal access to these basic services, thus no population group should be left behind (Targets 1, 2 and 3).

⁷ Second consultation in The Hague (3-5 December)

⁸ “Headline indicators are expressed in terms of people, while sub-indicators are expressed in terms of households, schools or health centres (as this is the basis on which data are collected)”. See Table 3 in section 4.2.1.

Table 2 Post-2015 JMP targets proposal

Type of Target	Description
2025 Interim target (target 1)	By 2025 no one practices open defecation, and inequalities in the practice of open defecation have been progressively eliminated.
2030 Interim target (target 2)	By 2030 everyone uses basic drinking-water supply and handwashing facilities when at home, all schools and health centres provide all users with basic drinking-water supply and adequate sanitation facilities, handwashing facilities and menstrual hygiene facilities, and inequalities in access to each of these services have been progressively eliminated.
2040 Main target (target 3)	By 2040, everyone uses adequate sanitation at home, the proportion of the population not using an intermediate drinking water service at home has been reduced by half, the excreta from 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 drinking water, sanitation and hygiene services are delivered in a progressively affordable, accountable, financially and environmentally sustainable manner.

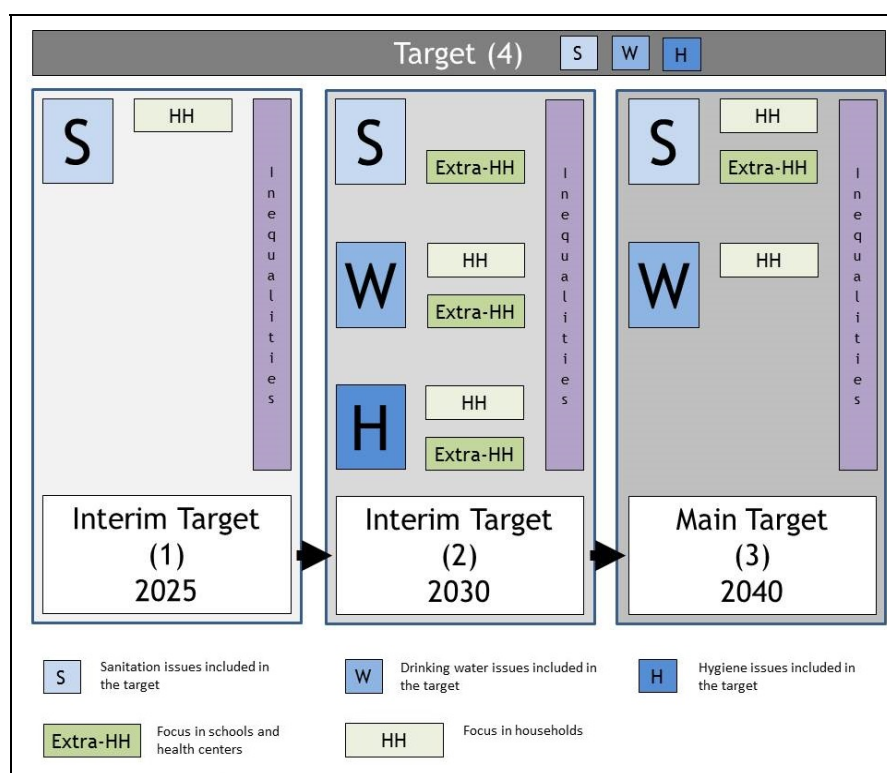


Figure 1 Post-2015 JMP Targets proposal: Horizons, sectoral focus and sources of information. *Source:* Authors

Second, it is important to mention that settings beyond the household have been considered for targets design. According to the human rights framework, it is relevant since it is considered that gender discrimination is an issue of concern. This kind of

information is difficult to measure at the dwelling. For that reason, these other sources of information (schools and health centres) have a great potential to measure gender inequities in those settings beyond the household in a simple and cost-effective manner (Targets 2 and 3). Moreover, it is pertinent considering a human rights perspective, since governments should directly provide these services in those government-run institutions (United Nations, 2012).

Third, progressive realization is a general legal obligation on States parties according to the content of the human right to water and sanitation (United Nations, 2002). In this sense, it is noteworthy that the proposal includes targets to encourage progress on service levels, which is essential to avoid remaining at low levels of service. It can be said that the post-2015 agenda thus reflects an intention to promote the progressive realization of these rights (Target 3).

Fourth, menstrual hygiene management (MHM) is another innovation of this work-in-progress agenda that is important to highlight in relation to the human rights framework. MHM can be considered as a good proxy for information about discrimination against women and girls in sanitation and hygiene (United Nations, 2012), and Target 2 somehow capture this important issue.

Finally, MDGs indicators only apply to the poor countries. One of the good points of the SDGs is that they propose indicators that affect all nations, and not only the poorest. Target 4 relates to service delivery issues (sustainability, non-discrimination, accountability, etc.), as important aspects to address the needs of the “poor/discriminated that live in the rich countries”. However, the final definition of indicators will inform about the extent to which the developed countries will engage in improving the way the services are being delivered.

Despite these unquestionable improvements, the proposal still shows some deficiencies according to a human rights perspective, which are briefly outlined below.

The targets are outcome-focused (Joint Monitoring Programme, 2013a) so no attention is paid to structural or process-related issues. For that reason, it can be said that they don't put sufficient pressure on State parties to ensure that they are meeting their obligations; which is essential in a human rights approach.

As it was pointed out before, setting a target of universal access is a great step forward. However, human rights experts consider that it is insufficient to resolve inequalities (United Nations, 2012), one of the most important deficiencies of the MDGs approach according to a rights perspective. Narayan et al (2012) highlight that “without explicit attention to equity, progress will continue to be discriminatory and inequitable”. It is therefore considered that current monitoring mechanisms fail to incentivize the areas of greatest needs (Rheingans, Cumming, Anderson, & Showalter, 2011), and dedicated goals and targets with a focus on the neediest are essential. In other words, any political will to focus on inequalities reduction needs to pay unambiguous attention to capture fundamental dimensions of inequalities. Otherwise, the people who are discriminated against will continue to be discriminated against (United Nations, 2012). In consequence, it is essential that those additional elements are formulated as measurable targets. Targets 1, 2, and 3 somehow relate to this issue when they mention that “inequalities (...) have been progressively eliminated/reduced”, but its practical implementation through targets' indicators is not clear. Even more, there are no targets that explicitly focus on disparities reduction and the situation of specific groups.

The proposal includes targets to encourage progress on service levels, which is essential to avoid remaining at low levels of service

In all, it is considered that the post-2015 targets reflect a progressive realization of the human right to water and sanitation (Joint Monitoring Programme, 2013b). Despite targets that explicitly consider the idea of progress on water and sanitation service level, progressive realization, as it is considered in human rights field, entails a broader range of objectives. These targets do not capture progressive realization of human rights subject in relation to maximum available resources, an essential issue in treaties on economic, social and cultural rights. There are attempts that take into account these issues. Fukuda-Parr et al (2008) propose an Economic and Social Rights Fulfilment Index that adjust outcomes with a measure of the State capacity, using Gross Domestic Product (GDP). Other authors (Luh, Baum, & Bartram, 2013) propose an index which combines outcome, structural and process indicators to monitoring progressive realization in water and sanitation sector specifically.

4.2. MONITORING ISSUES: INDICATORS AND INFORMATION SOURCES

4.2.1. Levels of Service

There are different understandings of what constitutes an acceptable level of service, since different contexts and user groups will probably show widely differing needs. Thus, standards should be defined taking into account local conditions according to the human rights considerations (United Nations, 2012). However, given the adoption of access to water and sanitation as a human right, it is probably adequate to define access through minimum acceptable norms for quantity, quality, accessibility and reliability of the service. In brief, service level could be defined through a set of measurable indicators that, taken together, allow qualitatively different types of service to be defined and monitored (Moriarty et al. 2013).

Water

Typically, indicators against which the quality of a water service is assessed include quantity - measured in litres per capita per day-; distance -from the household to the water point-; quality -both chemical and biological parameters-; and reliability -defined as the proportion of the time that it functions to its prescribed level-. It is against this background that the post-2015 indicators for drinking-water primarily assess the issues of availability and accessibility. In addition at household level, water quality is included as a key criterion (see Table 4).

The core indicator uses the type of technology as a proxy for a binary categorization (improved / unimproved) of drinking water sources. It also highlights the issue of service reliability, assuming the fact that health benefits attributed to the consumption of safe water are almost entirely lost if raw water is consumed even once over the course of a few days (Hunter et al. 2009). A water service can be interrupted because of functionality/management reasons or seasonality issues, and both aspects are properly included in the proposed indicator. Finally, water quality is also tested at the point-of-use, since literature elsewhere shows weak evidences to establish the relationship between safe water and improved sources (Joint Monitoring Programme 2011; Jiménez and Pérez-Foguet 2012; Onda et al. 2012). It may be assumed that water quality testing somehow replaces the former indicator related to household water treatment, thus producing more accurate and reliable figures since the impact of household water treatment on health has not yet been sufficiently documented, and the acceptability,

From a human rights perspective, it is probably adequate to define access through minimum acceptable norms for quantity, quality, accessibility and reliability of the service

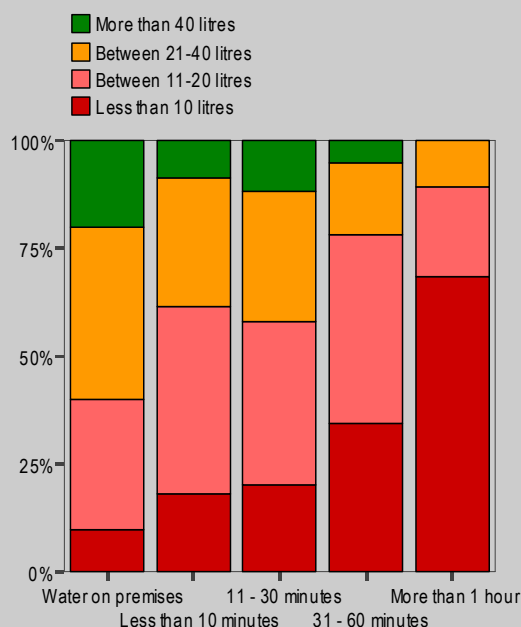
scalability and feasibility of this approach are still to some extent uncertain (Schmidt and Cairncross 2009).

In the end, it can be noted that all these variables are combined into one single composite index -defined as “% of population using an improved drinking water source on premises with discontinuity less than 2 days in the last 2 weeks; with less than 10 CFU *E. coli* / 100 mL year round at source; accessible to all members of the household at the times they need it”⁹- which may produce misleading messages. The loss of information in the aggregation process should be taken into account in index construction (Giné & Pérez-Foguet, 2010). Thus, one might argue that the information in the variables is more relevant than in the final single indicator.

A complementary indicator assesses the distance to the source, as this parameter may limit the quantity of suitable water that is available to a household for domestic purposes (see Box 1). In particular, research has shown that those spending more than half an hour per round trip progressively collect less water (Whittington et al., 1990; Cairncross & Feachem, 1993; Hutton & Haller, 2004), and this has been proposed as the threshold distance. This research also shows a well-defined ‘plateau’ of consumption that operates within boundaries defined by collection times equivalent to 5 to 30 minutes. In other words, there are minor changes in the quantity of water hauled within these boundaries, and it will not significantly increase until the collection time is reduced and water is delivered through at least a single tap on-plot (Cairncross and Feachem 1993; WELL 1998).

Research has shown that those spending more than half an hour per round trip progressively collect less water

Box 1. The linkages between water consumption and collection time



The data from Homa Bay confirms that water consumption for domestic purposes is primarily determined by the time spent in fetching water, and a clear correlation is observed between the per capita consumption and the distance to the waterpoint (see attached Figure).

Average consumption of water when it is piped on premises is acceptable in the majority of households (> 20 l/c/d), but decreases when water is supplied outside the home. There is little change in water consumption within the range of 5 to 30 minutes collection time. Beyond total collection time of more than 30 minutes, the quantity of water drops still further to a minimum where not even basic consumption needs can be met.

Interestingly, water use may be unexpectedly low even when the source of water is on the premises –more than 40% consume less than 20 l/c/d-; This idea could be linked with inadequate hygiene practices, which highlights the importance of hygiene education to promote behavioural change.

Source: GRECDH – UPC (2011)

⁹ See table 3.

Table 3 Supporting indicators related to the levels of service

Target	Source of information	Sector	Headline Indicators	Sub-indicators
Target 1	Household	Sanitation	% of population reporting practicing open defecation	% of population not using any sanitation facility. % of households in which open defecation is practiced by any household member. % of households with children under 5 reporting hygienic disposal of the stools of children under 5.
Target 2	Household	Drinking water	% of population using a basic drinking-water service	% of population using an improved drinking water source with a total collection roundtrip time of 30 minutes or less, including queuing.
Target 2	Household	Hygiene	% of population with basic handwashing facilities in the home	% of households with soap and water at a handwashing facility commonly used by family members. % of households with soap and water at a handwashing facility within or immediately near sanitation facilities. % of households with soap and water at a handwashing facility within or immediately near the food preparation area.
Target 2	Schools	Drinking water	% of pupils enrolled in primary and secondary schools providing basic drinking water, adequate sanitation and adequate hygiene services	% of primary and secondary schools with an improved drinking water source on premises and water points accessible to all users during school hours.
Target 2	Schools	Sanitation	% of pupils enrolled in primary and secondary schools providing basic drinking water, adequate sanitation and adequate hygiene services	% of primary and secondary schools with gender-separated sanitation facilities on or near premises, with at least one toilet for every 25 girls, at least one toilet for female school staff, a minimum of one toilet and one urinal for every 50 boys and at least one toilet for male school staff.
Target 2	Schools	Hygiene	% of pupils enrolled in primary and secondary schools providing basic drinking water, adequate sanitation and adequate hygiene services	% of primary and secondary schools with a handwashing facility with soap and water in or near sanitation facilities. % of primary and secondary schools with a handwashing facility with soap and water near food preparation areas. % of primary and secondary schools with a private place for washing hands, private parts and clothes; drying reusable materials; and safe disposal of used menstrual materials.
Target 2	Health Centers	Drinking water	% of beneficiaries using hospitals, health centers and clinics providing basic drinking-water, adequate sanitation and adequate hygiene	Percentage of hospitals, health centers and clinics with an improved drinking water source on premises and water points accessible to all users at all times.

Post-2015 WASH targets and indicators. A review from a Human Rights Perspective

Target	Source of information	Sector	Headline Indicators	Sub-indicators
Target 2	Health Centers	Sanitation	% of beneficiaries using hospitals, health centers and clinics providing basic drinking-water, adequate sanitation and adequate hygiene	% of hospitals, health centers and clinics with improved gender separated sanitation facility on or near premises (at least one toilet for every 20 users at inpatient centers, at least four toilets – one each for staff, female, male and child patients – at outpatient centers).
Target 2	Health Centers	Hygiene	% of beneficiaries using hospitals, health centers and clinics providing basic drinking-water, adequate sanitation and adequate hygiene	% of hospitals, health centers and clinics with a handwashing facility with soap and water in or near sanitation facilities, food preparation areas and patient care areas. % of hospitals, health centers and clinics with a private place for washing hands, private parts and clothes; drying reusable materials; and safe disposal of used menstrual materials.
Target 3	Household	Drinking water	% of population using an intermediate drinking water service	% of population using an improved drinking water source on premises with discontinuity less than 2 days in the last 2 weeks; with less than 10 CFU <i>E. coli</i> / 100 mL year round at source; accessible to all members of the household at the times they need it.
Target 3	Household	Sanitation	% of population using an adequate sanitation facility	% of population using an adequate sanitation facility. % of households where the sanitation facility is used by all members of household (including men and women, boys and girls, elderly, people with disabilities) whenever needed.
Target 3	Household	Sanitation	% of population living in households whose excreta are safely managed	% of households with adequate sanitation whose excreta are safely managed. Share of human excreta that reaches designated disposal sites.
Target 3	Schools	Sanitation		% of schools whose excreta is safely managed. Share of human excreta from schools that reaches designated disposal sites.
Target 3	Health Centers	Sanitation		% of health centers whose excreta is safely managed. Share of human excreta from health centers that reaches designated disposal sites.

In brief, the post-2015 proposal builds on existing indicators, but it considerably improves the scope by introducing some of the principles underlying the right to safe drinking-water. Specifically, the proposed indicators explicitly take into account availability, physical accessibility and quality human right to water normative criteria¹⁰. In contrast, the issue of gender disparities in water collection is no longer addressed. Although it is not included in the MDGs' target, gender issues has been dealt with through a core question¹¹ (Joint Monitoring Programme, 2006) that has been widely analysed in the annual reports (Joint Monitoring Programme, 2012b). It is an issue of concern taking into account the human rights framework, in a context where women still bear primary responsibility for collecting water, particularly in sub-Saharan Africa.

Sanitation

There are many definitions of sanitation. Consequently, the approaches to assess the sanitation service level differ greatly on the basis of the particular service indicators we address. From a human rights point of view, the issues of health and environment protection, privacy and dignity are essential (COHRE, WaterAid, SDC, & UN-HABITAT, 2008). And conceptually, the framework to define a sanitation service should include the (i) containment, (ii) collection, (iii) treatment, (iv) disposal and (v) reuse of human faeces and urine (Potter et al., 2011). The post-2015 sanitation proposal is comprised of indicators related to the practice of open defecation, the adequacy of the toilet facility and the management of the excreta, rather than a set of sanitation technology options. On the other hand, the proposal does not mention the sanitary conditions of the toilet nor does it effectively address the problem of acceptability.

No one can fully exercise the right to sanitation unless his or her community proceeds towards open defecation free status

One of the focuses of the proposal is to stop open defecation, in order to promote a clean and hygienic environment that benefits everyone. Open defecation contributes in various ways to a heavy disease burden (Musembi, 2010; Kar and Milward, 2011), thus it is not only a right for each person to access a sanitation facility, but also a right to be protected from excreta produced by others in the neighbourhood. In other words, no one can fully exercise the right to sanitation unless his or her community proceeds towards open defecation free status (M. Langford et al., 2014). Of primary importance in this regard is the disposal of children's faeces, since they are the most likely cause of faecal contamination to the immediate household environment. Hygienic disposal methods include putting or rinsing stools into a sanitation facility, or burying waste if a toilet is not accessible.

Another group of indicators focuses on the adequacy of the service. Specifically, it is asserted that the facility has to effectively separate excreta from human contact, and it should be conducive to the protection of the environment. A notable difference compared with the sanitation ladder in current use is that latrine sharing turns out to be an acceptable solution, as long as the facility is shared among no more than 5 families or 30 users who know each other (see Box 2). The platform or squatting slab which covers the pit should be constructed of durable, easy to clean material, thus minimising the risk of collapse. And the latrine should have a superstructure in order to ensure privacy. Finally, the facility must be accessible, which means that it must be available for use at all times of the day or night; it has to be designed to take account of the needs of

¹⁰ Affordability criterion is not included when considering levels of service, although it is a key element in terms of sustainability (see Section 4.2.4).

¹¹ Q3: Who usually goes to this source to fetch the water for your household?

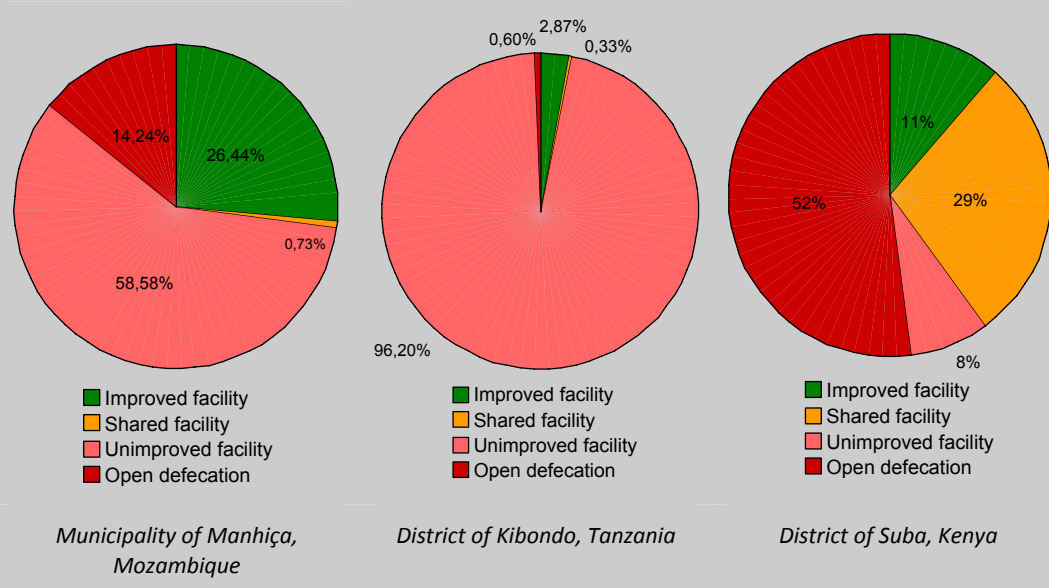
women and children, persons with disabilities, as well as those of elderly persons; and it has to be situated in a location where physical security can be guaranteed.

Box 2. Unimproved sanitation or open defecation?

Today, estimates of sanitation coverage may be somehow misleading, since unimproved sanitation does not distinguish between open defecation and latrine sharing. It is true that the sanitation ladder in current use produces separate estimates related to open defecation and shared latrines, but none of them are considered as “coverage”.

It is well known that access to improved and shared facilities or the practice of open defecation varies widely within different contexts. And for instance, while sharing the facility is a common practice in the district of Suba, Kenya (29%), it is not in Manhiça, Mozambique and in Kibondo District, Tanzania, where the vast majority of households (58.6 % and 96.2% respectively) use unimproved sanitation. As sanitation practice, in terms of health and environment protection, latrine sharing is markedly better than open defecation or unimproved sanitation. The recognition of this issue in the sanitation post-2015 proposal will therefore help produce more reliable coverage data.

The safe management of the household excreta is also considered as a relevant dimension in the new framework



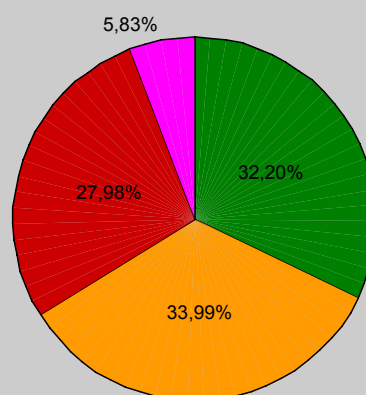
The safe management of the household excreta is also considered as a relevant dimension in the new framework, including the excreta containment, removal and transport to a designed disposal or treatment site, or its safe on-site reuse. It is important to recall that manual emptying of pit latrines is considered to be unsafe and, in general, culturally unacceptable. Therefore, mechanised alternatives that limit the contact with faeces should be used, while protecting the right of sanitation workers to manage waste with no risk to their health.

As previously mentioned, the new proposal discloses two major shortcomings. First, the approach to sanitary conditions of the facility or safety issues should be improved (see Box 3). These are key elements as they might constrain a continued use of the infrastructure. In addition, a lack of the latrine’s maintenance may also result in a focus of disease transmission (Scott et al., 2003). Second, sanitation evokes the concept of human dignity, and toilets need at least to accommodate menstruation needs. In much the same way as the necessity of providing a handwashing facility in the vicinity of the

toilet, a water point should be positioned to enable use for culturally acceptable hygiene practices, including menstrual hygiene, and anal and genital cleansing.

Box 3. Sanitary conditions of the toilet facilities

In Kenya (Suba and Homa Bay Districts), the sanitary condition of the toilet facilities was visually evaluated, and particularly four different proxies were verified: i) inside cleanliness, ii) presence of insects, iii) smell, and iv) privacy. Data show that on average i) only one-half of observed latrines were found clean, ii) very few were fly-proof and insects were observed in 68% of the latrines, iii) an unpleasant smell was reported in almost three-quarters of inspected latrines, and iv) roughly two-thirds did present adequate conditions of privacy. Based on these proxies, an aggregated indicator estimated the sanitary conditions of the latrine, and it is highlighted that less than one-third of facilities (32%) presented ‘good’ sanitary conditions.



- Latrine in good sanitary conditions
- Latrine in acceptable sanitary conditions
- Latrine in poor sanitary conditions
- Latrine in risky sanitary conditions

There are a variety of hygiene behaviours that are of greatest likely benefit to health. These include among others handwashing with soap, hygienic stools’ disposal, particularly those of infants, hygienic food preparation and menstrual hygiene management

Source: GRECDH – UPC (2011)

Hygiene

There are a variety of hygiene behaviours that are of greatest likely benefit to health. These include among others handwashing with soap, hygienic stools’ disposal, particularly those of infants, hygienic food preparation and menstrual hygiene management (Joint Monitoring Programme, 2012a). From the viewpoint of monitoring, however, there has been a failure to identify robust indicators of progress, mainly due to the difficulty in measuring behavioural changes objectively (Biran et al., 2008; Curtis et al., 1993; Ram et al., 2010). In consequence, despite the fact that hygiene promotion is at least as cost-effective in reducing diarrhoea morbidity as the provision of water and sanitation services (S. Cairncross et al., 2010; Feachem, 1984), the MDGs has not included a specific target for this third item in the WASH triumvirate.

To overcome this situation, the post-2015 proposal focuses on the issue of handwashing with soap for target setting. It is noted that the safe use of sanitation facilities to dispose of stools has been already included as a sanitation supporting indicator. And of the three remaining themes, handwashing with soap is the one associated with the strongest evidence base, as it has been the subject of relevant research in recent years.

Specifically, spot checks of handwashing facilities are proposed as proxies for handwashing behaviour, since handwashing cannot be practiced without a handwashing station (see Box 4). Generally speaking, observed data are considered more objective than self-reported data; and particularly spot checks can be rapid and relatively easy to conduct in a range of settings from households to institutions. In addition, the presence of water and soap at the handwashing station may be useful predictors to infer handwashing behaviour (Luby et al., 2009), although these proxies do not always correspond well with actual behaviour (Biran et al., 2008), and they may be correlated with socio-economic status (Luby & Halder, 2008). At the dwelling, the assessment is

expected to include two key areas where hygiene promotion may have considerable benefit: the sanitation facility and the food preparation area.

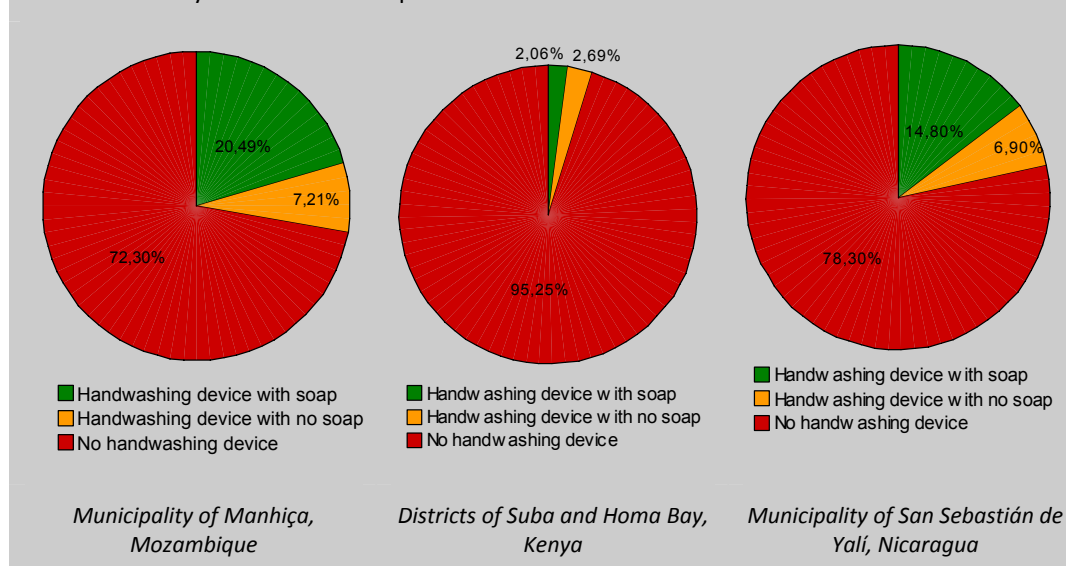
In spite of the unquestionable improvement in the approaches to monitoring hygiene, the post-2015 proposal is still subject to criticism. It has been previously highlighted that, from a rights perspective, the inclusion of menstrual hygiene in the monitoring framework is relevant, not only in terms of its impact on health but also on the social development of girls and women. In many cultures, menstruation is cause of shame, social stigma and school absenteeism, and poor menstrual hygiene potentially contributes to an increased risk of reproductive tract infections. For this purpose, one could advocate for the inclusion of proxy indicators to measure at least the “hardware” side of menstrual hygiene, i.e. to assess access to menstrual material; to water and soap; to adequate sanitation facilities that allow privacy; and to sanitary pads disposal facilities.

At the dwelling, the assessment is expected to include two key areas where hygiene promotion may have considerable benefit: the sanitation facility and the food preparation area

Box 4. Handwashing and the use of proxy indicators

The promotion of handwashing with soap has been suggested as a cost-effective intervention to reduce the occurrence of water-related diseases. However, much of the reported data on actual handwashing practice is unreliable.

The focus on responses to questionnaires about handwashing behaviour, where appropriate handwashing includes the time at which it is done and the technique used, may not reflect actual practice. On the other hand, structured observation may not be useful to capture individual practices for the purpose of identifying links with health outcomes, apart from being a time-consuming and expensive method. The use of proxy indicators seems to be an appropriate in-between solution; and literature suggests a variety of proxies for assessing handwashing practice. Among others, the presence of a handwashing facility, the availability of water in the facility, and an easy access to soap or other cleansing materials at the place to wash hands may be relevant examples.



4.2.2. Settings beyond the household

Household surveys provide an invaluable foundation for global WASH monitoring, and the “household” is indeed the most commonly used source for data collection. It is recognised, however, that a focus on households is not sufficient to deal with many

relevant questions, and hence needs to be complemented with other information sources (Joint Monitoring Programme, 2012c; United Nations, 2012). For instance, the assessment of menstrual hygiene management at schools is crucial as it offers an attractive opportunity to improve school attendance. Within this background, the post-2015 proposal prioritises the inclusion of schools and health centres to capture aspects not measurable at the household level and thus gain a clearer picture of the WASH context.

The education sector provides an excellent alternative to promote hygiene, since hardware at schools may be concurrently improved with knowledge, attitudes and behaviours. Such improvements may require large investment costs, but since the majority of children attend to school and are generally receptive to learning, school-based programs are potentially cost-effective interventions. In addition, children become well placed to act as health change agents within their families and communities. In much the same way as with the school sector, the health sector should play a relevant role in positioning hygiene issues within the disciplines of reproductive health and environmental health. It is noted, for instance, that specific needs of women are often unaddressed in the design of sanitation programmes. And issues beyond clinical health outcomes largely lie outside the remit of reproductive health (Joint Monitoring Programme, 2012a).

The education sector provides an excellent alternative to promote hygiene, since hardware at schools may be concurrently improved with knowledge, attitudes and behaviours

In terms of monitoring, an operational advantage is the existence of national monitoring systems for schools and health centres, in which basic hardware-related indicators are already being monitored. However, i) the coordination and integration of information between different sectors is still inadequate, and ii) data quality is poor, since the focus often is not on WASH but on education and health-related issues. These shortages are relevant as any attempt to address the links between the education, the health and the WASH sector must be holistic. They should go beyond the construction of facilities and include measurement of outcomes and impacts related to behavioural change. In this regard and from a rights perspective, the focus on universal handwashing and menstrual hygiene management is crucial and relevant, as discussed in previous section. A further positive aspect is the definition of adequate sanitation, as it encompasses accessibility issues and a gender-based approach.

A challenge in the educational and health sector is, conversely, the failure to reach children who are not in school and people who do not access the health facilities, as they are also likely to be the poorest and those who face the largest health risks.

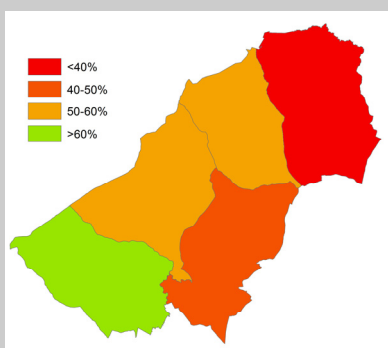
In addition, and besides schools and health centres, the water point in rural areas and the urban water utilities may help gain an insight into operational and management-related aspects of the water service. They may also provide a more accurate picture of coverage in case standard source:man ratio needs to be taken into account, as discussed in Box 5.

Box 5. Water coverage indicators

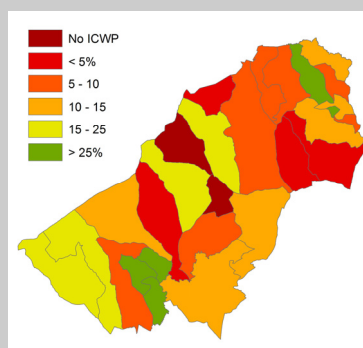
Access to water may be estimated in different ways. The focus may be on the availability and geographic distribution of waterpoints in combination with demographic data. Hence the access estimate is assessed on the basis of standard assumption on the number of users per water source (i.e. the source:man ratio, which in Kenya stands at 250 people per public tap). A complementary estimate may be produced at the household level, through the assessment of the type of waterpoint accessed by the household. The latter is the method currently employed by the JMP.

One clear conclusion might be drawn on the basis of the attached Figures. The coverage level of improved water points at the household or at the waterpoint are substantially different; i.e. the standard source:man ratio is not followed up in practice.

Source: GRECDH – UPC (2011)



Water coverage, estimated at the household level (Homa Bay District, Kenya)



Water coverage, estimated on the basis of a source:man ratio (Homa Bay District, Kenya)

There is a wide concern that non-discrimination and equity issues related to fulfilling these human rights should be reflected in future indicators

4.2.3. Reducing inequalities

As it was said before, it is widely recognised that MDGs focus on average global progress is an important reason to explain the poor progress reported for the most marginalized individuals and groups. This is why there is a wide concern that non-discrimination and equity issues related to fulfilling these human rights should be reflected in future indicators. Principally, two different alternatives have been considered for this purpose:

1. Disaggregation of the data according to different characteristics of discrimination: geographic inequalities, socioeconomic disparities, group-related inequities or individual- related inequalities. The Special Rapporteur considers that it “is a powerful tool for the collection of detailed and accurate information”, but it is not enough and something else is necessary to encourage inequalities reduction (United Nations, 2012).
2. Definition of stand-alone goals, targets and indicators.

There is a longer tradition in relation to the first alternative in the development sector, and particularly in WASH monitoring initiatives. The JMP (2011) has analyzed global, geographical (rural-urban), socioeconomic (using wealth quintiles), and gender (in relation to the burden of collecting water) inequities based on data from MICS and DHS, and it has produced a relevant example in relation to monitoring equity and inclusion (Narayanan et al., 2012). However, there are other fields that need further attention:

1. Improved monitoring of slums when measuring geographic inequalities.
2. Adequate characterization of group-related inequalities, as they may vary across countries. It is necessary to focus on discrimination based on ethnicity, race, nationality, language or religion.
3. Stronger focus on individual-related inequalities, i.e. sex/gender, age and disability (United Nations, 2012).

The post-2015 agenda seems to progress consistently as it is proposed to disaggregate data in four different ways to reflect the population groups cited above¹² (Joint Monitoring Programme, 2013a).

As regards the second alternative, it is observed that huge efforts have been made in the post-2015 agenda to incorporate equity and non-discrimination elements into future targets and indicators, as it is suggested from a human rights perspective. For instance:

- There are several indicators that incorporate an intra-household equity approach. It is the case of those indicators at household level (Target 1 and 3) that explicitly mention “(...) accessible to all members of the household” or “(...) by all members” or “(...) any household member¹³”. It is certainly a step forward as intra-household inequities are an issue of concern.
- According to individual related inequalities, it is also outstanding the effort to assess separately the male-female sanitation facilities in schools and health centres. There are indicators that specifically mention this relevant element, necessary for the recognition of women and girls necessities. In the same line, the inclusion of monitoring issues related to a proper MHM is also relevant, as it is considered a good proxy to measure discrimination against women and girls in sanitation and hygiene.
- According to the Joint Monitoring Programme (2013a), disadvantaged groups will be identified through participatory national processes taking into account prohibited grounds of discrimination. This is an adequate approach, taking into account the recommendations of human rights experts (United Nations, 2012). Moreover, a proposed methodology for monitoring reduction/elimination of inequalities has been designed (Joint Monitoring Programme, 2013a).

Disadvantaged groups will be identified through participatory national processes taking into account prohibited grounds of discrimination

Despite these unquestionable advances, there are some shortages that still persist and elements that need to be taken into account:

- There is no clear definition of the population groups considered in the monitoring framework, especially in relation to disadvantaged groups, and it is not easy to foresee the relevance of such inequalities in the monitoring outcomes. The method by which these context-based types of discrimination will be assessed is also unclear, and there is thus a risk that important areas of discrimination will not be considered. Moreover, the methodology proposes a kind of aggregated indicator to evaluate different fields of discrimination. It is a function where under performance in some fields can be compensated with over performance in others. Only one out of the four criteria deals with “disadvantaged groups”, which includes a variety of discriminatory issues such

¹² The groups considered are i) rich and poor, ii) urban and rural, iii) slums and formal urban settlements, iv) disadvantaged groups and the general population.

¹³ When talking about no open defecation

as ethnicity, race, nationality, language, religion, sex/gender, age or disability. Finally, the scoring proposal may lead to situations where countries with no progress in any of these fields are classified as “on-track”¹⁴.

- Wealth quintiles are used as a common technique to measure disparities based on socioeconomic status. Due to “direct” measures of living standards are often unreliable, unavailable or expensive and difficult to collect (Filmer & Pritchett, 2001) the use of asset-based indexes have been widely used for this purpose. This approach still is, however, subject to criticism. Houweling et al (2003) warn that the choice of assets influences the outcomes observed. In the same line, it is necessary to keep in mind that “DHS only include a limited number of durable consumer goods, whereas items that the poor and inhabitants of rural areas are likely to own are not included” (Houweling et al., 2003). And in terms of the weighting technique when constructing the index, the Principal Component Analysis (PCA) “may produce odd results when applied to short lists of items”, as a single item can wrongly influence the result (Houweling et al., 2003).

Sustainability is included as a fundamental consideration in the post-2015 agenda. Issues of affordability, accountability, as well as financial and environmental sustainability are explicitly reflected in Target 4

4.2.4. Sustainability

Sustainability is included as a fundamental consideration in the post-2015 agenda. Specifically, the idea is to highlight the issues of affordability, accountability, as well as financial and environmental sustainability (Joint Monitoring Programme, 2013a), ideas that are explicitly reflected in Target 4. This target seems to be a little bit a mixture of different concepts which are “difficult” to put into practice but that “have to be included somehow”. It can be interpreted, however, as a hazard, due to the existing risk of trivialisation of these fundamental elements.

It is noteworthy that experts consider that GC15 does not precisely clarify the core content and the wider scope of the Right to Water from different angles (Cahill, 2005). For instance, the concepts “sustainable water service provision and management” are specifically underlined since the human right to water is probably not the best framework to analyze sustainability issues. The Special Rapporteur encourages the JMP to explore ways to complement household survey data with additional information sources when monitoring WASH targets to better comply with human rights requirements (United Nations, 2012). This idea is especially appropriate when talking about sustainability parameters. And although questionnaires for post-2015 targets and indicators are not available yet, it is clear that additional sources of information will be necessary (Table 4). It is recalled in this regard that relevant attempts to monitor service sustainability in the WASH sector already exist (Jiménez & Pérez-Foguet, 2011), and they may provide interesting inputs for the post-2015 agenda final definition.

Affordability and accountability are considered as sustainability-related parameters in the post-2015 JMP proposal, which is coherent with a service delivery approach. Undoubtedly, it is positive that these dimensions are integral to the established monitoring mechanisms, and it should be interpreted as a step forward in including human rights into developing spheres. However, taking into account a human rights approach, it would be more pertinent to include affordability criteria as a parameter in

¹⁴ A Traffic Lights System will serve for the overall assessment of the progressive reduction of inequalities under each target, combining the four population groups (poorest vs. richest wealth quintile, rural vs. urban, slum vs. formal urban settlement, and disadvantaged groups vs. general population). Green implies “on track”, yellow shows that there is some progress, but that it is insufficient, and red means “off-track”. If 3 or 4 out of 4 disaggregated groups are on-track, it is assessed as green; 2 out of 4 is yellow; and 0 or 1 out of 4 is red (Joint Monitoring Programme, 2013)

Target 3, together with other normative criteria (availability, physical accessibility, and quality), in order to avoid potential misinterpretations of this concept. In a sense, while Langford (2010) alarmed about affordability omission in the MDG Declaration, the alarm may now be related to the way it has been included, as it does not point out the importance to guarantee the economic accessibility of the service.

Table 4 Target 4: Supporting indicators

Supporting Indicators
4.1. Percentage of population using water and sanitation service providers registered with a regulatory authority (disaggregated by rural and urban).
4.2. Percentage of population in the poorest quintile whose financial expenditure on water, sanitation and hygiene is below 3% of the national poverty line (disaggregated by rural and urban).
4.3. Ratio of annual revenue to annual expenditure on maintenance including operating expenditures, capital maintenance, debt servicing).
4.4. Ratio of annual expenditure on maintenance (including operating expenditures, capital maintenance, debt servicing) to annualized value of capital assets.
4.5. Percentage of raw water quality tests within national standards for faecal contamination.
4.6. EITHER Ratio of water production (lpcpd) to total water consumption (lpcpd) OR per capita renewable water resources.

GC15 refers to accountability basically on the sphere of mechanisms to ensure the implementation of national strategies or plans of action to realize the right to water, and to effective remedies at national and international level for those who have been denied their right to water

In any case, as it has been mentioned before, it is very relevant that international agencies and experts are beginning to pay attention to these issues at global level. Supporting Indicator 4.2 is defined as the “percentage of population in the poorest quintile whose financial expenditure on water, sanitation and hygiene is below 3% of the national poverty line (disaggregated by rural and urban)”, which is an attempt to monitor this unquestionably difficult-to-measure criteria. A common indicator proposed to measure affordability is the percentage of household expenditure on drinking water (COHRE AAAS SDC and UN-HABITAT, 2007; Roaf et al., 2005; Smets, 2009; UNDP, 2006) but it is not easy to determine the affordability index mainly because disposable income is notoriously hard to measure (Flores et al., 2013) . Post-2015 agenda evade the issue through a national-context standard as the poverty line.

Finally, Target 4 also deals with accountability issues. However, it is considered that related indicators do not precisely pick up these ideas, at least from a rights perspective. GC15 refers to accountability basically on the sphere of mechanisms to ensure the implementation of national strategies or plans of action to realize the right to water (art. 47 and 49), and to effective remedies at national and international level for those who have been denied their right to water (art. 55-59) (United Nations, 2002). Certainly, it is not easy to measure this criteria (Flores et al., 2013), as it requires a focus on structural and process indicators (Roaf et al., 2005). At local level, however, there are interesting attempts to treat this obligation (Laban, 2007).

5. LOCAL IMPLEMENTATION OF THE MONITORING FRAMEWORK

This section analyses the challenges, opportunities and recommendations related to the local implementation of the JMP post-2015 proposal. To this end, four key aspects are considered: i) methodologies for field data collection, ii) appropriateness, usefulness of global indicators and targets, iii) the institutional framework for monitoring mechanisms and iv) the potential uses of the data at local level.

5.1. METHODOLOGY FOR FIELD DATA COLLECTION AT LOCAL LEVEL

A variety of tools and techniques have been developed in recent years to collect primary data for the WASH sector, such as the Water Point Mapping -WPM- (WaterAid and ODI, 2005), the UNICEF-supported Multiple Indicator Cluster Survey -MICS- (United Nations Children's Fund, 2006), the Rapid Assessment of Drinking Water Quality -RADWQ- (G. Howard et al., 2012), and the Water Safety Plans (Bartram et al., 2009). Of particular interest amongst these are the household surveys, which use the household as the basic sampling unit, in a randomly clustered approach, since this is the information source by which water and sanitation indicators are usually assessed (Bostoen 2002; Joint Monitoring Programme 2006). These methodologies prove reasonably precise and thus valuable in large scale assessments. However, methodological problems arise when they are implemented at local scale to produce reliable inputs for planning support.

First critical shortcoming is related to the level of disaggregation in which data need to be presented, since national monitoring systems commonly do not produce local estimates. An issue of concern in local decision-making is the evaluation of the level of service for the area of interest (e.g. municipality or district) as a whole. But to influence and support local level policy development, the need for performance statistics at the lowest administrative subunits (e.g. communities, villages, etc.) is rapidly growing. However, the level in which information needs to be disaggregated at the local scale is high, as the number of communities / villages is large (Grosh 1997). In addition, the population size in each administrative subunit is often reduced, since the number of households typically ranges from 20 to 500. With these figures, the direct application of the standards commonly employed in large scale-surveys would produce too large samples, and one is therefore faced with the need to balance precision against cost when deciding the size of the sample. An adjustment in the process of sample size determination may be an in-between solution in these cases, as reduced sample sizes may be still valid to produce estimates with sufficient precision to be used in targeting and prioritization processes (Pérez Foguet & Giné Garriga, 2013, Under review).

A scientifically valid sampling methodology is also necessary to achieve reliable estimates. For national household surveys, a cluster sampling design has proved a practical solution, since the idea of taking a simple random sample of individuals across the country would be practically impossible (Bennett et al., 1991; Lemeshow and Stroh, 1988; United Nations Children's Fund, 2006). However, if sub-national or local estimates are required to assess separately the performance of the lowest administrative subunits, such sampling approach is not valid; and there is little choice but to opt for a stratified sampling, in which a sample of households is selected from each stratum (i.e. administrative subunit). In both cases, a defined number of households should be selected in a statistically random manner from a comprehensive list of all households in

First critical shortcoming of field data collection is related to the level of disaggregation in which data need to be presented, since national monitoring systems commonly do not produce local estimates

the subunit of study. If such a list lacks but the population size is small, the optimum alternative may be to create a list by carrying out a quick census. In those cases where enumerating all households is impracticable, literature suggests different sampling techniques to achieve a random or near-random selection (Bennett et al., 1991; Frerichs and Tar, 1989; Lemeshow and Stroh, 1988). They involve two stages: the identification of one or various households to be the starting point, and a method for selecting “n” successive households, preferably spread widely over the community. In the end, where a complete random exercise is not achievable, any methodology during the sampling process which promotes that the sample is as representative as possible would be acceptable, as long as it is clear and unambiguous, and does not give the enumerator the opportunity to make personal choices which may introduce bias.

The techniques employed for data acquisition also play a key role in terms of data reliability and validity (United Nations Children's Fund, 2006). A well-designed questionnaire helps elicit a response that is accurate and measures the things one seeks to measure. On the other hand, interviews with predetermined and closed-end questions are not conducive to study respondent's perceptions or motivations (Grosh, 1997), thus pointing out the need for employing alternative survey instruments to avoid bias in survey's outcomes. One example could be study of handwashing through structured observation, in order to avoid over-reporting of “desirable” hygiene behaviours (Manun'Ebo et al., 1997).

A well-designed questionnaire helps elicit a response that is accurate and measures the things one seeks to measure

Finally, there is an issue with the local capacities of decentralised bodies to participate in such data collection exercises. In an era where local capacities must be strengthened, this emerges as critical challenge, as further discussed in following section.

5.2. INDICATORS AND TARGETS

Targets and indicators proposed for global level monitoring may be relevant inputs for local level decision-making. Scholars have shown that these indicators provide policymakers with evidences to inform decentralised planning and targeting processes (Giné-Garriga, de Palencia, & Pérez-Foguet, 2013). In fact, the harmonised questionnaires designed by the JMP¹⁵ have been widely applied for multiple uses at local level, and probably, the new post-2015 proposal will be rapidly adapted to local contexts. From a human rights perspective, the local implementation of this nation-based mechanism poses a number of opportunities and challenges.

As it has been mentioned, comparability within countries is a fundamental issue on JMP and one of its main potentials. But it is precisely due to this comparability issue that the monitoring framework is rigid and poorly adapted to different contexts. This is an inherent limitation of the JMP when it is analysed through the human rights lens. “The human right to water entitles everyone to (...) acceptable water” (United Nations, 2002), and “sanitation facilities and services must be culturally acceptable” (United Nations, 2009). Acceptability is strongly linked to the reality on the ground, thus ensuring acceptable services means taking account of local realities and contexts (M. Langford et al., 2014).

Moreover, as the independent expert suggests, standards considered when measuring normative criteria indicators should take into account local level conditions and particularities (United Nations, 2010), so it is necessary to adapt the JMP framework into

¹⁵ See Joint Monitoring Programme (2006). Core questions on drinking-water and sanitation for household surveys. Geneva JMP.

a more flexible tool for local uses. Research on standards definition at the local level considering a human rights framework is, however, still missing (Flores et al., 2013).

This is very relevant since interventions are likely to be linked to what one can measure. As Singh et al (2008) suggest, appropriate action that considers the socio-cultural context is fundamental for facilitating realization of the human right to water by rural women. In the same line, Narayanan et al (2012) propose that detailed analysis of context-specific inequalities and exclusions in relation to sanitation and hygiene is essential for true implementation of the right to water and sanitation. The local level should therefore encompass an ad hoc data collection process that examines the context and identifies the barriers that hamper people's realization of such rights.

Access to information as well as individuals and groups participation in decision-making processes are outstanding principles of human rights (United Nations, 2002). For that reason, experts have pointed out the importance of allowing individuals and groups – particularly those whose rights are not realised or threatened- to develop and modify indicators and targets (Roaf et al., 2005). Up to date, the MDG consultation process has been strongly criticized for being top down instead of a grassroots effort (Alston, 2005). The post-2015 proposal emerges as a new opportunity to overcome this shortage when translating these ideas at local level.

In sum, there is no doubt that post-2015 targets and indicators will mean an improvement in monitoring water and sanitation according to the human rights framework. However, the challenge is not completely fulfilled. The process of adapting the proposal at the local level is a good opportunity to continue moving forward into better monitoring systems that put the human rights perspective into a functional framework.

As the independent expert suggests, standards considered when measuring normative criteria indicators should take into account local level conditions and particularities

5.3. DEVELOPING MONITORING SYSTEMS AT LOCAL LEVEL

As it has been already discussed, the JMP monitoring procedures present two important weaknesses: i) lack of accurate and representative data at local level, and ii) poor capacities of local technicians to undertake data collection exercises. In consequence, support at local level should focus on:

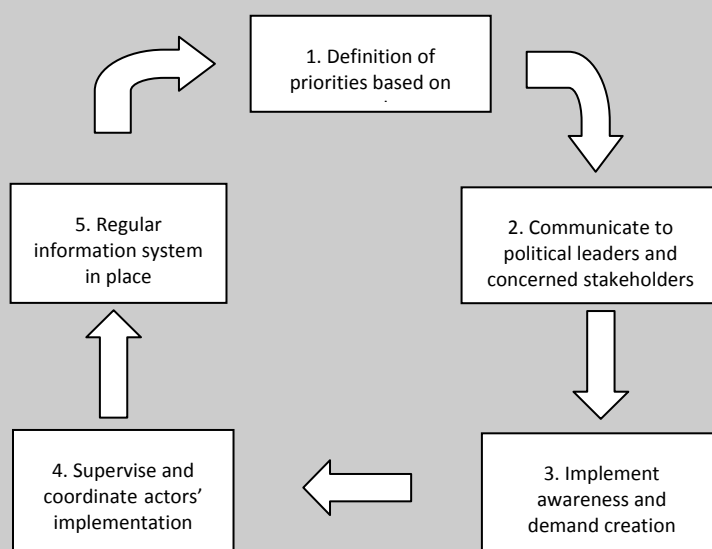
- Involve local duty bearers (typically government officers) in data collection methods, and allow for their capacity development in the process of collecting and analysing data, as well as in defining priorities based on the information gathered.
- Tailor surveys to the local context. The information collected should be coherent with the global framework, but exercises at local level may be more comprehensive and adapted to local specificities. The global monitoring framework tends to be focused on the minimum level of service required: hence, the indicators might be of limited use in certain regions or areas. In this sense, the use of the human rights based framework is useful to guide to incorporate new dimensions of service in local data collection mechanisms (Flores et al., 2013)

However, the process of data collection and use of such monitoring data at local level presents a number of challenges that need to be considered:

Box 6. Promoting interaction between the government and the users for data use and sustainability

The NGO ONGAWA has been working with local governments in Tanzania for over a decade. Among the initiatives proposed, two are highlighted: how to use monitoring information for planning, and the promotion of the interaction between water users and local government for the regular management of the services.

The framework for improved planning is presented in the following figure. It includes: i) the definition of priorities based on the needs (lack of access) and not in the demand (ability to have initial amount of cash and formal request letter); this priorities are officially approved in a District Priority Document; ii) the priorities are communicated to local political leaders, and other stakeholders (potential collaborators in the financing and implementation), and iii) prioritized villages are sensitized and trained on how to fulfil the requirements of the policy to access to new water services. When eventually the funds are available, iv) implementation has to be closely supervised, and if successful, v) the updated information will need to feed the Priority Document, which could be updated every 2 years.



Framework for the improvement of planning. Source: Jiménez and Pérez-Foguet (2010)

However, the increase of access to service has to be complemented with effective support to service management. To this end, a district water and sanitation unit support (DWUS) was created in Same District, who is in charge of the establishment, legalization, and timely assistance to water user entities (SDC, 2009b). It is formed by technical staff of departments concerned with water, and the team is in charge of continuous monitoring and support for the management of services, through regular visits to the communities and regular contact with WUE leaders, to detect and solve conflicts that might arise, and to supervise key aspects such as transparency in the management, affordability of the service and non-exclusion.

Despite these efforts, some challenges remain. The funds for recurrent costs at local government level are low, which makes it difficult to effectively support O&M at the community level. Additionally, LGAs lack capable human resources in many departments, exacerbated by continuous rotation of staff.

- Rotation of technical staff at local levels of government is significant; this needs to be considered as part of the context when acting at local level, since it is unlikely to change in the short term. Hence, the capacity development and

planning processes need to be included in the national capacity development framework for government officers, and repeated cyclically.

- Success is very dependent on “champions”; undoubtedly, many of these local initiatives rely on finding local champions that believe on the need of better monitoring data and better planning. However, champions might not be there forever. This fact also calls for the need of making the strategy of data collection as institutional as possible, including some other stakeholders that can press for it if it has been stopped. Of course, as long as these monitoring processes are nationally adopted, the task is easier.
- Lack of resources (technical and human) for data collection, including vehicles, equipment (GPS, Smartphones, etc...) or basic infrastructure (roads, network, energy) make the exercise difficult and expensive to roll out, at least in the short run.
- Lack of decision-making support systems, adapted to local level, to process, exploit and transform primary data into useful outputs for targeting and prioritization purposes, such as poverty maps, rankings and league tables, etc.

These challenges require for a long term commitment with the task of developing monitoring mechanisms that are used for decision making.

5.4. USE OF MONITORING DATA AT LOCAL LEVEL

Against the background cited above, data interpretation and analysis should be facilitated in different ways:

1. Developing tools and methodologies to ease interpretation,
2. Involving end users and other stakeholders in the process, so that the process is not entirely dependent on government’s commitment to it, and
3. Supporting the processes for regular update and accuracy of the information.

First, it is recognised that in order to improve evidence-based decision-making, two elements are necessary (Grosh, 1997): information must be analyzed to produce outcomes that are relevant to the policy question, and the analysis must be disseminated and transmitted to policymakers. For example, water and sanitation poverty maps may be powerful instruments for displaying information and enable non-technical audiences to easily understand the context and related trends (Henninger and Snel, 2002). Similarly, rankings and league tables are useful for establishing needs and priorities in a transparent way. In the end, both maps and ranks help target the most vulnerable segments of the population, who become the primary recipients of policy attention and public resources.

Second, a variety of actions may be in place to include other stakeholders in the process, such as:

- Development and promotion of spaces for participation between the government and other sectors of society. These are typically commissions and consultative committees that help to inform formal decision making within the government. However, this can go further towards participatory budget exercises, but legislation must be adapted to hold these exercises.
- Supporting that civil society is well organized around these issues, through water related networks or groups, aiming at a achieving a greater capacity for dialogue with the government.

In order to improve evidence-based decision-making, information must be analyzed to produce outcomes that are relevant to the policy question, and the analysis must be disseminated and transmitted to policymakers

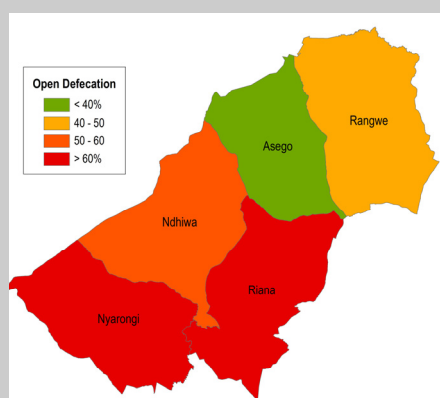
- Development of journalists’ capacities and interest on the water and sanitation related issues, including the development of networks, aiming at facilitating people’s access to information around these issues.
- Development of general awareness campaigns, either between targeted groups of stakeholders (associations, etc...), or the general public, about the rights and duties related to access to water and sanitation.

Box 7. Rankings and poverty maps as powerful prioritization tools

Unless data is easily accessible and is presented in a user-friendly format, decision makers will commonly do without the information. In addition, WASH-related poverty may follow a highly heterogeneous pattern, widely varying between and within different administrative units. As observed in the attached Figure, mapping permits a feasible visualization of such heterogeneity, and thus comes out an appropriate dissemination tool for sector planning, monitoring and evaluation support.

To denote priorities, however, ranks and league table may be more appropriate. Two different approaches may be adopted when defining prioritization criteria. In terms of regional equity, the goal would be to reach a minimum coverage threshold in every administrative subunit. But based on an efficiency criterion, those subunits with highest number of potential beneficiaries should be first targeted, regardless of coverage. As seen in the Table, one different ranking is produced depending on each abovementioned criteria, showing both ranks poor correlation. For planning purposes, the territorial equity criterion should be prioritized, as vulnerability is probably higher where coverage is lower.

The regular update of the information is a common weakness in all monitoring processes



Map of open defecation status (Homa Bay District, Kenya)

Division	% open defecation	Rank A (equity)	People practising open defecation	Rank B (efficiency)
Riana	0,667	1	59.965	3
Nyarongi	0,630	2	48.944	5
Ndhiwa	0,531	3	51.810	4
Rangwe	0,430	4	95.505	1
Asego	0,358	5	78.660	2

Ranking of priority divisions in terms of open defecation status (Homa Bay District, Kenya)

Finally, the regular update of the information is a common weakness in all monitoring processes. However, the validity of the information decreases with the time, and a very good planning process can be useless if there is no reliable data to feed it. To this end, it is important to consider regular costs for the update of the information. Moreover, designing a cheap and effective system is crucial, since most of the times the biggest investment is available for the set up, with little or no support for the follow up. On the other hand, the use of water and sanitation users, combined with ICT new developments, offer significant opportunities for almost live and potentially cheap update of data.

6. CONCLUSIONS

Practitioners, academics, researchers and civil society reached a consensus about targets and supporting indicators for post-2015 global monitoring (Joint Monitoring Programme, 2012d). In comparison with ongoing MDGs-related initiatives, the proposal is a significant step forward towards a monitoring framework where human rights elements are properly included:

- i. Human rights to water and sanitation may be understood as the rights to the supply of these basic services. It is therefore necessary to take the normative criteria as starting point when defining the levels of service. There is little doubt about the great influence of the human rights framework on the post-2015 proposal. And for instance, the explicit focus on improving from basic to intermediate service levels seeks to escape from poor levels of service, which is very much related to the legal obligation of progressive realization.
- ii. Human rights to water and sanitation explicitly mention the importance to expand the focus beyond the households. Accordingly, the new proposal incorporates schools and health centres as additional information sources.
- iii. Non-discrimination and equality issues have been an issue of concern from a human rights perspective during MDGs period, as they have been largely neglected. The new JMP proposal pays special attention to deal with this challenge, and it is for instance notorious i) the design of a methodology to measure inequalities, considering different inequities spheres; ii) the inclusion of menstrual hygiene management issues as a relevant aspect to dignify women and girls situation; and iii) the set of indicators that might be used to measure inequities even within rich countries.

In comparison with ongoing MDGs-related initiatives, the proposal is a significant step forward towards a monitoring framework where human rights elements are properly included

However, there are still some challenges unresolved in the proposal if the fulfilment of the human right to water and sanitation is considered in its broad spectrum:

- i. According to the normative criteria, more attention has to be paid to acceptability issues or affordability. It is questionable the inclusion of affordability as an element of sustainability and not as a criterion to characterize the service level.
- ii. There are no clear rules about the inclusion of some monitoring elements at the dwelling but not in the public institutions, and vice versa. For instance, quality of water is only tested at the household level, while MHM is only assessed at the schools and health centres.
- iii. Inequity is a critic issue and caution is necessary when defining a monitoring strategy. Among others, it demands a context based approach, and specifically, more attention should be paid to avoid the perpetuation of some forms of discrimination.

At local level, there is an urgent need to resolve the problem of poor or inaccurate data to support decision making. The JMP framework has a great potential in this regard, but it has not been adequately adapted to decentralized contexts. Some challenges and opportunities are pointed out below:

- According to the methodology for field data collection, further research is needed about the validity of sampling techniques to achieve reliable estimates at subnational level. Moreover, as the procedure for collecting information is

commonly based on national ad-hoc surveys, there is no chance of increasing the capacity to collect, analyse and decide upon the collected data.

- Targets and indicators defined at global level could be relevant for local applications. Hence the process of fine-tuning the JMP proposal to decentralized contexts is a good opportunity to make this monitoring framework more flexible. This is important to cope with the necessity to adapt proposed targets and indicators to local conditions and characteristics, which is of primary importance when dealing with normative criteria standards, as it is the case of “the elusive acceptability criterion” or for deepening into the roots of discrimination.
- Experiences of monitoring water and sanitation services at local level show that it still is an elusive aim. Local duty bearers need capacity development in the process of collecting, analysing and defining priorities. The rotation of LGAs technical staff is an obstacle to ensure the sustainability of local capacities. And a common need is also to face a lack of resources for data collection and a lack of decision-making support systems adapted to local level, required to transform data into useful outputs for targeting and prioritization support. Updating mechanisms are other weaknesses in local monitoring processes. Designing cheap and effective systems emerges as crucial.
- Data exploitation and analysis may be facilitated through simple tools and methodologies which ease interpretation. Ranking communities, linking indicators to possible remedial actions and priority maps are examples of tools that may help promote the use of data for decision-making. To be effective, however, the process of tools development demands the involvement and participation of end users and other stakeholders, which is coherent with a human rights-based approach.

Human development and human rights' approaches to water, sanitation and hygiene are in a position to learn and benefit from each other to ultimately improve international and local monitoring initiatives

To conclude, it is worth noting that human development and human rights approaches differ both in concepts and the way these concepts are used. And for these reasons, Fukuda-Parr (2011) states that “the human development indicators (...) cannot substitute for human rights indicators”. However, she also points out that human development analysis can benefit from human rights perspectives and vice versa, i.e. human rights analysis can benefit from the experience on human development sector in the use of quantitative methods and data. In line with previous assertions, the JMP post-2015 proposal to monitor WASH targets in SDG agenda, shows that human development and human rights' approaches to water, sanitation and hygiene are in a position to learn and benefit from each other to ultimately improve international and local monitoring initiatives. Furthermore, different types of users among human rights and development sectors may be interested in contributions and should collaborate in this work in progress.

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