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Indicator framework for monitoring SDG target on sanitation: a review through the lens of human rights

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With the end of the MDG era in 2015, the JMP has proposed a framework for integrated monitoring of post-2015 targets on water and sanitation. This article discusses about how each element of the proposed sanitation target and corresponding indicator can be understood from a human rights perspective. The discussion suggests that the proposal is a step forward towards a monitoring framework where human rights elements are effectively promoted. To support the implementation of the human rights obligations related to sanitation, the study proposes i) a practical definition of the normative content, and ii) a categorization of different levels of service based on a reduced set of easy-to-use normative elements.

Introduction

The WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (JMP) has been producing national, regional and global estimates of population using improved sanitation facilities since 1990. In 2000, it received a formal mandate to monitor progress towards the MDG drinking-water and sanitation target (7c), with two single indicators: access to improved sources of drinking-water and access to improved sanitation facilities. In this context, JMP has combined analytical, normative, advocacy and capacity development functions to accelerate progress towards universal access to these basic services. Admittedly, global indicators employed during the MDG period have fallen short of measuring progress in some key areas, such as those mentioned under the Human Right to Water and Sanitation (United Nations Human Rights Council, 2011): accessibility, reliability, affordability, sustainability and equality in access, among others.

Anticipating the need for a strengthened, comprehensive and more responsive post-2015 monitoring framework, the JMP has facilitated since 2011 international consultations on drinking-water and sanitation goals, targets and corresponding indicators (Joint Monitoring Programme, 2012). In 2015, the Open Working Group (OWG) on Sustainable Development Goals (SDGs) report to the UN General Assembly proposed a framework of 17 SDGs. (United Nations General Assembly, 2014). The proposal includes a dedicated goal on water and sanitation, which comprises six technical targets. Targets 6.1 and 6.2 seek to address the unfinished business and shortcomings of MDG target 7c and call for universal access to drinking water, sanitation and hygiene. As regards sanitation, target 6.2 reads "By 2030, achieve adequate and equitable sanitation and hygiene for all, and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations", and presumably it will be monitored by a new core indicator: "percentage of population using safely managed sanitation services" (Joint Monitoring Programme, 2015). The proposed indicator comprises three main elements: i) a basic sanitation facility (MDG 'improved' indicator), ii) which is not shared with other households, and iii) where excreta are safely disposed in situ or transported and treated off-site.

The aim of this study is to analyse the post-2015 sanitation target and the indicator cited above through the lens of human rights. More specifically, we evaluate the influence of the normative content of the human right to sanitation (HRtS) in indicators' development. To do this, we deepen our understanding of HRtS normative criteria through the operationalization of their definition into specific metrics. First, we propose a specific interpretation of the contents of the HRtS, particularly from a practitioner point of view. Second, the

study analyses if these normative criteria are well integrated into the post-2015 sanitation target and indicator.

Methodology

This research builds on a combination of literature review and specific local experience from three case studies. First, 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 documentation (papers, technical reports and grey literature) related to frameworks and approaches for WASH monitoring. In parallel to the literature review, three different East African settings have been selected as initial case studies, namely the district of Kibondo (Tanzania), the district of Homa Bay (Kenya), and the municipality of Manhiça (Mozambique).

Results and discussion

In recent years, the UN Special Rapporteur has tried to clarify the scope and content of the human right to sanitation (United Nations General Assembly, 2009). Various studies in the literature support her findings and recommendations (COHRE et al., 2008; Langford et al., 2014). In her report, the Special Rapporteur states that "sanitation can be defined as a system for the collection, transport, treatment and disposal or reuse of human excreta and associated hygiene". The report also points out that "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 General Assembly, 2009). From this, it can be inferred the specificities of sanitation as a human right. Yet, the normative content of the HRtS is actually borrowed from the human right to water, and the five criteria to define sanitation include - much like the HRtW - availability, physical accessibility, affordability, quality and acceptability.

In considering the content of these normative criteria, it is important to recognize that some elements may be understood under multiple dimensions, and that a degree of flexibility is needed in their interpretation. In other words, the classification of one element - e.g. physical location of the sanitation facility - as an issue of accessibility or availability is not as important as the fact of including this key aspect in the monitoring framework. It is equally true, however, that some guidance is needed to monitor the implementation of the HRtS. The identification and classification of those sanitation elements needed to define each of the five normative dimensions would provide practitioners with an adequate framework for monitoring the sector. The Table 1 is a step forward in this direction, as it elaborates the content of human rights obligations related to sanitation.

Interpreting the post-2015 sanitation target from a normative perspective

Taking the definitions included in Table 1 as starting point, this section discusses about how each element of the post-2015 sanitation target and corresponding indicator can be understood from a normative perspective.

To start with, the content of human rights obligations emphasises the importance of health and environment protection (COHRE et al., 2008). Conceptually, the framework to define a sanitation service should thus 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 approaches this framework by integrating elements related to the practice of open defecation, the adequacy of the toilet facility and the management of the excreta. By definition, the MDG categorisation of facilities between improved / unimproved focuses on the hygienic separation of excreta from human contact. In addition, the post-2015 proposal comprises one new element: excreta have to be safely disposed in situ or treated off-site. Another of the focuses is on ending, in order to promote a clean and hygienic environment that benefits everyone. Indeed, 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: no one can fully exercise the right to sanitation unless his or her community proceeds towards open defecation free status (Langford et al., 2014). In contrast, the classification of shared sanitation facilities as unimproved may be questioned. Public toilets or toilets shared between households, although not optimum, can be an interim solution where they are well-managed, kept in a hygienic condition and where access is affordable or free. Today, there is no clear consensus on considering certain categories of shared sanitation as "improved" (Giné Garriga et al., 2011). The post-2015 proposal makes it very clear that sanitation facilities must be physically accessible for

Table 1. Key concepts and composition of human right to sanitation normative criteria. *Source*: Flores et al (2015)

Criteria	Key Concepts	Definition
Availability	Sufficient number of facilities; Individual and/or shared facilities according to the context	There must be a sufficient number of sanitation facilities (with associated services) within, or in the immediate vicinity, of each household, health or educational institution, public institutions and places, and the workplace. Although it is tempting to determine a specific minimum number of toilets needed to meet the requirement of availability, such determinations can be counterproductive in human rights terms. It must be recognised that not only a latrine at home but also shared or even public facilities could satisfied availability criteria in some contexts. It is crucial that the assessment of the sanitation requirements of any community is informed by the context, as well as the characteristics of particular groups which may have different sanitation needs. In this regard, participation is a vital aspect of meeting human rights obligations related to sanitation.
Physical Accessibility	Reliable accessibility; Access at all times of day and night; Reasonable waiting times; Safe and convenient path for all; Easy-to-use and adapted technology	Sanitation facilities must be physically accessible for everyone; i.e. accessibility must be reliable, including access at all times of day and night and ensuring that waiting times are not unreasonably long. The location of sanitation facilities is critical as it must ensure minimal risks to the physical security of users. This has particular implications for the path leading to the facility, which should be safe and convenient for all users, especially, those with special access needs, such as children, persons with disabilities, elderly persons, pregnant women, parents accompanying children, chronically ill people and those accompanying them. Moreover, sanitation facilities should be constructed in a way that guarantees the physical integrity while using them, minimizing the risk of attack from animals or people, particularly for women and children.
Quality / Safety	Technical safety; Hygienic safety; Access to safe water for hand washing and other hygiene practices; Menstrual hygiene management; Hygienic cleaning and emptying of pits; Safe management and disposal of human urine and faeces	To meet the standard of quality, the focus is on both the individual user and the affected collective. As to the first, sanitation facilities must be technically safe to use, which means that the superstructure is stable and the floor is designed in a way that reduces the risk of accidents. Special attention should be paid to the safety needs of persons with disabilities, as well as the safety needs of children. Sanitation facilities must also be hygienically safe to use, which means that they effectively prevent human, animal and insect contact with human excreta, and that excreta is safely disposed in situ or treated off-site. Sanitation facilities must further ensure access to water for hand washing and anal and genital cleansing. The facility has to be equipped for adequate menstrual hygiene management, which includes the hygienic disposal of menstrual products. Regular cleaning, emptying of pits or other places that collect human excreta, and maintenance are essential for ensuring the sustainability of sanitation facilities and continued access. As to the collective dimension, quality is said to include regular cleaning, emptying of pits or other places that collect human excreta as well as maintenance for ensuring the sustainability of sanitation facilities and continued access.
Affordability	Reasonable price of sanitation services for all	Access to sanitation facilities and services, including construction, emptying and maintenance of facilities, as well as treatment and disposal of faecal matter, must be available at a price that is affordable for all people without limiting their capacity to acquire other basic goods and services, including water, food, housing, health and education guaranteed by other human rights. Water disconnections resulting from an inability to pay also impact on waterborne sanitation, and this must be taken into consideration before disconnecting the water supply
Acceptability	Cultural issues related to the service; Privacy; Gender issues	Sanitation facilities and services must be culturally acceptable. Personal sanitation is still a highly sensitive issue across regions and cultures and differing perspectives about which sanitation solutions are acceptable must be taken into account regarding design, positioning and conditions for use of sanitation facilities. In many cultures, to be acceptable, construction of toilets will need to ensure privacy. In most cultures, acceptability will require separate facilities for women and men in public places, and for girls and boys in schools. Facilities will need to allow for culturally acceptable hygiene practices.

everyone at all times of day and night. The location of sanitation facilities must ensure minimal risks to the physical security of users, particularly when they are not inside the house or in the household's compound. In addition, the HRtS entitles everyone to physical access to sanitation in all spheres of life. The JMP recommends that post-2015 monitoring should prioritise institutional settings, including schools, health care facilities and workplaces, where lack of access to WASH significantly impacts on the health, welfare and productivity. Another major focus of the normative content is on safety issues: the facility should be technically safe to use - the superstructure is stable and the floor is designed in a way that reduces the risk of accidents -, and hygienically safe to use. The proposed target is unclear, ambiguous and does not properly address this dimension, despite the fact that a considerable number of facilities often lack safe sanitary conditions. For instance, in those surveyed households where a latrine was used, its hygienic condition was visually evaluated, and particularly three different proxies were verified: i) inside cleanliness, ii) presence of insects, and iii), smell. The aggregation function employed to build up one single composite (i.e., index of latrine sanitary conditions) was the arithmetic mean of above-named three indicators. It can be seen in Figure 1 that in Tanzania roughly nine out of ten improved facilities do not present "acceptable" conditions, and similar percentages are reported in rest of countries. It is equally important to ensure that sanitation facilities and services are available at a price that is affordable for all people. The JMP plans to use available data on household expenditure, tariffs, income and poverty to start benchmarking affordability across countries and reporting national and global trends. Despite the likely utility of this monitoring approach to measure inequalities, this information might not be enough to fully understand the root causes behind the inability to pay. Issues such as willingness to pay, the educational level or cultural-based obstacles may also jeopardize the enjoyment of this right. In the case studies, households without their own latrine were asked why they did not have one. As shown in Figure 2, over three-quarters in Manhiça cite cost-related issues as the reason (81%). Interestingly, one out of ten households reports cultural-based obstacles, whilst in only 5% of interviewed households main reason for not having their own latrine is lack of habit to use the facility. Finally, sanitation evokes the concept of human dignity and acceptability. To be acceptable, construction of toilets should need to ensure privacy, and in most cultures, acceptability requires separate facilities for women and men in public places, and for girls and boys in schools. Similarly, facilities should allow for culturally acceptable hygiene practices, and particularly women's toilets would need to accommodate menstruation needs. It is still unclear how hygiene issues will be considered in the post-2015 proposal.

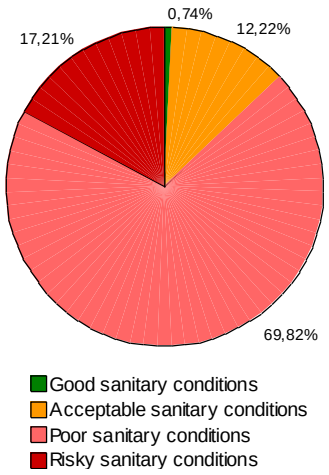

Figure 1. Quality: Sanitary conditions (Kibondo)

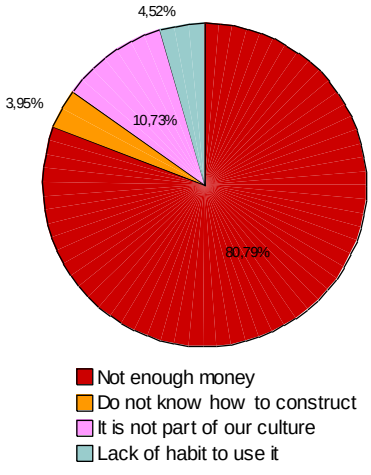

Figure 2. Affordability: Reasons for not having private latrine (Manhiça)

Improving the sanitation service ladder

As with the previous MDG framework, the JMP recommends to use a 'service ladder' approach to benchmark and track progress. In their methodological note (Joint Monitoring Programme, 2015), a five-rung ladder differentiates between improved facilities that are safely managed, those that are not correctly managed, and those of an otherwise improved type that are shared by more than one household. The ladder

Table 2. Indicator framework for post-2015 monitoring of sanitation

Sanitation Service Ladder	Indicator	Definition, based on the HRtS Normative Criteria				
		Availability	**Physical Accessibility**	**Quality / Safety**	**Affordability**	**Acceptability**
Safely managed sanitation	% of population using safely managed sanitation services	*, ** Improved sanitation in the household	* Access at all times of day and night * Safe and secure use of the facility * Safe access and convenient for all	Hygienically safe to use (clean, no insects and odour-free) Adequate condition of lined pit and upper superstructure Adequate hygienic practices (adequate menstrual hygiene management) * Hand-washing facility with soap in the vicinity of the latrine * Excreta is safely disposed in situ or transported to a designated place for safe disposal or treatment.	Sanitation is available at a price that is affordable for all people, without limiting their capacity to acquire other basic goods and services guaranteed by other human rights	Sanitation facilities are culturally acceptable to all (e.g. separate facilities for women and men where needed) Adequate conditions of privacy Adequate conditions of comfort
Basic Sanitation	% of population using a basic sanitation service	Improved / Shared sanitation within, or in the immediate vicinity, of the household	Partial access: the facility is available at least 18 hours per day Safe access (guarantees the physical integrity) but not convenient for all users, particularly those with special access needs, such as children, persons with disabilities, elderly persons, pregnant women, etc.	Poor hygienic conditions (poorly clean, few insects and a slight unpleasant smell) Inadequate condition of lined pit and upper superstructure Poor hygienic practices in the latrine Hand-washing facility with no soap in the vicinity of the latrine Excreta is disposed to a hole in the ground or leaching pit (protected, covered)	Sanitation is not available at a price that is affordable for all, but there are no households excluded from the service because of an inability to pay	Cultural issues hinder continued use of the latrine by part of the population Basic conditions of privacy Basic conditions of comfort
Poor Sanitation	% of population using a poor sanitation service	Improved / Shared sanitation located outside the household	Limited access: the facility is available less than 18 hours per day Unsecure: the physical integrity of users while using the facility is not guaranteed The path leading to the facility does not guarantee the physical integrity of users	Hygienically unsafe (not clean - faeces or urine on the floor -, insects and a strong unpleasant smell) No lined pit and / or no superstructure Unhygienic practices (inadequate menstrual hygiene management) No hand-washing facility in the vicinity of the latrine Excreta are deposited in or nearby the household environment. Excreta may be flushed to the street, yard/plot, an open sewer or other location.	There are households excluded from the service because of an inability to pay	Inadequate conditions of privacy Inadequate conditions of comfort
No Service	% of population with no service	Open defecation / ** Unimproved Sanitation				

Notes: * Indicator included in the proposed definition of adequate sanitation for the post-2015 period; ** Improved / Unimproved sanitation is defined as in the previous MDG period

also distinguishes between unimproved facilities and households practicing open defecation. Regrettably, only the highest rung of the ladder fully addresses the normative dimensions of the HRtS.

On the basis of the elements discussed above, and with the aim of producing a monitoring framework for the implementation of this human right, Table 2 defines different service levels to elaborate on the normative content related to sanitation. It makes a soft interpretation of the principle of "progressive realisation". The underlying idea is that progressive improvement in the level of service - from a rights perspective - would contribute to move upwards on the ladder. More specifically, moving up the ladder would necessarily mean that the different elements of all criteria have been fulfilled. In practice, the table is useful to illustrate how each level of service can be understood from a normative perspective. The elements proposed for monitoring are designed to match the normative interpretation as closely as possible, while recognizing that some of them are not yet possible to measure on a routine basis.

Concluding remarks

This study aims to interpret the proposed post-2015 sanitation target and corresponding indicator from a human rights perspective. It calls attention to the significant progress made in this regard during the transition from the MDG target 7c to the SDG target 6.2: i) the focus on universal access instead of halving the proportion of people with no access to clean water and basic sanitation; ii) the special attention given to the needs of women and girls and also to those in vulnerable situations; iii) the inclusion of institutional settings, such as schools and health care facilities; and iv) the definition of "progressive improvement", by basing the monitoring framework on service ladders.

More specifically, the study analyses the influence of the normative content of the human right to sanitation in target's and indicator's development. The achievements on this front are beyond question. For instance, an explicit effort is made to include accessibility issues. On the other hand, it is also true that increased attention should be paid to ensure that sanitation facilities are i) hygienically safe, ii) available at a price that is affordable for all people, and iii) culturally acceptable.

In sum, it can be stated that the post-2015 proposal is a step forward towards a monitoring framework where human rights elements are effectively promoted, but with shortcomings that remain unaddressed. On this basis, and to assist policymakers and practitioners with the interpretation and implementation of the normative content of human rights obligations related to sanitation, we propose in this study i) a practical definition of these normative criteria, and ii) a categorization of different levels of sanitation service based on a reduced set of easy-to-use normative elements.

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