

POLICY NOTE

Examining the Practice of Developing Human Rights Indicators to Facilitate Accountability for the Human Right to Water and Sanitation

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Abstract

Flowing from the evolution of international legal obligations for water and sanitation, human rights practice has shifted to address state accountability for a human right to water and sanitation through the development of human rights indicators. This policy note focuses on efforts to develop indicators for state reporting to human rights treaty bodies, with human rights norms framing national reports and treaty bodies employing indicators to monitor the progressive realization of the human right to water and sanitation. In supporting evidence-based treaty monitoring through the United Nations (UN), both the UN High Commissioner for Human Rights and the UN Special Rapporteur on the human right to safe drinking water and sanitation have sought to develop indicators. This process of developing indicators for the human right to water and sanitation seeks to draw on previous indicator development practices, looking to these practices in framing, identifying and reviewing indicators. As part of a larger drive to facilitate rights-based accountability, there arises an imperative to study the political process of developing indicators, looking to past models in structuring future processes to assess the realization of the right to water and sanitation. Exploring the development of indicators for the human rights to health and education, this policy note analyses the indicator development process, proposing an indicator development process model as a basis for developing indicators that reflect the attributes of the right to water and sanitation, enlist key stakeholders in the policymaking process and have political relevance for state reporting to treaty bodies.

Keywords: accountability; water and sanitation; indicators; human rights treaty bodies; post-2015 agenda; United Nations

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Introduction

Examining the development of human rights indicators as a tool to facilitate international accountability for national obligations, this policy note analyses the practice of developing indicators for the human right to health and the human right to education in order to inform the development of indicators for the human right to water and sanitation. With human rights accountability engaging a wide range of mechanisms for the progression of human dignity—including human rights litigation, national policy evaluation and ‘naming and shaming’ advocacy—human rights indicators provide a means of independently assessing the progressive realization of rights. Whereas indicators have been sought as a means to structure UN reports, field investigations, organizational agendas, judicial decisions, foreign assistance, civil society reports and Universal Periodic Review (UPR) (with each indicator development process engaging different stakeholders and practices), this policy note focuses on current efforts to develop indicators for monitoring state realization of human rights through the UN’s human rights treaty bodies. As indicator development has progressed for the human rights to health and education, which share normative origins and treaty body mechanisms with the human right to water and sanitation, an examination of these two past processes provides a rich comparative perspective in developing best practices for the future development of indicators. With the authors drawing on semi-structured interviews with key stakeholders in the development of indicators for the human right to health, human right to education, and human right to water and sanitation, this research identifies and explores key stages of the indicator development process, applying these practices as a guide in developing indicators to structure treaty monitoring for the human right to water and sanitation. Concluding that these previous indicators and the processes by which they were developed can inform the practice of developing indicators for the right to water and sanitation, this policy note proposes an indicator development process model to serve as a basis for developing human rights indicators for water and sanitation.

1. The evolution of human rights accountability for water and sanitation

In framing state assessments through normative standards, the human rights practice community has embraced indicators as part of a larger drive for measurement of human rights realization (Archer 2009). As a basis for accountability under human rights law, human rights indicators identify specific quantitative and qualitative data (or combinations of data) reflective of human rights norms, with stakeholders developing and implementing these indicators to monitor state obligations (Office of the UN High Commissioner for Human Rights (OHCHR) 2006). Given that states bear an obligation to report periodically to human rights treaty bodies on their efforts to assure the realization of rights, indicators are seen to give meaning to human rights

treaty monitoring—framing state reports in accordance with universal standards, supporting external scrutiny through ‘shadow reports’, and structuring constructive dialogue and state assessment (Riedel 2003; Yamin 2005). While cautious of the moral reductionism inherent in describing individual human rights experiences through population-level measurements (Merry 2011), this movement toward standardized, universal indicators has provided the human rights practice community with widely accepted tools to hold national governments accountable for realizing a wide range of civil, cultural, economic, political and social rights (Rosga and Satterthwaite 2009).

With these indicators allowing for more transparent assessments of rights subject to progressive realization—whereby the state has committed to realize rights only ‘to the maximum of its available resources, with a view to achieving progressively the full realization of the rights’ (International Covenant on Economic, Social and Cultural Rights, article 2)¹—indicators have shown great promise in the implementation of economic, social and cultural rights (Welling 2008). By allowing stakeholders to move beyond a focus on minimum core obligations (looking only to a small set of immediate state obligations), indicators permit an assessment of state obligations that is not minimalist in nature and does not create a ceiling for accountability (Young 2008). Because indicators can be assessed longitudinally for each attribute of the right (de Beco 2008), they can allow for consistent periodic assessments of the progressive fulfilment of rights through resource-dependent national policies, ensuring that the principle of progressive realization is not used as an ‘escape hatch’ to avoid state responsibility for rights realization (Felner, 2009). Engaging interdisciplinary collaboration for human rights accountability, stakeholders have sought to create a methodologically rigorous basis for developing indicators, delineating indicators that would be uniform in application, less subjective than narrative-based reporting, and comparable over time and across countries (Fukuda-Parr, Lawson-Remer, and Randolph 2009; Satterthwaite and Rosga 2012). Once developed, it is expected that states will implement these indicators by setting specific benchmarks (targets for meeting indicators), which can then be assessed by human rights treaty bodies (Riedel, Arend, and Franco 2010).

Human rights treaty bodies have recommended indicators as a critical component in monitoring state obligations, with indicators facilitating accountability for rights realization through formal assessments of state reports and constructive dialogue with national governments. In this political process, the UN Committee on Economic, Social and Cultural Rights (CESCR or Committee) has led the way among treaty bodies in pressing for indicators as a means of treaty monitoring (CESCR 1990; Bras Gomes interview 22 May 2013). As an independent monitoring body with international legal authority,

1 International Covenant on Economic, Social and Cultural Rights, 16 December 1966 (entered into force 3 January 1976).

the Committee holds a UN mandate to frame the development and implementation of economic, social and cultural rights by, *inter alia*, (1) issuing general comments to interpret the normative content of the International Covenant on Economic, Social and Cultural Rights (ICESCR or Covenant), and (2) reviewing state periodic reports on the implementation of the Covenant, conducting formal sessions of ‘constructive dialogue’ with state representatives, and issuing concluding observations for public discourse and state response (Crawford 2000; Leckie 2000). Indicators serve to bind these two interconnected responsibilities, clarifying the normative content of the Covenant and structuring the periodic reports of states parties.

As general comments interpret the nature of state obligations under the Covenant, the Committee has sought to elaborate the substance of specific rights, following up its efforts to develop the right to education (General Comments 11 and 13) and the right to the highest attainable standard of health (General Comment 14) with a clarification of the scope and content of the right to water (General Comment 15). Whereas the right to education and right to health are drawn from specific articles of the Covenant—articles 13 and 14 addressing education and article 12 addressing health—water is never discussed in the original text of the Covenant (Craven 2006). This omission in the Covenant would require the Committee to derive a distinct right to water based upon an interpretation of existing provisions (Riedel 2006; Weiss 2007). Recognizing an evolving understanding of basic human needs for household water resources (Gupta, Ahlers, and Ahmed 2010), the Committee found in General Comment 15 that a right to water is implicit in the human right to health and the human right to an adequate standard of living, articulating explicit state obligations to ‘ensure access to the minimum essential amount of water, that is sufficient and safe for personal and domestic uses to prevent disease’ (CESCR 2002: para. 37). To assess the progressive realization of the right to water, the Committee advocated the development of indicators—drawn from reporting requirements in General Comments 1 and 3 and extending state obligations from General Comments 13 and 14—outlining that:

right to water indicators should be identified in the national water strategies or plans of action. The indicators should be designed to monitor, at the national and international levels, the State party’s obligations ... [and] should address the different components of adequate water (such as sufficiency, safety and acceptability, affordability and physical accessibility), be disaggregated by the prohibited grounds of discrimination, and cover all persons residing in the State party’s territorial jurisdiction or under their control. (CESCR 2002: para. 53)

In strengthening the water and sanitation targets of the Millennium Development Goals (MDGs), commitments that have been criticized for

neglecting key attributes of human rights (Alston 2005; Bartram 2008), these indicators could frame national policy road maps to ensure legal accountability, progressive realization, and equitable outcomes (Bluemel 2004).

To develop a methodologically sound evidence base for promoting, implementing and assessing the rights under its monitoring authority, the Committee has worked with scholars and practitioners to analyse whether existing data reflect human rights realization (Landman 2004). As part of an inter-committee meeting of UN human rights treaty bodies, the Committee tasked the Office of the UN High Commissioner for Human Rights (Office of the High Commissioner) with studying the ‘use of appropriate quantitative indicators for assessing the implementation of human rights’ (OHCHR 2006: para. 2). Reviewing systematic efforts to analyse quantitative data in monitoring human rights (Malhotra and Fasel 2005), the Office of the High Commissioner has developed a conceptual framework for translating human rights norms into specific indicators, putting forward interconnected lists of illustrative indicators on a wide range of civil, cultural, economic, political and social rights (OHCHR 2008).

Applying such accountability frameworks to water and sanitation, the UN General Assembly has created a political imperative to implement these rights, declaring water and sanitation to be a singular human right and calling for ‘efforts to provide safe, clean, accessible and affordable drinking water and sanitation for all’ (UN General Assembly 2010a). This General Assembly resolution on the human right to water and sanitation has solidified international political support for the legal reasoning of General Comment 15, brought together obligations for water and sanitation under an independent human right to water and sanitation, and laid the groundwork for global water and sanitation governance through human rights accountability (Murthy 2013; Meier et al. 2013). To facilitate this human rights accountability, the UN created the position of Special Rapporteur on the human right to safe drinking water and sanitation, appointing Catarina de Albuquerque as the first Special Rapporteur. With de Albuquerque highlighting a ‘responsibility to concentrate all our efforts in the implementation and full realization of this essential right’ (de Albuquerque 2010), she is working with stakeholders to improve water and sanitation monitoring in the post-2015 development agenda—to be more responsive to rights-based accountability frameworks, to support the adjudicatory role of human rights treaty bodies, and to report progress on equality and non-discrimination through a focus on human rights indicators (de Albuquerque 2011).

2. The process of developing human rights indicators

In examining the process of developing indicators to assess realization of the right to water and sanitation, the rights to health and education provide insights into human rights practice, by which indicators are developed to reflect human rights norms and by which indicators are implemented through

state reporting to treaty bodies. Clarified by the Committee in the general comments immediately preceding General Comment 15, the right to health and the right to education are both clearly defined, established and accepted, with attributes routinely measured and norms translated into indicators for monitoring and accountability (Nelson and Dorsey 2003). Through a process spearheaded initially by Paul Hunt, then the UN Special Rapporteur on the right to health, the UN endorsed specific indicators for the human right to health (UN Commission on Human Rights 2003). Similarly, right to education indicators have been developed through a process begun under Katarina Tomaševski, then the UN Special Rapporteur on the right to education, who proposed a framework for establishing human rights indicators as well as comprehensive lists of indicators (Tomaševski 2001, 2005). Supporting these efforts, an array of scholars and practitioners have proposed indicators and benchmarks for monitoring state obligations under the right to health (Raworth 2005; Riedel, Arend, and Franco 2010) and right to education (Chapman 2007; Friboulet et al. (eds) 2006). In drawing on these right-specific practices at each stage in the indicator development process, carrying out its aforementioned mandate to establish a universal process for indicator development (OHCHR 2006), the Office of the High Commissioner has sought to delineate the attributes of a wide range of rights, employing these attributes to develop standardized lists of ‘illustrative indicators’ to structure state reporting across all human rights (OHCHR 2012).

With the practice of developing indicators driving the implementation of indicators, the authors undertook semi-structured interviews with 15 key stakeholders in the development of indicators for the rights to health, education, and water and sanitation. This semi-structured interview methodology allowed the authors to explore different avenues of inquiry as themes surfaced during interviews, facilitating an open-ended dialogue between interviewer and informant and providing unique data to examine the indicator development process (Mack et al. 2005). Employing a snowball sampling method to select potential informants, the authors first identified key informants based on their direct involvement in developing indicators for the human rights to health, education, and water and sanitation. The 15 research participants, listed in the acknowledgements section, have served in various capacities in the indicator development process: as special rapporteurs, members of treaty monitoring bodies, staff of international organizations, UN human rights officers, advocates with non-governmental organizations and academic analysts. The semi-structured interviews—conducted in the United States, France, the United Kingdom and Switzerland—focused on the informants’ respective roles in developing indicators, the debates that surfaced during the indicator development process, the obstacles to indicators and strategies employed to overcome these obstacles and the implementation of indicators through state reporting. Following an interview topic guide, the interviews pursued key topics with each informant, with the researchers continually revising and

adapting the topic guide as themes emerged, allowing for the iterative development of more detailed questions for subsequent interviews and further analysis (Miles and Huberman 1984). From interview transcriptions and supplemental document analysis, a narrative account of the indicator development process was created. Through thematic analysis of the process for each right—examining recurring topics, processes and patterns (Aronson 1994)—the authors identified, compared and analysed three discernible stages in these processes of developing human rights indicators, exploring the practice of framing, identifying and reviewing indicators to facilitate accountability for rights realization.

2.1 Framing indicators as a means to enhance accountability

To frame indicators as a basis for treaty monitoring, stakeholders look to the normative content of the right to define the obligations by which indicators can then be justified and conceptualized by the relevant international political institutions.

2.1.1 Justify

Founded upon the normative specificity of a general comment, the indicator development process begins by justifying the need to employ indicators to monitor state compliance with treaty obligations. With states long including statistical data in reports to human rights treaty bodies, states have often chosen these statistics ad hoc, without regard for human rights norms, thereby limiting treaty bodies' capability to assess realization of human rights and facilitate accountability for universal obligations (de Beco 2008). Especially for economic, social and cultural rights, stakeholders have sought to justify indicators to hold states to account for progressive realization and to disaggregate data to assess obligations for ensuring equality and non-discrimination (Satterthwaite interview 4 October 2011). Driven by academic initiatives and non-governmental organizations, these 'norm entrepreneurs' have played a crucial role in justifying the identification of indicators reflective of state human rights norms, building from general comments to frame indicators for treaty monitoring (Riedel, Arend, and Franco 2010; Roaf interview 4 October 2011).

An early proponent of quantitative human rights indicators, preceding the Committee's general comments on the right to education and right to health, Paul Hunt's reports as Special Rapporteur on the right to health provided early justification for developing health-related human rights indicators (Riedel interview 23 May 2012). With General Comment 14 inviting states to develop indicators, providing the normative basis necessary for indicator justification, Hunt's 2003 report (the first of three reports on indicators) sought to clarify the role of indicators and benchmarks to monitor progressive realization of the right to health and national expenditure of maximum available resources (UN Commission on Human Rights 2003). Hunt thereafter held

consultations at the World Health Organization (WHO) to begin to define these indicators, with Hunt proposing three components of the human right to health from which to justify specific indicators: essential medicines, reproductive health and water (Hunt interview 18 April 2012). In these preliminary consultations, stakeholders differentiated right to health indicators from other types of health measures, finding that human rights indicators needed to be derived from a specific rights-based norm and to aim to hold state duty bearers accountable (WHO 2003; Nygren-Krug interview 25 May 2012). While not yet defined, there was an early emphasis on drafting indicators that would disaggregate data to determine whether states were working toward the human right to health in an equitable manner, recognizing limitations in disaggregating data under existing health measures.

For the right to education, there was no single initiative comparable to the WHO consultation process for developing indicators. The process of justifying indicators for the right to education began as the Committee was considering its general comment (UN Commission on Human Rights 1998); however, these early efforts did not gain traction prior to the normative clarification of state obligations in General Comments 11 and 13 (Chapman interview 19 April 2012). In building from General Comment 11's normative specificity, Katarina Tomaševski, the first Special Rapporteur on the right to education, sought in her 1999 preliminary report to justify the need for quantitative and qualitative indicators, calling on governments and human rights advocates to set minimum standards and to carry out monitoring of those standards (UN Commission on Human Rights 1999). Developing a common indicators language for the right to education, Tomaševski examined compliance with human rights law through development statistics, including teaching and learning process inputs (e.g. budgetary considerations); education process safeguards (e.g. minimum standards); and education impacts (e.g. graduate unemployment). Similar to Hunt's work in justifying indicators for the right to health, Tomaševski stressed the need to disaggregate data on the basis of prohibited forms of discrimination and exclusion, looking specifically to immediate obligations to eliminate gender disparities in education (Tomaševski 2001; UN Commission on Human Rights 2002: paras 22–45).

2.1.2 *Conceptualize*

Once justified, relevant stakeholders have conceptualized the types of indicators and the methodology by which indicators are framed for treaty body assessment. With several conceptual frameworks initially proposed to delineate the types of indicators appropriate to state monitoring, the UN human rights system has reached consensus on a specific 'structure-process-outcome' framework for all human rights indicators (OHCHR 2006). Illustrative of causal pathways, this methodology for assessing state commitments, efforts and results seeks to correlate outcome measures with changes in structure and process, conceptualizing indicators to account for varying types of state

Table 1. Types of indicators (UN General Assembly 2003)

	Structural indicators	Process indicators	Outcome indicators
Measurement	Largely binary	Largely qualitative	Largely quantitative
Description	State commitments to undertake measures for the realization of the right	State efforts to implement the right	Population-level results reflecting individual enjoyment of the right
Examples	Ratification of international treaty Constitutional codification National plan of action	Policy development Budgetary allocation Enforcement actions	Socio-economic and public health data

obligations and to examine links between policy cause and social effect (Hunt 2006).

Reporting back to the UN General Assembly following his 2003 WHO consultations, Hunt conceptualized these three types of indicators, drawn from WHO's evaluations of essential medicines, adopted subsequently by other indicator development processes and reviewed in Table 1. With structural indicators serving to monitor legal commitment to the right to health, and with process and outcome indicators able to be paired with existing public policy measures and public health data, state-specific benchmarks for these indicators could provide consistent treaty monitoring in accordance with the principle of progressive realization (Hunt interview 18 April 2012). Hunt then sought to develop consistent terminology for this conceptualization of indicators and benchmarks, returning to WHO for a 2004 Workshop to examine a wide range of health-related indicator projects and create a 'toolbox' of manageable, appropriate and effective indicators to monitor national efforts to realize the right to health (WHO 2004). To catalyse political momentum around this evolving conceptualization, leaders of non-governmental organizations, international organizations, and national governments came together to declare their support for assessing implementation of the right to health through structure, process and outcome indicators (Hunt interview 18 April 2012).

While not as developed or accepted as with the right to health, given the absence of a corresponding norm entrepreneur or political champion, several academic and non-governmental projects have worked independently to

conceptualize the types of indicators necessary to hold states accountable for violations of the right to education (Chapman 2007). As part of a cooperative effort between the UN Special Rapporteur and the UN Educational, Scientific and Cultural Organization (UNESCO), Tomaševski began in 2004 to conceptualize a human rights framework for data collection and reporting to ‘assess progress’ and ‘reinforc[e] accountabilities’ in education (UN Commission on Human Rights 2004a: para. 2). These efforts, in parallel with efforts among academic institutions and non-governmental organizations (e.g. Instituto Interamericano de Derechos Humanos 2003), developed a new conceptual framework for right to education indicators (Friboulet et al. (eds) 2006). With Tomaševski’s mandate expiring in 2004, UN Special Rapporteur Vernor Muñoz Villalobos carried on her work to conceptualize attributes of the right, urging governments to apply both qualitative and quantitative indicators to address exclusion, discrimination, segregation and other limitations on education among vulnerable groups (UN Commission on Human Rights 2004b).

In creating a common approach to framing human rights indicators—harmonizing these justification and conceptualization practices across all human rights and treaty bodies—the Office of the High Commissioner has outlined a methodological framework for developing quantitative and qualitative indicators, establishing ‘structure-process-outcome’ as a crosscutting typology for monitoring compliance with all human rights and international instruments (OHCHR 2006). With human rights treaty bodies broadly adopting this ‘structure-process-outcome’ framework, the Office of the High Commissioner has formalized a universal process to identify the indicators necessary for human rights assessment.

2.2 *Candidate indicators identified*

To identify specific indicators for human rights treaty monitoring, stakeholders have not previously sought to establish their own measurements but to work with available data, disaggregated where possible, structuring these data around the normative content of the human right and the political feasibility of state reporting. The legitimacy and acceptance of indicators depends upon a logical connection between the norms of the right and the information being measured (Barsh 1993; Landman and Carvalho 2009), with stakeholders delineating the key normative attributes of a specific right—from general comments, UN resolutions and academic texts—and translating the criteria of the right into relevant data-driven indicators (OHCHR 2008). With a data preference for quantitative statistics, such indicators allow for a more concrete assessment of the attributes of the right and a means of constraining, though not eliminating, subjectivity in the politically fraught assessment of government obligations (Satterthwaite interview 4 October 2011). Balancing a tension between the available data on populations and the rights-based experiences of individuals (Davis, Kingsbury, and Merry 2010), stakeholders seek to identify candidate indicators cognizant of their statistical sensitivity

and specificity, empirically examining national contexts to assure a correlation between instances of rights violations and indicators for national monitoring (Riedel interview 23 May 2012).

In proposing ‘a human rights based approach to health indicators’, Hunt sought in 2006 to describe a right to health indicator in general terms and to explain how it could be applied in national policy (UN Commission on Human Rights 2006). Rather than searching independently for right to health indicators, Hunt identified existing health measures that reflected specific human rights norms, requesting information on these measures during country missions as Special Rapporteur (Hunt interview 18 April 2012). This process linked indicator data to specific norms of the right to health, with Hunt consulting a wide range of stakeholders to identify indicators that reflect attributes of the right concerning:

- a national strategy for the right to health,
- participation of individuals and groups (especially the disadvantaged and marginalized),
- access to health information and confidentiality of personal information,
- international cooperation and assistance, and
- accessible and effective monitoring and accountability mechanisms (UN Commission on Human Rights 2006).

Framed by the structure-process-outcome typology—and winnowed on the basis of robustness, usefulness, representativeness, understandability and importance—these identified indicators (disaggregated by sex, race, ethnicity, rural/urban area and socio-economic status) focused on policies supporting equitable health systems for the realization of underlying determinants of health.

The identification of candidate indicators for the right to education has been led predominantly by academics and human rights practitioners, focused largely on assessments of human rights violations through available data (de Beco 2013). Proposed ‘statistical indicators of fulfilment’ were conceived initially at a 1999 World University Service-International workshop, enlisting representatives from the Committee, UN specialized agencies, non-governmental organizations and multidisciplinary specialists (with expertise in education, the right to education and indicators) to identify candidate indicators from the key attributes of the right (Chapman 2007). These indicators—including literacy rates and net enrolment rates (disaggregated by gender, urban/rural area, ethnic background, age and education level)—were identified, with a view to structuring the work of human rights treaty bodies and UN specialized agencies to monitor state compliance with the right to education (Chapman interview 19 April 2012). Subsequently, scholars began to identify specific candidate indicators, employing rights-based conceptual frameworks to categorize statistical data, develop indicator ‘toolboxes’, and create national indices (Beekman 2004). Informed by the continuing indicator development efforts of the Office of the High

Commissioner, academics and non-governmental organizations have worked to examine the correspondence of indicators with the attributes of the right to education, combining conceptual frameworks to identify comprehensive sets of indicators necessary to measure state compliance (Robert F. Kennedy Center 2008; Kalantry, Getgen, and Koh 2010).

The Office of the High Commissioner has drawn from these right-specific efforts to identify illustrative indicators for a wide range of human rights. With inclusive participatory processes leading to an overabundance of proposed indicators, making comprehensive reporting infeasible (Riedel 2009), the Office of the High Commissioner has scaled back its expansive vision of indicator sets and now seeks to identify only a small number of key indicators based around available data (Fasel interview 24 May 2012). Creating streamlined, one-page tables of illustrative indicators, the Office is supporting the implementation of these indicators through ‘meta-data sheets’, which seek to define data sources reflective of the attributes of each right and guide targeted data collection for state reporting to human rights treaty bodies (OHCHR 2008).

2.3 *Final indicators reviewed*

With proposed indicators identified, stakeholders have worked across countries and disciplines to review the final indicator sets, institutionalizing indicators to assure that they are both indicative of universal norms and implemented in state reporting. This final review has sought to overcome a tension between the goal of universal norms and the practicality of state reporting, assuring that universal indicators will be appropriate to national context and accepted by national stakeholders (Fasel interview 24 May 2012). Validated through state consultations, national workshops and participatory feedback—with national human rights institutions bringing together statistical organizations, service providers and civil society—indicator proponents seek to finalize contextually relevant indicators, assure political feasibility of treaty monitoring, and build government capacity for indicator-based reporting.

Finalizing the right to health indicator set to 72 indicators across 15 attributes—focusing ultimately on reproductive health and essential medicines and emphasizing the need to disaggregate all data by sex, ethnic origin, rural or urban residence, socio-economic group and age—Special Rapporteur Hunt sought the advice of stakeholders across the world. Hunt met with a series of focus groups in revising the final indicators and testing their applicability to national health systems, consulting with UN and WHO Secretariat staff, non-governmental organizations, academic analysts and health-related practitioners in fields as wide-ranging as law, economics and anthropology (Hunt interview 18 April 2012). In validating the final indicators based upon the experiences of national health systems, Hunt worked with colleagues to ‘pilot test’ these indicators, analysing their application to the progressive realization of right to health in a study of 194 national health systems (Backman et al. 2008).

With the right to education indicators now driven by the Office of the High Commissioner, as part of its larger indicator development effort for all rights, non-governmental stakeholders are developing practical guidelines to clarify the Office's framework and methodology for education systems. The process of finalizing these indicators includes both the normative validation of selected indicators by an expert panel and the political participation of governments and civil society to select indicators that are acceptable to the local context (OHCHR 2012). Consulting with human rights treaty bodies, UN specialized agencies, special rapporteurs and subject-matter experts, the Office of the High Commissioner has sought to review all its illustrative indicators; however, given continuing disagreement on the normative content of the right to education, stakeholders have been unable to reach consensus in participatory efforts to finalize a set of key indicators (Chapman interview 19 April 2012). Without an international political authority to guide states parties and civil society groups on the right to education, experts have argued that the indicator development project remains inadequate for human rights treaty monitoring (de Beco 2013; Chapman interview 19 April 2012; Riedel interview 23 May 2012).

In reviewing the illustrative indicators for these (and other) human rights, the Office of the High Commissioner has consulted expert groups at the global level to validate the final selection of indicators and has met with participatory workshops at the national level to bring together state representatives, national human rights institutions and civil society groups to reach consensus on the finalization and implementation of indicators (Fasel interview 24 May 2012). With human rights treaty bodies calling for tools to contribute to indicator-based treaty reporting—highlighting the advantages for states parties in providing a focused report in accordance with treaty body expectations—the Office of the High Commissioner has created a guide to make its methodology more accessible in policymaking and amenable to implementation (OHCHR 2013).

3. A process model for developing indicators for the right to water and sanitation

To outline practices conducive to developing indicators for human rights treaty bodies to monitor the progressive realization of the human right to water and sanitation, drawing on past practices in the development of indicators for the right to health and right to education, previous indicator development efforts serve as a basis for modelling three key stages in the indicator development process:

1. To frame indicators based on accepted norms, only those rights that have been normatively justified (by norm entrepreneurs within the UN human rights system) and conceptualized (through the structure-process-outcome typology) would be amenable to indicator development.

2. With a need to identify indicators from both the criteria and attributes of the right, expert stakeholders must align indicators with the normative content of the human right (focusing on issues of equality and non-discrimination in the progressive realization of the right) and examine overlaps with indicators for other rights (promoting efficiencies in state reporting and recognizing the interconnectedness of human rights).
3. As indicators are delineated, it is necessary to review the final indicator set, consulting with the practice community (across disciplines, sectors and countries), working with state representatives (in supporting political buy-in and government capacity building for implementation) and conducting pilot testing (to assure that indicators are scientifically valid, contextually salient and policy relevant).

First, in framing indicators, there is a need to develop indicators reflective of state obligations for water and sanitation, assuring that indicators are necessary to accurately assess rights realization. Building upon the substantive foundations of General Comments 14 and 15, which clarify the scope and content of the right and raise the need for indicators and benchmarks to measure progressive realization and assist states in taking steps to realize rights, these general comments provide a basis to justify the need for indicators (Hunt interview 18 April 2012; Riedel interview 23 May 2012). With the UN General Assembly's resolution on the human right to water and sanitation extending the normative foundations of General Comment 15, there is international political justification to initiate the development of human rights indicators for water, sanitation and hygiene ([WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation 2011](#)). By working with key stakeholders to conceptualize the structure, process and outcome indicators for a burgeoning right to water and sanitation, a process already begun through the Office of the High Commissioner, this indicator development process can have a mutually reinforcing effect on both the normative articulation of the right to water and sanitation and its implementation through national policy and state reporting (Fasel interview 24 May 2012).

Second, in identifying candidate indicators, an initial set of indicators should be proposed to assess rights-based criteria for the availability, acceptability, accessibility, affordability, and quality of water and sanitation. Developed initially within an insular working group of expert stakeholders, privileging expertise and efficiency over inclusiveness and rights-based participation, stakeholder participation can expand over time to incorporate diverse perspectives and develop political consensus (Riedel interview 23 May 2012). Following a process similar to past indicator identification efforts, stakeholders should look to:

- *Delineate key attributes of the human right to water and sanitation:* With General Comment 15 limited to a right to water, there is an imperative to look to authoritative international legal sources beyond the general comments

(de Albuquerque interview 4 October 2011)—to the Committee’s statement on sanitation (CESCR 2010), the other human rights treaty bodies’ statements, the UN General Assembly’s resolution, and the Special Rapporteur’s reports—in specifying the evolving norms of the human right to water and sanitation (Langford, Bartram, and Roaf forthcoming).

- *Review existing indicators for water, sanitation and hygiene:* In previous non-governmental processes to develop indicators for the right to water, stakeholders have developed matrices of potential indicators, distinguished on the basis of the structure, process and outcome typology and focused on issues of legal codification of water rights and community participation in water systems (Centre on Housing Rights and Evictions (COHRE) 2005). With these non-governmental indicator sets already pilot-tested in select national contexts (COHRE et al. 2007), it is possible to draw on these existing indicator development and implementation experiences in considering issues of data availability and political feasibility for measuring water, sanitation and hygiene (Roaf interview 4 October 2011).
- *Develop indicators around available data:* In constructing a limited set of indicators—streamlining the process of state reporting and the agenda for constructive dialogue (Riedel interview 23 May 2012)—available data can be identified from a range of official cross-national data sets on water and sanitation, reflecting the key attributes of the right at feasible costs for data collection (Amjad, Kayser, and Meier 2013; Luh, Baum, and Bartram 2013). Comparing these data sources, Table 2 highlights global monitoring data sets that can be applied, among others, to monitor progressive realization of the right to water and sanitation. Where data do not exist to assess a specific indicator of the right to water and sanitation (with a preference for the official statistics of government agencies), this does not demonstrate that such an indicator cannot exist (Saji interview 24 May 2012); rather, stakeholders can use this forward-looking human rights basis to press for more appropriate data collection—from non-governmental sources, through future government efforts, and in funding of national and cross-national surveys (de Albuquerque interview 4 October 2011; de Albuquerque and Roaf 2012).
- *Draw on indicators from other human rights:* By developing measurements parallel to those used as indicators for other rights, indicators for the right to water and sanitation can account for the interconnected nature of human rights while promoting efficiencies in state data reporting (Satterthwaite interview 4 October 2011). Given that water and sanitation are underlying determinants of health and contributors to individual dignity and public welfare, the creation of overlapping indicators for the right to water and sanitation and intersectional rights to, among others, life, health, gender equality, education, work, housing, an adequate standard of living and development can advance the progressive realization of

Table 2. Existing cross-national data sets for monitoring water and sanitation

	Data set	Criteria monitored
Structure	Constitution Finder	Legal commitment, equity
	United Nations Treaty Collection Database	
Process	Water Law and Standards	Legal commitment, participation, international assistance, quality, equity
	International Labour Organization national legislation on labour and social rights (ILO NATLEX)	Legal commitment, equity
Outcome	WHO/UNICEF Joint Monitoring Programme (JMP)	Accessibility, equity, availability
	MEASURE Demographic Household Surveys (DHS)	Equity (disaggregated by wealth quintiles, urban versus rural), quality, availability, accessibility
	Multiple Indicator Cluster Surveys (MICS)	Quality, availability, accessibility, equity
	Global Annual Assessment of Sanitation and Drinking Water (GLAAS)	Affordability, accountability, quality, equity
	International Benchmarking Network for Water and Sanitation Utilities (IBNET)	Quality
	World Health Survey	Quality, accountability
	Living Standards Measurement Study	Affordability, international assistance
	Urban Inequities Survey (UIS)	Availability, accessibility, participation
	Core Welfare Indicator Question (CWIQ)	Accessibility, affordability, equity

these interconnected and interdependent rights (Hunt interview 18 April 2012; Riedel interview 23 May 2012).

- *Prioritize cross-cutting principles of equality and non-discrimination as a means to assure a just distribution of water and sanitation resources:* In seeking equity in the implementation of the human right to water and sanitation, stakeholders must move beyond formal equality to remove discriminatory barriers that prevent full substantive equality, thereby linking equity with affordability, requiring affirmative actions to rectify inequalities, and seeking universal access to water, sanitation and hygiene (UN General Assembly 2010b). Supporting discourse on the post-2015

development agenda, which seeks to capture the normative content of the right to water and sanitation, the development of human rights indicators can look to expanded data sources reflective of equality and non-discrimination and based upon the axes of inequity most relevant at the country level ([WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation 2012](#)).

Candidate indicators for water and sanitation can be identified through processes similar to those described above for the right to health and right to education, working with expert stakeholders in the water and sanitation sectors to identify data reflective of the attributes of the human right and working through global institutions for water and sanitation to give political legitimacy to indicator development practices (de Albuquerque interview 4 October 2011).

Finally, in reviewing these indicators, there is a need for consultations with an encompassing group of national governments, human rights institutions and civil society representatives to assure that the final indicators are technically reliable, logistically feasible and politically acceptable. The finalization of scientifically valid and policy relevant indicators is an inherently interdisciplinary venture, with inclusiveness facilitating the legitimacy necessary for state acceptance and indicator implementation (Fasel interview 24 May 2012). With the implementation of indicators requiring active state involvement in reporting indicator-driven data to human rights treaty bodies, state representatives will need to participate in the review of indicators, supporting political buy-in from necessary constituencies, building technical capacity for data collection and ensuring government use of indicators in state reporting (Riedel interview 23 May 2012). Negotiating conflicting needs for technical specificity and government flexibility, the process of developing indicators is often politically contested, creating a tension between the specificity of assessments in treaty monitoring and the application of indicators in state reporting ([Satterthwaite forthcoming](#)). As seen in previous experiences, where detailed indicators were developed by technical experts but rarely employed in state reporting ([de Beco 2013](#)), there must be state participation in indicator development to provide a basis for state involvement in indicator implementation ([Gruskin and Ferguson 2009](#)). Given the need for state governments to submit themselves to international monitoring through indicator-based reporting, treaty body reporting guidelines must offer the promise of objectivity, fairness and convenience in reporting national efforts to realize the right to water and sanitation—a promise that militates against any ordinal ranking that might dissuade states from reporting ([Büthe 2012](#); Riedel interview 23 May 2012). In this effort to ensure implementation by national governments, there is a need for positive political incentives—rather than simply criticisms for failures—in encouraging states to employ indicators in their reporting to human rights treaty bodies, with treaty bodies pilot-testing these indicators with a

small number of states to ensure applicability to benchmark setting, practicability of data collection, and efficiency in reporting processes.

Conclusion

With indicators giving meaning to national human rights reports, the practice of developing indicators can facilitate accountability where human rights treaty bodies employ indicators to monitor state efforts to progressively realize human rights. As a means to monitor state obligations, such human rights indicators can guide the policies, practices and actions of government institutions; structure state reporting and constructive dialogue with treaty monitoring bodies; highlight local, national and global gaps in rights realization; and frame accountability in the post-2015 agenda. The process of developing indicators to assess realization of the human right to water and sanitation seeks to draw on previous indicator development practices, with multidisciplinary stakeholders engaging in a process to frame, identify and review indicators. Viewing indicator-based accountability as process-dependent, this policy note provides an indicator development process model by which to analyse the political practice of stakeholders: in framing indicators based on normative justifications and accepted conceptualizations, in identifying indicators that reflect the criteria and attributes of the right and in reviewing indicators to assure measurement accuracy and state implementation in facilitating accountability for realizing the human right to water and sanitation.

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References

- Alston, P. 2005. Ships Passing in the Night: The Current State of the Human Rights and Development Debate Seen Through the Lens of the Millennium Development Goals. *Human Rights Quarterly* 27(3): 755–829.
- Amjad, U. Q., G. Kayser, and B. M. Meier. 2013. Workshop Synthesis Report: Human Rights-Based Indicators Regarding Non-Discrimination and Equity in Access to Water and Sanitation. *Journal of Water, Sanitation and Hygiene for Development*, in press, uncorrected proof, available online 21 October 2013. <http://www.iwaponline.com/washdev/up/default.htm>.
- Archer, R. 2009. Introduction to the Special Issue: Where is the Evidence? *Journal of Human Rights Practice* 1(3): 333–8.
- Aronson, J. 1994. A Pragmatic View of Thematic Analysis. *The Qualitative Report* 2(1). <http://www.nova.edu/ssss/QR/BackIssues/QR2-1/aronson.html>.
- Backman, G. et al. 2008. Health Systems and the Right to Health: An Assessment of 194 Countries. *The Lancet* 372: 2047–85.
- Barsh, R. L. 1993. Measuring Human Rights: Problems of Methodology and Purpose. *Human Rights Quarterly* 15: 91–121.
- Bartram, J. 2008. Improving on Haves and Have-Nots. *Nature* 452: 283–4.
- Beeckman, K. 2004. Measuring the Implementation of the Right to Education: Education versus Human Rights Indicators. *International Journal of Children's Rights* 12(1): 71–84.
- Bluemel, E. B. 2004. The Implications of Formulating a Human Right to Water. *Ecology Law Quarterly* 31: 957–1006.
- Büthe, T. 2012. Beyond Supply and Demand: A Political–Economic Conceptual Model. In K. E. Davis, A. Fisher, B. Kingsbury, and S. E. Merry (eds), *Governance by Indicators: 29–51*. New York: Oxford University Press.
- Centre on Housing Rights and Evictions (COHRE). 2005. Possible Indicators for the Right to Water and Sanitation.
- COHRE, American Association for the Advancement of Science (AAAS), Swiss Agency for Development and Cooperation (SDC), and United Nations Human Settlements Programme (UN-HABITAT). 2007. *Manual on the Right to Water and Sanitation*. Geneva: COHRE.
- Chapman, A. 2007. Development of Indicators for Economic, Social and Cultural Rights: The Rights to Education, Participation in Cultural Life and Access to the Benefits of Science. In Y. Donders and V. Volodin (eds), *Human Rights in Education, Science and Culture: Legal Developments and Challenges: 111–51*. Paris: UNESCO.
- Craven, M. 2006. Some Thoughts on the Emergent Right to Water. In E. Riedel and P. Rothen (eds), *The Human Right to Water: 37–47*. Berlin: Berliner Wissenschafts-Verlag.
- Crawford, J. 2000. The UN Human Rights Treaty System: A System in Crisis? In P. Alston and J. Crawford (eds), *The Future of UN Human Rights Treaty Monitoring: 1–12*. New York: Cambridge University Press.
- Davis, K. E., B. Kingsbury, and S. E. Merry. 2010. Indicators as a Technology of Global Governance. *Law & Society Review* 46(1): 71–104.

- de Albuquerque, C. 2010. Statement by Catarina de Albuquerque, Independent Expert on the Issue of Human Rights Obligations Related to Access to Safe Drinking Water and Sanitation. United Nations: 65th Session of the General Assembly, Third Committee, Item 69(b). 25 October.
- . 2011. Keynote Speech. Water and Health Conference, University of North Carolina at Chapel Hill, 3–7 October.
- de Albuquerque, C., and V. Roaf. 2012. *On the Right Track: Good Practices in Realising the Rights to Water and Sanitation*. http://www.ohchr.org/Documents/Issues/Water/BookonGoodPractices_en.pdf.
- de Beco, G. 2008. Human Rights Indicators for Assessing State Compliance with International Human Rights. *Nordic Journal of International Law* 77(1–2): 23–49.
- . 2013. Human Rights Indicators: From Theoretical Debate to Practical Application. *Journal of Human Rights Practice* 5(2): 380–97.
- Felner, E. 2009. Closing the ‘Escape Hatch’: A Toolkit to Monitor the Progressive Realization of Economic, Social, and Cultural Rights. *Journal of Human Rights Practice* 1(3): 402–35.
- Friboulet, J.-J., A. Niamégo, V. Liechti, C. Dalbera, and P. Meyer-Bisch (eds). 2006. *Measuring the Right to Education*. Hamburg: UNESCO Institute for Lifelong Learning.
- Fukuda-Parr, S., T. Lawson-Remer, and S. Randolph. 2009. An Index of Economic and Social Rights Fulfillment: Concept and Methodology. *Journal of Human Rights* 8(3): 195–221.
- Gruskin, S., and L. Ferguson. 2009. Using Indicators to Determine the Contribution of Human Rights to Public Health Efforts. *Bulletin of the World Health Organization* 87(9): 714–19.
- Gupta, J., R. Ahlers, and L. Ahmed. 2010. The Human Right to Water: Moving Towards Consensus in a Fragmented World. *Review of European Community and International Environmental Law* 19(3): 294–305.
- Hunt, P. 2006. The Human Right to the Highest Attainable Standard of Health: New Opportunities and Challenges. *Transactions of the Royal Society of Tropical Medicine and Hygiene* 100(7): 603–7.
- Instituto Interamericano de Derechos Humanos (IIDH). 2003. *II Informe Interamericano de la Educación en Derechos Humanos. Un Estudio en 19 Países*. San José: Instituto Interamericano de Derechos Humanos.
- Kalantry, S., J. E. Getgen, and S. A. Koh. 2010. Enhancing Enforcement of Economic, Social, and Cultural Rights Using Indicators: A Focus on the Right to Education in the ICESCR. *Human Rights Quarterly* 32(2): 253–310.
- Landman, T. 2004. Measuring Human Rights: Principle, Practice and Policy. *Human Rights Quarterly* 26(4): 906–31.
- Landman, T., and E. Carvalho. 2009. *Measuring Human Rights*. London: Routledge.
- Langford, M., J. Bartram, and V. Roaf. Forthcoming. A Human Right to Sanitation. In M. Langford and A. Russell (eds), *The Right to Water: Theory, Practice and Prospects*. Cambridge University Press.

- Leckie, S. 2000. The Committee on Economic, Social and Cultural Rights: Catalyst for Change in a System Needing Reform. In P. Alston and J. Crawford (eds), *The Future of UN Human Rights Treaty Monitoring*: 129–44. Cambridge University Press.
- Luh, J., R. Baum, and J. Bartram. 2013. Equity in Water and Sanitation: Developing an Index to Measure Progressive Realization of the Human Right. *International Journal of Hygiene and Environmental Health* 216(6): 662–71.
- Mack, N., C. Woodson, K. M. MacQueen, G. Guest, and E. Namey. 2005. *Qualitative Research Methods: A Data Collectors Field Guide*. Research Triangle Park, NC: Family Health International.
- Malhotra, R., and N. Fasel. 2005. Quantitative Human Rights Indicators: A Survey of Major Initiatives. Background paper for the Expert Meeting on Human Rights Indicators, Åbo Akademi University, Turku, Finland, 10–13 March 2005.
- Meier, B. M., G. L. Kayser, U. Q. Amjad, and J. Bartram. 2013. Implementing an Evolving Human Right through Water and Sanitation Policy. *Water Policy* 15(1): 116–33.
- Merry, S. E. 2011. Measuring the World: Indicators, Human Rights, and Global Governance. *Current Anthropology* 52(S3): S83–S95.
- Miles, M. B., and A. M. Huberman. 1984. *Qualitative Data Analysis: A Sourcebook of New Methods*. Beverly Hills: Sage.
- Murthy, S. L. 2013. The Human Right(s) to Water and Sanitation: History, Meaning, and the Controversy over Privatization. *Berkeley Journal of International Law* 31(3): 89–147.
- Nelson, P., and E. Dorsey. 2003. At the Nexus of Human Rights and Development: New Methods and Strategies of Global NGOs. *World Development* 31(12): 2013–26.
- Office of the UN High Commissioner for Human Rights (OHCHR). 2006. Report on Indicators for Monitoring Compliance with International Human Rights Instruments. Report prepared for the 18th meeting of the chairpersons of the human rights treaty bodies. 11 May. HRI/MC/2006/7.
- . 2008. Report on Indicators for Promoting and Monitoring the Implementation of Human Rights. Report prepared for the seventh inter-committee meeting of treaty bodies. 6 June. HRI/MC/2008/3.
- . 2012. *Human Rights Indicators: A Guide to Measurement and Implementation*. HR/PUB/12/5. New York and Geneva: United Nations.
- . 2013. The Factual Backdrop for Human Rights Protection and Development Agendas. <http://www.ohchr.org/EN/NewsEvents/Pages/ThefactualbackdropHR-protectiondevelopmentagendas.aspx>.
- Raworth, K. 2005. Measuring Human Rights. In S. Gruskin, M. A. Grodin, S. P. Marks, and G. J. Annas (eds), *Perspectives on Health and Human Rights*: 370–87. New York: Routledge.
- Riedel, E. 2003. New Bearings to the State Reporting Procedure: Practical Ways to Operationalize Economic, Social and Cultural Rights—The Example of the Right to Health. In S. von Schorlemer (ed.), *Praxisbandbuch UNO*: 345–58. Berlin: Springer.
- . 2006. The Human Right to Water and General Comment No. 15 of the Committee on Economic, Social and Cultural Rights. In E. Riedel and P. Rothen, *The Human Right to Water*: 19–36. Berlin: Berliner Wissenschafts-Verlag.

- . 2009. The Human Right to Health: Conceptual Foundations. In A. Clapham and M. Robinson, *Realizing the Right to Health*: 21–39. Zurich: rüffer & rub.
- Riedel, E., J.-M. Arend, and A. M. S. Franco. 2010. Indicators–Benchmarks–Scoping–Assessment: Background Paper. http://www.fes-globalization.org/geneva/documents/HumanRights/6July10_BackgroundPaper_IBSA.pdf.
- Robert, F. Kennedy Center. 2008. Right to Education of Afro-Descendant and Indigenous Peoples in the Americas. Report prepared for the Inter-American Commission on Human Rights.
- Rosga, A., and M. Satterthwaite. 2009. The Trust in Indicators: Measuring Human Rights. *Berkeley Journal of International Law* 27(2): 253–315.
- Satterthwaite, M. Forthcoming. *Measuring Human Rights: Indicators, Metrics, and Evidence-Based Practice*.
- Satterthwaite, M., and A. Rosga. 2012. Measuring Human Rights: UN Indicators in Critical Perspective. In K. E. Davis, A. Fisher, B. Kingsbury, and S. E. Merry (eds), *Governance by Indicators*: 297–316. New York: Oxford University Press.
- Tomaševski, K. 2001. Indicators. In A. Eide, C. Krause, and A. Rosas (eds), *Economic, Social and Cultural Rights: A Textbook* (2nd ed.): 390–401. Dordrecht: Martinus Nijhoff.
- . 2005. Has the Right to Education a Future Within the United Nations? A Behind the Scenes Account by the Special Rapporteur on the Right to Education. *Human Rights Law Review* 5(2): 205–37.
- UN Commission on Human Rights. 1999. Preliminary Report of the Special Rapporteur on the right to education, Ms Katarina Tomaševski. 13 January. E/CN.4/1999/49.
- . 2002. Annual Report of the Special Rapporteur on the right to education, Katarina Tomaševski. 7 January. E/CN.4/2002/60.
- . 2003. The Right of Everyone to the Enjoyment of the Highest Attainable Standard of Physical and Mental Health. Report of the Special Rapporteur, Paul Hunt. 13 February. E/CN.4/2003/58.
- . 2004a. The Right to Education. Report submitted by the Special Rapporteur, Katarina Tomaševski. 15 January. E/CN.4/2004/45.
- . 2004b. The Right to Education. Report submitted by the Special Rapporteur on the right to education, Mr Vernor Muñoz Villalobos. 17 December. E/CN.4/2005/50.
- . 2006. Report of the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health, Paul Hunt. 3 March. E/CN.4/2006/48.
- UN Committee on Economic, Social, and Cultural Rights (CESCR). 1990. General Comment No. 3. The Nature of States Parties Obligations (article 2, para.1).
- . 1998. State Obligations, Indicators, Benchmarks, and the Right to Education. Background paper submitted by Paul Hunt. 16 July. E/C.12/1998/11.
- . 2002. General Comment No. 15. The Right to Water. E/C.12/2002/11.
- . 2010. Statement on the Right to Sanitation. E/C.12/2010/1.

- UN General Assembly. 2003. The Right of Everyone to Enjoy the Highest Attainable Standard of Physical and Mental Health. Report of Paul Hunt, Special Rapporteur. 10 October. A/58/427.
- . 2010a. Resolution 64/292. The human right to water and sanitation, adopted 28 July 2010. A/RES/64/292.
- . 2010b. Human Rights Obligations related to Access to Safe Drinking Water and Sanitation. Report of the Independent Expert, Catarina de Albuquerque. 6 August. A/65/254.
- Weiss, E. 2007. The Evolution of International Water Law. In *Recueil Des Cours: Collected Courses of the Hague Academy of International Law 2007*: 167–404. Leiden, Netherlands/Boston: Martinus Nijhoff.
- Welling, J. 2008. International Indicators and Economic, Social, and Cultural Rights. *Human Rights Quarterly* 30(4): 933–58.
- World Health Organization (WHO). 2003. Consultation on Indicators for the Right to Health.
- . 2004. Consultation on Indicators for the Right to Health.
- WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply, Sanitation. 2011. Report of the First Consultation on Post-2015 Monitoring of Drinking Water and Sanitation, Berlin 3–5 May 2011.
- . 2012. JMP Working Group on Equity and Non-Discrimination Final Report. Available at <http://www.wssinfo.org/post-2015-monitoring/working-groups/equity-and-non-discrimination>.
- Yamin, A. E. 2005. The Future in the Mirror: Incorporating Strategies for the Defense and Promotion of Economic, Social, and Cultural Rights into the Mainstream Human Rights Agenda. *Human Rights Quarterly* 27(4): 1200–44.
- Young, K. 2008. The Minimum Core of Economic and Social Rights: A Concept in Search of Content. *Yale Journal of International Law* 33(1): 113–75.