

TST Issues Brief: Water and Sanitation¹

1. Stocktaking

The Future We Want adopted at the 2012 UN Conference on Sustainable Development (Rio+20) recognized that “water is at the core of sustainable development” and its three dimensions.² Water is the lifeblood of the planet and of critical importance for all socio-economic development.

Reconfirming previous commitments made in the Johannesburg Plan of Implementation and Millennium Declaration, as well to the human right to safe drinking-water and sanitation, Member States committed at Rio+20 to:

- the progressive realization of access to safe and affordable drinking-water and sanitation for all ;
- significantly improve the implementation of integrated water resources management at all levels as appropriate;
- protect and sustainably manage ecosystems, as they play a key role in maintaining water quantity and quality;
- address water-related disasters, such as floods and droughts, as well as water scarcity;
- significantly reduce water pollution, increase water quality and significantly improve wastewater treatment;
- improve water efficiency and reduce water losses.

Box 1 – Perspective from the country-level

“Water is central to human needs, equitable growth and development. It is one of the key drivers of sustainable economic growth through contribution to activities such as agriculture, manufacturing, mines, energy and transport. It contributes to social activities such as productive use of water within households (poverty alleviation), water for drinking, sanitation and health, etc. It should therefore be managed in a manner that is sensitive to and supportive of the many competing demands that is placed on it. Further, the management activities should not compromise the requirements of the future as well as ecological requirements. Based on these elements, water should be central to the integrated planning and development processes – South Africa.”

Source: GWP (2013) National Stakeholder Consultations on Water: Supporting the Post-2015 Development Agenda

The pervasive linkages between water and other priority areas are also reflected in the Rio+20 outcome document, where references to water are made in the following sections: food security and nutrition and sustainable agriculture; sustainable cities and human settlements; health and population; biodiversity; desertification, land degradation and drought; as well as mountains.

The achievement of the MDG drinking-water target³ demonstrates that setting international goals and targets can drive change. The increase in access to drinking-water has been achieved through sustained commitment, additional resources and effective implementation approaches. Estimates show that aid to the water sector has risen significantly since 2001.⁴ Governments, donors, civil society organizations and development partners have together formed the Sanitation and Water for All Partnership, which provides a transparent, accountable and results-oriented framework for action to address the obstacles for global progress in the drinking-water and

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Please note that ‘Water’ in this context includes all aspects of freshwater such as water resources management, wastewater and household water supply.

² A/RES/66/288. The Future We Want – Outcome Document of the Rio+20 Conference.

³ Measured through the proxy indicator ‘proportion of population using an improved drinking-water source’.

⁴ OECD (2012): *Financing Water Supply and Sanitation in Developing Countries: The Contribution of External Aid*, OECD, Paris.

sanitation sector.

Yet, significant obstacles remain to realize the human right to safe drinking-water and sanitation. Today, 800 million people, are without access to an improved water source and many more remain without safe and sustainable water supply. Indeed, it is likely that the number of people using safe water supplies has been over-estimated, since water quality testing was not feasible on a global scale at the time when the MDG target was formulated. In addition, disparities continue to exist between and within countries. For example, the poorest in sub-Saharan Africa have only experienced limited progress in drinking-water coverage. Moreover, not enough attention has been given to the interlinkages between service provision and managing surface and groundwater water resources, as well as to sustainable mechanisms for financing and maintaining water supply services and infrastructure. If sustainability aspects are not duly considered, there is considerable risk of slippage on the gains made in extending these services.⁵

The MDG sanitation target is today the most lagging of the MDGs. 2.5 billion people live without improved sanitation. 1.1 billion people still practice open defecation. Without significant policy change and investment, around 1.4 billion people are projected to be without access to sanitation in 2050.⁶ Trends in sanitation show that South Asia and Sub-Saharan Africa are struggling with particularly low coverage rates and that disparities in rural and urban sanitation are even more pronounced than those in drinking-water. Still, much has been achieved considering that almost 1.8 billion people gained access to improved sanitation facilities since 1990. Some countries that started from a low baseline and are facing rapid population growth have made substantial progress in absolute terms, but have to work much harder to halve the proportion of the population without access.⁷

Evidence shows that the sanitation and hygiene sub-sector suffers particularly from human, institutional and financial resources constraints. As in the case of water supply, cost-effective technological solutions for sanitation and hygiene are readily available. The challenge is rather to ensure that sound practices and services are sustained. This requires adopting behavioral change approaches and scaling-up services that are appropriate within the local context and accompanied by adequate human, institutional and financial arrangements for long-term operation and maintenance. Drinking-water continues to attract the majority of Water, Sanitation and Hygiene (WASH) funding, even in countries with relatively high drinking-water supply coverage and relatively low sanitation coverage. In addition, hygiene promotion including handwashing and menstrual hygiene management, critical for public health and gender equality, was not reflected in the MDG framework and has been relatively neglected. Evidence also demonstrates the linkages between the lack of sanitation and malnutrition, with long-lasting effects on human capital and growth. The most recent estimates suggest that, globally, the benefits of achieving universal access to sanitation outweigh the costs by a factor of 5.5 to 1, whereas for universal access to drinking-water the ratio is estimated at 2 to 1.⁸

Discrimination and inequalities in access to WASH are pervasive. Inequalities exist between countries; urban and rural areas; slums and formal urban settlements; men and women; and disadvantaged groups and the general population. In many countries, women and girls carry the burden of fetching water. Poor water and sanitation conditions also affect their health negatively, including sexual and reproductive health. The MDGs' focus on aggregate outcomes tends to mask these inequalities and improvements in access do often not reach those groups who suffer most, including the elderly, persons with disabilities, women and children. This is also reflected in the fact that schools and health centers often lack drinking-water and sanitation facilities. The future development agenda could overcome and eliminate inequalities by setting targets and by requiring the disaggregation of data by gender, age and disadvantaged groups so that they can be monitored.

⁵ WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply and Sanitation (2012): *Progress and Sanitation and Drinking Water, 2012 Update*, WHO, Geneva.

⁶ OECD (2012): *Environmental Outlook to 2050*, OECD, Paris.

⁷ WHO/UNICEF JMP (2012).

⁸ Hutton (2012): *Global costs and benefits of drinking-water supply and sanitation interventions to reach the MDG target and universal coverage*, WHO, Geneva.

One clear lesson from the MDGs is that the water challenge goes beyond access to WASH for all and encompasses water resources and wastewater management and issues of water quality. While Heads of State pledged in the Millennium Declaration to “stop the unsustainable exploitation of water resources by developing water management strategies”, the current MDG framework did not address the broader water agenda, including the development and management of water resources and wastewater management and issues of water quality. As highlighted by the Post-2015 Thematic Water Consultation, access to WASH, food and energy production, disaster risk reduction, economic development and healthy ecosystems rely on the availability and sustainable management of water resources. Examples of the positive impact of water on economic growth and poverty reduction include irrigation and hydropower as well as flood management. The value of wetlands for human well-being has been estimated at several trillion US dollars.⁹

Managing water sustainably to meet today’s needs and future demands is ever more urgent. Interruptions in water supplies intended for human and productive uses have immediate impacts on livelihoods and economies. Water supply crises have been identified in a survey of over 1000 experts from industry, government, academia and civil society as one of top three global risks.¹⁰ Over 1.7 billion people live today in river basins where water use exceeds recharge, leading to the desiccation of rivers and depletion of groundwater. As countries develop and populations grow and urbanize, their demand for water is projected to increase by 55% by 2050.¹¹ Two thirds of the world’s population could be living in water-stressed countries by 2025 if current consumption patterns continue.¹² At the same time climate change is anticipated to increase spatial and temporal water variability as well as extreme events such as floods and droughts which are already on the rise. The degradation of ecosystems due to human activity has already, and is expected to further exacerbate water scarcity and flooding. These trends could increase the risk of conflicts over water. To achieve poverty eradication and universal human development, while respecting the Earth’s finite and vulnerable water resource base, water productivity needs to be enhanced, appropriate infrastructure developed, an integrated approach to water resources management implemented, water governance systems improved at all levels and the ability of ecosystems to support sustainable water management protected and restored.

Box 2 – Water for irrigation and food production

Water for irrigation and food production constitutes one of the greatest pressures on freshwater resources. In many countries, water availability for agriculture is already limited and uncertain, and is set to worsen. Agricultural water withdrawal accounts for 44% of total water withdrawal in OECD countries, 74% in the BRICs and over 90% in the least developed countries. With global population growth projections of 2–3 billion people over the next 40 years, food demand is predicted to increase by 60% by 2050. FAO estimates an 11% increase in irrigation water consumption from 2008 to 2050. Although this seems a modest increase, much of it will occur in regions already suffering from water scarcity.

Sources: FAO (2011a), *AQUASTAT online database*. Rome, FAO; FAO (2011b), *The State of the World’s Land and Water Resources: Managing Systems at Risk*. London, Earthscan.

Recent results from a survey of 130 countries show that there has been widespread adoption of integrated approaches to water management worldwide, but significant challenges remain.¹³ Since 1992, 80% of countries made some progress in improving the policy, legal, institutional and financial framework for water resources management in response to the 2002 Johannesburg Plan of Implementation which stated that all countries should develop integrated water resources management and water efficiency plans. While the benefits of improved water governance in some cases have been far reaching, the results from the survey also show that this clearly remains an on-going process for most countries. Infrastructure development is advancing in some important areas including storage dams for water supply and hydropower. However, fewer countries report advanced implementation for irrigation, rainwater harvesting and investment in natural systems. Evolution towards efficient water use has been uneven across sectors and regions. Progress on integrated approaches to water resources

⁹ Millennium Ecosystem Assessment (2005): *Ecosystems and Human-Being: A Framework for Assessment*, Island Press, Washington D.C.

¹⁰ World Economic Forum (2013): *Global Risks 2013: Eighth Edition*, World Economic Forum, Davos.

¹¹ OECD (2012): *Environmental Outlook to 2050*, OECD, Paris.

¹² UNESCO (2009): *UN World Water Development Report*, UNESCO, Paris.

¹³ UNEP (2012): *The UN-Water Status Report on the Application of Integrated Approaches to Water Resources Management*, UNEP, Nairobi.

management is demonstrated by a strong correlation between progress on the enabling policy environment and a positive impact on management practices. Improving implementation capacity and stakeholder participation is perceived as a major challenge by many countries. Other constraints to the development of appropriate institutional arrangements relate to unclear mandates and difficulties in cross-sectoral coordination.

Improved knowledge, research, innovation and implementation towards much more productive and sustainable use of water, especially for food and energy, will be required to meet the world's future fuel and food needs.

Through a better combination of technical solutions and political commitment to sustainably meet competing needs of multiple users, wise water management offers enhanced livelihoods, including through job creation, a safer environment, improved economic activity and better overall health and well-being. The urgency of increasing water productivity and adopting sustainable production and consumption patterns to meet projected future demands needs to be matched by progress in this area.

Water remains at all levels a catalyst for coordinated policy, shared management, and peaceful cooperation between countries. Enhanced cooperation over water issues could contribute to more efficient management, with positive impacts on water quantity and quality, as well as reducing potential for conflicts. Addressing water and sanitation also requires vertical integration of policies (from national to subnational and municipal levels), as well as data sharing, capacity building and decentralized cooperation.

There is a pressing need to improve global freshwater quality by addressing water pollution and making better use of wastewater. It has been roughly estimated that about 80% of wastewater from human settlements and industrial sources worldwide is discharged directly untreated into water bodies, with detrimental effects on human health and the environment.¹⁴ Nutrient pollution from urban wastewater and agriculture – one of the most widespread water quality problems – is projected to worsen in most regions of the world, intensifying eutrophication and damaging coastal ecosystems. Improving the quality of the world's water resources requires pollution reduction including by collecting and treating contaminated water and restoring, managing and protecting the ability of ecosystems to regulate water quality. Moreover, particularly in the context of water scarcity, wastewater should be considered a resource, highlighting the need for policies, investments and practices for safe reuse and recycling. The lack of reliable data and scientific assessments remains a challenge to support the development and implementation of sustainable water resources policies. Progress in this regard could be facilitated through continuous and improved monitoring and data capture, including through remote sensing technologies.

Box 3 – The need for greater energy efficiency in wastewater treatment

The treatment of wastewater requires significant amounts of energy, and demand for energy to do this is expected to increase globally by 44% between 2006 and 2030 especially in non-OECD countries where wastewater currently receives little or no treatment.

Sources: IEA (2009), *World Energy Outlook*, Paris, IEA; Corcoran et al. (2010): *Sick Water? The Central Role of Wastewater Management in Sustainable Development*, The Hague, UN-Habitat /UNEP/GRID-Arendal.

2. Overview of proposals

Several proposals for integrating water and sanitation issues into the Sustainable Development Goals (SDG) framework have been made so far. These can be broadly grouped in two categories. The first category is those that integrate the social, economic and environmental dimensions of the water challenge in one single SDG on water. Proposals falling under this category tend to combine an access to safe drinking water and sanitation target; a water resources management and water use efficiency target; and a water quality target. The second category is those that compile clusters of SDGs that each addresses a different development dimension, i.e. basic human needs; natural resources management etc. In this case different water-related issues would be addressed in different goals.

¹⁴ Corcoran et al. (2010): *Sick Water? The Central Role of Wastewater Management in Sustainable Development*, UN-Habitat/UNEP/GRID-Arendal, Nairobi.

A) A Sustainable Development Goal on Water including Sanitation

This approach has been put forward among others by:

- **The African Minister’s Council on Water (AMCOW).** Under the heading “[to] ensure a water secure world for all”, AMCOW suggests three targets: 1) “Universal access to safe water, improved sanitation and hygiene by 2030”; 2) “Increase productive use of water resources under managed conditions to X% of harvest potential by 2030”; 3) “By 2030, water quality is assured and safeguarded for all uses”. See http://www.amcow-online.org/images/docs/outcomes_of_the_tunis_post_2015_water_consultations.pdf.
- **The UN Secretary General’s Advisory Board on Water and Sanitation (UNSGAB).** UNSGAB recommends a Global Goal on Water which includes the following objectives: 1) “Achieve universal access to sustainable sanitation and to drinking-water that is really safe”; 2) “Increase wastewater management and pollution prevention”; 3) “Improve integrated water resources management and water-use efficiency”. In order to address inter-linkages between water and other sectors, the Board also recommends including water efficiency targets in other post-2015 goals (e.g. in a potential goal on food) and calls for taking into consideration water-related disasters. See www.unsgab.org/content/documents/UNSGABpost2015brief.pdf.
- **The UN Global Compact’s CEO Water Mandate.** The role of business in advancing potential post-2015 policy objectives related to water was discussed at a multi-stakeholder meeting in March in Mumbai. One idea advanced was that targets should relate to or support one or more of the three sub-streams of the Thematic Consultation on Water (WASH, WRM and wastewater management and water quality). Learning from past experiences of the MDGs, business leaders suggested that water objectives be addressed more broadly than a single focus on WASH and that more societal players, including the private sector, will need to be involved in their achievement. See http://ceowatermandate.org/files/CEO_WaterMandateMumbaiPost2015MeetingKeyOutputs.pdf.
- Several countries support a standalone water goal that refers to a “water-secure world”. Building on the three streams of the Thematic Consultation on Water, such a goal would address three pillars: 1) “Safe and sustainable drinking-water, sanitation, and hygiene for all”; 2) “Water resources to be managed sustainably in order to satisfy human needs by respecting ecosystem requirements”; 3) “All wastewater to be managed based on the concept of reduction/omission, treatment and reuse/discharge”. See www.eda.admin.ch/eda/en/home/dfa/head/speech/single.html?id=48242.

Box 4 – The JMP Post-2015 consultative process

The WASH sub-sector has undertaken a consultative process, convened by WHO and UNICEF as the Joint Monitoring Programme for Water Supply and Sanitation, to consider WASH in the post-2015 agenda. Proposals for detailed WASH targets have been developed, which can be summarized as:

1. Everyone has water, sanitation and hygiene at home;
2. All schools and health centres have water, sanitation and hygiene;
3. No one practices open defecation;
4. Water, sanitation and hygiene should be equitable and sustainable.

The reduction of inequalities is proposed as a fundamental indicator of progress. The Sanitation and Water for All partnership supports these proposals. See: www.wssinfo.org/post-2015-monitoring.

Similar consultative processes on water resources management, wastewater management and water quality are currently ongoing.

The many proponents of a stand-alone water SDG argue, among other things, that all water issues are connected through the hydrological cycle. The complex interrelations between the various water-related needs require an integrated approach which would be better catalyzed by keeping these aspects together in one SDG.

In a recent paper the Overseas Development Institute also points out that water issues could come together in a single goal as they are closely interrelated with human development objectives and environmental sustainability concerns.¹⁵

B) Inclusion of water and sanitation aspects in different Sustainable Development Goals

This approach has for example been put forward by:

- **The European Commission in a recent Communication to the European Parliament.** The paper suggests that the framework could address the following clusters of issues by 2030: 1) “ensuring basic living standards”; 2) “promoting the drivers for inclusive and sustainable growth”; 3) “ensuring sustainable management of natural resources”; 4) “promoting equality, equity and justice; and peace and security”. In this framework, access to water supply and sanitation falls under “ensuring basic living standards”; overcoming water scarcity and reducing water losses under “promoting the drivers for inclusive and sustainable growth”; and sustainable water resources management under “ensuring sustainable management of natural resources”. See http://ec.europa.eu/europeaid/documents/2013-02-22_communication_a_decent_life_for_all_post_2015_en.pdf.
- **The Special Adviser to the UN Secretary-General on the MDGs** proposes a framework for sustainable development composed of four interconnected dimensions: 1) economic development and ending poverty; 2) social inclusion; 3) environmental sustainability; and 4) good governance and personal security. Water issues here would be dealt within the economic and the environmental dimensions. See <http://unsdsn.org/files/2012/12/121220-Draft-Framework-of-Sustainable-Development.pdf>.

Proponents of this approach argue, among others, that bringing together related policy objectives along different dimensions would limit the number of goals and allow numerous related sectors (e.g. access to energy, food, health, water; global management of the global commons etc.) to be addressed jointly.

III. Possible suggestions on the way forward

Through the Post-2015 Global Thematic Consultation on Water¹⁶, stakeholders from around the world have been taking stock of the lessons learned from the implementation of the MDGs and have made proposals to address key global challenges in water to inform the post-2015 development framework in ways that are measurable, inter-generational, pragmatic, and rest on the sustainable and equitable use of water. Additionally, the Global Water Partnership facilitated national stakeholder consultations on water in support of the post-2015 agenda in 20 countries¹⁷.

The recommendations emanating from the above discussions suggest that the future agenda should seek to achieve but also build on and go beyond the MDGs and existing commitments. The new agenda should encourage an integrated approach to water expressed in universally agreed goals which are simple, measurable and able to focus policies, resources and all partners on delivering concrete outcomes that improve people’s lives and protect their future and the environment.

¹⁵ Overseas Development Institute (2013): *How to build sustainable development goals: integrating human development and environmental sustainability in a new global agenda*, ODI, London <http://www.odi.org.uk/sites/odi.org.uk/files/odi-assets/publications-opinion-files/8290.pdf>.

¹⁶ The World We Want Thematic Consultation on Water. See <http://www.worldwewant2015.org/topics/160275> and consultation report: www.worldwewant2015.org/node/341163.

¹⁷ Global Water Partnership (2013): *National Stakeholder Consultations on Water: Supporting the Post-2015 Development Agenda*, GWP, Stockholm.

The following reflections that emerged from the Thematic Water Consultation might also be considered when discussing the water and sanitation agenda post-2015:

- Water is a key determinant in all aspects of social, economic and environmental development and should therefore be a central focus of any post-2015 framework for poverty eradication and global sustainable development.
- Safe Drinking Water, Sanitation and Hygiene, the Management and Development of Water Resources, Wastewater Management and Water Quality are all indispensable elements for building a water-secure world.
- Not adequately addressing water issues risks contributing to crises in water-dependent sectors. Water security will be of growing importance on the political agenda.
- Governments play a key role in securing water for competing demands, and also in protecting resources and ecosystems in a long-term perspective. However the quest for a water-secure world is a joint responsibility and can only be achieved through water cooperation at local, national, regional and global level and through partnerships with a multitude of stakeholders ranging from citizens to policy makers to the private sector. People must be able to participate in decisions on water and sanitation that affect their lives.
- Water-related capacity development, both at the individual and institutional levels, will be fundamental in the realization and implementation of the post-2015 development agenda.

Regarding the way forward, the Global Thematic Consultation on Water also recommended that there should be an ambitious goal and set of targets that take account of unfinished business and the emerging and future challenges. This goal should inspire and create incentives for a change in behavior to manage and allocate resources in a sustainable way such that benefits reach every person without discrimination.

In order to achieve water security for all, the following potential targets were proposed: equitable and universal access to safe and sustainable water, sanitation and hygiene; ground and surface water should be developed and managed sustainably and in an integrated manner to satisfy human needs while respecting ecosystem requirements; and all used water and wastewater should be collected and treated before it is returned to nature and managed under principles of pollution prevention and safe reuse.

While the centrality of water issues is particularly relevant to an SDG framework that has poverty eradication and sustainable development at its core, the very local nature of water poses challenges to reconcile a universal goal with the variety of national, local or basin-specific realities. More work is needed on targets and indicators and definitions, and on identifying data-needs to capture the many dimension and inter-linkages and to ensure national relevance and measurability. In this regard, the UN system stands ready to provide its technical support and expertise, including through the UN-Water Working Group on SDGs.