

The Committee of Permanent Representatives to UNEP
Briefing Session – Time: 10:00am – 12:00pm
16 March 2017
Gigiri, UN Office at Nairobi
Conference Room 4

Making the Global Case for Water Quality

Committee on Permanent Representatives, 16 March 2017

The importance of water quality

Freshwater is essential for life on our planet, yet makes up only around 2.5% of all its water. Less than 1% of all freshwater is available for direct human use and can be found accessible in ecosystems such as wetlands, rivers, aquifers and lakes – with the rest locked in the form of deep underground aquifers or ice. Managed well, freshwater ecosystems are some of the world's most productive, providing essential services such as drinking water, water for agriculture and energy, natural solutions for water purification and climate resilience, and habitats for fish and other aquatic lifeforms. In addition freshwater ecosystems provide services such as recreation and tourism. They directly support terrestrial ecosystems, such as mountains and forests, marine ecosystems and coastal zones, and are essential for sustainable development and general human well-being.

Water stress and scarcity have traditionally received more attention in political spheres, having been addressed during the MDG period along with access to drinking water and sanitation. These issues are still urgent, as water stress today affects more than 2 billion people worldwide, tendency growing. Furthermore, as of 2015, 2.4 billion people (nearly one in three) still lacked access to safely managed sanitation, meaning water resources could easily be re-contaminated. In 2012 1.8 billion people were estimated to be exposed to drinking water contaminated with faecal matter, and together water-borne diseases are a leading cause of death and disease named by the WHO, particularly among children.

To function properly and provide essential services, freshwater ecosystems require both adequate water quantity **and** quality of those water resources. Water quality also determines the quantity available for certain uses. This interdependency will be even stronger in light of rapid demographic change, displacements of people, potential conflicts and climate change. The dimensions of the resulting consequences for humans and the environment may have been significantly underestimated in previous assessments and have to be reconsidered in the light of the SDG agenda (UNEP 2016).

The current extent of the water quality problem

Already highly vulnerable to natural disasters which are being exacerbated by climate change, freshwater ecosystems are bearing the brunt of the impacts of human activities such as pollution, in particular through **pathogens** (largely from the expansion of sewer systems that discharge wastewater untreated into surface water systems), **organic matter** (including plant nutrients from agricultural run-off such as nitrogen or phosphorus), **chemicals** and **salinity** (from irrigation, domestic wastewater and runoff of mines into rivers).

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A preliminary assessment of the current water quality situation was laid out in a recent publication produced by UN Environment (UNEP 2016), *A Snapshot of the World's Water Quality*. Considering the sources, extent, and impacts of organic and pathogenic pollution, the *Snapshot* presents a picture of how pollution is affecting river stretches in Latin America, Africa and Asia: **severe pathogenic pollution in around one-third of all rivers; severe organic pollution in around one-seventh of all rivers; and severe and moderate salinity pollution in around one-tenth of all rivers.** Put together, these kinds of pollution put at risk the health not only of people, but also the freshwater fishing industry (threatening food security and livelihoods), and the use of river water for irrigation, industry and other uses.

More needs to be done on top of this *Snapshot* to understand the full extent and nature of the problem globally, including the mitigation options and governance approaches which will be needed to address this problem. Overcoming current limitations of data availability and accessibility would enable policy makers to grasp the extent of the water quality problem, and enable the setting of quality targets both for water and related ecosystems.

Water Quality and UN Environment's Mandate

Strengthened at Rio+20 by an expanded, now universal, country membership, UN Environment's mandate to advocate and protect the global environment clearly extends to water. UN Environment is already engaged in creating International Water Quality Guidelines for Ecosystems (IWQGES), mandated by Governing Council (GC) Decision 27/3 in February 2013 and aiming to help countries set national standards for their own water quality by applying an ecosystem health perspective.

Through GEMS / Water (Global Environmental Monitoring System Water), which was established in 1978 with the purpose of generating a database of global water quality data for global assessments, UN Environment also already has a long standing mandate renewed and strengthened by the United Nations Environment Assembly in its first session 2014 (Resolution 1/9) and a decades long track record of monitoring, analyzing and assessing data related to water quality at large. The resulting data were instrumental in the preliminary *Snapshot* water quality assessment last year but also highlight the substantial shortfalls in certain regions and time coverage. In light of the expanded ambition and mandates of the SDGs, UN Environment should strengthen and underpin its role by strengthening water quality data collection and underpin it with a full global water quality and scenario assessment in order to gain a better understanding of the extent of the world's water quality problem and the solutions available to countries.

Water Quality and the SDGs

During the MDG period, millions of people gained access to "improved" drinking water and sanitation between 1990 and 2015 – meaning they were provided in a way that was free from outside contamination or human contact, particularly in regards to basic hygiene. Yet a major shortcoming of that period was the lack of political and institutional prioritization or measurement of the quality of those water resources. It is well understood that poor sanitation, hygiene and access to drinking water are

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closely linked and a leading cause of child mortality and undernutrition, for example, leading to stunting and negative effects for lifelong health and development of the individual. But, water quality is also a critical determinant of the use of water for purposes such as agriculture, energy and for its essential role to sustain biodiversity and its services including food, fuel and fiber.

Water quality is now an essential prerequisite to the human rights to drinking water and sanitation, declared in 2010, and Sustainable Development Goal (SDG) 6, agreed in 2015. Both require access to “safe” drinking water. That in turn requires information about water quality in order to be measured.

The monitor and implement SDG 6, UN Environment is collaborating with the other global “custodians” of the water and sanitation SDG (SDG 6) which include UNICEF, WHO, FAO, WMO, UN-Habitat and UNESCO, in the integrated global monitoring initiative called GEMI, under the umbrella of UN-Water (www.unwater.org/gemi). UN Environment is the agency custodian for SDG indicators contained in target 6.3 (on water quality), 6.5 (on integrated water resources management) and 6.6 (on water-related ecosystems).

Water quality and other SDGs

SDG 6 relies upon water quality to meet all of its interrelated targets, in the same way that water quality also impacts upon, or is impacted by, realization of targets in other SDGs. For example, water quality can be negatively affected by the impacts of climate change, including flood and drought (SDG 11); it is also potentially negatively impacted by increased food (SDG 2) and energy (SDG 7) production and economic growth (SDG 8). At the same time, poor water quality is a major cause of poor health and productivity, including death and disease (SDG 3), contributing to the loss of tourism and poor working conditions (SDG 8). Achieving the management of chemicals and waste and sustainable consumption and production (SDG 12) will improve water quality, leading also to improvements in marine, coastal and terrestrial ecosystems (SDGs 14 and 15).

Monitoring and evaluation of water quality

The achievement of the SDGs rests on country ownership and accountability, through country monitoring and reporting on progress. Monitoring and evaluation of water quality are essential for understanding the intensity and scope of the global water quality challenge. Yet the availability and accessibility of data in many parts of the world is inadequate for this purpose.

The global indicator for the water quality target, 6.3, calls for

“By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally” Indicators listed by IAEG-SDG Proportion of wastewater safely treated Proportion of bodies of water with good ambient water quality.”

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As SDG 6 will initially be reviewed at the High-level Political Forum (HLPF) in summer 2018, UN Environment is providing input through UN-Water's **SDG 6 Synthesis Report** in early 2018, based on the data collected from countries through a global roll-out of SDG 6 indicators in 2017. This will provide an initial baseline of the water quality situation relying on a basic set of water determinants and still only in a selected number of countries. It is clear that data collection and monitoring need to be expanded, and also that a global water quality assessment would be essential to provide the underlying evidence to the monitoring process of SDG indicators, thus enabling countries and regions to react accordingly and embrace a cross-sectoral ecosystem based approach to water quality. By elaborating in detail on the water quality challenge, the drivers, pressures, impacts and current and future responses would provide the urgently needed direction for sustainable water policy in the Agenda 2030, including and well beyond SDG 6, as would look into those interlinkages which are most critical under a nexus perspective, e.g. water, energy, food, and health as well as urbanization and the cause-effect dimension of people displacement. A comprehensive worldwide water quality assessment is therefore imminently needed to expand on this baseline and complement the SDG process by developing a comprehensive global picture of the water quality and its close multisectoral interlinkages.

For further information on the need for a Worldwide Assessment of Freshwater Quality, see the recent UN-Water publication at <http://www.unwater.org/publications/publications-detail/en/c/457994/>.

References

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UN-Water, integrated monitoring of water and sanitation related SDG targets, www.unwater.org/gemi.