Good ambient water quality: monitoring methodology and first results of SDG indicator 6.3.2

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Access to safe water and sanitation and sound management of freshwater ecosystems are vital for people, planet and prosperity. The Sustainable Development Goal 6 of the 2030 Agenda for Sustainable Development defines ambitious targets regarding clean water provision and sanitation infrastructure worldwide as well as improvements in water quality (target 6.3) by 2030. Under the custodianship of the UN Environment Global Environment Monitoring System for Freshwater (GEMS/Water), the global SDG indicator 6.3.2 has been developed to monitor progress towards target 6.3. The indicator is defined as the proportion of waterbodies in a country that have good ambient water quality (i.e. natural, untreated water in rivers, lakes, groundwater) representing a combination of natural influences and the impacts of anthropogenic activities. Here we will (i) introduce the methodology of SDG indicator 6.3.2 and (ii) present first results and lessons from its initial worldwide application in 2017.

Starting in 2014, a detailed step-by-step methodology for monitoring water quality and calculating indicator 6.3.2 has been developed as part of the UN-Water Integrated Monitoring Initiative for SDG 6. The quality of inland water bodies is assessed by determining the compliance of selected water quality parameters with water quality targets such as legal standards or reference quality conditions. Each assessed waterbody is classified as having good quality if at least 80 % of the monitoring data collected at the waterbody within the last three years comply with the selected target values. The national indicator is computed as the ratio of the waterbodies classified as having good quality to the total number of assessed waterbodies.

Due to the natural variability of ambient water quality and large differences in monitoring capacities worldwide, countries can select the waterbodies, parameters and target values to be included depending on existing water quality monitoring programmes as well as management and regulatory frameworks. In order to enhance global comparability between countries, a core set of physico-chemical and nutrient parameters for different waterbody types (lotic and lentic surface waters and groundwater) have been recommended to calculate a core indicator.

In 2017, all UN member states were invited to provide baseline data for the core indicator. As of December 2017, data submissions from 38 countries have been quality-controlled covering more than 60 000 surface and groundwater bodies, mostly from European countries (18). 24 countries have reported more than half of their assessed waterbodies to have good quality but the results cannot easily be compared between countries due to large differences in the number and size of assessed water bodies as well as the parameters and the target values being used to assess the waterbodies. Especially developing countries and countries in transition that are particularly affected by emerging water pollution often lack the technical and institutional capacity to comprehensively monitor and report on indicator 6.3.2.