

Progress on Ambient Water Quality

GLOBAL INDICATOR
6.3.2 UPDATES AND
ACCELERATION NEEDS
2021

EXECUTIVE SUMMARY





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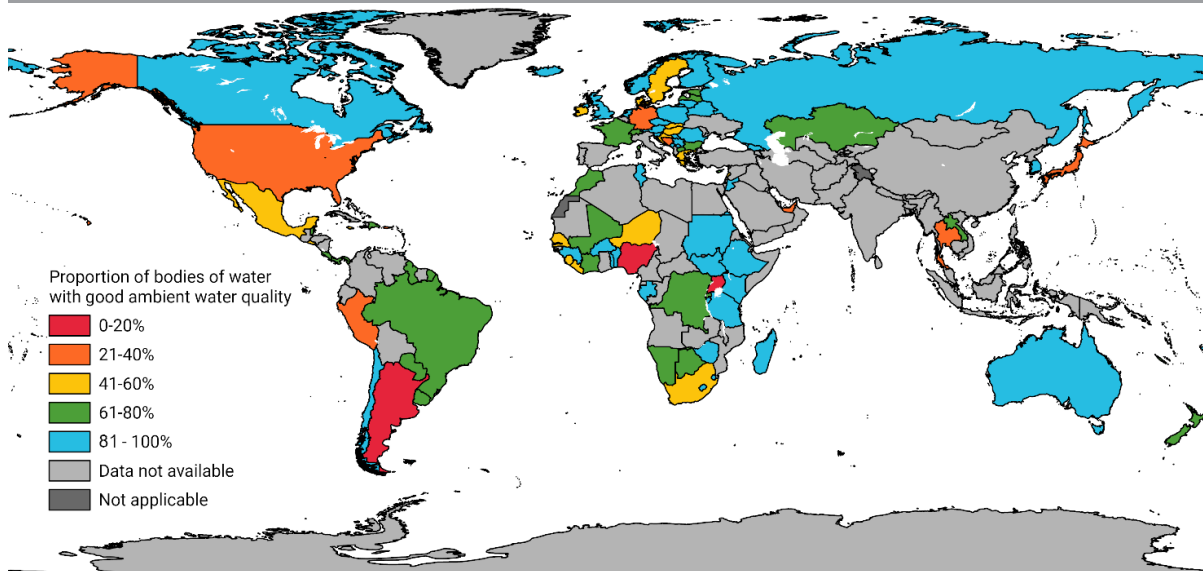
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Ambient water quality highlights

Figure 1. Map of latest available national indicator data, including submissions from 2017 and 2020 from 96 countries showing proportion of water bodies classified as having good ambient water quality



Source: Adapted from UN-Water (2021).

Inaction to address water quality issues threatens human health, the economy and ecosystem health (Damania *et al.*, 2019). The pollution of water bodies can be highly visible such as in algal blooms in lakes, or invisible if water contains certain chemicals or antibiotics. In either case, if nothing is done, human or ecosystem health can be adversely affected.

If target 6.3 is to be reached and water quality improved by 2030, an essential prerequisite is information. We need to know where water

quality is good and where it is not, and how this quality is changing over time. The 2020 data drive for Sustainable Development Goal (SDG) indicator 6.3.2 resulted in over a 100 per cent increase in submissions compared with 2017 (89 compared with 39). This is a positive sign, and although the number of submissions is important, it is only the first step. More submissions mean more countries engaged with the indicator, and more information is being generated and shared, and it is here that the real

success lies. Collecting these data and making them available helps to trigger action targeted at improving water quality.

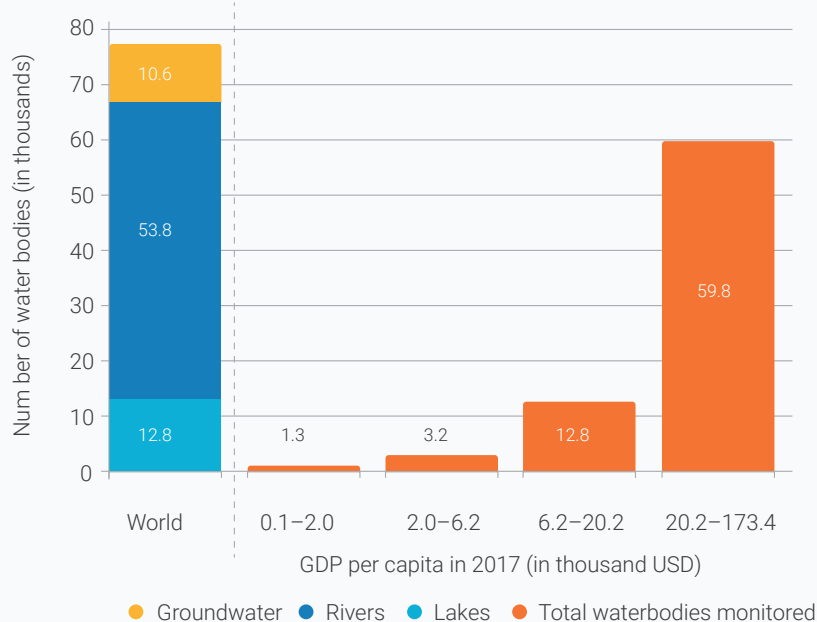
Receiving these extra submissions has many additional benefits and knock-on effects that often go unseen unless showcased and described. For example, in reaction to the latest data drive for this indicator, some countries looked at their data in a new way. The indicator helped turn data into information whereas previously they had remained within the organization that generated them and their potential went unrealized. Some countries have reviewed their ambient water quality reporting processes and for the first time generated a national water quality picture. Previously, only state or subnational reporting was undertaken without any national aggregation. Also, and most significantly, some countries have used this opportunity to initiate ambient water quality

programmes for the first time, or have used it to refocus existing monitoring efforts for this new purpose. All these examples, and many more, are described in this report to raise awareness of the importance of water quality in the international consciousness and initiate change.

Key takeaways for global policymakers

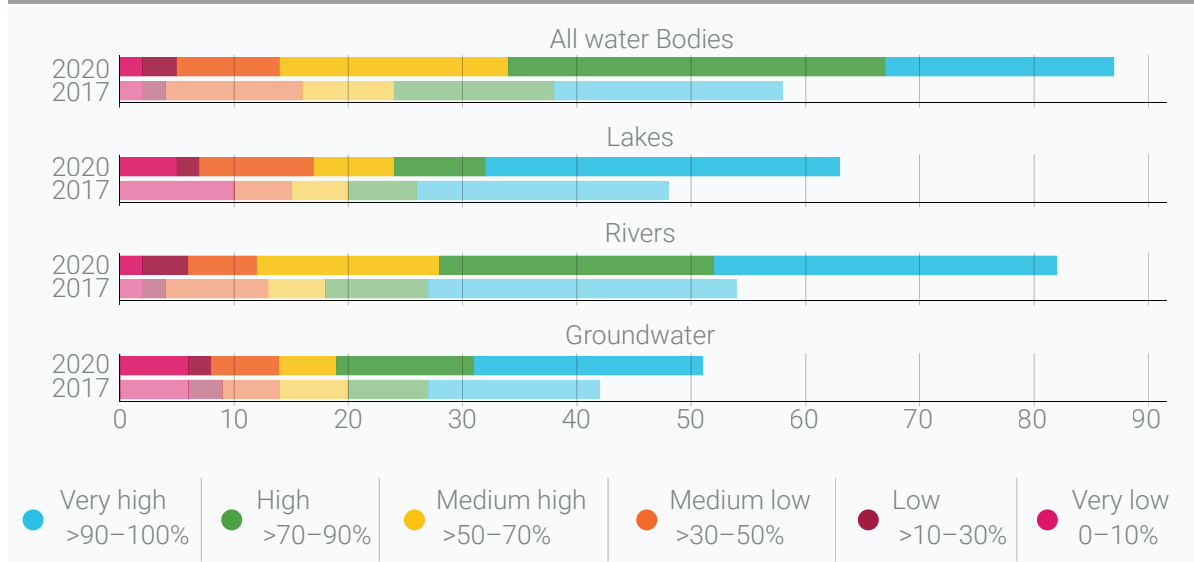
Data gaps in low-GDP countries. Over 75,000 water bodies were reported on in 2020, but over three-quarters of them were in 24 high-GDP countries. The poorest 20 countries reported on just over 1,000 water bodies. “More monitoring needed” can be an overused message, but a critically important one when people are using untreated water of unknown quality for drinking and domestic use.

Figure 2. Monitoring efforts expressed as the number of water bodies by water body type, partitioned by gross domestic product quartiles



Source: Adapted from UN-Water (2021).

Figure 3. Number of countries that reported on indicator 6.3.2 in 2017 and 2020, split by water body type and aggregated into six categories of water quality



Good water quality. In all world regions, in low-, medium- and high-income countries alike, there are water bodies that are still in good condition. Sixty per cent of water bodies – 45,966 out of 76,151 – assessed in 2020 were classified as having good ambient water quality. Protection is easier than restoration, so efforts to protect these water bodies must be initiated now so they can continue to provide benefits to communities and the environment.

Water quality threats. Although low-, middle- and high-income countries also reported poor water quality, the underlying drivers are likely to be different and therefore require country-specific actions. Agriculture and untreated wastewater pose two of the greatest threats to environmental water quality globally: they release excess nutrients into rivers, lakes and aquifers which damage ecosystem function. Measurements of nitrogen and phosphorus failed to meet their targets more often than the other water quality parameters of the indicator.

Lack of groundwater data. Of the 89 countries with data, only 52 reported information about groundwater, which is problematic because groundwater often represents the largest share of fresh water in a country. An understanding of the hydrogeological environment, the pressures on these resources, and how to monitor them effectively is lacking in many countries.

Building monitoring capacity. Ambient water quality data are not routinely collected in most countries. This means that water quality for 3 billion people is unknown and these people could be at significant risk. Furthermore, data on water quality from developing countries lacks detail, with the indicator calculated using relatively few measurements and without suitable environmental water quality standards. This lowers the reliability of the reporting.

Key takeaways for national policymakers

Positive trends for countries with robust monitoring systems. Nineteen of the 49 countries reporting in both 2017 and 2020 are on track to improve water quality. These are countries that have a robust monitoring system in place. This, in turn, supports the concept that monitoring is essential for positive management action.

Water quality data need to be embedded in management and policy action. To have the greatest impact, water quality data need to be embedded in management and policy actions and combined with improvements in outreach and communication aimed at all stakeholders to ensure water quality becomes everyone's business.

There are many threats to water quality. Nutrients from untreated wastewater effluent and agricultural run-off remain the greatest threat. Improving wastewater treatment rates and technologies, while simultaneously ensuring best management practices are applied in the agricultural sector, will have the greatest returns.

Collect data for the different SDG 6 indicators using the same spatial units. Collecting data using the same spatial units for all SDG 6 indicators will help to influence management action and policy change. For example, data on wastewater treatment levels and ambient water quality would help identify which river basins are making the most progress, and where efforts to improve water quality are not having the intended impact.

Capacity development in data management needed. Engagement with countries highlighted that capacity development in data management was one of the greatest and most urgent needs.

Targeting this area would help make better use of data already available and help activate these data for management decisions.

Key takeaways for water quality experts and practitioners

Improved implementation of the methodology. The target values used by those implementing the indicator in their countries were much closer to those expected to reflect "good ambient water quality" compared to those used in 2017.

Increased standardization. Comparing 2020 with 2017 indicator score results shows a slight contraction in the ranges observed, with the twenty-fifth and seventy-fifth percentiles moving towards the median for all water body types, and increases in the median values for both lakes and groundwater, with a substantial drop for rivers. This possibly suggests a greater degree in the standardization of approach in methodology implementation.

New indicator calculation service. Eighteen countries used the *indicator calculation service* provided by United Nations Environment Programme (UNEP) to reduce the reporting burden. Several of these countries chose to use data that they already regularly submit to GEMStat, the Global Environment Monitoring System for Freshwater (GEMS/Water) database. This meant these countries only needed to validate the indicator score generated on their behalf, which reduced the reporting burden.

Reducing reporting burden. Efforts are under way to reduce the reporting burden and duplication of effort for those countries engaged with existing regional frameworks. The 2020 data drive saw the first pilot to reuse data reported to the European Environment Agency by the 38 member and cooperating countries.

Key takeaways for general audience

Capacity development is having a positive impact. Capacity development for indicator 6.3.2 is having a positive impact already, but more action is needed to build on these efforts in least developed countries. This will expand monitoring and assessment activities to ensure that freshwater quality is everyone's business.

Significant regional gaps. The global coverage of indicator 6.3.2 information was much greater in 2020 than in 2017, but there are still significant data gaps. Most notable are those in Central,

Southern and Western Asia. Outreach efforts are ongoing in these regions to encourage future submissions.

SDG 6.3.2 is a key indicator of the SDGs. Its importance extends beyond its associated target to many other SDGs that rely, directly or indirectly, on good ambient water quality. Information from indicator 6.3.2 can inform decisions relating to ending hunger (SDG 2), improving health (SDG 3), increasing access to energy (SDG 7), promoting sustainable tourism and industrialization (SDGs 8 and 9), reducing marine pollution (SDG 14) and safeguarding terrestrial biodiversity (SDG 15).

Citizen scientists have a role to play. The collection of water quality data is an essential prerequisite if water resources are to be protected and the services we obtain from these freshwater ecosystems are to be maintained. Citizen scientists can play a significant role in data collection and their involvement has the additional benefit of promoting behavioural change and engagement in the management of water quality.



Amazonas, Brazil by Sébastien Goldberg

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Learn more about progress towards SDG 6

6 CLEAN WATER AND SANITATION



How is the world doing on **Sustainable Development Goal 6**? View, analyse and download global, regional and national water and sanitation data: <https://www.sdq6data.org/>

Sustainable Development Goal (SDG) 6 expands the Millennium Development Goal (MDG) focus on drinking water and basic sanitation to include the more holistic management of water, wastewater and ecosystem resources, acknowledging the importance of an enabling environment. Bringing these aspects together is an initial step towards addressing sector fragmentation and enabling coherent and sustainable management. It is also a major step towards a sustainable water future.

Monitoring progress towards SDG 6 is key to achieving this SDG. High-quality data help policymakers and decision makers at all levels of government to identify challenges and opportunities, to set priorities for more effective and efficient implementation, to communicate progress and ensure accountability, and to generate political, public and private sector support for further investment.

The 2030 Agenda for Sustainable Development specifies that global follow-up and review shall primarily be based on national official data sources. The data are compiled and validated by the United Nations custodian agencies, who contact country focal points every two to three years with requests for new data, while also providing capacity-building support. The last global “data drive” took place in 2020, resulting in status updates on nine of the global indicators for SDG 6 (please see below). These reports provide a detailed analysis of current status, historical progress and acceleration needs regarding the SDG 6 targets.

To enable a comprehensive assessment and analysis of overall progress towards SDG 6, it is essential to bring together data on all the SDG 6 global indicators and other key social, economic and environmental parameters. This is exactly what the SDG 6 Data Portal does, enabling global, regional and national actors in various sectors to see the bigger picture, thus helping them make decisions that contribute to all SDGs. UN-Water also publishes synthesized reporting on overall progress towards SDG 6 on a regular basis.



<p>Summary Progress Update 2021: SDG 6 – Water and Sanitation for All</p>	<p>Based on latest available data on all SDG 6 global indicators. Published by UN-Water through the UN-Water Integrated Monitoring Initiative for SDG 6.</p> <p>https://www.unwater.org/publications/summary-progress-update-2021-sdg-6-water-and-sanitation-for-all/</p>
<p>Progress on Household Drinking Water, Sanitation and Hygiene – 2021 Update</p>	<p>Based on latest available data on SDG indicators 6.1.1 and 6.2.1. Published by World Health Organization (WHO) and United Nations Children’s Fund (UNICEF).</p> <p>https://www.unwater.org/publications/who-unicef-joint-monitoring-program-for-water-supply-sanitation-and-hygiene-jmp-progress-on-household-drinking-water-sanitation-and-hygiene-2000-2020/</p>
<p>Progress on Wastewater Treatment – 2021 Update</p>	<p>Based on latest available data on SDG indicator 6.3.1. Published by WHO and United Nations Human Settlements Programme (UN-Habitat) on behalf of UN-Water.</p> <p>https://www.unwater.org/publications/progress-on-wastewater-treatment-631-2021-update/</p>
<p>Progress on Ambient Water Quality – 2021 Update</p>	<p>Based on latest available data on SDG indicator 6.3.2. Published by United Nations Environment Programme (UNEP) on behalf of UN-Water.</p> <p>https://www.unwater.org/publications/progress-on-ambient-water-quality-632-2021-update/</p>
<p>Progress on Water-Use Efficiency – 2021 Update</p>	<p>Based on latest available data on SDG indicator 6.4.1. Published by Food and Agriculture Organization of the United Nations (FAO) on behalf of UN-Water.</p> <p>https://www.unwater.org/publications/progress-on-water-use-efficiency-641-2021-update/</p>
<p>Progress on Level of Water Stress – 2021 Update</p>	<p>Based on latest available data on SDG indicator 6.4.2. Published by FAO on behalf of UN-Water.</p> <p>https://www.unwater.org/publications/progress-on-level-of-water-stress-642-2021-update/</p>
<p>Progress on Integrated Water Resources Management – 2021 Update</p>	<p>Based on latest available data on SDG indicator 6.5.1. Published by UNEP on behalf of UN-Water.</p> <p>https://www.unwater.org/publications/progress-on-integrated-water-resources-management-651-2021-update/</p>
<p>Progress on Transboundary Water Cooperation – 2021 Update</p>	<p>Based on latest available data on SDG indicator 6.5.2. Published by United Nations Economic Commission for Europe (UNECE) and United Nations Educational, Scientific and Cultural Organization (UNESCO) on behalf of UN-Water.</p> <p>https://www.unwater.org/publications/progress-on-transboundary-water-cooperation-652-2021-update/</p>
<p>Progress on Water-related Ecosystems – 2021 Update</p>	<p>Based on latest available data on SDG indicator 6.6.1. Published by UNEP on behalf of UN-Water.</p> <p>https://www.unwater.org/publications/progress-on-water-related-ecosystems-661-2021-update/</p>
<p>National Systems to Support Drinking-Water, Sanitation and Hygiene – Global Status Report 2019</p>	<p>Based on latest available data on SDG indicators 6.a.1 and 6.b.1. Published by WHO through the UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS) on behalf of UN-Water.</p> <p>https://www.unwater.org/publication_categories/glaas/</p>

Presenting the UN-Water Integrated Monitoring Initiative for SDG 6

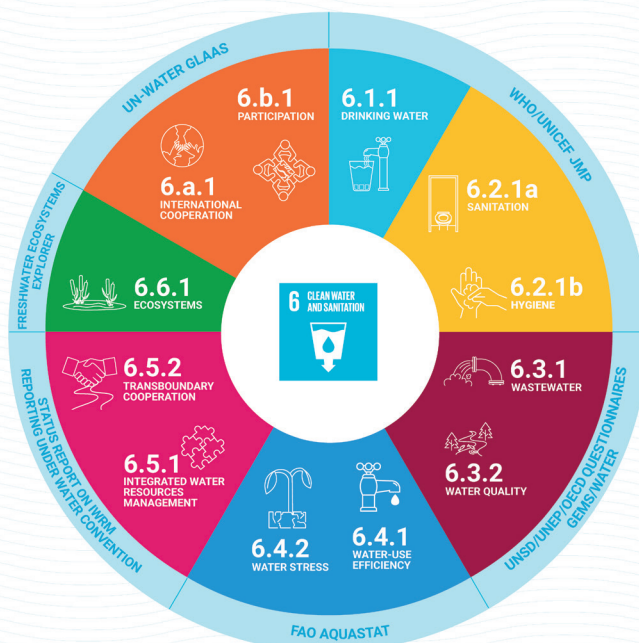
Through the UN-Water Integrated Monitoring Initiative for SDG 6 (IMI-SDG6), the United Nations seeks to support countries in monitoring water- and sanitation-related issues within the framework of the 2030 Agenda for Sustainable Development, and in compiling country data to report on global progress towards SDG 6.

IMI-SDG6 brings together the United Nations organizations that are formally mandated to compile country data on the SDG 6 global indicators, and builds on ongoing efforts such as the World Health Organization (WHO)/United Nations Children's Fund (UNICEF) Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP), the Global Environment Monitoring System for Freshwater (GEMS/Water), the Food and Organization of the United Nations (FAO) Global Information System on Water and Agriculture (AQUASTAT) and the UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS).

This joint effort enables synergies to be created across United Nations organizations and methodologies and requests for data to be harmonized, leading to more efficient outreach and a reduced reporting burden. At the national level, IMI-SDG6 also promotes intersectoral collaboration and consolidation of existing capacities and data across organizations.

The overarching goal of IMI-SDG6 is to accelerate the achievement of SDG 6 by increasing the availability of high-quality data for evidence-based policymaking, regulations, planning and investments at all levels. More specifically, IMI-SDG6 aims to support countries to collect, analyse and report SDG 6 data, and to support policymakers and decision makers at all levels to use these data.

- Learn more about SDG 6 monitoring and reporting and the support available: www.sdg6monitoring.org
- Read the latest SDG 6 progress reports, for the whole goal and by indicator: https://www.unwater.org/publication_categories/sdg6-progress-reports/
- Explore the latest SDG 6 data at the global, regional and national levels: www.sdg6data.org



INDICATORS	CUSTODIANS
6.1.1 Proportion of population using safely managed drinking water services	WHO, UNICEF
6.2.1 Proportion of population using (a) safely managed sanitation services and (b) a hand-washing facility with soap and water	WHO, UNICEF
6.3.1 Proportion of domestic and industrial wastewater flows safely treated	WHO, UN-Habitat, UNSD
6.3.2 Proportion of bodies of water with good ambient water quality	UNEP
6.4.1 Change in water-use efficiency over time	FAO
6.4.2 Level of water stress: freshwater withdrawal as a proportion of available freshwater resources	FAO
6.5.1 Degree of integrated water resources management	UNEP
6.5.2 Proportion of transboundary basin area with an operational arrangement for water cooperation	UNEP, UNESCO
6.6.1 Change in the extent of water-related ecosystems over time	UNEP, Ramsar
6.a.1 Amount of water- and sanitation-related official development assistance that is part of a government-coordinated spending plan	WHO, OECD
6.b.1 Proportion of local administrative units with established and operational policies and procedures for participation of local communities in water and sanitation management	WHO, OECD

UN-Water reports

UN-Water coordinates the efforts of United Nations entities and international organizations working on water and sanitation issues. By doing so, UN-Water seeks to increase the effectiveness of the support provided to Member States in their efforts towards achieving international agreements on water and sanitation. UN-Water publications draw on the experience and expertise of UN-Water’s Members and Partners.

SDG 6 Progress Update 2021 – summary	<p>This summary report provides an executive update on progress towards all of SDG 6 and identifies priority areas for acceleration. The report, produced by the UN-Water Integrated Monitoring Initiative for SDG 6, present new country, region and global data on all the SDG 6 global indicators.</p>
SDG 6 Progress Update 2021 – 8 reports, by SDG 6 global indicator	<p>This series of reports provides an in-depth update and analysis of progress towards the different SDG 6 targets and identifies priority areas for acceleration: Progress on Drinking Water, Sanitation and Hygiene (WHO and UNICEF); Progress on Wastewater Treatment (WHO and UN-Habitat); Progress on Ambient Water Quality (UNEP); Progress on Water-use Efficiency (FAO); Progress on Level of Water Stress (FAO); Progress on Integrated Water Resources Management (UNEP); Progress on Transboundary Water Cooperation (UNECE and UNESCO); Progress on Water-related Ecosystems (UNEP). The reports, produced by the responsible custodian agencies, present new country, region and global data on the SDG 6 global indicators.</p>
UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS)	<p>GLAAS is produced by the World Health Organization (WHO) on behalf of UN-Water. It provides a global update on the policy frameworks, institutional arrangements, human resource base, and international and national finance streams in support of water and sanitation. It is a substantive input into the activities of Sanitation and Water for All (SWA) as well as the progress reporting on SDG 6 (see above).</p>
United Nations World Water Development Report	<p>The United Nations World Water Development Report (WWDR) is UN-Water’s flagship report on water and sanitation issues, focusing on a different theme each year. The report is published by UNESCO, on behalf of UN-Water and its production is coordinated by the UNESCO World Water Assessment Programme. The report gives insight on main trends concerning the state, use and management of freshwater and sanitation, based on work done by the Members and Partners of UN-Water. Launched in conjunction with World Water Day, the report provides decision-makers with knowledge and tools to formulate and implement sustainable water policies. It also offers best practices and in-depth analyses to stimulate ideas and actions for better stewardship in the water sector and beyond.</p>

<p>The progress reports of the WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP)</p>	<p>The JMP is affiliated with UN-Water and is responsible for global monitoring of progress towards SDG6 targets for universal access to safe and affordable drinking water and adequate and equitable sanitation and hygiene services. Every two years the JMP releases updated estimates and progress reports for WASH in households, schools and health care facilities.</p>
<p>Policy and Analytical Briefs</p>	<p>UN-Water’s Policy Briefs provide short and informative policy guidance on the most pressing freshwater-related issues that draw upon the combined expertise of the United Nations system. Analytical Briefs provide an analysis of emerging issues and may serve as basis for further research, discussion and future policy guidance.</p>

UN-Water planned publications

- **UN-Water Policy Brief on Gender and Water**
- **Update of UN-Water Policy Brief on Transboundary Waters Cooperation**
- **UN-Water Analytical Brief on Water Efficiency**

More information: <https://www.unwater.org/unwater-publications/>

