Progress on Integrated Water Resources Management

GLOBAL INDICATOR 6.5.1 UPDATES AND ACCELERATION NEEDS 2021

EXECUTIVE SUMMARY

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Executive summary

Sustainable Development Goal (SDG) 6:

Ensure availability and sustainable management of water and sanitation for all

Target 6.5:

By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate

Indicator 6.5.1:

Degree of integrated water resources management implementation (0–100)

Integrated water resources management (IWRM) is an approach that helps to balance competing water demands from across society and the economy, without compromising the sustainability of vital ecosystems. This is achieved through coordinated policy and regulatory frameworks, management arrangements and financing.

Mara River, Kenya, by Lawrence L on Flickr, 2010

Progress towards target 6.5 – the three main points

1. **Globally, the rate of implementation of IWRM urgently needs to double (Figure 1).** Unfortunately, the world is not on track to achieve SDG target 6.5. For many countries with lower levels of IWRM implementation, where development challenges are usually significant and capacity may be relatively low, the rate of implementation needs to far more than double.

Figure 1. Current and required global IWRM implementation rate

Current rate — **Required rate** -- **Business as usual** •••
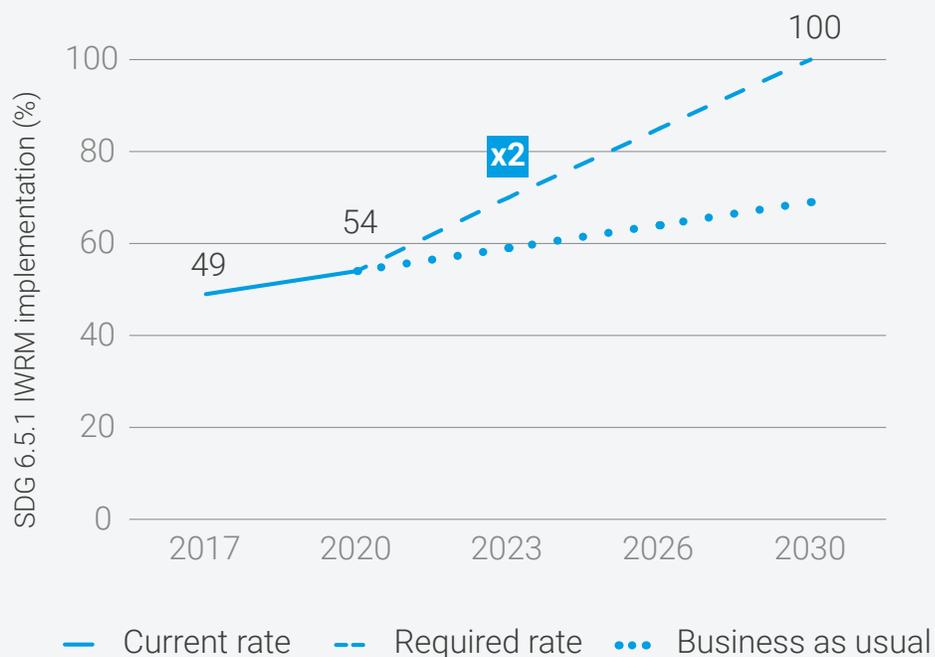
2. **Real and rapid progress is possible.**
Unfortunately, 107 countries are not making sufficient progress to achieve SDG target 6.5. However, in some countries there are clear signs of progress (Figure 2). For example, between 2017 and 2020, 52 countries made moderate progress (though this still needs to accelerate), and 22 countries made substantial progress. The 44 countries that are close to the target need to sustain their efforts, since achieving and maintaining the objectives of sustainable water resources management is an ongoing process.

Figure 2. Country progress towards target 6.5 (2017–2020)

Number of countries per progress level

IWRM implementation progress (2017-2020)

Limited · Moderate · Substantial · Close to target · No trend
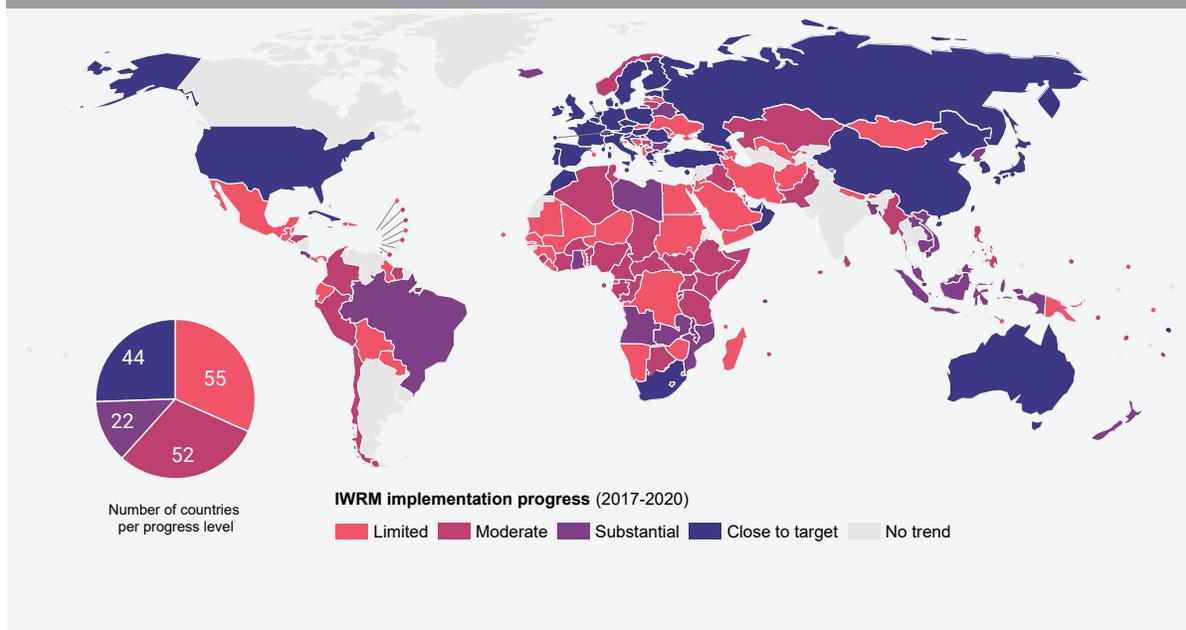
3. **Business as usual is not an option.**
The global call for IWRM implementation was formalized in 1992. Almost 30 years later, 87 countries (47 per cent) still report "low" or "medium-low" levels of IWRM implementation (Figure 3). Experiences from the 98 countries (53 per cent) reporting "medium-high" and above provide valuable lessons in advancing the various aspects of IWRM.

These countries are generally implementing IWRM as part of longer-term and focused efforts. Individual countries must decide on the course of action that will best suit their needs, and for many, strong political will to promote change is absolutely essential to make the progress required.

Figure 3. IWRM implementation level by country (2020)

Number of countries per implementation level

IWRM implementation level in 2020 (SDG indicator 6.5.1)

Very low   Low   Medium-low   Medium-high   High   Very high   No data
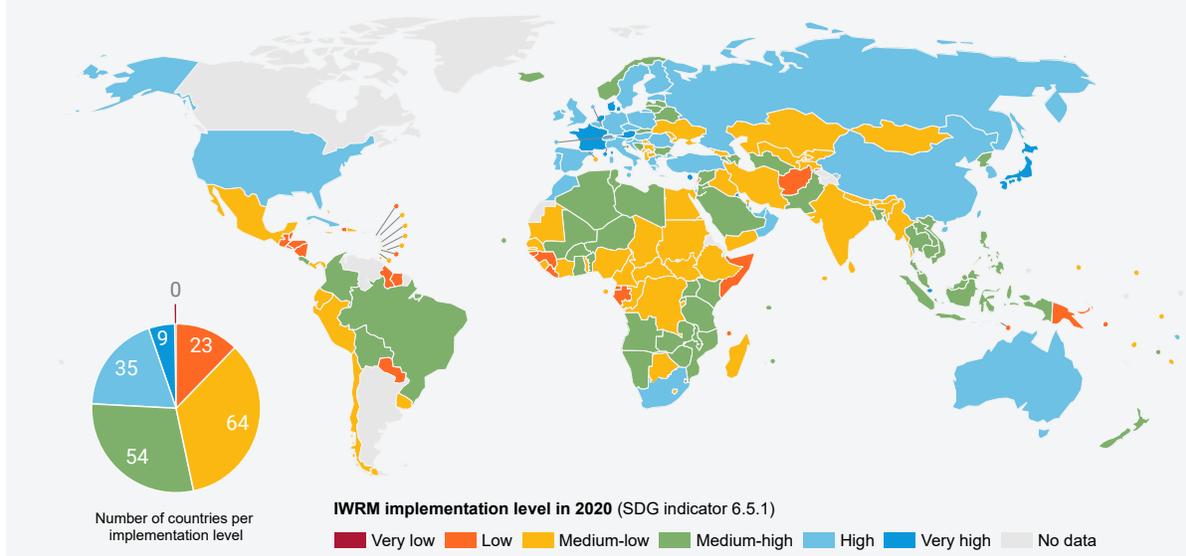
Why integrated water resource management?

The challenge: Human pressures on water resources are increasing unsustainably at the same time as climate change impacts are being amplified in the water environment. Unfortunately, the world is not on track to achieve sustainable management of water and sanitation (SDG 6) by 2030: 2.2 billion people lack access to safe drinking water, 4.2 billion lack access to safe sanitation, 2.3 billion live in water-stressed countries, only 24 out of 153 countries have all their transboundary waters covered by operational arrangements, water pollution is increasing and freshwater ecosystems are rapidly declining. Water demands are increasing to feed growing populations, meet our increasing energy needs, service expanding urban areas and satisfy industrial needs.

Compounding these challenges, climate change is increasing water variability and causing more frequent and extreme floods and droughts, disproportionately affecting the most vulnerable.

Part of the solution: Improvements in the way we use and manage our water are urgently needed to sustain our development. Addressing the complexity of competing and increasing demands and stresses on water resources requires coordinated action on financing, policy and legal frameworks, transparent management of data and information, and multi-stakeholder planning across all sectors and at all levels. In other words, there is a clear need to implement IWRM, as evaluated by SDG indicator 6.5.1, to be able to balance competing social, economic and environmental demands and impacts on water resources, as we work towards broader sustainable development objectives and climate resilience.

Countries demonstrate their commitment

In 2020, 171 countries invested significant effort to complete the 6.5.1 survey, with most countries organizing multi-stakeholder consultation processes. For most, this was an update of baseline reporting completed in 2017. This demonstrates the significant commitment of countries in working towards implementing IWRM in the context of the SDGs.[1]

What are the key management challenges?

Water practitioners at all levels have reiterated time and again the value of IWRM, but point to a number of implementation challenges, including the following deficiencies:

- **lack of coordination** and alignment of policies and institutional collaboration between water-related sectors and stakeholders, and between national, subnational and basin levels;

- **insufficient financing**, including poor coordination between water-related initiatives, and lack of capacity to absorb and disburse funds;

- **weak capacity** of institutions to enforce legislation, and of water professionals to develop and implement cross-sector programmes;

- **insufficient monitoring, and data- and information-sharing** in practice;

- **outdated or ineffective legal frameworks**;

- **lack of appreciation of the value of implementing IWRM** among water-related sectors and across government ministries, including those responsible for national planning and financing.

However, the fundamental challenge lies in achieving political commitment at the highest levels and across sectors to prioritize the implementation of IWRM as an enabler for so many other SDGs.

Key recommendations for advancing integrated water resources mangement

Key enablers

1. **Strengthening of political will through advocacy and communication:** Without high-level political support, countries will not achieve sustainable water resources management. Such backing is essential for required actions, financing and follow-up to take place. This can be achieved by clearly communicating and demonstrating the value of implementing IWRM for achieving multiple SDGs to key stakeholders at all levels and across sectors.

2. **Action planning:** Countries can develop IWRM Action Plans, or similar, in order to focus, prioritize and coordinate efforts. Each country should identify and formalize their own pathway to make progress. A useful source of inspiration is the SDG 6 IWRM Support Programme;[2] its Acceleration Package[3] contains guidance and is available to all countries.

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1   186 countries have reported on SDG indicator 6.5.1 across 2017 and 2020.
2   See www.gwp.org/en/sdg6support.
3   See www.gwp.org/en/sdg6support/consultations/where-we-need-to-go/acceleration-package/.

Supporting actions

3. **Coordination and alignment:** Coordination within the water sector and with other sectors needs to be prioritized and strengthened. For example, adopt integrated approaches to policies related to investments and management of water supply, wastewater treatment and reuse, water use and water-use efficiency in agriculture, industry and energy production, ecosystem protection and restoration, and water-related disasters. Identify opportunities to integrate water resources management into sectoral programmes and planning processes – such as climate change, agriculture and poverty reduction – and establish formal coordination mechanisms, with clear institutional mandates, responsibilities, and incentives for coordination.

4. **Financing:** Options include focusing on: (a) increasing direct central government investment backed by good policy; (b) raising revenue from traditional and non-traditional water and ecosystem services; (c) transparency, anti-corruption and accountability; and (d) leveraging opportunities from recovery support packages (COVID-19, natural disasters), using IWRM coordination mechanisms and stakeholder participation approaches as a tool for coordinating multiple interventions across sectors.

5. **Basin and aquifer management:** Prioritize the development of basin and aquifer organizations with clear mandates and strong links to relevant local government departments and agencies; technical capacity to monitor water resources and their use; and secured funding.

6. **Capacity development:** Identify and address the capacity gaps within and between key institutions and create incentives to retain qualified staff and encourage gender balance. Strengthen individual and institutional capacities through training programmes, peer-to-peer learning, partnering with universities, experience-sharing, career development pathways, and periodic evaluation. Ensure sufficient capacity and adequate and transparent management tools to enforce legislation, including for revenue raising. The aim should be long-term institutional capacity development, aligned with clear institutional mandates.

7. **Data and information management:** Options include: (a) developing an online national information system (or similar) for IWRM, which compiles and standardises relevant data and information on water use and allocation from different entities; (b) securing funding for establishing harmonized monitoring networks, making use of modern technology and approaches where appropriate; (c) encouraging national and international partners to share water data that may be of national interest; (d) ensuring that information is accessible and easily understandable to all relevant stakeholders.

8. **Inclusive participation:** The best ways and means to promote inclusive stakeholder participation in order to ensure the fairness and sustainability of water management and use are context-specific. However, general experience is that meaningful stakeholder engagement in at least the policy formulation and planning processes produces better results. In many countries, this approach will allow for consideration

of vulnerable groups and of gender mainstreaming. Some countries include participation considerations in their laws.

9. **Legal frameworks:** Develop or update laws to reflect progressive, coordinated water resources management approaches, and ensure policy alignment between existing or new legislation related to the use or pollution of water.

10. **Transboundary cooperation:** Promote the value of transboundary cooperation to national and riparian counterparts to ensure political backing and resources. A useful approach can be to draw upon regional and global frameworks, to enhance political buy-in at the basin and aquifer level.[4]

Further information, support and inspiration for action

IWRM data portal (http://iwrmdataportal.unepdhi.org): national SDG indicator 6.5.1 reports, visual country reporting summaries, global and regional reports, a results database, methodology, and Help Desk.

SDG 6 IWRM Support Programme (www.gwp.org/en/sdg6support): assists governments in designing and implementing country-led responses to SDG indicator 6.5.1, to accelerate progress towards the achievement of water-related SDGs and other water-related objectives, in line with national priorities. It is structured as three stages: (1) supporting countries to identify challenges through SDG indicator 6.5.1 reporting; (2) developing Action Plans, including an Acceleration Package; and (3) implementing solutions, including an Action Searcher.

Global Water Partnership (GWP) ToolBox: IWRM Action Hub (www.gwptoolbox.org): technical guidance and case studies covering all aspects of IWRM implementation, including interactive features for peer-to-peer exchanges between IWRM practitioners.

United Nations Water (UN-Water) SDG 6 Data Portal (www.sdg6data.org): global data sets on all SDG 6 indicators.

SDG 6 Global Acceleration Framework (www.unwater.org/sdg6-action-space): this UN-Water led initiative aims to coordinate the international community's support to countries to achieve SDG 6. The framework focuses on five accelerators: optimized financing, improved data and information, capacity development, innovation, and governance.

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4   See also SDG indicator 6.5.2 on operational arrangements for transboundary cooperation.

Valley of Ziz, Morocco by Alexander Schimmeck on Unsplash

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.sdg6data.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.

Summary Progress Update 2021: SDG 6 – Water and Sanitation for All	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. https://www.unwater.org/publications/summary-progress-update-2021-sdg-6-water-and-sanitation-for-all/
Progress on Household Drinking Water, Sanitation and Hygiene – 2021 Update	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). 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/
Progress on Wastewater Treatment – 2021 Update	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. https://www.unwater.org/publications/progress-on-wastewater-treatment-631-2021-update/
Progress on Ambient Water Quality – 2021 Update	Based on latest available data on SDG indicator 6.3.2. Published by United Nations Environment Programme (UNEP) on behalf of UN-Water. https://www.unwater.org/publications/progress-on-ambient-water-quality-632-2021-update/
Progress on Water-Use Efficiency – 2021 Update	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. https://www.unwater.org/publications/progress-on-water-use-efficiency-641-2021-update/
Progress on Level of Water Stress – 2021 Update	Based on latest available data on SDG indicator 6.4.2. Published by FAO on behalf of UN-Water. https://www.unwater.org/publications/progress-on-level-of-water-stress-642-2021-update/
Progress on Integrated Water Resources Management – 2021 Update	Based on latest available data on SDG indicator 6.5.1. Published by UNEP on behalf of UN-Water. https://www.unwater.org/publications/progress-on-integrated-water-resources-management-651-2021-update/
Progress on Transboundary Water Cooperation – 2021 Update	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. https://www.unwater.org/publications/progress-on-transboundary-water-cooperation-652-2021-update/
Progress on Water-related Ecosystems – 2021 Update	Based on latest available data on SDG indicator 6.6.1. Published by UNEP on behalf of UN-Water. https://www.unwater.org/publications/progress-on-water-related-ecosystems-661-2021-update/
National Systems to Support Drinking-Water, Sanitation and Hygiene – Global Status Report 2019	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. https://www.unwater.org/publication_categories/glaas/

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 Agriculture 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

UN WATER
INTEGRATED MONITORING INITIATIVE FOR SDG 6
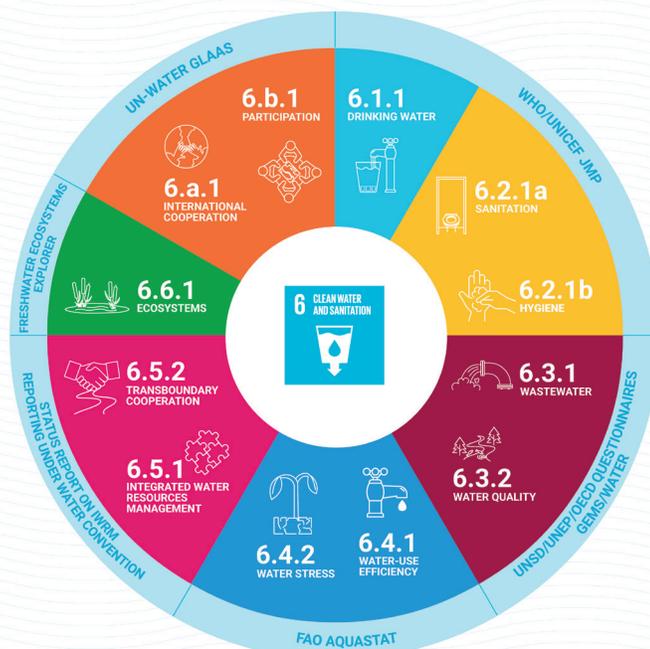
INDICATORS	CUSTODIANS
6.1.1 Proportion of population using safely managed drinking water services	WHO, UNICEF
6.2.1 Proportion of population using (a) safely managed sanitation services and (b) a hand-washing facility with soap and water	WHO, UNICEF
6.3.1 Proportion of domestic and industrial wastewater 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	UNECE, 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
INTEGRATED MONITORING INITIATIVE FOR SDG 6

United Nations | UN WATER

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	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.
SDG 6 Progress Update 2021 – 8 reports, by SDG 6 global indicator	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.
UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS)	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).
United Nations World Water Development Report	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.

The progress reports of the WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP)	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.
Policy and Analytical Briefs	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.

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/