

6 CLEAN WATER
AND SANITATION



2018

PROGRESS ON

INTEGRATED
WATER
RESOURCES
MANAGEMENT

EXECUTIVE SUMMARY

GLOBAL BASELINE FOR SDG 6 INDICATOR 6.5.1:
DEGREE OF IWRM IMPLEMENTATION

ACKNOWLEDGEMENTS

This report is entirely dependent on the substantial efforts and contributions of government officials and other stakeholders from more than 170 UN member states in reporting on SDG indicator 6.5.1. National focal points coordinated the country reporting processes. In addition, 36 of these countries held multi-stakeholder workshops which provided invaluable insights into the degree of implementation of integrated water resources management in those countries. These country workshops were co-facilitated by Country Water Partnerships of the Global Water Partnership (GWP).

The identification of national focal points and subsequent training and support were facilitated by UN Environment, UN Environment-DHI Centre, Cap-Net, the Global Water Partnership, and UN-Water.

Data analysis and development of this report were carried out by a working group with the following members: Paul Glennie (coordinating lead author), Maija Bertule (head of country support and lead data analyst), Paul Taylor (lead free-text analyst), Peter Koefoed Bjørnsen, Gareth James Lloyd and Nisha Gill Hansted, all from the UN Environment – DHI Centre on Water and Environment; and Alexander Egholm Møller, Nisha Midha and Lilian Neuer as interns with UN Environment – DHI Centre; and (the following in alphabetical order of affiliation) Josh Newton from the Global Water Partnership (GWP), James Dalton from the International Union for the Conservation of Nature (IUCN), Håkan Tropp and Oriana Romano from the Organisation for Economic Co-operation and Development (OECD), Marianne Kjellen from the UN Development Programme (UNDP), Alistair Rieu-Clarke from the UN Economic Commission for Europe (UNECE), Joakim Harlin from UN Environment, and Marina Takane from the World Health Organisation (WHO / GLAAS).

Review comments were gratefully received from (in alphabetical order): Akmal Abdurazakov, Jeremy Bird, Torkil Jønch Clausen, Ricard Gine, Themba Gumbo, and Claudia Pahl-Wostl, as well as from UN-Water Members and Partners. The list of UN-Water Members and Partners can be found on the following website – www.unwater.org.

This document is published by UN Environment on behalf of UN-Water. It is part of a series of reports on SDG indicators 6.3.1, 6.3.2, 6.4.1, 6.4.2, 6.5.1, 6.5.2 and 6.6.1, coordinated by UN-Water through the GEMI programme.

Financial support was provided by the Danish International Development Agency (DANIDA), and, through the GEMI programme, the German Federal Ministry for Economic Cooperation and Development (BMZ), the Dutch Ministry of Infrastructure and Water Management, the Swedish International Development Cooperation Agency (Sida) and the Swiss Agency for Development and Cooperation (SDC).

SUGGESTED CITATION

UN Environment (2018). Progress on integrated water resources management. Global baseline for SDG 6 Indicator 6.5.1: degree of IWRM implementation.

Copyright © United Nations Environment Programme, 2018

This publication may be reproduced in whole or in part and in any form for educational or non-profit purposes without special permission from the copyright holder, provided acknowledgement of the source is made. UN Environment would appreciate receiving a copy of any publication that uses this publication as a source. No use of this publication may be made for resale or for any other commercial purpose whatsoever without prior permission in writing from the United Nations Environment Programme.

DISCLAIMER

The contents of this report do not necessarily reflect the views or policies of UN Environment, or contributing organizations. The designations employed and the presentations of material in this report do not imply the expression of any opinion whatsoever on the part of UN Environment or contributory organizations, or publishers concerning the legal status of any country, territory, city area or its authorities, or concerning the delimitation of its frontiers or boundaries or the designation of its name, frontiers or boundaries. The mention of a commercial entity or product in this publication does not imply endorsement by UN Environment.

EDITING: Karen Brandon

DESIGN AND LAYOUT: Phoenix Design Aid

ISBN No: 978-92-807-3710-3

Job No: DEP/2187/NA

EXECUTIVE SUMMARY

Decisions about how to allocate and use water are fundamental to sustainable development. Such measures underlie all essential aspects of the human endeavour: human health and well-being, agriculture, business, and the quality of life in rural and urban areas. At the same time, water scarcity is becoming more commonplace. Pollution is increasing. Natural ecosystems are under growing pressure. Thus, the matter of determining how to allocate and use water in an efficient, sustainable and equitable manner is foundational.

It is also complex. Successful managing of water resources is a long-term and unceasing process. It requires the input and interaction of governments, agencies and organizations at international, national, regional and local levels, the private sector, charitable enterprises and dedicated individuals. Recognizing this, nations agreed to adopt integrated approaches to water resources management (IWRM) at the 1992 Earth Summit. The passing years have only underscored the importance of pursuing and implementing these measures to achieve the United Nations 2030 Agenda for Sustainable Development. Integrated water resources management provides an essential framework to achieve not only SDG 6 – to “ensure availability and sustainable management of water and sanitation for all” – but also to achieve all Sustainable Development Goals (SDGs).

With but a dozen years remaining until the target year, understanding the progress that has been made – and the tasks that remain – is urgent. This report aims to examine these issues in detail. It represents the work of 172 countries that provided information on efforts to implement integrated water resource management. Their assessments of successes and challenges are the core of this report. Through quantitative data and qualitative discussion, the report presents a global picture of the current state of affairs on water management. Though the report covers the subject in detail, **its central message can be distilled into two words: ACCELERATE PROGRESS.**

The very participation of the vast majority of the relevant world community in the assessments that underpin this report suggests a recognition of the importance of the task, a desire to achieve aims, and a willingness to move forward apace. The task is great: to come up with a network of policies and laws that create an enabling environment; to coordinate diverse players with different and often competing interests; to generate data to make effective decisions; and to find the financial wherewithal to transform plans into realities. The findings of this report demonstrate that the world’s nations can learn from one another, and that the insights they have gained thus far can chart the way forward. As the report underscores, nations of the world should act now – with urgency and speed.

KEY MESSAGES

The vast majority, 80 per cent, of countries have laid the foundations for integrated water resources management. Implementation must now be the focus.

- At the lower end, 20 per cent of countries have started developing IWRM approaches. They need to prioritize activities that will have the greatest impact in the national context.
- In the mid-range, 40 per cent of countries have institutionalized most IWRM elements. They need to focus on implementation.
- Another 20 per cent of countries are generally implementing most elements of IWRM in long-term programmes. They need to expand coverage and stakeholder engagement.
- The top 20 per cent of countries are generally achieving their policy objectives for integrated water resources management. They need to remain focused to consolidate and strengthen gains.

IWRM implementation needs to accelerate to realize the 2030 Agenda.

Integrated approaches help to coordinate sustainable development and water management for the full spectrum of users: residents in urban and rural areas, agriculture, industries and natural ecosystems. This coordination is critical for the full 2030 Agenda. With water scarcity and pollution increasing, finding ways to address conflicts and trade-offs is critical to allocate and use water in an efficient, sustainable and equitable manner.

Collective action that builds on the multi-stakeholder monitoring and reporting processes can accelerate implementation.

Multi-stakeholder processes for completing the survey that forms the basis of this report identify challenge areas and actions in line with national priorities and planning processes across sectors. Moving forward, all countries can build on these experiences. They can make full use of the integrated, multi-stakeholder approach to advance progress and set national targets where appropriate.

MEASURING PROGRESS

The survey conducted for this report assesses progress towards SDG target 6.5: “by 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate” as measured by two complementary indicators:

- **6.5.1** Degree of integrated water resources management implementation (0-100)
- **6.5.2** Proportion of transboundary basin area with an operational arrangement for water cooperation (which uses a different survey and is reported on separately)

The report summarizes results from the 172 countries that completed the self-assessed questionnaire containing 33 questions covering the main elements of integrated water resources management at national and basin levels, organized in four sections:

- **Enabling environment** of policies, laws, plans and arrangements.
- **Institutional frameworks**, cross-sectoral coordination, private-sector and other stakeholder participation and gender objectives.

- **Management instruments** and programmes for informed decision making, covering water availability monitoring and sustainable water use, pollution control, water-related ecosystems and disasters, and data and information sharing.
- **Financing** for investments, including infrastructure, recurring costs and revenue raising.

Following the SDG 6.5.1 indicator methodology, individual question scores were averaged within and across sections to obtain overall scores representing implementation of integrated water resources management. The scores are grouped into six implementation categories, ranging from very low to very high.

IMPLEMENTING IWRM AT ALL LEVELS

Countries are implementing IWRM, but implementation status varies enormously. Implementation is taking place at all levels (national subnational, basin, aquifer, local and transboundary) but to such a degree that implementation scores span the full range from zero to 100. In many countries, multi-sector national and basin/aquifer authorities and community water user associations and boards demonstrate an integrated approach to the development and implementation of policy, laws and planning for water resources management.

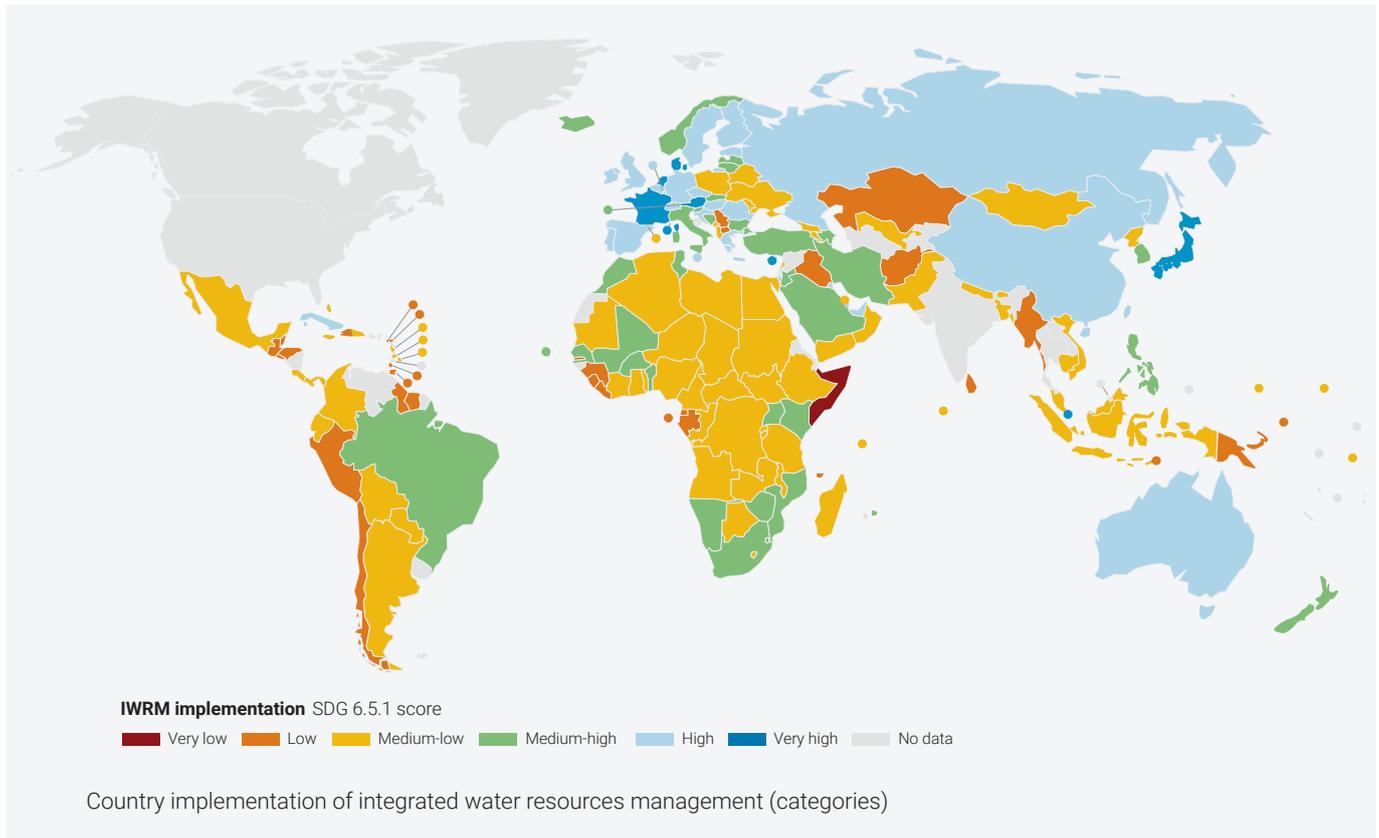
ASSESSING CURRENT STATUS AND EXPECTED PROGRESS TOWARDS 2030

More than 80 per cent of countries have laid solid foundations to achieve at least medium-low levels of IWRM implementation. Progress now needs to accelerate.

Percent of countries at each implementation level	Score range	Baseline	Towards 2030
4	Very high	91-100	Countries in this category are likely to reach the global target, or have already done so, but will need to remain focused to consolidate and strengthen gains.
15	High	71-90	
21	Medium-high	51-70	Countries in this category are potentially able to reach the target, but sustained efforts need to focus on 2030 targets.
41	Medium-low	31-50	Countries in these three lowest categories (60 per cent of countries) are unlikely to meet the global target unless progress significantly accelerates.
19	Low	11-30	
<1	Very low	0-10	

Countries in the three lowest categories should aim to set national targets based on the country context.

The global target is to reach “very high” implementation levels. Countries may need to set context-specific national targets to drive implementation towards 2030.



Subnational, basin, aquifer and local levels tend to lag national-level implementation. Capacity and resources are often lacking at the basin and aquifer levels for institutions and planning, management instruments and revenue raising.

Coordination among levels is important. Integration among all levels is key to ensuring that resources flow to where they are most needed, and where they can be most effective.

Most countries report that arrangements and organizational frameworks are in place for cooperation in most of their significant transboundary basins and aquifers. However, significant differences in capacity and development priorities between countries sharing transboundary basins and aquifers may hamper cooperation. Reporting on SDG indicator 6.5.2 addresses this issue in more detail.

ACHIEVING WIDER IMPLEMENTATION ACROSS SECTORS

Adopt integrated approaches to water supply and wastewater treatment measures. Water resources management encompasses water supply for different sectors (such as agriculture, industry, energy and municipalities), and sanitation, wastewater treatment and water-related disaster-risk reduction. Nevertheless, IWRM is often erroneously perceived as a separate concept to be implemented alongside such activities. Countries should continue implementing these activities. However, implementation should proceed in an integrated manner that considers sector impacts on other water uses and the environment. This is key for achieving more sustainable, equitable and efficient use of water resources, as well as for providing opportunities for joint investments and benefits.

Identify opportunities to integrate water into sectoral programmes and planning processes. There is a need to identify where water resources are being managed within national programmes and planning processes across all sectors that use or pollute water resources – such as those related to agriculture, urban areas, energy generation, and

consumption and production. There is also a need to ensure that water is being managed in a way that considers impacts across sectors, including the environment, and assures long-term sustainability. The SDGs provide a useful framework for coordinated action.

Find and adopt innovative, blended and multi-sector financing approaches to achieve sustainable water resources management for the 2030 Agenda. Some progress has been made in setting up institutions, the enabling environment, and management instruments for water resources management in many countries. Nevertheless, their potential to create positive impacts for societies and ecosystems will not be realized unless investments are secured, allocated and mobilized to ensure water is managed in a sustainable, efficient, and equitable way.

ACCELERATING PROGRESS

Integrated water resources management is an ongoing process with incremental impacts. Any steps a country can take to advance implementation will likely enhance sustainable and equitable management and use of water for all, leading to impacts such as improved allocation, water use efficiency, pollution control, enforcement of regulations and cost recovery. This kind of management is an ongoing process, and, as such, even countries that have “reached” the global target should perpetually review, revise and improve on the various elements of integrated water resources management.

Each country can identify pathways to make progress. There is no “one-size-fits-all” approach to implementing integrated water resources management. In the process of completing the 6.5.1 survey, countries have identified areas requiring action to advance sustainable management of water resources. For countries in which governmental and non-governmental stakeholders across sectors and levels of governance worked together on the survey to reach consensus, this collaboration can be developed to jointly identify actions in line with national priorities. These are significant outcomes of the SDG monitoring process.

For many countries, significant ground can be made by focusing on some of the weaker scores from the monitoring, such as improving basin and aquifer management, gender objectives, financial arrangements and capacity development. Section 6.3 of the full report includes a collection of proposed actions from several countries to provide a sense of how they will further implementation of IWRM towards 2030. While country-specific, these proposals will resonate with many other countries. These actions include very practical operational measures (increase monitoring stations, improve enforcement mechanisms), as well as more challenging ones (increase cost recovery for water-related services). They send a clear message that countries know what they want to achieve and the steps they must take to progress.



Integrated water resources management balances the competing demands and impacts of all users to achieve sustainable development.

© Alamy

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.

PERIODIC REPORTS

Sustainable Development Goal 6 Synthesis Report 2018 on Water and Sanitation

The SDG 6 Synthesis Report 2018 on Water and Sanitation was published in June 2018 ahead of the High-level Political Forum on Sustainable Development, where Member States reviewed SDG 6 in depth. Representing a joint position from the United Nations family, the report offers guidance to understanding global progress on SDG 6 and its interdependencies with other goals and targets. It also provides insight into how countries can plan and act to ensure that no one is left behind when implementing the 2030 Agenda for Sustainable Development.

Sustainable Development Goal 6 Indicator Reports

This series of reports shows the progress towards targets set out in SDG 6 using the SDG global indicators. The reports are based on country data, compiled and verified by the United Nations organizations serving as custodians of each indicator. The reports show progress on drinking water, sanitation and hygiene (WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene for targets 6.1 and 6.2), wastewater treatment and ambient water quality (UN Environment, UN-Habitat and WHO for target 6.3), water-use efficiency and level of water stress (FAO for target 6.4), integrated water resources management and transboundary cooperation (UN Environment, UNECE and UNESCO for target 6.5), ecosystems (UN Environment for target 6.6) and means for implementing SDG 6 (UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water for targets 6.a and 6.b).

World Water Development Report

This annual report, published by UNESCO on behalf of UN-Water, represents the coherent and integrated response of the United Nations system to freshwater-related issues and emerging challenges. The theme of the report is harmonized with the theme of World Water Day (22 March) and changes annually.

Policy and Analytical Briefs

UN-Water's Policy Briefs provide short and informative policy guidance on the most pressing freshwater-related issues, which draw upon the combined expertise of the United Nations system. Analytical Briefs provide an analysis of emerging issues and may serve as a basis for further research, discussion and future policy guidance.

UN-WATER PLANNED PUBLICATIONS 2018

- Update of UN-Water Policy Brief on Water and Climate Change
- UN-Water Policy Brief on the Water Conventions
- UN-Water Analytical Brief on Water Efficiency

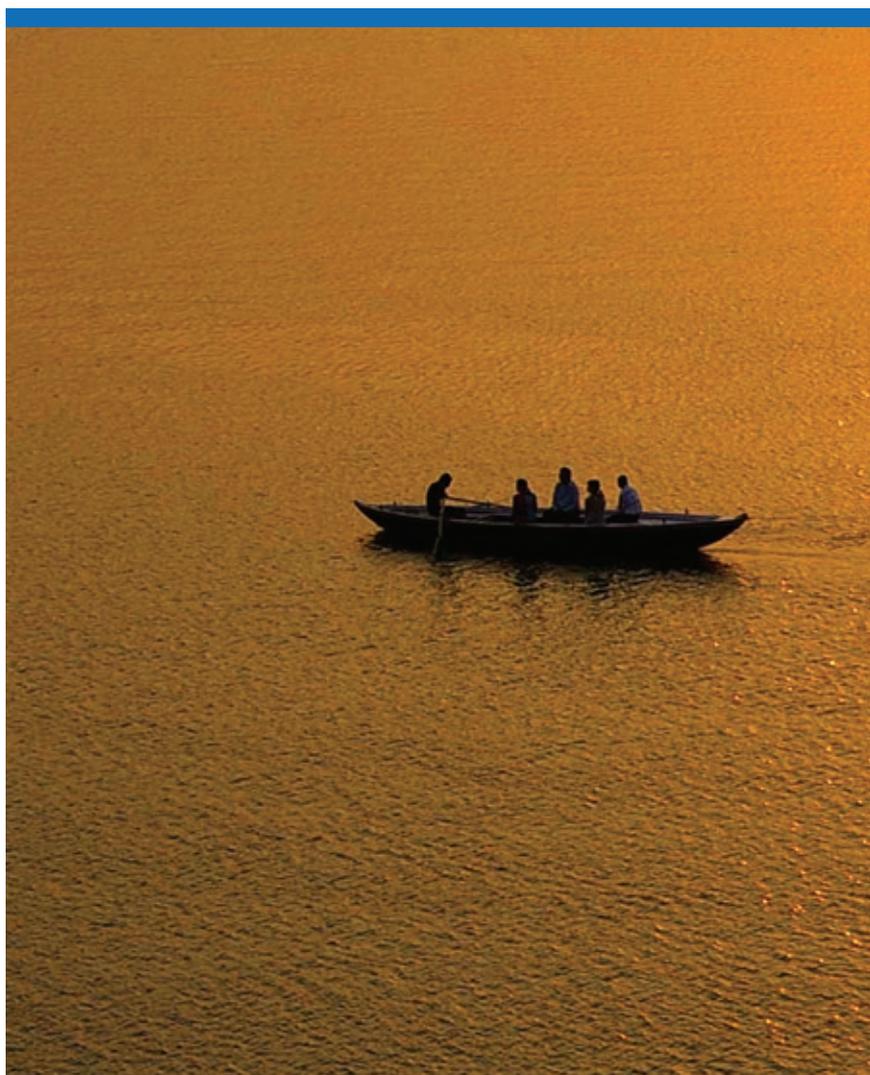
This status report provides the SDG baseline for indicator 6.5.1 “Degree of integrated water resources management implementation”. It represents the work of 172 countries.

Decisions about how to allocate and use water are fundamental to sustainable development. They are also complex. Successful managing of water resources requires the interaction of governments, organizations and the private sector at all levels.

Target 6.5 of the Sustainable Development Goals is to, “by 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate”. Integrated water resources management helps to balance and support the economic, social and environmental dimensions of sustainable development.

80 per cent of countries have laid the foundations for integrated water resources management. Accelerating implementation must now be the focus.

By looking into different aspects of water resources management, this report identifies areas of progress and those which need urgent attention. It explains how countries, and the international community, can build on multi-stakeholder reporting process to prioritize actions to work towards the 2030 target.



This report was produced as part of a series of reports on SDG 6 indicators, coordinated by UN-Water through the GEMI programme.

SDG 6 website: www.sdg6monitoring.org

Indicator 6.5.1 website: <http://iwrmdataportal.unepdhi.org>