SDG indicator metadata

(Harmonized metadata template - format version 1.1)

0. Indicator information (SDG_INDICATOR_INFO)

0.a. Goal (SDG_GOAL)

Goal 6: Ensure availability and sustainable management of water and sanitation for all

0.b. Target (SDG_TARGET)

Target 6.5: By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate

0.c. Indicator (SDG_INDICATOR)

Indicator 6.5.1: Degree of integrated water resources management implementation

0.d. Series (SDG_SERIES_DESCR)

ER_H2O_IWRMD - Degree of integrated water resources management implementation (%) [6.5.1]

ER_H2O_IWRMD_EE - Degree of integrated water resources management implementation, enabling environment (%) [6.5.1]

ER_H2O_IWRMD_FI - Degree of integrated water resources management implementation, financing (%) [6.5.1]

ER_H2O_IWRMD_IP - Degree of integrated water resources management implementation, institutions and participation (%) [6.5.1]

ER_H2O_IWRMD_MI - Degree of integrated water resources management implementation, management instruments (%) [6.5.1]

ER_H2O_IWRMP - Proportion of countries by IWRM implementation category [6.5.1]

0.e. Metadata update (META_LAST_UPDATE)

2026-03-27

0.f. Related indicators (SDG_RELATED_INDICATORS)

1.4.1, 1.4.2, 2.3.1, 2.3.2, 4.7.1, 5.5.1, 5.5.2, 6.6.1, 6.a.1, 6.b.1, 7.1.1, 7.1.2, 8.5.1, 8.5.2, 10.2.1, 11.3.1, 11.3.2, 13.2.1, 13.2.2, 15.9.1, 16.3.1, 16.3.2, 16.5.1, 16.5.2, 16.7.1, 16.7.2

0.g. International organisations(s) responsible for global monitoring (SDG_CUSTODIAN_AGENCIES)

United Nations Environment Programme (UNEP)

1. Data reporter (CONTACT)

1.a. Organisation (CONTACT_ORGANISATION)

United Nations Environment Programme (UNEP), implemented by the UNEP-DHI Centre on Water and Environment

2. Definition, concepts, and classifications (IND_DEF_CON_CLASS)

2.a. Definition and concepts (STAT_CONC_DEF)

Definition:

Indicator 6.5.1 is 'degree of integrated water resources management implementation'. It measures the stages of development and implementation of Integrated Water Resources Management (IWRM), on a scale of 0 to 100, in six categories (see Rationale section). The indicator score is calculated from a country survey with 33 questions, with each question scored on the same scale of 0-100.

The definition of IWRM is based on an internationally agreed definition, and is universally applicable. IWRM was officially established in 1992 and is defined as "a process which promotes the coordinated development and management of water, land and related resources in order to maximise economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems." (GWP 2010).

The method builds on official UN IWRM status reporting, from 2008 and 2012, of the Johannesburg Plan of Implementation from the UN World Summit for Sustainable Development (1992).

Concepts:
The concept of IWRM is measured in 4 main sections, each representing key dimension of IWRM:

1. Enabling environment: this includes the policies, laws, plans and strategies which create the 'enabling environment' for IWRM.
2. Institutions and participation: includes the range and roles of political, social, economic and administrative institutions that help to support the implementation of IWRM.
3. Management Instruments: The tools and activities that enable decision-makers and users to make rational and informed choices between alternative actions.
4. Financing: Budgeting and financing made available and used for water resources development and management from various sources.

The indicator is based on a national survey structured around these four main sections. Each section is split into two parts: questions concerning the 'National level' and 'Other levels' respectively. 'Other levels' includes sub-national (including provinces/states for federated countries), basin level, and the transboundary level as appropriate. These two parts address the wording of Target 6.5 'implement [IWRM] at all levels …'.

2.b. Unit of measure (UNIT_MEASURE)

Percent (%)

2.c. Classifications (CLASS_SYSTEM)

- Classification of inland water bodies:
  https://unstats.un.org/unsd/classifications/Family/Detail/2002
- Standard Country or Area Codes for Statistical Use (UN M49 classification of countries and regions)

3. Data source type and data collection method (SRC_TYPE_COLL_METHOD)

3.a. Data sources (SOURCE_TYPE)

Monitoring progress on meeting SDG 6.5 is owned by and is the responsibility of the national government. The government assigns a ministry with the primary responsibility for overseeing this survey, which then takes on the responsibility of coordinating the national IWRM monitoring and reporting process. As water management issues cut across a wide number of sectors, often overseen by different ministries and other administrative bodies at national or other levels, the process should be inclusive. Major stakeholders should be involved in order to contribute to well informed and objective answers to the survey.

The ministry is invited to nominate a national “IWRM focal point”, who may or may not be a government official. The UN provides support where needed and possible. The following steps are suggested as guidance only, as it is up to countries to decide which process or processes would best serve their needs. It should also be noted that the following steps represent a ‘ladder’ approach, in that completing all the steps will generally lead to a more robust indicator. However, it may not be possible or necessary for all countries to complete all steps.

1. The responsible ministry or IWRM focal point contacts other relevant ministries/agencies to compile responses to the questionnaire. Each possible response option has a score which is used to calculate the overall indicator score.
2. The completed draft survey is reviewed by government stakeholders. These stakeholders could include those involved in water-relevant sectors, such as agriculture, energy, water supply and environment, as well as water management at different administrative levels. This process may be electronic (e.g. via email) and/or through workshops.
3. The revised draft survey is validated at a multi-stakeholder workshop. Apart from government representatives these stakeholders could include water user associations, private sector, interest groups concerned with e.g. environment, agriculture, poverty, and academia. The suggested process is through a workshop but alternative means of consultation e.g. email or online call for public submissions could be considered. Note that steps 2 and 3 could be combined if desired.
4. The responsible ministry or IWRM focal point discusses with relevant officials and consolidates the input into a final version. This version is the basis for calculating the degree of IWRM implementation (0-100) for global reporting.
5. The responsible ministry submits the final indicator score to the national statistics office responsible for compiling all national SDG target data.

Based on the national survey, UN-Water periodically prepares synthesis reports for regional and global levels to provide overall progress on meeting SDG target 6.5.
Temporal Coverage: A reporting cycle of three years is recommended.

3.b. Data collection method (COLL_METHOD)

Official counterparts at the country level oversee the validation and consultation process.
The survey has been designed so that the indicator is comparable between countries and time periods. No adjustments are foreseen.

3.c. Data collection calendar (FREQ_COLL)

Data is collected approximately every 3-4 years. The baseline dataset was collected in 2017, the second data collection round in 2020, the third data collection round in 2023, and the fourth data collection round in 2026. Subsequent data collection round is expected in 2030. Each data collection round spans approximately 9-12 months.

3.d. Data release calendar (REL_CAL_POLICY)

Data is released approximately 3 months after the close of each data collection round.

3.e. Data providers (DATA_SOURCE)

The information required to complete the survey is expected to be held by government officials responsible for water resources management in the country, supported by official documentation. E.g. Ministry of Water in coordination with Ministry of Environment, Ministry of Finance, Ministry of Planning, Ministry of Lands and Agriculture, Ministry of Industry and Mining etc. See also 'data sources' section above. As a minimum, a small group of officials may be able to complete the survey. However, these government officials may belong to various government authorities, and coordination is required to determine and validate the responses to each question. Increased government and non-government stakeholder participation in validating the question scores will lead to a more robust indicator score and facilitate tracking progress over time.

3.f. Data compilers (COMPILING_ORG)

United Nations Environment Programme (UNEP), implemented by the UNEP-DHI Centre on Water and Environment, and UN-Water partners, under the UN-Water Integrated Monitoring Initiative for SDG 6 (IMI-SDG6).

3.g. Institutional mandate (INST_MANDATE)

UNEP is the designated Custodian Agency for the indicator. Support on the collection, processing, and dissemination of statistics for this indicator is provided by the UNEP-DHI Centre on Water and Environment, the Global Water Partnership (GWP), and Cap-Net.

4. Other methodological considerations (OTHER_METHOD)

4.a. Rationale (RATIONALE)

The indicator provides a direct progress measurement of the first part of Target 6.5 "…implement integrated water resources management at all levels …". The indicator score provides an easy and understandable way of measuring progress towards the target, with '0' interpreted as no implementation of IWRM, and '100' interpreted as IWRM being fully implemented.

To further aid interpretation and comparison, the indicator results can be categorized as follows:

Degree of implementation	Score range (%)	General interpretation for overall IWRM score
Very high	91 - 100	Vast majority of IWRM elements are fully implemented, with objectives consistently achieved, and plans and programmes periodically assessed and revised.
High	71 - 90	IWRM objectives of plans and programmes are generally met, and geographic coverage and stakeholder engagement is generally good.

Medium-high	51 - 70	Capacity to implement elements of IWRM is generally adequate, and elements are generally being implemented under long-term programmes.
Medium-low	31 - 50	Elements of IWRM are generally institutionalized, and implementation is underway.
Low	11 - 30	Implementation of elements of IWRM has generally begun, but with limited uptake across the country, and potentially low engagement of stakeholder groups.
Very low	0 - 10	Development of elements of IWRM has generally not begun, or has stalled.

The concept of the survey is that it provides sufficient information to be of real value to the countries in determining their progress towards the target, and through this, various aspects of IWRM. A balance has been sought between providing sufficient information to cover the core principles of IWRM, and thus providing a robust indicator value, and not overburdening countries with unnecessary reporting requirements.

Countries are encouraged to provide additional information on each question, which may help to qualify their choice of score, and/or put that score into their national context.

Indicator 6.5.1 is supported by indicator 6.5.2 “Proportion of transboundary basin area with an operational arrangement for water cooperation”, which directly addresses the portion of Target 6.5 “…, including through transboundary cooperation as appropriate.”.

4.b. Comment and limitations (REC_USE_LIM)

The challenge of subjectivity in responses associated with this type of survey is being addressed in a number of ways:

a. Draft responses are reviewed by a number of governmental and non-governmental stakeholders in an open, inclusive and transparent process.
b. Countries are encouraged to provide further information to qualify their responses and/or set them in the national context.
c. Guidelines are provided for each of the four main sections, each question, and each of the six thresholds for every single question, to ensure responses are as objective as possible, and are comparable both between countries, and between reporting periods.

To achieve robust indicator results requires a country process involving a wide range of stakeholders which requires a certain amount of time and resources. The advantage of this is that it puts in place a process that addresses the integrated and indivisible nature of the SDG targets, as well as stressing the importance of “leaving no one behind”.

4.c. Method of computation (DATA_COMP)

1. The survey contains 33 questions divided into the four main sections described above.
2. Each question is given a score between 0 and 100, in increments of 10, guided by threshold descriptions for the following 6 categories:
    - Very low (0)
    - Low (20)
    - Medium-low (40)
    - Medium-high (60)
    - High (80)

- Very high (100)

  Where question is not applicable, n/a can be selected as a reply, providing adequate explanation.

  Note that more question-specific guidance is provided for each threshold for each question, to ensure objective and comparable results.

3. The un-weighted average of the question scores within each of the four sections is calculated to give a score of 0 – 100 for each section, rounded to the nearest whole number. Questions with response n/a are omitted from calculation.
4. The section scores (rounded to the nearest whole number), are averaged (un-weighted), and rounded to the nearest whole number, to give the indicator score, expressed as a number between 0 and 100.

4.d. Validation (DATA_VALIDATION)

There is a dedicated SDG 6.5.1 Help Desk for ensuring the quality of the statistical results. Firstly, the data goes through any national quality assurance and approval processes, before being submitted to the Help Desk. The Help Desk then undertakes the Quality Assurance procedure described in section 4.j. All issues are discussed between the Help Desk and the Focal Point(s). Only when all issues are resolved, are the data finalised and entered into the Help Desk Database. The data is then submitted to the UNEP SDG focal point, who collates all indicator data for which UNEP is the Custodian Agency, where a further quality check is undertaken, prior to submission to the SDGs Indicator Database.

4.e. Adjustments (ADJUSTMENT)

Once the validation process described above is complete, no further adjustments are made.

4.f. Treatment of missing values (i) at country level and (ii) at regional level (IMPUTATION)

- **At country level**

The indicator and survey have been designed for all countries to be able to submit an indicator value, and the number of country responses under the SDG process is in excess of 95%. Estimates for countries not responding to the survey are therefore not made.

- **At regional and global levels**

As the number of country responses is in excess of 95%, this coverage of data is deemed to be representative of regional and global aggregates. Estimates for countries not responding to the survey are therefore not made.

4.g. Regional aggregations (REG_AGG)

Following the Agenda 2030 principle of “leaving no one behind”, regional and global values are based on simple, un-weighted averages of country scores. The country scores are presented as a whole number, and regional and global averages are also presented as a whole number. Global averages are based on country values, not regional averages.

Regional values may be assembled by regional bodies responsible for water resources in the region, such as the African Ministerial Council on Water (AMCOW), the European Environment Agency (EEA), and the United Nations Economic and Social Commission for West Asia (ESCWA).

4.h. Methods and guidance available to countries for the compilation of the data at the national level (DOC_METHOD)

1. National focal points selected by each country.
2. National focal points are responsible for coordinating a national process to engage governmental and non-governmental stakeholders, as appropriate in the context of each country, to develop draft responses and finalise responses. This may be via email, workshops, and online notices.
3. The following guidance materials are available for national focal points in 7 languages (English, Spanish, French, Arabic, Russian, Chinese, Portuguese), at https://iwrmdataportal.unepdhi.org/data-collection the Survey (MS Word); a Monitoring Guide; 1-page survey overview; calculation template, and a Gender Checklist. More detailed guidance on running the consultation processes is available in the "Stakeholder Consultation Manual". In addition, focal points may access the following country-level materials at https://iwrmdataportal.unepdhi.org/country-reports the 2017,2020 and 2023 surveys and 2-page results summaries (for 191 countries); and 2017, 2020 and 2023 workshop reports (for 78 countries) from https://www.gwp.org/en/sdg6support/sdgmap/.
4. In addition, an "SDG 6.5.1 Reporting Training Course" is available online via https://www.gwp.org/en/sdg6support/consultations/where-we-are/stage-1-activities/ , through the SDG 6 IWRM Support Programme.
5. Further technical and financial assistance to engage a facilitator is available through the SDG 6 IWRM Support Programme (Stage 1). Across 2017, 2020 and 2023, 78 countries have received this support, see https://www.gwp.org/en/sdg6support/consultations/where-we-are/stage-1-activities/.

Extensive explanations are provided in the monitoring guide and in the survey itself. The survey contains: an overall introduction and explanation; a glossary; an introduction and glossary in each of the four sections; threshold descriptions for six thresholds for each question; and a number of footnotes to explain aspects of questions or threshold descriptions. All materials can be downloaded from http://iwrmdataportal.unepdhi.org. In addition, a dedicated Help Desk is available to provide assistance at all times. The Help Desk is accessible via email iwrmsdg651@un.org.

4.i. Quality management (QUALITY_MGMNT)

UNEP-DHI Centre, which manages the statistical reporting processes for UNEP on indicator 6.5.1, operates through a Business Management System that fulfils the requirements of ISO 9001 (quality management), which covers relevant areas such as consulting and capacity development and training courses.

4.j Quality assurance (QUALITY_ASSURE)

The following quality assurance guidelines are available to all individuals involved in quality assurance for 6.5.1.
Process:

1. Nominate person responsible for the quality assurance (QA) for a country response once it is submitted for the first time.
2. Acknowledge receipt and inform the country of the QA process.
3. Update the QA spreadsheet, indicating date of receipt and who submitted.
4. Upload draft survey (MS Word) to the SharePoint folder.
5. Undertake ALL checks described below.
6. If there are any discrepancies, revert to UNEP-DHI colleagues.
7. Once action is agreed, respond to the countries.
8. Complete all checks on each subsequent version of the survey until all quality issues are resolved and survey is marked 'final'.

Checks:

1. **Focal point:** Confirm the person submitting is the formal national focal point. If not, any reply should also add the national focal point in Cc.
2. **Cover sheet:** check if cover sheet is correctly filled out. Cross-check if the person submitting is the formal national focal point. If not, any reply should include the national focal point in Cc.
3. **Question scores and calculations:** In the spreadsheet 'Quality_Assurance_651_2026.xlsx' on SharePoint, fill in the given responses in sheet "QA 2026 scores-status". Make the following checks to scores:
    a. All questions answered. The official guidance is that all questions should be answered (either with a score or n/a).
    b. Scores are in range from 0-100, in increments of 10. If they only give 'even' scores (e.g. 0, 20, 40 etc), then they may not have understood that they can also give 'odd' scores (10, 30, 50 etc), if they feel their situation lies between two threshold descriptions.
    c. Any differences between 'given' and 'calculated' section scores and overall score are given in columns C – G. If the difference is greater than +/- 0.5, the cells are automatically highlighted in red using conditional formatting. Ensure to complete the date of last submission in column B, otherwise the differences will not be calculated.
    d. Compare with previous scores. The QA 'Comparison' worksheet automatically calculates differences. Note any negative changes (orange), or increases of more than 20 (yellow). If there are any significant/unexpected differences, the country should have given some explanation in the free text fields.
    e. In the 'given' calculations (section 5.1 of the survey instrument), check that section averages and overall score are rounded to the nearest whole number. Rounding mistakes might occur.
    f. Note: in the calculations, 0 scores are included, and n/a scores should be omitted. n/a scores should always have explanation (unless obvious – e.g. transboundary questions for island states).
    g. Check if the final score is calculated as average of rounded section averages.
    h. In the free text responses in columns (BE-BF) in the main "QA 2026-score status" tab, for assigning Low/ Medium/ High categories the following criteria should be followed: Low: Less than three quarters of questions have responses and/or responses are poor quality. Medium: At least three quarters of the questions have responses, and/or responses are varying quality. Each question and the points make sense and are useful. High: All questions have responses and most responses are high quality. NB: Quality responses mean ones that are useful/informative/detailed and can contribute to stakeholder understanding/discussions and planning.

4. **Free text fields:** Using the 'text' tabs:
    a. Check that the free text make sense in the context of the score (and vice versa) (particularly in the case of (n/a or 100 responses).
    b. Check that n/a (not applicable) is used appropriately. i.e. only if the question is not applicable to the country. In some cases, a score of zero should be given, and in others, perhaps they need more help to figure out how to answer the question.
    c. Guidance for assigning Low/ Medium/ High categories: Low: Blank or not useful. Medium: Some text and details. High: Useful amount of text and detail than can contribute to stakeholder understanding/consensus and planning.

5. **Key priorities and targets for IWRM implementation:**
    a. Check if completed. Low, moderate, or high level of information?

6. **Country process reporting form:** Level of info in the free text field, the table, and in the 'additional info' field completed.
    a. Guidance for assigning Low/ Medium/ High categories: Low: Blank to few words. Medium: Minimum info to be useful to understand transparency. High: More detailed description that gives good idea of robustness and transparency of the process.

ANNEXES.

7. **Annex B: Facilitator's Report:**
    a. Mandatory for countries that received financial support through Stage 1 of the SDG 6 IWRM Support Programme in 2026.
    b. Check if completed. Low, moderate, or high level of information?

All data is provided by each country and is therefore fully owned by the countries. Each country undertakes stakeholder consultation, to a level that is appropriate given resources and capacity available to them, to ensure that the data has adequate acceptance and ownership within the country. Guidance on consultation processes are provided in the monitoring guide and through the introductory PowerPoint and video for focal points (all materials available at http://iwrmdataportal.unepdhi.org).

4.k Quality assessment (QUALITY_ASSMNT)

The quality management procedures in place are deemed sufficient to ensure the data submitted to the SDGs Indicator Database is of acceptable quality.

5. Data availability and disaggregation (COVERAGE)

Data availability:

Total number of countries: 190 (98% of UN Member States) (UNEP 2024)

The following covers the region (UNSD regional groupings): followed by the number of countries with data / total countries in region (as of 2023); followed by the percentage of countries with data.

Regional grouping	Number of countries with data / total countries in region (as of 2023)	Percentage of countries with data

Australia and New Zealand	2/2	100%
Central and Southern Asia	14/14	100%
Eastern and South-Eastern Asia	16/16	100%
Europe and Northern America	45/45	100%
Latin America and the Caribbean	32/33	97%
Northern Africa and Western Asia	23/23	100%
Oceania (excluding Australia and New Zealand)	10/12	83%
Sub-Saharan Africa	48/48	100%
World	190/193	98%

Time series:
Pre-SDGs: 2008, 2012 (UN-Water 2008, 2012).
SDG period: 2017, 2020, 2023, 2026.
All on IWRM Portal (http://iwrmdataportal.unepdhi.org)

Disaggregation:
The strength of the indicator lies in the potential for disaggregating the country score into the four main dimensions of IWRM, and further to the questions in the survey. This provides countries with a quick assessment of which aspects of IWRM are progressing well, and which aspects require increased efforts to reach the target.
The nature of the target, indicator and survey does not lend itself to disaggregation by sex, age group, income etc. However, social equality is an integral part of IWRM, and there are questions which directly address issues such as gender (2.2d), vulnerable groups (2.2c), geographic coverage and broad stakeholder participation in water resources development and management. These questions provide an indication of the national and sub-national situation regarding social equality.

6. Comparability / deviation from international standards (COMPARABILITY)

Sources of discrepancies:
Indicator is calculated by countries according to the internationally agreed methodology, and there are no deviations from international standards.

7. References and Documentation (OTHER_DOC)

URLs: http://iwrmdataportal.unepdhi.org . This contains the latest survey, monitoring guide, and all supporting documentation.
https://www.gwp.org/en/sdg6support/ : SDG 6 IWRM Support Programme.

References:
- WAEMU, GWP-WA & UNEP-DHI (2025), IWRM best practices for water security and resilient development in the WAEMU regio
- UNECE, UNESCO, GWP CA & UNEP-DHI (2025) Status of IWRM & Transboundary Cooperation in Central America
- ESCWA, UNEP-DHI (2025) 2024 Progress Report on the Implementation of Integrated Water Resources Management in the Arab Region: Midterm Status of Sustainable Development Goal Indicator 6.5.1

- AMCOW, UNEP-DHI (2025) 2025 IWRM-related Progress in Africa. Technical Note for consultations on post-2025 Africa Water Vision
- UNEP (2024): Progress on implementation of Integrated Water Resources Management. Mid-term status of SDG indicator 6.5.1 and acceleration needs, with a special focus on climate change.
- UNEP (2021): Progress on Integrated Water Resources Management. Tracking SDG 6 series: global indicator 6.5.1 updates and acceleration needs.
- UNEP (2018): Progress on integrated water resources management. Global baseline for SDG 6 Indicator 6.5.1: degree of IWRM implementation.
- GWP and UNEP-DHI (2021): Progress on Integrated Water Resources Management (IWRM) in the Asia-Pacific Region 2021: Learning exchange on monitoring and implementation towards SDG 6.5.1
- GWP Centroamérica (mayo de 2021): Estado de la implementación de la Gestión Integrada de los Recursos Hídricos en Centroamérica y Republica Dominicana al 2020.
- AMCOW (2018): Status Report on the Implementation of Water Resources Management in Africa: a regional report for SDG indicator 6.5.1 on IWRM implementation. AMCOW 2018: Status Report on the Implementation of Water Resources Management in Africa: a regional report for SDG indicator 6.5.1 on IWRM implementation.

- ESCWA (2021): Status Report on the Implementation of Integrated Water Resources Management in the Arab Region
- United Nations Economic and Social Commission for West Asia (2019): Status Report on the Implementation of Integrated Water Resources Management in the Arab Region: Progress on SDG indicator 6.5.1.
- UN-Water initiative on integrated monitoring of SDG 6: http://sdg6data.org
- UN-Water (2016): Water and Sanitation Interlinkages across the 2030 Agenda for Sustainable Development. Geneva. https://www.unwater.org/app/uploads/2016/08/Water-and-Sanitation-Interlinkages.pdf