STEP-BY-STEP MONITORING METHODOLOGY FOR INDICATOR 6.5.1

Degree of integrated water resources management implementation

1. MONITORING CONTEXT

1.1 INTRODUCTION OF THE INDICATOR

Definition of indicator, how it responds to the target and comment on its scope and limitations (rationale and interpretation), potential multipurpose use

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 (IWRM) implementation (0-100).

The indicator allows countries to measure incremental progress towards target 6.5, focussing on the first part of the target to ‘implement integrated water resources management at all levels’. It complements indicator 6.5.2 ‘Proportion of transboundary basin area with an operational arrangement for water cooperation’, which focuses on the second part of the target.

The indicator is determined based on a national survey using the attached questionnaire on degree of water resources management implementation to be completed by the relevant national authority or authorities. The survey addresses four main components of integrated water resources management (IWRM) through four sections:

1. **Enabling Environment**: Creating the conditions that help to support the implementation of IWRM, which includes the most typical policy, legal and strategic planning tools for IWRM.

2. **Institutions**: 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.
Each section contains two sub-sections, the first covering the national level, and the second covering ‘at all levels’, which includes sub-national, basin/aquifer and transboundary levels as appropriate.

The strength of the indicator lies in the potential for disaggregating the country score into the four main components 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 obtain the target.

### 1.2 Target levels for the indicator

*Description of the indicator target and target levels, noting that absolute levels will vary with the local context (e.g. primary-third WWT, good-bad WQ, low-high water stress, high-low degree of IWRM implementation)*

For each question, countries can select the degree of implementation from 0 – 100, in increments of 10. Written guidance is provided in the questionnaire on six thresholds as follows:

- Very low (0)
- Low (20)
- Medium-low (40)
- Medium-high (60)
- High (80)
- Very high (100)

The question scores in each component are averaged to provide a component score. The four component scores are averaged to create the indicator score on a scale of 0 – 100, which represents the degree of IWRM implementation. The ultimate target level is 100. However, the possibilities to disaggregate the data by component and by question enables governments to get a good insight into the aspects of IWRM where more effort is required.

### 2. Proposed monitoring methodology

#### 2.1 Monitoring concept and definitions

*Description of monitoring concept; definition of concepts and key components of the methodology (we will manage the connection with the “Joint glossary” afterwards)*

IWRM is a process that promotes the coordinated development and management of water, land and related resources in order to maximise the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems. IWRM is not an end in itself but a means of achieving the three key dimensions of sustainable development:

- Economic efficiency to make water resources go as far as possible;
- Social equity in the allocation of water across social and economic groups;
- Environmental sustainability to protect the water resources base and associated ecosystems.

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.

2.2 RECOMMENDATIONS ON SPATIAL AND TEMPORAL COVERAGE

Recommendations on country process, spatial and temporal coverage

Country process: Monitoring progress on meeting SDG 6.5 is owned by and is the responsibility of the national government. The government will assign a ministry with the primary responsibility for overseeing this survey will be asked to take on the responsibility of coordinating the national IWRM monitoring and reporting process. As water issues, and water management issues in particular, 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 questionnaire.

The ministry may wish to nominate a national “IWRM focal point”, who may or may not be a government official. The UN will provide 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.

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 will be used to calculate the overall indicator score,

2) The completed draft questionnaire 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 questionnaire 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, 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 will be the basis for calculating the degree of IWRM implementation (0-100) for global reporting. Countries can enter responses electronically into an online version of the survey, which will automatically calculate the degree of IWRM implementation score, and also generate graphs and automatic reports to help countries identify areas for attention.

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 will periodically prepare synthesis reports for regional and global levels to provide overall progress on meeting SDG target 6.5.
**Spatial Coverage:** Each section of the survey is split into two sub-sections, the first covering the national level, and the second covering ‘at all levels’ which includes sub-national, basin/aquifer and transboundary levels as appropriate. The spatial coverage of the national level questions is relatively straightforward. It becomes more complicated for federal countries, where responsibility for water resources management may be split between the national level and the provinces or states. However, the national level questions are still relevant for federal states. And two additional questions are included for federal countries only.

Addressing the ‘at all levels’ part of the target is critical for providing a complete picture of IWRM implementation. The questions ‘at all levels’ cover both the degree of implementation and the different administrative or geographical levels. Guidance is provided in the text given for each of the six ‘thresholds’ for each question.

**Temporal Coverage:** A reporting cycle of three years is recommended.

### 3. DATA SOURCES AND COLLECTION

#### 3.1 DATA REQUIREMENTS TO COMPUTE THE INDICATOR

*Table with required data and their units of measurement; recommendations on data aggregation/disaggregation, and implications for monitoring*

The data requirements for computing the indicator include information on the four components of IWRM, as described in section 1.1 above, and as specified in the attached questionnaire.

#### 3.2 SOURCES OF DATA — SHORT AND LONG TERM

*Description of potential data sources, including the potential for novel sources; description of typically involved institutions including potential to involve other stakeholders; challenges and opportunities in the short and long term*

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. 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 will be 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.

#### 3.3 RECOMMENDATIONS ON DATA MANAGEMENT

*Process for quality control and assurance*

*Data requirements for global reporting, including metadata and good practices — could this be done jointly? To be further discussed, pending discussion on global data repository and input from the IAEG process.*

The government should establish a system for storing the survey results so they are accessible over the full 15 years of implementing the 2030 Agenda. A mechanism for using the results of the survey to inform policy and actions should also be established so any aspect of IWRM that is lagging behind can be addressed.
4. **Step-by-step data collection and computation of indicator**

4.1.1 **Step 1**

The responsible ministry or IWRM focal point contacts relevant ministries/agencies to compile responses to the questionnaire. Each question is assigned a value between 0 and 100, in increments of 10, following guidance in the questionnaire. Question values are averaged to form component values. The four component values are then averaged to derive the indicator value for each country (draft 1).

4.1.2 **Step 2**

The draft 1 questionnaire is reviewed by relevant government ministries and/or agencies. These could include both water institutions and those involved in water-relevant sectors, such as agriculture, energy, water supply and environment, as well as water management on different levels (e.g. river basin, national, state/province, transboundary). This process may be electronic (e.g. via email) and/or through workshops. The responsible ministry or IWRM focal point considers all inputs, and produces a draft 2 of the questionnaire.

4.1.3 **Step 3**

The draft 2 questionnaire is validated at a multi-stakeholder workshop. Apart from government representatives, these stakeholders could include water user associations, civil society, business, academia and interest groups concerned with e.g. environment, agriculture, poverty etc. The suggested process is through a workshop but alternative means of consultation e.g. email, online call for public submissions could be considered. Note that steps 2 and 3 could be combined if desired. The responsible ministry or IWRM focal point considers all inputs, and produces the final questionnaire and associated country value.

4.1.4 **Step 4**

The final questionnaire is submitted to the national statistics authority and to the UN Statistics Division for inclusion in global monitoring of progress on meeting the targets set out in the 2030 Agenda. The responsible ministry or IWRM focal point may also establish a system for analyzing the individual survey responses as a diagnostic tool to determine where to focus action to make progress on those aspects of IWRM that are lagging behind. This would help to indicate what progress has been made when the next survey is carried out.

**Example**

**Practical example where the methodology has been applied**

Please see the attached example questionnaire. An example of the calculation steps is provided in the table below. Note there are more questions in the actual questionnaire than shown below. [To be revised]
5. **(BACKGROUND TO THE PROPOSED INDICATOR AND METHODOLOGY [0.5 PAGE])**

Brief summary of the indicator selection process and the development of the methodology, potentially referring to more detailed papers.