Summary Report

Global workshop for integrated monitoring of Sustainable Development Goal 6 on water and sanitation

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21–23 November 2017
The Hague
The Netherlands

UN WATER

Executive Summary

The inclusion of a goal on water and sanitation within the 2030 Agenda for Sustainable Development represented a significant advancement in the recognition of the sector, and of the complexities and interlinkages that characterize it. Recognizing the importance of integration across the goal, the United Nations custodian agencies for Sustainable Development Goal 6 (SDG 6) are collaborating under the UN-Water Integrated Monitoring Initiative for SDG 6. These agencies include UN Environment,[1] UNECE,[2] UN-Habitat,[3] UNICEF,[4] FAO,[5] UNESCO,[6] WHO,[7] and WMO.[8]

The Initiative's long-term goal is to establish and manage a coherent monitoring framework for water and sanitation to inform progress towards the 2030 Agenda, and to contribute to country progress through well-informed decision-making in the water sector. The first phase of work (2015–2018) is focusing on the development of monitoring methodologies and the establishment of a global data baseline for all of the SDG 6 global indicators. During 2016, draft methodologies underwent pilot testing and external expert review, and were revised based on the feedback received. In 2017, efforts were focused on country capacity-building and collecting data towards a 2017 global baseline.

To conclude the 2017 baseline process, UN-Water held a global workshop between 21 and 23 November 2017 in The Hague, the Netherlands, generously hosted by the Netherlands Ministry of Infrastructure and Water Management. This platform provided an opportunity for countries and United Nations organizations to share experiences and review results from baseline data-collection efforts, and to learn and prepare for future monitoring. A total of 162 people participated in the workshop, representing 74 Member States and also United Nations organizations and other international and regional partners.

The three-day workshop started with a session introducing participants to SDG 6 monitoring and reporting, and included a panel discussion composed of five Member States who described their processes, structures and experiences of implementing integrated monitoring.

Later on day one, the first of three breakout discussions focused on gathering participants' thoughts and lessons learned on various issues. The first session discussed the means for monitoring, and in particular the role of political support and institutional capacity. The session started with case studies from three countries and then led into breakout discussions on a number of questions that participants had identified during workshop preparations. Following reporting back and plenary discussion, the day concluded with an evening drinks reception where more than 20 countries presented posters describing their work on SDG 6 monitoring.

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[1] United Nations Environment Programme
[2] United Nations Economic Commission for Europe
[3] United Nations Human Settlements Programme
[4] United Nations Children's Fund
[5] Food and Agriculture Organization of the United Nations
[6] United Nations Educational, Scientific and Cultural Organization
[7] World Health Organization
[8] World Meteorological Organization

The next day commenced with the second set of breakout discussions, this time looking at the use of monitoring data to support progress towards the water and sanitation goal. This session included several case studies and small group work. Following this, participants had an opportunity to spend time with the United Nations custodian agencies in "market stalls" to hear about the results of the baseline process in some detail, to ask questions about the indicator methodologies, and to provide feedback on the different indicators based on their experiences. Both the participants and the custodian agencies found this interaction very useful.

The third day shifted from looking at past results and experiences to looking towards future SDG 6 monitoring. The day started with a discussion of what the "vision" for successful monitoring might look like by 2030, which then led the group into the third breakout round. This round focused on what countries need to strengthen their capacity for integrated monitoring. The final session of the day looked at two specific tools for promoting the use of monitoring data across all of SDG 6: the SDG 6 Data Portal, and the UN-Water SDG 6 Synthesis Report 2018.

Some of the key messages coming out of the workshop included:

- Countries see the value of all the SDG 6 indicators and of integrated monitoring, but it will take a number of years to reach full capacity for all indicators. There is currently a big difference in capacity and support for the newer indicators developed under the SDGs compared with the indicators of the Millennium Development Goal (MDG) period.

- Awareness of the existence of detailed methodologies varies, with some countries using very different methodologies to generate estimates.

- Countries are concerned about the large total number of SDG targets and indicators and the feasibility of delivering such an all-encompassing global agenda.

- Mobilizing political support is key to successful monitoring.

- Identifying correct overall and technical focal points is both politically and technically sensitive.

- Civil society organizations (CSOs) are important stakeholders and potential sources of data, but it is unclear how best to harmonize these data with official statistics. CSOs are currently primarily involved in consultation.

- It is very important to recognize that global reporting for the SDGs is not the same as national monitoring, and it is crucial to find ways to build the global SDG 6 indicators into existing national processes. One option is to incorporate the SDG targets and indicators into national water sector plans.

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List of acronyms

ACWUA – Arab Countries Water Utilities Association

AMCOW – African Ministers' Council on Water

CSO – civil society organization

DRR – disaster risk reduction

UNESCWA – United Nations Economic and Social Commission for Western Asia

FAO – Food and Agriculture Organization of the United Nations

GEMI – Integrated Monitoring of Water and Sanitation Related SDG Targets

GEMS/Water – Global Environment Monitoring System for freshwater

GLAAS – Global Analysis and Assessment of Sanitation and Drinking-Water

GWP – Global Water Partnership

HLPF – High-level Political Forum on Sustainable Development

IAEG-SDGs – Inter-Agency and Expert Group on SDG Indicators

IWRM – integrated water resources management

JMP – WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene

MDG – Millennium Development Goal

MoI – means of implementation

MoU – memorandum of understanding

SDG – Sustainable Development Goal

SFM – Sendai Framework Monitor

STATIN – Statistical Institute of Jamaica

TrackFin – Tracking Finance to WASH

UNECE – United Nations Economic Commission for Europe

UNESCO – United Nations Educational, Scientific and Cultural Organization

UNICEF – United Nations Children's Fund

UNISDR – United Nations International Strategy for Disaster Reduction

WASH – water, sanitation and hygiene

WFD – EU Water Framework Directive

WHO – World Health Organization

WMO – World Meteorological Organization

Introduction

As part of the 2030 Agenda for Sustainable Development – an ambitious plan of action for "people, planet and prosperity" – the dedicated goal on water and sanitation (Sustainable Development Goal 6 (SDG 6)) will, through its many interlinkages with other goals, play a key role in realizing this Agenda. To ensure progress and strengthen accountability, it is essential to set up solid mechanisms for results monitoring and reporting. To this end, United Nations Member States have developed a set of global indicators through the Inter-agency and Expert Group on SDG Indicators (IAEG-SDGs). Based on these indicators, and building on national monitoring efforts, the UN-Water family stands ready to support Member States in monitoring SDG 6.

For each global indicator, the IAEG-SDGs has appointed a custodian agency responsible for compiling and verifying country data for the purpose of global reporting. Recognizing the importance of integration across the goal, the custodians for SDG 6 are collaborating under the UN-Water Integrated Monitoring Initiative for SDG 6. These agencies include UN Environment, UNECE, UN-Habitat, UNICEF, FAO, UNESCO, WHO, and WMO. The Initiative is supported by project funding from the governments of France, Germany, the Netherlands, Sweden, Switzerland and the UK, and by the Bill & Melinda Gates Foundation.

The Initiative's long-term goal is to establish and manage a coherent monitoring framework for water and sanitation to inform progress towards the 2030 Agenda, and to contribute to country progress through well-informed decision-making in the water sector. Credible country water and sanitation data can underpin advocacy, stimulate political commitment and public and private investments, and inform decision-making at all levels. The specific objectives of the Initiative are to:

- Develop methodologies and tools to monitor SDG 6 global indicators
- Raise awareness at the national and global levels about SDG6 monitoring
- Enhance technical and institutional country capacity for monitoring
- Compile country data and report on global progress towards SDG 6

The first phase of work (2015–2018) is focusing on the development of monitoring methodologies and the establishment of a global data baseline for all of the SDG 6 global indicators. During 2016, draft methodologies underwent pilot testing and external expert review, and were revised based on the feedback received. In 2017, efforts were focused on country capacity-building and collecting data towards a global data baseline for SDG 6.

To conclude the 2017 baseline process, UN-Water held a global workshop between 21 and 24 November 2017 in The Hague, generously hosted by the Netherlands Ministry of Infrastructure and Water Management. This platform provided an opportunity for countries and United Nations organizations to share experiences and review results from baseline data-collection efforts, and to learn and prepare for future monitoring.

The expected results of the workshop were as follows:

1. Exchange of experiences from SDG 6 baseline data collection in countries, including the identification of key success factors and challenges, with a specific focus on aspects related to:

a. institutional structures and processes

b. the analysis and use of data

c. integration across SDG 6

d. sustainability of monitoring efforts

2. Feedback on the global compilation of SDG 6 baseline data in 2016/2017 by custodian agencies, related to both the compilation process and the preliminary results

3. Feedback and awareness-raising on SDG 6 synthesis reporting and the need to align national, regional and global reporting efforts

4. Fostering of communities of practice for SDG 6 monitoring (regional and technical)

5. Awareness-raising for country engagement in global monitoring in 2018 and beyond

6. Advice on priorities for the next phase of work of the UN-Water Integrated Monitoring Initiative for SDG 6 (2018–2021).

The main audience of the workshop was national overall focal points for SDG 6 monitoring (70 per cent), who had been nominated by their respective governments to represent their country in the workshop. The other participants were representatives from United Nations organizations (18 per cent), and other international and regional partners (12 per cent: regional organizations, civil society, development partners and other partner organizations of UN-Water).

Of the 162 people who participated in the workshop, three quarters were men. Of the 74 individual countries represented, 41 per cent were African, 23 per cent Asian, 19 per cent from the Americas and 17 per cent European. This workshop report aims to present a summarized account of each of the workshop sessions, highlighting the main messages from the very engaging and productive discussions.

Day 1: 21 November

The first day of the workshop set the stage with a panel discussion on the implications of the 2030 Agenda at the country level, where panellists outlined what their countries are doing to "nationalize" the SDGs and the implications for country monitoring systems. This was followed by brief introductions to the SDG process, including the global indicator framework, the UN-Water Integrated Monitoring Initiative for SDG 6 and its work during the 2016–2017 baseline process. In the afternoon followed a discussion on the means for monitoring, starting with three country case studies and then breakout discussions on the importance of political support, alignment with national structures and processes, coordination among stakeholders and data harmonization. The day ended with a drinks reception and presentation of country posters, where countries participating in the integrated baseline process could share their initial experiences from implementing SDG 6 monitoring in an informal setting.

1. Welcome and ice-breaker exercise

The workshop opened with a video message from Mr Gilbert Houngbo, President of the International Fund for Agricultural Development (IFAD) and UN-Water Chair, who welcomed participants to the workshop and recalled the ambition of SDG 6 and the important role that monitoring plays in its implementation, since data are the lifeblood of decision-making and the raw material for accountability. He noted that a comprehensive understanding of the goal requires hydrological, environmental, social and economic information to be integrated, but that this can be challenging since data are often collected across sectors by different institutions. Having introduced the UN-Water Integrated Monitoring Initiative and 2017 as the first year of data collection by United Nations custodian agencies with Member States, Mr Houngbo noted the timeliness of the workshop to reflect on the results of this learning journey and wished participants an exciting and productive workshop.

Thereafter followed a welcome address by the workshop host, Mr Peter Heij, Director General for Spatial Development and Water Affairs, Ministry of Infrastructure and Water Management, the Netherlands, who opened by highlighting the importance of the 2030 Agenda and the central role of SDG 6 in realizing it. To implement this SDG, he noted the great need to improve water governance and create an effective global architecture, improve United Nations coordination and encourage solidarity and global exchange among the United Nations Member States. He further noted that at the 2018 High-level Political Forum on Sustainable Development (HLPF) scheduled only six months later, if water and sanitation were to be discussed in-depth, credible data would have to exist. Flagging the importance of integration in monitoring, he admitted that in the Netherlands, it had not been that easy to produce a coherent picture of the overall water and sanitation situation, since data are collected by numerous stakeholders. He further explained that the purpose of the workshop was to share experiences and lessons learned among countries starting to implement SDG 6 monitoring, and reminded participants that they were in charge of formulating messages for the HLPF as well as outlining what is needed to improve SDG 6 monitoring. Mr Heij concluded the address by wishing participants a warm welcome, a productive workshop and a pleasant stay in the Netherlands.

The agenda item concluded with an ice-breaker exercise by Ms Deirdre Casella, the workshop moderator, for participants to become acquainted with one another.

2. Introduction SDG 6 monitoring and reporting

The session was opened by Ms Monique Berendsen, Ministry of Infrastructure and Water Management, **the Netherlands**.

Mr Joakim Harlin of UN Environment and also UN-Water Vice-Chair gave a brief **presentation about water and sanitation in the 2030 Agenda**, emphasizing the expanded scope of the SDGs compared to the Millennium Development Goals (MDGs), and the integrated nature of the agenda, with water and sanitation at its core. He presented the SDG 6 targets and the need for the global ambitions to be translated into action at the country level, while taking into account national priorities and circumstances. Turning to the global indicator framework, he noted that different types of indicators serve different purposes: the global indicators are effective in communicating needs and ensuring accountability between decision-makers and right-holders, but they need to be complemented with other more detailed indicators that can inform policy- and decision-making at the national and subnational levels. Mr Harlin highlighted that countries are responsible for collecting and making data and metadata available for global reporting, and that the role of United Nations custodian agencies is to support countries in these efforts. The UN-Water Integrated Monitoring Initiative coordinates custodian agency efforts and focuses on integration and overarching institutional capacity. Mr Harlin then outlined the follow-up and review process at the global level, before concluding with a presentation of the UN-Water SDG 6 Synthesis Report which, based on collected baseline data, will present the global status of SDG 6 and provide policy recommendations for the 2018 HLPF.

Thereafter, Mr Sven Kaumanns of the Federal Statistical Office, Germany, gave an **update on indicator process from the Inter-Agency and Expert Group on Sustainable Development Goal Indicators (IAEG-SDG)**. From a statistical perspective, two groups have been set up to develop a global indicator framework to track progress towards the SDGs, harmonize monitoring methods, build country capacity and define the monitoring process from the national to the global level: the IAEG-SDG and the High-level Group for Partnership, Coordination and Capacity-Building for post-

2015 monitoring. Mr Kaumanns noted that the global indicator framework proposed by the IAEG, including a total of 232 different global indicators, had been accepted by the United Nations Statistical Commission (UNSC), and explained how the tiering system works and that small refinements to the framework will be made continuously, but with two extensive revisions in 2020 and 2025. He further highlighted that the 2030 Agenda calls for data disaggregation for a large number of strata, flagging a number of challenges including the sheer amount of data needed, especially for cross-disaggregated data (about 700,000 time series per country), confidentiality issues (especially for minorities), as well as laws restricting the collection and use of confidential data. However, he also noted that detailed disaggregated information may not be useful at the global level, and thus can be kept at the national level with less need for harmonization. He ended the presentation with an overview of the data available for SDG 6 in the SDG indicator database (only including data on Tier 1 indicators), noting that for Tier 1 indicators, data availability is already rather high.

Mr William Reidhead of the UN-Water Technical Advisory Unit then **presented the UN-Water Integrated Monitoring Initiative for SDG6**. He began by outlining the SDG 6 global indicators and how their respective custodian agencies organize their work within three initiatives: WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP), UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS), and the Integrated Monitoring of Water and Sanitation Related SDG Targets (GEMI). Support is provided by the governments of Switzerland, Germany, the Netherlands, Sweden, the United Kingdom and France, as well as the Bill & Melinda Gates Foundation. Mr Reidhead explained that JMP, GLAAS and GEMI come together under the UN-Water Integrated Monitoring Initiative for SDG 6 to develop monitoring methodologies and tools, raise awareness at the national and global levels, enhance country capacity in monitoring, and compile country data and report on global progress towards SDG 6. Mr Reidhead then summarized the work to date, starting with methodology development in 2014–2015, pilot testing and methodology revision in 2016, global baseline data collection in 2016–2017 and, looking ahead, baseline reporting and the SDG6 Synthesis Report in 2018. He explained how countries had organized their work during both the pilot testing phase and the baseline process, for example through workshops to identify focal points and create intersectoral monitoring teams. The presentation concluded with an illustration of how an integrated country monitoring system might look, with political support, alignment with existing national processes, a focus on data use, and broad involvement of stakeholders coordinated through focal points and intersectoral teams.

The agenda item concluded with a **panel discussion on how to implement SDG 6 monitoring at the country level**, and in particular what countries are doing to "nationalize" the SDGs and the implications for their monitoring systems. The discussion was moderated by Ms Casella, who started by asking all panellists the meaning of, and benefits they associated with, "integration" in the context of SDG 6 monitoring.

Ms Parag, Ministry of Industries in **Bangladesh**, explained that due to the abundance of water in Bangladesh, issues related to water resources have been overlooked, and the focus has been mainly on drinking water and basic sanitation. SDG 6 has helped the country to acknowledge and start addressing all water-related aspects in its national agenda. She further noted that although many data are available, they are not well-integrated.

Ms Carolina Noboa, National Water Secretariat in **Ecuador**, highlighted that an integrated process in Ecuador has found that many data are readily available, thus enabling data baselines for the SDG 6 global indicators to be developed. The next step in Ecuador is to establish a suitable mechanism for applying the information within national water planning.

Mr Bocar Abdallah Sall, Ministry of Hydraulics and Sanitation in **Senegal**, mentioned that his country has created a national framework with focal points in each ministry to support data collection and sharing, and that this framework is very useful for SDG 6 reporting.

Mr Ali Subah, Ministry of Water and Irrigation in **Jordan**, explained that his country has established both a vision for 2025 that outlines how to coordinate across ministries and other stakeholders, as well as a national SDG committee led by the Ministry of Planning. Data are available to report on the SDG 6 targets, and while noting that some SDG 6 global indicators are more resource-heavy than others, data baselines for indicators 6.1.1 to 6.6.1 have been established. Mr Subah highlighted that for a water scarce-country such as Jordan, data are important to help create water resilience.

Ms Fabia Hüsler, Federal Office for the Environment in **Switzerland**, mentioned that both horizontal (across sectors) as well as vertical (across levels of government) integration are important in her country, as is the accessibility and transparency of available data. Water management in Switzerland has moved away from a focus on flood protection and hydropower production towards environmental sustainability and integrated resources management. Ms Hüsler noted that while integrated data management allows for a broader view of existing challenges – making it easier to anticipate future challenges – integration comes at a cost, in the form of coordination needs, potential conflicts of interest and slower decision-making processes.

In the next part of the panel discussion, the moderator asked panellists what steps their countries have taken to nationalize the SDGs. Ecuador mentioned that it is now focusing on how to implement its water plan and has, for integrated SDG monitoring, formed a commission on environmental statistics, where stakeholders from across sectors are working together. Bangladesh has embedded the SDGs in its five-year national development plan, as well as its ministry-specific annual performance plans, to ensure progress (and reviews thereof) through their existing processes. The first step taken with regard to SDG monitoring was an analysis of available data and data gaps, followed by mapping of responsible ministries and agencies. Bangladesh has defined national SDG targets, e.g. 100 per cent access to safe water by 2020 and 90 per cent access to safe sanitation by 2030, and the political commitment is very high, with its Prime Minister participating in

the High-level Panel on Water; main challenges include stakeholder involvement and financial resources for implementation.

The moderator then noted that both Senegal and Switzerland will be subject to an in-depth review at the HLPF in the coming years, and asked how they are preparing for this. In Senegal, the processes and mechanisms put in place through its unified framework require accompanying capacity-building measures, and it was noted that the support received from United Nations experts during the pilot and baseline processes was very beneficial. In Switzerland, work is carried out both at the national and international levels. At the national level, the country has conducted a public dialogue on all the SDG targets to identify where progress is lagging behind, and also to prioritize the work ahead, and is currently synthesizing the findings per SDG. At the international level, Switzerland is also committed to supporting other countries in conducting voluntary national reviews.

Looking ahead, the moderator asked about opportunities and challenges. Jordan emphasized the importance of political willingness, which is present in Jordan due to its good experience from MDG monitoring through the MDG+ Initiative led by United Nations Economic and Social Commission for Western Asia (UNESCWA) and the Arab Countries Water Utilities Association (ACWUA). With regard to challenges, Jordan stressed its location in one of the driest regions in the world, and noted that to reach the SDG targets (e.g. to increase the safe use of wastewater), regional cooperation around shared resources as well heavy infrastructure investments are needed, and for that international support is essential.

The audience was then invited to pose questions to the panellists and reflect on the discussion, starting with a question about how the countries represented worked with corresponding targets and indicators at the national level. Ecuador mentioned that it has a programme for ensuring access to freshwater, through which it gathers information complementary to the SDG reporting. In Switzerland, sustainability targets and indicators existed long before the SDGs, but since the 2030 Agenda was adopted, the country has been using it as the overall framework for national sustainable development and aligning national targets and indicators with it. Meanwhile, Jordan noted that the water sector has many performance indicators that are required for day-to-day operations of, for example, utilities, and that these of course will also be monitored in the future. Jordan is currently using these to compute the global indicators. Senegal was asked if it reports also to the African Council of Minister's on Water (AMCOW) monitoring and reporting platform and, if so, how the two processes and the methodologies are aligned. Senegal confirmed that it does, and that global indicators are well reflected in the AMCOW platform.

Another participant asked how the panellists managed to bring together the many different stakeholders involved to collaborate across the commonly seen silos, with South Africa asking specifically how transboundary water commissions had been involved. Bangladesh recognized the challenge of silos but said that the existence of SDG 6 really helped bring all stakeholders to the table, since it presented a common goal for everyone involved, and provided hope for improved transboundary cooperation, since the SDGs are internationally adopted. Jordan highlighted the importance of having a strong leader to initiate and drive the process, which in its case was the Minister of Water and Irrigation, who could convene other stakeholders. Senegal explained that its process started with an inception workshop, in which all relevant ministries and other stakeholders, including the transboundary water commissions, were invited to participate. During this workshop, participants formulated a workplan for each of the indicators. Ms Casella concluded the panel discussion, noting that there would be plenty of opportunity to discuss these issues further in the days to come.

Panel discussion on implementing SDG 6 monitoring at the country level available at: https://www.facebook.com/UnitedNationsWater/videos/v/l.2230595782337022/10154985531147109/?type=1

3. 2017 integrated baseline process

Ms Maria Schade of the UN-Water Technical Advisory Unit presented the **overall objectives of the 2017 integrated baseline process**, with its two complementing objectives: in the short-term, to establish a global baseline for SDG 6 in time for the in-depth review of SDG 6 at the 2018 HLPF, and in the long-term, to initiate a process to develop capacity within countries for integrated monitoring, recognizing the importance of institutional capacity and integration across sectors and levels of government. With regard to the second objective, UN-Water has started to develop this process with a limited number of countries, which is expected to increase in the years to come. A geographically and socioeconomically balanced selection of 65 countries received an official invitation to participate in the integrated process, of which 30 countries responded and identified a focal point. Many of these countries are participating in the workshop. The process started in March with an introduction webinar outlining lessons learned and good practices from the pilot testing, and shortly after, custodian agencies intensified their work on reaching out to countries with data requests and different types of support. Recalling the importance of supporting country technical and institutional capacity for monitoring, Ms Schade outlined four types of support that had been applied during the baseline process, starting with written guidelines that include step-by-step methodologies for each indicator and good practices for country monitoring systems, all based on lessons learned from the 2016 pilot testing. The second type was online support, with webinars, tutorials and help desks. The third type involved regional and global exchanges, including a workshop with AMCOW for the African region in May 2017 and the final type related to direct support to countries, including bilateral conversations and "integrated monitoring seed grants", where countries could apply for up to $10,000 to support institutional capacity for integrated monitoring. Finally, Ms Schade offered some early reflections on the process, highlighting that while identifying an overall focal point seemed to be challenging for countries, it was very useful in triggering discussions on roles and responsibilities and the need for coordination. She noted the importance of having a focal point that can convene and coordinate the different stakeholders. Furthermore, she mentioned that although time-consuming, SDG 6 must be formally incorporated into national strategies and plans, stressing the great need for capacity-building and resources, especially for the new indicators. She ended the presentation by

highlighting that the purpose of the workshop is to gather country experiences and feedback in order to further improve future efforts.

Mr Tom Slaymaker of UNICEF presented the work on indicator **6.1.1 on drinking water** and indicator **6.2.1 on sanitation and hygiene**, for which UNICEF is a co-custodian together with WHO. Both WHO and UNICEF have been monitoring WASH since 1990 through the JMP, and in July 2017 they published data baselines for their SDG indicators. Mr Slaymaker noted that developing the baselines has been a long process, which started in 2011 with discussions on what to monitor and how to carry out monitoring. These discussions fed into the work on the 2030 Agenda, and following the finalization of the global indicator framework, a data drive was conducted in 2016, with data gathered from 150 countries through UNICEF and WHO country offices. Based on the country data gathered, preliminary estimates were produced and then validated through country consultations. Mr Slaymaker stressed that SDG indicators 6.1.1 and 6.2.1 contain many new elements that had not previously been collected at the global level. Although data are available for all countries on access to basic drinking water and sanitation services, and open defecation, there are large gaps regarding "safely managed" elements of the indicators, and few countries have data on water quality in rural areas and faecal sludge management. There are also gaps related to basic handwashing facilities, particularly in developed countries, where such data are not systematically collected. He noted that to produce regional estimates, data must be available for at least 30 per cent of the population and highlighted that all data (and data sources) are available on the JMP website.

The work on indicator **6.3.1 on wastewater treatment** was presented by Mr Graham Alabaster of UN-Habitat, on behalf of UN-Habitat and WHO as co-custodians of the indicator. For the domestic component of the indicator, preliminary estimates are available for 80 countries, thanks to the close connection with the definition of indicator 6.2.1 and use of its data sources. To capture commercial and industrial wastewater, UN Habitat and WHO are trying to incorporate utility data, which are widely available and publically accessible in national performance reports. Mr Alabaster pointed out that many countries are also asking for additional indicators on wastewater recycling and reuse, which are driving many aspects of the wastewater treatment agenda, especially in water scarce countries. Challenges include wastewater discharged directly into the environment (not through sewers), in particular from commercial and industrial sources, and through overflow and leakages, which can be significant but are seldom measured. Data gaps also exist for on-site treatment, which at times are managed separately from sewerage services and industrial discharges, calling for intersectoral teams and data disaggregation aligned with ministry responsibilities.

Mr Hartwig Kramer of UN Environment presented the work on indicator **6.3.2 on ambient water quality**, flagging that for this indicator, the organization has been able to take advantage of the work of the Global Environment Monitoring System for freshwater (GEMS/Water), which focuses on capacity-building for monitoring and maintains one of UN Environment's richest data portals, though there are significant gaps in geographical, time series and parameter coverage data. For the indicator, a data request was sent to all United Nations Member States in March 2017, jointly with indicator 6.6.1 which looks at ecological aspects. Following training webinars (60 countries), help desk support, in-country technical training (eight countries), nine country visits and five workshops, 46 countries had submitted data by the end of October 2017. With regard to lessons learned, Mr Kramer noted a lack of water quality monitoring programmes capable of producing sufficient data, challenges to identify correct technical focal points, weak governance structures that are unable to drive the data generation from the top down and the inaccessibility of data which are spread across various institutions. In addition, he highlighted the complex nature of the indicator and its methodology, and the associated resources requirements, the challenge of defining "good quality" data to set national targets, and countries' requests for harmonization with existing frameworks, such as AMCOW monitoring and reporting and the EU Water Framework Directive (WFD).

The work on indicators **6.4.1 on water-use efficiency** and **6.4.2 on level of water stress** was presented by Mr Riccardo Biancalani of FAO, who outlined activities undertaken during 2017, including webinars, regional workshops, a revision of the methodology for indicator 6.4.1 (classified as Tier 3 until recently) based on feedback from countries and partners and closely following the IAEG-SDGs process, an e-learning tool for indicator 6.4.2, as well as bilateral teleconferences and exchanges, which he identified as particularly useful. In terms of the lessons learned, Mr Biancalani highlighted that there are institutional challenges in many countries, such as stakeholder involvement, poor data availability and data in different formats. He noted that some countries had questioned the formality of SDG reporting, and welcomed the work of the IAEG-SDGs to provide advice on such matters. In addition, he noted that technical capacity-building and investments in data-collection infrastructure are needed, and stressed that water indicators are not just numbers and should relate to actual situations, acknowledging that countries may prioritize some SDG targets over others.

Mr Peter Koefoed Bjørnsen of UN Environment presented the work on indicator **6.5.1 on integrated water resources management**. Countries were contacted to establish focal points in 2017, and following this, data requests were sent to all United Nations Member States and joint follow-ups were conducted for the 30 countries participating in the integrated baseline process through UN-Water. Country support included an online version of the survey instrument, a dedicated website with all materials, including a help desk, technical webinars, bilateral follow-ups and 30 country workshops organized through the Global Water Partnership (GWP). In terms of lessons learned, Mr Bjørnsen mentioned that in general, the process had been very encouraging, with a lot of country engagement and feedback. Both very small and large federated states were challenged by the reporting, and the regional context was noted as important. He further noted the value of bilateral dialogues (rather than deadlines) and country workshops, and indicated that there is scope for the survey instrument to be further developed.

The work on indicator **6.5.2 on transboundary cooperation** was presented by Mr Aurélien Dumont of UNESCO and Ms Francesca Bernardini of UNECE as co-custodians of the indicator. Mr Dumont outlined the activities and process undertaken to develop and implement the methodology. Data was collected through a questionnaire sent to all countries with transboundary waters (154) and various support for capacity-building was offered, such as webinars and face-to-face meetings. For the countries that are parties of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention), the questionnaire was incorporated into the more comprehensive reporting on the convention, to reduce the burden on countries and help validate the indicator 6.5.2 responses. Reflecting on lessons learned, Ms Bernardini mentioned that the identification of focal points was not a significant issue, since existing networks of the Water Convention and the Intergovernmental Council for the International Hydrological Programme of UNESCO could be used. She noted that validating the indicator 6.5.2 responses was time-consuming, and that the quality of reporting was not related to the economic situation of a country, but to the country's transboundary cooperation experience. She continued that reporting on groundwater remains a challenge and that the reporting in general had triggered discussions and coordination at the national level. Many countries had been very honest about their situation, which is the purpose of monitoring and is essential for moving forward with implementation and establishing a baseline on which road maps can be built.

The work on indicator **6.6.1 on water-related ecosystems** was presented by Mr Stuart Crane of UN Environment, who explained that the methodology had been developed through a consultative process in 2016, before being implemented in 2017 by sending a questionnaire to all Member States. Support was provided in the form of webinars, in-country training in a small number of countries and a help desk. He noted that 80 countries engaged in the process, of which 35 had reported to date. In terms of lessons learned, Mr Crane highlighted that indicator 6.6.1 monitoring involves several ministries and institutions and although a lot of data exist, the challenge is to encourage the sharing of data and to establish a coordination mechanism that can bring the data together. The complexity of the indicator, which has three subcomponents and reporting requirements down to the basin level, is well documented and underpins the value of the indicator. Going forward, he stressed the need for continuous in situ data collection and opportunities to use Earth observations, as well as the importance of regional and subregional approaches to build capacity.

Ms Fiona Gore of WHO presented the work on indicators **6.a.1 on international cooperation** and **6.b.1 on stakeholder participation**. These indicators fall under the scope of the GLAAS reporting, which has been expanded to meet the needs of the SDG reporting. In their last reporting cycle in 2016–2017, 80 countries reported. Ms Gore noted that deadlines were identified as a challenge for the other indicators, yet these could greatly increase response rates of countries, particularly if ministers were preparing to present the indicator status at a high-level forum. Other challenges relate to the very definition of the indicators, especially stakeholder participation, as well as their relevance, as the current tracking of official development aid does not fully capture target 6.a. GLAAS is currently working with the Stockholm International Water Institute (SIWI) to explore these issues. Ms Gore also emphasized that GLAAS is working together with AMCOW and other regional reporting mechanisms to harmonize and streamline reporting.

After the presentations, a few comments from the floor followed. Two countries asked about the integration of United Nations organizations, raising concerns about the many custodian agencies and focal points at the United Nations and country levels. They noted that it is difficult for countries to keep track of where data submissions should be sent, and that within a country, indicator focal points may not be aware of one another, which makes it easy to lose track of the data and the situation in general. In response, it was confirmed that the Integrated Monitoring Initiative is aware of this problem and is working to find ways to better coordinate within the United Nations. It has also published a list of indicator focal points from each custodian agency online[9] for countries to access. However, it was highlighted that the collaboration for SDG 6 at the global level is a lot more advanced than for other SDGs. Furthermore, the existence of multiple focal points is partly in response to water sector fragmentation at the country level, where, for example, the ministry that reports on drinking water may not have any information about transboundary issues and vice versa. Focus should be given to bringing the data together and using them in an integrated manner. Another country noted that at the country level, different United Nations organizations are present and asked how they are working together. It was explained that some United Nations organizations have country offices and therefore have the opportunity to support countries directly, whereas other United Nations organizations have regional and subregional offices, which countries would need to contact themselves. Countries were advised to first identify what type of support they need, and then find out which part of the United Nations system is most suited to providing that support. This was noted as one of the workshop's objectives.

[9] Available at: http://sdg6monitoring.org/

4. Means for monitoring – the importance of political support and institutional capacity

The session was opened by Mr Samwel Alima, Ministry of Water and Irrigation, **Kenya**, who drawing on experiences from Kenya outlined the importance of political support and high-level recognition of the monitoring process from across sectors.

Thereafter followed three country case studies, starting with Mr Callist Tindimugaya, Ministry of Water and Environment, **Uganda**. Mr Tindimugaya presented the work carried out in Uganda as one of the pilot countries for SDG 6 monitoring in 2016, spearheaded by the formal appointment of interdisciplinary task teams and focal points for each indicator, with overall coordination by the Ministry of Water and Environment. The process began with an inception workshop presided over by the minister in charge of water, and following an agreement on the organizational structure, task teams undertook intensive data collection, which included

several meetings. Two progress review workshops and the final workshop were attended by high-level government officials, as this type of support had been identified as key to achieving successful outcomes. For Uganda, the SDG 6 indicators have been integrated into the national Water and Environment Sector Performance Monitoring Framework. Mr Tindimugaya discussed the importance of a clear institutional set-up with defined roles and responsibilities, noting that SDG 6 monitoring is an ongoing process that requires ongoing input from stakeholders and consequently both human and financial resources.

Ms Monique Berendsen, Ministry of Infrastructure and Water Management, **the Netherlands**, presented the next case study, outlining the challenges ahead for achieving the SDGs. In the Netherlands, implementation began by mapping the SDGs to central government policies, a list of initiatives by different stakeholders and an indicator report from their national statistical office in 2016. This was followed by progress reporting to the parliament and the United Nations HLPF. The Netherlands also took part in pilot testing SDG 6 monitoring in 2016, and started the process by appointing policy coordinators for the different indicators, identifying relevant stakeholders and existing data sets, and determining how additional information could be gathered. Ms Berendsen stressed that data collection is not an end in itself, but should support decision-making processes and improve implementation, thus making it necessary to link monitoring and policy processes. She also emphasized the importance of integration, explaining that it is possible to integrate data by using existing statistical standards, which is essential for integrated water resources management (IWRM).

The final case study came from **Peru**, which also participated in pilot testing SDG 6 monitoring. Ms Paola Chinen Guima, National Water Authority, Peru, briefly introduced the situation in her country, illustrating the large discrepancies in water availability and the different policies that exist for managing water resources. She outlined the work on SDG 6 monitoring to date in Peru, including the establishment of independent coordination teams for each target and various meetings to convene stakeholders, compile data and evaluate results. All results and the steps taken to achieve them have been summarized in a report. The National Institute of Statistics and Information (INEI) is compiling data on all SDGs to inform overall national planning processes, as well as global follow-up and review processes.

After an introduction of the four discussion topics, related to political support, national alignment, stakeholder coordination and data harmonization, participants formed breakout groups and left the plenary session to discuss these. After one hour, the breakout groups returned to the plenary session to present their discussions, with all participants welcome to share their thoughts following each topic.

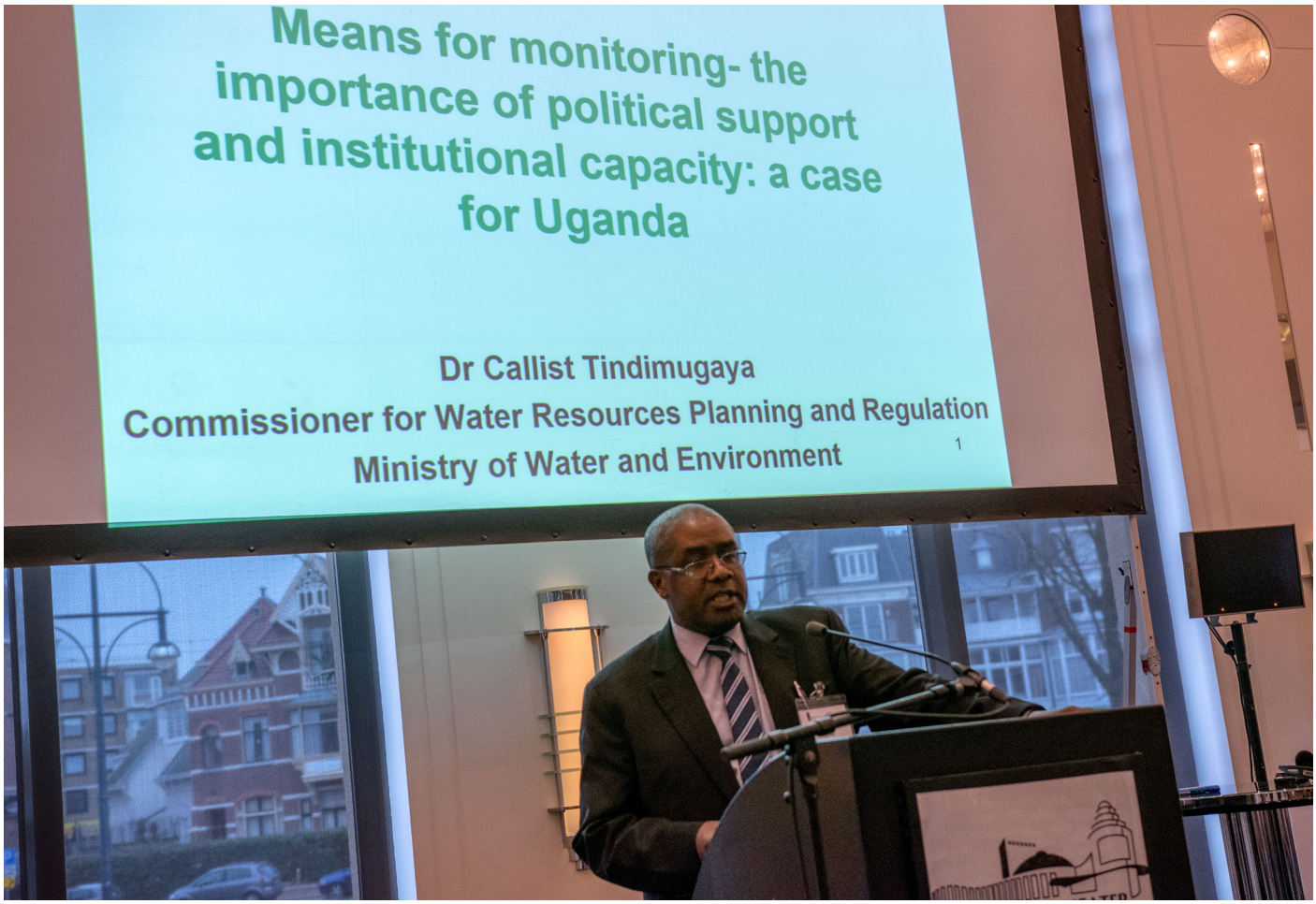
Three groups discussed the importance of **high-level recognition and support for the monitoring process** from leaders in all relevant sectors and institutions, which has been highlighted by many countries implementing SDG 6 monitoring. It was noted that all relevant actors should be included in the process in order to access and use existing data from different sectors and that creating a more inclusive process can help stimulate engagement. To convince politicians about the value of monitoring, indicators should be aligned with existing public policies at the national and subnational levels. By including civil society in the monitoring process and promoting transparency in general, accountability can be ensured and actors can use data to inform policymaking. Taking into account the fragmented management of water resources across ministries, it was suggested that high-level support is needed, for example, from the Prime Minister's Office. However, it was also noted that the monitoring mechanism should be institutionalized to ensure it is sustained, even when a country is facing political changes, and that international and regional platforms should help support its sustainability. Regional strategies and institutions can also help to motivate political action at the national level, with the Arab Ministerial Water Council and the Gulf Cooperation Council mentioned as examples. Finally, it was also noted that integration is costly and the benefits of integration thus need to be clearly communicated, such as through a business case. The participants recognized the importance of having a solid business case for monitoring and emphasized the need for simple processes to facilitate communication with politicians and the public.

The next topic, discussed by two groups, related to the importance of **aligning the SDG monitoring process with existing national monitoring and reporting processes**, as well as **policy- and decision-making processes** and existing institutional and coordination frameworks, to ensure long-term sustainability. It was emphasized that SDG monitoring should build on and strengthen existing structures, noting that many countries already have ministerial structures in place to convene stakeholders from across sectors, but that these can differ greatly from one country to another. Acknowledging the central role of national statistical offices, it was noted that these can lead the coordination of ministries responsible for water sector monitoring. The importance of aligning national policies with the SDGs was also mentioned, as was the opportunity to use the SDGs and the global indicator framework to expand national monitoring frameworks and policies, for example, to cover a specific component of the global indicators for which the country is lacking information. Building on existing regional mechanisms, such as WFD and AMCOW monitoring and reporting, provides the potential for synergies and thus a reduced reporting burden. Coordination opportunities with other sectors were also highlighted as a way to move faster with SDG 6 monitoring, which could be achieved by including water in other agendas, for example, existing environmental agendas. The need for financial support to maintain and expand existing monitoring infrastructure for national monitoring processes was strongly emphasized, and a permanent budget would ensure the sustainability of the data collection.

Monitoring SDG 6 involves a wide range of **stakeholders across different sectors and levels of government**, and one group discussed how these can be **engaged in the process**. Focusing on "non-traditional" stakeholders in particular, such as utilities, universities, civil society organizations (CSOs), the private sector, development partners and space agencies, it was noted that a high-level coordination mechanism could help bring these into the official process. However, since these stakeholders come from varying sectors and may act as both data collectors and data users, a tailored approach should be used to reach them. In some cases, coordination at the river basin level may be more suitable than a high-level mechanism.

The final group discussed the **harmonization of data** from different stakeholders, which helps to increase data availability from across sectors and allows for a comprehensive assessment and analysis of the state of water resources and possible development paths. The experiences of participating countries revealed that data should be accurate and well managed, and that clear methodologies for all indicators and transparency of data sources were needed to control the quality of the data. The role of national statistical offices was further emphasized, as they are the agencies responsible for producing statistically sound data. By involving multiple stakeholders in data validation, it is possible to cross-check results, ensure accountability and maximize the use of existing data. Providing incentives for data sharing is essential. For the purpose of global reporting to the custodian agencies, a joint data platform was suggested, which would encourage harmonization and the sharing of data, bringing together data sets of individual ministries. The audience also contributed a point on this matter, stressing the importance of one national information system with standardized definitions and units across all sectors within a country.

Country case studies from the Netherlands, Peru and Uganda on the means for monitoring available at: https://www.facebook.com/UnitedNationsWater/videos/vl.223059578233702/10154985785402109/?type=1



Uganada and Peru delivering their case studies

Reception, display of country posters and live broadcasting

The first day of the workshop ended with a reception and display of country posters. The reception was opened by Ms Monique Berendsen and Mr William Reidhead, who welcomed participants and invited them to look at the posters and speak with the respective country focal points, to encourage an exchange of experiences between countries and to start building a community of practice.

The posters were created by countries that had actively participated in the integrated baseline process and presented the work on SDG 6 monitoring in their country, including lessons learned and baseline data. A total of 22 posters were displayed at the workshop (see Annex 2 or www.sdg6monitoring.org/activities/proceedings-2017-global-workshop/ for all posters).

To encourage participation in the workshop among those interested, all sessions with country representation were broadcast live on Facebook. To further stimulate an exchange of experiences, several participants were interviewed about their work, which was also broadcast live on Facebook. All broadcasts were made available online after the workshop as learning material.

All workshop broadcasts, including country interviews, available at: https://www.facebook.com/UnitedNationsWater/playlist/223059578233702

Discussing the country posters

Day 2: 22 November

Following the discussion of the first day on the means for monitoring and how to implement structures and processes to collect and compile data across sectors, the second day focused on the results of monitoring and how real data can be used to achieve SDG 6. The day began with three country case studies, followed by breakout discussions on how to improve data analysis and disaggregation, use data for policymaking and planning, and communicate the results to different audiences. The afternoon session began with a brief presentation on the preliminary baseline data for the SDG 6 global indicators. Thereafter, participants could visit indicator-specific market stalls to learn more about the results, exchange experiences from their work on a specific indicator and provide feedback on its methodology.

5. Monitoring for implementation – how to make use of the data

The session was opened by Mr Richard Muller, Ministry of the Environment, **Slovakia** and on behalf of GWP Central and Eastern Europe, who drawing on experiences from Slovakia, outlined the importance of linking data collected through various monitoring efforts to national and subnational policy- and decision-making.

Thereafter followed three country case studies, starting with Ms Liya Gu, Ministry of Water Resources, **China**. Ms Gu began by highlighting the steps that China has taken to mainstream SDG 6 into national water planning. At the broader level, the Ministry of Foreign Affairs of China has developed an action plan for the 2030 Agenda. In this plan, 169 SDG targets were assigned to 43 line ministries to ensure that all SDG goals and targets can be implemented in a comprehensive manner. For SDG 6, coordinated efforts have been made by the Chinese Ministry of Water Resources, Ministry of Environmental Protection, Ministry of Housing and Urban-Rural Development and the National Health and Family Planning Commission. Ms Gu also highlighted the status of the water sector according to each of the SDG 6 targets and described the next steps agreed by the government for improving the delivery of water and sanitation priorities across the country.

Ms Schmoi McLean, Statistical Institute of Jamaica (STATIN), **Jamaica**, presented the next case study, describing how water and sanitation data are used for policymaking. STATIN is one of three government bodies in Jamaica with a cross-cutting role in support of the overall 2030 Agenda, and is tasked with the production and monitoring of statistical indicators. Ms McLean discussed her country's processes for monitoring water quality, drinking water and sanitation, and water resources, providing examples of how the data feed into development plans, policy initiatives, licensing and permitting for each process. In addition, she described the government's Open Data Portal and Open Data Policy, both of which are designed to facilitate greater and easier public access to government data, particularly for use in entrepreneurial ventures that will boost the economy.

Mr Moloko Matlala, Department of Water and Sanitation, **South Africa**, presented the final case study, outlining how the South African government has organized itself to implement SDG 6 through an SDG 6 working group under the Department of Water and Sanitation. Within this working group are nine task teams, made up of water and sanitation experts, which meet monthly to discuss planning and the implementation of activities towards SDG 6 targets. Each task team is also responsible for reporting global indicator data to the respective United Nations organizations and for producing a Gap Report which presents the current state compared with desired state of progress, along with recommendations, responsibilities and time frames for closing the gaps. This is communicated to relevant stakeholders for inclusion in their annual business plans. His presentation concluded by highlighting the importance of capacity and governance structures for implementing the SDG 6 programme and the need to involve all water sector stakeholders to ensure progressive and sustainable outcomes.

After an introduction of the four different discussion topics, related to analysing and disaggregating data, using data for policymaking and planning, and communicating results, participants formed breakout groups and left the plenary session to discuss these. After one hour, the breakout groups returned to the plenary session to present their discussions, with all participants welcome to share their thoughts following each topic.

The first two breakout groups were tasked with discussing questions related to the current strengths and weaknesses of data analysis and opportunities for integrating analysed SDG 6 data with data from other sectors. The groups noted the importance of ensuring **integration between different data systems and departments**, to improve how data are used for implementation purposes. **National statistical offices are important partners**, as they ensure that standardized mechanisms are used to create reliable data sets. The groups also raised issues of the need to **identify and fill gaps in data availability**. To achieve this, countries must have the technical and financial means to collect and analyse data. **Priorities for capacity-building** include human resources training, technology transfer and knowledge-sharing for countries with weak capacity. One idea to increase the use of data in policymaking could be to **demonstrate quick wins**, with available data showing direct relevance to a particular policy question. Finally, the groups also noted the importance of, and challenges related to, **data sharing across sectors** in order to maximize their value for policymaking. During the open discussion with all participants, several discussed the value of having **strong national information systems** and **strong global information systems**, allowing countries to compare and share data. Other participants highlighted the question of **alignment with other regional and global reporting commitments** and how to maximize the value of all such data for policymaking.

Given that one of the key objectives of monitoring is to inform policy- and decision-making, it is important that data are detailed enough to indicate where, when, how and at whom to target interventions. The second topic discussed in the breakout groups therefore related to the disaggregation of data. The groups began by highlighting the value of disaggregation, i.e. **better disaggregation leads to better and more targeted policymaking**. For example, disaggregating wastewater data at the industrial level could result in a database of pollution sources, which could be used to plan targeted inspections. Disaggregation by water bodies would give detailed information on water quality and allow for targeted remedial actions. Furthermore, and perhaps most importantly, disaggregated data **enables policymakers to address the specific needs of specific populations**. However, it was also noted that in practice, **solutions for disaggregating data are not obvious for many SDGs, in particular gender**. In addition, **human resources and financial costs grow proportionally with the number of parameters being disaggregated**. It was also suggested that **statistical agencies should play a role in disaggregation** as they are the custodians of detailed demographic data on which much of the disaggregation would be based.

The third set of breakout groups focused on questions related to data use for policymaking and planning, in particular on how to ensure that policymakers are aware of the existence and potential of data to inform policy, and how these can support integrated management of water and sanitation. The groups found that as a precondition for using data for policymaking and planning, **data must be reliable, of good quality and accessible**. In addition, **data must be analysed and presented as information that has a clear message** for decision makers. Following from this, the groups highlighted that there is a need for **capacity in institutions for analyses and financial resources for the preparation of data, to link social, economic and environmental related data and to harmonize data-collection** instruments and scales. Lastly, the groups encouraged **dialogue between data providers and decision makers** to understand the data needs of the latter and the capacity needs of the former. The responses from participants built on this last point, with several reinforcing the need to find out policymakers' requirements up front and present data in a format that is immediately useful and meaningful for policy- and decision-making.

The final set of breakout groups discussing this agenda item looked at different audiences for data and how to best communicate data to them. The groups began by highlighting a number of key audiences and the different ways they might receive communications, for example

- **parliament:** reports, concept notes, summarized information to make decisions
- **ministries:** reports
- **community level:** very specific information related to local issues
- **donors:** national, regional and global level contexts, information on the return on investment
- **socioeconomic sectors:** simple clear messages linked to livelihoods, health, gender, etc.
- **regional economic communities:** national data that can be compared and aggregated regionally, best practices from other countries.

The subsequent discussion made points similar to those discussed by the third set of breakout groups on data use for planning. In particular the groups noted the **need for good communication between implementation agencies and researchers** and for **producing data in a format that is visual and easily understandable**. One participant mentioned that their country had held a workshop on the SDGs and had advertised it on television, newspapers, billboards etc., thus emphasizing the value **of the media for reaching audiences**.

Country case studies from China, Jamaica and South Africa on how water and sanitation data can be used available at: https://www.facebook.com/UnitedNationsWater/videos/vl.223059578233702/10154987799137109/?type=1

6. Preliminary results and experiences from the SDG 6 baseline data collection

The session was opened by Ms Chinen Guima, National Water Authority, **Peru**, who highlighted that the purpose of the session was to discuss the actual results of the monitoring process, i.e. baseline data on all SDG 6 global indicators. She also noted that the session offers countries an opportunity to provide feedback on the indicator methodologies.

Thereafter followed a short presentation by the custodian agencies of the results of their baseline data collection, and participants were invited to visit the indicator-specific market stalls during the afternoon. Mr Slaymaker of UNICEF explained that estimates on indicator **6.1.1** are available for 96 countries and four out of eight regions, and that 5.2 billon people used a safely managed drinking water service in 2015. On indicator **6.2.1**, estimates are available for 84 countries and five out of eight regions, with 2.9 billion people using safely managed sanitation services in 2015. For handwashing, estimates are available for 70 countries and two out of eight regions, which, although informative, is insufficient to produce a global estimate.

Ms Kate Medlicott of WHO presented the preliminary results on indicator **6.3.1**, with estimates from 84 countries, a third of which are based on performance data reflecting actual wastewater treatment. In about a third of the countries with estimates, less than 50 per cent of the wastewater undergoes treatment, which is largely due to a lack of on-site sludge and wastewater treatment facilities (which are used by about half of the world's population). For non-municipal wastewater directly discharged into the environment, insufficient data are available to make any estimates.

Mr Stuart Warner, representing UN Environment, flagged that many countries are struggling with the new indicator **6.3.2** reporting, and that greater support is needed, including a more general resourcing

of water quality monitoring programmes in countries. He noted that 45 countries had reported on the indicator to date, but that the reporting of many countries relied on very few monitoring locations.

Mr Biancalani of FAO explained that the estimates for indicators **6.4.1** and **6.4.2** are based on existing country data on water resources from FAO AQUASTAT. By presenting both the overall level of water stress calculated at the global level (13 per cent), and the average level of water stress based on an average of individual country estimates (70 per cent), he highlighted how sensitive the indicator is to the calculation method and missing data.

Mr Gareth Lloyd invited participants to visit the market stall on indicator **6.5.1** to discuss in detail the global and regional results and how countries could be supported in using these results to improve IWRM, including through an IWRM support programme, fact sheets and a water solutions dashboard.

Mr Alistair Rieu Clarke of UNECE noted that out of the 154 countries sharing transboundary waters, to date, 102 countries had submitted data on indicator **6.5.2**. Since the indicator is new, the validation process is intensive, and so far, surface water and groundwater data from 57 and 28 countries respectively had been validated, indicating a high level of water cooperation in roughly half of surface water basins and a third of groundwater basins.

Emphasizing the importance of healthy ecosystems for sustainable development, Mr Chris Dickens on behalf of UN Environment, noted that indicator **6.6.1** is a new indicator that brings together a lot of existing information from various sources. Thus, the reporting on the indicator is time consuming and to date, 35 countries had submitted data. He noted that many data are also readily available at the global level, for example, through Earth observations, and that they are working to explore how this data can be reconciled with national data.

Ms Marina Takane of WHO presented the work on indicators **6.a.1** and **6.b.1**, noting that indicator **6.a.1** is currently capturing official development assistance, where disbursements have been growing steadily over the last years, though the percentage of total official development assistance provided for water and sanitation had remained at the same level. Worryingly, in recent years official development assistance commitments from donors have been declining. For indicator **6.b.1**, drawing on the findings from the 2017 GLAAS reporting, she flagged that many countries have defined procedures for participation in law-making or policymaking, but that the actual level of participation is low.

Due to its close linkages with SDG 6, the workshop also invited representatives of the United Nations Office for Disaster Risk Reduction (UNISDR), the custodian agency for target 11.5, to hold a market stall. Ms Ritsuko Yamazaki-Honda of UNISDR highlighted the interlinkages between SDG 6 and indicator **11.5.1 on the number of people affected by disasters** and indicator **11.5.2 on economic loss due to disasters**, and the related process around the Sendai Framework for Disaster Risk Reduction, welcoming participants to learn more at the market stall.

Thereafter, participants were welcomed to visit the different indicator-specific market stalls (indicators 6.2.1 and 6.3.1, and indicators 6.3.2 and 6.6.1 had combined market stalls) to discuss preliminary results and lessons learned from the baseline data collection. Three market stall sessions were offered, meaning that participants could attend discussions on three different indicators. Below follows a short summary of the discussions at each market stall.

Market stall discussion on indicator 6.1.1 on drinking water

Key feedback:

1. National stakeholders are still internalizing the shift from MDGs to SDGs and information from the central government has not yet filtered down to decentralized authorities. It will take time to raise awareness and operationalize SDG monitoring in practice.

2. Sector ministries are fully aware of the challenges associated with accessibility, availability and quality of drinking water services and are of the opinion that the SDG indicators better reflect the reality on the ground, but need to work with national statistical offices to update household surveys and administrative data sources.

3. National data on service levels is limited. Although most countries have data on accessibility, relatively few have data on availability and quality, and these indicators are not yet standardized. All countries have less data on rural populations.

Feedback on methodology:

1. Country representatives really appreciated the opportunity to have an in-depth discussion on the indicators and the methods used to classify and compare national data.

2. Sector ministries are pleased to see that data on service levels are now included and recognize the need to strengthen regulatory systems to collect information on inequalities in service levels, especially in rural areas.

3. There is no standard approach to measuring availability and most household surveys and administrative systems do not take account of storage, which is key where supplies are intermittent. Some countries collect a wider range of water quality parameters which could potentially be included in future global monitoring.

4. All countries need to invest in strengthening national data systems to enable disaggregated reporting at subnational levels.

5. Everyone agreed that affordability is important but no one as yet has a solution for monitoring it.

Messages from provisional results:

1. The baseline estimates are not perfect and show that most countries have at least some data available.

2. The baselines underline the scale of the challenge associated with achieving the SDG targets but have not yet led to a significant increase in investment.

3. Further work is required to communicate the results and raise awareness of the importance of improving the availability and quality of drinking water.

4. Countries need to update their national monitoring systems to align with the SDG indicators and to address major data gaps.

5. Countries are keen to learn from one another and receive technical support and advice from international agencies on how to collect and analyse data in relation to SDG targets.

Market stall discussion on indicator 6.2.1 on sanitation and hygiene and indicator 6.3.1 on wastewater treatment

The market stall presented the 2015 baseline data for indicator 6.2.1 on the proportion of population using safely managed sanitation services, published by the JMP (www.washdata.org) in July 2017 and the preliminary estimates for indicator 6.3.1 on the percentage of wastewater safely treated, and the next steps to prepare the indicator 6.3.1 baseline.

Indicator 6.2.1 – safely managed sanitation

The session presented the new monitoring ladders, introducing safely managed sanitation as a new and more ambitious rung on the MDG sanitation ladder. The MDG for sanitation was not met and based on 2015 baselines, only 1 in 10 countries below 95 per cent coverage are on track to achieve universal basic sanitation by 2030. The session introduced and discussed the shift from the MDG measurement of use of sanitation facilities to the SDG focus on sanitation services. Sanitation services may be safely managed through the following: safe disposal in situ, excreta emptied and treated on-site, and wastewater treated off-site. Roughly 50 per cent of the global population are connected to sewers, but in developing countries the proportion is much lower. The session highlighted the need for nationally representative data on the management of on-site sanitation facilities to generate safely managed sanitation estimates for countries where on-site sanitation is the main form of sanitation.

Key feedback:

- Many participants sought clarification on how the estimates were derived. The facilitators clarified that all data sources are from publicly available national surveys and utility or regulator reports combined with rules and assumptions to fill data gaps. Data sources used can be found in the JMP country files available online. A thematic report and updated methodological report will be published in early 2018.

- Participants noted the high ambition of the target given its baseline. The facilitators highlighted that the global targets are aspirational and countries need to set realistic national targets.

- Participants asked about tools for filling data gaps for on-site sanitation. The facilitators pointed to new questions for household surveys and countries with good practices, such as France, Ireland and Japan, which have regular inspection and reporting programmes for on-site sanitation and new sanitary inspection forms for sanitation under development by WHO.

Indicator 6.3.1 – safely treated wastewater

The session presented the preliminary estimates for indicator 6.3.1 derived from treatment data jointly collected for indicator 6.2.1 by the JMP. The session also highlighted key differences between indicators 6.2.1 and 6.3.1, namely that indicator 6.3.1 excludes open defecation and unimproved sanitation as generators of wastewater, but includes improved shared facilities. Indicator 6.3.1 also uses

treatment performance data from effluent monitoring where available. Furthermore, indicator 6.3.1 also includes an inventory of permits for industrial discharges to the environment. However, there is a major lack of data on industrial discharges aggregated at the national level and aggregating municipal treatment and industrial emission data into a single indicator can be challenging.

Key feedback:

- Participants appreciated the joint data collection for indicators 6.2.1 and 6.3.1 to limit the reporting burden on countries.
- Participants noted the high proportion of wastewater generated by commercial and industrial establishments, as well as stormwater and greywater.
- Participants highlighted opportunities for regional collaboration on wastewater data, particularly through initiatives led by the Japan International Cooperation Agency (JICA) in Asia, ACWUA in the Arab region, and European Commission in Europe for monitoring under the urban wastewater treatment directive and emission transfer register.

Market stall discussion on indicator 6.3.2 on ambient water quality

A short presentation outlined the core principles of the indicator 6.3.2 methodology, highlighting the significance of water quality monitoring to achieve many other SDGs, and noted the issues countries face in implementing the methodology, offering solutions for these known issues.

The results of the 2017 data drive and range in quality of the submissions received were presented. The discussion focused on the need for capacity-building in order to deliver effective water quality monitoring programmes that can generate sufficient data to meet reporting requirements for indicator 6.3.2. These include training and resources support and more detailed support for certain areas of the methodology.

Market stall discussion on indicator 6.4.1 on water-use efficiency and indicator 6.4.2 on level of water stress

Key lessons:

- Participating countries, particularly those with experience such as the 2016 pilot countries, noted the importance of establishing a national coordination mechanism to oversee the whole process. It was stressed in the discussions that GEMI should provide better examples of coordination among agencies, resulting in a reduced reporting burden on country teams.
- Countries recognized that they are not yet ready to fully monitor all the indicators as required by the SDG framework. Time to prepare for monitoring and support from United Nations organizations are needed.
- Many countries noted that a harmonization of data collected regularly through regional mechanisms and data required for SDG monitoring would be helpful.

Feedback on methodologies:

- Some participants discussed the complexity of the methodologies, particularly the methodology for water-use efficiency. The lack of specific guidelines for certain aspects of the methodologies, for example, environmental flow requirements and the coefficient of rain-fed agricultural production, sparked discussions on the completeness of the proposed methodology.
- Poor data availability was another common issue. It was noted that European countries seem to have particular problems obtaining data on water resources and water use in agriculture. In developing countries, problems tended to relate more to a lack of coordination and poor organization of data-collection systems. Some countries also expressed concern for the weak state of their data-collection infrastructure and the need to improve or update it, particularly with regard to groundwater resources monitoring.
- Some European countries discussed their limited interest in the SDG indicators, considering their large availability of water and therefore lesser need collect data on the resource.

Messages from provisional results:

- Countries appear to have difficulties interpreting the data, as many struggle to understand the physical reality behind the numbers. Many specialists seem to be more accustomed to work at the subnational level, on a field (or town) scale, with smaller amounts of water linked to a specific use.
- The issue of interpreting data is particularly felt by hyper-arid countries. The values of water stress – often well above 100 per cent – are difficult to understand and do not seem to offer any policy or management support to improve the situation. The introduction of supplemental indicators, such as the proposed indicator on people suffering from water scarcity, appears to be the best way to provide an answer to those concerns.

Market stall discussion on indicator 6.5.1 on integrated water resource management

The discussion focused on four topics:

- Initial global and regional results: The outline methodology was presented and countries asked clarifying questions. Although there was general understanding and support for the approach, there was some confusion regarding the division of regions and use of colours when presenting the results, which will need to be considered when producing the formal reports. The key draft messages were not questioned significantly, with greater interest focused on which countries had or had not reported and their status.

- Country status fact sheets: Two examples of how country data could be transformed into information products – such as fact sheets – were shared with participants for consideration. The purpose of the first fact sheet is to illustrate IWRM status, key challenges and possible solutions. Countries could use this information as a reporting product and as background information for further work to stimulate ideas for making progress. The second fact sheet had similar and additional content, and has been designed to stimulate interest from the private sector – both within a country and externally. Both fact sheets drew on additional sources of information. The idea was generally well received. Although such fact sheets may not be feasible for all countries, different types of fact sheets could be developed for a selected number of countries.

- SDG 6 IWRM Support Programme concept: The concept proposed an initiative to monitor and support countries in implementing IWRM. It involves a range of partners supporting several stages, including monitoring, identifying issues and solutions, and implementing interventions. Countries were excited by the proposal and several expressed strong interest in collaborating, should the opportunity arise. The main outcome was strong confirmation of the potential value of such an initiative. Follow-up meetings with countries and potential collaboration partners were agreed.

- Water Solutions Dashboard: The presented concept outlined the creation of a dashboard as a tool to promote knowledge-sharing and technology transfer between national and subnational governments with water technology needs and private sector solution providers, to achieve water-related SDGs. Several participants who cautioned about embarking on a long-term effort that may be difficult to complete were reassured that a phased approach would be taken, with strong stakeholder engagement envisaged.

In the plenary session, it was mentioned that countries participating in the market stall were interested in discussing the scope, IWRM scoring and data-collection process of the survey instrument for indicator 6.5.1, including the possibility to add country specific questions. In terms of stakeholder involvement, it was noted that including more stakeholders made the process more costly, but also provided more insight, for example, when water ministries assessed themselves, the resulting IWRM score was higher than when other stakeholders participated in the assessment. It was emphasized that achieving the implementation target will be a long process, and as such, a data-collection frequency of five years is appropriate.

Market stall discussion on indicator 6.5.2 on transboundary cooperation

The objective of this session was to share lessons learned in terms of process, results and validation. The session was also an opportunity to highlight good practices and common errors faced by countries in completing the reporting. In terms of challenges, participants highlighted the integration of aquifers in the calculation of indicator 6.5.2. This is a common challenge reported by participants from all regions of the world, in terms of their identification and delineation. The UNESCO Internationally Shared Aquifer Resources Management (UNESCO-ISARM) database has been recommended as an important data source for aquifers.

The market stall was an excellent platform for clarifying the current stage of the national reports validation process and allowed countries to discuss issues directly.

Several countries shared their experiences in completing the reporting template. For example, Algeria mentioned the North-Western Sahara Aquifer System shared with Libya and Tunisia, as a milestone for transboundary cooperation. Colombia highlighted the work undertaken with Ecuador to establish new agreements. Cost Rica and the Dominican Republic, among others, highlighted coordination with riparian countries, and Senegal emphasized the challenges to integrate groundwater.

Turkey expressed its concern with the indicator methodology, but the market stall provided an opportunity for some of their points to be clarified, in particular the flexibility that the indicator offers for several aspects, such as the nature of arrangements and/or agreements, or the existence of joint objectives.

Extensive feedback on the process of assessing indicator 6.5.2 was shared by Botswana, which stated that the reporting exercise was beneficial at the national level in terms of coordination with all the related stakeholders and as a means to assess the status of agreements and the availability of information. Botswana also highlighted its willingness to enhance the role of basin organizations as a platform for discussions with riparian countries to coordinate reporting in the next reporting round.

Market stall discussion on indicaor 6.6.1 on water-related ecosystems

A presentation was given to illustrate the indicator methodology and explain its sub-indicators (ecosystem spatial extent, water quantity, water quality and ecosystem health). The discussion that followed focused on the need to collect data on these sub-indicators at the ecosystem level (rivers, lakes and wetlands), as well as aggregated data at the basin level, which is a useful scale for reporting and decision-making on watershed management. Also discussed was the role that Earth observations can play in automatically generating spatial extent data on open water bodies, which can reduce the reporting burden on countries and provide a practical reference point (year 2001) to present the indicator's percentage change.

Since target 6.6 is aimed at protecting and restoring water-related ecosystems, the need to monitor ecosystem health as part of indicator 6.6.1 was also emphasized. While there is no global methodology for monitoring ecosystem health to date, partly since biological monitoring parameters are context-specific, countries were encouraged to consider this sub-indicator for their national reporting.

Market stall discussion on indicator 6.a.1 on international cooperation and indicator 6.b.1 on stakeholder participation

The market stall presentations provided an opportunity to present the means of implementation (MoI) for SDG 6 and opportunities for monitoring and reporting on the two indicators, namely 6.a.1 on the amount of water and sanitation related official development assistance that is part of a governmental coordinated spending plan and 6.b.1 on the proportion of local administrative units with established and operational policies and procedures for participation of local communities in water and sanitation management. Background on definitions, data sources, indicator calculations, supporting indicators included in the methodological note, and limitations of the current methodology were presented and further discussed with market stall participants. One of the major challenges identified is capturing the scope of the targets as the indicators are currently quite limited. Also highlighted were specific questions in the GLAAS survey, which aims to capture data that are used to monitor and report on the MoI and was expanded to cover IWRM. It was also noted that the GLAAS 2018 survey will be revised and work closely with partners to improve the monitoring of the MoI and explore revisions to the indicators in order to ensure their usefulness. The Tracking Finance to WASH (TrackFin) initiative and data from countries implementing it will further contribute towards improving monitoring and reporting of the MoIs, specifically for 6.a.1.

The concluding remarks of the discussions were that countries participating in the next GLAAS survey (2018–2019 cycle) will have their data included in reports that WHO submits for SDG monitoring. It was also emphasized that WHO is continuing to work with partners – UN Environment and the Organisation for Economic Co-operation and Development (OECD) – to better define the methodology and indicated that the review and feedback of the methodological note is welcome from any interested stakeholder. Several participants indicated keen interest in having further discussions and providing input.

Market stall discussion on indicator 11.5.1 on number of people affected by disaster and 11.5.2 on economic loss due to disasters

The market stall started with a presentation of the indicators and the alignment process of the SDGs and the Sendai Framework Monitor (SFM), which includes the use of common indicators. Information was provided on indicator pilot testing, the national disaster loss database (including hazard classifications and/or disaggregation which capture water-related hazards) and the new online monitoring and reporting system. Market stall participants appreciated the efficiency of the joint reporting mechanism.

Several issues were raised in the discussion that followed:

- The lack of a common definition of "water-related hazards" among participants, since this depends on contexts of each country. Some participants referred to flood-related hazards, whereas others included water scarcity (drought), with some suggesting that tsunamis should not be included, as SDG 6 deals with fresh water (although from a disaster risk reduction (DRR) perspective, tsunamis cause relatively large-scale disasters despite their infrequency).
- The need to monitor water management as part of a DRR strategy for water-related hazards was mentioned, although no such indicator exists for the SDGs or the SFM. It was clarified that such issues should be addressed by national DRR monitoring frameworks and that UNISDR are working to lead Member States in this direction.
- It was suggested that regional floods and water framework directives could be used for data validation.
- Technical assistance and capacity-building at the national level was a common issue raised. It was also noted that workshops and face-to-face opportunities are especially useful for developing countries to directly learn about and get involved in the SDG reporting process.

The session was closed by Mr Biancalani of FAO, who noted that the afternoon had illustrated the various results of the baseline process, with a good amount of data available on most of the SDG 6 indicators. He also noted the need for further involvement and reactions from countries, and for further efforts and coordination by custodian agencies. He thanked participants for their active and informed participation in the market stall discussions and highlighted that the next day's sessions would be more forward looking and inform the design of the next phase of SDG 6 monitoring.

Market stall discussion

Day 3: 23 November

The third day of the workshop, taking on-board all the experience shared during the first two days, focused on the future of SDG 6 monitoring. Starting with a presentation on innovative monitoring and integrated data solutions, participants were encouraged to share their monitoring vision for 2030. A session on how to strengthen capacity for integrated monitoring followed, with breakout discussions on how to build technical and institutional capacity for SDG 6 monitoring, resource mobilization and partnerships. The purpose of the session was to gather inspiration for the second phase of the Integrated Monitoring Initiative. Recognizing the importance of linking national, regional and global reporting, the afternoon started with case studies and discussions on the topic. In acknowledgement of the importance of linking across the SDGs, the last session presented the work completed on a SDG 6 data portal and the SDG 6 Synthesis Report 2018, seeking to bring together data and analyses of water and sanitation interlinkages across the 2030 Agenda.

7. Vision for 2030

As the global workshop entered its third day, the focus shifted from looking at what has been achieved and experiences to date to what the future of SDG 6 monitoring might look like. The first session of the day aimed to generate a vision for SDG 6 monitoring by the end of the SDG period in 2030. The session began with a presentation by Mr Thomas Bjelkeman-Pettersson of Akvo Foundation, a private company in the Netherlands focusing on providing integrated data solutions for measuring various parameters related to water and sanitation. The presentation gave examples of the Akvo Foundation's vision, moving from static and conventional methods of measuring water parameters to new and innovative solutions for collecting, analysing and presenting water data. Such innovations are one example of a vision for the future of SDG 6 monitoring.

Following this presentation, participants were given 10 minutes to discuss their ideas for a 2030 vision for water and sanitation monitoring with their neighbours, which they were then invited to share in a plenary session. Among the reflections shared was the idea of creating a globally-shared system for collecting and automatically uploading all data into a central platform, which can be used by anyone without any restrictions. This was noted as a visionary idea, albeit politically challenging. Another opportunity discussed was to better involve people in data collection, as a better understanding of where the data comes from would lead people to trust it more and also create awareness. A further opportunity mentioned was to train women in new technologies and empower them to collect and provide key data, which would result in large-scale data collection, increased awareness and more jobs. Lastly, cellular phone technology was noted as presenting a great opportunity, both in terms of measuring and communicating data and as a democratic tool, allowing the monitoring of water and sanitation to belong to everyone.

Visioning introduction by Akvo available at: https://www.facebook.com/UnitedNationsWater/videos/vl.223059578233702/10154990089127109/?type=1

8. Strengthening capacity for integrated monitoring

Agenda item 8 on how to strengthen capacity for integrated monitoring was introduced by Mr Reidhead of the UN-Water Technical Advisory Unit, with a recollection of previous sessions on how to create an enabling environment for monitoring i.e. the means, what is done with the outcomes of the monitoring process, such as linking data to policy- and decision-making processes, as well as the technical discussions on specific indicators. With a clearer picture of the challenges ahead, he explained that the purpose of the session is to look forward and determine how the necessary capacity in countries can be developed and what support countries need to do so. After an introduction of the four different discussion topics on institutional capacity-building, technical capacity-building, resource mobilization and partnerships, participants returned to their breakout groups to discuss these. After one hour, the breakout groups returned to a plenary session to present their discussions, with the audience welcome to share their thoughts after each topic.

Two groups discussed what types of support are required to build institutional capacity, from the United Nations and other entities at the local, national, regional and international levels. The groups noted that since **all countries have different institutional arrangements, stakeholders and starting points**, there is a need to develop tailored national processes for integrated SDG 6 monitoring. The groups stressed the importance of **involving local governments in the monitoring process**, since these are responsible for implementing large parts of the agenda and thus need to know how to use data for better decision-making and planning. There is a great need for **financial and technical assistance**, including the **transfer of monitoring technology**, and there is much to gain from **exchanging experiences with other countries**. The group further emphasized that capacity-building is a systematic process, and should target not only technical matters, but also, for example, activities to **train people in communicating with other sectors and the media**. In the discussion with the audience, it was noted that capacity-building is a long-term process that should be **continuous to compensate for frequent changes in staff**. As an example of good practice, the MDG+ Initiative was mentioned, since it focused on activities for **training trainers**, who once trained, can continue training people in countries at a low cost.

The following discussion was on the need for technical capacity-building, with two groups feeding back on the need for **statistical training and resources for institutions in charge of monitoring**, to ensure the implementation of basic monitoring programmes. To maintain technical capacity over time, robust **programmes for training trainers** are essential. The difference between information technologies (IT) and information systems was highlighted, noting that data management and analysis is the work of technical rather than IT staff. **Remote sensing and other new technologies** can be extremely useful for reporting on some of the indicators in a cost-efficient way. However, these technologies require initial investments in software/hardware and training, as well as access to remote sensing images. The audience provided an example from the Arab region, where remote sensing imagery

is updated every two weeks and is freely available, and thus can be used immediately to track important parameters, for example agricultural need for water and potential illegal use. To help countries better assess their starting point and associated needs, it was suggested that the Integrated Monitoring Initiative prepare a road map template. Interest in the development of a **web-based platform for submitting country data** on all indicators was noted. **Transparency** is essential to democratize data and involve civil society. In terms of involving stakeholders, it was mentioned that **universities and non-governmental organizations (NGOs) can support training**, and also that **regional initiatives** such as AMCOW and MDG+ have an important role to play. The authority with overall responsibility of water and sanitation needs to **know and involve all other relevant authorities** and be able to support these with their monitoring efforts.

The next two groups discussed resources for integrated monitoring, focusing on opportunities available at all levels and how to ensure long-term sustainability. One group started the discussion by defining an **integrated monitoring system as a well-costed and well-designed system, with a long-term focus and an appropriate scale and scope**, so as to include **all stakeholders from the local, regional and national levels**. Noting that some governments have large budgets for infrastructure projects, it was suggested that through better project management, **funds could be freed up for monitoring activities**. It is also important to **optimize existing monitoring programmes**, for example, by looking at synergies and duplications across agencies. State funding is critical and can be gathered through **taxes and user fees** (e.g. included in the price of water, such as in Senegal) or based on the **polluter pays principle** (e.g. wastewater fee based on actual volumes or quality), with service providers and river basin organizations contributing to the collection of funds. Private sector and multi- and bilateral donors can also provide funding and funding mechanisms could be developed, such as a **water fund** (similar to the green climate fund), along with **public–private partnerships, crowdfunding and civil society programmes**. Regional and global initiatives can support country-level efforts and capacities, especially by **reducing the reporting burden on countries** through harmonizing reporting mechanisms. Multinational corporations can support countries with free services (e.g. Google) and space agencies can help increase data availability through Earth observations. However, it was also stressed that **monitoring should have its own budget line** to reduce its dependency on specific programmes or projects. Furthermore, monitoring – including data collection, management and analysis – could be less expensive if **implemented according to the principle of subsidiarity**, i.e. at the local or catchment levels financed by local taxes. By **highlighting the benefits and use of information obtained through the monitoring system, politicians can be convinced to invest in the system**. Capacity-building and investments in monitoring infrastructure go hand-in-hand, and countries can learn a lot from each other, making it important to facilitate the **transfer of knowledge and technology across countries**. Regarding resources for integration, it is essential to have a road map on how data will flow in the future, across national agencies and other stakeholders, and an organization chart, to help identify where and when resources are needed. Having a clear work programme will also help communicate needs to ministries of finance.

The last groups discussed partnerships for data, including how to identify and engage non-traditional stakeholders, and the existing opportunities for using their data sets for national, regional and global reporting, along with potential challenges. The discussion groups mentioned the **need to strengthen and provide training to non-traditional stakeholders**, especially those at the community level, to ensure their participation in the monitoring process and to empower them to use data. **By communicating how the data will be used** and organizing campaigns, stakeholders can be further encouraged to contribute, as was done in Uganda with their joint sector review. Some countries have **sector working groups**, which bring together different stakeholders, and can be used to map which data stakeholders are collecting. By **incorporating the SDGs into existing sector-specific strategies and plans** (e.g. such as in Ethiopia), countries can ensure that the global goals and targets are implemented alongside their national ones, and that the global indicators are monitored. Noting that data-sharing partnerships are long-term commitments (similar to a marriage), directives, a **memorandum of understanding** (MoU), or possibly even legislation may help formalize them. Partnerships provide an opportunity for all institutions to learn from each other and boost capacities. If **universities start to teach monitoring** as part of their programmes, young professionals would become more aware of its importance and be able to engage in such activities. Identified challenges included **trust** (in particular, how non-traditional stakeholders can trust that national authorities will use their data appropriately, and conversely, how national authorities can trust the quality of non-traditional data) and the **data format**, which differs across reporting mechanisms (including the custodian agencies).

UNESCO closed the session by recalling the message from the morning session, that the water sector is at the beginning of something extraordinary with regard to the digital revolution, and that solutions are needed on how to couple this with data quality issues on the one hand, and capacity-building at both institutional and individual levels on the other.

Participant recommendations for GEMI phase 2

Following the workshop discussions, participants completed a workshop evaluation form, which asked them to detail specific support their country would need to strengthen its integrated monitoring of the SDG 6 global indicators, and their recommendations for the priorities in implementing phase 2 of GEMI. Below follows a summary of the recommendations provided.

General recommendations

- Create a joint project for all involved countries
- Draw up a list of contacts for all indicators in all countries
- Make the relationship between the joint Integrated Monitoring Initiative and custodian agencies more effective
- Identify sources of funding and capacity-building that countries can use, including UN-Water partners
- Encourage custodian agencies to advocate the importance of SDG 6 monitoring to national politicians
- Explore how the monitoring of other SDGs are carried out at all levels, encourage national focal points for SDG 6 to engage with national focal points for other SDGs

Align with other reporting mechanisms

- Align national, regional, continental and global monitoring processes
- Allow for the submission of data collected through other mechanisms (e.g. the WFD and AMCOW), from which custodian agencies can extract the data directly (e.g. from the Water Information System for Europe (WISE), Africa Water Sector and Sanitation Monitoring and Reporting (WASSMO))

Encourage peer learning

- Develop regional communities of practices to stimulate exchanges across countries, for example, through strengthening regional organizations
- Organize field visits for countries at a less advanced monitoring level to countries at a more advanced monitoring level
- Organize meetings between countries to share experience
- Organize a workshop during phase 2 and help countries prepare their reports in advance
- Allow for more lengthy workshops to stimulate exchange and reflection
- Publish lessons learned from phase 1, including success stories from countries, to exchange knowledge-sharing
- Encourage pilot and integrated baseline countries to become ambassadors and share their experiences

Provide direct support at the country level

- Support the identification of national focal points
- Organize national workshops
- Assist countries in involving different stakeholders in the process, including national statistical offices
- Assist countries in creating national indicators that correspond with the global indicators
- Assist countries in developing and operating national informational systems
- Provide training/capacity-building for overall focal points on specific indicators (including to improve the understanding of the indicators) and on statistics
- Ensure that the list of focal points remains updated and do not solely focus on one focal point, since staff changes in ministries are frequent
- Provide financial support to initiate integrated monitoring in countries (e.g. seed funds) and for ongoing monitoring (data collection)
- Improve access to hardware and software for monitoring and data analysis (e.g. geographic information systems (GIS))
- Focus more on validating country estimates

Improve technical and institutional support

- Improve monitoring methodologies and data collection forms
- Standardize data collection procedures and data
- Strengthen non-traditional methods for data collection and data modelling to fill gaps
- Develop the progressive monitoring approach
- Develop an online platform for countries to submit data on all indicators
- Fill existing data gaps
- Focus more on using data for policymaking
- Continue holding webinars, which are an easy way for developed countries to engage

9. Linking national, regional and global reporting on SDG 6

The session was opened by Ms Parag, Ministry of Industries, **Bangladesh**, who emphasized how the integration of global, regional and national monitoring and reporting efforts is essential for implementing SDG 6.

Mr Khaldon Khashman of **ACWUA** and Ms Carol Chouchani Cherfane of **UNESCWA** presented the MDG+ Initiative, a regional mechanism for monitoring and reporting in the Arab region which sought to address shortcomings of the MDGs through additional indicators on wastewater treatment and water use, and now is integrating the SDG 6 indicators. Mr Khashman highlighted their work on country capacity-building, with 13 countries receiving training through national workshops, and emphasized the importance of continued collaboration between ACWUA and SDG national teams. Ms Chouchani Cherfane outlined the regional need to better understand the dimensions of water scarcity, such as those related to non-revenue water, dependency on transboundary water, and climate change. She mentioned that the MDG+ Initiative is currently examining ways to quantify the human dimension of water scarcity in the region, which could help improve communication with policymakers on these urgent issues.

The next presentation was made by Ms Anita Gaju of **AMCOW** and Ms Tracy Molefi, Ministry of Land Management, Water and Sanitation Services, **Botswana**. Ms Gaju explained that AMCOW is an intergovernmental organization, which is responsible for monitoring and reporting on the progress made towards high-level African commitments on water and sanitation. She emphasized that the AMCOW framework for monitoring follows the same integrated nature as SDG monitoring and presented their web-based monitoring system, which tracks progress and strengthens country capacity for monitoring. Challenges in the region include data gaps, reporting capacity, data reliability and the alignment and harmonization of methodologies. AMCOW has learned that the process is easier when monitoring and planning processes are linked, with improved accountability and transparency of decision-making. For the future, Ms Gaju noted the need for alignment and harmonization, and to strengthen coordination and institutionalize monitoring at the country level. Ms Molefi explained how the joint work between Botswana and AMCOW fits into the national reporting process, outlining her country's reporting levels and key processes. She highlighted a number of challenges including lack of resources and tools for reporting, limited human resources and data gaps, but also noted opportunities for capacity-building through incorporating activities into the tasks of existing staff.

Ms Cécile Gözler, Ministry for the Ecological and Inclusive Transition, **France**, presented her country's work within the **WFD**, stressing the need for improved coordination between the European and the SDG levels, to reduce the reporting burden on European countries. She suggested a discussion between the Integrated Monitoring Initiative and the European Commission on the establishment of a common strategy for water and sanitation, as well as the possibility to directly use country information and data reported to the European Commission in SDG reporting.

Mr Alexandre Lima de Figueiredo Teixeira, National Water Agency, **Brazil**, provided insight to the reporting process in his country, highlighting challenges resulting from the multiple ministries and other stakeholders involved in water and sanitation monitoring. He explained that Brazil produces annual reports based on data from all these stakeholders, and to facilitate the sharing of data and availability of these for the public, a common platform had been created. Another challenge that Brazil faces is spatial and temporal variability of water resources, with 80 per cent situated in the Amazon region, far from industrial and inhabited regions.

After the presentation the audience was invited to ask questions and share their thoughts. One of the custodian agencies noted that standardized and transparent data are essential to enable immediate use of data from other sources for global reporting, and asked how data will be disaggregated at the national and regional levels going forward. It was clarified that ACWUA data can be disaggregated down to the utility level and that WFD data are available at both the national and regional levels. It was also clarified that the work of AMCOW complements the SDGs, and that the AMCOW monitoring and reporting process includes training followed by a three-month period for data collection and validation workshops, noting that the 42 countries participating currently are able to report on only 48 per cent of the indicators. One participant queried the lack of connection between the regional frameworks and United Nations organizations, upon which UNESCWA confirmed its support to the Integrated Monitoring Initiative, recalling that the MDG+ Initiative was created to address the existing gaps in their region. It was clarified that the WFD indicators are very similar to the SDGs, and both France and the Netherlands indicated their interest in using existing WFD data for their SDG reporting, and a willingness to align where necessary. It was confirmed that the Integrated Monitoring Initiative is aware of the existing gaps and opportunities associated with regional platforms, noting the need for harmonization between methodologies, focal points and processes.

Mr Rieu-Clarke of UNECE concluded the session by re-emphasizing the importance of the linkages between regional, national and global reporting, taking note of all the established political commitments and processes which can be tapped into to spearhead SDG 6 monitoring. He also emphasized the importance of institutional capacity-building, coordinated parallel processes and the benefit of having the global process at a national level.

Presentations on how to link national, regional and global reporting on SDG 6, presented by ACWUA and UNESCWA, AMCOW and Botswana, France on behalf of the WFD, and Brazil, available at: https://www.facebook.com/UnitedNationsWater/videos/vl.223059578233702/10154990392787109/?type=1

10. Linking across the SDGs

The final substantive session of the workshop examined what can be done with all the data obtained from SDG 6, sharing two tools that demonstrate the value of integrating the data from the SDG 6 indicators (and other SDG indicators) at the United Nations level.

The first of two presentations was offered by Ms Maria Schade of the UN-Water Technical Advisory Unit, who provided the group with an update on the SDG 6 Data Portal. Ms Schade pointed out that currently data come from various separate databases and need to be used by a wide range of stakeholders, missing the opportunity to capture the interlinkages between indicators. The SDG 6 Data Portal will be the entry point to the wealth of information available in the United Nations system and will advance the integration of data, supporting integrated policy and management and credible reporting on overall progress towards SDG 6. It will offer tailored options for visualization and analysis, give more prominence to water and sanitation issues and enable broader dissemination of information. The portal is undergoing a consultative planning process that includes Member States and will be launched mid-2018.

The second presentation was made by Mr Stephan Uhlenbrook of the UNESCO World Water Assessment Programme and focused on the concept and progress of the UN-Water SDG 6 Synthesis Report 2018. The objective of the Synthesis Report is to enable United Nations organizations to speak with one voice on SDG 6 and to avoid a fragmented approach on SDG 6 reporting. The report will analyse data, information and policy linkages between different SDGs, using data for the 11 global indicators generated during the 2016/2017 baseline process, as well other complementary data sets for SDG 6 and for other goals under the 2030 Agenda. The report will comprise four main sections: the first will analyse each of the 11 SDG 6 indicators, the second and third will examine intralinkages between the SDG 6 indicators and interlinkages between SDG 6 and other goals respectively, while the fourth will address policy perspectives. The Synthesis Report is being developed through a consultative stakeholder process, and will be released in June 2018 as a key United Nations input to the HLPF in-depth review of SDG 6.

The session was concluded with an 'elevator speech' exercise led by Mr Slaymaker of UNICEF. In this exercise, participants were asked to imagine a chance encounter with a high-level policymaker in an elevator, in which they had 30 seconds to present a clear argument for action on water and sanitation. As these policymakers are one of the main audiences of the Synthesis Report, these arguments could become messages for the report. Some messages identified included:

Ghana – to ensure that the policymaker's constituents have access to sustainable water and sanitation, local governments and service providers need resources of $2–3/person/day

Hungary – in the country, 100 out of 300 municipalities are lacking sewage systems

Jordan – health and the environment are in danger because of the very low coverage of sanitation in the country; producing water is not the only solution for increasing available water supply – improving efficiency within all uses should also be a priority

Philippines – the country has 7,000 islands for which water and sanitation are a matter of life and death – the conversation should be about water rather than drugs

Closing

The workshop was wrapped up by Mr Reidhead of UN-Water, who started by thanking everyone for their active participation, noting that the number of participants was far beyond initial expectations and planning. Recalling that a lot of the indicators are brand new, he noted that surprisingly many data are already available for many of the indicators, and that UN-Water is putting the information to good use through the SDG 6 Synthesis Report 2018, which will describe the baseline situation and provide recommendations to the in-depth review of SDG 6 at the 2018 HLPF. Mr Reidhead further noted that the work on integration seems to be well under way in many countries, and that regional platforms are already allowing for regional cooperation and exchanges, which should be built on going forward. He then summarized the workshop's main messages from the point of view of the Integrated Monitoring Initiative:

- The Initiative recognizes the need to harmonize with regional monitoring and reporting mechanisms and the opportunities that follow, including reduced reporting burden on countries, and that the alignment of focal points, methodologies and processes is a priority for its next phase.

- Although one overall focal point for water and sanitation monitoring may seem unnatural given the fragmented nature of the sector, the value of having this has been demonstrated through the pilot testing and the integrated baseline process. Participants, mostly identified for participation in the workshop through their permanent mission to the United Nations, were thus requested to act as overall focal points for their countries and were encouraged to speak with the pilot and baseline countries to learn more about form and function.

- Recalling that monitoring is not only a technical process, but also a political one, the need to mobilize political will to ensure sustainability over time was emphasized, for example by being able to demonstrate the added value of monitoring to ministers in relevant terms, thinking about how data can be transformed into information and services, and what that means in terms of saved lives and money. Presenting good quality data should become a matter of pride for ministers.

- Another way to ensure the sustainability of the monitoring process and that the data are useful for policy- and decision-making, is to build the global indicators into national strategic plans, taking into account that such processes involve a lead time.

- With regard to country capacity support, all requests and suggestions emerging from the workshop will be taken into account when the Initiative plans for its next phase, which commences in 2019, recognizing the need for both a short- and a long-term strategy.

Mr Reidhead acknowledged that the United Nations system needs to get better at practising what it preaches with regard to coordination, noting that the next phase will focus more on these issues. He also noted that, in addition to the feedback from participants before, during and after the workshop, an ongoing external review of the work of the Initiative to date will help shape the next phase. Finally, he asked participants to help disseminate the SDG 6 Synthesis Report 2018, noting that both participants, as well as their ministers, form part of the target audience.

On behalf of the Ministry of Infrastructure and Water Management, the Netherlands, Ms Berendsen extended a warm thank you to all participants for three days of inspiration, positive energy and a high level of engagement and activity. After crediting all the people involved in the organization of the workshop (including interpreters, technical and logistics staff, the UN-Water Technical Advisory Unit, Dutch colleagues from IHE Delft and the Ministry as well as the moderator), she welcomed everyone to take part in the field trips planned for the following day, to explore innovative solutions for water and sanitation monitoring.

Closing statement of the workshop given by Ms Berendsen of the Ministry of Infrastructure and Water Management, the Netherlands

Group Photo - workshop participants

Annex 1 Field trip – 24 November

To wrap up the workshop, the host government invited participants to a full day of outside activities and visits to Dutch water institutes, to learn more about innovative solutions for SDG 6 monitoring. The field trip and workshop ended with a boat tour through Delft and included a Dutch lunch.

Flood Proof Holland – tour on innovative monitoring and solutions

The VPdelta programme works to stimulate innovations in the water sector. In the most densely populated and urbanized region of the Netherlands, entrepreneurs, scientists and local governments have formed an alliance to accelerate delta technology and water management innovations. The VPdelta programme helps future-proof delta management worldwide, through providing entrepreneurs with up-to-date knowledge to find solutions to public challenges.

One of the ways that VPdelta stimulates innovations is by creating field labs where entrepreneurs can test and develop their prototypes. Flood Proof Holland is one of these unique experimental field labs. This testing facility makes it possible to test innovative temporary flood defences and other water innovations, such as monitoring tools. With this unique test and demonstration site, entrepreneurs, students, businesses, governments and researchers have the opportunity to test and demonstrate innovative water ideas.

On arriving at the Flood Proof Holland facility, the participants were met at the polder and provided with tea and Dutch cookies (*stroopwafels*). Ms Marjan Kreijns, program director of VPdelta, welcomed the delegation to the site, gave a short introduction and explained the test facility. The participants then split into four groups to watch demonstrations given by four entrepreneurs:

- Trans-African Hydro-Meteorological Observatory (TAHMO) – Innovative, low-cost, robust weather station
- Akvo Foundation – open source, Internet and mobile software and sensors for (participatory) water monitoring
- Mobile Water Management – automated water level monitoring
- Soil Distributed Temperature Sensing (DTS) – an innovative technique to monitor soil moisture at a high resolution in time and space over large areas

IHE Delft Institute for Water Education – presentations on groundwater monitoring and water productivity and accounting

The IHE Delft Institute for Water Education is the largest international graduate water education facility in the world. IHE Delft confers fully accredited MSc degrees, and PhD degrees in collaboration with partner universities. It offers a unique combination of applied, scientific and participatory research in water engineering, combined with natural sciences, social sciences and management and governance. Since its establishment, IHE Delft has played an instrumental role in developing the capacities of water sector organizations in the Global South, not least by strengthening the efforts of other universities and research centres to increase the knowledge and skills of professionals working in the water sector.

At IHE Delft the participants received information about phase two of DUPC2, its partnership programme with the Directorate-General for International Cooperation (DGIS) of the Dutch Ministry of Foreign Affairs, and its Water Productivity and Water Accounting Plus activities. In addition, the International Groundwater Resources Assessment Centre (IGRAC) presented and discussed the importance of groundwater in SDG 6.

Deltares – presentations on innovative monitoring and tour around Deltares' experimental facilities

Deltares is an independent institute for applied research in the field of water and subsurface, which carries out work worldwide to develop smart solutions, innovations and applications for people, the environment and society. The institute's main focus is on deltas, coastal regions and river basins, and it works with governments, businesses and other research institutes and universities to manage densely populated and vulnerable areas. It produces expert knowledge to be used in and for societies.

At Deltares the participants listened to presentations on new technologies for the SDGs and took a tour around the Deltares institute. In addition, Wageningen University discussed the need for innovative monitoring tools and Amsterdam Water Sciences spoke about smart monitoring projects, such as the Smart Integrated Monitoring based on Affinity (SIMONA).

Annex 2 List of participants

Country/Organization	Name	Title Ministry/Department
Algeria	Ms Hassina Hammouche	Sous Directrice de la Coopération Ministère des Ressources en Eau
Algeria	Mr Abdelaziz Lardjoum	Sous Directeur de l'alimentation en eau potable Ministère des Ressources en Eau
Armenia	Mr Hovhannes Harutyunyan	Deputy Chair Ministry of Energy Infrastructures and Natural Resources
Azerbaijan	Mr Fariz Agharzayev	Deputy Director Azerbaijan Amelioration and Water Management OJSC
Azerbaijan	Mr Rahid Fatalizade	Deputy Head Azersu OJSC
Bahrain	Mr Khalid Hashim	Manager Electricity and Water Authority (EWA)
Bangladesh	Ms Parag	Additional Secretary Ministry of Industries
Belarus	Mr Kanstantsin Tsitou	Senior Researcher Central Research Institute for Complex Use of Water Resources
Botswana	Ms Tracy Molefi	Deputy Director Ministry of Land Management, Water and Sanitation Services
Brazil	Mr Alexandre Lima de Figueiredo Teixeira	Superintendence of Water Resources Planning/National Water Agency (SPR/ANA)
Brazil	Ms Adriana Lustosa	General Coordinator of the National Water Resources Plan Ministry of the Environment
Burkina Faso	Mr Toro Boro	Directeur de la Programmation et du Suivi-Evaluation Ministère de l'Eau et de l'Assainissement
Burundi	Mr Epimaque Murengerantwari	Conseiller au Cabinet Ministère de l'Eau, de l'Environnement, de l'Aménagement du Territoire et de l'Urbanisme
Cameroon	Mr Daniel Claude Wang Sonne	Chef de Cellule du Système d'Information sur l'Eau Ministère de l'Eau et de l'Energie

Country/Organization	Name	Title Ministry/Department
Chad	Mr Nassour Saleh Terda	Directeur des Ressources en Eau Ministère de l'Eau et de l'Assainissement
China	Ms Chang Yuan	Engineer Development Research Center Ministry of Water Resources of the People's Republic of China
China	Ms Liya Gu	Division Director, Professor International Economic & Technical Cooperation and Exchange Center Ministry of Water Resources of the People's Republic of China
Colombia	Mr Mauricio Molano	Adviser on International Affairs
Congo	Mr Armel Alouna	Attaché à l'Hydraulique au Cabinet Ministère de l'Energie et de l'Hydraulique
Costa Rica	Mr Jose Miguel Zeledón Calderón	Director Ministerio de Ambiente y Energia
Côte d'Ivoire	Mr Sidi Braïma Dagnogo	Directeur Ministère de Infrastructures Economiques Office National de l'Eau Potable
Côte d'Ivoire	Ms Akoua Elysée Dua epouse Doumbia	Chargée de Communication Ministère des Infrastructures Economiques Office National de l'Eau Potable
Côte d'Ivoire	Mr Jean Claude Koya Natoueu	Conseiller Technique Ministere du Plan et du Developpement
Dominican Republic	Mr Arnulfo González Meza	Coordinador Sectorial Ministerio de Economía, Planificación y Desarrollo
Ecuador	Ms Carolina Noboa	Arquitecta Secretaría del Agua
Egypt	Mr Abdelaziz Mohamed Abdallah Abdelrazek	Head of Economic Studies Administrative CAPMAS
El Salvador	Mr Roberto Cerón	Gerente de Hidrología Ministerio de Medio Ambiente y Recursos Naturales
Eswatini	Mr Khoza Makhosini Mabhuta	Chief Water Engineer Ministry of Natural Resources and Energy

Country/Organization	Name	Title Ministry/Department
Ethiopia	Mr Habtamu Takele Yalew	Team Leader National Planning Commission
Ethiopia	Mr Abraham Tesfaw Wate	International NGO and Environment Expert Ministry of Foreign Affairs
Finland	Mr Antton Keto	Ministerial Adviser Department of Natural Environment Ministry of the Environment
France	Ms Cécile Gözler	Chargée de mission Minsistère de la Transition Écologique et Solidaire
Germany	Ms Katrin Gronemeier	Component Head – Sustainable Water Policy Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
Germany	Mr Sven Kaumanns	Head of Section Federal Statistical Office
Germany	Mr Thomas Stratenwert	Head of Division Federal Ministry for Environment, Nature Conservation, Building and Nuclear Safety
Guatemala	Mr Martin Mendez	Msc. Ingeniería Sanitaria Asociación Interamericana de Ingeniería Sanitaria y Ambiental (AIDIS)
Guinea	Mr Mandiou Conde	Directeur Direction Nationale de l'Hydraulique
Guyana	Ms Onika Baptiste	Senior Engineer Ministry of Agriculture
Haiti	Mr Pierre Bernadin Poisson	Directeur Régional Ministère des Travaux Publics, Transports et Communications/Direction Nationale de l'Eau Potable et de l'Assainissement (MTPTC/DINEPA)
Haiti	Mr Guito Edouard	Directeur Général Ministère des Travaux Publics, Transports et Communications/Direction Nationale de l'Eau Potable et de l'Assainissement (MTPTC/DINEPA)
Hungary	Mr Pál Bóday	Director Hungarian Central Statistical Office
Jamaica	Ms Schmoi McLean	Environment Statistician Statistical Institute of Jamaica (STATIN)
Japan	Mr Nakagawa Kazuma	Deputy Assistant Director Japan International Cooperation Agency (JICA)

Country/Organization	Name	Title Ministry/Department
Japan	Mr Kitagawa Mitsuo	Senior Adviser for Sewage Works and Water Pollution Control Japan International Cooperation Agency (JICA)
Jordan	Mr Ali Subah	Secretary General Assistant Ministry of Water and Irrigation
Kenya	Mr Samwel A.O. Alima	Director Ministry of Water and Irrigation
Lebanon	Mr Amin Shaban	Director of Research National Council for Scientific Research
Liberia	Mr Sulon Matthew Opah	Subnational Coordinator Ministry of Public Works
Madagascar	Mr Luciano Elby de Princy Andriavelojaona Nirina	Directeur Général de l'Eau, de l'Assainissement et de l'Hygiène Ministère de l'Eau, de l'Énergie et des Hydrocarbures
Madagascar	Mr Eloi Rakotoarisoa	Chargé d'études Ministère de l'Économie et du Plan
Malawi	Mr James Kumwenda	Economist Ministry of Agriculture Irrigation and Water Development
Malaysia	Mr Thoo a/l Kim Ching	Senior Undersecretary Ministry of Energy, Green Technology & Water
Malta	Ms Francine Pace Caruana	Research Analyst Ministry for Energy and Water Management
Mauritania	Mr Gaye Assane Ousmane	Conseiller technique du DirecteurMinistère de l'Hydraulique et de l'Assainissement
Mexico	Mr Jorge Delgado	Second Secretary Embassy of Mexico to the Netherlands
Mexico	Ms Medina Laguna Griselda	Subgerente de Gestión y Evaluación de Proyectos con Crédito Externo Comisión Nacional del Agua
Morocco	Mr Rachid Madah	Head of Rural Water Supply and Sanitation Division Secretary State in charge of Water
Netherlands	Ms Monique Berendsen	Ministry of Infrastructure and Water Management
Netherlands	Mr Peter Heij	Director General for Spatial Development and Water Affairs Ministry of Infrastructure and Water Management

Country/Organization	Name	Title Ministry/Department
Netherlands	Mr Job Kleijn	Focal point for the Middle East and North Africa (MENA) Ministry of Foreign Affairs
Netherlands	Mr Aart van der Horst	Senior Policy Officer Ministry of Foreign Affairs
Netherlands	Mr Pim van der Male	Senior Policy Officer Ministry of Foreign Affairs Directorate-General for International Cooperation (DGIS)
Netherlands	Mr Ronald van Dokkum	Rijkswaterstaat Water Ministry of Infrastructure and Water Management
Netherlands	Mr Niels Vlaanderen	Coordinator International Water Affairs Ministry of Infrastructure and the Environment
Niger	Mr Khamada Baye	Directeur Ministère de l'Hydraulique et de l'Assainissement
Nigeria	Ms Sule Martha	Deputy Director M & E Ministry of Water Resources
Panama	Mr Cerrud Zuniga Ricardo Alberto	Planificador Ministerio de Salud
Republic of Korea	Mr Jinbum Choi	Korea Environment Corporation
Republic of Korea	Ms Hannah Jeong	Korea Environment Corporation
Republic of Korea	Mr Beomjik Kim	Korea Environment Corporation
Republic of Korea	Mr Minjong Kim	Korea Environment Corporation
Republic of Moldova	Mr Ion Salaru	Deputy Director National Centre of Public Health
Saudi Arabia	Mr Alasfoor Majid	Project Specialist Ministry of Economy and Planning
Saudi Arabia	Mr Alghamdi Mohammad Saleh	

Country/Organization	Name	Title Ministry/Department
Senegal	Mr Bocar Abdallah Sall	Ingénieur du Génie Rural Ministère de l'Hydraulique et de l'Assainissement (MHA)
Serbia	Ms Biljana Filipovic	Head of Department Ministry of Environmental Protection
Slovakia	Mr Richard Muller	Regional Coordinator Ministry of the Environment
South Africa	Mr Moloko Matlala	Director of Water Information Programmes Department of Water and Sanitation
Sri Lanka	Mr Nafeel Abdul Careem	Additional Secretary (Development) Ministry of City Planning & Water Supply
Sweden	Ms Therése Elfström	Analyst Swedish Agency for Marine and Water Management
Switzerland	Ms Fabia Hüsler	Scientific Staff Federal Office for the Environment
Switzerland	Mr Pierre Kistler	Programme Manager Swiss Development Cooperation Agency (SDC)
Switzerland	Ms Isabella Pagotto	Senior Policy and Programme Manager Swiss Development Cooperation Agency (SDC)
Syrian Arab Republic	Mr Jawhara Rabee	Second Secretary Ministry of Foreign Affaires
Tajikistan	Mr Mahmadulloev Idris Leading	Specialist Ministry of Energy and Water Resources
Thailand	Mr Nirut Koonphol	Director of International Cooperation Bureau Department of Water Resources Ministry of Natural Resources and Environment (MNRE)
The former Yugoslav Republic of Macedonia	Mr Ylber Mirta	Head of Department Ministry of Environment and Physical Planning
Togo	Mr Djatoz Bawa	Hydrogéologue à la direction des politiques, de la planification et de suivi-évaluation Ministère de l'agriculture, de l'élevage et de l'hydraulique
Trinidad and Tobago	Mr Curtis Augustine	Monitoring and Evaluation Coordinator Ministry of Public Utilities

Country/Organization	Name	Title Ministry/Department
Trinidad and Tobago	Mr Joel Straker	Senior Economic Policy Analyst Ministry of Public Utilities
Tunisia	Ms Abderrahmen Ouasli	Director of Management of the Hydraulic Sector Ministry of Agriculture
Turkey	Ms İffet Deniz Cengiz	European Union and Foreign Relations Department Ministry of Forestry and Water Affairs (MoFWA)
Turkey	Mr Murat Hatipoğlu	General Directorate for State Hydraulic Works Ministry of Forestry and Water Affairs (MoFWA)
Turkey	Mr Osman Özdemir	General Directorate for Water Management Ministry of Forestry and Water Affairs (MoFWA)
Turkey	Mr Subutay Yüksel	Department Head Ministry of Foreign Affairs
Uganda	Mr Callist Tindimugaya	Commissioner for Water Resources Planning and Regulation Ministry of Water and Environment
United Kingdom of Great Britain and Northern Ireland	Mr Stephen Lindley-Jones	Department for International Development (DFID)
United Republic of Tanzania	Mr Ndunguru Erasto	Assistant Director Monitoring and Evaluation Ministry of Water and Irrigation
Uruguay	Ms Emma Fierro	Civil Engineer – Adviser Dirección Nacional de Aguas
Yemen	Mr Musaed Aklan	Project Manager/PhD fellow in the Netherlands Urban Water and Sanitation Ministry of Water and Environment (MWE)
Yemen	Mr Tawfeeq Al-Sharjabi	Deputy Minister Ministry of Water and Environment (MWE)
Zimbabwe	Mr Hasios Ronald Mashingaidze	National Coordinator Ministry of Water Resources Development and Climate
Zimbabwe	Mr Nesbert Shirihuru	WASH Officer Ministry of Water Resources, Development and Climate
State of Palestine	Mr Adel Yasin	Director Palestinian Water Authority

Country/Organization	Name	Title Ministry/Department
United Nations Economic and Social Commission for Western Asia (UNESCWA)	Ms Carol Chouchani Cherfane	Chief, Water Resources Section Sustainable Development Policies Division
United Nations Educational, Scientific and Cultural Organization, World Water Assessment Programme (UNESCO WWAP)	Ms Angela Ortigara	Associate Project Officer
United Nations University – Institute for Water, Environment and Health (UNU-INWEH)	Ms Lisa Guppy	Project Manager
United Nations Office for Disaster Risk Reduction	Ms Ritsuko Yamazaki-Honda	Programme Management Officer
World Bank Group	Mr Luis Andres	Lead Economist
United Nations Global Compact CEO Water Mandate	Mr Ross Hamilton	
Water Supply and Sanitation Collaborative Council (WSSCC)	Ms Chaitali Chattopadhyay	Senior Program Officer, Monitoring and Evaluation
African Ministers' Council on Water (AMCOW)	Ms Anita Gaju	Liaison Consultant SDG & Pan African WASH Monitoring
Arab Countries Water Utilities Association (ACWUA)	Mr Khaldon Khashman	General Secretary
Global Institute for Water Environment and Health (GIWEH)	Mr Tobias Schmitz	Senior Adviser for water resources
Global Water Partnership (GWP)	Mr Joshua Newton	Senior Network Officer
International Groundwater Resources Assessment Centre (IGRAC)	Mr Neno Kukuric	Director
IHE Delft Institute for Water Education	Ms Vanessa de Oliveira	Liaison Officer – International Relations
IHE Delft Institute for Water Education	Mr Eddy Moors	Professor
International Union for Conservation of Nature (IUCN)	Ms Isabelle Fauconnier	Water Policy and Sustainability Adviser

Country/Organization	Name	Title Ministry/Department
International Water Association (IWA)	Mr Kalanithy Vairavamoorthy	
International Water and Sanitation Centre (IRC)	Ms Marieke Adank	Programme Officer
International Water and Sanitation Centre (IRC)	Mr Nicolas Dickinson	Associate M&E
International Water and Sanitation Centre (IRC WASH/Simavi)	Ms Erma Uijtewaal	Consultant
International Water Management Institute (IWMI)	Mr Chris Dickens	Head of Office and Principal Researcher
Ramsar Convention	Ms Maria Rivera	Senior Regional Adviser for the Americas
WaterAid	Mr Stuart Kempster	Policy Analyst – Monitoring & Accountability
WaterLex	Ms Amanda Loeffen	Director General
Women for Water Partnership (WfWP)	Ms Boleslawa (Lesha) Witmer	Steering Committee Member
World Wildlife Fund (WWF)	Mr Dean Muruven	Policy Lead – Freshwater
Food and Agriculture Organization (FAO)	Mr Riccardo Biancalani	Project Coordinator
Food and Agriculture Organization (FAO)	Ms Lucie Chocholata	Capacity Development Consultant
United Nations Economic Commission for Europe (UNECE)	Ms Francesca Bernardini	Secretary to the Water Convention
United Nations Economic Commission for Europe (UNECE)	Mr Alistair Rieu-Clarke	Legal Adviser
UN Environment	Mr Peter Koefoed Bjørnsen	Director of UNEP-DHI Partnership – Centre on Water and Environment
UN Environment	Ms Stuart Crane	Programme Coordinator

Country/Organization	Name	Title Ministry/Department
UN Environment	Mr Hartwig Kremer	Head of GEMS/Water Unit – Science Division
UN Environment	Mr Gareth Lloyd	Senior Adviser
UN Environment	Mr Stuart Warner	Training and Support Officer
United Nations Educational, Scientific and Cultural Organization (UNESCO)	Mr Aurélien Dumont	Assistant Programme Specialist
United Nations Educational, Scientific and Cultural Organization (UNESCO)	Mr Stefan Uhlenbrook	Coordinator
UN-Habitat	Mr Graham Alabaster	Chief of Wastewater & Sanitation
UN-Habitat	Ms Nao Takeuchi	Waste Management Expert
United Nations Children's Fund (UNICEF)	Mr Tom Slaymaker	Senior Statistics & Monitoring Specialist (WASH)
World Health Organization (WHO)	Ms Fiona Gore	Team Leader – GLAAS
World Health Organization (WHO)	Ms Kate Medlicott	Team Leader – Sanitation and Wastewater
World Health Organization (WHO)	Ms Marina Takane	Technical Officer
World Meteorological Organization (WMO)	Mr Tommaso Abrate	Scientific Officer
Akvo Foundation	Mr Thomas Bjelkeman-Pettersson	
World Health Organization (WHO)	Ms Marina Takane	Technical Officer
World Meteorological Organization (WMO)	Mr Tommaso Abrate	Scientific Officer
Akvo Foundation	Mr Thomas Bjelkeman-Pettersson	

Country/Organization	Name	Title Ministry/Department
Oosterhof Organizing	Ms Patricia Oosterhof	
Netherlands National IHP-HWRP Committee	Ms Sandra de Vries	Committee Secretary
Independent Consultant	Ms Deirdre Casella	Facilitator
UN-Water Management Team	Mr Joakim Harlin	Vice-Chair
UN-Water Management Team	Mr Federico Properzi	Chief Technical Adviser
UN-Water Management Team	Mr William Reidhead	Global Monitoring Officer
UN-Water Management Team	Ms Maria Schade	Global Monitoring Specialist
UN-Water Management Team	Ms Anna Nylander	Digital & Community Specialist
UN-Water Management Team	Ms Sarah Fragnière	Administrative Assistant
Peregrine Swann Ltd	Ms Nathalie Andre	Consultant
Peregrine Swann Ltd	Mr Peregrine Swann	Director
Peregrine Swann Ltd	Ms Rachel Norman	Consultant

Annex 3 Information on country monitoring collected through participation registration form

During the workshop registration, which took place between September and November 2017, all participants from Member States were asked to respond to a few questions related to the monitoring and reporting situation in their country. Below follows a summary of the responses provided.

Challenges for water and sanitation monitoring at the country level

One question asked about the main challenges related to water and sanitation monitoring in the participant's country. Responses were given for 69 countries, outlining several challenges.

Low technical capacity and little human and financial resources was the most common challenge reported, ranging from a lack of monitoring infrastructure (monitoring and laboratory equipment, low geographical reach and frequency of data collection), data management systems (software and hardware), staff numbers and expertise (for data collection, laboratory work and data management/statistics) and insufficient funding. Some indicators were noted as particularly challenging, including the monitoring of priority substances, water-related ecosystems, water use by sector and groundwater resources.

The second most reported challenge was related to the large number of stakeholders involved in the sectors and the difficulties of coordinating and harmonizing efforts. It was noted that data are scattered across different ministries and institutions, at various levels of administration. The sharing of data between stakeholders can be challenging both for political and technical reasons, the latter resulting from the use of different indicators, monitoring methodologies, statistical standards and data management systems. The lack of coordination and clarity on responsibilities may also result in duplicated efforts and an inefficient use of existing resources.

The lack of coordination across stakeholders and the availability of financial resources are associated with low political support for monitoring, which was the third more reported challenge. Monitoring is not associated with visible results in the same way as implementation, and many water issues are "invisible", which can make it more difficult to create a demand for monitoring investments.

With regard to SDG monitoring, participants reported that there is limited understanding of the global indicators and the reporting process and that the indicators may not align with national priorities.

Additional challenges mentioned were more specific to the national context, for example, damages to monitoring infrastructures due to climate change, vandalism and war situations, electricity outages and inaccessible locations.

Use of water and sanitation data at the country level

Below follows a summary of responses given by participants on how they use water and sanitation data.

Policy

- To support policy- and decision-making – creation of laws
- To aid policy dialogues on priority issues –data are used as a barometer to prioritize projects
- To help develop policy and strategies
- To coordinate the implementation of the 2030 Agenda at the national level (used by the Prime Minister's office)
- To help the government respond to the needs of the people

Investments

- To inform decisions on measures for the years ahead, allocating budgets, e.g. when the government wants to invest in water supply, data on which districts have the least access to water supply services would help to identify the beneficiary districts
- To encourage funding from the international community and mobilize resources

Planning

- To monitor the country's natural resources, assist with environmental planning and implement protection measures
- To support regional and territorial developments
- To help with IWRM/river basin management and flood risk planning
- To alert on potential disasters (drought, storms)
- To assess water and wastewater networks
- To enable boreholes to measure waste dumps proximity, including toilets
- To formulate environmental protection plans for drinking water sources

Law enforcement

- To determine where persons can abstract water for domestic, agricultural and industrial purposes and to monitor the amount of water that is available within the country (water stress)
- To enable self-regulation of users that tend to submit data – this helps agencies determine whether users are obeying permit conditions
- To ensure territorial equity – water and sanitation data sets are included in annual state water cadaster
- To enforce the Federal Waters Protection Act (including revitalization, determination of residual flows, hydropower rehabilitation) and the polluter pays principle (financing of water protection)
- To carry out monitoring to determine whether water is fit for human and animal consumption

Communication with the public

- To support public dialogue on priority issues
- To improve customer service
- To raise awareness on smart water use
- To produce health briefs for the public

Academia

- To inform studies and in education, including on climate change
- To carry out modelling and hydrological forecasts
- To complete statistical yearbook publications

Examples of how countries use data from the different SDG 6 global indicators

- Indicator 6.1.1 Proportion of population using safely managed drinking water services: data are used to plan infrastructure development projects, including water transfer pipelines.
- Indicator 6.2.1 Proportion of population using safely managed sanitation services, including a handwashing facility with soap and water: data are used to plan the construction of wastewater treatment plants.
- Indicator 6.3.2 Proportion of water bodies with good ambient water quality: data are used to define standards on water quality and to control and enforce trade effluent agreements.
- Indicator 6.4.2 Level of water stress: freshwater withdrawal as a proportion of available freshwater resources: data are used to design water policies, develop and implement IWRM plans, national water accounts, and water conservation and demand management strategies, and decide raw water abstractions and corresponding prices.
- Indicator 6.5.2 Proportion of transboundary basin area with an operational arrangement for water cooperation: data are used to support the work of transboundary water basin commissions, including the development and implementation of joint programmes and projects and for information-sharing protocols.
- Indicator 6.6.1 Change in the extent of water-related ecosystems over time: data are used to inform national policies and plans, including for aquatic weeds control and environmental flow requirement assessments.
- Indicator 6.a.1 Amount of water and sanitation related official development assistance that is part of a government-coordinated spending plan: data are used to inform memorandum of understandings and bilateral agreements on water resources management.
- Indicator 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: data are used to plan the development of catchment management areas.

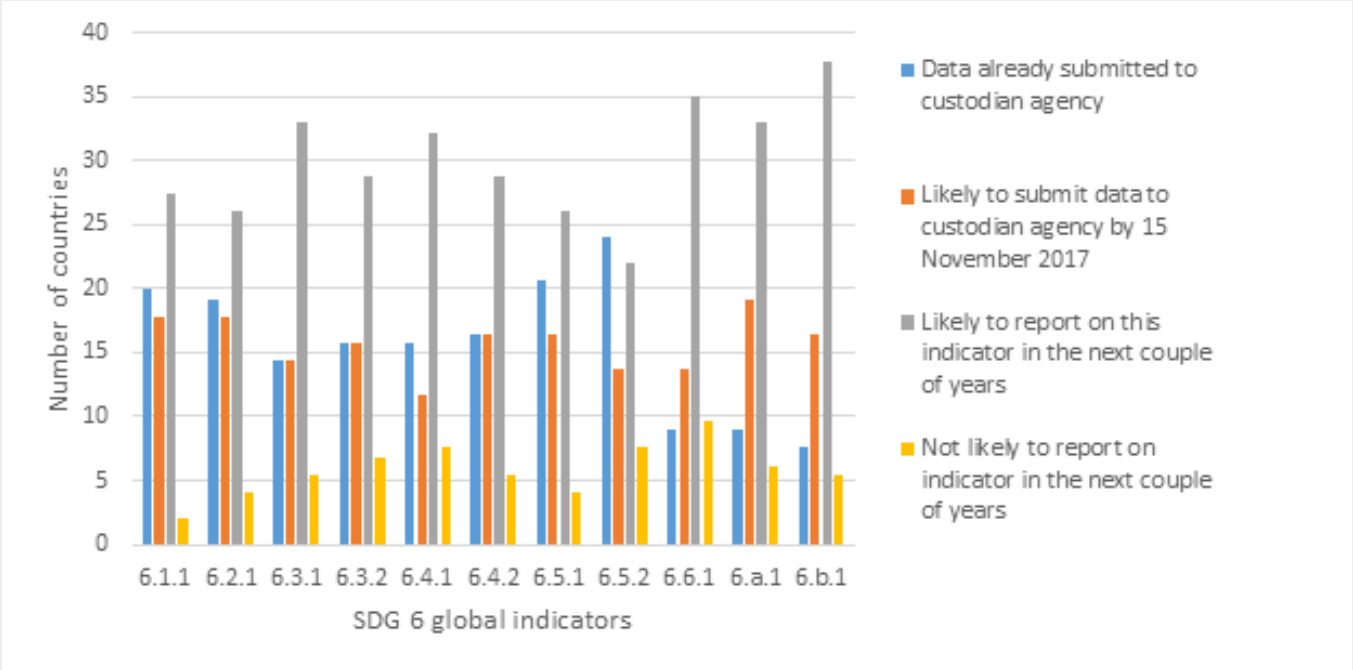
Other water and sanitation reporting mechanisms

Participants were asked if their country reports on water and sanitation to other regional or global mechanisms, which was found to be the case for the vast majority of countries. Below follows a list of reporting mechanisms mentioned in the responses.

International organizations (United Nations)	• JMP • GEMI, including GEMS/Water, FAO AQUASTAT, UNECE Water Convention • GLAAS/Sanitation and Water for All (SWA) • UNESCO International Hydrological Programme (UNESCO- IHP) • WMO • WHO/UNECE Protocol on Water and Health
International organizations (others)	• OECD • GWP • World Water Council (WWC) • International Water Association (IWA)
Regional organizations	• African Union – AMCOW • League of Arab States – MDG+ • European Union – Shared Environmental Information System (SEIS), EUROSTAT, EU WFD, EU Commission, EU Environmental Agency, Joint Research Centre (JRC), State of the Environment (SoE)
Subregional organizations	• Indian Ocean Commission (COI) • Economic Community of West African States (ECOWAS) • Southern African Development Community • South Asian Association for Regional Cooperation (SAARC) • Rural Water and Sanitation Information System (SIASAR)
Transboundary water organizations	• Volta Basin Authority (ABV) • Niger Basin Authority (ABN) • Senegal River Basin Development Organization (OMVS) • Gambia River Basin Development Organization (OMVG) • Mano River Union • International Commission for the Protection of Lake Geneva (CIPEL) • International Commission for the Protection of Italian-Swiss Waters (CIPAIS) • International Commission for the Protection of the Rhine (IKSR)

SDG 6 reporting capacity at the country level

As part of the registration process that took place between September and November 2017, participants from Member States were asked to assess the likelihood of their country reporting on each of the SDG 6 global indicators within the next couple of years. The results provide a coarse indication of the monitoring and reporting capacity of countries. However, it should be noted that participants may not have had a complete overview of the situation of each indicator when they responded.



About us

Through the UN-Water Integrated Monitoring Initiative for SDG 6, the United Nations seeks to support countries in monitoring water- and sanitation-related issues within the framework of the 2030 Agenda for Sustainable Development in an integrated manner, and in compiling country data to report on global progress towards SDG 6. The Initiative brings together the United Nations agencies who are formally mandated to compile country data for the purpose of global reporting on SDG 6.

To learn more about water and sanitation in the 2030 Agenda for Sustainable Development, and the Integrated Monitoring Initiative for SDG 6, visit our website or contact one of our focal points.

Website

www.sdg6monitoring.org

www.unwater.org

Project management

UN-Water: William Reidhead

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Agency focal points

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UN-Habitat (co-custodian 6.3.1): Graham Alabaster
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UNICEF (co-custodian 6.1.1, 6.2.1): Tom Slaymaker
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UNECE (co-custodian 6.5.2): Annukka Lipponen
Annukka.Lipponen@unece.org
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