

Water and the Transformation towards sustainable and resilient Societies

Input to HLPF 2018 by Stockholm International Water Institute

Introduction

Who we are: SIWI is a water institute. We leverage knowledge and our convening power to strengthen water governance for a just, prosperous, and sustainable future.

SIWI focuses on a range of research and development topics within and around water that support decision-makers worldwide. SIWI hosts the World Water Week, the world's leading annual water event, and awards the Stockholm Water Prize the most prestigious water award, and the Stockholm Junior Water Prize fosters future generations of water excellence.

SIWI also hosts several flagship programs, including the UNDP-SIWI Water Governance Facility, the International Centre for Water Cooperation (ICWC), the Action Platform for Source-to-Sea Management (S2S Platform), and the Alliance for Global Water Adaptation (AGWA). Through the Swedish Water House, we connect Swedish water stakeholders with each other and to international processes.

Why we focus on water: The SDGs describe an integrated trajectory for global development where focus falls not on single goals in isolation; but the entire suite of goals constitutes a pathway to the "future we want". In this way, water serves as an exemplary, if not the single most important, connecting factor for reaching the Global Goals beyond SDG 6 itself.

Water is essential for basic human needs as described in the human rights to water and sanitation, but also for marine and land ecosystems, for producing food and energy, and supporting livelihoods and industry. Water has a critical role to play in both mitigation of and adaptation to climate change. And not least, water is an important factor in the spiritual and aesthetic lives of billions of people.

SIWI's focus on water governance places SDG 6 and its relations to the other goals in a central position for our work, driving analysis of the state of the implementation ahead of HLPF 2018.

Assessment of the situation regarding the principle of “ensuring that no one is left behind” at the global level, including gaps, areas requiring urgent attention, risks and challenges

Delivering on SDG 6 is a prerequisite to reaching our global goal of “leaving no one behind”. Yet, this remains a challenge and the SDG 6 Synthesis Report to be published by UN Water ahead of HLPF 2018 will draw a more complete picture of achievements to date. But already at this stage, various data indicates deficiencies threatening the 2030 objectives in all areas covered under SDG 6 and in relation to the other water related targets covered in the overall 2030 Agenda.

Basic Human rights and needs – Drinking Water, Sanitation and Hygiene (SDG 6.1 and 6.2):

According to the WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP), 3 in 10 of the world’s inhabitants, or 2.1 billion people, lack access to safe, readily available water at home; 6 in 10, or 4.5 billion people lack access to basic latrines and safely managed sanitation. 69 countries are not on track for achieving a basic water coverage for all in 2030, and 89 not for sanitation. Additionally, various layers of inequality remain when it comes to access to water, sanitation and hygiene:

- **Women continue to be underrepresented in water management and suffer most from inadequate services.** While many local water management organizations have equal male/female representation, women remain underrepresented at higher levels of policy and decision making. Empowerment of women is critical to improve services and reduce inequalities.
- **Indigenous peoples constitute 5% of the world’s population, but 15% of the world’s poorest people.** They suffer disproportionately from discrimination and disempowerment – as reflected in their (non) access to basic water and sanitation services. An intercultural approach in water management is key for ensuring indigenous peoples’ equal participation.
- **People living with disabilities amount to 15% of global population; 80% of them living in developing countries.** Inclusion of these groups and adequate design of infrastructures is essential to provide inclusive access.
- **People living in fragile countries are twice as likely to lack basic sanitation and four times as likely to lack basic water as populations in non-fragile countries.** At the same time, support to these countries does not always match the size of the needs.

Protecting our health, ecosystems and water bodies: Water Quality and Wastewater, Use and Scarcity, Ecosystems (SDG 6.3, 6.4, 6.6):

Continued or growing overexploitation, pollution, flow modification and destruction or degradation of habitats are increasing the pressure on the world’s common water resources and degrading its aquatic ecosystems. Many rivers, lakes, and aquifers are reaching the limits of their renewable capacity, leading to water deficits for many regions. More than 70% of industrial wastes are dumped untreated into waters in many developing countries. Estimates suggest that 60% of the world’s sewage is discharged into the environment without any treatment; 80% being discharged in our seas.

Increasing pressures straining the quantity and quality of global water supplies significantly impact essential ecosystem services that help buffer extreme events, support food production and energy generation and sustain other natural resources. Inadequate access to clean water imperils public health, compromises livelihoods, and saps the potential for economic development. Unsafe water supplies and insufficient sanitation annually cost sub-Saharan African nations over 4% of GDP in health damages and lost economic production.

Water security and cooperation: Water Resources Management (SDG 6.5):

The Earth now counts 286 transboundary rivers and 592 transboundary aquifers. Some 40% of the world's population live in shared basins, and transboundary rivers supply approximately 60% of total global river flow. **Robust international cooperation thus remains crucial to managing the world's freshwater resources equitably and sustainably.**

While SDG 6.5 commits the international community by 2030 to implement Integrated Water Resource Management (IWRM) at all levels (including through transboundary cooperation as appropriate, and to expand international cooperation and capacity-building support to developing countries), the draft SDG 6 Synthesis Report finds the effective implementation of integrated approaches to be lagging.

- Many countries have espoused IWRM policies and adopted official legislation on paper, but most have fallen short applying these policies in practice.
- Most transboundary basins lack cooperative governance frameworks and institutional mechanisms essential to manage rising demands and mounting environmental pressures on shared water resources.
- Fewer than 20% of African and Asian basins, and under 5% of South American basins, are governed by key tenets of international water law such as equitable and reasonable utilization; cooperation and information exchange; and consultation and peaceful dispute resolution.

International cooperation, capacity building and participation (SDG 6.a and 6.b):

The challenges and inequalities need to be combatted through inclusion and empowerment of all levels of society. Accordingly, the advance briefing to the SDG 6 Synthesis Report gives a clear indication that **institutional aspects and governance are key to the achievement of the goals**, thereby also linking to SDG 16 and 17. It also highlights the need for more and easily accessible data and strengthened national monitoring systems and capacities to track progress towards achieving SDG 6. This will increase the transparency and accountability of the decision-making process, and help build awareness and encourage public, private and civil society engagement.

- Access to information about service performance, at national and subnational levels, needs to be improved for water and sanitation services in almost every country.
- It is necessary to bridge the gap between policies on participation and actual participation in practice. While policies are in place in many countries, broad stakeholder participation varies from moderate to low levels, and only around 25% of countries report a high level of participation in any subsector.
- The degree of influence of public participation in decision making needs to be enhanced.

- Regulatory functions must be strengthened, including in peri-urban and rural areas, to oversee the quality of service delivery in these regions. Increased accountability in water management is essential for progressing on SDG 6 and related goals and agendas.
- Enhanced coordination between sectors and actors is paramount for capturing synergies and navigating interdependencies, given the interconnected nature of the goals.
- Human rights-based approaches need to be at the core of the effort, furnishing critical substantive and procedural frameworks for addressing the inequalities noted above.

Besides political will to prioritise water policies and investments, financing remains the other major challenge. As indicated by the World Bank, the estimated costs for achieving the 2030 targets for water and sanitation require a threefold increase in existing levels of investment, the vast majority of which is expected to come from domestic sources, while international aid commitments have decreased alarmingly: aid commitments to Sub-Saharan Africa, one of the regions with the greatest needs, have decreased by more than 50% (US\$3.8 billion to US\$1.7 billion from 2012 to 2015).

Despite the strong interlinkages between various SDGs and the relevance of water for many of these dependencies, in practice, SDGs are still often treated in silos or cherry picked and the benefits of cross-sectoral approaches are rarely being realized. In order to engage our transformation towards sustainable and resilient societies, it is essential that an integrated and holistic approach is adopted placing water as a multi service resource, able to contribute to the delivery of several goals and targets.

Valuable lessons learned on transformation towards sustainable and resilient societies, including emerging issues likely to affect building sustainable and resilient societies

Sustainable water governance is a prerequisite for providing water resources and services for all people, uses and sectors. Thus, an integrated and holistic approach, placing water at the heart of policies, planning and investments is part of the foundation of sustainable and resilient societies. As a contribution to this year's HLPF 2018, we would like to illustrate the interlinkages and dependencies between SDG6 and the other SDG's being addressed (SDG 7, 11, 12, 15, 17). This does not exclude the key role of water for other SDGs.

- **Affordable and clean Energy (SDG 7):** affordable energy means affordable water and vice versa. Water is used in all phases of energy production and electricity generation, and energy is required for extracting, treating and distributing water. Innovative solutions also allow for waste water and waste water treatment to create clean energy. The energy sector accounts for some 10% of world water withdrawals, while 4% of global electricity consumption goes to extracting, treating, and distributing water. The challenge of managing these interconnections will be exacerbated by the projected future growth of demand for both energy and water. Water scarcity and variability are already today increasing the vulnerability of energy systems and most clean energy solutions rely on a stable access to water in quantity and quality. Future water and energy policy and governance must address this uncertainty.

- **Sustainable Cities and Communities (SDG 11):** By 2040, it is estimated that nearly 60% of the world's population will be living in cities. The concentration of populations and economies, makes cities a paramount concern regarding water supply, water-related disasters and changes to water quality. Global municipal water demands are projected to soar 135% by 2100. The basins and aquifers, watersheds, wetlands and forests providing most of the water resources and ecosystem services to the world's cities need to be an integral part of sustainable urbanization concepts. Local authorities need access to funding and develop multi stakeholder and multi sectoral governance process to plan and implement accordingly. Urban resilience planning to adapt and resist and reduce risks need to increase their green and blue infrastructure planning and nature-based solutions.
- **Sustainable Consumption and Production (SDG 12):** Water is a key factor for various global supply chains and the demand from all water-using sectors is projected to increase. Nearly half of the targets in SDG 12 require improved management and governance of water resources and waste water treatment. Competition for water and other natural resources is becoming a priority for governments, private sector, and citizens. Food productivity and nutritional value per unit of water in agriculture have to be improved, food losses and waste in the value chains reduced and pollution and eutrophication from food production minimized. Equally, industrial production has to become more water efficient and minimize pollution, driven and supported by better regulation and/or economic incentives.
- **Life on Land (SDG 15):** Restoration of multi-functional landscapes and resilient ecosystems are a prerequisite for resilient societies and the provision of ecosystem services. For this, water needs to play a more central role and be considered e.g. in the role of appropriate forest management as a natural infrastructure solution to achieve SDG 6 and for meeting cities' growing water demand (SDG 11). Data and methodologies are needed that mutually monitor factors of water, forests and landscapes to inform management and policy decisions. As an example, successfully integrating water and landscape approaches, will be a crucial factor for reaching other goals, including those related to hunger (SDG 2), poverty (SDG 1), climate (SDG 13), energy (SDG 7), economic growth (SDG 8) and sustainable cities (SDG 11), but also the Aichi Targets for biodiversity and the Paris Climate Agreement.

In assessing the global situation, Africa faces the main challenges. About 40% of sub-Saharan Africa is semi-arid or dry sub-humid; climate change, and ecosystem degradation create major water shocks on a continent with a population projected to grow from 1 billion to up to 3 billion this century. Most African countries will not reach the targets set out, especially in their rural areas; and this starting at the basic service delivery level for drinking water and sanitation. To reach the SDGs in Africa we need an African Water Revolution – based on green water – that builds multiservice water resilience for sustainable development.

But even for the rest of the World, hydrological resources and risks determine the feasibility of various environmental, social and economic goals across local, national, regional and global scales. A water centred approach is therefore essential to deliver on the 2030 Agenda for Sustainable Development, the Paris Climate Agreement, the Addis Ababa Action Agenda, the Sendai Framework for Disaster Risk Reduction, the New Urban Agenda as well as the Aichi Targets for biodiversity, the implementation of the UN Convention to Combat Desertification and the RAMSAR convention.

Accordingly, water can serve as a guiding resource and variable for a successful transition through the Anthropocene. But in turn, the cross-cutting character and finite nature of water means that

deficiencies in some areas hamper progress in others. This is a central challenge for the implementation of the SDGs and the related global agendas.

Nevertheless, the President of the 70th General Assembly of the United Nations pointed out that SDG 6 and 12, despite their cross-cutting relevance and interconnectedness, “remain largely uncovered under the GA and ECOSOC agendas”. A deep mind-shift is required, from the predominant blue (liquid) water paradigm, to an integrated green and blue water paradigm that builds water resilience.

Holistically addressing the SDGs and other challenges and agendas of global scale such as climate change and conflict prevention are vital to achieving the goals. Two complementary concepts that showcase the benefits of a water-centred policy strategies can be found in the fields of Resilience and the “Source to Sea” approach:

Resilience is the capacity of human and natural systems to respond and adapt to shocks and stresses and to transform when conditions require it. The ability to cope with current and future stresses on freshwater resources, such as accelerating urbanization, growing demand and inefficient use (industry, energy and agriculture), pollution, climate change and degradation of ecosystems and their water services is a core challenge to achieving sustainable development. Therefore, developing water resilient approaches that are multi-sectorial and multi-stakeholder is a path way to mitigate the risks and plan for sustainable development.

Looking at water from **Source to Sea**, provides the opportunity to address many of these stress factors and develop solutions in a holistic and multi stakeholder approach that aims at improved collaboration and management of the linkages between land, water, coasts and seas: Marine and coastal resources represent enormous assets and opportunities for local and global economy, but they may be jeopardized by upstream activities on land and along rivers, including pollution from urban wastewater, agricultural activities, emerging pollutants such as pharmaceuticals, plastic leakage. Governance and management arrangements to deal with up/downstream linkages are often fragmented, struggling to balance diverse and potentially conflicting management objectives, stakeholder priorities, and institutional arrangements in different parts of an inter-linked system. But the implementation of the 2030 Agenda has the potential of harnessing stronger integration and coordination across connected sectors, from source to sea.

Areas where political guidance by the high-level political forum is required and policy recommendations on ways to accelerate progress in establishing sustainable and resilient societies

The Sustainable Development Goals can only be reached through partnerships. Vertical and horizontal segregation and exclusion, within states and globally, are root causes for today’s unsustainable social and economic systems and degraded ecosystems. Only joint efforts crossing geographies, sectors, societies, built on trust and mutual understanding as much as on clear rules and rule-enforcement will enable the necessary change as outlined in the vision of the 2030 Agenda.

Water as the foundation of life on Earth has the potential to link the relevant global sustainability agendas with the SDGs and should be put at the core of unified, holistic strategies, built on existing experience and preparedness for future challenges. Poor governance can on the other hand increase the risk for water scarcity to stir international instability and conflict, underpinning the close conjunction between SDG 6, 17 and 16.

As outlined in the above sections, a holistic approach both for SDG 6 and the water dimensions embedded in other SDGs and global agendas is necessary. But the lack of essential requirements to reach the targets under SDG 6, like IWRM plans and their implementation, international agreements for transboundary water cooperation, transparent, accountable and participatory governance structures and institutions, including monitoring systems and sufficient financial resources, are key barriers also for reaching the water related targets in other SDGs. This includes private sector responsibility and financial resources.

The view that SDGs 6 and 12 have languished as the orphans of the SDGs, clearly underpins this interconnectedness. But this perception by no means relieves countries and communities from the responsibility to bolster human and institutional capacities for negotiation and water diplomacy, to build and strengthen the stakeholder relationships and cooperative decision-making practices to realize IWRM in transboundary basins, to ensure transparent, accountable and participatory rules for water governance and improve the representation of disadvantaged or underrepresented groups like women, youth, migrants or indigenous peoples in decision-making processes.

When it comes to production and global supply chains, domestic regulation needs to be enforced and monitored. International trade should require and incentivize minimized water impacts regarding both consumption as well as effluents. Sharing of best practices and increased demand for sustainable products must be promoted – mirroring the consumption side of the supply chains. This places a shared responsibility on regulators, brands, procurers, end-consumers and investors for demanding more sustainable supply chains and fostering the development and standardization of tools, while governments should ensure overarching rules of transparency, fairness and accountability.

While many of the findings in the above sections imply a range of recommendations in the specific context, the following conclusions address the general direction for both the UN and Member States.

Leadership and guidance by the UN is needed through systematic monitoring and providing a platform to share experiences among Member States, and also including the Major Groups and other Stakeholders. Member States need to engage with the UN, other governments and the representative stakeholder groups in their countries, to become proactive in adapting water-wise regulation, governance and incentive structures, supportive to the SDGs and other agendas, as outlined under the respective goals above. Building long-term, trust-based relationships among various stakeholders should therefore be a key strategy for the UN as well as for Member States.

The measures put in place today to sustainably manage current and emerging water stresses will determine the future level of resilience and well-being of the citizens of all countries. While countries that do not prepare will fall behind, countries preparing for the necessary transition will:

- Develop effective, accountable and transparent institutions, and ensure responsive, inclusive, participatory and representative decision-making at all levels to mitigate and manage potential drivers to possible water conflicts, improve access to services for all and enable better water resources management for the people and the environment;

- Provide capacity for transboundary cooperation on shared water resources, contributing to IWRM and conflict prevention;
- Apply a human rights-based approach to providing water and sanitation services, especially for disadvantaged and underrepresented groups, such as ethnic minorities, indigenous peoples and establish correspondingly inclusive inter-sectorial, multi-stakeholder decision-making and accountability platforms, designing integrated policies and plans, ensuring full inclusion of women, and youth;
- Address governance and market failures to adequately value water, reduce pollution, incentivize efficient use and improved productivity, stimulate innovation to resolve stresses and scarcity, and provide for socially optimal water allocation and use, incorporating future or emerging stresses from changes in the global hydrological cycle and rainfall patterns;
- Adopt a source-to-sea approach as a framework for taking a systems perspective on water management, including the protection of terrestrial, freshwater and marine ecosystems that provide crucial services for rural as well as for growing urban populations, and aiming for resilience for both human and natural systems.

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