Making Every Drop Count

An Agenda for Water Action

HIGH-LEVEL PANEL ON WATER OUTCOME DOCUMENT

14 March 2018

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List of Acronyms

COP	Conference of the Parties		
DRM	Disaster Risk Management		
DRR	Disaster Risk Reduction		
HELP	High Level Experts and Leaders Panel on Water and Disasters		
HLPF	High Level Political Forum on Sustainable Development		
HLPW	High Level Panel on Water		
HLPWP	Global High Level Panel on Water and Peace		
IFI	International Financial Institution		
IPBES	Intergovernmental Science-Policy Platform on Biodiversity		
	and Ecosystem Services		
IPCC	Intergovernmental Panel on Climate Change		
ISO	International Organization for Standardization		
IUWM	Integrated Urban Water Management		
IWRM	Integrated Water Resources Management		
MHM	Menstrual Hygiene Management		
OECD	Organisation for Economic Co-operation and Development		
SDG	Sustainable Development Goal		
SIWI	Stockholm International Water Institute		
UNDP	United Nations Development Programme		
UNEP	United Nations Environment Programme		
UNFCCC	United Nations Framework Convention on Climate Change		
WASH	(Drinking) Water Supply, Sanitation, and Hygiene		
WGI	Water Governance Initiative		
WIE	Water Innovation Engine		
WOP	Water Operator Partnership		
WRM	Water Resources Management		
WSS	Water Supply and Sanitation		

All dollar amounts are U.S. dollars unless otherwise indicated.

Preface

he United Nations and World Bank Group convened a High Level Panel on Water (HLPW) to provide leadership in tackling one of the world's most pressing challenges – an approaching global water crisis. As leaders of our organizations, the challenge we put before the Panel was to identify ways in which the world could accelerate progress towards ensuring the *availability and sustainable management of water and sanitation for all* (SDG 6) as well as to contribute to the achievement of the multiple SDGs that also depend on the development and adequate management of our planet's water resources and thereby achieve the 2030¹ Agenda.

To ensure the highest level of political leadership, we invited 11 sitting Heads of State or Government, as well as a Special Advisor, to lead the Panel for a two-year period starting in April 2016.

During the United Nations General Assembly in September 2016, the Panel issued an Action Plan which called for a fundamental shift in the way the world looks at and manages water. Since then, the Panel members have explored ways to implement this Plan and have taken initiatives in many of the action areas, leading by example. This report presents a summary of the Panel's findings and recommendations.

Today, as we write this Preface, some parts of our planet are suffering from the misery of drought while others endure the destruction of floods. Climate change is exacerbating natural variability of the water cycle, increasing water stresses that constrain social progress and economic development. Our health, food security, energy sustainability, jobs, cities, and the ecosystems on which all life is based are all being influenced by the way water is being managed in different parts of the world.

The Panel's recommendations call for all stakeholders to be involved in crafting responses to these challenges, and to build on the work already underway. Governments will need to take the lead in many cases, including in cooperating across national boundaries, but citizens, civil societies, the private sector, and international organizations also have vital roles to play in meeting these challenges. At stake is our human right to access to safe drinking water and sanitation and our future survival. The International Decade for Action "Water for Sustainable Development", 2018-2028 gives new inspiration and opportunity to accelerate and enforce our efforts in this direction.

The Panel members and their respective member states have committed to take action on water, and are inviting their peer leaders, as well as other policymakers, and leaders from civil society and the private sector to find creative and collaborative solutions to better manage and value water. We wholeheartedly endorse this urgency to act.

António Guterres UN Secretary-General

Jim Yong Kim President of the World Bank Group

¹ UN World Water Development Report 2015: Water for a Sustainable World (2015) http://unesdoc.unesco.org/images/0023/002318/231823E.pdf

Acknowledgements

he High Level Panel on Water acknowledges with immense gratitude the contributions of a large number of individuals, organizations and officials, who are too numerous to identify and thank individually. This document has benefited greatly from the broad strategic guidance as well as detailed comments received during various consultations. This Report would not have been possible without the support and the contribution of the community and professionals from diverse fields engaged at various events.

The Panel also acknowledges the ongoing support provided by the Secretariat: The United Nations Department of Economic and Social Affairs and World Bank's Water Global Practice.

Members of the High Level Panel on Water

Mauritius (Co-Chair)	President, H.E. Mrs. Ameenah Gurib-Fakim
Mexico (Co-Chair)	President, H.E. Mr. Enrique Peña Nieto
Australia	Prime Minister, H.E. Mr. Malcolm Turnbull
Bangladesh	Prime Minister, H.E. Mrs. Sheikh Hasina
Hungary	President, H.E. Mr. János Áder
Jordan	Prime Minister and Minister of Defense, H.E. Mr. Hani Al-Mulki
Netherlands	Prime Minister, H.E. Mr. Mark Rutte
Peru	President, H.E. Mr. Pedro Pablo Kuczynski Godard
South Africa	President, H. E. Mr. Jacob Zuma*
Senegal	President, H.E. Mr. Macky Sall
Tajikistan	President, H.E. Mr. Emomali Rahmon
Special Advisor	Former Prime Minister of the Republic of Korea, Dr. Han Seung-soo

*Membership through 14 February 2018

Executive Summary

Pressure on water is rising, and action is urgent. Gaps in access to water supply and sanitation, growing populations, more water-intensive patterns of growth, increasing rainfall variability, and pollution are combining in many places to make water one of the greatest risks to economic progress, poverty eradication and sustainable development. Floods and droughts already impose huge social and economic costs around the world, and climate variability will make water extremes worse. More troubling, if the world continues its current path, projections suggest that we may face a 40% shortfall in water availability by 2030. The consequences of such stress are local, national, transboundary, regional, and global in today's interconnected and rapidly changing world, with consequences that will be disproportionately felt by the poorest and most vulnerable. Addressing these issues poses one of the greatest challenges facing the world.

Many of these challenges are captured in the Sustainable Development Goals (SDG). SDG6, the 'Water SDG', calls for progress around water supply, sanitation, water quality, water efficiency and scarcity, integrated water resources management, water and the environment, increased international cooperation, and involvement of communities in the management of water and sanitation. Water is the common currency which links nearly every SDG, and it will be a critical determinant of success in achieving most other SDGs – on energy, cities, health, the environment, disaster risk management, food security, poverty, and climate change among others.

The HLPW's key message is that the world can no longer take water for granted. Individuals, communities, companies, cities, and countries need to better understand, value, and manage water. The HLPW articulates an agenda at three levels:

- A foundation for action. To take effective action we need to understand the importance of the water we have, and therefore must invest in *data*; we need to *value* the water we have, in its social, cultural, economic and environmental dimensions; and we need to strengthen water *governance* mechanisms so that we can effectively manage it.
- Leading an integrated agenda at the local, country and regional levels. Water flows across political and sectoral boundaries. The Panel therefore calls for an integrated approach, including sustainable and universal access to safe water and sanitation, building more resilient societies and economies, including disaster risk reduction, investing more and more effectively in water-related infrastructure, appreciating the centrality of environmental issues, and building sustainable cities and human settlements.
- Catalyzing change, building partnerships & international cooperation at the global level. The Panel recommends progress in encouraging innovation, promoting partnerships, increasing finance, increasing institutional support, strengthening the global and international water cooperation, and seizing the opportunity to take action with the Water Action Decade before us.

The HLPW, as political leaders, commit to leading change in these areas, and have identified specific recommendations and new initiatives for action, which are summarized in the following table and the report. The Panel calls on leaders and all stakeholders to join together in pursuit of safe water for all, managed sustainably.

HLPW Headline Recommendations





FOUNDATIONS FOR ACTION

UNDERSTAND WATER

Commit to making evidence-based decisions about water, and cooperate to strengthen water data, such as through the HLPW World Water Data Initiative.

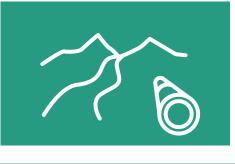


VALUE WATER Use the HLPW Principles on Valuing Water to sustainably, efficiently, and inclusively allocate and manage water resources and deliver and price water services accordingly.



MANAGE WATER

Implement integrated approaches to water management at local, national, and transboundary levels, strengthen water governance, and ensure gender equality and social inclusion.



AT THE LOCAL, COUNTRY AND REGIONAL LEVELS

AT THE GLOBAL LEVEL

LEADING AN INTEGRATED AGENDA

ENSURE UNIVERSAL ACCESS TO SAFE WATER & SANITATION

Address gaps in service delivery models, technology and behavior change which limit access to sustainable drinking water and sanitation for all - including the



needs of women, girls, people with disabilities, and communities in vulnerable situations, recognizing access to safe drinking water and sanitation services as a fundamental human right.

BUILD RESILIENT SOCIETIES AND ECONOMIES. REDUCING DISASTER RISK

- Shift the focus of disaster management from response to preparedness and resilience.
- Create incentives for water users, including irrigators, to use water efficiently, to not pollute water, and to promote its reuse.



• Take action where water-related risks may exacerbate fragility, conflict, or forced displacement, and affect peace and security.

INCREASE WATER INFRASTRUCTURE INVESTMENT

Improve the enabling environment for investment in sustainable water-related infrastructure and services, in order to at least double current levels of investment.



NURTURE ENVIRONMENTAL WATER

Value environmental contributions to



water management, prevent degradation and pollution of watersheds, rivers, lakes and aquifers, and where necessary, restore and maintain acceptable environmental conditions and water quality.

DEVELOP SUSTAINABLE CITIES



Implement an integrated approach to urban water management in line with the Habitat III New Urban Agenda,

aiming at more adaptable and resilient infrastructure.

CATALYZING CHANGE. **BUILDING PARTNERSHIPS &** INTERNATIONAL COOPERATION

PROMOTE INNOVATION

Support programs, such as the HLPW Water Innovation Engine, which foster the uptake of new water-related business models and technologies.



STRENGTHEN PARTNERSHIPS

Motivate all water use sectors to value water, embrace water stewardship, strengthen their collaboration, and participate in integrated water resource management.



INCREASE GLOBAL WATER COOPERATION

Strengthen the UN system's support to member states and its coordination of water matters by establishing UN meetings on water at the highest possible level, consider a scientific panel on water and promote international cooperation. Using the UNGA Water Action Decade as a platform for policy dialogue, exchanges of best practices, and building global partnerships.



Introduction

chieving the Sustainable Development Goals (SDGs) will require governments, societies, and the private sector to change the way they use and manage water. To accelerate this transformation the UN Secretary General Ban Ki-moon and World Bank Group President Jim Kim launched the High Level Panel on Water (HLPW) in early 2016. Secretary General António Guterres has provided strong support to the HLPW since his appointment in 2017.

The Panel, at the Heads of State and Government level, is focused on the commitment to ensure availability and sustainable management of water and sanitation for all (SDG 6), as well as to contribute to the achievement of the many other SDGs that rely on the development and management of water resources.

This Outcome Document summarizes the HLPW's main findings and recommendations. The Panel's recommendations are primarily aimed at decision-makers and practitioners but are relevant to the full range of stakeholders. In addition to this document, the HLPW is also releasing an Open Letter to fellow Leaders, a video which highlights the challenges and opportunities presented by water, and several short and focused documents on initiatives undertaken by the Panel. This Outcome Document, along with all other documents related to the Panel, can be found at https://sustainabledevelopment.un.org/HLPWater.

1.

2. The Worldwide Water Challenge

A MATTER OF LIFE AND DEATH

Water is, quite literally, a matter of life and death. Universal access to safe water and sanitation is a cornerstone of socioeconomic development. Water is also a vital ingredient in (among other things) food, energy, health, industrial development, livable cities, and the biodiversity and ecosystems around us. Pressure on water is rising and action is urgent. Our planet is so profoundly dependent on water that when scientists search for the possibility of life on other planets, they search first for evidence of water.

A SHARED AGENDA

The SDGs represent a comprehensive agenda for action. SDG6 identifies the range of 'water sector' issues that require attention, while almost all of the SDGs depend in some fashion on water and how well water is managed. The SDGs provide a clear and comprehensive agenda, but the nature of water and the range of stakeholders involved in managing water also make it a particularly complex agenda. Water seldom corresponds neatly to administrative or political boundaries, instead existing in river basins and aquifers that may be local, regional, national or international. Indeed, 40 percent of the world population lives within shared river basins, and almost 90 percent of the world population lives in countries sharing transboundary waters¹.

A WORLD OFF-TRACK

- Water Supply and Sanitation: More than two billion people are compelled to drink contaminated water, resulting in a child dying every minute of every hour of every day. 4.5 billion people lack safely managed sanitation services². Without safe drinking water, and adequate sanitation and hygiene facilities, it is harder for women and girls to lead safe, dignified, productive, and healthy lives. These inequalities based on gender create vast divides between men and women in their ability to access, manage and benefit from water, sanitation and hygiene, with devastating consequences for the enjoyment of other human rights and gender equality more generally.
- Water Scarcity: About 2.5 billion people (36% of the world's population) live in water-scarce regions where more than 20% of global GDP is produced³. By 2050, more than half of the world's population—and about half of global grain production—will be at risk due to water stress⁴. Intense water scarcity may displace as many as 700 million people by 2030. Growing populations and increasing demand for food and energy will exacerbate scarcity problems, as will poor decisions on water allocation and use⁵.

2 WHO JMP UNICEF 2017 Progress on Drinking Water, Sanitation and Hygiene http://www.who.int/mediacentre/news/releases/2017/launch-version-report-jmp-water-sanitation-hygiene.pdf

¹ UNEP 2016 Transboundary River Basins: Status and Trends; The Transboundary Water Assessment Program http://www.geftwap.org/publications/river-basins-spm

³ WHO JMP UNICEF 2017 Progress on Drinking Water, Sanitation and Hygiene http://www.who.int/mediacentre/news/releases/2017/launch-version-report-jmp-water-sanitation-hygiene.pdf

⁴ WHO http://www.who.int/mediacentre/factsheets/fs391/en/

⁵ UNWATER http://www.unwater.org/water-facts/scarcity/

- Undervalued Water: While water stress is growing, farmers, businesses, and households often have few incentives to consume less, maintain water quality, or allocate it to ecosystems or social objectives. In many areas where water is scarce, it is used more wastefully and inefficiently than in areas where it is abundant. This is often a consequence of inappropriate policies and incentives that condone waste and over-use, instead of efficient and prudent use of scarce water resources.
- Water-Related Disasters: Over the last 20 years, the overwhelming majority of disasters (90%) have been caused by floods, storms, droughts, heatwaves, and other weather-related events⁶. By 2050, desertification alone will threaten the livelihoods of nearly one billion people in about 100 countries⁷.
- Water Pollution: Water pollution resulting from human activities has clear health and socioeconomic impacts and is associated with biodiversity loss, reduced ecosystem functioning, and diminishes the availability of water often with impacts that are irreversible.
- Urban Water Management: For the first time in history, more than half of the global population lives in towns and cities. By 2050, that proportion is expected to have risen to two-thirds, creating an unprecedented demand for reliable and safe water supply⁸.
- Water Infrastructure and Investment: Lack of investment in water infrastructure leads to significant, economic, social and environmental losses⁹. According to the Organisation for Economic Co-operation and Development (OECD), total financial needs between 2016 and 2030 for transformation to a water- secure world might require additional annual investments of \$500 billion¹⁰.
- Water Governance: Water crises are usually governance crises. Technical solutions often exist, but the challenge is translating them into "who does what, at which level, and how" which is too often lacking.

8 UNDESA World Population Prospects 2017 Revision https://esa.un.org/unpd/wpp/Publications/Files/WPP2017_KeyFindings.pdf

⁶ UNISDR 1995-2015 The Human Cost of Weather Related Disasters https://www.unisdr.org/we/inform/publications/46796

⁷ UNCCD News

⁹ UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS) 2017 report http://www.who.int/water_sanitation_health/publications/glaas-report-2017/en/

¹⁰ Sadoff C. et al. (2015), Securing Water, Sustaining Growth, report on the GWP-OECD Task Force on water security and sustainable growth, University of Oxford, UK.

3. A Comprehensive Agenda for Action

he wide range of water challenges described above will require a similarly wide range of technical solutions, ranging from hand-pumps to remote sensing; from desalination to fecal sludge management; and from sand-dams to nanotechnology. Technical solutions will bring new information and decision-support systems to light, develop new forms of institutions, and enable more sustainable infrastructure. But technical solutions alone cannot solve the world's water challenges. Sustainable solutions require integrated approaches, addressing technical, institutional, financial, social, and environmental issues simultaneously. The water community has for some decades been pursuing a vision of 'integrated water resource management' (IWRM) but putting IWRM into practice requires leadership well beyond the water community.

The HLPW is premised on the idea that addressing the world's water and sanitation challenges requires political leadership. Political leadership is essential because water is essential to life, largely finite, is used by a multitude of stakeholders, and requires very long-term investments in services that provide large public benefits but limited financial returns. The HLPW has therefore focused on developing a comprehensive and integrated agenda that outlines how political leadership can contribute to addressing the world's water and sanitation challenges.

In September 2016, the HLPW called for a fundamental shift in the way the world deals with water, putting water at center stage and treating it as a valuable and irreplaceable asset. The HLPW also launched its Water Action Plan, which outlines a comprehensive agenda for action (summarized in the accompanying figure) that is

(summarized in the accompanying figure) that is built around:

Understanding, valuing, and managing

water. To take effective action stakeholders need to understand the quantity, quality, distribution, use, and risks of the water they have, and therefore need to invest in water-related data as well as the systems to share, analyze and take decisions with this data. Societies need to value the water they have - in all its social, cultural, economic, and environmental dimensions - to educate their citizens, reduce wastage and pollution, ensure water is available for societies' priorities, reduce risk, and to make water services more sustainable. Societies and their authorities also need to strengthen their water governance mechanisms to effectively manage water, provide ways for the full range of stakeholders to engage with and take responsibility for water



resources, as well as inclusive and sustainable water and sanitation services.

- ◆ Leading an integrated agenda at the local, country and regional levels. Water challenges are embedded across the economy and society and often overlapping. The Panel therefore calls for an integrated approach, building on the notion of IWRM. The starting point is progress towards sustainable and *universal access to safe water and sanitation* putting people at the center of development. Water supply and sanitation services both contribute to and rely on building more *resilient economies and societies, including reducing the risk of disasters*. Building universal access to services and more resilient economies will require *investing more and more effectively in water-related infrastructure*. Investing in water-related infrastructure without integrating the critical role of the *environment* or "natural infrastructure" in delivering water-related services will make built infrastructure both less sustainable and unnecessarily expensive. At the same time, it is essential to recognize the two-way relationship: the environment is a key element of water-related services, but water is also essential to the health of the environment. Finally, the place where all of these issues come together most directly is in our cities, towns, and villages. Building *sustainable cities and human settlements* is both a particular challenge and a particular opportunity for solving water-related challenges.
- Catalyzing change, building partnerships & international cooperation at the global level. The Panel recommends progress in encouraging innovation, promoting partnerships, investment and financing, institutional support, international cooperation, and taking advantage of the Water Action Decade before us.

Critical to the Sustainable Development Goals

he Panel was charged with identifying ways in which the world could accelerate progress towards ensuring the *availability and sustainable management of water and sanitation for all* (SDG 6) as well as to contribute to the achievement of the multiple SDGs that also require progress on the development and management of our planet's water resources. Water management will be crucial in determining whether the world achieves Agenda 2030. Water is the common currency which links nearly every SDG, and it will be a critical determinant of success. Abundant water supplies are vital for the production of food and will be essential to attaining food security; clean and safe drinking water and sanitation systems are necessary for health; and water is needed for powering industries and creating new jobs. None of this is achievable without adequate and safe water to nourish the planet's life-sustaining ecosystem services.

Partnerships No poverty for the goals Peace, justice and Zero hunger strong institutions 17 Þ ŤŧŦŦŧŤ Good health Life on land and well-being 3 Life below Quality water education 13 Gender Climate Eard Water equality action 12 \mathcal{CO} Responsible Clean water consumption and sanitation and production ▖▋▌ Ċ 10 Ξ Affordable and Sustainable cities clean energy and communities Source: PBL 2018 Decent work and Reduced economic growth inequalities Industry, innovation and infrastructure Group 1 targets: Group 2 targets: Group 3 targets: strongly related to water related to water indirectly related to water

The below figure shows how water is linked to the SDGs.

Key Recommendations

4.1. FOUNDATION FOR ACTION

Sustainable change requires strong foundations. The HLPW believes that making progress on understanding, valuing, and managing water will provide the foundations for the broader integrated water management agenda that needs to follow – and thus progress towards achieving the SDGs.

Understand Water

The adage "you can't manage what you can't measure" is particularly true for water. Information about water quantity, quality, distribution, access, risks, and use is essential for effective decision-making, whether by businesses managing a production process, rural communities managing a well or basin authorities managing a flood. Yet major gaps in water data and decision-making systems exist in many places, driven by a failure to invest in or maintain hydro-meteorological ('hydromet') equipment and other water data. In some parts of the world hydromet systems are degrading just as water pressures are growing. In addition, where water data does exist it is often difficult for stakeholders to access.

THE CHANGES WE NEED

These shortcomings result from absent or outdated policies for the collection, storage, dissemination, and use of water data, as well as the high cost and complexity of managing water data. Innovative technologies and appropriate practices can help lower the cost and complexity of these processes, particularly when open source and open access systems are developed. Water data and analysis can also be informed by more sophisticated approaches to social inclusion.

An ambitious global framework is needed to enable public and private sector actors to cost-effectively access, use, and share water and hydromet data. Global and regional solutions can complement country systems since there are interlinked hydrological and climate systems. Such a framework would also make it easier for countries to monitor and report on their progress toward water-related SDGs.

HLPW ENGAGEMENT

The Panel's World Water Data Initiative Roadmap of February 2017 outlines an agenda for improving access to water data particularly by reducing costs and complexity for data users. Guidance material has been developed for countries seeking to improve water data policies, and strengthened water data responsibilities among multilateral agencies have been suggested.

An ambitious global framework is needed to enable public and private sector actors to cost-effectively access and use water and hydro-meteorological data.

Under the auspices of the Panel, three technical workshops involving key relevant multilateral and expert agencies were convened to provide technical inputs, and an innovation challenge on water data for farmers was launched to encourage innovative solutions to a pressing problem, funded by the Water Innovation Engine, and managed by the Global Innovation Fund.

HEADLINE RECOMMENDATION

Commit to making evidence-based decisions about water, and cooperate to strengthen water data, such as through the HLPW World Water Data Initiative.

DETAILED RECOMMENDATIONS

 Develop national water data policies and systems, using open data approaches wherever possible, with support from the HLPW World Water Data Initiative.



Too often we take water for granted. As a result, we waste it, pollute it, or ignore its destructive power. The opposite of taking water for granted is to value it, in all its dimensions. Valuing water requires recognizing the full range of direct and indirect benefits and risks associated with water, which may be cultural, spiritual, emotional, economic, NDATION ACTION

5 Principles for Valuing Water

Recognize and Embrace Water's Multiple Values

Identify and take into account the multiple and diverse values of water to different groups and interests in all decisions affecting water.

There are deep interconnections between human needs, social and economic well-being, spiritual beliefs, and the viability of ecosystems that need to be considered.

Reconcile Values and Build Trust

Conduct all processes to reconcile values in ways that are equitable, transparent, and inclusive. Trade-offs will be inevitable, especially

when water is scarce, and these call for sharing benefits amongst all those affected. Inaction may also have costs that involve steeper trade-offs. These processes need to be adaptive in the face of local and global changes.

Protect the Sources

Value, manage, and protect all sources of water, including watersheds, rivers, aquifers, associated ecosystems, and used water flows for current and future generations. There is growing urgency to protect sources, control and prevent pollution, and address other pressures across multiple scales.

Educate to Empower

Promote education and public awareness about the intrinsic value of water and its essential role in all aspects of life.

This will enable broader participation, water-wise decisions and sustainable practices in areas such as spatial planning, development of infrastructure, city management, industrial development, farming, protection of ecosystems, and domestic use.

Invest and Innovate

Ensure adequate investment in institutions, infrastructure, information, and innovation to realize the many different benefits derived from water and reduce risks.

This requires concerted action and institutional coherence. It should harness new ideas, tools, and solutions while drawing on existing and indigenous knowledge and practices in ways that nurture the innovative leaders of tomorrow.



environmental, or social. The United Nations General Assembly has expressed a fundamental value of water by recognizing universal access to safe drinking water and sanitation as a human right.

THE CHANGES WE NEED

Valuing water appropriately is a cornerstone for better water management, preventing conflicts over water allocation, and pollution, allowing for more sustainable service delivery from both natural and built infrastructure. Valuing water means identifying and taking into account the multiple and diverse values of water to different groups and interest in all decisions affecting water. Appropriate pricing of water, or water services is a critically important way of recognizing part of the value of water. Where tariffs or prices are used for household water supply, irrigation or waste water treatment, safeguards are essential to ensure that access to water is available and affordable to all – as has been successfully practiced in many countries around the world, both rich and poor. Ensuring the involvement of all in valuing water is key, paying particular attention to women, indigenous people, and historically marginalized groups.

HLPW ENGAGEMENT

The HLPW has facilitated a global conversation on valuing water, including the development of key principles by a cross-section of experts across businesses, civil society, academia, and government. After drafting sessions in numerous fora across five continents, the HLPW adopted the five key principles highlighted in Box 1, covering the need to embrace water's multiple values, reconcile conflicts, build trust, protect the sources of water, educate, invest, and innovate. The HLPW members commit to putting these principles into practice.

HEADLINE RECOMMENDATION

Use the *HLPW Principles on Valuing Water* to sustainably, efficiently and inclusively allocate and manage water resources and deliver and price water services accordingly.

- Apply the HLPW Principles on Valuing Water in order to recognize the various values that societies accord to water and its uses, take these into account in political and business decisions, and in decisions to price water and sanitation services appropriately.
- Conduct all processes to reconcile values in ways that are equitable, transparent, and inclusive and value, manage and protect all sources of water, including watersheds, rivers, aquifers, associated ecosystems, and used water flows for current and future generations.
- Promote education and public awareness about the intrinsic value of water and its essential role in all aspects of life and ensure adequate investment in institutions, infrastructure, information and innovation to realize the many different benefits derived from water and reduce risks.

POLAD RECORDER AGAIONS POR NO PREMARING REALING ACTION

3 Manage Water

Managing water better at multiple levels – water governance – is at the heart of most water challenges. However, water governance is complicated by the fact that water needs to be managed as a system – usually as a basin, sub-basin, or aquifer – and water system boundaries often do not correlate well with political or administrative boundaries.

DOMESTIC WATER GOVERNANCE

Water governance can be defined as "the set of rules, practices, and processes through which decisions for the management of water resources and services are taken and implemented, and decision-makers are held accountable¹." The challenge is to enable a set of institutions that can do this in an effective and equitable way.

THE CHANGES WE NEED

To achieve good water governance, the technical, financial, and institutional solutions must be in place, and followed by effective and coordinated implementation. Institutional mapping must be done to understand today's and possible future institutional arrangements to address governance challenges. All social groups need to be included. Better governance is complex, yet urgently needed. Governance not only involves the different levels of government, but also a wide range of stakeholders, multiple action scales, different sectoral concerns and, last but not least, the whole set of water policy challenges. Political leadership is a must for enhanced water governance worldwide, since challenges do not just relate to the design of governance programs but also to their implementation.

HLPW ENGAGEMENT

Recognizing the important work being done by the Water Governance Initiative, the Panel has sought to highlight the 12 principles of water governance that the Initiative has developed.

HEADLINE RECOMMENDATION

Implement integrated approaches to water management at local, national and transboundary levels, strengthen water governance, and ensure gender and social inclusion.

DETAILED RECOMMENDATIONS (DOMESTIC WATER GOVERNANCE)

- Pursue integrated approaches to water resources management across local, national, and regional levels.
- Promote principles and frameworks for encouraging better water governance, such as the Water Governance Initiative.

¹ See the work of the Water Governance Initiative, hosted by OECD, http://www.oecd.org/cfe/regional-policy/water-governance-initiative.htm



Transboundary Water Governance

Worldwide, more than 286 rivers and about 600 aquifers cross sovereign borders, and 40 percent of the world population lives within shared river basins. Without transboundary water cooperation, inclusive sustainable development is severely curtailed, and the potential for threats to peace and security rises.

The 1997 Convention on the Law of the Non-Navigational Uses of Transboundary Watercourses and the 1992 Helsinki Convention on the Protection and Use of Transboundary Watercourses and International Lakes as well as the UNILC's Draft Articles on the Law of Transboundary Aquifers recognize the importance of states establishing agreements and joint institutional arrangements for their shared waters and provide guidance for doing so.

However, about 60 percent of transboundary river basins worldwide still lack any cooperative arrangement, while only six aquifer agreements have been adopted at the international level and two agreements regarding the sharing of transboundary groundwaters between subnational authorities.

THE CHANGES WE NEED

Strengthening of transboundary water cooperation can be a powerful tool for reaching the water-related SDG targets and the broader sustainable development goals. Global leadership is required to define a political agenda and jump-start or accelerate action in support of SDG6 and other water-related targets. The exchange of information—on water allocation, flooding, and pollution caused by accidents, infrastructure projects, navigation, irrigation, the chemical and quantitative status of groundwater resources that could affect other riparian countries, etc.—is key to building trust and a shared vision and can be a first step towards a formalized agreement for joint basin management. A common basis for decision making requires harmonized monitoring mechanisms, compatible assessment methods, and data management systems, as well as uniform reporting procedures.

HLPW ENGAGEMENT

To refine its thinking the Panel has engaged in consultations with relevant think tanks, research institutions, river basin organizations, UN agencies, the World Water Council, the OECD, the Global High Level Panel on Water and Peace (HLPWP), and civil society organizations. They have also used the platforms of the Budapest Water Summit 2016 and the Stockholm International Water Week 2017.

HEADLINE RECOMMENDATION

Implement integrated approaches to water management at local, national, and transboundary levels, strengthen water governance, and ensure gender and social inclusion.

DETAILED RECOMMENDATIONS (TRANSBOUNDARY WATER GOVER-NANCE)

- Share water in river basins and aquifers, pursue legal frameworks for international cooperation, and establish joint institutions for the transboundary water governance.
- Adopt common standards for water data collection, sharing and analysis on transboundary waters



Gender Equality And Social Inclusion

Achieving SDG6 and the human right to safe drinking water and sanitation requires action on gender equality and social inclusion.

THE CHANGES WE NEED

Norms and practices related to water often exacerbate ingrained gender and social inequalities. The relationship between water and gender presents an opportunity to address these challenges, since water in many ways mirrors and even reinforces gender inequality. Therefore, interventions that equalize gender and social relations in water-related contexts will also influence gender equality and social exclusion overall. The Panel supports the Global Water Partnership's four action areas to drive gender equality and social inclusion in water resource management¹, which can be summarized as follows:

- Leadership: Water governance institutions can demonstrate leadership by making gender equality and inclusion a core goal. This requires adequately funding and implementing gender equality strategies.
- **Analysis**: Water management decisions informed by gender and social inclusion analysis, to reveal the different uses and knowledge of water by women, girls and others.
- **Participation**: Meaningful and inclusive participation in decision-making and partnerships in water management institutions including river basin organisations, irrigation associations and water ministries, through adopting a 'nothing about them without them' approach.

• **Resources**: Changing discriminatory policies which cut women out of owning water and land resources.

The Panel also considers these matters sufficiently important to be the theme for one of the years of UN Decade for Water.

HLPW ENGAGEMENT

In developing its recommendations for improving gender equality and social inclusion in water resource management, the Panel considered the outcomes of the 2017 Global Water Partnership High Level Meeting for Gender Equality and Inclusion in Water Resource Management and the framing paper "Gender and SDG6: The Critical Connection".

HEADLINE RECOMMENDATIONS

Implement integrated approaches to water management at local, national and transboundary levels, strengthen water governance, and ensure gender and social inclusion.

- Commit to gender equality and social inclusion in water resource management and raise the profile of these important issues in all relevant fora.
- Endorse and commit to operationalising the Global Water Partnership's four actions on gender equality and water resource management
- Focus the proposed inclusion year of the UN Decade on Water on women and water to raise the profile of the importance of gender equality and inclusion in water resource management.

¹ Global Water Partnership Action Piece "Gender equality and inclusion in water resources management": http://www.gwp.org/en/we-act/themesprogrammes/Gender/



Universal Access to Safe Water and Sanitation

In 2015, 2.1 billion people lacked water services that meet the new (SDG) standards, including 159 million who were compelled to drink untreated water directly from surface water sources. Almost 4.5 billion people did not use a sanitation facility that safely disposed of excreta, and 892 million people—mostly in rural areas—still practiced open defecation. Safe water and proper sanitation are key to health, poverty reduction, and prosperity for all.

THE CHANGES WE NEED

SDG 6 goes beyond basic access to water and sanitation and calls for safe levels of service that are sustainable and provide more inclusive and equitable access. Policies, institutions, and programs should be put in place that are inclusive and prioritize outcomes for the poorest and most vulnerable—in particular women, girls, and people with disabilities—consistent with the human right to safe drinking water and the commitment to achieving the SDGs that are affected by water, such as those related to health, poverty, sustainability and resilience.

HLPW ENGAGEMENT

The Panel has committed itself to a range of initiatives to spur progress on SDG6, encouraging all Member States to ensure universal access to safe drinking water, sanitation and hygiene (WASH) for the growing world population, estimated to reach about 10 billion by 2050. The Panel has called on governments to mainstream WASH in national, subnational, and community-level planning; to establish a transparent and multistakeholder sector review process; to approach the implementation of all the water-related SDG targets in an integrated manner; and to pursue innovative and sustainable financing strategies that will ensure universal access to WASH.

HEADLINE RECOMMENDATION

Address gaps in service delivery models, technology and behavior change which limit access to sustainable drinking water and sanitation for all – including the needs of women, girls, people with disabilities and communities in vulnerable situations, recognizing access to water and sanitation services as a fundamental human right.

- Innovate, share best practices and replicate successful initiatives.
- Adopt national targets and scale-up solutions and interventions at national, subnational and community levels involving all stakeholders.
- Give special attention to the needs of women, girls, people with disabilities and communities in vulnerable situations.
- Governments, in a position to do so, are encouraged to join the Sanitation and Water for All (SWA) Partnership.

Societies, and Disaster Risk Reduction

DISASTER RISK REDUCTION

Globally, water-related disasters account for almost 90% of the 1,000 most devastating natural disasters since 1990¹. Damages attributed to water-related disasters amount to 15–40% of annual GDP for some countries². Moreover, climate change is exacerbating the incidence and extremes of hydrometeorological events, most noticeably through floods and droughts³. However, about 90% of financing for disaster risk reduction (DRR) worldwide is directed at emergency response and reconstruction/rehabilitation, while only 10% is for preparedness and resilience⁴. Furthermore, while \$106 trillion are available through different funds worldwide, only 1.6% is invested in infrastructure and even less in initiatives to increase resilience⁵.

THE CHANGES WE NEED

The rising trend of losses caused by water-related disasters must be reversed. This requires a different approach based on prevention and preparedness and additional financing for water-related DRR and effective use of available funds. Increased resilience against climate change stimulates economic activity, ensures fiscal stability, and provides the foundation for sustainable societies and livelihoods. Preparedness and resilience should be high on the political agenda and embedded in actions toward sustainable development.

HLPW ENGAGEMENT

The Panel helped to raise global awareness of the importance of preparedness for and resilience to water-related disasters at the UN Global Platform for Disaster Risk Reduction (GPDRR), held in Cancun, in May 2017, and hosted by the Panel co-chair. At the 3rd UN Special Thematic Session on Water and Disasters, held in New York in July 2017, the Panel called for action on water-related DRR.

The Panel has welcomed important work on this in other global fora, including the High-level Experts and Leaders Panel on Water and Disasters (HELP) which produced a set of "Principles on Investment and Financing for Water-related Disaster Risk Reduction", and noted the launch of a flagship document on good practices and lessons of megadroughts at COP23.

The Panel has also helped lay the foundation for a research focused "alliance of alliances" to increase available knowledge and tools for understanding the impacts of water-related disasters; to facilitate decision making for prevention and mitigation of risks; and to promote the adoption of innovative technologies.

HEADLINE RECOMMENDATION

Shift focus of disaster management from response to preparedness and resilience.

- Political leadership is needed to raise awareness, strengthen science (that includes a gender perspective), policy and planning, upgrade education, and mobilize financing.
- The HLPW Action Plan should be utilized as useful guidance and a connector for advancing the actions towards achieving the Agenda 2030 (SDGs and Paris climate agreements and

- 2 'The United Nations World Water Development Report, Managing Water Under Uncertainty and Risk (p.116)'
- 3 UNISDR, Living with Risk A Global Review of Disaster Reduction Initiatives (p.47) https://www.unisdr.org/files/657_lwr1.pdf
- 4 GFDRR, Financing Disaster Risk Reduction (p.6~p.7) https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/8574.pdf
- 5 World Bank: Investing in Urban Resilience Can Save the World's Cities Billions Each Year and Keep Millions out of Poverty http://www.worldbank.org/en/news/press-release/2016/10/12/world-bank-investing-in-urban-resilience-can-save-the-worlds-cities-billionseach-year-and-keep-millions-out-of-poverty

¹ UNESCO, Global Trends in Water-related Disasters (p.2) http://unesdoc.unesco.org/images/0018/001817/181793e.pdf



Sendai Framework) in an integrated manner. Platforms on Water Resilience and Disasters among all stakeholders should be formulated in countries to facilitate dialogue and scale up community-based practices.

- Disaster risk prevention and resilience should be integrated in long-term planning.
- Financing for and investment in water-related DRR and resilience should be doubled within the next five years. "Principles on Investment and Financing for Water-related DRR" should be used to make effective use of this increased investment and could help increasing investments in countries.
- Global research networks, global disaster database, integrated scientific tools for assessing risks, and a global platform integrating science and policy including higher education should be developed and put into support of countries.
- Special Thematic Sessions on Water and Disasters should be organized biennially in the UN General Assembly to raise global awareness.

Water Use Efficiency

Many countries are dealing with water scarcity. Even countries with an overall positive water balance usually have some localized or seasonal scarcity. This can constrain economic development and social cohesion, as well as the achievement of the water-related SDGs. Improvements in water use efficiency can help limit these risks.

THE CHANGES WE NEED

Policies that create incentives for water users to use water efficiently, and not waste it, are needed. These incentives may derive from a combination of regulatory requirements, economic instruments and improved information for water users. Priority attention should be given to boosting efficiency in the largest water users, by volume and cost. Irrigation is the largest consumer of water by *volume*; the provision of clean and safe urban drinking water is the largest water use by *cost*. Energy and industry are other large users of water.

HLPW ENGAGEMENT

The Panel's *Action Plan* recognized the challenge of increasing water scarcity and encourages states and organizations to improve water use efficiency through the adoption of new technologies and policy reforms. The Panel's *Water Use Efficiency for Resilient Economies and Societies Roadmap* (June 2017) set out the proposed approach to address this issue. Panel members have also been working together on the practical application of *WaterGuide* principles, which cover a step-by-step approach to improving water use efficiency.

HEADLINE RECOMMENDATION

Create incentives for water users, including irrigators, to use water efficiently, to not pollute water, and to promote its reuse.

- Focus on measures to improve water use efficiency for resilient economies. Leaders should enhance efficient use of water through a national policy framework that creates incentives for water users, including irrigators, to not waste or pollute water, and promote its reuse, drawing on guidance materials prepared under the HLPW Water Use Efficiency for Resilient Economies and Societies Roadmap.
- Encourage the International Organization for Standardization (ISO) to develop and adopt an international standard for water efficiency labelling of domestic appliances that use water and explore similar standards for agricultural and industrial equipment.



Water, Peace, Forced Displacement, And Refugees

About 2.5 billion people (36% of the world's population) live in water-scarce regions where more than 20 percent of global GDP is produced¹. By 2050, 4.8 billion people more than half of the world's population and about half of global grain production will be at risk due to water stress². Intense water scarcity may displace large numbers of people by 2030. By 2050, desertification alone will threaten the livelihoods of nearly one billion people in about 100 countries³.

THE CHANGES WE NEED

The vital importance of water for sustaining international peace and security must be recognized. Long-term livelihood development should be prioritized in addition to post-conflict mitigation and emergency aid. Hydro-diplomacy must be strengthened in the framework of water stress-related conflict-prevention strategies. Countries bordering or in crisis zones and facing water scarcity, as well as those that host many displaced persons should get special support. Training programs for UN peacekeeping forces should include a module on supporting local authorities in identifying and addressing water-related risks.

HLPW ENGAGEMENT

The HLPW has worked with the Global High-Level Panel on Water and Peace and built upon the analyses and recommendations of its Report: *A Matter of Survival*.

HEADLINE RECOMMENDATION

Take action where water-related risks may exacerbate fragility, conflict, or forced displacement and affect peace and security.

DETAILED RECOMMENDATIONS

- Address the adverse impacts and challenges water can cause, including fragility, conflict and forced displacement, exacerbated by climate change and emphasize the need for adequate risk assessment and management solutions.
- Endorse the recommendations of the HLPWP on the central role of water cooperation at local, transboundary and global levels for a sustainable water management and to contribute to peace and security.
- Address the water-related root causes, as well as pursue preemptive actions.
- Exercise international solidarity and support for countries hosting large numbers of displaced persons and refugees to address their water-related challenges.

3 UNCCD News

¹ UN-Water 2017 UN World Water Development Report, Wastewater: The Untapped Resource http://www.unesco.org/new/en/natural-sciences/environment/water/wwap/wwdr/2017-wastewater-the-untapped-resource/

² WHO http://www.who.int/mediacentre/factsheets/fs391/en/

Water Infrastructure and Investment

SDG6 has focused minds globally on a significantly expanded water infrastructure agenda, covering WASH, flood protection, water security, drought management, and water quality management – and also the interlinkages with investment needs for food security, health, sustainable consumption and production, and terrestrial ecosystems. While water-specific investments will be critical, water-sensitive investments in other sectors (land use, urban development, energy and agriculture) will also be beneficial.

To deliver on this agenda financing for water-related investments will have to be significantly increased. Global estimates for financing needs range from \$6.7 trillion by 2030 to \$22.6 trillion by 2050¹. Investments are needed not only to build new infrastructure but also to maintain and operate existing facilities. Failure to improve water resource management could diminish national growth rates by as much as 6 percent of GDP by 2050².

"Natural capital" solutions, which draw on such features of nature as the water-retaining abilities of forests, offer relatively inexpensive means of addressing water challenges as well. Water services can often be provided through better management of ecosystems and investments in natural capital at a fraction of the cost of physical and engineering solutions. Natural infrastructure (forests, mangroves, flood plains, and rivers) not only serves as a source of protection and resilience but is required for sustainability – to assure future supplies of water. Adoption of these solutions has been slow due to misaligned incentives that fail to recognize the value and role of ecosystem assets and services.

THE CHANGES WE NEED

Mobilizing additional concessional funds will help—but will not be sufficient. A new sector financing paradigm is required based on five broad themes. The sector has to realign itself around actions that (I) improve sector governance and efficiency (improving creditworthiness); (II) crowd in or blend private finance (*leveraging capital*); (III) allocate sector resources more effectively to deliver the maximum benefit for every dollar invested (*targeting capital*); (IV) improve sector capital planning to reduce unit capital costs (minimizing capital requirements); and (v) readjust the strategies of financing institutions to reflecting the role of sustainable water management in development (banking system being part of the transformation). Achieving the new financing paradigm requires a more collaborative approach with all stakeholders playing an active role, including understanding the social and economic costs of not investing in urgently needed water infrastructure.

This new paradigm also needs to identify *permanent* revenue sources for operations and maintenance, preferably through charges to those who benefit from the service; design investment pathways that maximize water-related benefits over the long term; ensure synergies and complementarities with investments in other sectors; and attract more financing by improving the risk-return ratio of water investments.

HLPW ENGAGEMENT

The Panel has consulted with the ten largest Multilateral Development Banks and the Green Climate Fund at the margins of the Budapest Water Summit 2016. It has worked together with the Roundtable on Fi-

¹ Winpenny, J. (2015), Water: Fit to Finance? Catalyzing National Growth through Investment in Water Security, report of the High Level Panel on Financing Infrastructure for a Water-Secure World.

² World Bank (2016), High and Dry: Climate Change, Water and the Economy, World Bank, Washington, DC. License: Creative Commons Attribution CC BY 3.0 IGO.



nancing Water infrastructure (involving the OECD, WWC, WBG). It has also consulted with water operators, investment funds and civil society organizations at the margins of SIWW and WATEC.

HEADLINE RECOMMENDATION

Improve the enabling environment for investment in sustainable water-related infrastructure and services in order to at least double current investment levels.

- Governments are encouraged to improve the enabling environment for investment in sustainable water-related infrastructure, so as to:
 - Create a comprehensive case for water-related investments,
 - Plan and sequence investments to maximize social and economic returns, as well as increase benefits from interlinkages across sectors,
 - Promote the preparation of viable, investment ready and high impact projects,
 - More than double available finance by mobilizing domestic finance, blending public and commercial finance, and
 - Invest at least one-third of international climate finance in water-related projects that improve climate adaptation and strengthen climate mitigation.
- Multilateral financial institutions to partner with governments and the private sector to achieve the above.
- Financial institutions to improve the disclosure of their investments' exposure to water-related risks and how their investments may contribute to or mitigate water-related these risks.

Water and the Environment

A healthy natural environment stores and filters water, thereby contributes to reducing water scarcity, reducing flood risks, drought impacts and improves water quality. Many current water crises have roots in environmental degradation, such as deforestation, swamp clearance, or pollution, and are further exacerbated by climate change. Water taken from the environment, or returned to the environment in a polluted state, reduces the environment's capacity to sustain life and provide its full range of economic, social, and cultural values. One study estimates the economic loss from reduced environmental services to be over \$4 trillion between 2007 and 2011¹. Pressures on water quality, ecosystem, and biodiversity are particularly severe due to poor wastewater management, inadequate disposal of industrial and agricultural water. About 90 percent of all municipal wastewater in developing countries is discharged untreated.

THE CHANGES WE NEED

Environmental or 'nature-based solutions' can help address many of today's most pressing water challenges, particularly if planned in harmony with 'built' infrastructure. Environment objectives are generally expressed through principles of IWRM, seeking to balance the demands of all human uses with the need for the environment to continue to provide the water required to meet these demands. To achieve this balance, the full suite of measures and reforms being advocated by the Panel will have to be adopted (see *Action Plan*). The United Nations Environment Programme has provided advice and guidance on how environmental sustainability can be incorporated in the SDGs², among others, by covering critical issues of environmental sustainability such as major *irreversible* changes in the global environment.

HLPW ENGAGEMENT

The Panel's Action Plan proposed several priority actions, and its *Water Use Efficiency for Resilient Economies and Societies Roadmap* (June 2017) highlighted the importance of water use efficiency for the environment. The HLPW also supports the 2018 World Water Day theme, "The answer is in Nature".

HEADLINE RECOMMENDATION

Value environmental contributions to water management, prevent degradation and pollution of rivers, lakes and aquifers, and where necessary, restore and maintain acceptable environmental conditions and water quality.

- Raise awareness of the contribution of healthy rivers, lakes, wetlands and aquifers to human life and wellbeing, and ensure the value of environmental services is accounted for in managing and allocating water.
- Prevent degradation and pollution of rivers, lakes and aquifers, and where necessary, restore and maintain acceptable environmental conditions and water quality.

¹ High Level Panel on Water Action Plan (September 2016) https://sustainabledevelopment.un.org/HLPWater

² UNEP (2013) https://sustainabledevelopment.un.org/index.php?page=view&type=400&nr=972&menu=1515.



Sustainable Cities and Human Settlements

The global urban population is projected to reach 7.3 billion by 2050¹. Cities' water needs will grow from 15–20 percent of global consumption to 30 percent, while the supply of freshwater resources will remain unchanged². Cities contribute significantly to the contamination of freshwater resources. Globally, 80 percent of wastewater is still discharged untreated.

The fastest urbanization is taking place in countries and regions with scarce water resources. Furthermore, many cities are located at the crossroads of rivers and seas, which offers trade opportunities but also makes them more vulnerable to water-related disasters. People living in urbanized deltas (about 500 million people) and residents of monsoonal basins (about 1 billion people) are especially vulnerable to water-related disasters³.

Concentration of population and economic assets leads to increasing competition for water and a growing volume of urban waste water. In mushrooming megacities, the traditional model of *centralized* waste water management for everyone is no longer feasible, and their water investment needs may no longer be financially sustainable.

THE CHANGES WE NEED

The lack of a reliable urban water infrastructure results in more expensive water, lower quality control, damage by flooding, and negative public health effects. Integrated urban water management (IUWM) addresses these issues and helps cities progress toward a circular economy. Sustainable water and wastewater management of settlements is crucial for the broader suburban areas, aquifers, and river basins.

HLPW ENGAGEMENT

To keep up with the rapidly growing urban water demand and the decreasing per capita supply, the Panel has engaged the science and practitioner communities to further develop the main IUWM principles, duly taking into account the UN *New Urban Agenda* recommendations.

HEADLINE RECOMMENDATION

Implement an integrated approach to urban water management in line with the Habitat III New Urban Agenda, aiming at more adaptable and resilient infrastructure.

- City and state/provincial leaders should embrace an integrated approach to urban water management, including a basin-wide perspective and coordinated approaches to green and gray water infrastructure, in line with the Habitat III New Urban Agenda.
- Design and deliver urban water and sanitation infrastructure and services which are adaptable to changing population and circumstances, such as decentralized systems.
- Support the New Urban Agenda's push to give "particular consideration to urban deltas, coastal areas and other environmentally sensitive areas", and "to integrating appropriate measures into sustainable urban and territorial planning and development".

¹ UNDESA (2015) World Population Prospects: The 2015 Revision https://esa.un.org/unpd/wpp/publications/files/key_findings_wpp_2015.pdf

² UN-Water (2017) UN World Water Development Report, Wastewater: The Untapped Resource http://www.unesco.org/new/en/natural-sciences/environment/water/wwap/wwdr/2017-wastewater-the-untapped-resource/

³ World Bank (2014) Water Resources Management: Sector Results Profile http://www.worldbank.org/en/results/2013/04/15/water-resources-management-results-profile



4.3. CATALYZING CHANGE, BUILDING PARTNERSHIPS & INTERNATIONAL COOPERATION AT THE GLOBAL LEVEL

In addition to the country-level agenda for action outlined above, the HLPW is calling for global-level progress on multi-stakeholder partnerships.

Innovation

More of the same will not be sufficient if we are to achieve the water-related SDGs. Creative breakthroughs are urgently needed: in service delivery models, data collection, water use efficiency and the application of new technologies. But a study commissioned by the HLPW¹ found that the water sector is under-invested in innovation, relative to other sectors such as health.

THE CHANGES WE NEED

Reforms to water governance and management, valuing water and the environment for water infrastructure investment will be critical to promoting water-related innovation. In addition, specific new initiatives are needed, to kick-start innovation.

HLPW ENGAGEMENT

To complement existing innovation efforts in the water sector, a new, water-specific innovation funding vehicle is required to encourage coordination and investment in water innovation by bringing together entrepreneurs, new ideas, and flexible financing. The Water Innovation Engine² has been established for this purpose and is open for investment (see also the section on Water Data). The Engine brings together entrepreneurs, new ideas, and flexible financing to accelerate innovation to achieve the vision of the HLPW and the Global Goals

RECOMMENDATION

Support programs, such as the HLPW Water Innovation Engine, which foster the uptake of new water-related business models and technologies.

Partnerships for Cooperation

Achieving SDG6 will require a concerted effort to harness a vast amount of resources: financial, technological, human, etc. The multidimensional role of water creates an intricate set of interlinkages between various actors, sectors, and activities, ultimately rendering sustainable water management highly complex, but also creating opportunities for cooperation toward the achievement of the 2030 Agenda (for Sustainable Development). Partnerships are key to coordinating and consolidating inputs for integrated planning, mobilization of resources, and inclusive consultations.

THE CHANGES WE NEED

Unilateral, isolated approaches are limited in their ability to address the complexities inherent in water challenges; collective efforts and wide alliances between the public sector, the private sector, and civil society are required. Partnerships, in their various forms, may offer innovative, inclusive, and flexible approaches to these challenges. These arrangements are versatile and adaptable to regional and local contexts and, when based on a shared vision with clearly defined activ-

¹ Results for Development Institute (January 2017) 'Challenge Funds and Innovation in the Water Sector'

² See: https://www.globalinnovationexchange.org/programs/water-innovation-engine

ities, roles, and capacities, they can tap into the wide range of benefits that emerge from considering diverse perspectives, experiences, and knowledge.

HLPW ENGAGEMENT

The Panel fosters effective public-public, public-private, and civil society alliances, pooling the experiences and resourcing strategies of partnerships. It also recommends that countries worldwide create, participate, support, and consolidate local, regional, and global partnerships.

HEADLINE RECOMMENDATION

Motivate all water use sectors to embrace water stewardship, strengthen their collaboration, and participate in integrated water resource management

DETAILED RECOMMENDATIONS

- Motivate sectors, such as agriculture, environment, energy, industry, and urban architecture to embrace water stewardship and strengthen their collaboration.
- Promote the Water Partnership Catalogue—a repository of information and an open database to register water partnerships around the world.

Global Water Cooperation

The aspirations for SDG6 and other water-related targets are high. Global leadership is required to define a political agenda and jump start or accelerate action in support of SDG6 and other water-related targets. Achieving the water-related SDGs and implementing the recommendations of the HLPW require concerted efforts by all stakeholders.

Water matters at the local, regional, basin, and global level. As water is a global common good, protecting and preserving it is a shared responsibility that requires international cooperation. Most water-related challenges can be addressed at the basin or national level. Further global water stewardship is needed to support climate change mitigation and adaptation efforts. Water challenges contribute to people's displacement, loss of food security, ecosystem loss and degradation, and virtual water trade, which cannot be addressed at the national level alone.

THE CHANGES WE NEED

The UN should effectively support the cooperation of governments and other stakeholders to deliver on the commitments made in the framework of the 2030 Agenda and the Paris Agreement towards a water safe, secure, resilient, sustainable & inclusive access world.

HLPW ENGAGEMENT

The HLPW has been engaged with a wide range of stakeholders in global forums to support global water cooperation.

HEADLINE RECOMMENDATION

Strengthen the UN system's support to member states and its coordination of water matters, by establishing UN meetings on water at the highest possible levels, consider a scientific panel on water and promote international cooperation. Using the UNGA Water Action Decade as a platform for policy dialogue, exchanges of best practices and building global partnerships.

- Strengthen the capacities of UN-Water to discharge its function as the UN's coordination mechanism for all agencies working on the implementation of SDG 6 and other water-related SDGs.
- Consider the creation of an intergovernmental multi-stakeholder platform.
- Establish an annual or biannual Global Water Conference.
- Consider the creation of a global intergovernmental scientific platform on water.



1 International Decade for Action "Water for Sustainable Development" 2018-28

Water is critical for sustainable development and the eradication of poverty and hunger, and indispensable for human development, health, and wellbeing. Sustainable water management is crucial to achieving the SDGs and other relevant development goals.

THE CHANGES WE NEED

Achieving SDG6 and other water-related goals requires coordinated and consolidated efforts of all stakeholders through different mechanisms. To support these efforts, UNGA has proclaimed the period 2018-28 the International Decade for Action: "Water for Sustainable Development"¹. The Decade will start and end on World Water Day (March 22). It seeks to inspire action to achieve the 2030 Agenda, in particular SDG6, by facilitating access to knowledge and the exchange of good practices. Events under its aegis are to generate new information relevant to water-related SDGs; pursue advocacy and networking; promote partnerships and action; and strengthen communications for reaching the water-related goals.

HLPW ENGAGEMENT

It is important to promote the Water Action Decade by raising awareness, promoting relevant activities, and supporting decision making on water issues. The activities under the aegis of the Water Action Decade will also contribute to mobilizing financial and other resources for water- related projects and programs; support the creation of national mechanisms or the use of existing ones to coordinate the Water Action Decade's activities in member countries; organize conferences, seminars, and other events at national and international levels to raise awareness, follow up and monitor the implementation of the Decade's activities; and launch lighthouse and other initiatives at the national level, which could make a significant contribution to the Water Action Decade.

HEADLINE RECOMMENDATION

UN member states and other stakeholders are encouraged to use the UN Water Action Decade as a platform for policy dialogue, exchanges of best practices and building partnerships to address water issues at all levels.

DETAILED RECOMMENDATIONS

Governments are encouraged to devote each year of the Water Action Decade to a water-related issue outlined in this document.

¹ https://www.un.org/pga/72/wp-content/uploads/sites/51/2017/11/International-Decade-for-Action-%E2%80%9CWater-for-Sustainable-Development%E2%80%9D-2018-2028.pdf

5. The Way Forward

National action is the essential ingredient for making the changes required to implement the water-related Sustainable Development Goals. Our recommendations are therefore primarily aimed at national political leaders and opinion leaders, in public and private sectors, who can determine and influence policy. Panel members' countries will actively promote the recommendations of the Panel in appropriate forums and engagements with other countries.

The urgently required change will be complex, multi-faceted and challenging, and often controversial, and require cooperation from all stakeholders. We call on all national leaders to initiate and guide a national water reform process and for others in leadership roles to support these efforts.

National action will also benefit from international cooperation. Trans-boundary and regional cooperation, as described earlier in this report, is vital for the 40% of the people of the world living in river basins which cross national borders¹.

We have identified a number of priority themes which are especially ripe for international cooperation, so that we share and learn lessons, and help countries to adopt and implement best practice. With this in mind, and without prejudice to the many other important and valuable initiatives underway, we highlight the following ongoing initiatives as being especially valuable to states and stakeholders seeking to implement our recommendations:

- World Water Data Initiative²
- The OECD Water Governance Initiative³
- The Delta Coalition⁴
- HELP, including an Alliance of Alliances on disaster risk reduction researches⁵
- The initiative on Financing Water Infrastructure convened by the OECD⁶
- Water Innovation Engine⁷

In addition, we encourage the launch of new cooperative initiatives in areas of critical importance to the new water agenda, such as:

- A global leadership coalition on valuing water
- A water scarcity initiative, and
- An Africa water investment program.

- 2 See: https://sustainabledevelopment.un.org/content/documents/13327HLPW_WWDI_Roadmap.pdf
- 3 See: http://www.oecd.org/cfe/regional-policy/water-governance-initiative.htm
- 4 See: http://www.deltacoalition.net/
- 5 See: http://www.wateranddisaster.org/
- 6 http://www.worldwatercouncil.org/sites/default/files/2017-10/WWC_OECD_Water-fit-to-finance_Report.pdf
- 7 https://www.globalinnovationexchange.org/programs/water-innovation-engine

¹ UNEP (2016) Transboundary River Basins: Status and Trends; The Transboundary Water Assessment Program http://twap-rivers.org/

Importantly, the UN system has much to offer in support of its member states. We have made recommendations in this report to strengthen UN capacity to support member states. We believe that the Water Action Decade will be especially helpful as a venue for discussion among countries of their major challenges, and possible solutions. Periodic UN High Level Meetings will also be helpful for continuing the political momentum for change.

Finally, we trust that the co-conveners of the Panel, the UN and World Bank Group will address the water-related challenges, particularly of the developing world and work actively to help member states to deliver this agenda.