



2022 AFRICA WATER POLICY REPORT



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ABOUT WATER POLICY GROUP

The Water Policy Group is comprised of people who have been decision-makers and trusted advisers within governments and international bodies handling complex water policy and strategy.

Water Policy Group members have the common goal that their knowledge, networks and practical experience can help achieve the sustainable development of water resources.

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FOREWORD

Evidence abounds that sustainable water resources management is fundamental for socio-economic development. Access to safe drinking water and sanitation is essential for the health and wellbeing of all. Yet, about 4 billion people still experience severe water scarcity for at least one month per year globally. According to the 2021 Africa Water and Sanitation Sector Monitoring (WASSMO) report, Africa is currently off-track on the targets of the Africa Water Vision 2025, the Ngor commitments and the Sustainable Development Goals. Across the continent, less than 50% of the population have access to potable water services. Less than 25% of the population has access to safely managed sanitation. Only one-third of African Union Member States indicate having relatively adequate basic hygiene services delivery systems. This situation is projected to be exacerbated by the impacts of climate variability and climate change. Urgent action is, therefore, needed to tackle these challenges. A key first step is to ensure availability of high-quality data and information to support evidence-based policy formulation and implementation.

Against this background, the Water Policy Group – in collaboration with AMCOW – conducted a high-level survey on the water policy challenges faced by Member States. The results of the survey led to the production of this inaugural 2022 Africa Water Policy Report. Key findings of the report revealed exponential growth of water demands among Member States. Other revelations include the

impacts of climate change and climate variability as a key water-related risks. Low prioritisation of water in national systems for economic planning may also be a key factor underlying weak institutional arrangements. Therefore, water sector leaders in Africa must take cognisance of the above findings. This will help to advance good water governance and sustainable water management as a catalyst for achieving Africa’s continental and global development goals.

This context specific analysis provided by the survey report is timely for a number of reasons. First Africa is hosting the 9th World Water Forum in March 2022, in Senegal. This presents a platform for Member States and stakeholders to discuss this report and to take action steps to address the findings. Secondly, the findings from this report will also inform discussions leading to the post 2025 Africa Water Vision.

AMCOW therefore calls on the water sector leaders across the continent to take action on the findings of this report for inclusive growth and sustainable water development. This will be a major contribution to accelerate progress towards achieving the Africa Water Vision 2025, the Sustainable Development Goals, 2030 and the African Union Agenda 2063.

**Hon. Carl-Hermann Gustav Schlettwein,
Minister for Agriculture and Land
Reform, Republic of Namibia and
AMCOW President.**

In 2021, the Water Policy Group undertook a survey of national water leaders across the world with the aim of understanding why achieving the goal of 'sustainable water management for all' seems so difficult. Their views on the risks and challenges they faced in water management and in meeting the water-related Sustainable Development Goals are reported in the Global Water Policy Report 2021: Listening to National Water Leaders.

This Africa focused report is on the views and opinions of African water leaders as expressed through the 2021 survey. This report has been prepared at the request of the African Ministers' Council on Water (AMCOW) and aims to highlight Africa water issues for high level political leadership and policy makers attention.

Water is essential to every element of the economy, environment and social fabric of every country. As a limited resource, it has to be managed and shared sustainably across competing priorities and used to the best effect for the community overall, over the long term.

Every decision that a government makes about water will have social, economic and environmental consequences, and that makes achieving sustainable water outcomes for all a key challenge for governments - one that can be politically very difficult.

Not only is success with water integral to the national sustainable development agendas of every country, it is essential to achieving the collective global Sustainable Development Goals (SDGs) of Transforming our World: the 2030 Agenda for Sustainable Development ('Agenda 2030'). SDG 6 is to "Ensure availability and sustainable management of water and sanitation for all", reflecting the increased attention to water and sanitation issues in the global political agenda. Successive

Global Risks Reports, published by the World Economic Forum, in every year from 2012 to 2020 identified 'water crises' as one of the top five risks identified in terms of severity of impact at a global level (www.weforum.org/global-risks/reports).

Good water outcomes are also pivotal for adapting to climate change. This is becoming an increasingly important factor and likely to gain prominence as water-scarce countries prepare to host COP 27 (Egypt) and COP 28 (United Arab Emirates). In November 2021 the African Union Peace and Security Council held a special session on the Climate-Development- Security Nexus. More broadly, improved water outcomes underpin wider efforts to end poverty, advance sustainable development and sustain peace and stability (UN-Water SDG 6 Synthesis Report 2018).

Yet, the United Nations has reported many countries across the African continent are not on track towards achieving SDG 6 (www.unwater.org/publications/summary-progress-update-2021-sdg-6-water-and-sanitation-for-all).

Why is achieving the availability and sustainable management of water for all so difficult? This inaugural Africa Water Policy Report seeks to answer this question by identifying the key issues faced in improving national and continental water outcomes, as perceived through the eyes of national water leaders of all regions of Africa - the people entrusted with water leadership responsibility.

This report provides governments of Africa comparative perspective and opportunities to learn from others' experiences.

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Nile river at sunrise in Cairo, Egypt. © Shutterstock.

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We also thank Dr Alice Aureli, Dr Bill Alley, Ms Michela Miletto, Professor Moshood Tijani, Dr Neno Kukuric, Dr Shafick Adams and Mr Shammy Puri as members of the independent groundwater expert group, and Professor Ralph MacNally (analysis) and Ms Nathalie Lyon-Caen (graphic design), who have been generous with their time, expertise and experience.

We recognise the numerous individuals and organisations who assisted in realising the survey across the globe, including the African Ministers' Council on Water (AMCOW), International Commission on Irrigation and Drainage (ICID) and Sanitation and Water for All Partnership (SWA).

Most of all, Water Policy Group thanks the national water leaders who participated in the survey, who must remain unnamed - you know who you are!

This report is based on the experiences and perspectives of national water leaders from 26 countries of Africa.

Among them they have responsibility for achieving 'sustainable water for all' for over 900 million people.

In summary, this is what they are saying:

The highest water-related risks their countries face are increased demand for water, climate change and associated pressures on water supplies and worsening floods and droughts.

The greatest challenge many face is with the prioritisation of water issues within governments.

Administrative problems of fragmented water institutions and inadequate data are of as much, if not greater, concern than factors such as public resistance to reforms.

COVID-19 has raised the priority and urgency of water and sanitation services.

Most Sustainable Development Goal 6 targets are 'challenging' or 'impossible', with lack of financing and governance problems the main reasons for this. With development assistance, there are concerns about the adequacy of current arrangements.

While groundwater is considered by most national water leaders of Africa to be essential to their country's future water supply, far fewer consider their groundwater is being used sustainably.

When compared to the Global Water Survey, national water leaders of Africa are more confident than their counterparts across the world as a whole that their countries are increasing attention to water as the result of COVID-19 and more conscious of the importance of groundwater. They are also more challenged by achieving Sustainable Development Goal 6 targets overall and more concerned about risks of increasing demand for water, inadequate data and information, and lack of finance for key SDG 6 targets.

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CHAPTER 1

INTRODUCTION

The 2022 Africa Water Policy Report aims to support African countries in their efforts to achieve better water outcomes. This Report is derived from and reflects the opinions, perspectives and experience of Ministers, agency heads, senior officials, and others whose job it is to make difficult decisions on water management in their respective countries. These are the 'national water leaders' described in this report.

These opinions, perspectives and experiences were obtained from a comprehensive survey, the 2021 Global Water Leaders Survey, open to national water leaders of all United Nations member States in 2021. Overall, 127 national water leaders participated from 88 countries of all regions with combined populations of 6 billion, around 75% of the global population.

In Africa, 33 survey responses were received from national water leaders of 26 of the 55 African Union member States, with 67% of the Africa population. Approximately three quarters (19) of these countries are classified as being of 'low water stress' and one quarter (7) of 'some water stress' (see Appendix). 19 responses were from Ministers.

This Report collates the survey results across all of these countries with responses to some questions broken down further by water stress status. The method for processing and presenting the respondents' answers to the survey questions is explained in the Appendix. The research method used in the survey was reviewed and approved by UNSW's Human Research Ethics Committee to protect the anonymity of the respondents, including their national affiliation, and to ensure compliance with ethical standards.

The survey was in three parts, asking about: (1) water management risks and challenges; (2) Sustainable Development Goal 6 water targets and the SDG 6 Global Acceleration Framework; and (3) groundwater issues. This Report is structured accordingly, providing aggregate survey outcomes under each topic, broken down by water stress status where that is most relevant.

This Report reflects the perspectives and opinions of the survey respondents in 2021. Water Policy Group intends to repeat the global survey regularly, to discover how attitudes to these matters change over time.



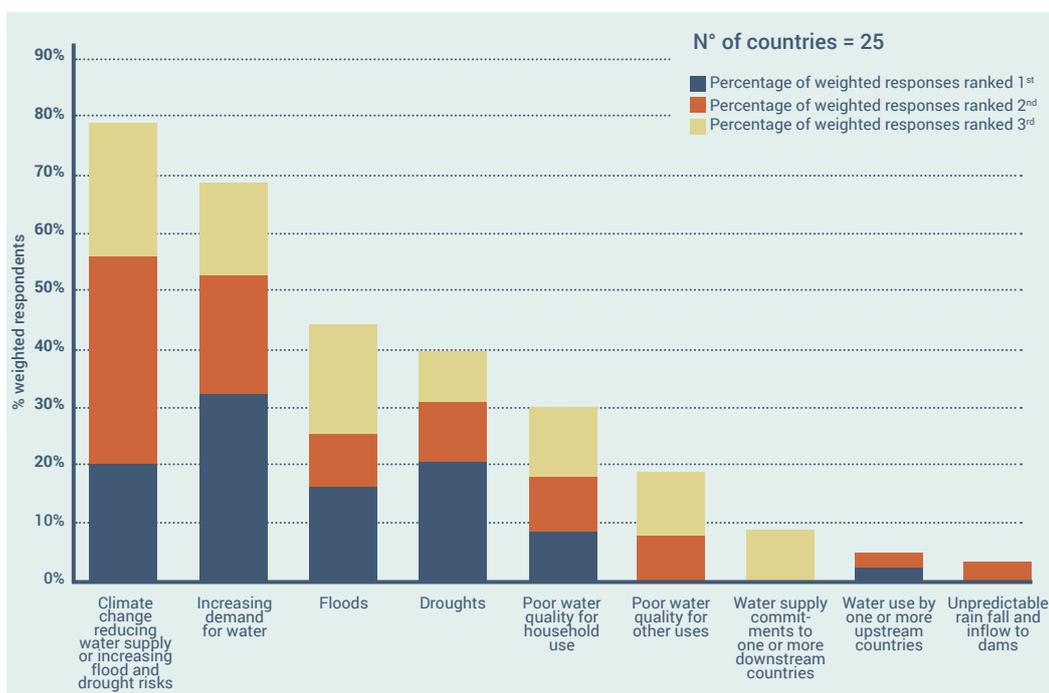
Women and young village girls collect water from a rain water pool in Gayo Village, Ethiopia. © Shutterstock.

CHAPTER 2 PERCEPTIONS OF RISKS AND CHALLENGES

WATER MANAGEMENT RISKS

National water leaders were asked to select at least three risks they believe pose the biggest threat to sustaining or achieving good water management in their country and to rank them in order of importance. These 'risks' are matters that are generally outside the immediate control of governments.

Fig 2.1: Risks to achieving good water management for surveyed countries in Africa Region

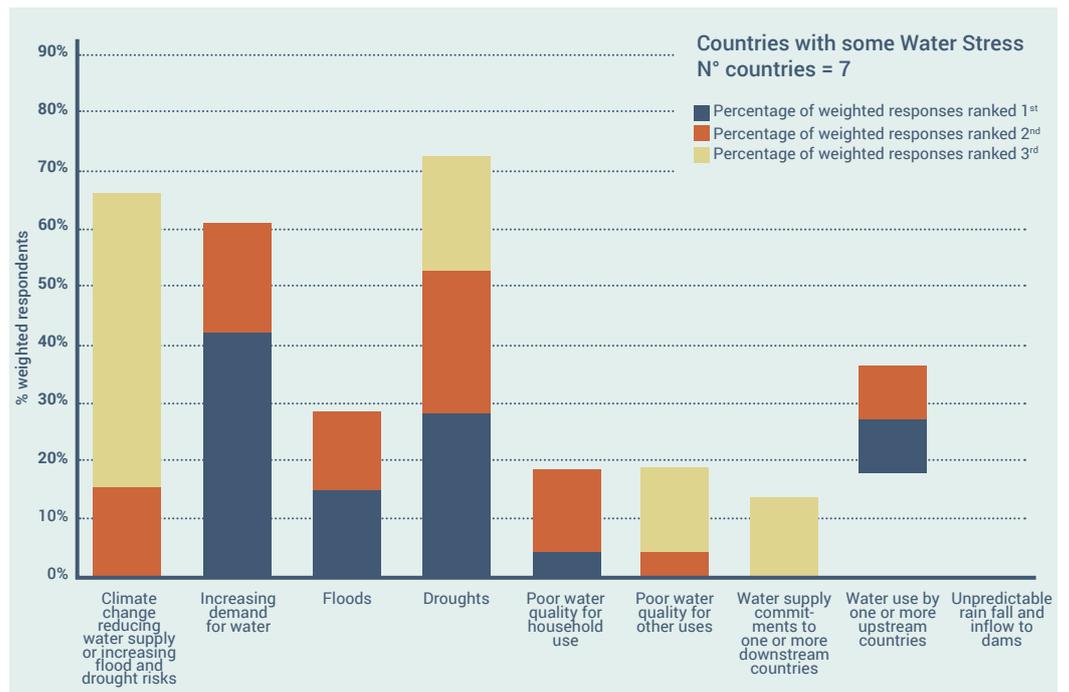
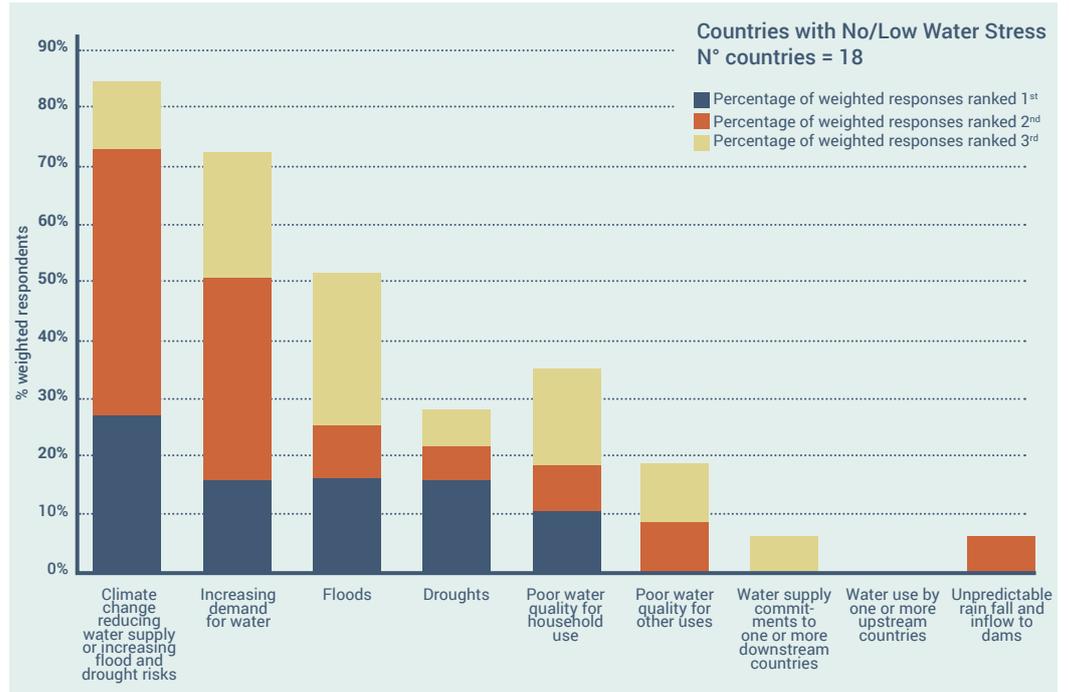


MINISTER PERSPECTIVES

A former (in the past 5 years) national government Minister describes risks:

"Drought constitutes the most important risk for [my country]. It has a huge impact on the economy and employment."

Fig 2.2: Risks to achieving good water management in African surveyed countries by Water Stress



MINISTER PERSPECTIVES

A former (in the past 5 years) national government Minister says what caused him or her to feel constrained in achieving better water outcomes for their country included: *“...(lack of) convergence between sectoral policies especially agriculture”*.

Increasing demand for water was the highest ‘first ranked’ risk. When ‘top two’ and ‘top three’ risks are counted, ‘Climate change reducing water supply or increasing flood and drought risks’ ranks highest for the most countries (a ‘top three’ risk for 80 per cent), with floods and droughts also ranking highly as separate risks. For water stressed countries, the immediate issues of increasing demand for water and drought appear to be of most concern with climate change also ranking highly as a second or third risk.

This has strong resonance with the recent discussions at the African Union as well as the 6th AU-EU Summit as well as the Forum on China-Africa Cooperation (FOCAC) 2021 with climate change and resource scarcity taking centre-stage.

Poor household water quality is ranked in the top three risks for 30% of the surveyed countries. Other water quality issues, unpredictable rainfall and inflows, and cross-border water management issues rank as 'top three' risks for the fewest countries.

WATER MANAGEMENT CHALLENGES

National water leaders were asked to identify which they think are the greatest challenges to maintaining or achieving good water management in their country and to rank them in order of importance. These 'challenges' are issues largely of a policy and administrative nature within the control of governments.

Fig 2.3: Challenges to achieving good water management for all surveyed countries in Africa

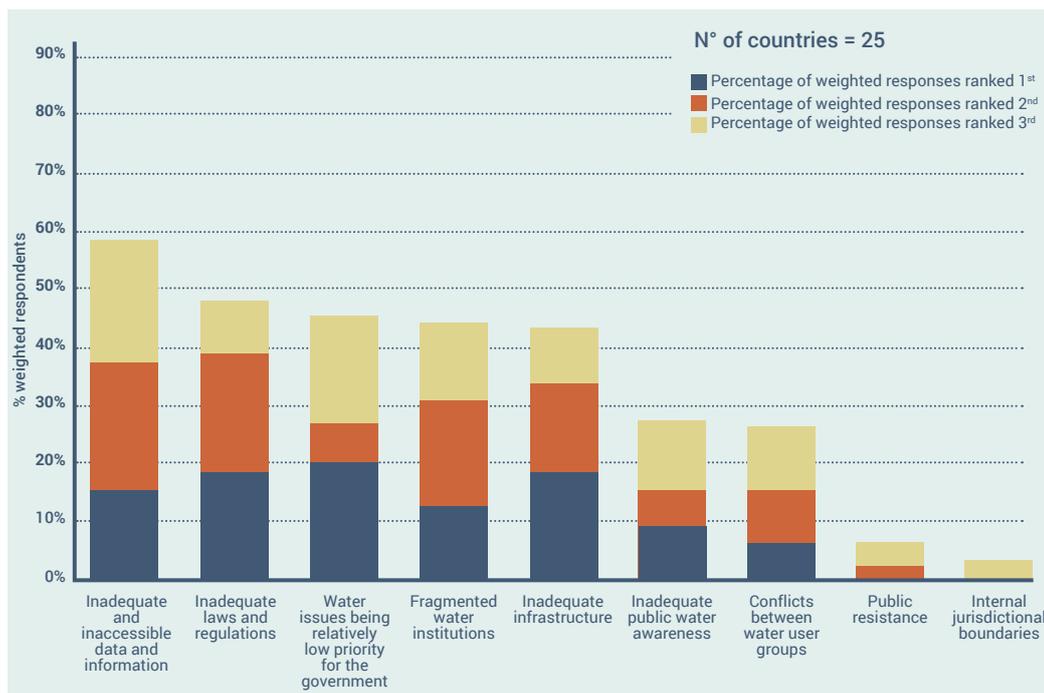


Fig 2.4: Challenges to achieving good water management in African surveyed countries reported by Water Stress

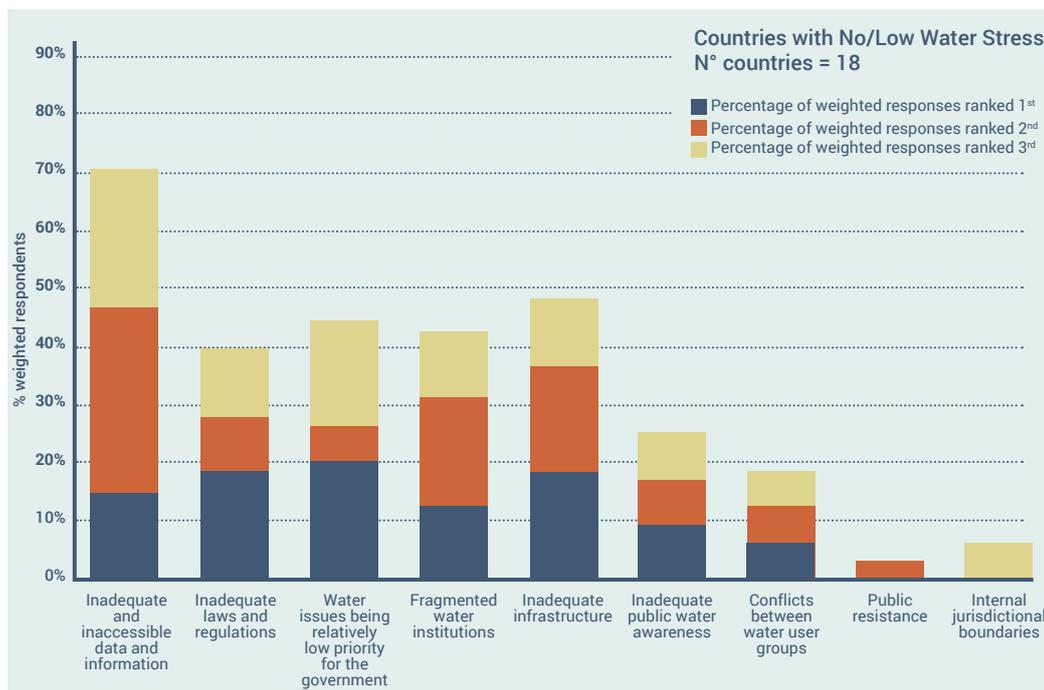
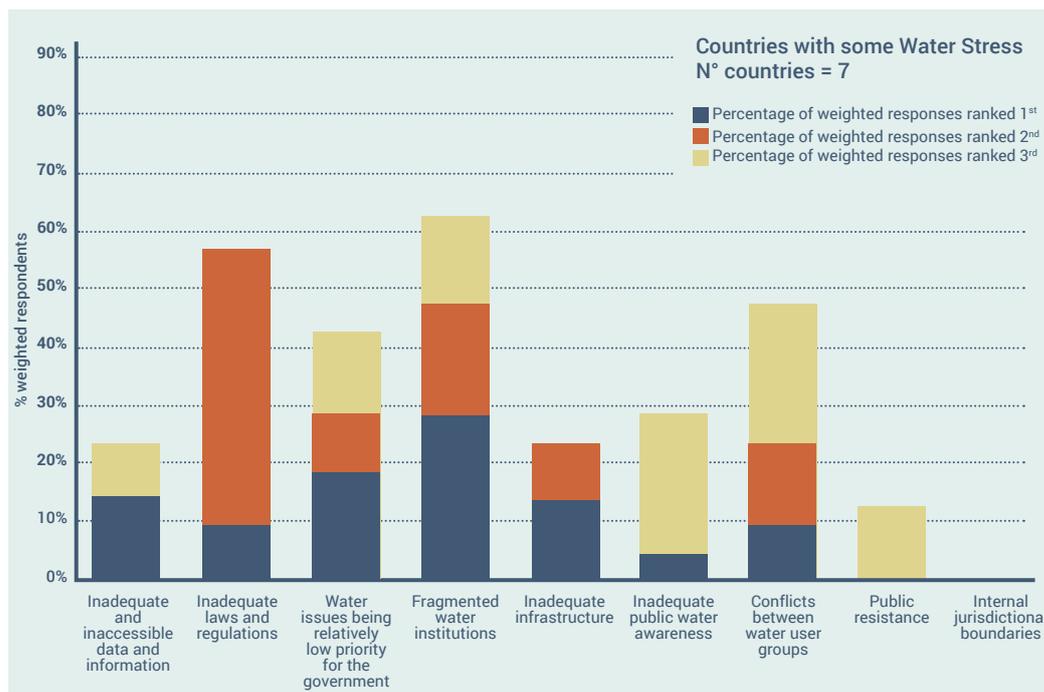


Fig 2.4: Challenges to achieving good water management in African surveyed countries reported by Water Stress



When only the first ranked challenge is considered, 'water issues being a relatively low priority for the government', 'inadequate laws and regulations' and 'inadequate infrastructure' are the most often identified challenges. When the 'top two' and 'top three' ranked challenges are considered, 'inadequate and inaccessible data and information' and 'fragmented water institutions' also rank as the most common challenges. The other listed challenges rank as 'top three' for a similar number of countries except for 'public resistance' and 'internal jurisdictional boundaries' which are of concern in the fewest countries.

In the case of water stressed countries, 'fragmented water institutions' is the highest ranked 'top three' challenge, followed by 'inadequate laws and regulations', and 'conflict between water user groups'.

THE IMPACT OF COVID-19

The COVID-19 pandemic has resulted in unprecedented levels of investment (and debt) in many countries as they strive to achieve both public health and economic development outcomes. There have been many calls to direct some of this increased investment to fast-track new water infrastructure - particularly in the areas of safe drinking water and sanitation - and ultimately accelerate the achievement of SDG 6. The survey focused on how the pandemic had affected water management among countries and how governments had responded to this challenge.

COVID-19 has increased government prioritisation of water management in Africa.

Asked whether the COVID-19 pandemic has caused their government to be more concerned or less concerned about water issues, national water leaders of a majority (56%) of the surveyed countries consider it has made the government to be more concerned, and for 18% less concerned. For 26% they think there has been no change.

Asked how the pandemic has affected their priorities in regard to drinking water services and sanitation, national water leaders of a clear majority (72%) of surveyed countries in Africa agreed that these issues have become more urgent, compared to 24% that disagreed while 4% that were not sure.

MINISTER PERSPECTIVES

A serving national government minister says: "Due to the Global COVID-19 pandemic, ... the government along with other key WASH sector actors mobilized more resources for WASH infrastructure development, ensured access to WASH at vulnerable sites such as hospitals, schools, prisoners area and other

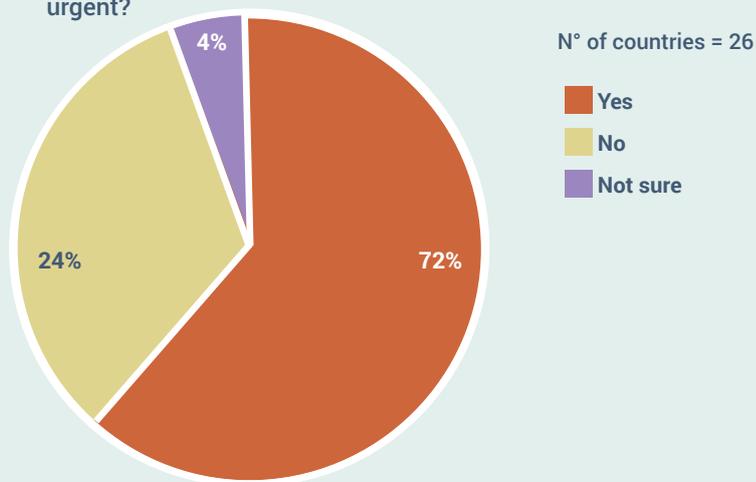


A gentleman washes his hands under running water while wearing mask for protection. © Shutterstock.

This is an important proxy indicator of the water sector's ability to ensure national resilience to extreme events like the COVID-19 pandemic on the one hand, but also serves as an indicator of vulnerability to other disease burdens that rely on clean and safe water access for both treatment and prevention.

When asked if the impact of the pandemic had made infrastructure more urgent, national water leaders of a majority (57%) of surveyed countries in Africa agreed that infrastructure has become more urgent, compared to 29% that disagreed and 13% that were not sure.

Fig 2.5: Has the COVID-19 pandemic made drinking water services and sanitation more urgent?



Asked whether COVID-19 has changed government attention to achieving water sector improvements, national water leaders of most (59%) of the surveyed countries consider there has been more attention. For 41% of the surveyed countries, they consider there has been no change.



Hippopotamuses in the water
in Tanzania. © Shutterstock.

CHAPTER 3

ACHIEVING

GLOBAL GOALS

In 2015, the United Nations General Assembly adopted Transforming our World: the 2030 Agenda for Sustainable Development ('Agenda 2030'), embodying 17 Sustainable Development Goals (SDGs) to be achieved by all countries by 2030. Water and sanitation goals are the subject of SDG 6 'Ensure availability and sustainable management of water and sanitation for all' which has eight water management targets (Box 1):

Box 1: SDG 6 Targets

Target 6.1: By 2030, achieve universal and equitable access to safe and affordable drinking water for all.

Target 6.2: By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.

Target 6.3: By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.

Target 6.4: By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.

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

Target 6.6: By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.

Target 6a: By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies.

Target 6b: Support and strengthen the participation of local communities in improving water and sanitation management.

The United Nations has reported many countries are not on track to achieve these SDG 6 water targets and some are regressing. Overall, the [United Nations reports Africa¹](#) is the most challenged in its effort in making progress towards achieving the SDG 6 (with only 30% of the population using a safely managed drinking water service compared with 74% globally); wastewater treatment (with 28% of domestic wastewater safely treated compared with 56% globally); water use efficiency (with \$13/m³ value added from the use of water by people and the economy compared with \$19/m³ globally) and integrated water resources management (with a 46% degree of implementation compared with 54% globally).

The New Partnership for Africa's Development Second Continental Report on the Implementation of Agenda 2063 ([NEPAD 2022](#)) also puts the achievement level for access to safe drinking water to 64% as of 2021, up from 55% in 2013, but significantly behind the 2023 target of 98%, and the 2021 expected level of 97%. The same report cites commendable progress for another water-related target of Agenda 63, 'proportion of terrestrial and inland water areas preserved', with an increase from 13.8% in 2013 to 20.2% in 2021, well above the 2023 target of 17%.

Recognising that 'business as usual' was not good enough to achieve SDG 6, the United Nations adopted the SDG 6 Global Acceleration Framework (GAF) in 2020 to focus the in-country water and sanitation work of all UN agencies on SDG 6 outcomes and five 'accelerators' to expedite progress (Box 2).

The 2021 Water Leaders Survey sought the perspectives of national water leaders on what they see as the main issues in achieving each of the SDG 6 'water targets' within their country. All the targets were explored except 6.2, due to 'sanitation and hygiene' involving issues going beyond the mandate of many of the water leaders surveyed. In the case of target 6.4, the 'water-use efficiency' and 'water scarcity' elements were subject to separate questions. In the case of target 6.5, the 'integrated water resources management' and 'transboundary cooperation' elements were subject to separate questions. The Survey sought to determine their views on the relative difficulty of achieving these targets and for those that are the most challenging to achieve, and the reasons why they are so difficult, framed in the terms of the GAF accelerators. This is aimed at a better understanding of the potential usefulness of each accelerator for each SDG6 target.

Box 2: United Nations Global Acceleration framework 'accelerators'

1. **Financing.** Optimized financing is essential to get resources behind country plans.
2. **Data and information.** Data and information targets resources and measures progress.
3. **Capacity development.** A better-skilled workforce improves service levels and increases job creation and retention in the water sector.
4. **Innovation.** New, smart practices and technologies will improve water and sanitation resources management and service delivery.
5. **Governance.** Collaboration across boundaries and sectors will make SDG 6 everyone's business.

www.unwater.org/sdg6-action-space

1. For the UN Statistics Division SDG regional grouping of Sub-Saharan Africa.

MOST SDG 6 WATER TARGETS ARE VERY DIFFICULT TO ACHIEVE IN AFRICA

Only two of the eight SDG 6 water targets surveyed are considered either 'achieved' or 'not difficult to achieve' by national water leaders of more than 50% of surveyed countries of Africa - these are 'transboundary cooperation' and 'participation'.

The remaining six SDG 6 targets are all considered to be either 'challenging' or 'impossible' to achieve for the majority of surveyed countries. Of these, the target on protecting and restoring water dependent ecosystems is considered to be either 'challenging' or 'impossible' to achieve for largest proportion (79%) of the surveyed countries, closely followed by the targets on drinking water (74%), water quality (72%), water use efficiency (69%), and water scarcity (69%).

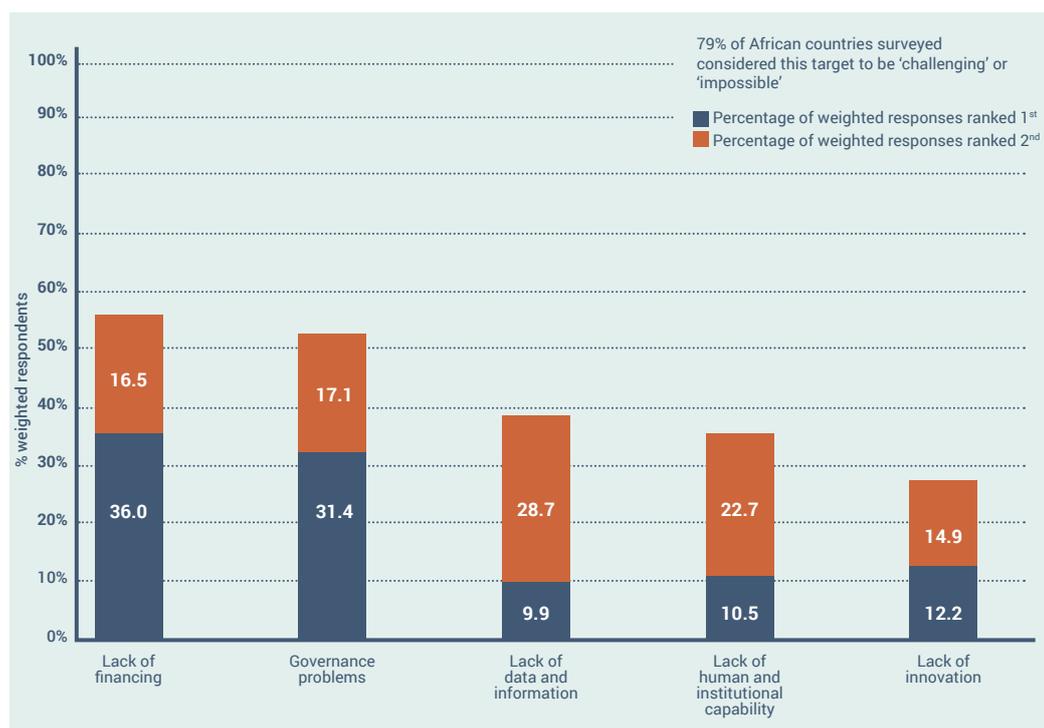
WHY SDG 6 TARGETS ARE NOT BEING ACHIEVED: THE ROLE OF THE 'ACCELERATORS'

National water leaders were asked why it is so difficult to achieve each SDG 6 target they rated as 'impossible' or 'challenging' for their country, ranking reasons based on the five SDG 6 accelerators (listed on page 18, Box 2). This question aimed to discern which of the accelerators were likely to be the most (and least) useful for countries in achieving each target. The sections below show the outcomes of this for each of the SDG 6 targets.

ECOSYSTEMS

For the 79% of surveyed countries where 'protecting and restoring water-related ecosystems' is considered to be an 'impossible' or 'challenging' target, the most frequent 'first-ranked' reason is 'lack of financing'. The 'top two' most cited reasons are 'lack of financing' and 'governance problems'.

Fig 3.1: Top two reasons for SDG 6 Target 'Protecting and restoring water-related ecosystems' being rated as 'challenging' or 'impossible'



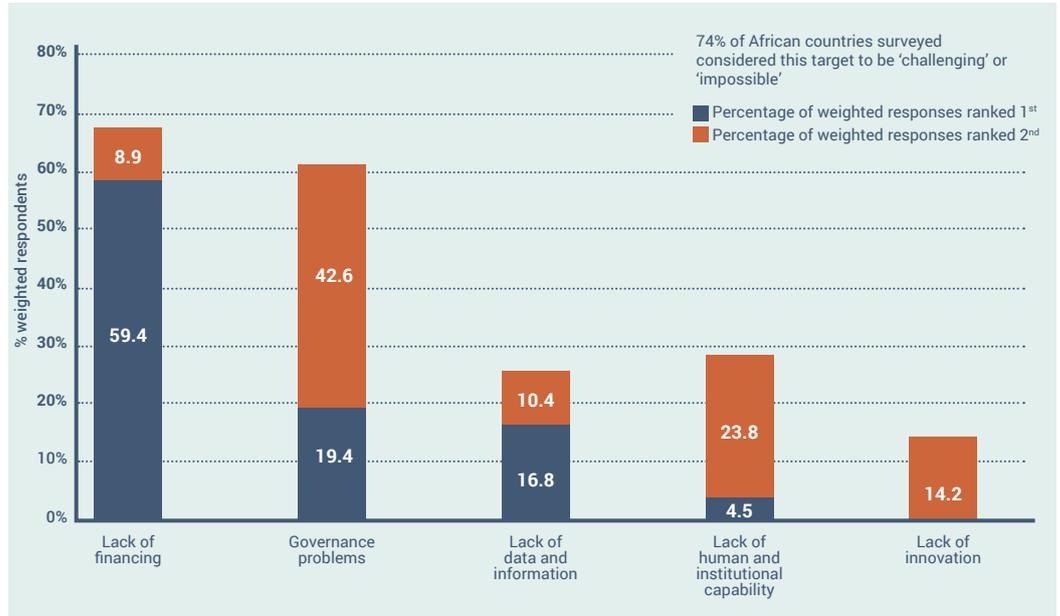
MINISTER PERSPECTIVES

A serving national government Minister says: *“The Major Challenge in achieving the SDG WASH Goals (are) the Finance, technical human and institutional capacity particular at sub-regional, district and village level. Soaring prices of construction materials and imported goods highly affected the sector”.*

DRINKING WATER

For the 74% of surveyed countries where ‘safe and affordable drinking water for all’ is considered to be an ‘impossible’ or ‘challenging’ target, the most frequent ‘first-ranked’ reason for this is ‘lack of financing’. The ‘top two’ most cited reasons are ‘lack of financing’ and ‘governance problems’, with other reasons cited as ‘top two’ much less often.

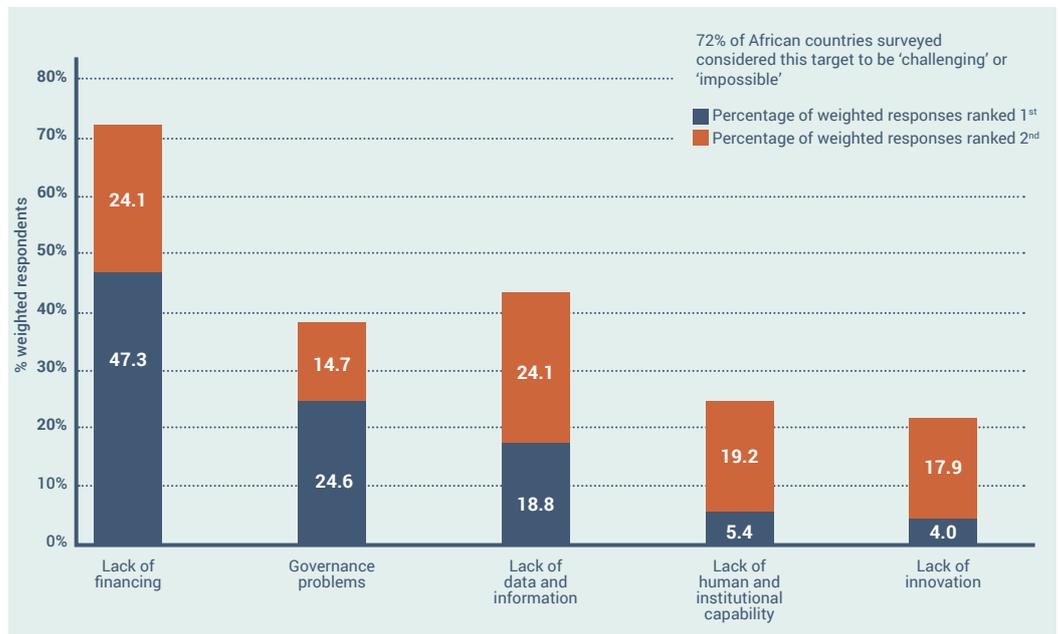
Fig 3.2: Top two reasons for SDG 6 Target ‘Providing safe and affordable drinking water’ being rated as ‘challenging’ or ‘impossible’



WATER QUALITY

For 72% of surveyed countries where ‘improved water quality’ is considered to be an ‘impossible’ or ‘challenging’ target, the most frequent ‘first-ranked’ reason for this is ‘lack of financing’. The ‘top two’ most cited reasons are ‘lack of financing’ with ‘governance problems’ and ‘lack of data and information’ cited with similar frequency.

Fig 3.3: Top two reasons for SDG 6 Target ‘Improving water quality’ being rated as ‘challenging’ or ‘impossible’



MINISTER PERSPECTIVES

A serving national government Minister says: *“Most of the WASH infrastructures old and damaged as a result high level of non-revenue water is observed in the urban premises. Thus, replacing the same by adequate structure to increase water -use efficiency requires significant resources/Finance.”*

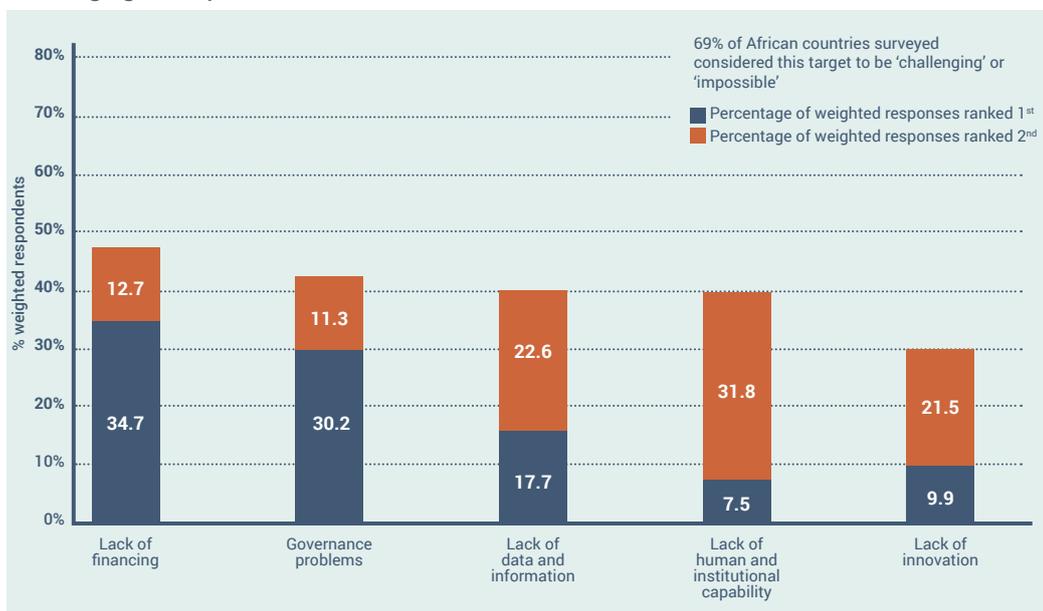


Irrigation canal by the Nile River, Egypt. © Shutterstock.

WATER USE EFFICIENCY

For the 69% of surveyed countries where ‘improved water use efficiency’ is considered to be an ‘impossible’ or ‘challenging’ target, the most frequent ‘first-ranked’ reason is ‘lack of financing’. The ‘top two’ most cited reasons are ‘lack of financing’ and ‘governance problems’, with ‘lack of data and information’ and ‘lack of capability cited with similar frequency.

Fig 3.4: Top two reasons for SDG 6 Target ‘Increasing water use efficiency’ being rated as ‘challenging’ or ‘impossible’



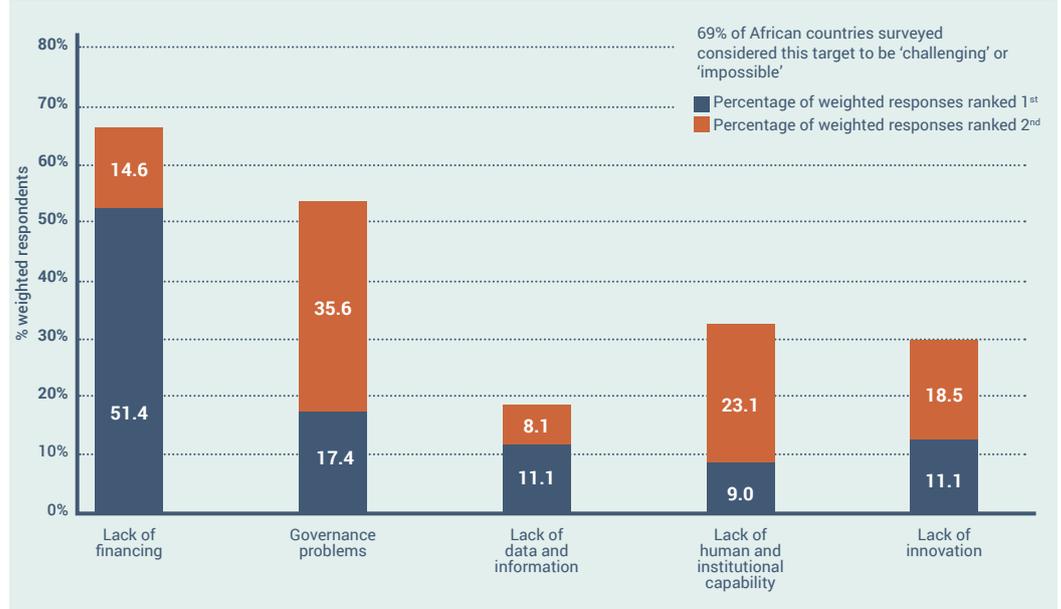
MINISTER PERSPECTIVES

A serving national government Minister says: “Climate induced impacts highly endangered our efforts towards water supply and sanitation services as combating the same demands significant resources. Secondly, under scattered rural settlement condition, the per capita cost of investment is quite high.”

WATER SCARCITY

For 69% of surveyed countries where ‘substantially reducing the number of people suffering from water scarcity’ is considered to be an ‘impossible’ or ‘challenging’ target, the most frequent ‘first-ranked’ reason is ‘lack of financing’. The ‘top two’ most cited reasons are ‘lack of financing’ and ‘governance problems’, with other reasons cited as ‘top two’ much less often.

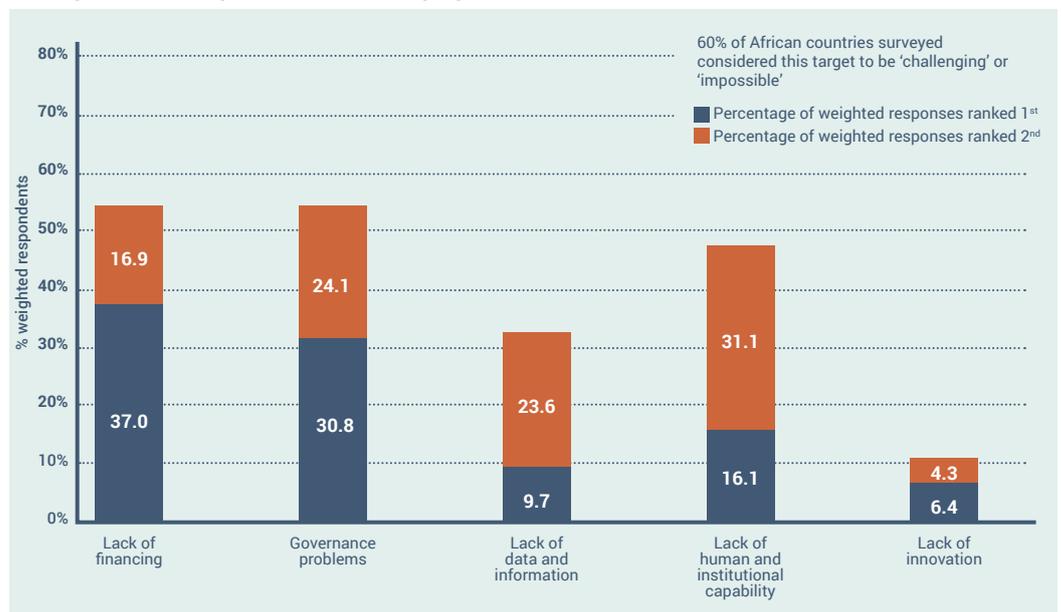
Fig 3.5: Top two reasons for SDG 6 Target ‘Reducing water scarcity’ being rated as ‘challenging’ or ‘impossible’



INTEGRATED WATER RESOURCES MANAGEMENT

For the 60% of surveyed countries where ‘implementing integrated water resources management’ is considered to be an ‘impossible’ or ‘challenging’ target, the most frequent ‘first-ranked’ reason is ‘lack of financing’. The ‘top two’ most cited reasons are ‘lack of financing’ and ‘governance problems’, closely followed by ‘lack of capability’.

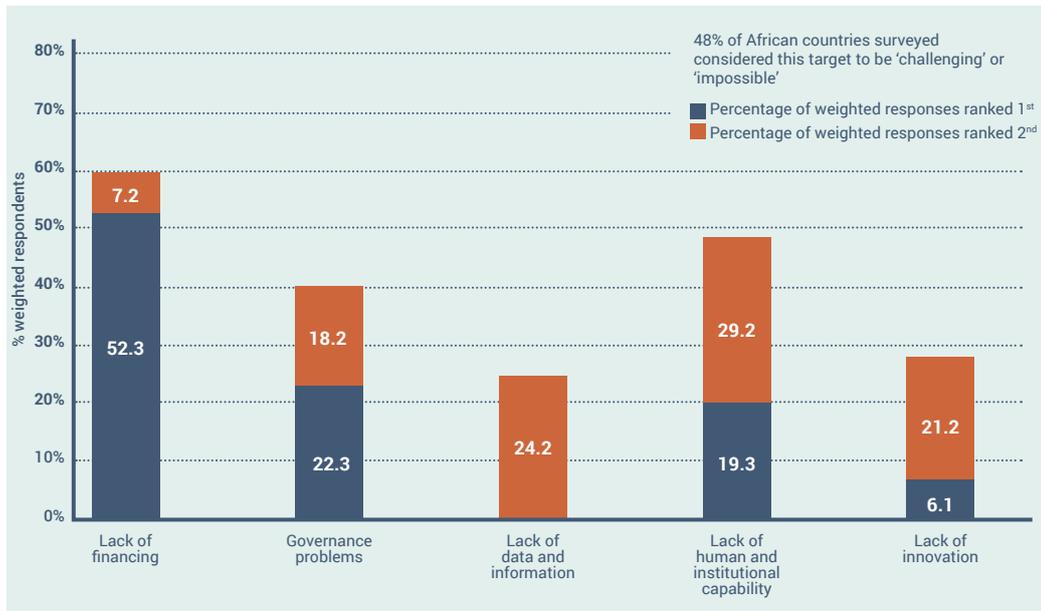
Fig 3.6: Top two reasons for SDG 6 Target ‘Implementing integrated water resource management’ being rated as ‘challenging’ or ‘impossible’



PARTICIPATION OF LOCAL COMMUNITIES

Less than half of surveyed countries considered that ‘supporting and strengthening the participation of local communities in water-related policy matters’ is an ‘impossible’ or ‘challenging’ target (48%). For these countries, the most frequent ‘first-ranked’ reason is ‘lack of financing’. The ‘top two’ most cited reasons are ‘lack of financing’ and ‘lack of capability’.

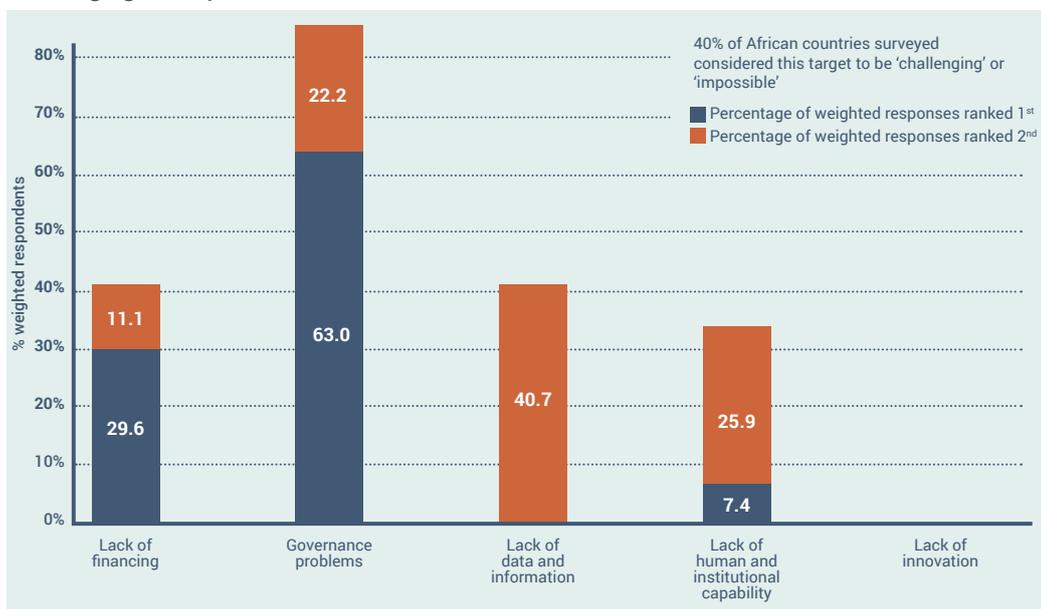
Fig 3.7: Top two reasons for SDG 6 Target ‘Strengthening local participation’ being rated as ‘challenging’ or ‘impossible’



TRANSBOUNDARY COOPERATION

Less than half of surveyed countries considered ‘transboundary water cooperation with your neighbors’ to be an ‘impossible’ or ‘challenging’ target (40%). In these countries, ‘governance problems’ was clearly the key issue – ranked as the most frequent ‘first-ranked’ reason by 63% of relevant countries and in the top two by more than 80%.

Fig 3.8: Top two reasons for SDG 6 Target ‘Transboundary water cooperation’ being rated as ‘challenging’ or ‘impossible’





An African woman with a bowl of water.
© Freepik.

DEVELOPMENT ASSISTANCE

Respondents of 20 African countries advised their countries are recipients of development assistance. Respondents of three countries advised their countries are providers of development assistance.

When asked whether international cooperation and capacity-building support to developing countries in water and sanitation related activities and programmes is adequate, respondents from the majority (57%) of countries consider support to be not adequate,

while the remainder consider support to be inadequate. Views on this were quite firm, with no respondents being 'not sure'.

When asked why it is challenging to expand international cooperation and capacity-building support for water and sanitation-related activities and programmes in their country, national water leaders in the majority of countries cite 'lack of financing' closely followed by 'governance problems'. These are the 'top two' reasons for over 50% of countries. The next ranked 'top two' reason is 'lack of human and institutional capability' (32% of countries).

Table 1: Top two reasons for SDG 6.6a (international cooperation) being rated 'challenging' or 'impossible'

All countries (n = 19)	Reasons why is it so challenging to expand international cooperation and capacity-building support for water- and sanitation- related activities and programmes in your country?				
	Lack of Financing	Lack of information	Lack of Capability	Lack of Innovation	Governance Problems
No 1 reason (% of weighted responses)	39.5%	0.0%	11.2%	10.5%	33.5%
No 2 reason (% of weighted responses)	20.8%	19.3%	19.3%	15.1%	20.2%
Top two reasons	60.3%	19.3%	30.5%	25.6%	53.7%

OVERALL CONCLUSIONS ON THE UNITED NATIONS ACCELERATORS

The table below summarises the top two ranked reasons for each target being 'impossible' or 'challenging' across all the SDG 6 targets. A clear message is that the inter-related issues of 'lack of financing' and 'governance problems' are the key issues across all of the SDG 6 targets as well as being considered to be the key factors affecting the expansion of the international assistance for WASH programs.

Table 2: Ranked Reasons for considering SDG 6 Targets and expanding development assistance to be challenging. Rankings are based on the percentage of countries that nominated the issue in their top two most challenging reasons.

SDG 6 Target	Considered 'impossible or challenging' (by % of 26 countries surveyed)	Ranked reasons for considering SDG 6 target to be impossible or challenging				
		Lack of financing	Governance problems	Lack of information	Lack of capability	Lack of innovation
Protecting/restoring water-dependent ecosystems	79%	1	2	3	4	5
Safe and affordable drinking water	74%	1	2	3	3	5
Improved water quality	72%	1	3	2	4	5
Increasing water use efficiency	69%	1	2	3	3	5
Impact of water scarcity	69%	1	2	5	3	4
Implementing IWRM	60%	2	1	4	3	4
Strengthening local participation	48%	1	3	5	2	4
Transboundary cooperation	40%	2	1	2	4	-
Development assistance	No of countries	Ranked reasons why expanding international support for WASH programs is considered challenging				



Alone well in the Sahara
Desert, Morocco.
© Shutterstock.

CHAPTER 4

GROUNDWATER

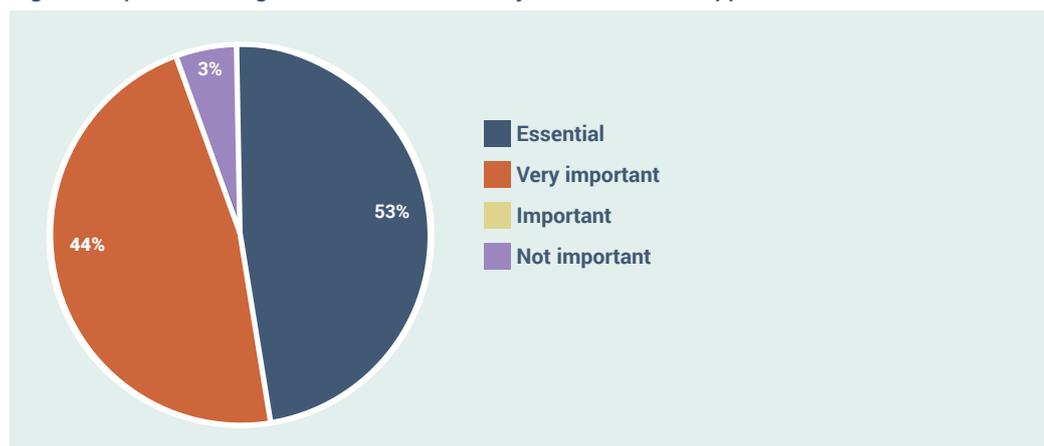
The theme for United Nations World Water Day 2022 and the 2022 World Water Development Report is 'Groundwater: Making the Invisible Visible'. This Report shares the perspectives of national water leaders of Africa on what they see as the main issues in managing groundwater at the national level.

National water leaders have given their perspectives on the importance of groundwater to their country's future water supply, the sustainability of their country's groundwater use, the relative difficulty for their country to achieve SDG 6 targets in relation to groundwater, and constraints in improving groundwater management in their country, including the adequacy of groundwater governance arrangements.

■ IMPORTANCE OF GROUNDWATER TO FUTURE WATER SUPPLY

National water leaders of almost all (97%) of surveyed countries in Africa consider groundwater to be 'very important' or 'essential' to the future of their country's water supply. For over half, groundwater is considered 'essential'.

Fig 4.1: Importance of groundwater to a country's future water supplies



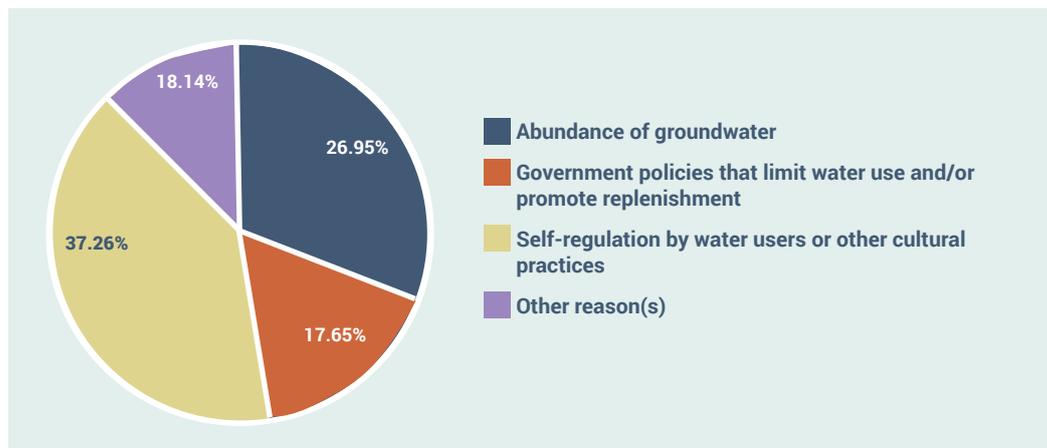
■ SUSTAINABILITY OF GROUNDWATER USE

National water leaders of only 25% of the surveyed countries in Africa consider their groundwater is being used sustainably in most places. For 20% of the countries, they consider that groundwater is not being managed sustainably anywhere in their countries, and for 46% of the countries, that groundwater is being managed adequately somewhere in their countries, some of the time only. For 10% of surveyed countries, their national water leaders say they do not have enough information to answer the question about where in their country water is managed sustainably.

For the 75% of surveyed countries in Africa where national water leaders consider there is at least some sustainable groundwater use, the areas with the most sustainable use are considered to be the poorer areas, including both poorer rural settings (38%) as well as poorer urban and peri-urban areas (35%). The areas with the least sustainable use are considered to be the prosperous rural areas (6%). Prosperous urban and peri urban areas are considered to have the most sustainable groundwater use in 21% of the surveyed countries.

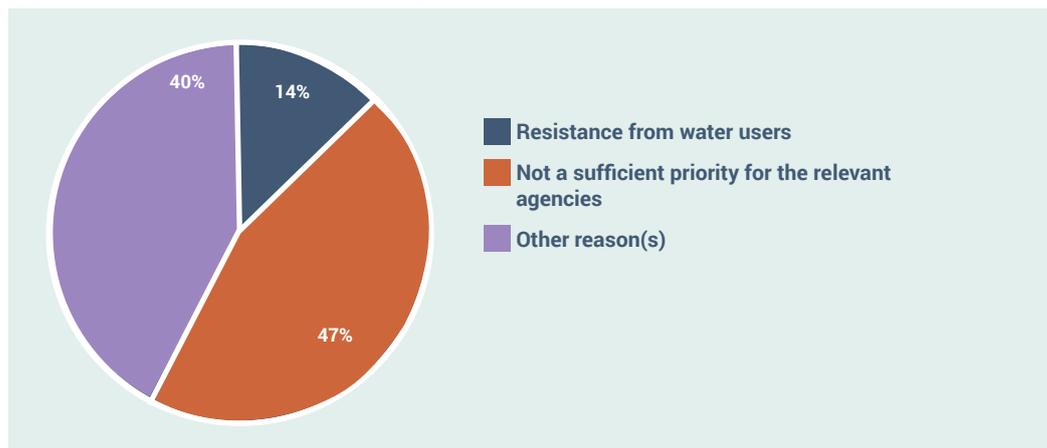
Where groundwater use is considered to be sustainable, the most often cited reason for this is 'self-regulation by water users or other cultural practices' (37%). This may reflect a preference of governments to leave responsibility for groundwater management at the local level and with groundwater users.

Fig 4.2: Reasons given for sustainable groundwater use



For the 20% of the countries of Africa considered by their national water leaders to lack sustainable water use anywhere, nearly half (47%) consider this is due to 'not a sufficient priority for the relevant agencies'.

Fig 4.3: Reasons for non-sustainable groundwater use



SDG 6 TARGETS IN RELATION TO GROUNDWATER

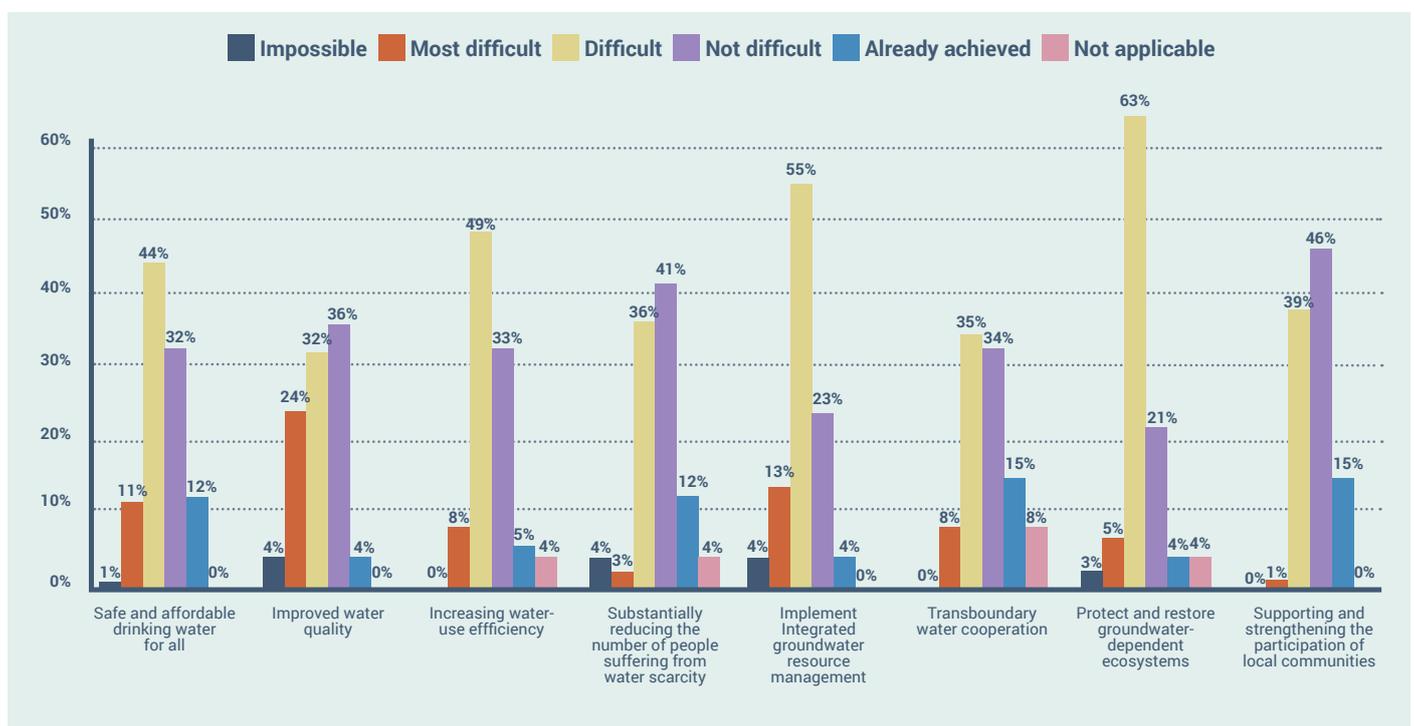
National water leaders were asked for their perception of the relative difficulty of achieving the 'SDG 6 targets' relating to groundwater in their country, specifically concerning drinking water, water quality, water-use efficiency, water scarcity, integrated water resources management, groundwater dependent ecosystems, transboundary water and local participation.



Water flows from a pipe into a waterway. © Freepik.

For only one of the surveyed countries are the targets considered to be 'impossible' to achieve when considering national groundwater policy. However, across the majority of target areas, the most common weighted response is the middle choice suggesting that overall countries find these targets 'somewhat difficult' in relation to groundwater. This does not apply to three targets – 'participation of local communities', 'transboundary cooperation' and 'reducing the number of people suffering from water scarcity'. For these, the most common weighted response is 'not difficult.' The only target rated as either 'impossible' or 'most difficult' by more than 25% of weighted responses is 'improved water quality' (28%). As was the case in considering water resources as a whole, the target area considered to be difficult for most countries is that on protecting and restoring ecosystems.

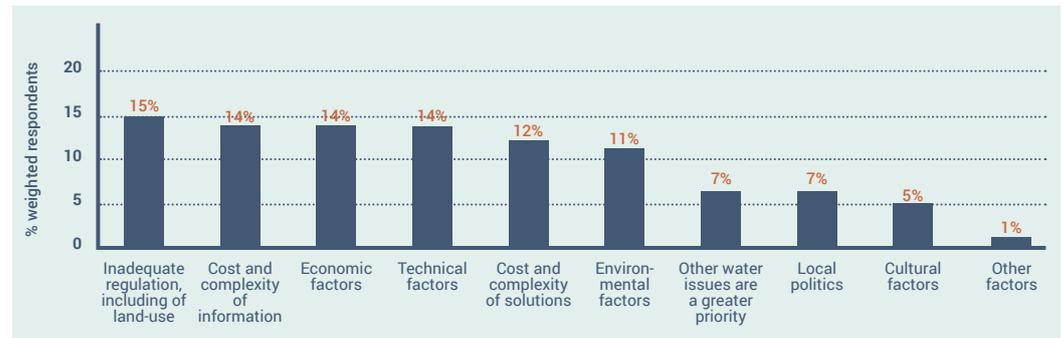
Fig 4.4: Difficulty achieving SDG 6 water targets in relation to groundwater: proportion of all surveyed countries



■ CONSTRAINTS TO IMPROVING GROUNDWATER MANAGEMENT AND THE ADEQUACY OF GROUNDWATER GOVERNANCE ARRANGEMENTS

When asked about the five main ‘constraints and impediments’ to sound groundwater management (from nine listed), inadequate regulation (15% of countries), ‘economic factors’ (14%), and ‘cost and complexity of information’ (14%) are the most commonly cited. The constraint that features the least in the ‘top five’ is ‘cultural factors’ (5%).

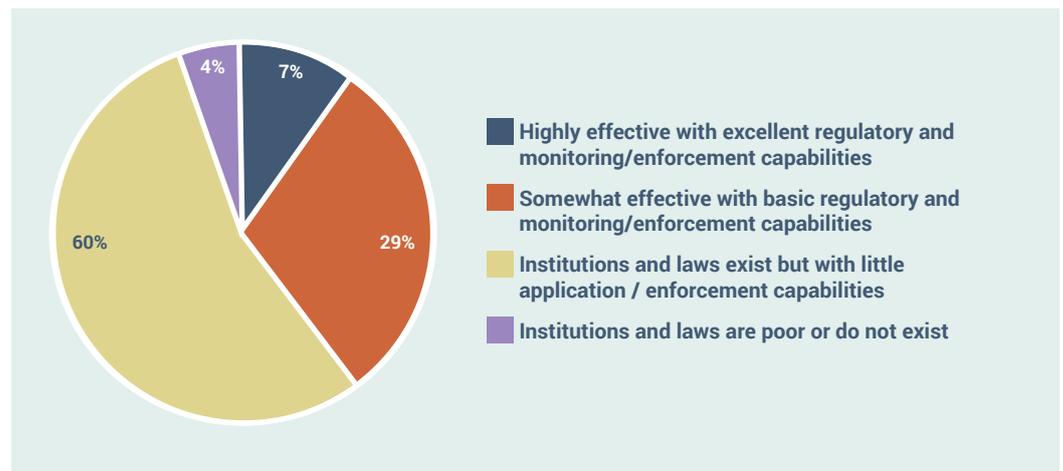
Fig 4.5: Constraints to improving how groundwater is managed: proportion of all surveyed countries



When asked whether groundwater outcomes are well enough integrated into national water management institutions and plans, responses are positive overall (yes 54%; no 46%).

Opinion is more clearly divided on the effectiveness of the institutions and laws that govern groundwater resources. For very few (7%) of the surveyed countries do national water leaders say their institutions and laws are ‘highly effective with excellent regulatory and monitoring/enforcement capabilities.’ For 89% of countries, they say their institutions and laws are ‘somewhat effective with basic capabilities’ (29%) or have ‘little application and enforcement capability’ (60%).

Fig 4.6: Are institutions and laws governing groundwater resources effective?



When asked about whether groundwater resources planning takes into account climate change scenarios, national water leaders of only one of the surveyed countries are confident this is occurring everywhere in the country. For around 71% of countries, they consider this is occurring in most (20%) or some (51%) parts of the country. For 12% of the surveyed countries, national water leaders consider groundwater resources planning never adequately takes climate change scenarios into account.



A child taking water from a well in Chad. © Shutterstock



Dam wall and surrounding landscape at Katse Dam in Lesotho. © Shutterstock.

CHAPTER 5

GLOBAL COMPARISONS

The results of this report can be compared with the results reported in the Global Water Policy Report 2021 ('global report'). Overall, the results are very similar to those reported for responses of low income countries in the global report.

Compared with the world overall,
water leaders of Africa are:

More concerned about risks of increasing demand for water.

More concerned about inadequate and inaccessible data and information.

more confident their countries are increasing attention to water
as the result of COVID-19.

More challenged by achieving Sustainable Development Goal
6 targets overall.

More concerned about 'lack of finance' for SDG 6 targets
on IWRM, ecosystems and local participation which, for the world
as a whole, 'governance problems' are rated as a higher top concern.

More concerned about the adequacy of development assistance.

More conscious of the importance of groundwater.

More reliant on self-regulation by water users or other cultural practices
for achieving groundwater sustainability.

More challenged with groundwater regulation, monitoring and enforcement.



Traditional colorful fishing boats at old port in Bizerte, Tunisia, North Africa.
© Shutterstock.

CHAPTER 6 CONCLUSIONS

This project set out to answer the question ‘why is achieving the availability and sustainable management of water for all so difficult?’ It invited the perspective of national water leaders - those with the responsibility and opportunity to achieve the best outcomes at the national level. Respondents of Africa represented 26 countries with a combined population of over 900 million people.

Ultimately readers can draw their own conclusions from this report, from how it compares with the Global Report and the further global data on the Water Policy Group website. They may use it to broaden their own outlook and understanding based on the experiences the results reveal. Water Policy Group considers the following to be particularly interesting and useful messages from the participating national water leaders of Africa.

■ WATER RISKS – DEMAND FOR WATER AND CLIMATE CHANGE

When water leaders of Africa consider the risks their country faces, for most of the surveyed countries, their greatest concern is about increasing demand for water and climate change reducing the water supply or worsening floods and droughts. More water-based disasters, all amplified by climate change, are also seen as very high risks.

■ WATER CHALLENGES – GOVERNANCE

When asked to identify the key challenges to achieving good water outcomes in their country, ‘water issues being a relatively low priority for the government’, ‘inadequate laws and regulations’, ‘inadequate infrastructure’, ‘inadequate and inaccessible data and information’ and ‘fragmented water institutions’ are the most often identified challenges in Africa. Political concerns such as public resistance to reforms, are generally seen as less challenging.



People in wooden sailboat in Ganvié, Bénin. © Pexels.

■ COVID-19 HAS INCREASED THE PRIORITY OF WATER

For most surveyed countries, national water leaders of Africa advise that the COVID-19 pandemic has made water and sanitation services more urgent for them, and their governments have given more attention to water matters.

■ SUSTAINABLE DEVELOPMENT GOALS FOR WATER SEEM OUT OF REACH FOR MANY

National water leaders of most of the surveyed countries in Africa consider all but two of the SDG 6 targets to be 'challenging' or 'impossible' to achieve. This confirms the urgency given by the United Nations to supporting member states to implement SDG 6 through the SDG 6 Global Acceleration Framework and may bring into question the realism of some of the targets.

■ FINANCING AND GOVERNANCE ARE THE KEY ACCELERATORS IN MOST COUNTRIES

The opinions of national water leaders as to why the most challenging targets were so difficult may be an indicator of the overall usefulness of each of the Global Acceleration Framework accelerators. A clear message is that lack of financing and governance

emerge as the key issues across all the SDG 6 targets, including expanding development assistance. Reasons relevant to the other three accelerators ('lack of data and information' 'human and institutional capability' and 'lack of innovation') rank as lower concerns.

■ GROUNDWATER MATTERS AND BUT IS CURRENTLY NOT BEING USED SUSTAINABLY FOR MOST

National water leaders of almost all (97%) surveyed countries consider groundwater to be at least 'important' to their country's future water supply, and over half consider groundwater to be 'essential'. Despite this message about the intrinsic importance of groundwater resources, national water leaders of only a quarter of surveyed countries believe their groundwater is being used sustainably in most locations in their countries.

For 30% of surveyed countries, national water leaders consider groundwater is not being managed sustainably anywhere or they say they do not have enough information to know.

■ SDG 6 TARGETS NOT AS DIFFICULT WITH GROUNDWATER

Overall, national water leaders of most of the surveyed countries in Africa consider the SDG 6 targets involving groundwater to be not as difficult to achieve as for water resources as a whole. With groundwater, the only targets rated as 'impossible' or 'most difficult' by the national water leaders of more than a quarter of the surveyed countries was that concerning water quality.

■ GROUNDWATER'S DIVERSE CHALLENGES

National water leaders of most of the surveyed countries identify the top constraints and impediments to sound groundwater management as inadequate regulation, economic factors, and the cost and complexity of information. As is the case with water resources as a whole, there is less concern about constraints of a more political nature.

While national water leaders of almost all the surveyed countries consider groundwater to be important, and for the majority of countries, to be sufficiently integrated into national water management plans and take into account climate change; most consider laws and regulations governing groundwater are not being applied or enforced adequately.

■ GLOBAL COMPARISON

Compared with the world overall, water leaders of Africa consider their countries to be more aware and more concerned about many of the critical water issues they face. In particular their responses suggest their countries are more concerned about increasing demand for water, and access to data and information, and have been more responsive to water matters as the result of COVID-19.

■ WRAPPING UP

Water Policy Group encourages readers of this Report to look, listen and learn from the national water leaders who have been so generous with their time in sharing their experience and perspectives and draw your own conclusions.

MINISTER PERSPECTIVES

Describing the main challenges they face, one national government Minister says "*The Most Piercing challenges are Financial and Technical capacity in the water sector, poor enforcement of available laws and regulations, Inter-Regional Conflicts (governance), Transboundary water Resources Issues, Lack of appropriate Data and Information*".



Lake during sunset in
Capetown, South Africa.
© Pexels.

APPENDIX EXPLANATORY INFORMATION

OVERVIEW

This research used qualitative and quantitative techniques to analyse alphanumeric and text responses to the 2021 Water Leaders Survey. The survey opened on 1 March 2021 and contained 26 questions covering; meta-data on the nationality and role of the respondent; water risk and challenges, including from COVID-19; issues with Sustainable Development Goal 6; and groundwater resources. The survey was made available to respondents in an on-line format through the QualtricsXM platform and in a portable document format. All responses were consolidated at the conclusion of the survey on 1 October 2021.

ETHICAL STANDARDS

To ensure the project complied with the highest standards in ethical research an application was filed with the UNSW Sydney Human Research Ethics Committee (HC200546) which operates in accordance with, and applies the criteria specified in, the Commonwealth of Australia's National Health and Medical Research Council's (NHMRC) National Statement on Ethical Conduct in Human Research¹. Approval to proceed with the research was received from the committee on the 25 August 2020. Opportunity to participate in the survey was widely promoted on social media and at meetings and conference events. Invitations were sent to Ministers and other potential respondents directly, through their staff or through official channels.

GROUNDWATER'S DIVERSE CHALLENGES

National water leaders of most of the surveyed countries identify the top constraints and impediments to sound groundwater management as inadequate regulation, economic factors, and the cost and complexity of information. As is the case with water resources as a whole, there is less concern about constraints of a more political nature.

While national water leaders of almost all the surveyed countries consider groundwater to be important, and for the majority of countries, to be sufficiently integrated into national water management plans and take into account climate change, most consider laws and regulations governing groundwater are not being applied or enforced adequately.

1. www.nhmrc.gov.au/about-us/publications/national-statement-ethical-conduct-human-research-2007-updated-2018



■ ENSURING THE ANONYMITY OF RESPONDENTS

Participation in the survey was voluntary and respondents were not asked to supply information on their name or gender. To further maintain confidentiality and encourage candid responses, meta-data on the professional status of an individual national water leader, nor their country of affiliation can be identified from the data presented in this report.

Respondents to the survey were classified based on their leadership role including as national government Minister (or equivalent) with responsibility for the water portfolio (Category 1), chief executive or equivalent of a national sector or utility (Category 2) or other positions, including leadership of civil society or industry associations (Category 3). While respondent classifications were used to weight aggregated responses from each country, the leadership status of any respondent cannot be identified from data presented in this report.

Respondents were asked to identify and select one of the 194 countries on the register of the United Nations Member States², however, the national affiliation of any respondent cannot be identified from data presented in this report.

■ DISTRIBUTION OF SURVEYED COUNTRIES

The responses were include UN member States of Africa in the geographic regions of Sub-Saharan Africa and Northern Africa and Western Asia as defined under the Standard Country or Area Codes for Statistical Use (known as M49) of the United Nations Statistics Division³. Responses were grouped according to Water stress classifications based on UN Sustainability Goals⁴ as reported by the UN Food and Agriculture Organisation⁵. This report consolidates these into two categories 'no or low stress' and 'higher stress'. The designations employed and the presentation of the material in this survey do not imply the expression of any opinion whatsoever on the part of Water Policy Group or UNSW Sydney

2. datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups

3. www.un.org/en/member-states/index.html unstats.un.org/sdgs/indicators/regional-groups

4. sdg6data.org/indicator/

5. www.fao.org/3/cb6241en/cb6241en.pdf



View fo Namib desert,
Namibia. © Freepik.

concerning the legal status of any place or concerning the delimitation of its frontiers or boundaries.

EQUAL REPRESENTATION PARTICIPATING COUNTRIES

To acknowledge and value the contribution of all respondents that completed the survey, all responses received before 1 October 2021 were included in the analysis. However, to ensure equal representation of each country's contribution, a weighting process was used to scale all the responses from each country to a value of 1.0. This was achieved by considering the 'respondent categories', reflecting their degree of seniority and influence, and assigning a fractional weight. For example, if multiple responses were received from respondents at the same category, an equal fractional weighting was applied based on the number of responses (i.e. two responses weighted 0.5 each, three responses weighted 0.33 each). In the event that multiple responses were received from respondents in different seniority categories the responses were weighted so that category one responses were weighted at twice the value of category two and category two responses were weighted at three times the value of category three (i.e. a weighting ratio of 6:3:1 for Category 1, 2 and 3).

REPRESENTATION OF RANKED RESPONSES

Selected questions were designed to identify risks and challenges faced by water leaders in areas such as general water management and progress on the SDGs. In these questions, respondents were asked to select and rank risks and challenges from most (highest) to least (lowest) priority. Again, these responses were weighted to ensure equitable contribution from all countries irrespective of the number of responses. The weighted rankings were presented in column charts, where a single column corresponded to a particular risk and the column value represents an aggregate of all the weighted rankings (from high to low) arranged from the bottom (highest) to the top (lowest) of the column. The data was presented on the same scale with each column displaying how the challenged was ranked by the respondents, weighted according to their category and with each country having the same total weight. In each case the total number of countries represented in each category was displayed on the graph to indicate sample size per question.



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