

## Background note

# Water-related risks and their implications for financial institutions in Africa

### **10th meeting of the Roundtable on Financing Water (22-23 November, Abidjan)**

This paper will inform discussions at the tenth meeting of the Roundtable on Financing Water (Abidjan, 22-23 November 2023).

The background note builds on existing literature and OECD's experience. It may not reflect the opinion of the OECD and its Member Countries nor the opinion of the African Development Bank.

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## Abstract

Water, vital for Africa's socio-economic development, faces significant challenges: including too much too little and polluted water and well as disruptions to freshwater cycles. Degradation of water resources and climate change worsen these challenges, affecting urban and rural areas alike. Economic activities are exposed to these risks, notably agriculture, manufacturing, and tourism which rely heavily on water, making them particularly vulnerable. The financial sector, through investments and insurance, is also exposed. Yet, the financial materiality of water-related risks is often overlooked in risk management practices.

This session explores the importance of identifying, understanding, and managing water-related financial risks, for safeguarding against financial shocks but also for promoting responsible investment practices. It also looks at existing financial market initiatives and regulatory guidance in Africa that contribute to enhancing the management of water-related risks within the realms of both natural and climate risk considerations

## Introduction

Water is a fundamental resource for social and economic development in Africa. As population and economic pressures intensify, the availability, quality and reliability of water resources face unprecedented challenges. Climate change exacerbates these issues in varying ways across the African continent, notably through erratic rainfall patterns, prolonged droughts and flash floods, affecting both urban centres and rural communities. Water-related risks, including too much, too little and polluted water as well as disruptions to freshwater cycles therefore pose significant challenges to sustainable development in the region.

The private sector is exposed to the economic impact of water related risks. From agriculture to manufacturing, energy production to tourism, water underpins the vitality of diverse sectors across the continent. Through the companies financed, invested in, or insured, various financial actors are also exposed to water-related risks. Increasing identification and management of water-related financial risks is therefore an important lever for mitigating exposure to these risks, but also encouraging firms to divert investment away from activities that undermine water security.

This background document discusses the importance of understanding water related risks to financial systems in Africa, looking at both risks driven by climate change and those driven by economic activities, and the material impacts that are increasingly apparent. This document also discusses the importance of increasing the financial sector's understanding of these risks both to protect to the financial sector from shocks, that at sufficiently large scale could undermine financial stability, but also as a level for better water management practices. Finally, the paper considers examples of existing financial market initiatives and regulatory guidance in Africa, that have a role in strengthening management of water-related risks.

## The financial materiality of water-related risks in Africa

### ***Water, a critical risk-driver in Africa***

Water-related climate and nature risks are embedded within key socio-economic challenges, such as poverty, food security, green energy transition, and domestic and international conflicts, as well as other environmental challenges, such as biodiversity loss. Africa is made up of diverse climates and geographic conditions, but nevertheless, the continent is highly exposed to water-related risks, and notably to droughts(GCA, 2022<sup>[1]</sup>). These risks are exacerbated by economic activities that negatively impact on the quantity and quality of water resources, as well as the increasing impacts of climate change, to which the continent is disproportionately exposed.

About two-thirds of its land classed as semi-arid or arid, and an estimated 30 African countries experience high to extremely high levels of water stress, significantly impacting agricultural productivity and food security, and 13 African countries are critically water insecure (UNU IWEH, 2023<sup>[2]</sup>). Human activities are depleting available water resources in Africa, diminishing both their quantity and quality. More than 60% of South Africa's rivers are being overexploited, with only one third of these still considered to be in good condition (Donnenfeld, Crookes and Hedden, 2018<sup>[3]</sup>). Lake Chad, once considered Africa's largest freshwater reservoir, is shrinking due to overexploitation of its water. It has diminished by 90% between the 1960s, from 26,000 square kilometres in 1963 to less than 1,500 square kilometres in 2018 (Usigbe, 2019<sup>[4]</sup>).

At the same time, water pollution is increasing across the continent, linked factors such as industrial pollution, discharge of untreated sewage, disposal of solid waste into storm drains, agricultural runoff, and leaching of liquids from landfills. Pollution from food processing waste and the presence invasive aquatic weeds also poses a significant challenge. Given the quantity and characteristics of waste discharged into water bodies, freshwater ecosystems alone are unable to breakdown pollutants and pathogens, leading to the widespread occurrences of waterborne diseases. The decline in water quality represents a significant form of resource depletion, which drives up the cost of treating water resources for usage and exacerbates water scarcity notably in cases where water cannot easily be treated (UNU IWEH, 2023<sup>[2]</sup>).

In addition, despite its low contribution to greenhouse gas emissions, Africa is disproportionately impacted by climate change, and remains the most vulnerable continent. Five African nations are amongst the top 10 most impacted countries by extreme weather conditions. These include Mozambique (ranked first), Zimbabwe (second), Malawi (fifth), South Sudan (eighth), and Niger (ninth) (Eckstein, Künzel and Schäfer, 2021<sup>[5]</sup>). Climate change is driving severe weather events, including escalating temperatures and heightened occurrences of droughts and erratic rainfall patterns. The impacts of climate change are putting increasing pressure on water systems. Lake Victoria is approximately 80% dependent on precipitation, leading to fluctuations under El Niño (wet) or La Niña (dry) years, which are more frequent and intense due to climate change (Ransom, 2021<sup>[6]</sup>). Under rising temperatures, two out of the three remaining African mountains with glaciers are projected to undergo complete deglaciation by the year 2030. Mount Kilimanjaro is anticipated to experience full deglaciation by 2040. Simultaneously, sea levels along the African continent are rising at a rate exceeding the global average, leading to heightened frequency and severity of coastal flooding, and erosion and deterioration of freshwater resources (Ransom, 2021<sup>[6]</sup>).

Water is therefore at the heart of both nature and climate crisis in Africa and these crises are also mutually reinforcing. Over-exploitation of water resources increase vulnerability to climate-related risk. In addition, degradation of wider nature further exacerbates risks and vulnerabilities to water-related risks. For example, deforestation has implications for increasing the fragility of water-related ecosystem services. Where rainfall was previously assimilated into the ecosystem, deforestation can aggravate risk of flooding or trigger landslides. In addition, deforestation can now be clearly linked with changes in evaporation and precipitation patterns, impacting rainfall across other countries (Rockström et al., 2023<sup>[7]</sup>). Studies suggest that projected future deforestation in Western and Central Africa has a strong potential to disrupt the West African monsoon (McKinsey Sustainability, 2022<sup>[8]</sup>).

At the same time, nature loss can contribute to drivers of climate change. For instance, loss of soil moisture in peatlands can lead to a release of stored greenhouse gas emissions (IUCN, 2021<sup>[9]</sup>). Africa is notably home to the largest carbon sink in the world, the Congo Basin, which absorbs more carbon than the Amazon. This means preservation of Basin forests and peatlands is vital not just for the future of Africa, but also for global efforts to tackle the effects of climate change and biodiversity loss (World Bank, 2022<sup>[10]</sup>). These interconnections underscore that water-related climate and nature risks in Africa have national, regional, but also global implications.

### ***Water-related risks already have important economic implications in Africa***

Water-related risks, which include too much, too little and polluted water, and disruption to the freshwater systems, lead to substantial socio-economic losses across various sectors in Africa. There are already many examples of the impact water-related risk on economic activities in Africa, and their implications for food insecurity, population displacement, and economic loss. In addition, changes to the quality or quantity of water resources have long-term repercussions on ecosystems and biodiversity, which in turn can impact on sectors like fisheries and eco-tourism.

Extreme weather phenomena such as rising temperatures and the increasing frequency of droughts and natural disasters are affecting lives in Africa to varying degrees across countries. Eastern and Southern Africa is particularly exposed as a large share of the population does not have access to basic water, sanitation and hygiene. In 2020, around 387 million people in lacked a basic level of drinking water service. A further 737 million lacked basic sanitation services contributing to a range of water-related diseases, including cholera and diarrheal illnesses. 811 million had limited or no access to basic hygiene services (World Bank, 2023<sup>[11]</sup>).

Agriculture's large share of GDP and employment adds to the continent's vulnerability, as do other weather-sensitive activities such as herding and fishing, with disruptive weather events leading to income losses and increased food insecurity. Water scarcity is already severely impacting agriculture, resulting in crop failures and livestock losses, as has been seen with sometimes devastating consequences in Djibouti, Eritrea, Ethiopia, Kenya, and Somalia (UNICEF, 2022<sup>[12]</sup>). The water scarcity challenge is particularly acute in Sub-Saharan Africa, where 95% of agriculture is rain-fed, and an estimated 41% of the population lives in drought-prone dry lands (Biazin et al., 2012<sup>[13]</sup>).

Many other sectors are also affected by water stress, particularly those sectors that heavily rely on water, such as energy production, and mining and materials (CDP, 2022<sub>[14]</sub>). The energy sector, notably hydropower, is susceptible to reduced production during droughts, necessitating costlier energy alternatives (IEA, 2020<sub>[15]</sub>). Water-related risks have important implications for critical infrastructure. For example, flooding creates substantial damages for roads and water supply systems. Recent examples of floodings caused by heavy rains, in Niger, Nigeria, Gambia, and Guinea, have led to loss of critical livelihood, and human lives (OCHA, 2023<sub>[16]</sub>). These risks also have implications for tourism, a vital economic driver for many African countries, which face disruptions to popular attractions caused by water-related issues.

The 2022 Corporate Water Security questionnaire by CDP received responses from 58 companies operating in Africa, shedding light on significant losses linked to water-related risks. It revealed that 215 facilities in the African region reported potential financial impacts amounting to USD 67 billion. Among the reported risks, acute physical risk was the most frequently cited concern by 104 facilities. Box Error! No text of specified style in document..1 provides some illustrative examples from the CDP water security questions of financial losses and opportunities.

Data from the CDP questionnaire also highlights the growing recognition that immediate action is imperative to address water-related in Africa. Among the 58 respondent companies, 26% have established targets for water withdrawal, 12% have set targets related to pollution, 14% have defined targets for Water, Sanitation, and Hygiene (WASH) initiatives, while 9% have specific targets for supplier engagement. Additionally, 2% of the companies are deploying Nature-based Solutions (NBS) to mitigate water-related risks.

#### Box Error! No text of specified style in document..1. CDP 2022 CORPORATE WATER Security – case studies of financial losses and opportunities

- **Diageo Plc** headquartered in UK is reporting a potential **USD 68 million** loss in Kenya due to Water Stress, a Chronic Physical Risk, which is anticipated to happen in the next **1-3 years** with **high impact** and a **virtually certain** likelihood.
- **Shoprite Holdings Ltd** headquartered in South Africa is reporting a potential **USD 47 million** loss in South Africa due to Drought, an Acute Physical Risk, which is anticipated to happen in the next **1-3 years** with **high impact** and a **likely** likelihood.
- **Barrick Gold Corporation** headquartered in Canada took over a tailing storage facility (TSF) in Tanzania that was previously shut down by local authorities. They invested **USD 65 million** to upgrade the water treatment facilities to return the TSF's functionality and have reported a potential financial opportunity of **USD 463 million** that is realizable within a year of their investment.
- **Danone** headquartered in France supports water access, sanitation and hygiene facilities and practices, through several partnerships developed with NGOs or International Organizations such as water.org or UNICEF, reaching close to 1 million additional beneficiaries in Africa. It reports an opportunity worth a potential **USD 47 million** by implementing WASH initiatives in Africa that is realisable after 6 years of their investment.

## Finance, water security and water-related risks

### *Driving investment towards water security*

The financial system can have a decisive role in driving investment towards projects that contribute to water security, or conversely in directing investment towards activities that exacerbate water-related risks. Since United Nations (UN) Climate Change Conference of the Parties (COP 21), the financial sector has become an important arena for climate change, and since the 15th Conference of the Parties to the Convention on Biological Diversity (COP15), the adoption of the Kunming-Montreal Global Biodiversity Framework, action is now picking up to mobilise finance towards nature goals.

However, access to finance to address climate change impacts across the African continent remains a significant challenge and financial support falls short of levels required to address climate-related needs across African countries. The total climate finance flows in Africa amount to USD 29.5 billion, which is only 11% of the estimated USD 277 billion needed annually to effectively implement its Nationally Determined Contributions (NDCs) and achieve 2030 climate targets (CPI, 2022<sub>[17]</sub>). Mitigation efforts accounted for 49% of climate finance flows in Africa, followed by adaptation at 39%, and dual benefits finance at 12%. While there is a more balanced split between mitigation and adaptation finance in Africa, as compared to other parts of the world, there is a pressing need to substantially increase spending on both areas, respectively by at least 14 and 6 times, to meet NDC commitments (CPI, 2022<sub>[17]</sub>).

Water, despite being the second highest priority sector for NDC implementation in Africa, accounted for 9% of total climate investments (USD 2.6 billion) and about 23% of tracked adaptation financing (CPI, 2022<sub>[17]</sub>). This underscores a pressing need to explore new solutions to sustainably mobilise investment towards water security in Africa. This topic is discussed in the Background Note on ***Diversifying sources of finance for water in Africa***.

With respect to the nature finance landscape, globally, approaches remain much more fragmented in terms of initiatives, actors, and a common language on good practices. Nature finance means both understanding and taking into account nature related financial risks and valuing the place of natural capital and ecosystem services in investment. There is increasing interest in channelling investment into nature through new financing vehicles including natural climate solution (carbon credits), biodiversity credits and debt for nature swaps, which could be harnessed toward addressing water-related risk in Africa. These topics are discussed in the Background Notes on ***Refinancing debt for conservation and climate: the example of TNC's Nature Bonds program and its applicability to freshwater***.

### ***Understanding water-related financial risk to the financial system***

At the same time, beyond mobilising investment towards sustainable goals, there is an equally important need to ensure that investment is not being directed towards activities that exacerbate water-related risks. There is increasing recognition that climate and nature risks can lead to structural changes that affect economic activity at macro-level, with important implications for the financial system. This was notably highlighted by Mark Carney's 2015 speech, "Tragedy of Horizons," which brought to the limelight the connection between climate change and its impact on economic and financial stability.

Water being one of the main channels through which climate risks materialise, financial actors, in Africa as well as globally, should have a keen interest in assessing and managing water-related risk and understanding the impacts and dependencies of financial beneficiaries on water resources. However, a review of current practices, shows that physical water-related climate and nature risks are not being adequately assess by financial institutions (Davies and Martini, 2023<sub>[18]</sub>). If financially material water-related risks are invisible to current analytical approaches used in the financial system, when risks materialise, financial actors may not be equipped to deal with them. There is therefore an important need to strengthen practices within the financial sector to identify, assess and manage exposure to physical risks (Davies and Martini, 2023<sub>[18]</sub>).

Economic impacts linked to water-related risk can take the form of the destruction of physical capital, disruption of production and supply chains, adaptation costs, or deterioration of macroeconomic conditions. For example, in primary sectors, these risks can affect a company's profitability by changing its profit margin or the volume of goods it produces. Downstream sectors such as manufacturing, wholesale trade, and retail trade can be affected by changes in the prices of commodities (illustrated in Figure Error! No text of specified style in document..1).

**Figure Error! No text of specified style in document..1. Transmission channels for water-related risks to financial actors**

Type of risk	Water-related risk	Economic impact	Financial risk
<b>Physical risks</b> Climate Change Land use change Overexploitation of natural resources Pollution	Flooding Water scarcity Polluted water Disruption to freshwater system	Disruption of activities Disruption of value chain Raw material price - volatility Adjustment or relocation of activities Capital destruction	Credit Market Liquidity Business Underwriting risk
<b>Transition risks</b>	Policy and regulation Technology Business model innovation Consumer or investor sentiment		
<b>Liability risks</b>	Litigation		

Source: (Davies and Martini, 2023<sup>[18]</sup>).

In an illustration of these economic impacts, under business as usual, water stress across Africa is poised to significantly increase the cost of agricultural production in the most severely impacted regions by 2030 (McKinsey Sustainability, 2022<sup>[8]</sup>). High levels of water stress are anticipated to be exacerbated in the future, linked to both climate change and economic activities including land use change, overexploitation of natural resources or pollution, falling under both climate and nature-related risk categories. This could lead countries that face the highest pressure on limited water resources to strengthen allocation rights or fees to water resources for private sector actors. A study by McKinsey focused on Africa pointed to the potential for this to increase the unit production costs of several agricultural commodities by 20 to 40% in 2030, as compared to a business-as-usual scenario which does not account for these risks. In the absence of concerted mitigative measures, this could trigger substantial knock-on effects, manifesting as price hikes between 15 and 30% for commodities, affecting both downstream businesses and consumers (McKinsey Sustainability, 2022<sup>[8]</sup>).

These impacts can transmit to the financial system in the form of credit, market, liquidity, business and underwriting risks, as described in Table Error! No text of specified style in document..1. Banks, the insurance and reinsurance ((re)insurance) companies, asset owners (such as institutional investors and sovereign wealth funds), asset managers, and central banks are all notably exposed to these risks (OECD, 2021<sup>[19]</sup>) (Davies and Martini, 2023<sup>[18]</sup>).

**Table Error! No text of specified style in document..1. Financial risks**

Type of risk	
Credit risk	Risk that a borrower will not pay an amount owed.
Market risk	Movements in stock prices, interest rates, exchange rates, and commodity prices.
Operational risk	Risk that affects operations of an organisation, either from risks within the operations of an organisation or from external events outside of the control of the organization.
Business risk	Risk associated with operating earnings and reflected both sales risk and operating risk.
Underwriting risk	Underwriting risk is the loss borne by insurers and reinsurers.

Source: (Davies and Martini, 2023<sup>[18]</sup>).



## Increasing understanding of water-related risks

### ***Businesses and financial institutions in Africa are starting to disclose on financial risks and opportunities linked to water***

Globally, increasing awareness of the need to understand climate and nature related finance risk has manifested, for example, in the development of the Task Force on Climate-Related Financial Disclosures (TCFD)<sup>1</sup> and more recent Task Force on Nature-Related Financial Disclosures (TNFD)<sup>2</sup> recommendations, the Network for Greening the Financial System (NGFS)<sup>3</sup>, and various initiatives under the United Nations Environment Programme Finance (UNEP FI), including the Principles for Responsible Banking (PRB)<sup>4</sup>.

The voice of African countries has an important role to play in these initiatives. As discussed above, water and wider nature related risks in African countries have important national, regional, and even global implications, notably if critical ecosystems such as the Congo Basin are affected. Under business-as-usual scenarios, Africa could breach environmental tipping points, that cause large-scale physical risks for financial assets (McKinsey Sustainability, 2022<sup>[8]</sup>).

Already, increasingly visible impacts of climate change across the continent, coupled with the substantial financial losses directly and indirectly attributed to these changes are putting pressure on the financial system, and can potentially lead to systemic consequences for overall financial stability. This is becoming increasingly apparent to African authorities and to the private sector (GCA, 2022<sup>[11]</sup>).

Information is the first step to addressing water-related risks and opportunities, and voluntary disclosure, such as the CDP water security questionnaire plays a pivotal role in understanding risk exposure and uncovering potential opportunities. In 2022, nine financial institutions in Africa took a proactive step by disclosing water security data to CDP. These included 2 asset managers, 2 insurers, and 5 banks, with 8 based in South Africa and 1 in Egypt. The majority of these financial institutions are actively engaged in assessing water-related risks (6) and opportunities (5). Moreover, three financial institutions have instituted policies mandating that clients and investees must meet specific water-related requirements, demonstrating a strong commitment to sustainability. One financial institution is actively involved in shareholder voting, showcasing a proactive approach towards fostering responsible business practices.

In certain countries, national industry initiatives are driving the adoption of climate risk practices. The Kenya Bankers Association Sustainable Finance Initiative, for instance, is primarily focused on capacity-building programs and the exchange of knowledge. This illustrates that while in early stages, there is growing awareness amongst private sector and financial institutions of the need to understand climate-related risks.

### ***Regulatory requirements have a critical role in driving private sector adoption***

Regulatory requirements can be particularly impactful in driving private sector adoption of climate risk practices in African countries. By mandating disclosure, setting water efficiency standards, and incentivising sustainable practices, governments can foster a more water-resilient business environment. This, in turn, creates a powerful catalyst for innovation and investment in water stewardship across industries. This transparency not only enhances stakeholder trust but also enables informed decision-making. Additionally, it supports the identification of opportunities for innovative water management practices and investments in water-related ventures.

Financial institutions are anticipating regulatory interventions in response to demands from investors and development finance institutions. For instance, several financial institutions in Egypt, Morocco, South Africa, and Zimbabwe have been among the early adopters of the TCFD recommendations. FSD Africa, a not for profit in with a mandate to transform financial markets across sub-Saharan Africa, is working to promote an African voice for the TNFD and nature-related financial risk management.

In addition, central banks and financial authorities play a critical role in the financial system as supervisors and regulators assessing and providing guidance on micro and macro prudential risks. Increasing guidance on managing

climate and nature risks will play an important role, increasing the financial sector's understanding of exposure water-related risks, and driving private sector adoption better water-risk management practices.

To date, in Africa, there has been limited publication of regulations or supervisory expectations from financial sector regulators and supervisors regarding climate-related or broader sustainability risks. While some authorities may implicitly consider these risks within their current mandates, there are now also ongoing initiatives to establish comprehensive frameworks for the identification, assessment, management, and disclosure of climate-related risks, aligning with private sector progress (GCA, 2022<sup>[1]</sup>).

A few countries stand out as more advanced in this regard, such as Mauritius and Kenya. For instance, on October 15, 2021, the Central Bank of Kenya (CBK) issued guidance on Climate-Related Risk Management to commercial banks and mortgage finance companies. This empowers banks to integrate climate-related opportunities and risks into their governance structure, strategy, and risk management frameworks, while also guiding them in disclosing pertinent climate-related information to stakeholders. These principles carry legal weight, mandating compliance. Similarly, the Bank of Mauritius (BoM) published guidelines on Climate-related and Environmental Financial Risk Management<sup>5</sup> in April 2022, to support financial institutions in incorporating climate-related and environmental risks. These guidelines explicitly reference climate risks, including extreme weather events, and environmental risks which include water pollution and scarcity of fresh water, and indicate high level guidance on internal control frameworks and risk management, as well as scenario analysis and stress testing.

Several of the most progressive authorities have become members of the NGFS, aiming to draw upon global best practices in regulatory approaches. The majority of authorities that have enacted mandatory regulations are affiliated with either the NGFS or the Sustainable Banking and Finance Network (SBFN), using these platforms for knowledge exchange regarding the incorporation of climate risk within regulatory frameworks (GCA, 2022<sup>[1]</sup>).

Other countries have implemented alternative regulations or engaged in industry collaborations, using principles like disclosure standards, stress tests, and best practice guidance. Notable examples include Egypt, Ghana, Morocco, Nigeria, South Africa, and Zimbabwe (GCA, 2022<sup>[1]</sup>). For example, the South African Reserve Bank published in 2022 an overview of the modelling frameworks available for assessing climate change impacts in South Africa, covering both local and global models. This paper aimed to help financial institutions and regulators develop partnerships to build scenarios and assess the impact of climate-related risks. Given the South African context, this guidance notably includes discussion on water including information on modelling water resources and flooding (Vafa Anvari et al., 2022<sup>[20]</sup>).

However, a considerable number of countries have yet to initiate the integration of climate risks into their regulatory and supervisory actions, though some may have commenced collaborative efforts at international or national levels, such as members of the Union Monétaire Ouest Africaine (UMOA), as well as the Democratic Republic of Congo (DRC), Tunisia, and Rwanda (GCA, 2022<sup>[1]</sup>).

## The path ahead

The African continent, while made up of diverse landscapes and climates, is highly exposed to water-related risks, and notably risk of drought. Exposure to water-related risks is increasing due to pressures from climate change impacts, and other risks drivers includes over-exploitation of resources, pollution and land use change. These crises are also mutually reinforcing, as for example, over-exploitation of water resources increases vulnerability to climate impacts. At the same the continent is disproportionately vulnerable to these risks, given the weaker economic resilience of many African countries. This points to the importance of rapidly improving water management practices to enable both sustainable use of resources, and to avoid increasing vulnerability to climate change impacts.

The financial sector can play a critical role in exacerbating risks if they do not take into account the financial materiality of water-related risks and the environmental impacts of the companies they finance. Understanding of water within both climate and nature risks paradigms therefore needs to be strengthened. While in early stages, across the African, there is growing awareness amongst private sector and financial institutions of the need to understand climate-related

risks. While some jurisdictions are actively shaping their financial sectors' approach to climate risks through regulatory mandates, others are more influenced by private sector initiatives (GCA, 2022<sup>[1]</sup>). Indeed, actions from many actors is needed; this includes increased corporate disclosure on exposure to and management of water-related risks, improved risk assessment methodologies amongst financial actors, and strengthened guidance from financial supervisors on risk management practices.

Moreover, as the climate and nature agendas accelerate across the global financial landscape, there are many lessons that can be shared in Africa. But at the same time, Africa also has lessons to share with the rest of the world, being at the forefront of experiencing the profound impacts of water-related risks. The voice of African countries in the TNFD, NGFS and other initiatives is therefore vital.

At the same time more tools and expertise are needed to accurately identify measure and manage water-related risks to the financial system. This means capacity building to improve the identification, assessment and management of water-related risks, to integrate climate and nature into risks management strategies and to increase the quality and quantity of data to inform the financial sector's exposure to water-related risks. Collaboration between institutions and technical assistance can have an important role in this regard.

The 10<sup>th</sup> Roundtable on Financing Water notably provides an important opportunity for sharing best practices from African countries on managing water-related risks. The Roundtable was created in 2017 by the OECD, the government of the Netherlands, the World Water Council and the World Bank precisely to respond response to the lack of exchange and mutual understanding between the water and finance communities – which is often cited as a barrier to investment in water and can also lead to over-investment in activities that undermine water security. The OECD is also contributing to the body of work exploring the financial materiality of water-related risks. A first paper on assessing the financial system's understanding of water-related risk was published in September 2023 (Davies and Martini, 2023<sup>[18]</sup>).

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<sup>1</sup> The TCFD has developed a framework to help public companies and other organizations more effectively disclose climate-related risks and opportunities through their existing reporting processes. More information: <https://www.fsb-tcfid.org/>

<sup>2</sup> The Taskforce on Nature-related Financial Disclosures (TNFD) has developed a set of disclosure recommendations and guidance for organisations to report and act on evolving nature-related dependencies, impacts, risks and opportunities. More information: <https://tnfd.global/>

<sup>3</sup> The Network for Greening the Financial System (NGFS) is a network of 114 central banks and financial supervisors that aims to accelerate the scaling up of green finance and develop recommendations for central banks' role for climate change. More information: <https://www.ngfs.net/en>

<sup>4</sup> The Principles for Responsible Banking (PRB) are a unique framework for ensuring that signatory banks' strategy and practice align with the vision society has set out for its future in the Sustainable Development Goals and the Paris Climate Agreement. More information: <https://www.unepfi.org/banking/more-about-the-principles/>

<sup>5</sup> More information: [https://www.bom.mu/sites/default/files/guideline\\_on\\_climate-related\\_and\\_environmental\\_financial\\_risk\\_management\\_01.04.2022.pdf](https://www.bom.mu/sites/default/files/guideline_on_climate-related_and_environmental_financial_risk_management_01.04.2022.pdf)