

Background note

Diversifying sources of finance for water 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, OECD's experience and the expertise of the Alliance for Green Infrastructure in Africa. 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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Introduction

Water-related investments deliver substantial benefits for water security and sustainable development.

“Water-related investments” refer to a broad range of investments that contribute to water security through the delivery of water and sanitation services, the management of water resources and water-related risks (OECD, 2022^[1]). Water risks refer to the risks, in terms of their potential likelihood and impact, of water shortage (e.g. droughts), water excess (e.g. floods), water pollution, and the risks of undermining the resilience of water-related ecosystems (OECD, 2016^[2]). Water-related investments connect multiple sectors and policy agendas, including agriculture, energy, urban development, public health and education. Due to their cross-cutting and underpinning nature, such investments are central to achieving the Sustainable Development Goals (SDGs), global climate and biodiversity goals (OECD, 2022^[1]). Water-related investment has historically been financed by public budgets, including international transfers, with contributions users via tariffs, abstraction charges, and other economic instruments (OECD, 2019^[3]).

The world is not on track to meet SDG 6 on water and sanitation largely due to insufficient levels of water-related investment, particularly in Africa.

In Africa, a significant proportion of the population still does not have access to safely managed drinking water and sanitation services, and this lack of access has considerable social and economic consequences. 69% of the sub-Saharan population do not have access to a safely managed drinking water service and 76% to a safely managed sanitation service (UN-Water, 2022^[4]). In recent years, Sub-Saharan Africa lost approximately 5% of its GDP each year, due to issues related to water scarcity, polluted water, or inadequate sanitation. At the same time, the cost of achieving SDG 6 would represent 2-4% of GDP for two-thirds of African countries and 1-2% of GDP for the remaining one-third (African Union, 2023^[5]). Water represents a limited share of public budgets in Africa (African Union, 2023^[5]), national water strategies for water are not fully implemented and budget are not fully spent (WHO, 2022^[6]). Tariffs set by African countries are far below cost recovery levels (WHO, 2021^[7]). ODA flows for water in Africa are decreasing and failing to reach countries most in need. Blended finance, PPP models and private equity investments for water in Africa are emerging but have not reached scale.

There is significant scope to mobilise sources of finance for water in Africa more effectively (including private capital), **by strengthening the water investment framework and diversifying funding mechanisms and financing instruments.** Strengthening the water investment framework and developing innovative financial arrangements aimed at diversifying financing sources and mitigating risks represents opportunities to tap into financing sources (users, industries, philanthropes, domestic commercial banks) more effectively, while ensuring a fair distribution of risks and rewards between the public and private sectors. However, in sectors such as water, the private sector cannot realistically be the main financier. Governments will keep playing the key role through public resources, mobilised grants, development finance and commercial loans. This is why the reform the global architecture for development finance may be an opportunity for financing water in Africa, as it could provide additional liquidities to developing and poorest countries to finance global public goods and national development priorities such as water.

Chapter 1 – Challenges to finance water in Africa

Investing in water is a prerequisite for the sustainable development of African economies

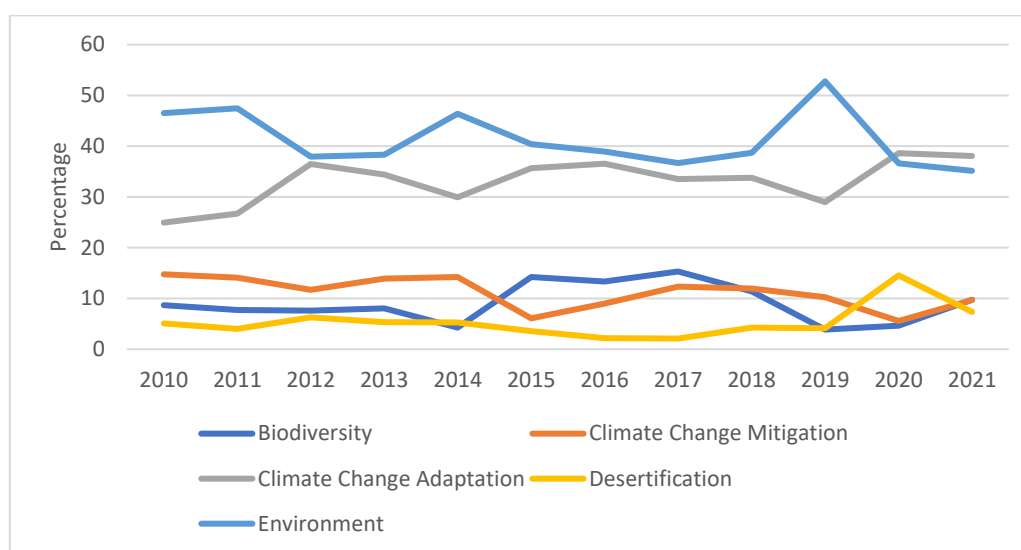
Investing in water is a condition to achieve the Sustainable Development Goals in Africa

Water-related investments are essential for sustainable development and inclusive growth globally. SDG 6 on Clean Water and Sanitation is fundamental for achieving numerous SDGs, making it a critical element at the centre of the global development agenda. Access to clean and reliable water is fundamental to achieving a wide range of development goals, including poverty reduction, improved health, food security, and economic growth. Most of the SDGs cannot be achieved without access to adequate and safe water (Ait-Kadi, 2016^[8]) (Mugagga and Nabaasa, 2016^[9]). Water also plays a crucial role in addressing climate change, in terms of mitigation and adaptation strategies. The IPCC identifies four main reasons (Caretta et al., 2022^[10]): i) half of the world's population is currently facing a water shortage for at least part of the year due to climatic and non-climatic factors; ii) climate change is also affecting water requirements for various uses, such as irrigation ; iii) the majority of adaptation responses concern adaptation to water-related risks such as droughts, floods and rainfall variability ; iv) many mitigation measures could potentially have an impact on water security in the future. The work of the Global Commission on the Economics of Water documents how climate change affects precipitation regimes, and endeavours to decipher the economics consequences of such a shift (GCEW, 2023^[11]).

This is particularly true in Africa, where the road to achieving development goals is the most challenging and, at the same time, the continent is particularly exposed to climate change and vulnerable to water scarcity and to climate change. Africa is the continent of the world most affected by climatic shocks, which are felt mainly through water. More than 130 disasters related water have been recorded on the continent in 2020-2021 (African Union, 2023^[5]). Unpredictable floods and droughts exacerbate displacement, migration and food insecurity; inflict costly damage to infrastructure; and devastate livelihoods, quality of life, biodiversity - ultimately undermining economic growth and well being. It is the continent with the highest number of countries at high risk of drought, and it is home to eleven of the world's most economically vulnerable countries to droughts and floods (MacAlister et al., 2023^[12]). By 2050, climate-related costs, driven primarily by water-related hazards, could amount to US\$50 billion annually for African countries (African Union, 2023^[5]).

Investing in water in Africa is instrumental in addressing climate change adaptation, mitigation efforts, and other climate objectives, as highlighted by the contribution of ODA flows for water to Rio markers in Figure 1. For instance, in 2021, almost 40% of ODA for water in Africa has been recognised as playing a role in adaptation to climate change.

Figure 1. Water ODA by Rio Marker in Africa, Marked Principle or Significant



Note: This dataset includes bilateral ODA and its support to environment sustainability and biodiversity, climate change mitigation, climate change adaptation and desertification. A scoring system of three values is used, in which aid activities are “marked” as targeting environment as the “principal objective” or a “significant objective”, or as not targeting the objective.

Source: Authors, based on OECD Creditor Reporting System (OECD, 2023^[13]) <https://stats.oecd.org/index.aspx?DataSetCode=CRS1>

Despite the strong economic case to invest in water in Africa, the investment gap is massive

In Africa, a significant proportion of the population still does not have access to safely managed drinking water and sanitation services, and this lack of access has considerable social and economic consequences.

According to SDG 6 monitoring, 69% of the sub-Saharan population do not have access to a safely managed drinking water service and 76% to a safely managed sanitation service (UN-Water, 2022^[4]). In 2020, approximately 387 million people on the continent did not have access to basic drinking water services and 737 million did not have access to basic sanitation services. In addition, around 811 million people have limited or no access to basic hygiene services (World Bank, 2023^[14]). The economic impact of this lack of access is tremendous and there is a strong economic case for investing in water on the continent. Under a business-as-usual scenario, the Sahel and Central Africa are projected to experience negative GDP impacts of 12% and 7% respectively by 2050 because of climate change effects on water resources. (World Bank Group, 2016^[15]). In recent years, Sub-Saharan Africa has lost approximately 5% of its GDP each year, due to issues related to water scarcity, polluted water, or inadequate sanitation. At the same time, the cost of achieving SDG 6 would represent 2-4% of GDP for two-thirds of African countries and 1-2% of GDP for the remaining one-third (African Union, 2023^[5]). Thus, the cost to African economies of not investing in water will be much higher than the cost of investing.

Despite this strong economic case, investment in water in Africa is inadequate. The financial gap for achieving SDG 6 is much greater in Africa than at global level. Globally, achieving SDG 6 will require a three- to sixfold increase in current rates of progress. For Africa, achieving the objective would entail a 12-fold improvement in current rates of progress for safely managed drinking water, a 20-fold increase for safely managed sanitation, and a substantial 42-fold rise for basic hygiene services. (UNICEF and WHO, 2022^[16]). The level of investment required to achieve the Africa Water Vision 2025 is estimated at US\$64 billion per year in the continent. The annual investment gap to meet this target is estimated at US\$45-54 billion by 2025, above current annual investment levels of US\$10-19 billion (AfDB, 2016^[17]).

The double challenge of investing in water in Africa

The complex macroeconomic context and biased investment perception limit investment opportunities

African economies hold unique assets to close the continent's sustainable financing gap (AUC/OECD, 2023_[18]). Real GDP growth is estimated to return to the levels before COVID-19, at 3.7% in 2023, the second highest rate in the world after developing Asia (5%) and before Latin America and the Caribbean (1.6%). The growth is estimated at 4.9% in East Africa, 4.3% in Central Africa, 4% in North Africa, 3.8% in West Africa and 1.4% in Southern Africa. Moreover, Africa has the world's youngest population, its natural resources represent a key asset and domestic financial resources hold a large potential for sustainable development. Domestic government revenues amounted to USD 466 billion in 2021, equivalent to 17% of GDP. Assets held by African institutional investors amounted to USD 1.8 trillion in 2020, equivalent to 73% of GDP. During the COVID-19 pandemic in 2020-21, intra-Africa foreign direct investment was three times more resilient than foreign direct investment from outside the continent (AUC/OECD, 2023_[18]).

Despite this potential, the challenging macroeconomic and financial context in Africa has reduced the capacity of African countries to invest in crucial sectors, including water and sanitation. Global economic uncertainties have had a significant impact on African economies, including increased difficulty in accessing financial markets, burgeoning public debt, and liquidity problem. As of 2022, Sub-Saharan Africa's public debt ratio had reached 56% of GDP, a level not seen since the early 2000s. The surge in debt have raised concerns about debt sustainability, with 19 out of 35 low-income countries in the region already in debt distress or facing a high risk of such distress in 2022 (IMF, 2023_[19]). The cost of debt service for African economies increased from 3% to over 5% of gross national income over the 2010-20 period. In addition, African countries with low credit ratings were excluded from international capital markets, preventing debt refinancing (AUC/OECD, 2023_[18]). Financial markets have become more expensive and more difficult to access since 2020 for African countries (Douet, 2023_[20]). Specifically, Eurobond issuances for the region decreased from \$14 billion in 2021 to \$6 billion in the first quarter of 2022. Moreover, the median inflation rate reached approximately 10% in February 2023, more than double the rate observed at the onset of the pandemic (IMF, 2023_[19]). The devaluation of countries' currencies has exacerbated the issue (particularly due to their heavy dependence on imported goods). Devaluation also automatically increases the value of public debt in hard currency, with around 40% of Sub-Saharan Africa's debt coming from external lenders in 2021 (IMF, 2023_[19]). In the case of WASH, projects typically generate revenue in the local currency, while financing is usually denominated in hard currencies. This mismatch implies a currency risk for water projects (OECD, 2019_[3]). To top it all, ODA to Africa decreased over the past years. Preliminary data for 2022 show that net bilateral ODA flows from DAC countries to Africa have decreased by 7% in real terms compared to 2021. Within this total, net ODA to Sub-Saharan Africa has decreased by 8% in real terms compared to 2021 (OECD, 2023_[21]).

While infrastructure default rates in Africa rank among the lowest globally, the region continues to attract less commercial finance for infrastructure investments, partly due to overstated perceived risks (OECD, 2023_[22]). Africa experienced a 5% default rate on infrastructure project finance debt, lower than Asia (6%) and Latin America (10%). Meanwhile, risk perceptions and information shortages have eroded investor confidence and elevated the cost of capital in Africa to levels exceeding those in other parts of the world. A survey of investors conducted for AUC/OECD Africa's Development Dynamics report confirm that the lack of information and data limits assessments of investment opportunities in African markets. For instance, Africa garners the smallest share of capital from institutional investors. Global pension funds and insurance companies directed 0.5% of their capital toward African assets in 2017-18 (AUC/OECD, 2023_[18]). The poor credit ratings of many African countries may overestimate risks and result in

excessive cost of capital. A recent UNDP study compared model-based ratings considered “neutral”¹ with those issued by credit rating agencies, estimating that the latter hindered investment mobilisation. According to UNDP, if credit ratings were based more closely on economic fundamentals and less on subjective assessments, African countries could access an additional USD 74.5 billion (UNDP, 2023^[23]). Country credit ratings also serve as a reference point for private debt holders, thereby influencing the cost of private capital. This dynamic has been a barrier to mobilising investment particularly in sectors where large upfront capital expenditures are required, such as water-related investments (AUC/OECD, 2023^[18]). Not only is there a **bias on credit rating, but they also face higher interest rate spreads compared to countries** in other regions **with similar credit ratings**. Even if African countries have the same credit rating as countries in other regions, they may still have to pay a higher interest rate on their debt, which hinder their economic development. SSA countries pay considerably higher coupon at issuance compared to their peers from other regions, even after controlling for rating and for bond characteristics (Gbohoui, Ouedraogo and Some, 2023^[24]). The unequal transposition of the ratings in the estimated risk premiums has a huge impact on African economies. **As the spread affects the cost of capital (equity and debt), if the spread is reduced, the expected WACC² falls and, with the same tariffs, the country can make significant savings and carry out more bankable water projects.**

Investment attributes in water are further limiting investments

Features of water-related investments pose challenges for financing (OECD, 2022^[11]), particularly in Africa. Due to the sector’s inherent complexity and distinct characteristics, investors might perceive water-related investments as more risky and generally less attractive than other sectors (Streeter, 2017^[25]) (OECD, 2010^[26]). The management of water resources and delivery of water and sanitation services provide a mix of public and private benefits, with many benefits (e.g. improved public health, improved ecosystem functioning) not easily quantified and monetised (OECD, 2016^[2]). This makes it difficult to translate benefits of investments that contribute to water security into revenue flows, particularly for avoided costs or cross-sectoral benefits (OECD, 2018^[27]). In addition, water infrastructure is typically capital intensive, with a dissuasive long development period and high development budgets. This calls for a high initial investment followed by a long pay-back period (of about 20 to 30 years), while investors are generally seeking quick returns. **Each water sub-sector has distinct investment attributes**. They have different risk-return profile and a distinct maturity in terms of history of access to finance. Approaches to facilitating finance differ from sub-sectors. As an illustration, a summary of investment attributes across three water subsectors (Water and Sanitation Utilities, Off-grid sanitation, Multipurpose water infrastructure (MPWI) projects and Landscape-based Approaches) is available in Annex B.

To mitigate barriers related to the risk-return profile and project attributes of water-related investments, a variety of financing instruments and mechanisms are already being applied for water. The WSS sub-sector is one of the most matures in terms of access to non-concessional finance (through multiple channels, including domestic commercial debt and equity, and public-private partnership models). Nonetheless, there is significant untapped potential (particularly for private finance) in other subsectors such as unconventional water source development, water storage, catchment management, urban stormwater management, flood risk insurance, and irrigation efficiency programmes (World Bank, 2023^[28]). Research conducted by the OECD reveals varied blending experiences with

¹ Credit rating agencies frequently employ methodologies that extend beyond the scope of macroeconomic and public finance fundamentals, especially when assessing emerging and developing economies. In the UNDP report, the Trading Economics (TE) algorithm is considered as neutral as it is based on a forwards-looking macroeconomic model (UNDP, 2023^[23]).

² The weighted average cost of capital (WACC) is a financial metric that represents the average cost of the sources of financing a company or project, considering both equity and debt.

different instruments (credit lines, guarantees, grants, etc.) and contexts (urban and rural; large and smaller operators). They also reveal that blending can happen at multiple entry points in the financing chain, such as upstream at the level of the lender or utility (technical assistance, loans, credit lines, guarantees), or downstream to customers (such as access to microfinance loans) (OECD, 2019^[3]). As an illustration, annex C presents a list of **cases where various sources of funding have been mobilised for water-related investments in Africa**, including through the use of innovative financing mechanisms.

Chapter 2: Ultimate sources of finance for water in Africa: State of play

Public budgets for water are not fully spent, tariffs are far below cost recovery levels and taxes could be implemented more effectively

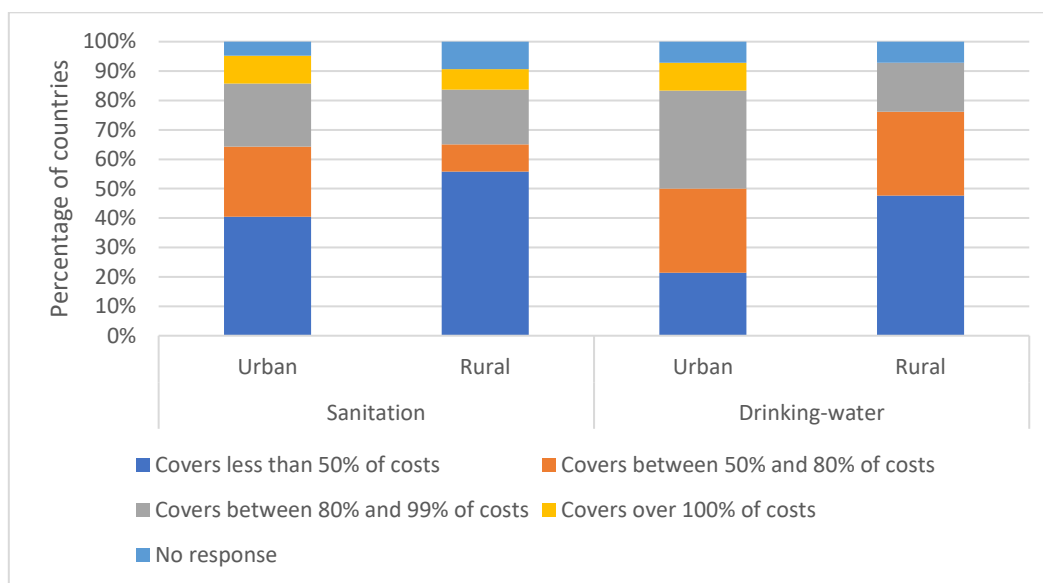
Water accounts for a limited proportion of public budgets in Africa, and budgets allocated to water are not fully spent. Between 2009 and 2020, 2% of global public spending targeted water, which represented approximately 0.44% of GDP on average globally (World Bank, 2023^[28]). In Africa, national government budgets for water have fallen from USD 6.1 billion in 2016 to USD 4.3 billion in 2020, representing a drop from 20% to 13% of their total budgets. Of the countries that pledged to invest 0.5% of their GDP in sanitation at the Ngor commitments³ in 2015, only four have achieved this target. Many African countries have shown rising political interest in water and sanitation, but this did not translate in a real increase in public budgets. Water is generally well integrated into national development plans, but **national water investment plans and strategies remain underdeveloped and poorly implemented** (African Union, 2023^[5]). 97% of African countries who reported to GLAAS in 2018 addressed sanitation and drinking water in their national development plan. Meanwhile, only 23% of them had fully implemented their plan in 2021 (WHO, 2022^[6]). Limited budget allocations and implementation capacity for water result in weak institutional mandates (African Union, 2023^[5]). When they are used, existing public funds dedicated to water are often used inefficiently, discouraging operational and financial performance, and failing to deliver water services to the most vulnerable populations (World Bank, 2023^[28]).

While cost recovery rates differ within countries, from rural to urban settings and by sub-sector, tariffs for water services applied in Africa are far below cost recovery levels. Less than half of African countries⁴ can cover more than 80% of their operating and maintenance (O&M) costs for WASH services through tariffs. As evidenced in Figure 2, cost recovery levels are lower in rural than urban settings. They are also lower for sanitation than drinking-water services (WHO, 2021^[7]). For example, South Africa reported that the larger the city, the more operating and maintenance costs are covered by tariffs, and that tariffs in smaller and poorer municipalities do not reflect costs and the WASH service operates at a loss (WHO, 2022^[29]).

³ The Ngor Declaration on Sanitation and Hygiene was adopted by the African Ministers responsible for sanitation and hygiene in 2015. With the aim of achieving universal access to sanitation and hygiene services and eliminate open defecation by 2030, several commitments were established, including the requirement for countries to allocate 0.5% of their GDP to sanitation and hygiene by 2020.

⁴ 47 countries reported information over the 54 African countries.

Figure 2. Cost recovery levels (via tariffs) for sanitation and drinking water in Africa (2021)



Note: the total number of countries surveyed is 47. The costs refer to operations and maintenance costs.

Source: Authors, based on GLAAS 2021/2022 country survey (WHO, 2022^[6]) <https://glaas.who.int/glaas/visualizations>

Not only WSS tariffs are far below cost recovery levels but subsidies in place are inefficient. Water subsidies often are not targeted and inefficient, frequently benefiting households already connected to the network (Blended finance taskforce, 2022^[30]) and high-income households, and failing to reach the very poor (Abramovsky et al., 2020^[38]) (Andres et al., 2019^[39]) (Poulin et al., 2022^[31]).

Finally, the use of taxes for water in Africa, varying significantly from one country to another, could be improved. Although data on taxes in Africa are limited, an estimation from UNICEF (UNICEF, 2019^[32]) indicate the following: in 2017 out of an estimated investment of US\$ 13.1 billion in the water sector across Africa, state financing through taxes accounted for 45%. This percentage vary significantly from one country to another. For instance, in Burundi, donor financing made up around 57% of the overall spending in the WASH sector in 2017, while government taxes contributed only 12%, and tariffs covered 31% of the funding. In contrast, in Uganda, donor finance constituted an estimated 30% of the overall WASH sector spending, with the government contributing 22%, and user tariffs and household contributions covering 48% of the funding. Eswatini's water resource management sector received an average of 51% of its investment from foreign loans between 2015 and 2020. The government's own contribution to the water sector, primarily through taxes, accounted for 43%, while foreign grants made up just 5% of the allocations (UNICEF, 2019^[32]). There is significant scope to improve the use of taxes for water in Africa, including through pollution and resource taxes.

ODA flows alone will not close the financing gap for water in Africa

Development finance has played and is playing a key role for financing water and in the achievement of SDG6 in Africa, and it will continue in the future. In this subsection, the critical role played by development finance in Africa is

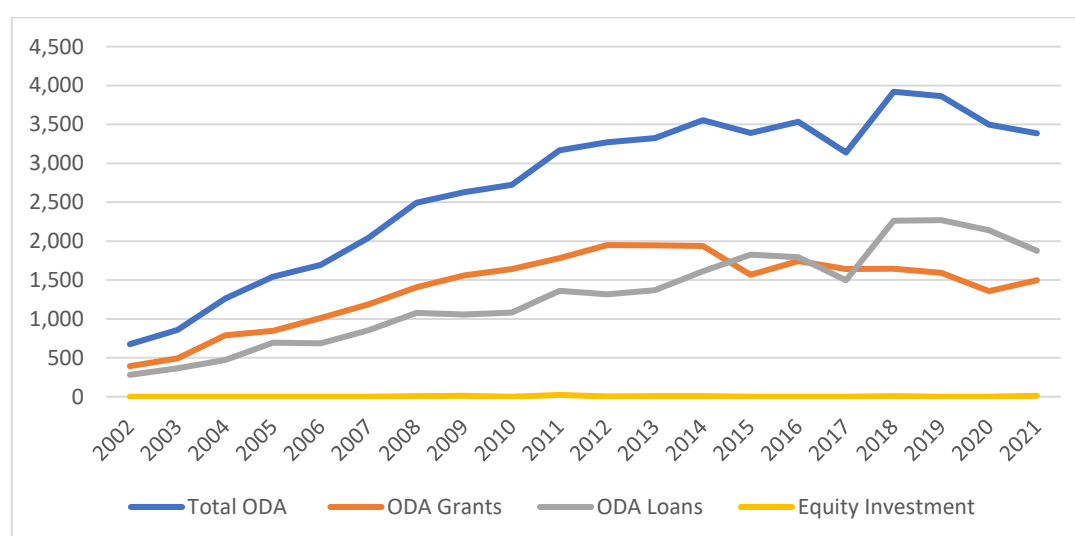
acknowledged, but the focus is on key limitations and evidence that there is significant scope for improvement and for policy reforms, to accelerate the achievement of SDG6 by 2030.

Water-related ODA⁵ for Africa is decreasing since 2018

The decline in ODA to Africa significantly affects water-related investments, particularly since 2018. ODA gross disbursements for water in Africa increased significantly between 2002 and 2018, as shown in Figure 3. They peaked in 2018, when total ODA towards water reached USD 3.9 million, more than five times the flow recorded in 2002. This trend reversed after 2018, with a decrease to USD 3.4 million in 2021 (OECD, 2022_[33])⁶.

The nature of ODA is changing. ODA loans exceeded ODA grants in 2018, while equity investments remained relatively marginal. ODA grants increased until 2012, after which they stagnated, with the exception of two significant declines in 2015 and 2020. At the same time, ODA loans increased relatively in 2018, constituting the main type of flow since then. In 2021, ODA loans accounted for USD 1,875 million, while USD 1,499 million was disbursed in the form of ODA grants. They represented respectively 55% and 44% of total ODA. Equity investments accounted for USD 11 million in the same year, or 0.3% of total flows. **The increase in the share of concessional loans poses a problem: as they have to be repaid, they add to the debt burden faced by many African countries.** This raises questions about the role of development finance and particularly the need to reconcile the seemingly contradictory objectives of responding to countries financing needs generated by successive crises in the short term while ensuring countries' debt sustainability in the longer term (OECD, 2022_[33]).

Figure 3. Evolution of water-related ODA in Africa by type of instrument



⁵ ODA flows include gross disbursements for WSS, hydro-electric power plans and agricultural water resources.

⁶ The analysis on ODA flows and mobilised private finance uses data from the OECD Credit Reporting System Database. Data are collected on individual projects and programmes reported to the OECD by countries and organisations. The database is therefore dependent on the information being disclosed, which means that coverage is not complete. This limitation is more important in the case of mobilised private finance, as it is also necessary to assess a causal link between an official intervention and the mobilisation of private flows. Consequently, data on private mobilisation shows volatile results as specific projects can significantly drive the figures. It is not possible to distinguish when the information is missing or the flow is equal to zero, so when there is no value given, it is considered null. The 2021 data on mobilised flows is preliminary as reporting from major actors in the area are pending so it is not included in the analysis. Lastly, methodological work is ongoing on the measurement of amounts mobilised through technical assistance and capacity building activities.

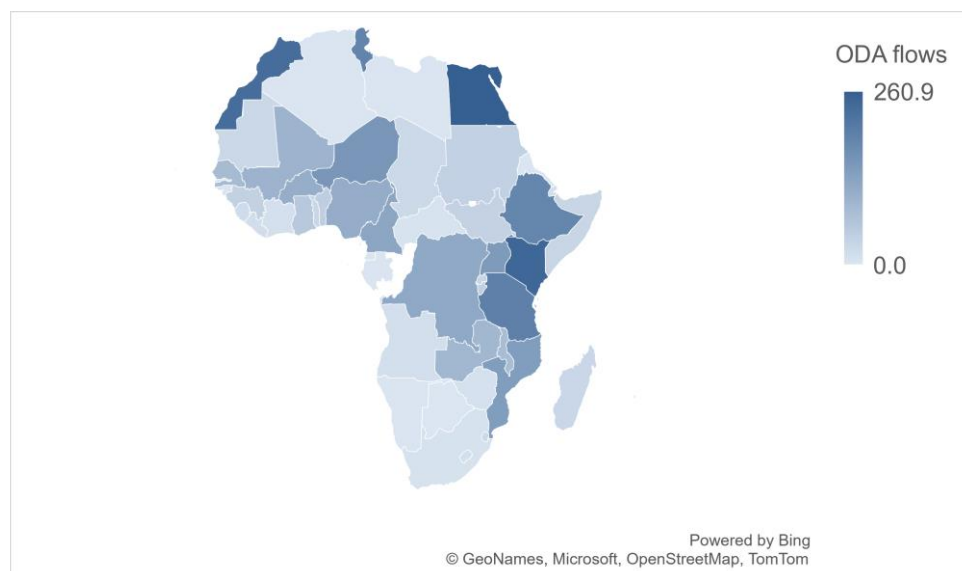
Source: Authors, based on OECD Creditor Reporting System (OECD, 2023^[13]) <https://stats.oecd.org/index.aspx?DataSetCode=CRS1>

Water-related ODA is unevenly distributed across countries, hardly reaching the poorest countries

The analysis of ODA flows towards water reveals major disparities between geographical regions and countries. ODA flows for water in 2021 mostly targeted Asia and Africa. Africa was the second beneficiary continent after Asia, with USD 3,384 million (while Asia received USD 3,483 million. Europe, America, and Oceania received significantly lower amounts (USD 276 million, USD 599 million and USD 84 million respectively) (OECD, 2023^[13]). Eastern Africa was the first recipient of ODA for water in 2021 (USD 1,338 million), followed by Western Africa (USD 834 million), North of Sahara (USD 691 million), Middle Africa (USD 317 million) and Southern Africa (USD 59,4 million).

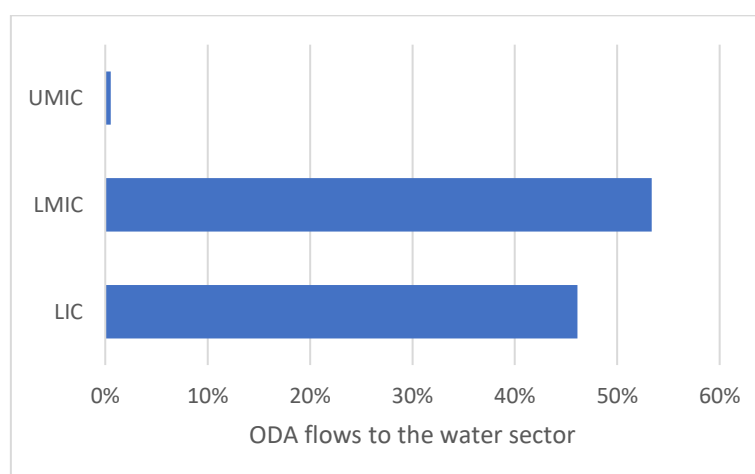
ODA for water is concentrated on a limited number of African countries and fails to reach the countries that need it most. The top three recipients of ODA for water for the continent (54 countries) in 2021, Egypt, Kenya and Morocco, accounted for 23% of the total. The top 10 recipient countries received more than 50% of the total. Only four of the top ten countries are low-income economies, while the rest are lower-middle income countries. In addition, the top five African recipient countries belong to the low-middle income group, while the efforts made by low-income countries to achieve SDG 6 are greater than those of other income groups. Indeed, the total annual cost of investment in safely managed water, sanitation and hygiene represents 15% of GDP for low-income countries, 3% for lower-middle-income countries and 1% for upper-middle-income countries (WaterAid, 2023^[34]). These data show that ODA is hardly reaching countries that face higher costs (relative to their GDP) to guarantee their population's access to water services.

Figure 4. Geographical distribution of ODA flows towards water investments in 2021



Source: Authors, based on OECD Creditor Reporting System (OECD, 2023^[13]) <https://stats.oecd.org/index.aspx?DataSetCode=CRS1>

Figure 5. Distribution of ODA for water by income group (2021)



Source: Authors, based on OECD Creditor Reporting System (OECD, 2023^[13]) <https://stats.oecd.org/index.aspx?DataSetCode=CRS1>

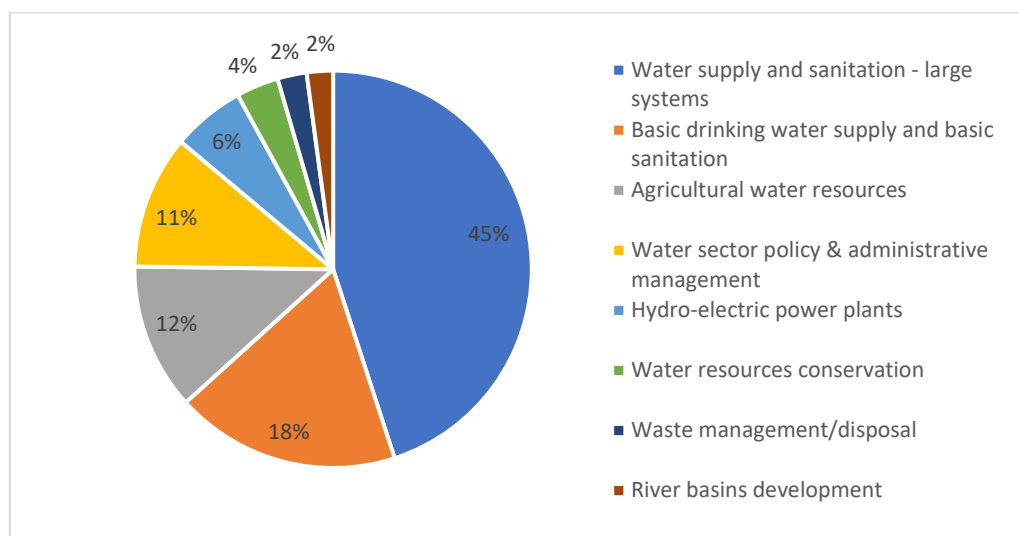
Water-related ODA mostly supports large water supply and sanitation systems, to the detriment of other water sub-sectors

Large water supply and sanitation systems⁷ account for the bulk of ODA flows in Africa, to the detriment of other sub-sectors. This sub-sector accounted for 45% of total flows for water, with an amount of USD 1,516 million in 2021 (Figure 6). It was followed by basic drinking water supply and sanitation⁸, which received 18% of total ODA (USD 617 million). ODA for agricultural water accounted for 12% of total water flows (USD 401 million in total value), while water sector policy accounted for 11% of ODA (USD 366 million in total value). ODA flows for hydropower plants, water resource conservation, waste management and waste disposal represent relatively small shares compared to other water-related sub-sectors. Small-scale water supply systems – defined as supplies that serve up to 5000 people or supply less than 1000 m³ water per day - receive little ODA support due to their inherently limited economies of scale, significant fragmentation and lower political and financial priority compared to larger utility systems. Greater attention to small-scale systems is likely to be necessary to achieve SDG 6, especially for unserved populations in rural areas (WHO, 2020^[35]).

⁷ Large water supply systems include potable water treatment plants, intake works, storage, water supply pumping stations and large-scale transmission and distribution systems. Large sanitation systems account for large scale sewerage including trunk sewers and sewage pumping stations, domestic and industrial wastewater treatment plants (OECD, 2023^[13]).

⁸ Basic drinking water supply covers rural water supply schemes using handpumps, spring catchments, gravity-fed systems, rainwater collection and fog harvesting, storage tanks and small distribution systems typically with shared connections. It also comprises urban schemes using handpumps and local neighbourhood networks. Basic sanitation account for latrines, on-site disposal, and alternative sanitation systems, including the promotion of household and community investments in the construction of these facilities (OECD, 2023^[13]).

Figure 6. Allocation of ODA flows by water sub-sector in 2021 (%)



Source: Authors, based on OECD Creditor Reporting System (OECD, 2023^[13]) <https://stats.oecd.org/index.aspx?DataSetCode=CRS1>

The limited effectiveness of the public sector in mobilising private finance⁹

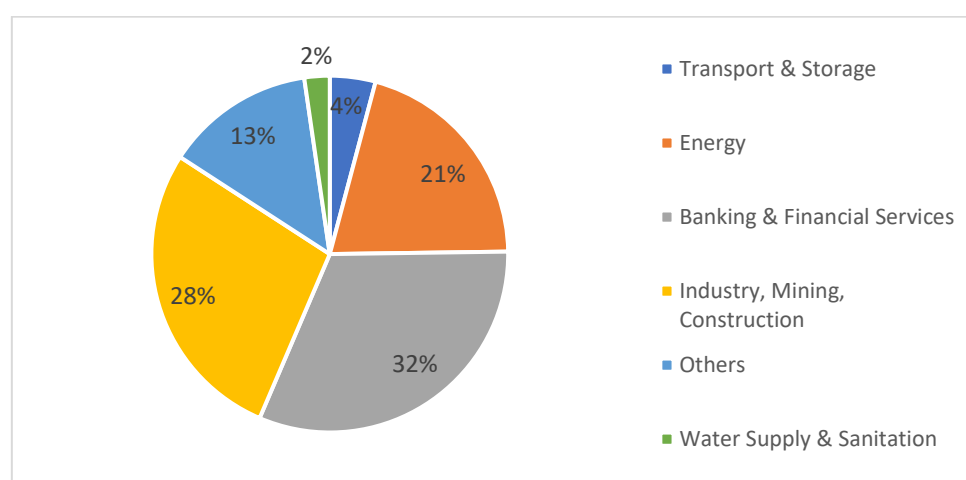
Mobilised private finance for water supply and sanitation in Africa lags far behind other sectors

The water supply and sanitation lags far behind other capital-intensive sectors in terms of mobilised private finance. 32% of the total private finance mobilised¹⁰ by official interventions was directed towards banking and financial services over the period 2012-2020. Together with industry, mining and construction (which received 28% of the total) and energy (21%), these sectors accounted for 81% of private finance mobilised in Africa. **Water accounted for just 2% of private finance on average over the period 2012-2020** (Figure 7).

⁹ The data on mobilised private finance come from the OECD Creditor Reporting System (OECD, 2023^[13]). The results must be put into perspective by the limited quantity of data reported officially.

¹⁰ The concept of mobilised private finance refers to private flows mobilised through official interventions – with a causal link between private finance made available for a specific project and the official intervention. The data on mobilisation of the CRS database is limited to water supply and sanitation (OECD, 2023^[13]). Blended finance is the strategic use of development finance for the mobilisation of additional finance towards sustainable development in developing countries (OECD, 2018^[51]). “Additional finance” refers to commercial finance, i.e. finance by investors who operate following a commercial and for-profit. These investors can be private but also public, if publicly owned enterprises are subject to the profit-making logic as private companies (DAC, 2023^[50]). In this paper, the concept of “mobilised private finance” is used interchangeably with the concept of blended finance, due to limited data availability.

Figure 7. Private finance mobilised by official development finance interventions by sector in Africa (average 2012-2020)



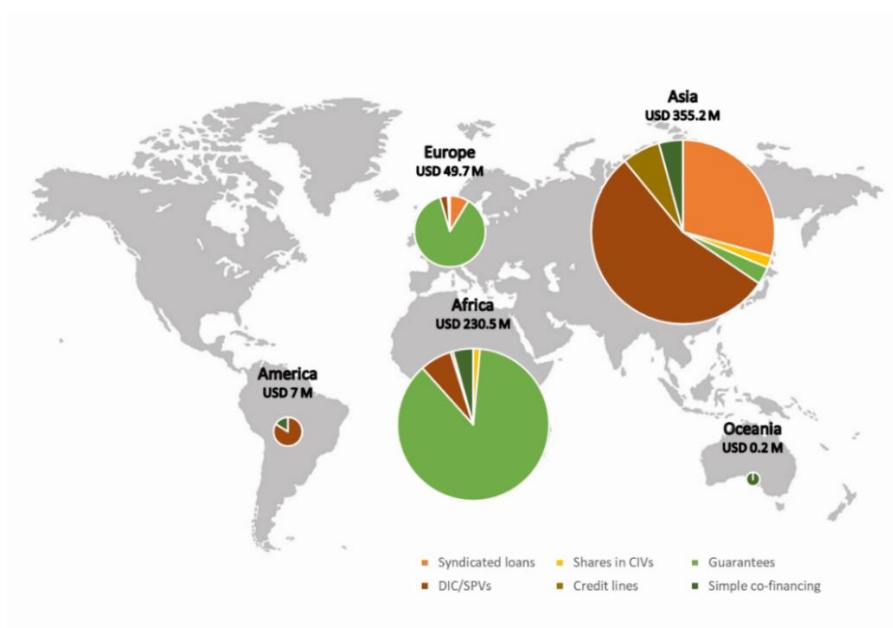
Source: Authors, based on OECD Creditor Reporting System (OECD, 2023^[13]) <https://stats.oecd.org/index.aspx?DataSetCode=CRS1>

Mobilised private finance for water in Africa is unevenly distributed among regions and mostly channelled through guarantees

Africa is the second beneficiary continent of total mobilised private finance for water in the world (36%), just after Asia (55%), while it is the first beneficiary continent when it comes to mobilised private finance for all sectors (33% - of a much higher amount). Europe and America benefited from much smaller amounts of mobilised private finance for water (and Oceania accounted for a negligible percentage). Mobilised private finance in Africa for WSS represented USD 231 million from 2012 to 2020. It was channelled mostly through guarantees, with an average of USD 200 million over the same period. Asia benefited from 355 million of mobilised private flows, primarily through Direct Investment in Companies (DIC) and Special Purpose Vehicles (SPV)¹¹. In Europe (USD 50 million), America (USD 7 million) and Oceania (USD 0.2 million), the main mechanisms used were guarantees, DIC/SPVs and simple co-financing respectively.

¹¹ Definitions are provided in Annex A.

Figure 8. Distribution of mobilised private finance by continent and mechanism for water (average 2012-2020)



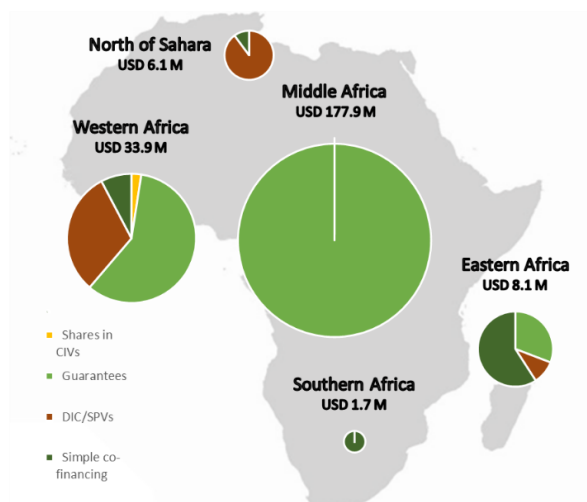
Note: DIC stands for Direct Investment in Companies and SPVs for project finance Special Purpose Vehicles. CIVs refers to Collective Investment Vehicles. Definitions are provided in Annex A.

Source: Authors, based on OECD Creditor Reporting System (OECD, 2023^[13]) <https://stats.oecd.org/index.aspx?DataSetCode=CRS1>

There are notable regional disparities across Africa, not only in the magnitude of mobilised private finance, but also in the mechanisms employed. As evidenced in figure 9, Middle Africa¹² was the first beneficiary region of mobilised private finance for WSS (USD 177.9 million), followed by Western Africa (USD 33.9 million) and Eastern Africa (USD 8.1 million). The substantial funding in Middle Africa was largely attributed to Angola and mostly through guarantees. Guarantees also represented a significant share of mobilised private finance in Western Africa (59%) and Eastern Africa (31%). Simple co-financing was used for all sub-regions except Middle Africa, accounting for 59% and 100% of total mobilisation in Eastern Africa and Southern Africa respectively. DIC and SPVs played a role in mobilising funds for water investments in Eastern Africa, Western Africa, and North of Sahara, with North of Sahara relying heavily on them (constituting 90% of total mobilisation). Shares in CIVs were only present in Western Africa, representing only 2% of total mobilised private finance.

¹² Cameroon, Democratic Republic of the Congo, Chad, Congo, Angola, Central African Republic, Sao Tome and Principe, Gabon and Equatorial Guinea are part of Middle Africa in the CRS data set.

Figure 9. Distribution of mobilised private finance for water in Africa by subregion and mechanism (average 2012-2020)



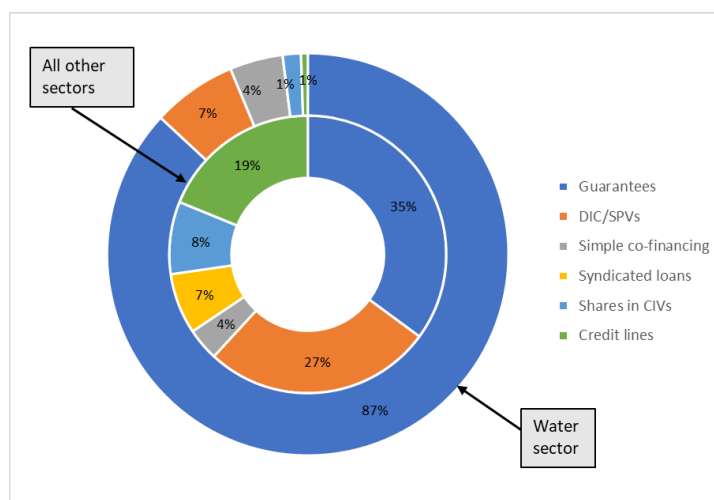
Note: the comparative importance of Middle Africa is driven by Angola, where extraordinarily high sums were mobilised in 2013 and 2019 (679.5 USD million and 919 USD million respectively).

Source: Authors, based on OECD Creditor Reporting System (OECD, 2023^[13]) <https://stats.oecd.org/index.aspx?DataSetCode=CRS1>

Guarantees are considerably more employed to mobilise private finance for water supply and sanitation than in other sectors in Africa. In 2012-2020, guarantees accounted for 87% of mobilised funds in the WSS sector, while they represented 35% of mobilisation for all the sectors. Guarantees are the most used credit enhancing tool among the blended finance mechanisms used for water and sanitation, as they can lower both the political and commercial risk of lending to utilities (OECD, 2019^[3]). It is expected that guarantees are more present in Africa compared to other regions and in water as they present higher and more diversified array of risks to ensure against. However, guarantee funds operating on a purely commercial model are very difficult to implement in fragile contexts, as they do not provide enough cushion for negative contextual developments. Structured guarantee funds, where donors and development finance institutions with higher risk tolerance play a pivotal role, are indispensable for mobilising commercial capital in challenging environments (Basile and Neunuebel, 2019^[36]). It is worth noting that **guarantees are helping governments to reduce the cost of debts and to increase maturities but they are not sustainable due to debt sustainability issues of many African countries.**

DIC and SPVs were the second most used mechanisms to mobilise private finance for WSS in Africa (accounting for 7%), even though their share was lower compared to other sectors (27% of mobilised private finance for all sectors). They are mostly relevant for financing large infrastructure projects that require significant upfront investment (OECD, 2023^[22]). The amounts raised via simple co-financing, shares in CIVs, and credit lines were modest, accounting for 4%, 1%, and 1%, respectively (Figure 10).

Figure 10. Mobilised flows by sector and mechanism (average 2012-2020)



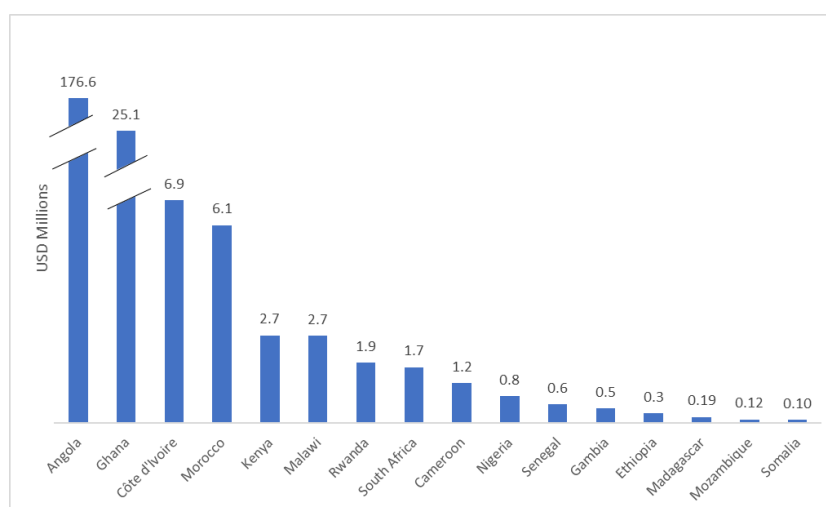
Note: the inner circle groups all other sectors except water and sanitation and the outer circle represents the water and sanitation sector separately. DIC stands for Direct Investment in Companies and SPVs for project finance Special Purpose Vehicles. CIVs refers to Collective Investment Vehicles. Definitions are provided in Annex A.

Source: Authors, based on OECD Creditor Reporting System (OECD, 2023^[13]) <https://stats.oecd.org/index.aspx?DataSetCode=CRS1>

Mobilised private finance for water is hardly reaching lower-income economies

The mobilisation of private flows for WSS is limited to a reduced number of African countries. Evidence shows that reported mobilised funds are largely concentrated in a few countries, among which Angola, Ghana, Côte d'Ivoire, and Morocco stand out. These four countries were the main beneficiaries of mobilised private finance in 2012-2020, exceeding USD 6 million each per year on average. On the contrary, countries such as Nigeria, Gambia, or Ethiopia received less than USD 1 million of mobilised private flows. In general, 94% of total mobilised private finance targeted the top 4 countries while the others benefited from only the 6% of the funds.

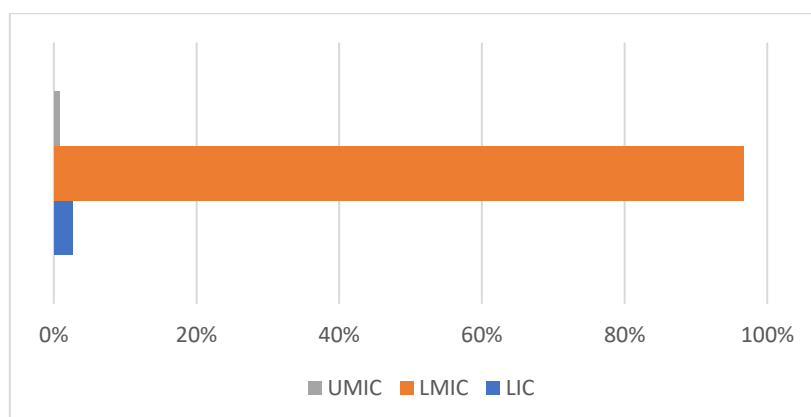
Figure 11. Distribution of mobilised private finance for water in Africa by country (average 2012-2020)



Finally, most of mobilised private finance for water in Africa is targeting middle income countries (MICs), failing to reach the low-income countries (LICS). LICS received USD 222 million per year on average in 2012-

2020, with USD 220 million for lower middle-income countries (LMICs) and USD 1.7 million for upper middle-income countries (UMICs). Meanwhile, LICs received USD 5.8 million over the same period. These figures imply that 96.7% of country-allocable mobilised private finance benefited LMICs and 0.8% UMICs, while LICs received 2.6% of mobilised private finance.

Figure 12. Distribution of mobilised private funds for water by income group (average 2012-2020)

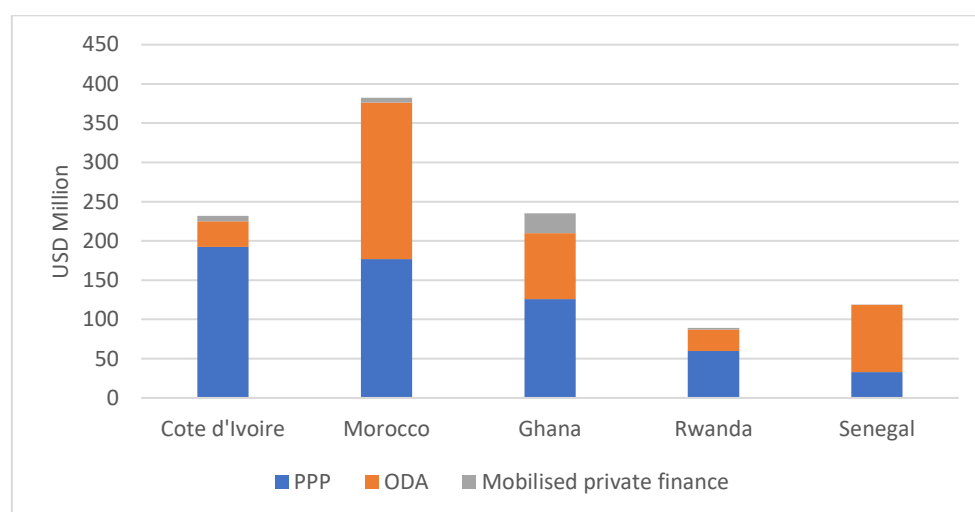


Source: Authors, based on OECD Creditor Reporting System (OECD, 2023^[13]) <https://stats.oecd.org/index.aspx?DataSetCode=CRS1>

The potential of public-private partnerships for water in Africa

Public-private partnerships already play an important role in financing water in Africa, and there is scope to scale them up. As evidenced by a comparison between ODA, mobilised private finance and PPP for water in Africa (limited to 5 countries as data on PPP was not available for other countries) in figure 13, the amounts of private capital raised via PPP mechanisms are significant, of the same order of magnitude as the amounts of ODA, and much higher than the amounts of mobilised private finance. There is potential for scaling up PPP in water. Some successful cases (see case studies in annex C), such as Rwanda's Kigali Bulk Water Supply PPP could pave the way for more PPPs in Africa. According to Rami Ghandour, managing director of Metito, a UAE-based water company with operations in Africa, the market is still "99% untapped", presenting huge opportunities for international water companies. Current trends present similarities with the evolution of PPPs for the power sector, which was mainly led by government utilities two decades ago and then grew substantially closing the supply gap on electricity in Africa.

Figure 13. PPP, ODA and mobilised private finance for water (average 2012-2020)



Note: Due to limited data availability, the data includes only: i) PPP for WSS; ODA for WSS, hydro-electric power plans and agricultural water resources; iii) mobilised private finance for WSS.

Source: Authors, based on OECD Creditor Reporting System (OECD, 2023^[13]) <https://stats.oecd.org/index.aspx?DataSetCode=CRS1> and the World Bank database on (World Bank, n.d.^[37]) <https://data.worldbank.org/indicator/IE.PPI.WATR.CD>

Examples of public-private partnerships for water in Africa include **concession arrangements** under which a government or municipality allows a private entity to operate the water infrastructure for a specified period. Under the responsibility of the service authority, the private-sector operator is in charge for providing the service, including operating and maintaining the infrastructure for the given period and is also responsible for asset replacement and network expansion. The private sector is then exposed to users' risk. For instance, in Benin, four eight-year PPP concession contracts for 10 piped water systems were implemented (with the support of the World Bank, the IFC and the Dutch cooperation fund), to give access to water to three rural municipalities. 48,500 people are expected to have improved access to drinking water, and local commercial banks are willing to finance commercial water operators (World Bank Group, 2018^[44]). They includes as well **build Operate Transfer (BOT) arrangements and similar contractual arrangements (Design-Build-Operate, Build-Own-Operation, among others)** under which the public sector grants to the private entity the right to develop and operate a facility or system for a certain period, usually a greenfield project. Depending on the nature of the contract, the private company is either exposed to the users' risk or to the off-taker's risk (public utility, municipality, etc.). For instance, the Kigali Bulk Water Supply project in Rwanda is the first large scale water treatment facility financed through a PPP model in Sub-Saharan Africa (excluding South Africa). Metito consortium won the 27-year concession to build, operate, maintain, and transfer the facility. The resulting infrastructure is expected to cover the 40% of Kigali's water supply needs (OECD, 2019^[3]). Another sub-nature of contractual arrangement is divesture with ownership of the existing assets. Divesture from existing water assets, especially in urban areas where the probability to have more bankable water projects is higher, can offer the public sector, in certain contexts and if certain conditions are met, an **asset recycling opportunity for water** whereby they receive upfront capital from the private sector instead of future income from those revenue-generating water assets. Then, the monetised proceeds, in certain context, can be used to invest in less bankable water assets, like in rural areas for example or to de-risk potentially bankable water projects to further attract private capital into the sector, where appropriate.

Chapter 3: Diversifying sources of finance for water in Africa: ways forward

Strengthening the water policy investment framework

Water pricing and targeted social measures

The implementation of cost-reflective tariffs and efficient cost recovery mechanisms are particularly constrained in Africa because of a misconception of how affordability constraints can be addressed and inefficient subsidies in place which benefit high-income groups and fail to reach the very poor (Abramovsky et al., 2020^[38]) (Andres et al., 2019^[39]) (Poulin et al., 2022^[31]). In addition, the predictability of tariff adjustments is sometimes uncertain, which can deter investment.

Low tariffs only benefit users who are connected, while depriving utilities from the revenue to extend coverage. Subsidising connection can be more effective than keeping tariffs low. **At least in urban environments, tariffs could be increased to generate additional revenues, whereas affordability can be addressed through targeted social measures.** In rural environments and informal settlements, setting up such measures may be more challenging. **Appropriate responses to affordability issues need to combine several dimensions.** They can waive or modulate access fees, which can be disproportionate with households' capacities to save or incur debt. They can adjust payment schedules to match households' liquidity or irregular income. They are better delivered through targeted social measures than through the water bill. The most appropriate responses vary according to national and local contexts. They usually combine a capacity to target households most in need of support; low transaction costs, building on existing data and social programmes; and synergies with water conservation measures (Leflaive and Hjort, 2020^[40]).

On top of targeting subsidies, tracking their use and their impacts can allow governments to ensure they are efficient. **A option for governments is to establish water subsidies accounts¹³ to centralise subsidies for the sector** based on the forecasted needs and disburse accordingly. On top of annual government's contribution, the subsidies account can be complemented by philanthropists and other potential donors. Water taxes/fees from water consumption industries could also complement the accounts. These accounts can be predictable and annually replenished. The accounts would operate as a Partial Risk Guarantee (PRG) that could complement or be junior to the PRG that a MDB could bring on a transaction.

Economic instruments and policies to incorporate the cost of water into the energy, agriculture sectors and other water-intensive sectors at the national level are opportunities to leverage finance for water. As previously mentioned, water-intensive industries could, for instance, contribute to water subsidy accounts implemented by

¹³ Similar to debt reserve accounts, which have in reserve the equivalent of 6 to 12 months of debt services. In case a project is not performing well, lenders can take money from this account before calling insurance and eventually default. If they use the account and the project starts performing again, the account is replenished. The water subsidies account could work in a similar way.

governments through water taxes or fees. **In addition, developing multipurpose projects integrating several water components has proven to be effective mobilising finance for water**, particularly in rivers shared by multiple countries, encompassing purposes such as food production (irrigation), energy generation (hydropower), and water use (water treatment systems). This was the case for instance on the Senegal river with OMVS, the Gambia River with OMVG and the Nile River.

Structuring long-term water project pipelines

Structuring long-term water project pipelines should start with a clear water strategy that reflect countries' long-term ambitions and needs. Projects, financial needs, and investment plans should be based on these strategies that will be the corner stone of any partnership with other actors to boost water finance. Costs and revenues appraisal should be done for each project to determine the total investment and operational costs that are needed, the required revenue versus the expected revenue, and the level of subsidies / concessional resources necessary for private sector involvement. This will provide visibility to the market regarding the pipeline of projects for the coming years (including their bankability). Each player (private sector, commercial lenders, philanthropists, donor countries, MDBs, etc.) can provide the right instrument and make long term pledges that will further encourage the private sector to invest.

To achieve this and address the complexity, lack of scale and lack of implementation of water projects, one effective approach would be to support African countries in establishing strong and credible water project facilitation units. To strengthen their effectiveness and impact, these units should be supported with technical assistance and affordable resources from Multilateral, Regional, and Bilateral Development Banks. With this support, these units could:

- prioritise projects (see following paragraph on project planning below),
- develop transparent procurement processes based on factors like bankability, efficiency criteria, and subsidy availability,
- assess project readiness using standardised methods and implement necessary reforms to enable the investments in water (including under PPP schemes),
- coordinate among various local stakeholders (ministries, agencies, etc.) for water projects, and facilitating permits and agreement negotiations,
- define the subsidy levels or blended finance requirements for specific projects fairly, ensuring that the public sector does not over-subsidise, while offering an attractive risk-adjusted return to the private sector,
- provide information in a standardised format through common portals, including priority projects for the country, environmental studies, and standard contract clauses is also relevant for the success of these projects.

Diversifying financing instruments and financing sources

Risk mitigation instruments and project preparation

A variety of instruments to de-risk water investments on the continent, including loan guarantees, blended finance funds and project preparation and development services could be scaled up for water:

- Loan guarantees, which include **Partial Risk Guarantees** to cover liquidity issues at project level and **Political Risk Insurances**. For instance, GuarantCo provided a joint partial credit risk guarantee with USAID

of USD 1.8 million to Nedbank as part of the financing for the Kalangala Infrastructure project in Uganda, which aimed at upgrading the transport and water infrastructure, covering the non-payment of debt service (OECD, 2019^[3]).

- **Blended finance funds for water at global, regional and local levels:** like for climate, the creation of a worldwide blended fund for water should be encouraged, to deploy grants or concessional resources in water projects to make them bankable building on the experiences of the Green Climate Fund for example. At regional and country level, specific blended finance funds could be created with a minimum contribution from the government's budget and with substantial contributions from MDBs, donors countries, philanthropists instead of them supporting small size and fragmented projects. Pooling grants into large scale and impactful projects rather than small and fragmented ones will enable to scale up the impact of these grants (see paragraph below on pooling projects). These blended finance funds should be run by professionals that will assess the opportunities and the amount of blended capital as well as the level of concessionality to provide to a project based on its fundamentals and the end-beneficiaries. The contribution does not have to always be grants, it could be reimbursable grants, or junior equity to ensure scalability and sustainability.

- **Portfolio pooling arrangements can be effective in attracting large-scale commercial investment by reducing the transaction costs associated with risk-sharing arrangements for individual investments.**

Pooling projects and financing instruments could be an effective way forward to address selected unfavourable project attributes. Providing commercial investors' access to a variety of transactions in the water and sanitation sector can mitigate concerns around small ticket size, risk exposure, limited sector or regional knowledge as well as high transaction costs. Pooling mechanisms such as blended finance funds tailor different risk and return profiles for individual investors, with development financiers often taking the first loss and junior tranches buffering the risk for commercial investors in the senior tranches. Guarantees, moreover, can strategically mitigate portfolio risk (OECD, 2019^[3]).

An effective example of a syndication structure at portfolio level is IFC's Managed Co-Lending Portfolio Program (MCP), a pooled syndication arrangement allowing different types of investors to invest alongside IFC in developing countries, for example in clean energy infrastructure investments. With an eight-year long track record and USD 10 billion of funds raised from 11 commercial investors, in 2021 IFC launched the MCP One Planet, a new USD 3 billion iteration that specifically target investments that are aligned with the Paris Agreement (World Bank, 2023^[45]).

- **Project preparation and development services¹⁴:** there is a clear appetite for infrastructure projects on the continent, including water-related investments when there is clear route to commercial viability. However, the private sector may not be comfortable with early-stage risks due to the complexity of these transactions and the lack of visibility. This is why governments should support the creation of water project preparation and development funds that will enable to provide a pipeline of bankable and beneficial projects and will mitigate the lack of risk appetite for water-related investments. Preparation and development resources will enable the realisation of the full analysis of projects, structure them in the most optimal way and de-risk them as well as their environment.

Accessing local financing

¹⁴ Similar point as project preparation but this recommendation is going further to development stage. Preparation is more focused on government (capacity building, right policies and reforms, project identification and planning, pre-feasibility). Development is focused on the private sector and is the actual work to be done from pre-feasibility all the way to financial close to de-risk the project and mobilise required private capital.

Financing instruments can be developed to tap local capital markets for water and facilitate exits and trades (thanks to market liquidity). This includes the creation of **country platforms with bankable water projects** that can be sold to the markets or can be refinanced with bonds, so that the initial investors can exit and recycle their money. The Water Finance Facility seeks to mobilise large-scale private investment from domestic institutional investors (e.g. pension funds, insurance companies) by issuing local currency bonds in support of domestic priorities on water and sanitation. The first such facility is the Kenya Pooled Water Fund (KPWF), which has been initiated in Kenya with support of the Dutch government, Kenyan authorities and other development partners. (OECD, 2019_[3]). This includes as well **mobilising local savings through dedicated instruments into operational and de-risked water infrastructure fund.** Water projects such as desalination, once de-risked and operational can provide attractive risk adjusted return. Hence, investors can then open the shareholding to instruments that mobilise local savings. The FCPR SEN FONDS, the 1st venture capital mutual fund, launched by the Senegalese Ministry of Economy, is an illustration.

Providing access to local currency financing and mitigating currency risks is also key to mobilise private capital in water infrastructures projects in Africa. For instance, the Kigali Bulk Water Supply project incurred delays due to disagreements over the currency of the loans as well as a late notice from regulators that they did not support the impact on water and sanitation tariffs (OECD, 2019_[3]). Domestic guarantee platforms, as they adapt to local market regulations, can be an effective way to mitigate currency risks. The Infrastructure Credit Guarantee Company Limited (InfraCredit) was established by GuarantCo and the Nigeria Sovereign Investment Agency (NSIA) to provide credit enhancements for Nigerian local-currency debt instruments for infrastructure financing. InfraCredit's capital structure is composed of three tiers of capital, namely core, paid-in capital by NSIA and other institutional investors, callable capital by GuarantCo and subordinated capital by KfW and AfDB (InfraCredit Nigeria, 2023_[46]). InfraCredit is working on creating strategic partnerships with donors and DFIs and MDBs that could unlock new sources of early-stage capital for well-structured, bankable infrastructure projects (World Bank, 2023_[47]).

Developing innovative funding arrangements

Furthermore, innovative funding arrangements represent a significant potential to raise additional revenue from private actors for water management and internalise pressures on water bodies, resulting from abstraction or pollution (including through taxes). Several mechanisms are particularly promising in this respect, including Payments for Ecosystem Services (PES), Extended Producer Responsibility (EPR)¹⁵, or fiscal policies based on the Beneficiary Pays principle, such as land value capture mechanisms¹⁶ (OECD/Lincoln Institute of Land Policy, PKU-Lincoln Institute Center, 2022_[48]) (OECD, 2023_[49]). Payments for Ecosystem Services (PES)¹⁷ have been implemented in Africa via the Water Funds model. Water Funds provide a financial, technical and institutional mechanism that promotes public and private sector participation for watershed conservation. This mechanism offers

¹⁵ EPR is a regulatory approach whereby a producer's responsibility for a product is extended to the post-consumer stage of a product's life cycle.

¹⁶ Land value capture is the recovery and public utilisation of increases in land value that result from public planning and infrastructure investments. Recovered revenues can be used to fund infrastructure for urban water, irrigation, and flood protection, including nature-based solutions. LVC offers a valuable solution for addressing sustainable land use, enhancing tax revenues, and bolstering the fiscal independence of subnational governments. Among the financing tools, developer obligations emerge as a practical mechanism. These obligations encompass cash or in-kind payments intended to offset the expenses associated with new public infrastructure and services that private development requires. Developer obligations come into play when developers actively seek development approvals or special permissions, thus aligning with the actions of private developers and landowners. Importantly, LVC needs to be used well to avoid overdevelopment and unnecessary increases in built-up area, as well as earmarking LVC gains towards wealthy areas (OECD, 2023_[49]).

¹⁷ PES are voluntary mechanisms where suppliers of ecosystem goods and services (EGS) are paid by the beneficiaries to manage the ecosystems so that the provision of EGS is maintained and/or enhanced.

opportunities to promote the sustainable management of watersheds and improved water security for downstream users, such as city dwellers, corporates or agricultural users. The water funds model, first set up by TNC and the Municipality of Quito, brings together different types of public and private actors in a pooling mechanism that provide long-term, sustainable finance to contribute to water security through nature-based solutions (OECD, 2019^[3]). In Africa, TNC has developed 14 Water Funds. The first one was the Upper Tana-Nairobi Water Fund (UTNWF), implemented to help secure the Nairobi water sources. The fund allows urban users to invest in upstream watershed conservation efforts, which at the same time benefit farmers, businesses and all the actors that depend on the Tana River. Major water users (including private companies such as Coca-Cola) are largely playing the role of investors, while non-urban communities receive training and incentives to support land conservation measures.

Coordinating multiple stakeholders

Finally, innovative arrangements to coordinate multiple stakeholders such as Just Water Partnerships (JWP) could also enable to crowd in additional capital. Following the model of Just Energy Partnerships, JWP can drive down the cost of capital by using the complementary strengths of each funding stream - channelling current inefficient national subsidies, leveraging multilateral development banks and development finance institutions, and calling on private companies, banks and institutional investors, as well as philanthropic money. The multilateral development banks, regional development banks, and development finance institutions should collaborate closely with national governments, city and local authorities, and public development banks. This collaboration is essential to facilitate investments on their respective balance sheets while also increase the participation of private capital. It should encourage multi-stakeholder partnerships with public, private, and civil society participation. The economic return on these investments will far exceed their costs. JWPs should be a country platform with an approach for water where countries work with development banks and other actors to define policies and mobilise investment, which need blended finance mechanisms that have concessional elements, especially for low-income countries (GCEW, 2023^[11]). A first JWP was launched in Mexico in September 2023.

Water within the reform of the global financial architecture

However, in sectors such as water, the private sector cannot realistically be the main financier. Governments will keep playing the key role through public resources, mobilised grants, development finance and commercial loans. In the meantime, most African countries are dealing with day-to-day priorities to the detriment of the huge investments needed in water access and security. They must face food security, energy crises which require subsidies, health crises as well as security issues that can sometimes cost up to 3% of their respective GDPs. This is why there is a need to reform the global architecture for development finance to provide additional liquidities to developing and poorest countries to finance global public goods and national development priorities such as water.

Concrete propositions on the reform of the international financial architecture, to ensure it is fit for financing water in the Global South (including in Africa) were made at the [9th meeting of the Roundtable on Financing Water](#). They included the following:

- **The definition of the hydrological cycle as a global common good** (GCEW, 2023^[11]) **is key to ensure water projects have access to potential new financial windows** created with the reform of the global financial architecture. Initial debates suggest that multilateral development banks could pay more attention to financing global public goods, while regional and national development banks could focus on regional and local projects.
- **The IMF could issue new Special Drawing Rights (SDRs) for resilience and water**; these new SDRs would not reflect countries' quota (which results in G20 countries being granted the bulk of issuances, and

African countries around 5%) but the vulnerability of countries to climate and water or countries' level of ambition for climate and water. Such shift in quota rules (based on countries climate vulnerability, including water security) would be a major overhaul of the financial system that will enable vulnerable countries to have more liquidity to build climate resilient water infrastructures and to face losses and damages when they happen. **The IMF could also issue SDRs** (or developed countries could decide to redistribute a share of their SDRs) **and put them into a guarantee fund, in order to give access to capital markets to African countries** (will go from 7 to 3% interest rate a year, the profit could be invested in water). Finally, SDRs could be rechannelled through Regional Development Banks for leverage to lend more to countries who no longer have access to the capital markets. Part of these SDRs could be earmarked for water projects.

- Many African countries are facing constraints to finance water due to their debt ceilings (70% of GDP), and budget deficit ceilings (3% of GDP). **Debt-for-water swap could be implemented, contributing to financing water** while addressing high-level of sovereign debt of emerging economies (see background document on *Refinancing debt for conservation and climate: the example of TNC's Nature Bonds program and its applicability to freshwater*).
- **Loans of public development banks could be conditional on all sectors treating water as seriously as the global climate crisis.** It would help to put water security at the same level as climate change in international negotiations. MDBs would have a big role to play to achieve this objective, and more importantly their shareholders (countries). **Aligning water and climate objectives is important as water is at the cornerstone of climate change issues and the transition to net zero**, from mitigation, adaption, loss and damage perspectives. Strategically linking water-related investments with climate action can help achieve both climate goals and water security and unlock financing flows. For example, the new Resilience and Sustainability Fund within IMF should benefit to water projects on the continent.

Questions for discussion at the Roundtable meeting

Challenges to finance water in Africa

- Does the paper reflect your experience?

Sources of finance: State of play

- Tariffs. Can we agree that low tariffs for WSS only benefit the ones who are connected? Where are the capacities to develop targeted social measures really lacking?
- Which trends in ODA do you see as promising / a source of concern? What are the options to make better use of ODA (better target projects that deliver tangible outcomes on the ground; better target ODA to people most in need; better use of ODA to leverage private finance; else)

Diversifying sources of finance: Ways forward

- What are the prospects for diversifying and scaling up sources of finance for water in Africa? What policies and instruments should be put in place or developed?

Annex A. Blended finance instruments and mechanisms for financing water and sanitation utilities

Leveraging mechanism	Definition
Direct investments in companies and special purpose vehicles (SPVs)	In the context of project finance, these mechanisms refer to mobilising private investments in SPVs, which are neither covered by official guarantors nor part of a syndicated loan. Beyond project finance, direct investment in companies refers to loans, mezzanine finance and equity investments in enterprises alongside with private investors to provide liquidity for expansion purposes.
Guarantees	Guarantees are legally binding agreements under which the guarantor agrees to pay part or the entire amount due on a loan, equity, or other instrument in the event of non-payment by the obligor or loss of value in case of investment.
Syndicated loans	Syndicated loans are defined as loans provided by a group of lenders (called a syndicate) who work together to provide funds to a single borrower.
Credit lines	Credit lines refer to a standing credit amount which can be drawn upon by borrowers (typically local finance institutions) for on-lending purposes, mainly to SMEs.
Simple co-financing arrangements	Simple co-financing arrangements refer to various business partnerships, B2B programmes, business surveys, matching programmes, co-financing of specific projects and similar arrangements where official providers extend finance in co-financing with the private sector.
Shares in collective investment vehicles (CIVs)	Shares in collective investment vehicles (CIVs) represent investments in pooling vehicles, such as investment funds and facilities, which typically use such finance to foster local SME development

Source: (OECD, 2023^[22]).

Annex B. Summary of investment attributes across three water sub-sectors

Feature	Water and Sanitation Utilities	Off-grid sanitation	MPWI and Landscape-based Approaches
Risk			
Macroeconomic and business risks	Currency risk (due to mismatch in revenue and debt servicing currency), operating risk (weak performance of utilities), and credit risk (inability of counterparty to honour contractual arrangements).	Currency risk (due to mismatch in revenue and debt servicing currency), market risk (demand for service), operating risk (weak performance of sanitation service providers), and liquidity risk (inability to exit/sell).	Currency risk (due to mismatch in revenue and debt servicing currency), credit/off-taker risk (if applicable), operating risk (due to a variety of different technologies in MPWI), termination risk (risk of early termination of long-term contracts), market risk (demand for service), and construction risk (if applicable).
Regulatory and political risks	Regulatory and political risk (sensitivities around water and sanitation tariffs and potential for political interference in the tariff setting process); economic regulation may be weak or absent (further, regulatory regimes may preclude the possibility of including debt service in the costs that can be covered by the tariff).	Regulatory risk (e.g. in many developing country contexts there is no regulatory environment for off-grid sanitation, political risk in the case of government procurement contracts, and utilities may not have a mandate to engage in non-sewered sanitation).	Regulatory risk (e.g. change in tariffs if any; private participation in infrastructure).
Technical risks	Due to the long-lived and capital-intensive nature of water and sanitation infrastructure as well as under-investment in maintenance, performance risks may arise due to aging infrastructures, leakage, and obsolescence of technologies. As water distribution infrastructure is underground and services can continue despite high levels of leakage, such degradation can go undetected for years, as rehabilitation and maintenance needs climb significantly.	Performance risk and obsolescence of utilized technology as off-grid sanitation approaches are container-based solutions (CBS) and faecal sludge management (FSM) technologies are relatively new.	Obsolescence of utilized technology given the long-term nature of contracts and multitude of technologies applied.
Environmental/ social risk	Environmental risk (e.g. increasing water scarcity can lead to an increase in the cost of bulk water supply as a result of variability in rainfall and increasing uncertainty about future conditions). Social risks (e.g. particularly for low-income households, relative to tariff	Environmental risk (e.g. chances of spillages of excreta of container-based solutions (CBS) and onsite sanitation).	Environmental risk (e.g. complex and costly assessment of Multi-Purpose Water Infrastructures (MPWIs) adherence to environmental standards; variability of availability of water resources due to climate change can reduce the performance of MPWI, for example, hydropower production).

	increases as a result of major new capital investments).		Potential negative environmental impacts of large MPWIs, disrupting natural flow regimes that support ecosystem services. Social risk (e.g. the resettlement of households that will be flooded downstream of dams).
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Return

Cash-flow generation	Utilities collect tariffs and other payments (e.g., connection fees) from customers. Tariffs can, but in practice often do not, fully cover operational and maintenance costs and rarely cover capital expenditure. Improvements in operational efficiency can create more cash flow to invest in service expansion and increase the customer base and revenues.	Depending on the off-grid sanitation model, cash flows are generated through the sale of toilets (usually paid monthly), collection fees for waste, from products sold after processing of waste, user fees for toilets, and concession contracts from local governments.	MPWI projects often have quite predictable revenue streams, for example, in the case of electricity generation tariffs or power purchase agreements (PPAs) and large-scale waste treatment plants. Cash flows generated by landscape approaches to delivering water-related services often generate cash flows within actors operating in the spatial area, including by increasing turnover, efficiencies, or reducing costs and expenditures of e.g. bulk water supply.
Developmental return	Improved access to water and sanitation services produces a range of valuable benefits for individuals, communities, and the environment, including a reduction in adverse health outcomes, increased educational attainment (especially for girls), and enhanced labour productivity.	Can reduce levels of open defecation and improve household hygiene, leading to reduced illness. Sanitation services also improve menstrual hygiene management, which, in turn, can reduce dropout rates of girls in school. Properly managed waste reduces the environmental impact of poorly managed sanitation.	Projects can have a potentially significant economic impact on areas. Landscape-based approaches can improve water management and quality for downstream users.

Project Attributes

Greenfield vs. brownfield	Greenfield projects face additional business or technical risk due to the construction.	Not applicable given the service nature of the subsector.	Greenfield projects face additional business or technical risk due to the construction.
Scalability	Some projects and financing structures could be scaled and replicated, with adaptation to local contexts and institutional structures. Other models present limitations to replication due to specific contextual circumstances.	Off-grid sanitation models can be scaled, particularly if they are seen as complementary to sewerage systems and can access a stable revenue source, e.g., a public off-taker. Any replication of a project hence depends on the underlying jurisdiction and context.	MPWI and landscape-based approaches are significantly dependent on the spatial area where they are located, including the actors located in the areas. At the same time, in particular landscape-based approaches such as Water Funds have proven to be scalable and replicable when adapted to the local context.
Size	Depends on whether the water provider serves an urban or rural area. The population density of the service area is a critical factor.	Small-scale direct investment in enterprises.	MPWI are typically large-scale projects run as Special Purpose Vehicles (SPVs). Landscape infrastructure projects tend to be smaller, focusing on a spatial area.

Transaction costs	High given the weak capacity of service providers to maintain an asset registry and sufficient financial and accounting record keeping.	High given the opacity of small businesses, typically with a low level of expertise in financing this sector.	Adapting projects to the local context comes with high project development costs.
Tenor/ Longevity	Minimum average of 15 years of debt financing for sustainable debt service.	Varies, with the need for long-term patient capital to develop and scale business models.	Long tenor of in particular for Multi-Purpose Water Infrastructure (MPWI) public-private partnerships (PPPs), e.g., 20-25 years.

Source: (OECD, 2019^[3])

Annex C. Case studies

Case	Description	Country	Financing Sources	Financing Structure and Instruments used	Potential Impact
Blue Credit Line	Credit line for water and sanitation	Morocco	European Investment Bank, AFD, BMCE Bank of Africa	Credit Line & technical assistance	Ten companies benefited from the credit line
Upper Nairobi Fund	Tana-Water Nature Conservancy water funds which connect upstream and downstream communities	Kenya	Water consumers, public and private concessional funding	Payment for ecosystem service	44,725 farmers have implemented conservation activities, 3.4 million trees have been planted, 163 hectares of public forest rehabilitated, and 298 kilometres of riparian buffer lands fully conserved
Bitá Water Project	Improvement of the hydraulic infrastructure of the capital	Angola	International Bank for Reconstruction and Development (World Bank Group)	Guarantee	The total cost of the project (USD 1.1 billion) is secured. It currently benefits 2 million people
Piped-water systems in Benin	Improve the capacity of private sector operators of rural piped water systems	Benin	IFC and WB	PPP	Rehabilitation of ten piped water systems which will benefit 48,500 people.
South Africa's Water Reuse Programme ("WRP")	Operationalise a national water reuse programme (WRP) to transform the country's wastewater system	South Africa	GCF and DFIs	Multiple	In progress
DBSA Programme of the City of Tshwane	Large scale municipal water conservation, water demand management and cost recovery programmes	South Africa	DBSA, Infrastructure Investment Programme of South Africa, Private Investors	Grant, debt	It is anticipated that the project will reduce water losses in the distribution system, reduce consumption and improve billing and cost recovery rates.

Songwe River Basin Development Programme	Development of integrated industrial irrigation, water supply, and hydropower projects.	Tanzania & Malawi	SIWI, Government of Tanzania, Government of Malawi, African Development Bank, private investors	Grants, TA, Debt	In progress
Kafue River Basin	Funding water projects within Kafue River Basin including a wastewater treatment plant	Zambia	The World Wide Fund for Nature (WWF), Government of Zambia, FMO and private sector	Grant	In progress
Kalangala Infrastructure Services	Development of infrastructures services, among which water services are included	Uganda	Emerging Africa Infrastructure Fund (EAIF), InfraCo, PIDG's TAF, GuarantCo, Nedbank.	Equity, guarantee	The water treatment plant increased the capacity of producing water by 400000 litres per day, reducing waterborne diseases in Bugala Island by 80%.
Kigali Bulk Water Supply	Construction of a water treatment plant	Rwanda	Private Infrastructure Development Group (PIDG): Technical Assistance Facility (TAF), Emerging Africa Infrastructure Fund (EAIF), DevCo; African Development Bank	Grants, Technical Assistance (TA), Debt, Equity	Clean water supply to 500 000 inhabitants of Kigali

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