Infrastructure Financing Trends in Africa 2021-2023



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The Infrastructure Consortium for Africa

NEPAD-IPPF
INFRASTRUCTURE PROJECT PREPARATION FACILITY

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Table of Contents

Acknowledgements....8
Acronyms/Abbreviations....9
About the ICA....10
Foreword....11
Definitions....13
List of Figures....14
The Big Picture....17
1 Key Messages and Findings....19
1.1 Iinfrastructure Financing Trends and Policy Insights....19
1.1.1 Context....19
1.1.2 Strategic Trends....20
1.1.3 Policy Insights....22
1.2 Effects of COVID-19 on Infrastructure Investment....23
2 Financing Trends....25
2.1 A closer look at the infrastructure financing gap in Africa....25
2.2 Who is financing Africa's infrastructure?....30
2.3 What sectors are attracting investment?....30
2.4 Which regions are the funds flowing into?....31
3 Government Infrastructure Funding....32
3.1 Overview....32
3.1.1 Methodology....35
3.2 Commitments by African Governments in Infrastructure....36
3.2.1 By sector....36
3.2.2 By sub-region....37
4 ICA Member Financing....38
4.1 Overview....38
4.2 Trends in Financing....40
4.2.1 Commitments by sector....42

Table of Contents

4.2.2 Commitments by region..... 42
4.2.3 Country Allocations.....42
4.3 ICA Member Activities.....44
4.3.1 Africa Finance Corporation (AFC).....44
4.3.2 African Development Bank (AfDB).....44
4.3.3 African Import Export Bank (Afrexim) 44
4.3.4 The African Union Commission (AUC).....45
4.3.5 AUDA-NEPAD.....45
4.3.6 Banque Ouest Africaine de Développement (BOAD).....46
4.3.7 Canada.....46
4.3.8 European Investment Bank.....47
4.3.9 European Commission.....47
4.3.10 France 48
4.3.11 Germany.....48
4.3.12 Islamic Development Bank.....49
4.3.13 Italy.....49
4.3.14 Japan.....50
4.3.15 South Africa.....50
4.3.16 Spain.....51
4.3.17 United Kingdom.....51
4.3.18 USA.....52
4.3.19 Vinci.....52
4.3.20 World Bank Group.....53
4.3.21 IFC.....53
5 Non-ICA Members Financing.....54
5.1 Overview.....54
5.1.1 Public Financing.....54
5.1.2 Private Sector Financing.....56
5.2 Arab Coordination Group.....56

Table of Contents

5.2.1 The Abu Dhabi Fund for Development (ADFD)..... 57

5.2.2 The Kuwait Fund for Arab Economic Development (the Kuwait Fund, KFAED).....57

5.2.3 The Arab Fund for Economic and Social Development (the Arab Fund, AFESD)..... 58

5.2.4 The Saudi Fund for Development (SFD).....58

5.2.5 The OPEC Fund for International Development (the OPEC Fund, OFID)..... 59

5.2.6 The Arab Bank for Economic Development in Africa (BADEA).....59

5.3 Other IFI Sources.....59

5.3.1 European Bank for Reconstruction and Development (EBRD).....59

5.3.2 ECOWAS Bank for Investment and Development (EBID).....59

5.3.3 New Development Bank (NDB).....60

5.3.4 Asian Infrastructure Investment Bank (AIIB).....60

5.3.5 Africa 50.....60

5.4 Bilateral.....61

5.4.1 China.....61

5.4.2 India.....62

5.5 Private Sector Financing.....63

6 Sectoral Analysis.....64

6.1 Transport.....65

6.1.1 Who is financing the transport sector?.....65

6.1.2 Major Projects.....66

6.2 Water and sanitation.....68

6.2.1 Who is financing the water sector?.....68

6.2.2 Major Projects.....69

6.3 Energy.....71

6.3.1 Who is financing the energy sector?.....72

6.3.2 Major Projects.....72

Table of Contents

6.4 ICT……75

6.4.1 Who is financing the ICT sector?……76

6.4.2 Major Projects……76

7 Regional Analysis……78

7.1 Central Africa……79

7.2 East Africa……81

7.3 North Africa……83

7.4 Southern Africa……85

7.5 West Africa……87

7.6 Multi-Regional and continental projects……89

8 Strategic Trends……90

8.1 Challenges to Governments Contribution……90

8.1.1 Debt sustainability……90

8.1.2 Domestic resource mobilization……93

8.2 IFIs ……100

8.2.1 Deteriorating Terms of Concessional Financing……100

8.2.2 Declining Volume of Development Aid from Donor Countries……101

8.3 The Role of the Private Sector……102

8.3.1 Public-Private Partnerships……102

8.3.2 Asset recycling……105

8.3.3 Other trends in private sector participation in the infrastructure sector……106

8.4 Strategic Corridors for Industrialization and Integration in Africa…108

8.5 Climate Finance……112

8.5.1 Trends in climate finance mobilization……113

8.5.2 Sources of climate finance……113

8.5.3 Climate Finance and Private Sector Financing……114

8.5.4 Barriers and opportunities to effective climate finance mobilization in Africa……114

Table of Contents

8.6 Sector Strategic Trends.....115

8.6.1 Transport.....115

8.6.2 Energy.....120

8.6.3 Water.....128

8.6.4 ICT.....133

9 Policy Insights.....138

9.1 Reforms to limit debt effects on IFT.....139

9.2 Tackle Fiscal challenges.....142

9.3 Engaging institutional investors to realize the long-term value of African infrastructure investments.....143

9.4 Under-developed capital mark.....144

9.5 Inadequate Tariff Structures.....146

9.6 Shaping regulatory frameworks to support blended finance and public-private risk sharing.....149

9.7 Reinforce Quality Infrastructure Systems.....151

9.8 Overall Macroeconomic Parameters.....152

9.9 SDG finance.....155

9.10 The importance of project preparation to attract financing.....158

9.11 The need for data.....160

Annex 1: List of References.....162

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Infrastructure Financing Trends in Africa – 2021-2023 is the Infrastructure Consortium for Africa's (ICA's) annual report on how financial resources are being mobilized to facilitate the development of the continent's transport, water and sanitation, energy, and ICT sectors.

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Acronyms/ Abbreviations

Acronym	Definition
ACG	Arab Coordination Group
AFD	French Development Agency
AfDB	African Development Bank
AFESD	Arab Fund for Economic and Social Development
AFC	Africa Finance Corporation
AfCFTA	African Continental Free Trade Area
AGFUND	Arab Gulf Program for Development
AIIB	Asian Infrastructure Investment Bank
AMF	Arab Monetary Fund
AUC	African Union Commission
BADEA	Arab Bank for Economic Development in Africa
BOAD	Banque Ouest Africaine de Développement
BRI	Belt and Road Initiative
CAR	Central African Republic
DBSA	Development Bank of Southern Africa
DRC	Democratic Republic of Congo
EBID	ECOWAS Bank for Investment and Development
EBRD	European Bank for Reconstruction and Development
EIB	European Investment Bank
ICA	The Infrastructure Consortium for Africa
ICT	Information and communications technology
IsDB	Islamic Development Bank
KFAED	Kuwait Fund for Arab Economic Development
MIGA	Multilateral Investment Guarantee Agency
NDB	New Development Bank
NDC	National Defined Contributions
ODA	Official Development Assistance
OFID	OPEC Fund for International Development
PIDA	Program for Infrastructure Development in Africa
QFD	Qatar Fund for Development
SFD	Saudi Fund for Development
SDG	Sustainable Development Goals
SEFA	Sustainable Energy Fund for Africa
STP	São Tomé and Príncipe
UNCTAD	United Nations Conference on Trade and Development
UNECA	United Nations Economic Commission for Africa
UNDP	United Nations Development Program
WB	World Bank

About the ICA



Origin

From the 1990s through 2004, many of the major donor agencies and G8 countries were mainly focused on non-infrastructure issues in Africa. For example, fighting the HIV pandemic across the continent of Africa has directed many investments away from transport, energy, water, and ICT programs. The 2005 G8 Summit at Gleneagles offered the Commission for Africa an opportunity to present compelling information on the critical need to redirect attention to building and managing a sustainable infrastructure system in Africa.

The Commission for Africa's aim was to take a fresh look at Africa's past and present, and at the international community's role in its future development. The Commission made several clear recommendations for the G8, the European Union, and other wealthy nations and African countries. A key recommendation was to address the critical need to strengthen Africa's infrastructure (transport, water, energy, and ICT).

Mission and Vision

The primary role of the Infrastructure Consortium for Africa, ICA, is to help reduce poverty and increase economic growth throughout Africa by supporting and promoting increased investment in African infrastructure, from both public and private sources. ICA's vision is that all Africans have access to sustainable and reliable infrastructure services, including energy, transport, water, and information and communications technology (ICT).

Membership

ICA is a tripartite relationship between bilateral donors, African institutions, and multilateral institutions.

ICA members include:

- **All G8 countries:** Canada, France, Germany, Italy, Japan, the United Kingdom, the United States, and Russia.
- Members from the G20 including the Kingdom of Spain (a permanent guest of G20) and the Republic of South Africa (the first African member country).
- **African Institutions:** The African Union Commission (AUC), the African Union Development Agency of the NEPAD (AUDA-NEPAD); the United Nations Economic Commission for Africa (UNECA); the Regional Economic Communities participate as observers at ICA meetings.
- **Multilateral Development Banks:** The African Development Bank (AfDB), the African Export-Import Bank (AfreximBank), the European Investment Bank (EIB), the International Finance Corporation (IFC), the Islamic Development Bank (IsDB), the Africa Finance Corporation (AFC), and the World Bank Group (International Finance Corporation – IFC – the Multilateral Investment Guarantee Agency – MIGA – and the World Bank – WB).
- **Regional and Bilateral Development Finance Institutions:** The French Development Agency (AFD), la Banque Ouest Africaine de Développement (BOAD), and the Development Bank of Southern Africa (DBSA).
- VINCI, a private firm specializing in concessions, construction, and energy, joined as the first private sector ICA member.

Other donors making significant financial contributions to infrastructure in Africa may become members.

Foreword

The Infrastructure Consortium for Africa (ICA) reports on infrastructure investment in Africa through the Infrastructure Financing Trends in Africa (IFT) Report. The report reviews financing by country and by type of contributor. Its goal is to monitor investment patterns and highlight ways to strengthen support for sustainable infrastructure in transport, water and sanitation, energy, and ICT. ICA is not itself a financing agency; it is a consortium of governments and key financial partners working to maximize financing flows to Africa, reduce the continent's infrastructure gap, and improve the lives and livelihoods of all Africans. ICA plays a facilitating role in African infrastructure financing and development by pooling its members' efforts in information sharing, the creation and dissemination of relevant knowledge, and the identification of emerging policy lessons that can help mobilize financial resources for infrastructure development at national and regional levels. This edition of the IFT Report covers the years 2021 to 2023.

The COVID-19 pandemic severely disrupted infrastructure development across Africa. This disruption was compounded by a collapse in global commodity prices - especially oil and minerals - diminishing export revenues and fiscal capacity in resource-dependent African countries. At the same time, rising public debt, declining official development assistance, and reduced Chinese infrastructure investment further constrained Africa's ability to finance infrastructure and recovery. These trends reflect fragile debt conditions on the continent, China's domestic economic challenges, and a strategic shift in its global lending approach.

Despite these headwinds, infrastructure financing recovered between 2021 and 2023 and reached $96.7 billion in 2023, representing a 19% increase compared to 2020. However, infrastructure needs continued to grow, and the infrastructure financing gap widened to $117 billion in 2023 - a net increase of 4% over the three years, underscoring the persistent need for sustainable, long-term investment.

Between 2021 and 2023, the transport sector received the largest share of financing, followed by the energy sector. This aligns with areas of greatest need, project costs, and historical trends. North Africa received the most infrastructure financing, driven primarily by investments by the Government of Egypt, while the share allocated to Southern Africa declined due to reduced infrastructure spending in South Africa.

This report reveals several critical insights. First, national governments have re-emerged as the primary financiers of infrastructure, accounting for over 60% of total commitments in 2021 and 2022. This reflects both a strong commitment to infrastructure-led development and a concerning decline in international assistance. Second, private sector participation remains well below its potential, despite the continent's growing pool of institutional capital. African pension funds, for example, manage over $350 billion in assets, yet allocate less than 2% to infrastructure. Unlocking this capital will require regulatory reform, innovative financing instruments, and robust project pipelines.

Third, there is an urgent need to align infrastructure investment with climate and development goals. The report highlights the growing role of climate finance, blended finance, and SDG-linked instruments in mobilizing capital. However, Africa still receives only a fraction of the climate finance it needs - just 12–15% of the estimated $277 billion required annually. Scaling up climate-resilient infrastructure will demand stronger project preparation, improved data systems, and greater collaboration between public and private actors.

Finally, the report emphasizes the importance of financial sustainability and governance. Many utilities and infrastructure agencies continue to face weak cost recovery, limited institutional capacity, and fragmented regulatory frameworks. Addressing these challenges is essential to improving project bankability and attracting long-term investment.

We hope this report serves as a practical resource for policymakers, investors, and development partners.



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Definitions

Budget Data

Budget allocations: Total approved government budget for the respective item.

Total infrastructure budget: Sum of energy, water and sanitation, transport, and ICT budget allocations. Where available, significant multisector or other infrastructure allocations are indicated separately.

Note that unless otherwise stated, all values are in USD.

ICA Members

G7 countries and Russia, the Republic of South Africa, Spain, AFC, AFD, AfDB, AfreximBank, AUC, AUDA-NEPAD, UNESCA, BOAD, DBSA, EC, EIB, IsDB, RECs, VINCI, WBG (WB, IFC, MIGA)

Infrastructure

Total infrastructure budget: Sum of energy, water and sanitation, transport, ICT, and multi-sector infrastructure budget allocations.

Hard infrastructure: Physical infrastructure.

Soft infrastructure: Measures to support or accompany the production of physical infrastructure outputs, including research, enabling legislation, project preparation, and capacity building.

Project preparation: The undertaking of all project preparation cycles or development activities necessary to take an infrastructure project from identification through concept design to financial close. This includes feasibility testing and financial and legal structuring, as well as raising capital.

Funding

Commitments: Direct funds approved in a given year to projects over their lifetime.

Disbursements: Money outflow going to infrastructure projects during a given year.

ODA – Official Development Assistance: Grant or loan with public concessional modalities administered by donor government agencies.

Non-ODA: Non-concessional funding from public or private sources.

Regional project: Projects with direct beneficiaries in more than one country. These can either be cross-border projects or other regional integration projects involving a minimum of two countries or national projects.

Location

Central Africa: Burundi, Cameroon, Central African Republic (CAR), Chad, Congo, Democratic Republic of Congo (DRC), Equatorial Guinea, Gabon, São Tomé and Príncipe (STP).

East Africa: Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Mauritius, Rwanda, Seychelles, Somalia, South Sudan, Sudan, Tanzania, Uganda.

North Africa: Algeria, Egypt, Libya, Mauritania, Morocco, Tunisia.

Southern Africa: Angola, Botswana, Eswatini, Lesotho, Malawi, Mozambique, Namibia, Republic of South Africa, Zambia, Zimbabwe.

West Africa: Benin, Burkina Faso, Cape Verde, Gambia, Ghana, Guinea, Guinea Bissau, Côte d'Ivoire, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo.

Sector

Transport: Airports, ports, rail, road.

Energy: Generation, transmission, and distribution of electricity and gas (including pipelines and associated infrastructure).

Water and sanitation: Sanitation, irrigation, (transboundary) water resource infrastructure, water supply, waste (solid & liquid) treatment and management.

ICT: Information and communication technology, including broadband, mobile network, and satellite.

Multi-sector: Not sector-specific or cross-cutting projects. This could include the implementation of a PPP unit or capacity-building programs.

List of Figures

Figure 1-1: Cumulative African National GDP 1990-2023 19
Figure 1-2: Debt service as a share of government spending (African median).....19
Figure 1-3: Tax-to-GDP ratios in world regions, 2000-2022.....20
Figure 1-4: Breakdown of global climate finance by region of destination ($ bn).....22
Figure 2-1: Infrastructure Financing Gap over 2021, 2022 and 2023 in the 4 sectors ($ bn).....25
Figure 2-2: Infrastructure Financing Gaps 2021 ($ bn).....26
Figure 2-3: Infrastructure Financing Gaps 2022 ($ bn).....26
Figure 2-4: Infrastructure Financing Gaps 2023 ($ bn).....27
Figure 2-5: Infrastructure Financing Needs, 2022-2022-2023 ($ bn).....27
Figure 2-6: Infrastructure Investments trend, 2021-2022-2023 ($ bn).....28
Figure 2-9: Infrastructure Financing by Sector 2019-2023 ($bn).....29
Figure 2-10: Commitment Trends by Source (2019-2023).....30
Figure 2-11: Disbursement Trends by Source (2021-2023).....30
Figure 3-1: National Government Infrastructure Financing by Region 2021-2023 ($m).....32
Figure 3-2: Internal and external funding from national budgets 2021-2023.....34
Figure 3-3: National Government Infrastructure Financing (2021-2023).....35
Figure 3-4: National Infrastructure Budget Allocations by Region (2021-2023).....36
Figure 4-1: ICA member infrastructure financing 2021-2023.....40
Figure 4-2: ICA member financing by sector (2021-2023).....41
Figure 4-3: ICA member financing by region (2021-2023).....41
Figure 4-4: Contributions to country specific projects totalling over $500m.....42
Figure 5-1: Non-ICA IFI Financing by Sector ($m).....53
Figure 5-2: Non-ICA Public Funding by Source ($m) 54
Figure 5-3: Private Sector Infrastructure Investment by sector 2021-2023 ($m).....55
Figure 5-4: Non-ICA Member Arab Coordination Group Financing 2021-2023 ($m).....55
Figure 6-1: Sectoral Infrastructure Investments by Year and Source ($bn).....63
Figure 6-2: Transport Sector Financing (2020-2023).....64
Figure 6-3: Transportation Subsector Financing (2021-2023).....64
Figure 6-4: Transportation Sector Financing by Source (2021-2023).....64

List of Figures

Figure 6-5: Transportation Subsector Financing (2021-2023)……67
Figure 6-6: Water and Sanitation Sector Financing by Source 2021-2023……68
Figure 6-7: Energy Sector Financing (2020-2023)……70
Figure 6-8: Energy Sector Financing by Source (2021-2023) ……71
Figure 6-8: Energy Sector Financing by Source (2021-2023)……74
Figure 6-10: ICT Sector Financing (2020-2023)……75
Figure 6-11: ICT Sector Financing by Source (2021-2023) ……75
Figure 7-1: Central Africa Infrastructure Financing ……78
Figure 7-2: Eastern Africa Infrastructure Financing ……80
Figure 7-3: Northern African Infrastructure Financing ……82
Figure 7-4: Southern Africa Infrastructure Financing ……84
Figure 7-5: Western Africa Infrastructure Financing ……86
Figure 8-1: Overall components of IFT 2010-2020……90
Figure 8-2: General government gross debt (% of GDP)……90
Figure 8-3: External public debt, share by type of creditor in African ($bn, current prices)……91
Figure 8-4: Debt service as a share of government spending (African median)……91
Figure 8-5: African countries classified as per risks of debt distress……92
Figure 8-6: Selected African Pension Funds Investment in Infrastructure……94
Figure 8-7: Africa's domestic resources mobilization compared to the rest of the world……96
Figure 8-8: Foreign reserves of African countries. 2021. ($ bn)……98
Figure 8-9: Number of Projects reaching financial closure by year in Sub-Saharan Africa 1999-2023……101
Figure 8-10: Number of Economies Adopting Major PPP Regulatory Reforms and Total PPP Investments ($bn), 1990-2022……102
Figure 8-11: Sources of financing for PIDA ($bn)……110
Figure 8-12 Breakdown of global climate finance by region of destination ($ bn)……112
Figure 8-13: Breakdown of Africa climate finance for adaptation & mitigation split by public and private sources ($ bn)……112
Figure 8-14 Share of private climate finance to total climate finance by region (2021/2022 average)……113

List of Figures

Figure 9-1: Central Government Debt. African countries. 1995-2028 (Percent of GDP)……..140

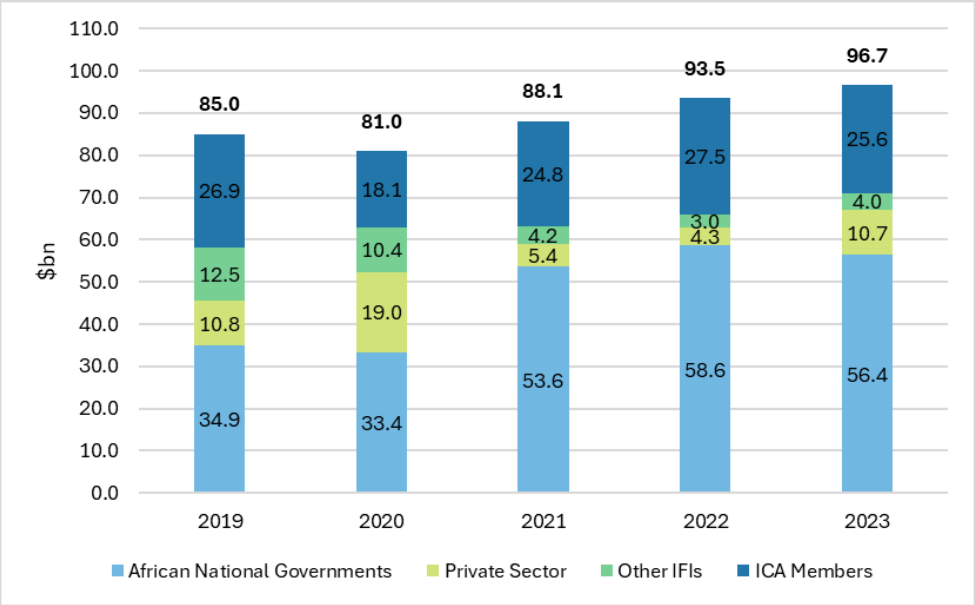
Figure 9-2: The Long-Term Finance's (LTF) Radar (rescaled indicators over 2013-2020 – scale 0.1 to 1)……...……..145

Figure 9-3: Illustration of the impacts of non-reflective tariffs on utilities. ESKOM…..……..149

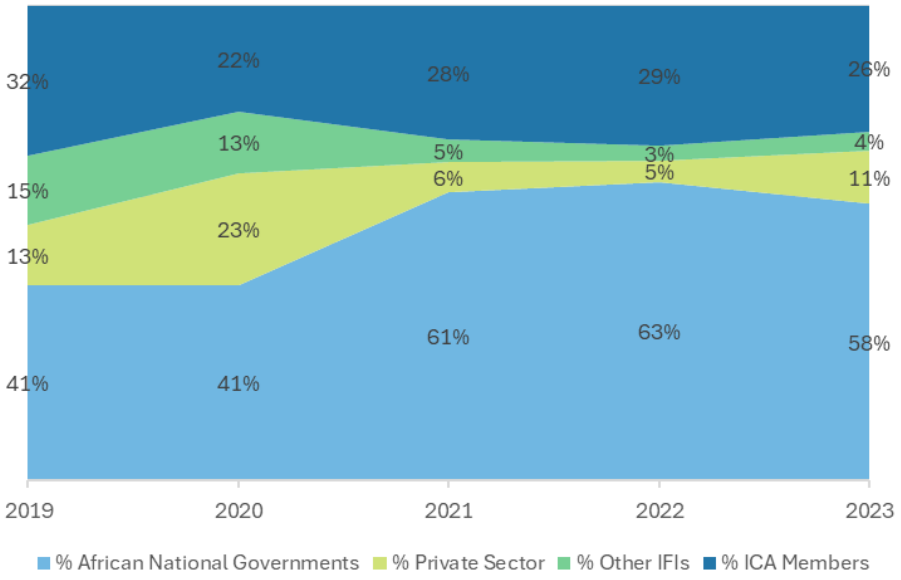
Figure 9-4: List of NEPAD-IPPF projects approved from 2021 to 2023……..……...160

The Big Picture

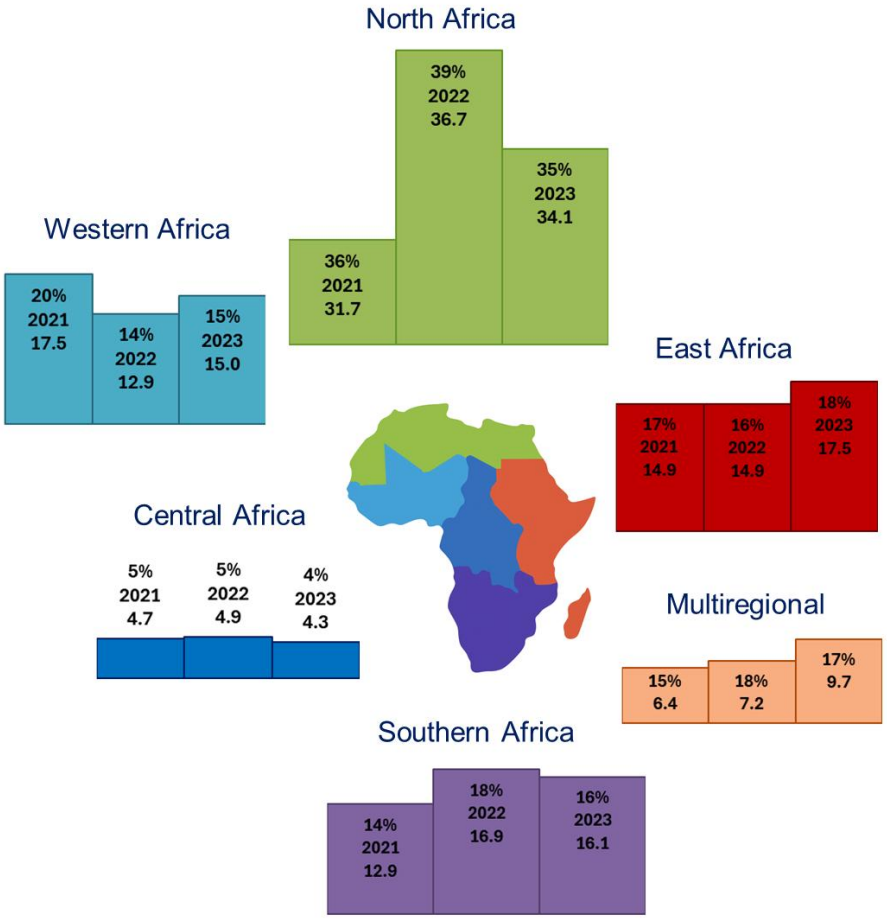
Funding has increased steadily over the past three years. Financing has recovered from COVID with an average of **$92.7bn** over the three years.



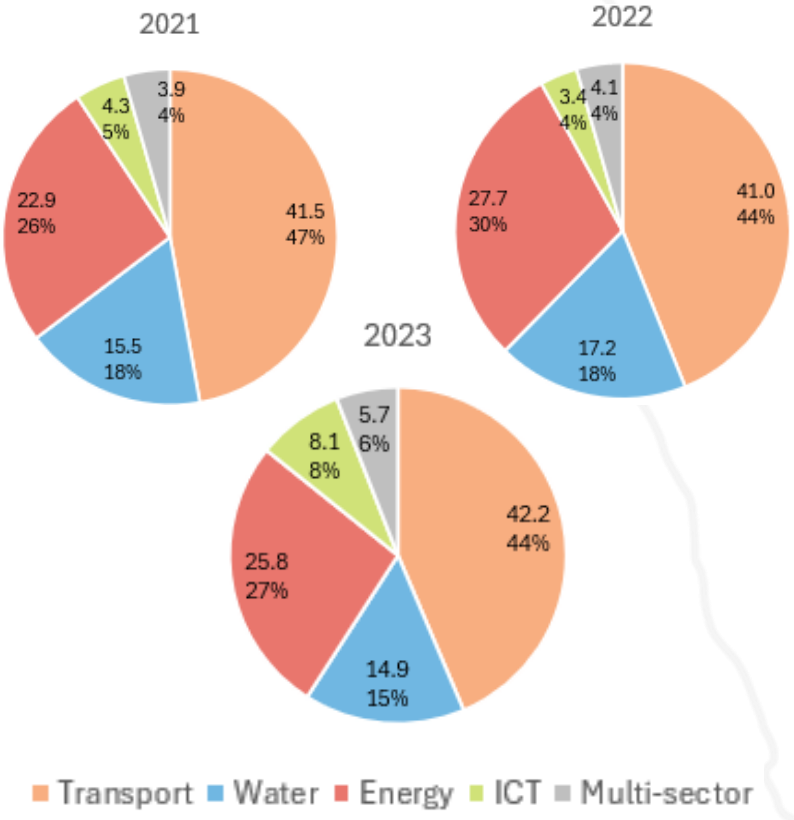
The portion of financing from ICA members and other IFIs has reduced from 47% in 2019 to 30% 2023 while national government funding has increased.



North Africa received the largest portion of infrastructure financing with a peak of 36.7bn USD.



Transportation received the largest portion of infrastructure financing with a peak of 42.2bn USD in 2023.





Key Messages and Findings

1

1.1 Infrastructure Financing Trends and Policy Insights

Carefully planned and financed infrastructure investment is essential to Africa's economic transformation, poverty reduction, industrial growth, and deeper regional integration. As infrastructure requirements across transport, energy, water, and ICT have surged, the increase in funding levels has not been able to prevent the infrastructure financing gap from increasing from $112bn in 2021 to $118bn in 2023.

During this period, governments, development partners, and private investors have turned to debt instruments, blended-finance mechanisms, and public–private partnerships to help close the shortfall, even as they grapple with rising debt-service burdens, less concessional lending terms, and shifting climate-finance priorities. Despite these efforts, the gap continues to widen, driven by escalating needs. Reversing this trend will require strengthening fiscal resilience, mobilizing long-term domestic savings, deepening public–private collaboration, and leveraging SDG-aligned finance to unlock concessional and impact capital.

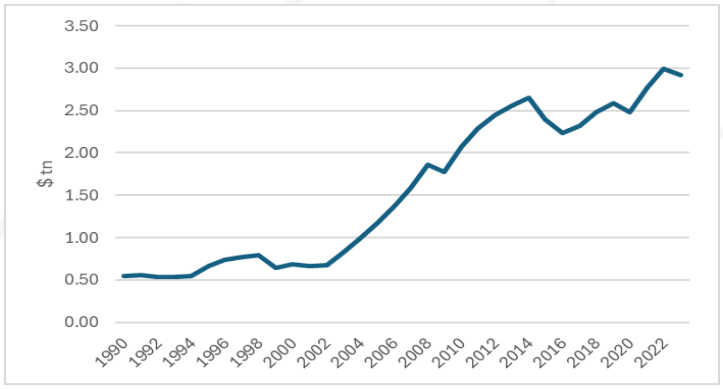
1.1.1 Context

Driven by state funding budgets, African countries' cumulative GDP reached $2.6tn in 2014, the peak in the 2010s, before falling in 2015 and 2016. African GDP recovered to $2.5tn in 2019. However, the breakout of COVID-19 affected the recovery process, and African GDP decreased by $30bn in 2020. With infrastructure-led investment, African GDP surpassed its 2014 peak in 2021, reaching 2.76tn and set a historical high of $2.99tn in 2022. Affected by multiple shocks in 2023, African GDP slid to $2.92tn in 2023.

Historically, Nigeria has had the largest economy in Africa; however, and with record public investment in infrastructure of over $20bn in 2021 and 2022, Egypt surpassed Nigeria with a GDP of $394bn in 2023. Still, infrastructure investment can be a double-edged sword. By 2023, overspending made Egypt's public finance unsustainable, and in 2023, the government of Egypt had no choice but to ask for a bailout from the IMF. One of the conditions for the bailout is reducing public infrastructure financing budget and creating an enabling environment for private sector participation.

The link between GDP and infrastructure spending, and the importance of carefully structured and planned infrastructure spending, constitutes the backbone for the trends and policy insights outlined in this report.

Figure 1-1: Cumulative African National GDP 1990-2023



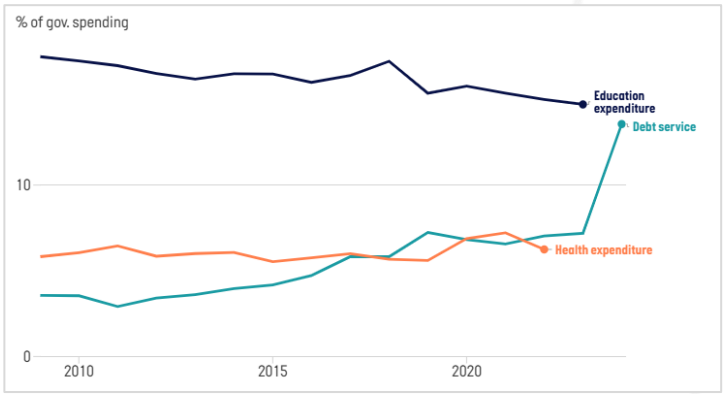
Source: World Bank Database

1.1.2 Strategic Trends

Between 2010 and 2020, infrastructure financing in Africa rose to a peak of $99.6bn in 2013, driven by low global interest rates and high commodity prices, but the subsequent drop in GDP and commodity revenues pushed many countries beyond debt-sustainability thresholds. Sovereign and publicly guaranteed debt now account for a growing share of public spending and eight countries fell into debt distress in 2023, with 29 others at high or moderate risk.

One illustration of this trend is that in several countries, the proportion of budgets allocated to debt servicing surpasses that of spending in the health sector and is nearing the levels dedicated to education.

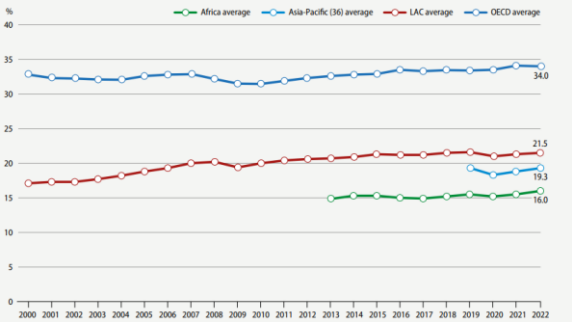
Figure 1-2: Debt service as a share of government spending (African median)



Source: Once Data from International Debt Statistics (IDS), UNESCO Institute for Statistics, WHO GHED, IMF WEO.

Domestic financing remains underutilized: illicit outflows of $858bn between 2010–2018 have outstripped FDI and ODA, while pension and sovereign wealth funds hold the bulk of trillions in assets abroad instead of financing local infrastructure. Africa's domestic resources mobilization is below the rest of the world. The graph below illustrates the fact that Africa's tax-to-GDP ratio is lower than the rest of the world.

Figure 1-3: Tax-to-GDP ratios in world regions, 2000-2022



Source: Revenue Statistics in Africa. OECD. 2024

In the transport sector, urbanization, regional integration, and climate imperatives are reshaping transport investments. Major cities are adopting BRT, LRT and metro systems—such as Dakar's electric BRT—financed by the World Bank, AfDB, EIB and climate funds.

PIDA's second phase aims to mobilize $160.8bn for 69 regional projects, leveraging sovereign loans, concessional funds and toll concessions. Rail corridors like Mombasa–Nairobi and Addis–Djibouti are financed by Chinese export credits and multilateral co-financing. Port expansions under Build-Own-Transfer and concession models, PPP-backed airport terminals, and inland dry-ports all feature blended finance to improve trade flows.

Investments in transportation electrification and in improving climate resilience of infrastructure have increased dramatically over the last three years.

In the energy sector, power integration through the Continental Master Plan and the Africa Single Electricity Market aims to reduce costs and enhance energy security by linking national grids. Battery energy storage systems (e.g., Eskom's 1 440 MWh Hex BESS) create new revenue streams via capacity contracts and ancillary services. Green hydrogen projects remain nascent (only 1% at FID stage versus 7% globally), yet Africa's abundant renewable resources could position it as a major producer[1]. Independent Power Transmission PPPs (Kenya's 400kV Lessos–Loosuk line) and solar-PV leasing models (e.g., Scatec's 28.6MW RELEASE) introduce flexibility and mitigate sovereign-guarantee mismatches.

Water infrastructure funding lags despite an annual need of $30–60bn for universal access. Fragmented governance, weak cost recovery and limited utility capacity prevent bankable projects. Integrated "water-lens" planning across agriculture, energy and industry could unlock value; the $1.08bn Bita water supply project in Angola exemplifies scale but also complexity of blended financing under climate stress.

ICT connectivity requires investments across four "miles": submarine cables and landing stations ("first"), national fiber backbones ("middle"), RAN sharing and satellite solutions ("last"), and regulatory, cybersecurity and data-center frameworks ("invisible"). Sub-Saharan Africa faces a $91bn CAPEX gap for 90% broadband coverage, with satellite bridging remote-area deficits at $200 per month per cluster. RAN sharing can cut last-mile costs by at least 25%. "Invisible-mile" governance and security demand roughly $10bn annually.

1 The Africa Hydrogen Opportunity | Hydrogen Council

1.1.3 Policy Insights

Achieving sustainable infrastructure financing begins with bolstering fiscal space through smarter debt management alongside stronger domestic revenues. Excessive debt service already consumes a larger portion of national budgets than health spending in over 30 countries, and in 2023, eight nations fell into debt distress, with another 29 at high or moderate risk. To avoid this outcome, governments must tighten tax expenditures—closing redundant incentives could unlock up to $46bn annually—and modernize revenue administration. **South Africa's e-tax reforms cut VAT compliance time by over 20%, and Rwanda's e-filing boosted tax receipts by 6%, illustrating the gains from digitalization.** In parallel, accumulating foreign reserves beyond adequate levels carries high opportunity costs—funds parked in low-yield assets could be used to finance roads, power plants, or water systems, which would in turn drive economic growth.

Mobilizing long-term domestic savings can help wean infrastructure investment off volatile foreign borrowing. African pension funds now hold trillions in assets—yet allocate less than 1% to local infrastructure, compared to 3–10% in OECD countries. **Reforming regulations to allow infrastructure-grade investments, as seen in Kenya's Pension Fund Investment Consortium, and pooling assets regionally would channel these funds into transport corridors, renewable energy, and social projects.**

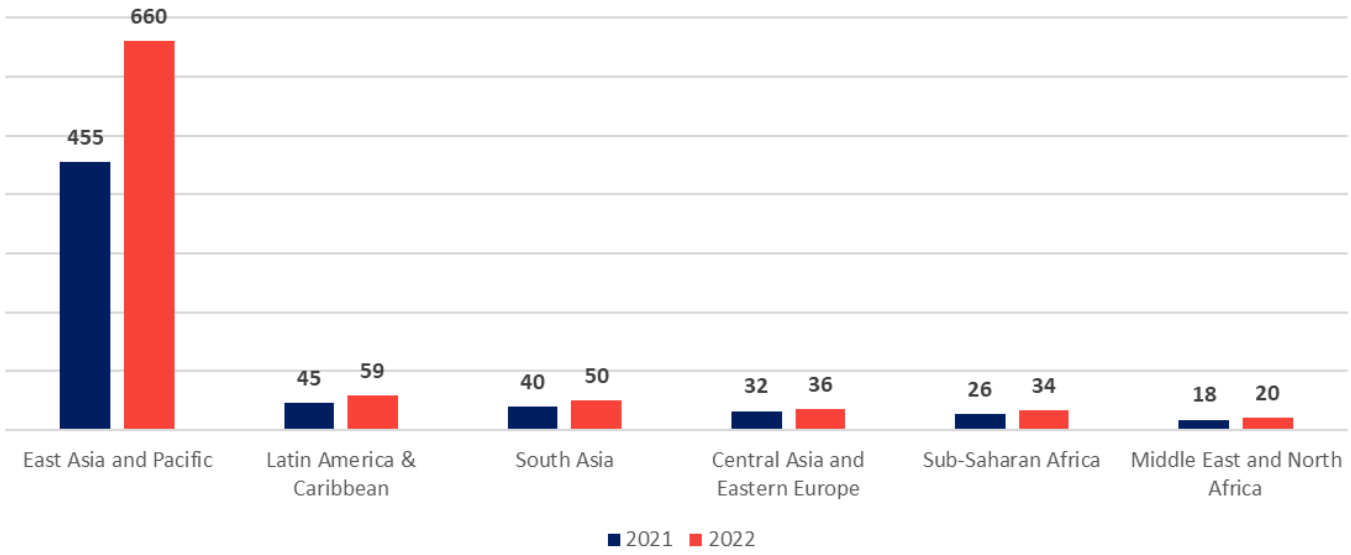
Blended-finance instruments (e.g., guarantees and first-loss tranches models) must be deployed more broadly to de-risk projects and attract private capital, especially as concessional loan terms harden; average grace periods have fallen from 10 to 5–6 years. The grant portion of ODA slipped from 42 % in 2012 to 30 % in 2022.

Public–private partnerships offer further avenues to stretch scarce public funds. Strong, transparent PPP regulations and streamlined procurement processes can reverse recent declines in PPP investments—energy and ICT sectors alone attracted $3.5bn across 66 projects in 2023—while toll-road concessions and airport terminal PPPs allow governments to collect revenue through user fees rather than taxes. **Asset recycling—the sale or lease of existing public assets to fund new projects—also has promise: Africa50's $100m Senegambia Bridge program in The Gambia freed up capital without adding debt.** Success depends on clear institutional frameworks, robust valuation, and public buy-in to ensure proceeds are reinvested in high-impact infrastructure.

Incorporating Sustainable Development Goal (SDG) alignment into infrastructure planning and financing can unlock concessional, climate, and impact capital. Projects that explicitly contribute to universal access (SDG 6, 7, 9), climate resilience (SDG 13) and inclusivity (SDG 10, 11) attract blended-finance instruments and may qualify for green and social bonds. **Nigeria, Kenya and South Africa have already issued green bonds for renewable energy, clean transport, and climate-resilient water systems, benefiting from lower risk premiums and access to new investor pools.** To scale SDG finance, governments should mainstream SDG performance metrics in national infrastructure plans and public investment management, embed ESG criteria in procurement documents, and strengthen the capacity of agencies to report on SDG-linked outcomes—thereby enhancing transparency and investor confidence.

Scaling up climate finance is indispensable if Africa is to build resilient, low-carbon infrastructure. Although the continent needs an estimated $277bn per year through 2030 to meet its NDCs, it secured only 12–15% of that in 2019–2020, leaving a $200–400bn annual gap. Expanding blended finance for adaptation and mitigation, strengthening project preparation facilities like the Green Climate Fund Readiness Program, and developing domestic green-bond markets will be critical.

Figure 1-4: Breakdown of global climate finance by region of destination ($ bn)



Source: CPCS from The Global Landscape of Climate Finance database

1.2 Effects of COVID-19 on Infrastructure Investment

The COVID-19 pandemic disrupted Africa's infrastructure rollout at an unprecedented scale. In 2020, private-sector commitments in developing countries worldwide plunged to just $45.7bn – a 52 percent fall from 2019[2] — reflecting the widespread impact of the COVID-19 pandemic on infrastructure investments world-wide as lockdowns halted construction, supply chains stalled, and many governments diverted budgets to health and social support.

This disruption did not occur in a vacuum. It coincided with a collapse in global commodity prices—particularly oil and minerals— which many African economies depend on for export revenues, foreign exchange earnings, and fiscal stability.

For oil-exporting countries like Nigeria and Angola, and mineral-rich economies such as Zambia and the Democratic Republic of Congo, the sharp contraction in demand from global markets significantly reduced national incomes and further constrained public investment capacity.

2 Private Participation in Infrastructure Database. World Bank. 2022.

Concurrently, public debt levels in Africa, which had already been rising before the pandemic, reached critical thresholds during this COVID period. Many countries entered the crisis with limited fiscal space, and the need for emergency spending on health, social protection, and economic stimulus measures pushed debt burdens to historic heights.

Similarly, data shows that COVID reduced the ODA financing flows from $6.4 bn in 2019 to $4.7 bn and $4.6 bn in 2020 and 2021, respectively[3]. By 2022 however, total disbursements across governments, IFIs, and commercial investors rebounded.

Climate-specific infrastructure finance tells a similar story: flows grew by 48% to $44bn in 2021/22, buoyed by $19bn from MDBs and $8bn of private capital, even as domestic public climate contributions fell from $1.6bn to $1bn[4].

This pattern—sharp pandemic-driven declines followed by catch-up rebounds—means that genuine, structural increases in Africa's infrastructure financing have yet to materialize. Moving beyond cyclical recovery will require new models that strengthen fiscal resilience, mobilize long-term domestic savings, deepen public-private collaboration and scale up concessional, SDG-aligned instruments.



3 OECD, 2025.
4 Climate Policy Initiative. October 2024.



Financing Trends

2

2.1 A closer look at the infrastructure financing gap in Africa

This section examines the infrastructure financing gap in Africa over the years 2021 to 2023, using data from the Global Infrastructure Outlook[5] as source for financing needs and data collected from government budgets, DFIs investment records, and other sources (see section 3.1.1) to estimate financing trends over the three-year period. The Global Infrastructure Outlook includes the financing needs to meet Paris Accord commitments; however, it does not consider the additional requirements to create the African Continental Free Trade Area (AfCFTA) which could increase the financing needs, particularly in the transport sector.

5 https://outlook.gihub.org/

The IF gap is growing…

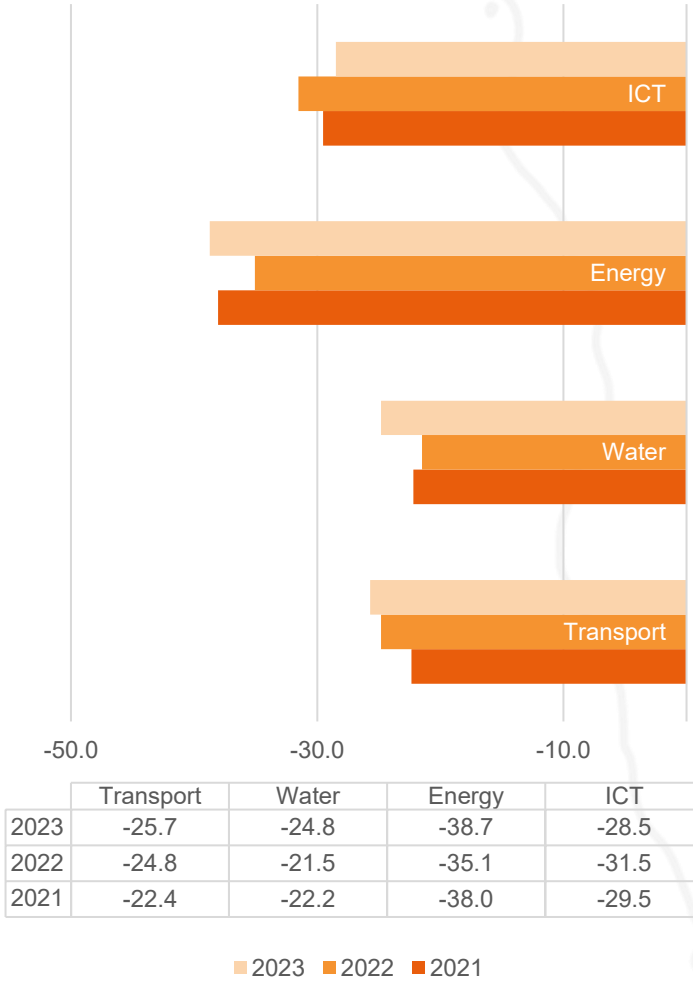
Covering four critical sectors—Transport, Water, Energy, and Information and Communication Technology (ICT), the analysis indicates a steady rise in infrastructure needs, juxtaposed against relatively stagnant investment levels.

This discrepancy has resulted in a slight growth in the financing gap, which increased from $112bn in 2021 and 2022, to $118bn in 2023. Overall, this reflects a net increase of 4% over the three-year period not taking into account SDG targets.

During this period, the Energy sector experienced the largest gap as a result of higher demand compared to the rate of investment growth in 2021. Transport's gap broadened slightly over the period as investments declined, reflecting fiscal or prioritization constraints. ICT's persistently large gap highlights chronic underfunding of digital infrastructure. The water gap initially decreased but rose again in 2023 due to a significant investment drop, signaling potential risks to water access goals. The total gap was stable between 2021 and 2022, before rising in 2023, suggesting persistent imbalances and the need for enhanced financing strategies to close sector-specific gaps.

When evaluated against Sustainable Development Goals (SDG) targets, the financing shortfall becomes even more pronounced, reaching $226bn in 2023.

Figure 2-1: Infrastructure Financing gap over 2021, 2022 and 2023 in the 4 sectors ($ bn)

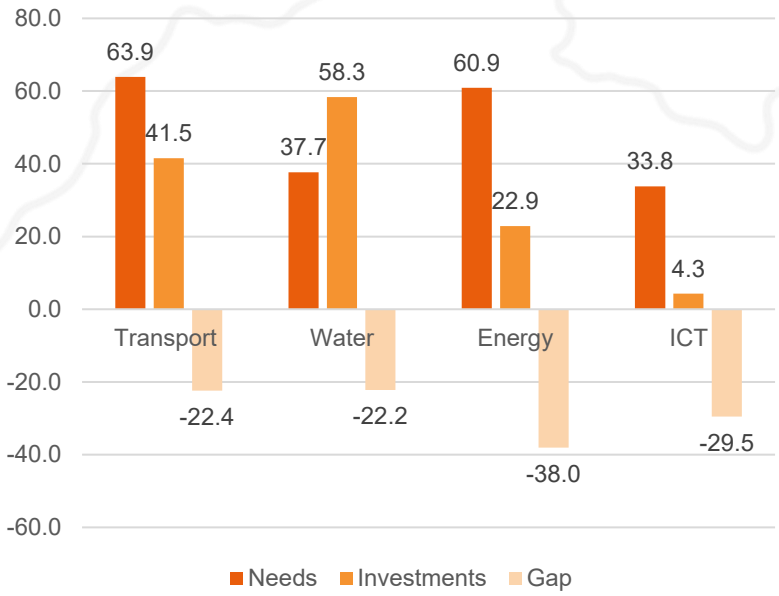


	Transport	Water	Energy	ICT
2023	-25.7	-24.8	-38.7	-28.5
2022	-24.8	-21.5	-35.1	-31.5
2021	-22.4	-22.2	-38.0	-29.5

2021

In 2021, the total financing gap was $112.1bn, with Energy exhibiting the largest sectoral shortfall at $38bn, reflecting high needs ($60.9bn) against modest investments ($22.9bn). ICT followed with a $29.5bn gap, driven by low investments ($4.3bn) relative to needs ($33.8bn). Transport's gap was $22.4bn, with needs ($63.9bn) significantly outpacing investments ($41.5bn). Water had a similar gap at $22.2bn, with investments ($15.5bn) falling short of needs ($37.7bn). The gaps underscore early challenges in mobilizing sufficient capital, particularly for Energy and ICT.

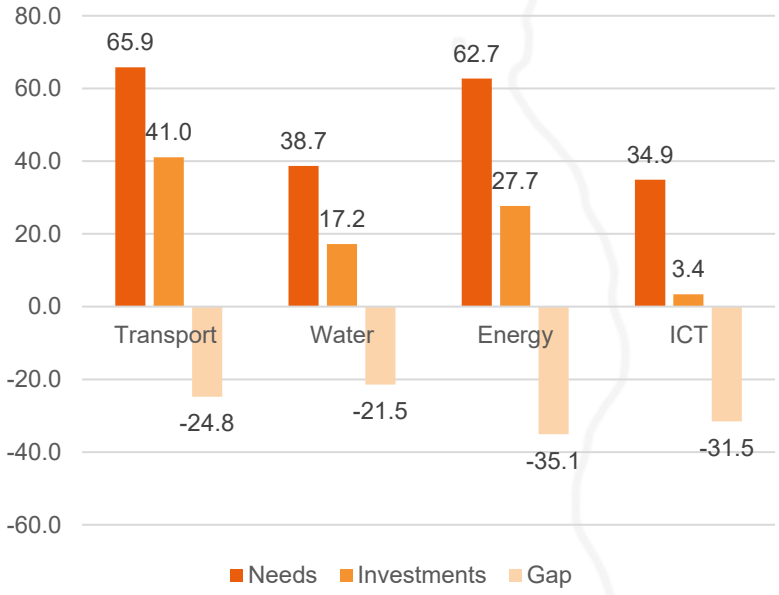
Figure 2 2: Infrastructure Financing Gaps 2021 ($ bn)



2022

By 2022, the total gap decreased to $112.9bn when needs grew to $202.2bn while investments increased to $89.3bn. Energy's gap contracted to $35.1bn due to an investment increase to $27.7bn, even if needs rose to $62.7bn. Transport's gap increased to $24.8bn as stagnating investments of $41.0bn faced even higher needs ($65.9bn). ICT's gap reduced to $31.5bn, with investments declining to $3.4bn despite ICT needs increasing to $34.9bn. Water's gap reduced slightly to $21.5bn, with investments ($17.2bn) not keeping pace with needs ($38.7bn).

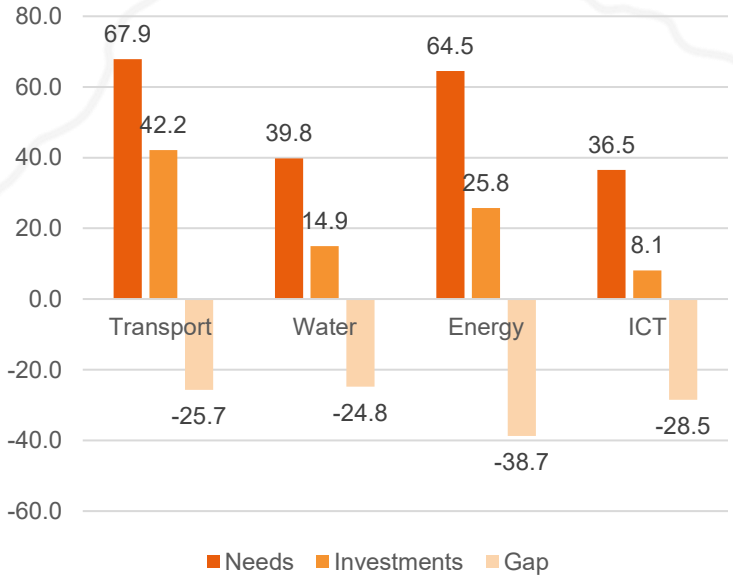
Figure 2 3: Infrastructure Financing Gaps 2022 ($ bn)



2023

In 2023, the gap reached $117.8bn, an increase of 4% from 2022, as needs climbed to $208.7bn while investments increased only mildly to $90.9bn. Energy's gap widened to $38.7bn, with needs ($64.5bn) far exceeding investments ($25.8bn). Transport's gap increased to $25.7bn, reflecting a decrease in investment compared to 2022, at $42.2bn against increasing need up to $67.9bn. Water's gap increased as well, up to $24.8bn, driven by an investment drop to $14.9bn against increasing needs of $39.8bn. ICT's gap slightly narrowed to $28.5bn, despite low investments ($8.1bn) relative to needs ($36.5bn), due to a temporary investment uptick. The 2023 data reveal acute funding challenges, particularly in Energy and Water.

Figure 2 4: Infrastructure Financing Gaps 2023 ($ bn)

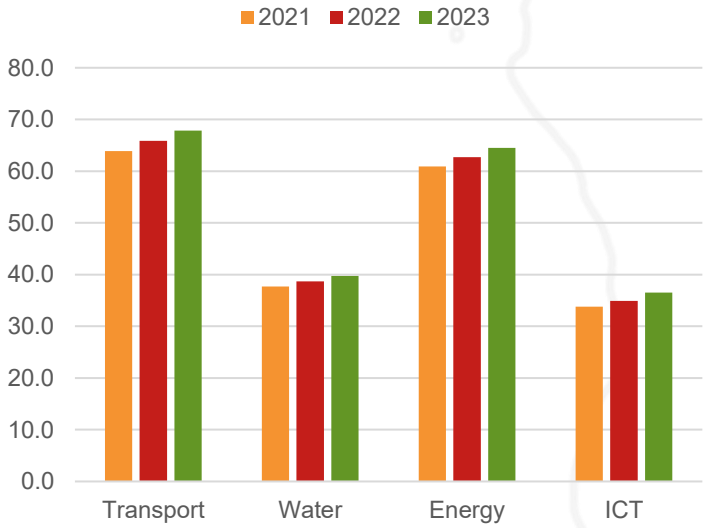


…driven largely by escalating needs…

Between 2021 and 2023, infrastructure needs across the four sectors exhibited consistent growth, reflecting the increasing pressure on African economies to expand and modernize critical systems. Total needs rose from $196.26bn in 2021 to $208.66bn in 2023, representing an annual growth rate of approximately 3.1%.

The Transport sector consistently accounted for the largest share, with needs increasing from $63.87bn in 2021 to $67.85bn in 2023, driven by the demand for enhanced road, rail, and port infrastructure to support trade and urbanization.

Figure 2-5: Infrastructure Financing Needs, 2021-2022-2023 ($ bn)



The Energy sector followed closely, with needs growing from $60.9bn to $64.5bn over the same period, underscoring the urgency of expanding power generation and distribution to address energy access deficits.

Water infrastructure needs, encompassing water supply and sanitation, saw a more moderate increase from $37.7bn to $39.8bn, while ICT needs grew from $33.8bn to $36.5bn, reflecting the rising importance of digital connectivity.

…and investment growth that trails behind demand.

Data shows that infrastructure investments across Africa moderately grew between 2021 and 2023, increasing from $84.2 billion in 2021 to $89.3 billion in 2022 to $90.9 billion in 2023. When multisector investments are included, these totals increase slightly. Although the total envelope expanded by over 8% during the period, investment patterns are insufficient to catch up with the growing needs.

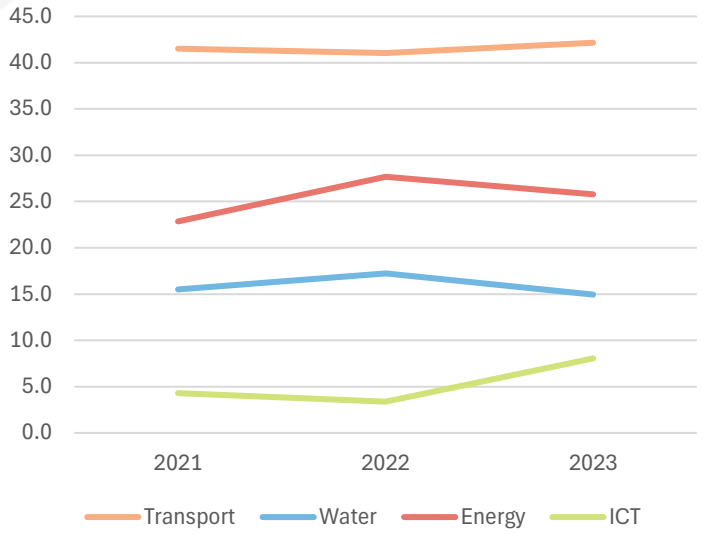
Investment patterns reveal uneven sectoral trends across Transport, Water, Energy, and ICT—underscoring challenges in aligning financial flows with sectoral demands.

Over the three-year period investment in transport increased by 2%, decreased by 4% in water, increased in energy by 13% and increased in ICT by 88%.

Overall, the trends reflect stagnation or decline in traditional sectors such as Energy and Water in 2023, counterbalanced only partially by the sharp upswing in ICT investment.

This report delves into the sectoral dynamics, temporal trends, and implications for sustainable development, providing a comprehensive assessment of infrastructure financing.

Figure 2-6: Infrastructure Investments trend, 2021-2022-2023 ($ bn)





2.2 Who is financing Africa's infrastructure?

Commitment to Africa's infrastructure recovered from the drop in 2020 as a result of the COVID-19 pandemic (see section 1.2). There was a significant reduction in funding from IFIs and the private sector, this gap was filled by an increase in national government spending.

National governments share of infrastructure financing increased from 41% in 2020 to 61% in 2021, it remained stable in 2022 and dropped slightly to 58% in 2023. This increase in the share of infrastructure financing is symptomatic of an increase in the capacity of African governments to invest in their infrastructure.

ICA member financing increased slightly from 2021 to 2022 primarily driven by the growing investments and loans provided by the AfDB and the World Bank. It decreased in 2023 as a result in a decline in investments from the World Bank.

Data also shows that China's contributions to African infrastructure continued to drop in 2021 and 2022, the Arab Coordination Groups contributions surpassed China for the first time since 2016 in both years.

Private sector financing decreased from $19bn in 2020 to $5.4bn in 2021, it continued to decrease in 2022 and started to recover in 2023. This trend is in part a result of a delayed recovery following the economic impacts and uncertainty of COVID-19.

2.3 What sectors are attracting investment?

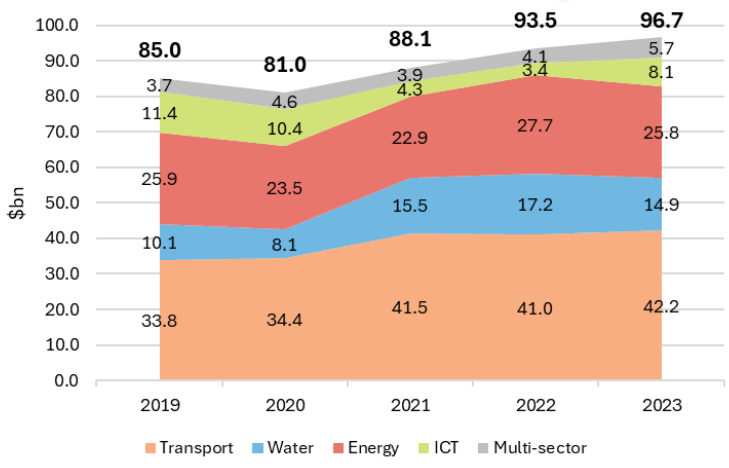
The transportation sector continued to receive the largest share of infrastructure financing from 2021-2023. It received 47% in 2021 ($41.5bn), 44% in 2022 ($41.0bn) and 2023 ($42.2bn) respectively. Both the share and absolute value of transportation sector financing increased compared to 40% in 2019 and 42% in 2020.

The water and sanitation sector saw a significant increase in financing, jumping from $8.1bn in 2020 to $15.5bn in 2021. Financing continued to increase to $17.2bn in 2022 before dropping to $14.9bn in 2023. This increased investment reflects the emphasis on access to clean water and sanitation aligned with SDG targets and efforts to build climate resilient infrastructure.

Financing for the energy sector decreased from 2020 to 2021, dropping from $23.5bn to $23.4bn. Investments in the sector increased markedly in 2022 ($27.7bn) and before dropping in 2023 to a total of $25.8bn.

Commitments to the ICT sector decreased significantly in 2021, falling from $11.4bn in 2020 to $4.3bn in 2021. This is associated with a drop in private sector financing which fell from $6.9bn to less than $1bn. Private sector financing for ICT remained low in 2022 before increasing to $4.2bn in 2023, this increase in commitment drove the overall increase in ICT funding.

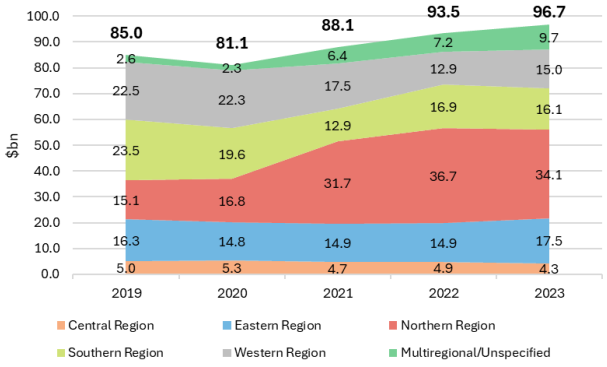
Figure 2-9: Infrastructure Financing by Sector 2019-2023 ($bn)



2.4
Which regions are the funds flowing into?

The regional distribution of infrastructure financing shifted dramatically between 2020 and 2021, where the Western region received most of the financing for multiple years, in 2021 the Northern Region received the majority. This is largely driven by an increase in funding from Egypt's national budget. Funding for the Southern Region also decreased from 2020 to 2021, largely driven by a reduction in South Africa's national spending. The sharp increase in funding of multiregional/unspecified projects is driven by a lack of disaggregated data for some IFIs.

Figure 2-10: Commitment Trends by Region ($bn) (2019-2023)



CAVEAT

The financing breakdown by source presented above and throughout this report is derived from the commitments of ICA members.

Disbursement data was available for only a subset of ICA members. Although disbursements provide a more accurate measure of actual infrastructure investment, analysis in this report relies on commitment levels due to their broader availability across all financing sources.

In addition, while disbursements may be paid in a different year than the initial commitment was made, the assumption is that commitments made in the years studied will be effective.

For information, the first figure below illustrates infrastructure financing based on available ICA member disbursements, the second figure shows financing based on commitments. Actual funding is likely higher than shown, as data from several ICA members is missing, placing the true level between the two figures.

Figure 2-11: Commitment Trends by Source (2021-2023)

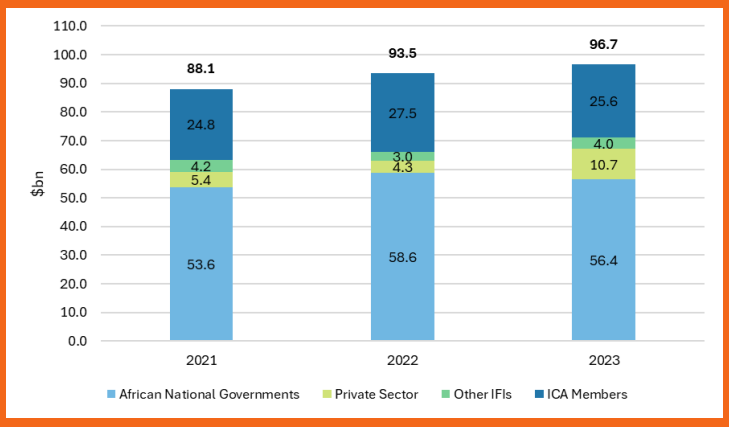
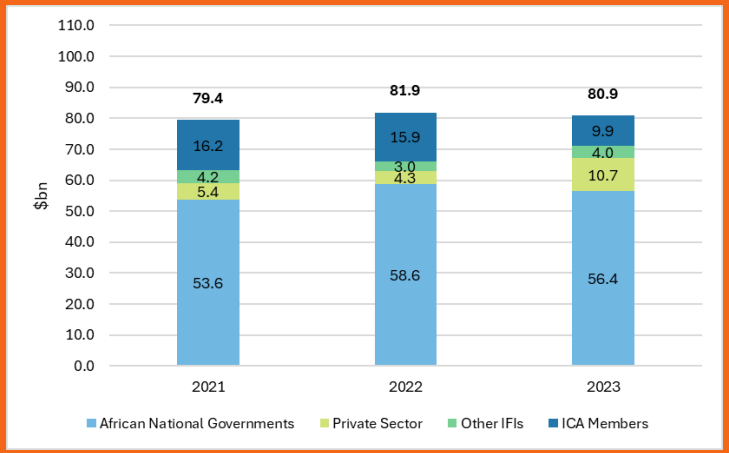


Figure 2-12: Disbursement Trends by Source (2021-2023)





Government Infrastructure Funding 3

3.1 Overview

National government investments in infrastructure represent the largest portion of infrastructure financing. The total investment in infrastructure increased between 2021 and 2022, from $53.6bn to $58.6bn, but declined to $56.4bn in 2023.

These investments represent a significant increase compared with the amounts from the previous years ($34.8bn in 2019 and $33.4bn in 2020). This increase can in part be explained by an increase in the number of countries included in the study over the years, resulting in a more complete data set.

The national budget data was collected for 51 countries. The Eswatini, Libya, Djibouti, and Sudan budgets were added to the 2021-2023 report, which have not been included in previous studies. Only budget information for Eritrea could not be found to include in the study.

The table *below* shows the total contribution by country for each year of the study.

Figure 3-1: National Government Infrastructure Financing by Region 2021-2023 ($m)

Row Labels	2021	2022	2023
Central Africa	**2,071.9**	**1,936.4**	**2,118.9**
Burundi	19.0	17.3	24.6
Cameroon	1,072.2	979.7	623.7
Central African Republic	3.0	4.7	3.4
Chad	355.8	108.3	404.6
DRC	371.8	609.3	882.7
Equatorial Guinea	110.9	104.2	0.0
Gabon	69.2	37.8	52.3
Republic of Congo	60.4	58.1	110.1
Sao Tome and Principe	9.7	16.9	17.5
East Africa	**9,436.8**	**7,843.1**	**11,580.6**
Comoros	24.1	4.5	10.3
Djibouti	639.6	583.8	774.7
Eritrea	0.0	0.0	0.0
Ethiopia	1,606.0	1,538.5	1,466.2
Kenya	3,353.4	3,371.7	3,053.8
Madagascar	77.0	170.0	230.0
Mauritius	170.7	174.3	182.0
Rwanda	339.1	324.7	536.9
Seychelles	25.2	28.7	38.4
Somalia	17.8	28.6	43.2
South Sudan	53.7	177.4	2,004.1
Sudan	49.6	0.0	0.0
Tanzania	2,199.2	629.4	2,577.3
Uganda	881.3	811.5	663.6
North Africa	**28,014.9**	**30,826.0**	**26,655.8**
Algeria	3,595.6	4,329.3	6,822.8
Egypt	21,693.4	21,931.4	15,216.1
Libya	0.0	745.9	1,147.0
Mauritania	118.6	158.9	206.6
Morocco	558.7	736.0	717.9
Tunisia	2,048.7	2,924.5	2,545.4

Row Labels	2021	2022	2023
Southern Africa	**8,253.4**	**11,617.8**	**10,976.8**
Angola	1,319.3	2,624.4	2,380.2
Botswana	1,047.6	1,263.5	1,404.7
Eswatini	76.3	46.2	25.4
Lesotho	65.4	89.7	65.0
Malawi	113.5	204.9	67.6
Mozambique	55.0	175.8	298.8
Namibia	103.5	78.2	44.7
South Africa	5,242.8	6,628.1	6,012.6
Zambia	53.3	247.2	216.7
Zimbabwe	176.7	259.7	461.2
West Africa	**5,814.1**	**6,424.5**	**5,097.2**
Benin	247.2	298.2	347.8
Burkina Faso	278.4	549.6	374.5
Cabo Verde	42.7	18.1	25.9
Cote d'Ivoire	1,696.7	968.0	1,270.6
Gambia	54.3	7.0	0.0
Ghana	154.7	400.9	270.5
Guinea	64.9	187.9	32.2
Guinea-Bissau	10.4	12.1	26.2
Liberia	42.3	23.3	31.7
Mali	362.5	326.0	262.6
Niger	534.0	390.9	442.3
Nigeria	1,017.7	2,295.4	1,164.5
Senegal	900.0	650.8	467.1
Sierra Leone	37.4	16.9	8.8
Togo	370.8	279.5	372.4

3.1.1 Methodology

For all countries, budget data was collected from publicly available financial laws or decrees, and reports. A complete list of sources can be found in Annex 1. Each budget was analyzed to determine the level of funding for each sector. If the actual spend value was available through a performance review, it was used rather than commitment amounts to reflect the true infrastructure investment.

Where budgets provided a separation between capital and recurrent costs, only capital costs were included. Infrastructure maintenance (for example, road maintenance), while a recurring cost, was included as it prolongs the life of the infrastructure.

For countries that have a fiscal year different than the calendar year, the budget values for the fiscal year were recorded and then redistributed to match the calendar year. For example, if a country's fiscal year is July 1 to June 30, 50% of the budget is allocated to each year. While this may not reflect the precise timing of spending, it does allow an analysis of trends.

Approach for distinguishing internal and external sources

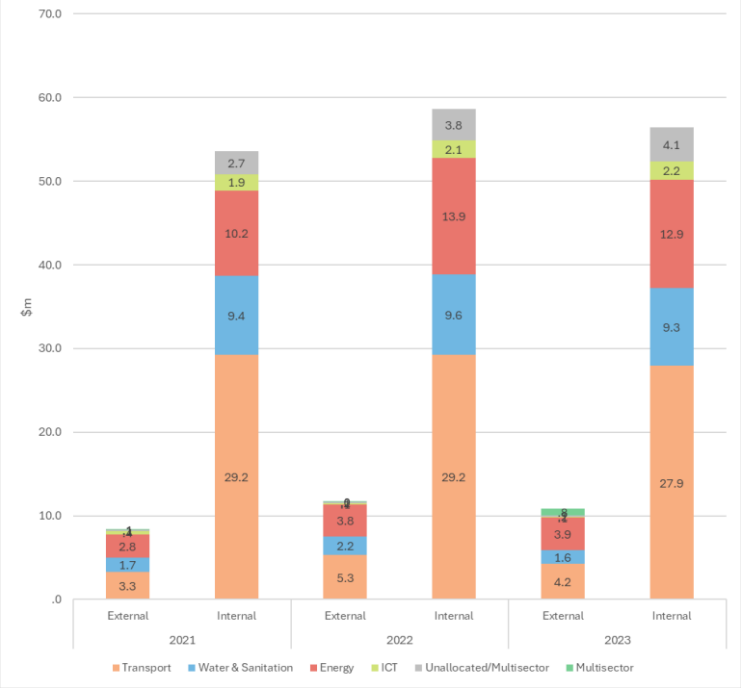
To avoid double-counting and to provide data that is as accurate as possible, identifiable external funding has been removed.

The following methodology was used:

1. **Identification** of the external loans and grants in the state budgets and calculation of their shares in the total budgets or through ICA member funding project identification;
2. **Calculation** of the share of IF allocation in the total budget

The possibility of double-counting remains, as some countries do not itemize external and internal funding for specific projects or sectors.

Figure 3-2: Internal and external funding from national budgets 2021-20233



There is a gap between the external funding in the IF Budget and the collected commitments from ICA and non-ICA member as well as private sector. We term them as governance gaps. They arise either from external commitments including the cancelled loans and grants, internal funding done off budget or external funding that is not identified in national budgets. All are related to deficiencies of IF governance.

Innovations and limitations

This methodology is sufficient to determine the trend but can not be used as baseline for investment decisions because governments always revise their budgets in line with national development circumstances. In addition, reviews of national budget implementation are rare. There could exist a large gap between state budget commitments and their implementation review.

As government budgets become more precise and transparent it will be possible to monitor infrastructure financing governance gaps to improve calculation of optimal external/internal funding mix.

3.2 Commitments by African Governments in Infrastructure

3.2.1 By sector

Transport

In 2021-2023, as in previous years, transport accounted for the majority of government infrastructure spending, accounting for an average of 51% of infrastructure spending over the three years, receiving a total of $86.4bn. The amount spend on transport infrastructure was stable from 2021 to 2022 then dropped in 2023. Countries in Central Africa dedicated the highest portion of their national infrastructure financing to the transport sector.

Water and Sanitation

Investments in the water and sanitation sector represented $9.4bn in 2021, $9.6bn in 2022 and $9.3bn in 2023 with the total financing decreasing over the three-year period. Despite this decrease, the spending on water and sanitation is much higher than in previous years. In 2020, national governments spent just $4.3bn on water and sanitation infrastructure. In addition to an increase in the absolute value of infrastructure spending on water and sanitation, the portion of government budgets has also increased. In 2020, water and sanitation represented 13% of national budgets, whereas in 2021, it represented 18%.

At the country level, Egypt was the largest contributor to spending on water and sanitation, followed by Algeria and South Africa. These three countries accounted for 57% of the total investment in water and sanitation.

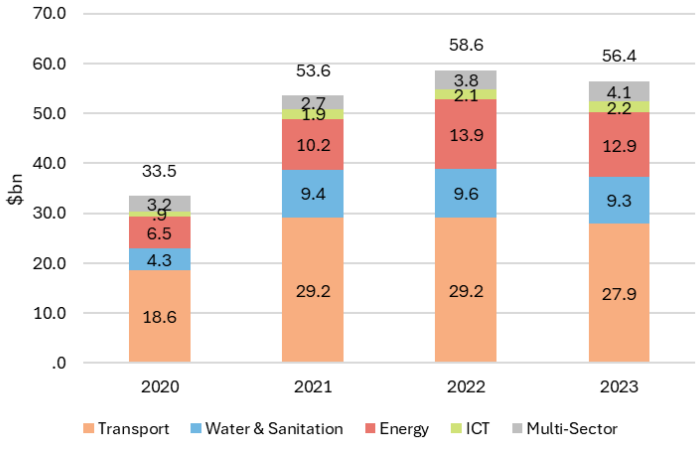
Energy

Investment in the energy sector increased from $10.2bn in 2021 to $13.9bn in 2022 then decreased to $12.9bn in 2023. The investment across all three years was higher than in the previous periods. The increase in the absolute value of investment energy also represented a larger portion of national government budgets. In 2020, energy accounted for 19% of infrastructure investment, whereas in 2021 it accounted for 19% and in 2022 it accounted for 24% and in 2023 23%.

ICT

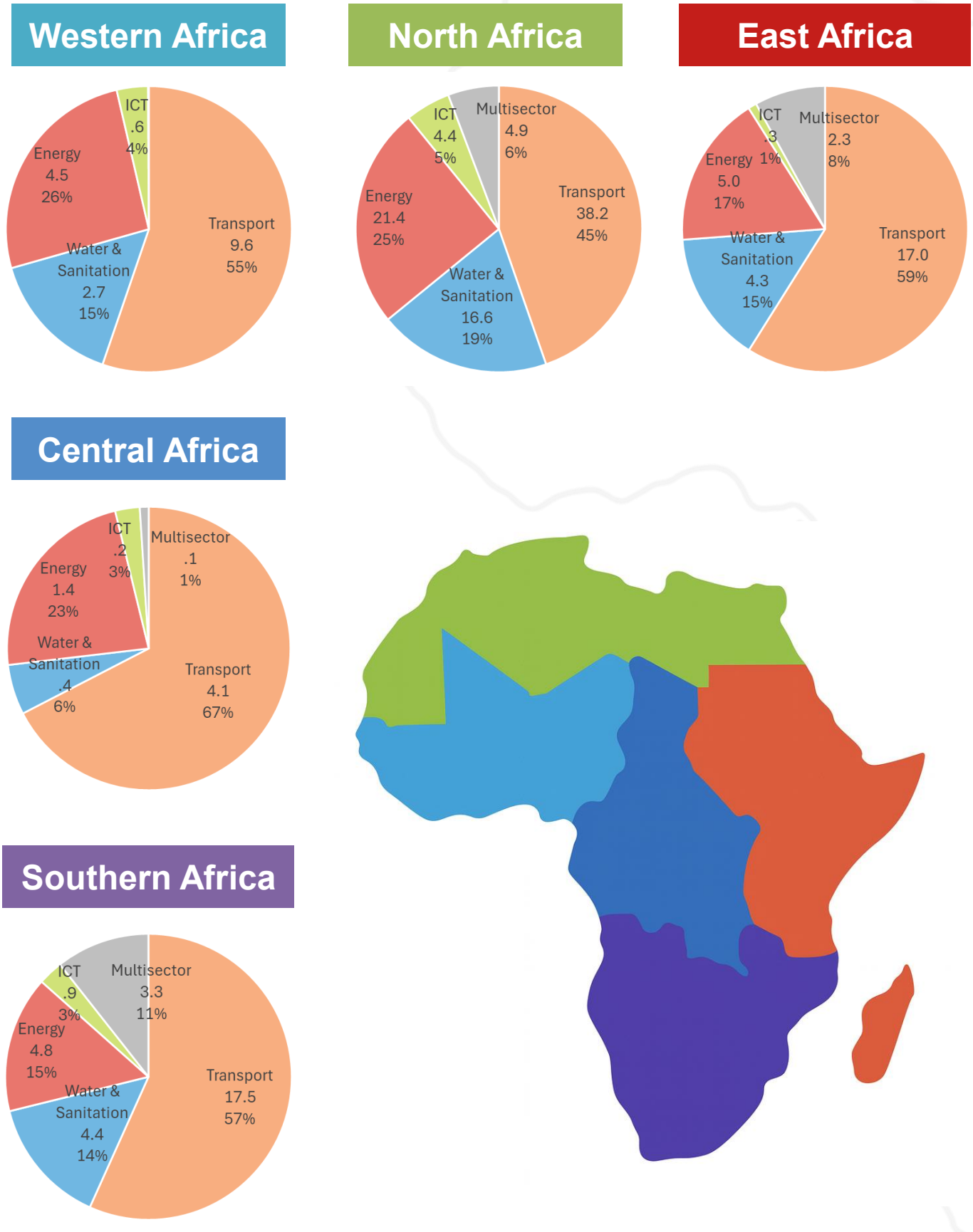
Averaging at only 4% from 2021-2023, spending on ICT accounted for the smallest portion of infrastructure financing. National governments contributed $1.9bn in 2021, $2.1bn in 2022 and $2.2bn in 2023. National governments in the North African region invested the highest percentage of budget to the ICT sector.

Figure 3-3: National Government Infrastructure Financing (2020-2023)



3.2.2 By sub-region

Figure 3-4: National Infrastructure Budget Allocations by Region (total 2021-2023)





ICA Member Financing

4

4.1 Overview

Chapter 4 analyzes the commitments made by ICA members in 2021-2023 and compares them with commitments made by other financers and commitments for previous years with a sectorial and regional lens. The chapter also provides a breakdown by ICA member.

Data for ICA member commitments was collected through a mixture of desktop research from publicly available sources and directly from members through a survey. Data shows that ICA members infrastructure financing, with a total of $77.9b from 2021-2023, represents the second largest portion of infrastructure financing after national budget contributions. This is an increase in the level of investment compared to previous years which may be explained by reduced spending on infrastructure during 2020 as a result of the impacts of Covid-19.

Data was made available for the following ICA members data and is explored in this chapter:

- The Africa Finance Corporation (AFC)
- The African Development Bank (AfDB)
- Africa Export Import Bank (Afrexim)
- AUDA-NEPAD
- AUC
- Banque Ouest Africaine de Développement (BOAD)
- Canada
- European Investment Bank
- European Commission
- France
- Islamic Development Bank (IsDB)
- Italy
- Japan
- South Africa
- Spain
- United Kingdom
- USA
- Vinci
- World Bank Group

No new members joined the ICA over the study period however data from AUDA-NEPAD, Vinci, AUC were included for the first time.



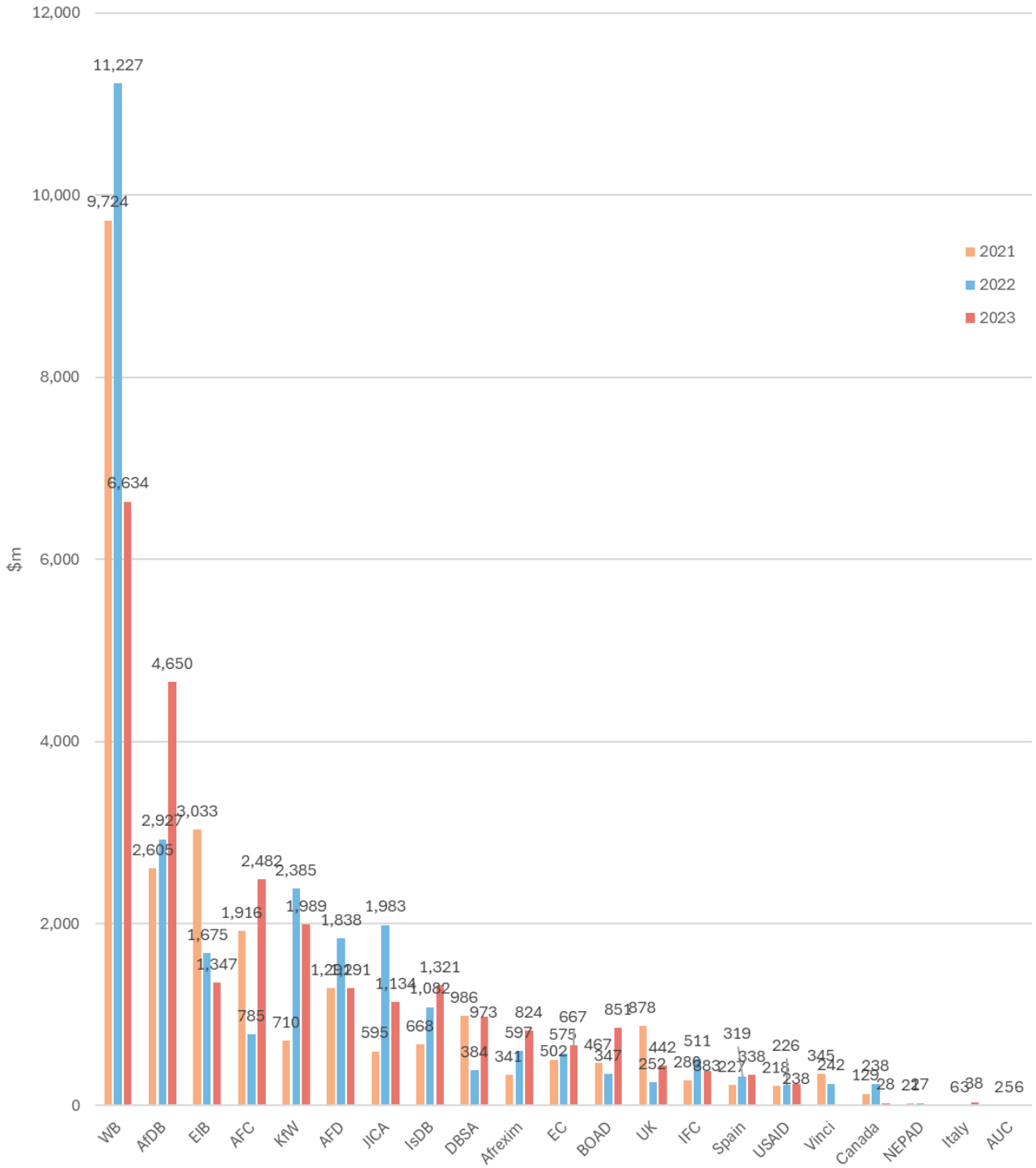
4.2 Trends in Financing

ICA members committed $24.9b in 2021, $27.6b in 2022 and $25.6b in 2023. Compared with $18.1b in 2020 this is a significant increase which is largely driving by the increasing commitments by African financing institutions (Afrexim and AfDB). These two institutions alone account for 15.4% of total ICA member financing demonstrating that financing for Africa is increasingly coming from regional institutions.

Globally the volume of commitments from members increased by 5% from 2021 to 2022 and decreased by -7.3% from 2022 to 2023.

Annual					3-year rolling average			Change	
ICA Member	2021	2022	2023	Total	2021	2022	2023	2022/ 2021	2023/ 2021
WB	9,724	11,227	6,634	**27,584**	7,294	9,182	9,195	26%	0%
AfDB	2,605	2,927	4,650	**10,181**	3,049	2,236	3,394	-27%	52%
EIB	3,033	1,675	1,347	**6,055**	2,083	2,111	2,018	1%	-4%
AFC	1,916	785	2,482	**5,183**	2,089	1,349	1,728	-35%	28%
KfW	710	2,385	1,989	**5,083**	679	1,228	1,694	81%	38%
AFD	1,291	1,838	1,291	**4,420**	1,396	1,365	1,473	-2%	8%
JICA	595	1,983	1,134	**3,712**	626	1,037	1,237	66%	19%
IsDB	668	1,082	1,321	**3,070**	506	705	1,023	39%	45%
DBSA	986	384	973	**2,344**	1,181	816	781	-31%	-4%
Afrexim	341	597	824	**1,763**	640	509	588	-20%	15%
EC	502	575	667	**1,744**	293	539	581	84%	8%
BOAD	467	347	851	**1,665**	473	428	555	-10%	30%
UK	878	252	442	**1,572**	651	531	524	-18%	-1%
IFC	280	511	383	**1,174**	362	394	391	9%	-1%
Spain	227	319	338	**883**	93	184	294	97%	60%
USAID	218	226	238	**682**	229	229	227	0%	-1%
Vinci	345	242		**587**	345	294	294	-15%	0%
Canada	129	238	28	**394**	48	126	131	164%	5%
AUDA-NEPAD	21	27		**48**	21	24	24	17%	0%
Italy	6	3	38	**47**	8	6	16	-20%	144%
AUC	2	5	6	**14**	2	4	5	89%	24%
Total	**24,945**	**27,628**	**25,634**	**78,207**	**24,945**	**26,286**	**26,069**	**5%**	**-1%**

Figure 4-1: ICA member infrastructure financing 2021-2023



4.2.1 Commitments by sector

The financing commitments by sector are shown in Figure 4 2. The energy sector received the largest share of funding from ICA members until being overtaken by the transport sector in 2022, with $10.5b in financing. The emphasis on those two sectors reflects financing needs discussed in Chapter 2.

4.2.2 Commitments by region

West Africa received the most funding from ICA members in 2021 ($8.7b) while East Africa received the most funding in 2022 ($5.8b) and multiregional projects received the most funding ($6.7b) in 2023. The large portion of unspecified data is a result of the lack of disaggregated data from certain ICA Members.

4.2.3 Country Allocations

ICA members committed over 70% of financing to country-specific projects across the study period. In 2022, country-specific projects constituted 78% of the total investment, representing the highest proportion in the period. Nigeria received the most country-specific infrastructure financing investment with a total of $4.7b across all three years. Egypt ($4.6b), Senegal ($4.0b), South Africa ($3.3b), and Kenya ($3.2b) received the next highest portions of infrastructure financing for a combined total of 29% infrastructure financing. In 2021, financing was concentrated in a smaller number of countries, with only 3 countries receiving over $1bn while in 2022, eight countries received over 1 billion, and four in 2023.

Figure 4-2: ICA member financing by sector (2020-2023)

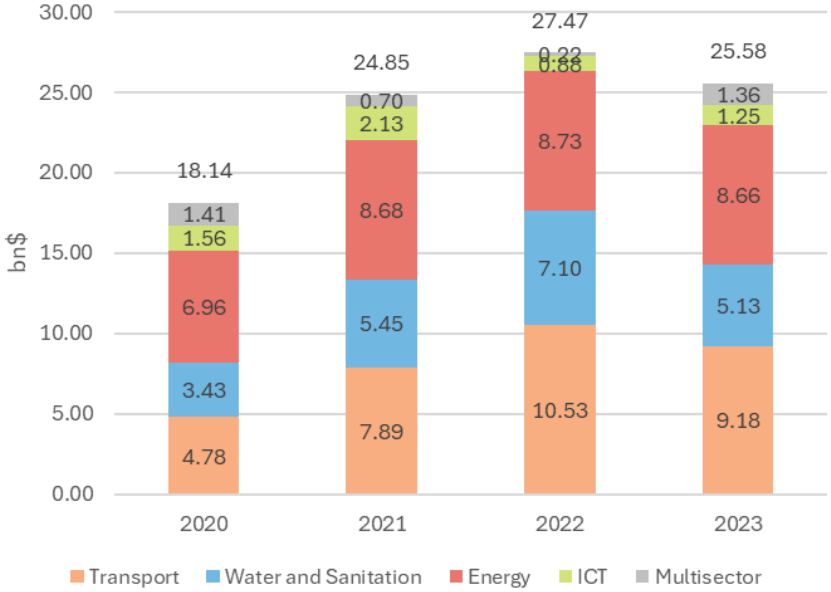
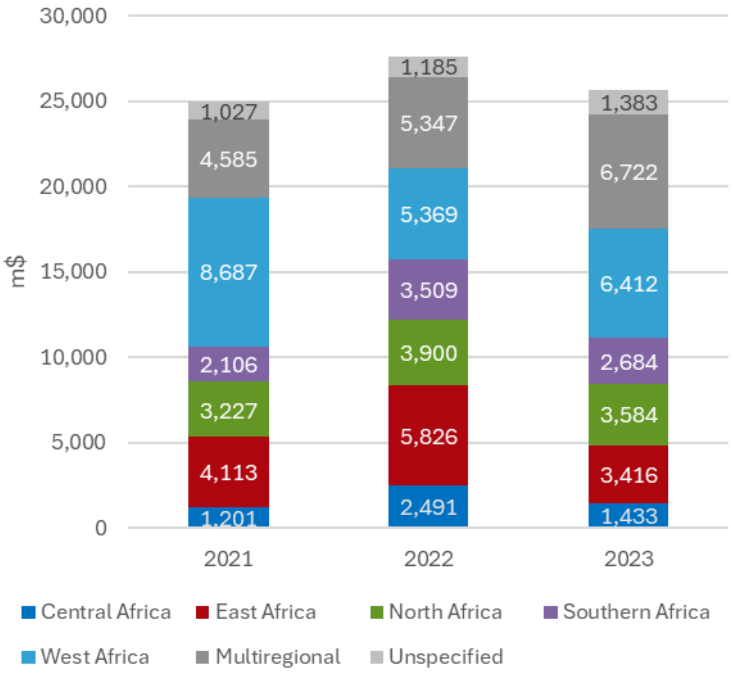


Figure 4-3: ICA member financing by region (2021-2023)



The table *below* shows the countries that received contributions of over $500m each year by sector.

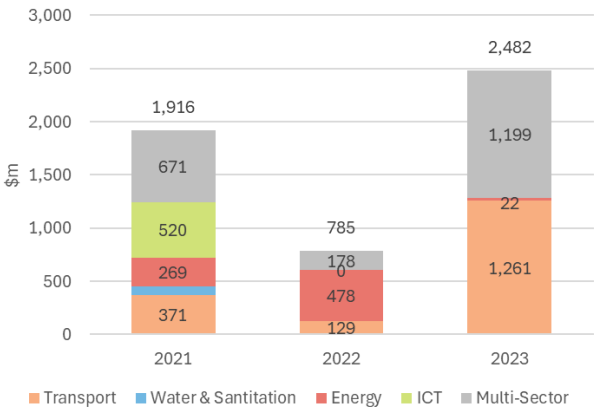
Figure 4-4: Contributions to country specific projects totaling over $500m

	2021	2022	2023
Transport	• Egypt	• Egypt • Tanzania • Mozambique • Democratic Republic of the Congo • Senegal • Madagascar	• Senegal • Egypt
Energy	• Nigeria • Benin • Mozambique • DRC • Ethiopia	• South Africa • Uganda • Tanzania • Nigeria	• Nigeria • South Africa • Kenya
Water and Sanitation	• Kenya • Nigeria	• Kenya • Democratic Republic of the Congo	None
ICT	• Nigeria	None	None

4.3 ICA Member Activities

4.3.1 Africa Finance Corporation (AFC)

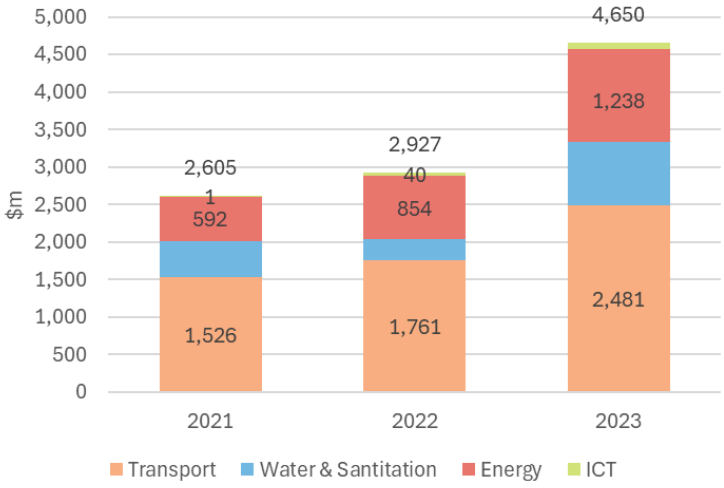
AFC's infrastructure financing focused on industrialization, connectivity, and energy security. In Senegal, AFC committed $1 billion to a series of road infrastructure projects in 2023, enhancing national and cross-border connectivity, and supporting economic integration in West Africa. In the same year in Egypt, AFC invested $500 million in oil and gas projects, helping to modernize the sector, improve energy self-sufficiency, and support the country's export ambitions. These projects underscore AFC's strategic approach to unlocking Africa's economic potential through targeted, high-impact infrastructure investments



AFC infrastructure financing 2021-2023

4.3.2 African Development Bank (AfDB)

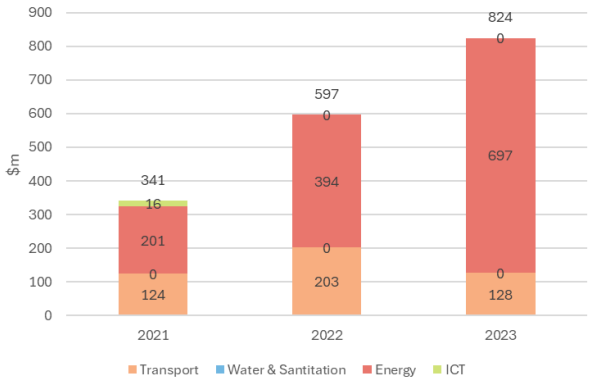
The AfDBs infrastructure investments from 2021-2023 focused on the transportation sector. Some examples of projects include financing over $75m for road construction studies in Rwanda and Burundi in 2022[6] and an upgrade to the southern road corridor in Tanzania in 2021[7].



AfDB infrastructure financing 2021-2023

4.3.3 African Export Import Bank (Afrexim)

The Afrexim Bank investments were heavily focused in the energy sector across all three years of the study. The transport sector received the second highest portion of funding. The Afrexim banks investment in infrastructure more than doubled over the three-year period.



Afrexim infrastructure financing 2021-2023

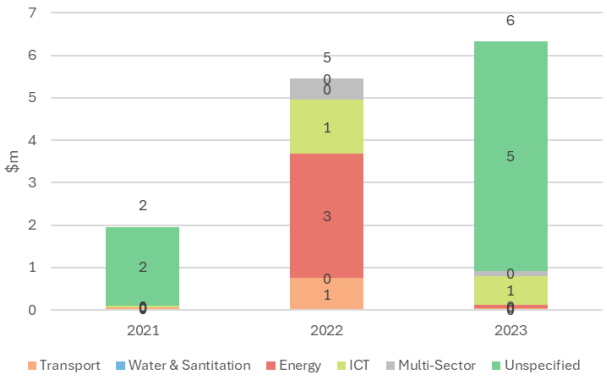
6 African Development Fund grants over $75 million to Rwanda and Burundi for cross-border road construction and studies | African Development Bank Group

7 Tanzania: African Development Fund approves $116 million loan to upgrade southern road corridor | African Development Bank Group

4.3.4 The African Union Commission (AUC)

Between 2021 and 2023, the African Union Commission (AUC) reinforced its commitment to expanding energy access and developing renewable energy resources across Africa through strategic initiatives and targeted funding. A central pillar of this effort was the establishment of the Geothermal Risk Mitigation Facility (GRMF) in 2021[8]. It supports early-stage geothermal energy projects in East Africa. Under this program, the AUC disbursed a $2 million grant to support geothermal exploration and reduce the financial risks associated with drilling and infrastructure development. This funding contributed to broader goals of increasing clean energy generation, enhancing regional energy security, and fostering sustainable economic growth.

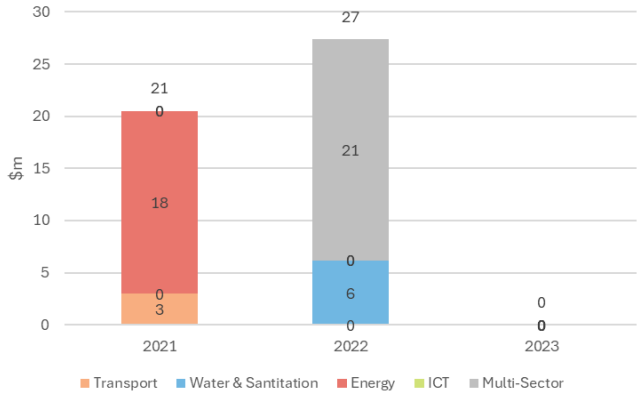
The AUC's energy strategy during this period emphasized regional cooperation, private sector engagement, and the scaling of renewable energy technologies to meet the continent's growing power needs.



AUC infrastructure financing 2021-2023

4.3.5 AUDA-NEPAD

Between 2021 and 2023, AUDA-NEPAD advanced a strategic, integrated approach to infrastructure investment across Africa. Central to this was the Programme for Infrastructure Development in Africa (PIDA), which focused on enabling cross-border projects that align with the African Union's Agenda 2063. A key initiative of AUDA-NEPAD in 2021 was the Continental Power Systems Masterplan ($17.5m), aimed at harmonizing electricity markets and planning across regions to support a unified African power grid. This initiative is financed by the EU, the World Bank, IsDB, AFD, IRENA and IAEA while AUDA-NEPAD is the executing agency. The GIZ Support to PIDA Green Infrastructure Corridors ($14.2m) promoted climate-resilient transport and energy corridors, integrating environmental and social safeguards into infrastructure planning. Additionally, the PIDA Implementation Support Project ($7m) was approved by the AfDB in December 2021 to provide technical and institutional support to accelerate project preparation and execution. AUDA-NEPAD is the grant recipient and executing agency.

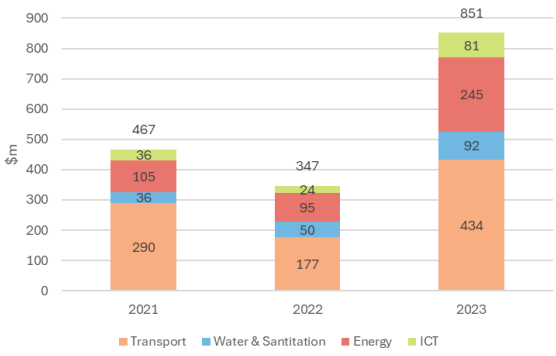


AUDA-NEPAD infrastructure financing 2021-2023

8 AUC signs Grant Contract with the Geothermal Development Company (GDC) - Geothermal Risk Mitigation Facility (GRMF)

4.3.6 Banque Ouest Africaine de Développement (BOAD)

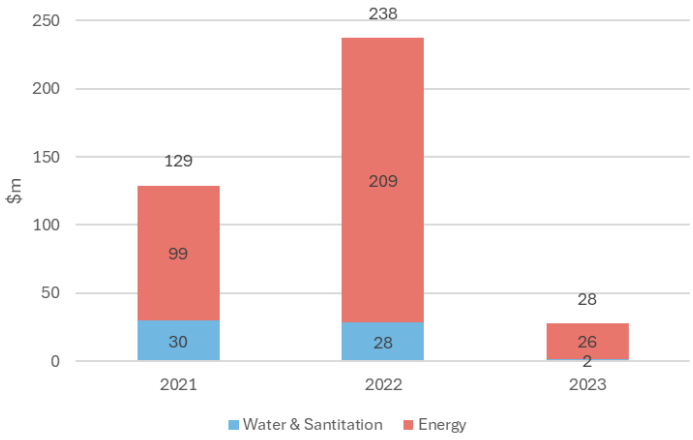
(BOAD) financed infrastructure projects that support economic integration and public service delivery across West Africa. In Mali, BOAD supported the Program to clear the debt owed to strategic suppliers of the Mali Energy Company (EDM-SA) ($74m) in 2023, helping to stabilize the national energy provider by settling debts to key suppliers. In Senegal, the bank approved a loan for the partial financing of infrastructure and systems for the 19 km Diamniadio–AIBD section of the Train Express Régional (TER), a major urban mobility project aimed at improving transport connectivity between Dakar and its suburbs. In Burkina Faso, BOAD financed the construction and paving of the Regional Road No. 11 (RR11) Kolinka–Fara–Poura junction in 2021, enhancing regional trade routes and rural accessibility. These projects reflect BOAD's strategic focus on infrastructure that promotes regional development, economic resilience, and improved public services.



BOAD infrastructure financing 2021-2023

4.3.7 Canada

Canada strengthened its role in global climate infrastructure financing, with a focus on supporting low-carbon transitions and climate resilience in developing regions, including Africa. A major contribution was the $161 million investment in the Climate Investment Funds – Accelerating Coal Transition (CIF-ACT) Program in 2022, aimed at helping countries phase out coal while ensuring a just transition for affected communities. In 2021, Canada partnered with the African Development Bank to launch the Canada-African Development Bank Climate Fund (CACF), contributing $36 million to support climate adaptation and mitigation projects across the continent. Additionally, in 2022, Canada provided a $26.9 million repayable contribution to the Canada-European Bank for Reconstruction and Development (EBRD) High Impact Partnership on Climate Action, targeting high-impact, scalable climate solutions.



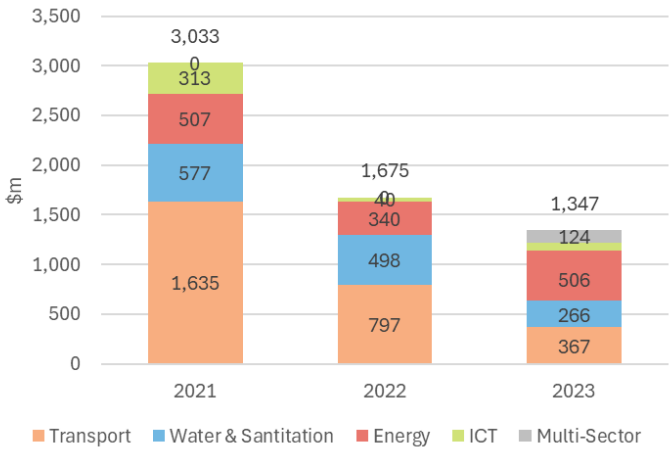
Canada infrastructure financing 2021-2023

4.3.8 European Investment Bank

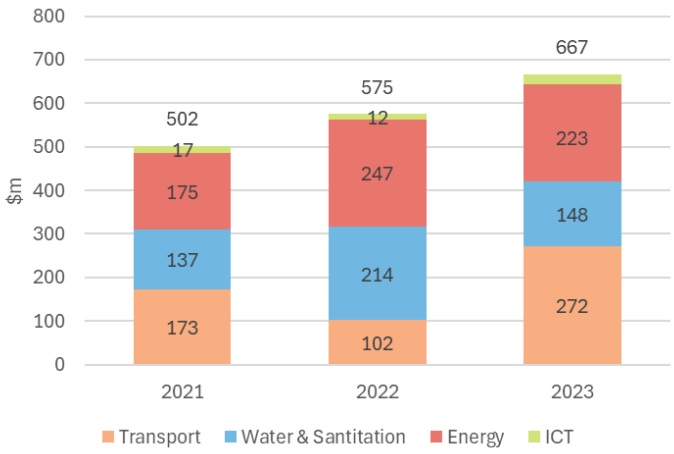
Over the period from 2021 to 2023, the European Investment Bank continued its engagement with African infrastructure projects, despite featuring a notable decline in 2022. As the only sector to continually receive increased financing, the highlight transport project was a EUR 167m contribution to Dakar's public transport network restructuring efforts in 2022. The energy sector received large, albeit fluctuating financing, with highlights including investments in transmission infrastructure like the EUR 170m Guinea-Mali Interconnection project. Contributing to the large uptick in energy sector financing visible in 2023, the EIB also provided EUR 200m for projects in South Africa through the Development Bank of South Africa Embedded Generation Investment Programme (DBSA EGIP), which represents the bank's single largest commitment over the reporting period.

4.3.9 European Commission

The European Commissions financing commitments contributed to a variety of infrastructure projects and programs across the continent. At EUR 78m, Phase II Water Sector Reform Program Phase II represents the single largest financing commitment, demonstrating the large focus on the WASH sector in 2022. The program is aimed at improving financial and operational water resources management in order to increase access to drinking water. Further large contributions include commitments to the African Investment Facility through PIN FED 11 for the enhancement of the transport, water, and electricity in Madagascar in both 2022 (EUR 24m) and (EUR 40m). As the largest singular project, the rehabilitation of the Tschikapa-Mbuji-Mayi section of National Highway 1 in the DRC accounted for EUR 34m of financing committed by the Commission.



EIB infrastructure financing 2021-2023



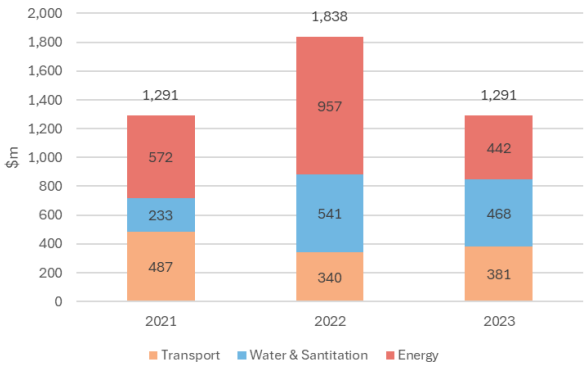
European Commission infrastructure financing 2021-2023

4.3.10 France

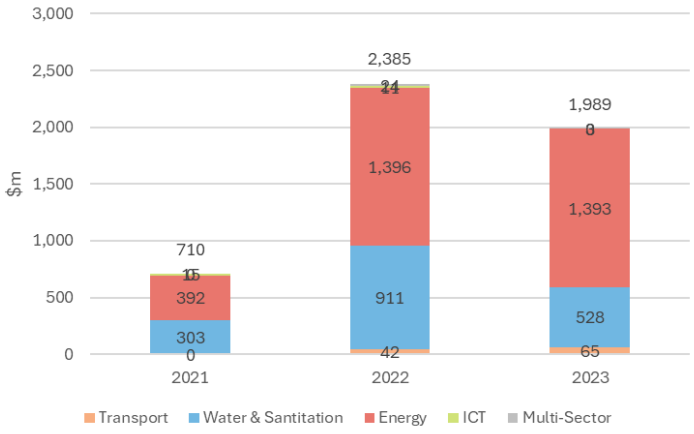
Between 2021 and 2023, France's contributions to infrastructure development across Africa, focused on sustainable energy, electricity transmission, and water policy reform. In South Africa, France provided EUR 300 million for the Budget Financing for a Just Energy Transition, supporting the country's shift away from coal and promoting renewable energy initiatives. In Nigeria, EUR 226 million was allocated to the Upgrade Program for the Electricity Transmission Network in Northwestern Nigeria, aiming to enhance grid reliability and reduce power losses in a region with chronic electricity shortages. Meanwhile, in Mauritius and Rodrigues, EUR 202 million supported the updating and piloting of the Water Policy, focusing on sustainable water management and climate resilience. These investments reflect France's broader strategy to foster inclusive, climate-resilient infrastructure across the continent.

4.3.11 Germany

Between 2021 and 2023, Germany invested in sustainable infrastructure development in Africa, aligning its financing with climate goals and regional development priorities. In Morocco, Germany invested EUR 100 million in the Sustainable Urban Mobility project, aimed at reducing emissions and improving public transport systems in major cities. In Ghana, a EUR 85 million initiative focused on Renewables and Energy Efficiency, supporting solar energy deployment and energy-saving technologies to enhance energy access and reduce carbon footprints. Meanwhile, in Eastern Côte d'Ivoire, Germany committed EUR 51 million to the Sustainable Energy Development project, which aimed to expand electricity access in rural areas and strengthen the local energy grid. These investments reflect Germany's broader strategy to foster green growth, energy transition, and inclusive urban development across Africa.



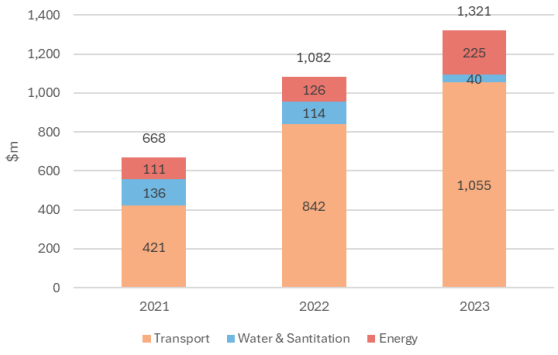
AFD infrastructure financing 2021-2023



Germany infrastructure financing 2021-2023

4.3.12 Islamic Development Bank

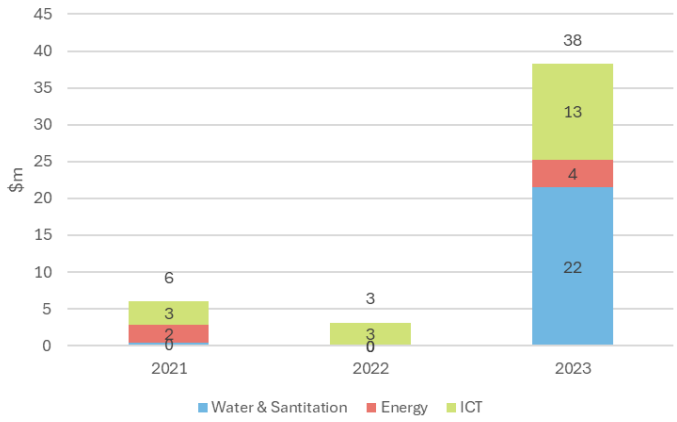
The Islamic Development Bank (IsDB) significantly expanded its role in financing infrastructure across Africa, shifting from primarily concessional support to larger-scale, strategic investments in transport and energy. This evolution reflects a broader institutional pivot toward high-impact, growth-enabling infrastructure that supports regional integration and economic resilience. In 2023, IsDB approved $340 million for the Electric Express Train Phase-1 Project in Senegal, an investment aimed at modernizing urban mobility and reducing congestion in the Dakar metropolitan area. In 2022, the Bank committed $295 million to the upgrading of national roads in Uganda, enhancing connectivity and trade routes in East Africa. That same year, it also financed the construction of the Dakar–Saint Louis Highway with $270 million, a critical corridor for regional commerce and tourism. These projects illustrate IsDB's growing emphasis on large-scale, transformative infrastructure, supported by innovative Islamic finance instruments like sukuk, which have become increasingly central to its development strategy



IsDB infrastructure financing 2021-2023

4.3.13 Italy

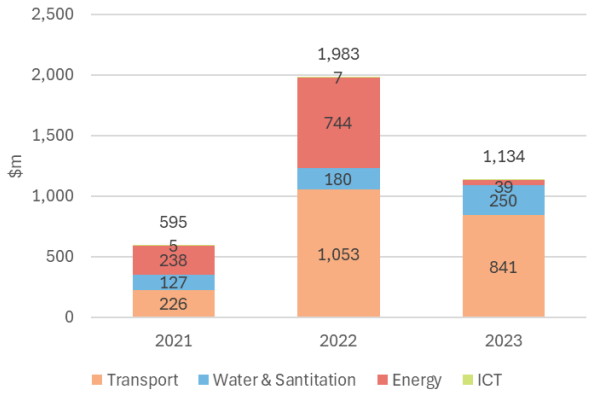
The majority of Italy's investments in infrastructure were in 2023 and focused on enhancing water security, agricultural resilience, and climate adaptation, particularly in vulnerable regions. In Ethiopia, Italy committed EUR 7.5 million to strengthen WASH (Water, Sanitation, and Hygiene) resilience in the lowlands, aiming to improve access to clean water and sanitation services while supporting drought-prone communities. In Niger, a EUR 2.8 million irrigation project was launched to boost agricultural productivity and food security through sustainable water management. Additionally, Italy supported a EUR 2.7 million refinancing project for a water retention measure on the Sirba River, designed to mitigate flooding and enhance water availability for local populations. These projects reflect Italy's targeted approach to infrastructure investment, prioritizing human development, environmental sustainability, and regional stability in Africa.



Italy infrastructure financing 2021-2023

4.3.14 Japan

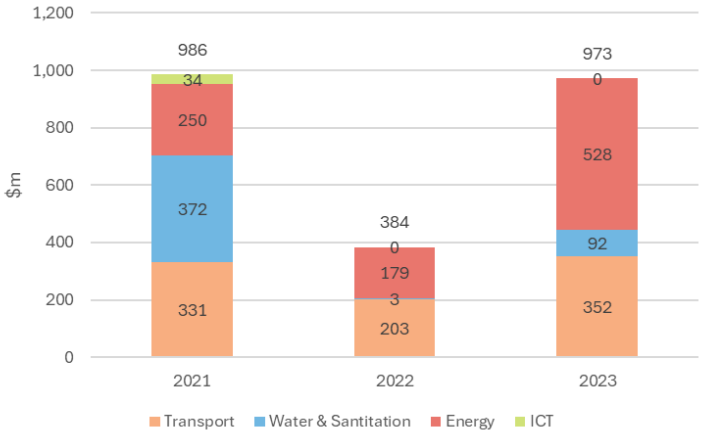
Between 2021 and 2023, Japan deepened its infrastructure engagement in Africa, focusing on projects that combine advanced technology, urban development, and sustainable utilities. Japan's approach, largely implemented through the Japan International Cooperation Agency (JICA), emphasizes long-term partnerships, quality infrastructure, and capacity building. In Egypt, Japan invested $311m in the Greater Cairo Metro Line No. 4 Phase 1 Project (II) in 2022, supporting the expansion of urban transit to reduce congestion and improve mobility in one of Africa's largest cities. In Nigeria, Japan committed $199m to the Lagos and Ogun Power Transmission System Improvement Project, aimed at strengthening electricity infrastructure and reducing transmission losses in two of the country's most industrialized states. In Zanzibar, a $172m investment in 2023 funded the Urban Water Distribution Facilities Improvement Project, enhancing access to clean water and supporting climate resilience.



JICA infrastructure financing 2021-2023

4.3.15 South Africa

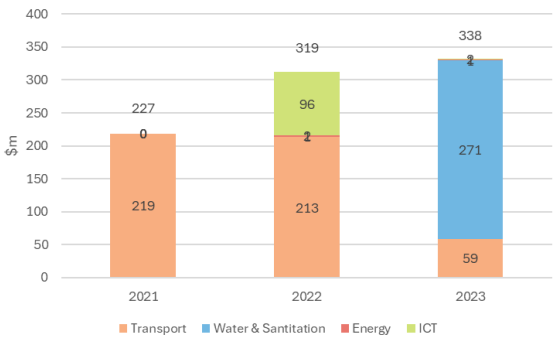
Between 2021 and 2023, South Africa advanced its domestic infrastructure agenda through major investments in water security and transport logistics. The Trans-Caledon Tunnel Authority (TCTA) played a central role, securing $202 million in 2021 for the Lesotho Highlands Water Project – River System, aimed at augmenting water supply to the Gauteng region through cross-border collaboration with Lesotho. That same year, another $169 million was allocated to the Vaal River System component of the project, reinforcing water infrastructure critical to South Africa's industrial and urban centers. In 2023, Transnet, the state-owned freight and logistics company, received $135 million under a Corporate Facility for its Capital Expenditure Programme, supporting upgrades to rail, port, and pipeline infrastructure.



DBSA infrastructure financing 2021-2023

4.3.16 Spain

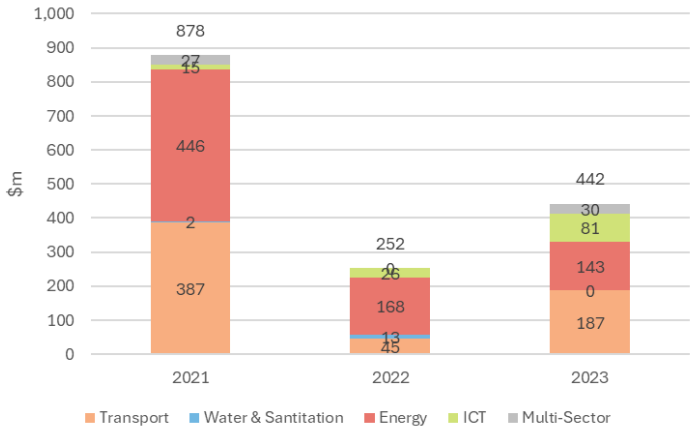
Between 2021 and 2023, Spain's infrastructure investments in Africa focused on sustainable water solutions and modernizing transportation systems. In 2023, Spain committed $270m to the SALT project, which involves the full lifecycle development of a water desalination plant, including design, construction, financing, and long-term operation—an essential step toward addressing water scarcity in coastal regions. In 2022, Spain supported Egypt's rail modernization with a $210m investment for the supply of coaches for seven sleeping trainsets, enhancing long-distance passenger comfort and capacity. Additionally, in 2021, Spain contributed $188m to the refurbishment of rolling stock for Cairo Metro Line 1, improving reliability and extending the lifespan of one of the city's most vital transit lines. These projects reflect Spain's strategic emphasis on sustainable infrastructure, urban mobility, and water resilience in its African partnerships.



Spain infrastructure financing 2021-2023

4.3.17 United Kingdom

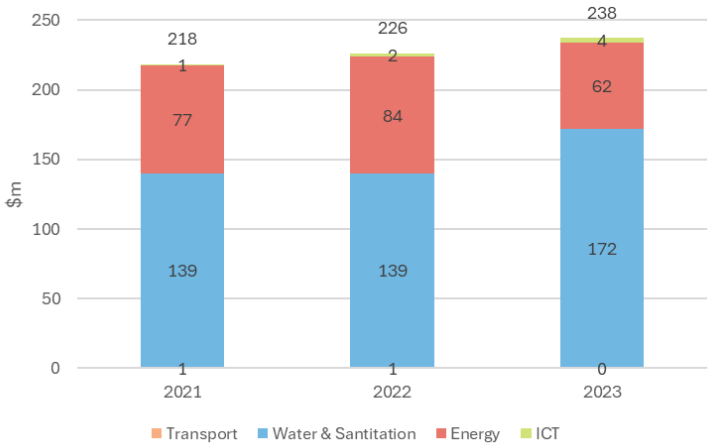
The United Kingdom reinforced its infrastructure engagement in Africa through a mix of public-private partnerships and climate-aligned investments. The Africa Gateway project, launched in 2021 with a $384m commitment to support trade-enabling infrastructure across the continent, including ports, logistics, and digital connectivity. That same year, the UK backed Klinchenberg B.V. with $137m, a project focused on sustainable industrial development and clean energy solutions, likely through blended finance mechanisms. In 2023, the UK contributed $60m to the Dakar Bus Rapid Transit (BRT) system in Senegal, a transformative urban mobility project designed to reduce congestion, lower emissions, and improve access to jobs and services in the capital. These investments reflect the UK's evolving strategy to align infrastructure finance with climate goals, economic development, and regional integration in Africa.



UK infrastructure financing 2021-2023

4.3.18 USA

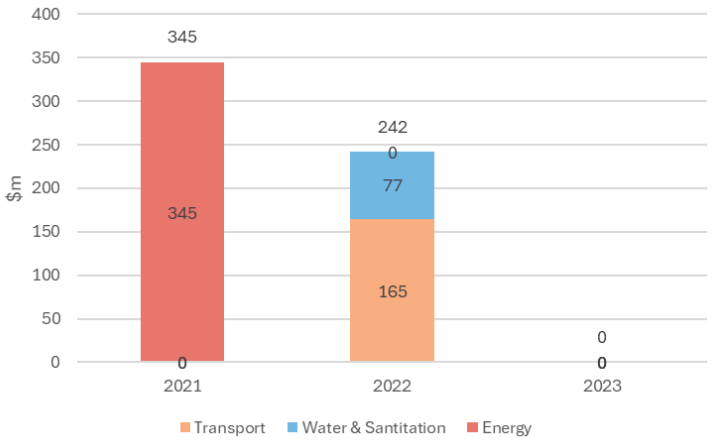
USAID infrastructure investments focused on water access, sanitation, and energy sector reform. In Ethiopia, the U.S. invested $20 million in the Urban WASH Activity, aiming to improve water, sanitation, and hygiene services in rapidly growing urban areas, thereby enhancing public health and resilience. In Egypt, the El Hanady Water Treatment Plant received
$16 million in U.S. support to expand clean water access and improve wastewater management in Upper Egypt. Meanwhile, in Nigeria, the Power Africa: Nigeria Power Sector Program (NPSP) was backed with $15 million, targeting reforms and capacity building to strengthen the electricity sector, attract private investment, and expand energy access.



USAID infrastructure financing 2021-2023

4.3.19 Vinci

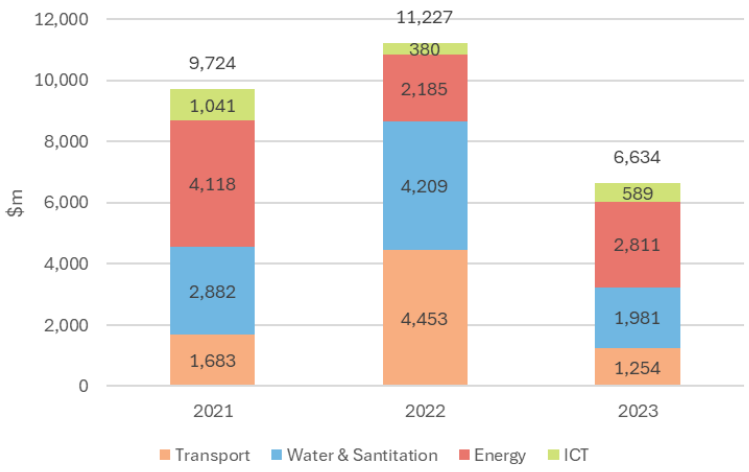
Vinci Construction is the first private member of the ICA. Between 2021-2023 its infrastructure financing targeted energy in Benin in 2021, and air and road transportation projects in 2022.



Vinci infrastructure financing 2021-2023

4.3.20 World Bank Group

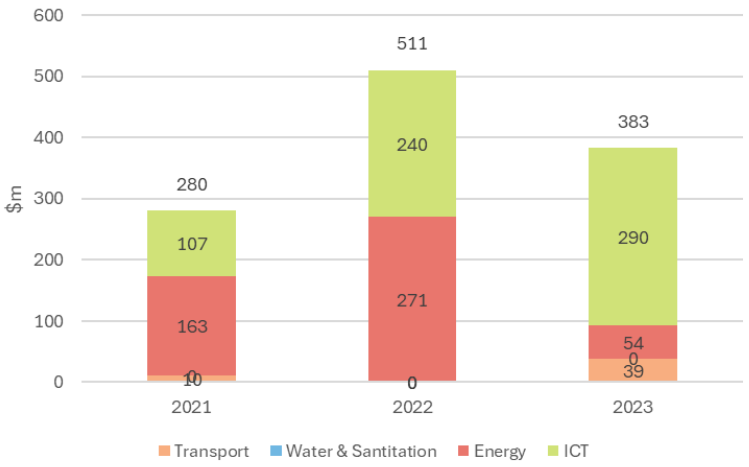
Multi-country loans for projects to improve irrigation and drainage, yielding a Water Sector investment of $788m. In addition, the bank provided $750m worth of loans to transmission and distribution projects in Nigeria in 2023, which represents the institution's largest energy commitment over the reporting period. In the water sector, the Bank provided loans of $750m each to projects in Kenya in both 2021 and 2022, making up a significant portion of its WASH financing across the continent.



World Bank infrastructure financing 2021-2023

4.3.21 IFC

Throughout the reporting period, IFC concentrated much of its financing efforts on the ICT sector. Commitments of $160m to Global Partners in Ethiopia in 2023 and $150m to Airtel Africa, who operate across multiple countries in 2022, constitute the highest volume projects. The largest non-ICT commitment was support for the Abydos Solar IPP in Egypt, for which $105m were mobilized in 2022, contributing to much of the observable uptick in energy sector financing in the chart above.



IFC infrastructure financing 2021-2023



Non-ICA Members Financing

5

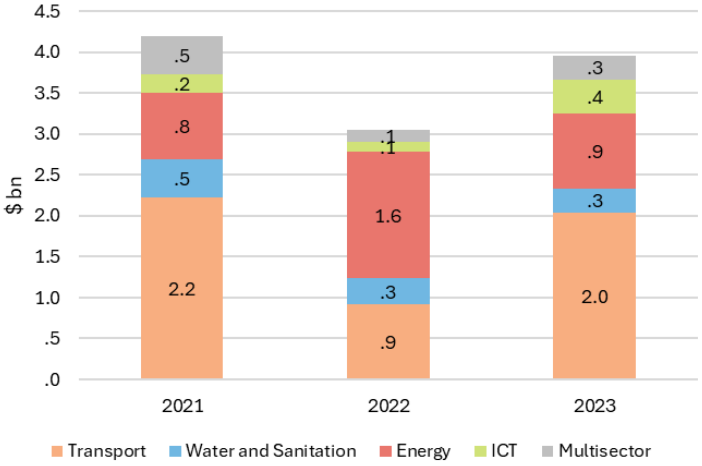
5.1 Overview

5.1.1 Public Financing

Non-ICA Member financing represented between 3 and 5% of total infrastructure financing between 2021-2023, which is a reduction compared to 2020 when their contributions made up 13% of total financing. This reflects a reduction not only in the portion of overall infrastructure financing but also in the quantity, dropping from $14.2b in 2020 to $5.6bn in 2021.

Non-ICA members contributed the most to transport sector projects in 2021 and 2023 and to energy sector projects in 2022.

Figure 5-1: Non-ICA Member Public Financing by Sector ($m)



For the first time since 2014, the Arab Coordination Group (ACG) contributions totaled more than Chinese loans to Africa in 2021 and in 2022. In 2023 Chinese contributions increased and once again surpassed all other non-ICA member contributions.

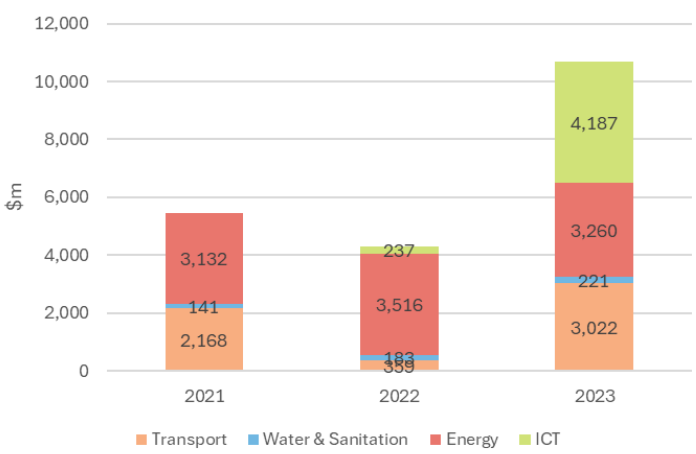
Figure 5-2: Non-ICA Public Funding by Source ($m)

IFI	2021	2022	2023	Total
Chinese Loans to Africa	1,441	227	2,035	3,703
Arab Coordination Group	1,781	859	472	1,831
○ Abu Dhabi FD	58	45		103
○ Kuwait FD	467	65	2	534
○ Arab Fund ESD		114	52	166
○ Saudi FD	20	235	260	515
○ OPEC	193	161	158	513
○ Arab Bank DEA	1,043	239		1,282
India	465		180	645
EBRD	132	73	218	422
EBID	52	30	21	103
NDB		100		100
AIIB		250	500	750
Africa50	92	1,157	379	1,628
Belgium			25	25
FMO	49	240	120	409
IFAD	10	16	12	38
Norway	174	92		266
Total	**4,196**	**3,045**	**3,962**	**11,203**

5.1.2 Private Sector Financing

Private sector financing accounted for 6% of infrastructure financing in 2021, 4% in 2022, and 10% in 2023. While there are some high-value ICT projects in 2023, the energy sector received the largest portion of investment (48%), followed by the transport sector (27%) between 2021-2023.

Figure 5 3: Private Sector Infrastructure Investment by sector 2021-2023 ($m)



5.2 Arab Coordination Group

The Arab Coordination Group's (ACG) main purpose is to optimize the application of resources and the giving of aid by the various Arab Development Funds. A further objective is to derive benefit from coordinating financing efforts and the accompanying procedures, particularly for major projects and programs that exceed the capacity of any single institution. In addition to achieving these common objectives, the intention is to establish clear links to promote development assistance and economic relations in the recipient countries.

The ACG comprises 10 institutions, four of which are national institutions, including:

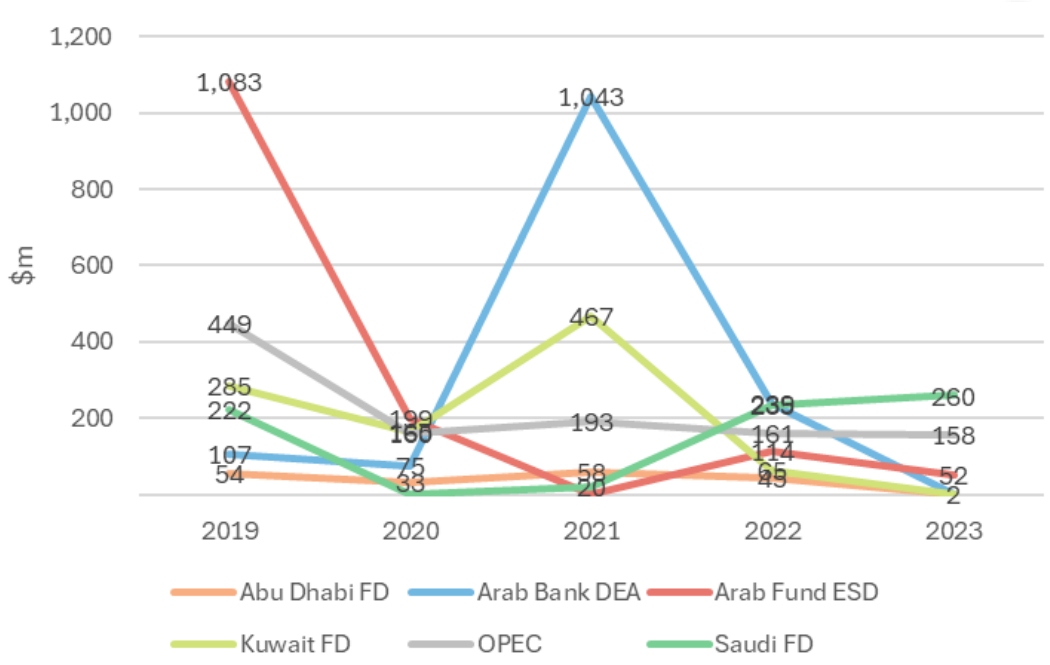
- the Abu Dhabi Fund for Development (ADFD),
- the Kuwait Fund for Arab Economic Development (KFAED),
- the Qatar Fund for Development (QDF),
- the Saudi Fund for Development (SFD).

ACG also includes six regional organizations:

- the Arab Bank for Economic Development in Africa (BADEA),
- the Arab Fund for Economic and Social Development (AFESD),
- the Arab Gulf Program for Development (AGFUND),
- the Arab Monetary Fund (AMF),
- the Islamic Development Bank (IsDB), and the
- OPEC Fund for International Development (OFID).

The IsDB is an ICA member, and its contributions are covered in the previous chapter. Data on specific initiatives was not available in the annual reports of the Arab Monetary Fund and the Qatar Fund for Development invest in health, education, and economic projects rather than infrastructure. ACG non-ICA members committed $1.7bn in 2021, $859m in 2022, and $472m in 2023. This represents an overall increase from 2020.

Figure 5-4: Non-ICA Member Arab Coordination Group Financing 2021-2023 ($m)



5.2.1 The Abu Dhabi Fund for Development (ADFD)

The ADFD extended 4 loans over the study period, three in 2021 and one in 2022 with a total value of $103m. The loans funded 3 transport projects for roads in Rwanda, Guinea and Nigeria ($86m), and one water and sanitation sector project in Lesotho ($17m).

5.2.2 The Kuwait Fund for Arab Economic Development (the Kuwait Fund, KFAED)

In 2021, the Kuwait Fund for Arab Economic Development (KFAED) provided seven loans in Africa totaling $467m, with the largest share directed toward the water and sanitation sector.

Four water projects received a combined $314m, including two in Egypt, one in Tunisia, and another in Tanzania. Additionally, the energy sector saw two loans worth $112m, with funding allocated to electrification in Djibouti and a thermal energy project in Sudan. A $40m loan supported a road rehabilitation project in Senegal. These projects reflect the Fund's focus on essential infrastructure and utility improvements across the continent.[9]

In 2022, KFAED extended $64.6m through three loans, mainly in the transport sector. Two loans totaling $52.2m were dedicated to road projects, enhancing regional accessibility and infrastructure. In the water and sanitation sector, KFAED contributed $12.4m to Lesotho's Lowlands Water Development Project, aimed at expanding water access and supporting sustainable resource management.[10] In 2023, KFAED provided a single grant to Egypt for a feasibility study on rail connectivity between Egypt and Sudan ($2.4m).[11]

9 The Kuwait Fund for Arab Economic: Annual Report 2020/2021, (2021)
10 The Kuwait Fund for Arab Economic Annual Report 2021/2022, (2022)
11 The Kuwait Fund for Arab Economic Annual Report 2024/2023, (2023)

5.2.3 The Arab Fund for Economic and Social Development (the Arab Fund, AFESD)

AFESD committed $114m in 2022 to two water projects in Mauritania, aiming to address water shortages. The projects—one for securing water supply to Nouakchott and another for Kiffa—support the National Water Company through facility rehabilitation, technical services, and institutional support. In 2023, AFESD provided a $52m loan to Tunisia's Ministry of Equipment and Housing to support the construction and rehabilitation of classified roads in four Governorates, improving safety and linking production to consumption areas while enhancing tourism and industry services.

5.2.4 The Saudi Fund for Development (SFD)

In 2021, the Saudi Fund for Development (SFD) provided a single loan ($20m) in Africa for the Samatar-Wajir Road project in Kenya. This investment is aimed at enhancing road connectivity in Kenya, facilitating regional trade, and improving infrastructure resilience in underserved areas.[12]

In 2022, SFD expanded its activities, committing a total of $235m across five projects. This included three loans in the transport sector for road projects valued at $115m SR across Africa, one loan for an electricity access project in Rwanda, and a water and sanitation project in Mauritania amounting to $100m for improved water access.[13]

In 2023, SFD continued to increase engagement, providing eight loans valued at $260m. Two loans in the transport sector ($70m) continued to focus on expanding road infrastructure. The energy sector received two loans ($33m), aimed at increasing electricity access. Lastly, SFD supported water and sanitation infrastructure, allocating $157m across four loans.[14]

5.2.5 The OPEC Fund for International Development (the OPEC Fund, OFID)

In 2021, the OPEC Fund committed $193m across seven loans in Africa, with the largest investments directed toward the energy sector ($103m across four projects), including three in renewable energy. A loan of $50m was provided for Mozambique's Central Termica de Temane, a 450MW gas-fired plant designed to serve 1.5 million households, co-financed with the IFC. The transport sector received $70m for three road projects, while a water and sanitation loan of $20m supported essential infrastructure improvements.

In 2022, OFID extended $161m in six loans and one grant, with a strong emphasis on transport infrastructure. The largest commitment, $66.9m, funded Dakar's Saint Louis Highway Project to improve regional connectivity. Additionally, $41.1m was directed to energy projects in Morocco and Senegal, specifically for thermal power initiatives, while $15m supported water and sanitation upgrades in Malawi. The loans and grants for the transport sector included three road projects and one for air transport.

In 2023, OFID's support amounted to $158.2m across five loans and two grants in transport, renewable energy, and water supply. The transport loan, $40m, was allocated to urban road development in five counties across Kenya, while $55m in loans supported two energy projects, including the development of a solar plant in Niger. Water and sanitation projects received $61.2m, with Mauritania's Kiffa Water Supply Project receiving $40m and Rwanda's Karenge Water Supply Project $21.2m. Additionally, two climate finance grants worth $2m were provided for regional initiatives in Rwanda, Madagascar, Malawi, and the Democratic Republic of Congo.

12 The Saudi Fund for Development (SFD): Annual Report 2021 (2022)
13 The Saudi Fund for Development (SFD): Annual Report 2022 (2023)
14 The Saudi Fund for Development (SFD): Annual Report 2023 (2024)

5.2.6 The Arab Bank for Economic Development in Africa (BADEA)

In 2021, the Arab Bank for Economic Development in Africa (BADEA) committed a total of $1.04 bn through ten loans and grants. Transportation received the largest allocation, with three road project loans totaling $950m and one grant for a regional airport project in Malawi. In the energy sector, two loans valued at $72m supported infrastructure expansion, while the water and sanitation sector received one loan of $20 m and a smaller grant of $150k. Additionally, BADEA extended two grants in the ICT sector, valued at $0.3 m.[15]

In 2022, BADEA's commitments totaled $239.2 m across seven loans, with the road sector continuing to dominate at $208.2 m across six projects. Additionally, a $31 m joint credit loan was extended for the construction and development of a power plant in Senegal. [16]

5.3 Other IFI Sources

5.3.1 European Bank for Reconstruction and Development (EBRD)

The EBRD contributed a $422m total commitment across 2021-2023, exclusively deployed in North Africa. The EBRDs financing was focused on the transport ($172m) and water and sanitation ($165m) sectors. While the total amount invested in the transportation sector there were a larger number of projects in the water and sanitation sector (3 vs 18).

5.3.2 ECOWAS Bank for Investment and Development (EBID)

The ECOWAS Bank for Investment and Development (EBID) is actively engaged in financing infrastructure projects in West Africa, dispersing $103m between 2021 and 2023. Among the main beneficiary countries were Senegal, with commitments of nearly $43m over this period, followed by Côte d'Ivoire with $18.6m, and Sierra Leone, which received close to $12 m. The priority sectors for these investments included transport in 2021, accounting for 52% of the annual commitments, while water, sanitation, and energy dominated in 2022. In 2023, all financing was exclusively directed toward the transport sector.

These investments reflect the EBID's strategy to support projects that are essential for sustainable socio-economic development in the West African region.

15 Arab Bank For Economic Development in Africa (BADEA): Annual Report 2021, (2022)
16 Arab Bank For Economic Development in Africa (BADEA): Annual Report 2021, (2023)

5.3.3 New Development Bank (NDB)

The NDB loaned $100m to the DBSA sustainable infrastructure project in 2022. In addition to this project, two projects received project concept approval, $1.1b to improve South Africa's railway, Transnet and $1bn for a municipal water and sanitation project. They were not included in this analysis because financing approval was not completed in the study period.

5.3.4 Asian Infrastructure Investment Bank (AIIB)

In 2022, the Asian Infrastructure Investment Bank (AIIB) committed a $250m sovereign loan to Egypt's transportation sector to support the development of the Alexandria Abou Qir Metro Line[17]. In 2023, AIIB increased its commitments to Africa with three loans totaling $500 m. A $200m loan was dedicated to a rail infrastructure connectivity project in Côte d'Ivoire[18], while Egypt received $100m directed to a port infrastructure project[19] and $200m for a multi-sector initiative aimed at sustainable transport and digital infrastructure.[20]

5.3.5 Africa 50

Africa50 is an infrastructure investment platform that contributes to Africa's growth by developing and investing in bankable projects, catalyzing public sector capital, and mobilizing private sector funding. Africa50's investor base is currently composed of 32 African countries, the African Development Bank, the Central Bank of West African States (BCEAO), Bank Al-Maghrib and Public Investment Cooperation with over $895m in committed capital.

Africa50 invested, from 2021 to 2023, a total of $1.6bn in infrastructure projects across Africa, with a strong focus on the transport sector.

In 2021, the institution committed approximately $92m, entirely dedicated to transport infrastructure. This focus continued and intensified in 2023, with all investments—amounting to $379.3m—directed exclusively toward the transport sector. The year 2022 marked a peak in commitments, with $1.1bn invested primarily across the energy, water, and sanitation sectors.

During this period, Africa50 financed several large-scale projects that reflect its strategic priorities. In Senegal, it supported the Malicounda Power Plant, a thermal energy facility, with a contribution of $92m aimed at enhancing the country's electricity generation capacity. In Togo, Africa50 co-financed the Lomé–Kpalimé road project with an investment of $15.5m, improving regional transport infrastructure and facilitating trade and mobility.

These investments were mainly provided as loans, reflecting Africa50's mission to support private sector involvement and accelerate the implementation of high-impact infrastructure through public-private partnerships.

17 AIIB: Egypt: Alexandria – Abou Qir Metro Line, (2022)
18 AIIB: Côte d'Ivoire: Inclusive Connectivity and Rural Infrastructure Project, (2023)
19 AIIB: Egypt: Damietta Port - Container Terminal II, (2023)
20 AIIIB: Egypt: Egypt Sustainable Transport and Digital Infrastructure Guarantee (2023)

5.4 Bilateral

5.4.1 China

China's infrastructure commitments in Africa amounted to $1.4bn in 2021, $0.2 bn in 2022, and $2.0bn in 2023[21]. While this reflects a recovery from the sharp pandemic-driven decline, the annual investment remains substantially lower than the 2018-2020 period ($13.9bn, $6.7bn and $6.4bn). This shift is attributed to factors such as Africa's fragile debt situation, China's domestic economic challenges, and a strategic realignment in China's global lending approach.

The year 2023 marks the first increase in Chinese loans to Africa since their peak in 2015. However, it is unlikely that this increase signals a return to the $10 bn-plus annual commitments typical of the early Belt and Road Initiative (BRI) years. Instead, China appears to be calibrating its investment approach, focusing on sustaining relationships with longstanding partners rather than redirecting funds solely to countries with higher debt tolerance. For instance, Angola, Egypt, and Nigeria—key suppliers of oil and other resources for China—remain central to Chinese financial support despite their economic challenges.

Sectoral Breakdown of Chinese Investments

Transport: The transport sector received the largest portion of China's African investment from 2021 to 2023, totaling $2.2bn. A significant recovery in 2023, with two projects together valued at over a billion dollars, drove this resurgence. A highlight is the Lagos-Kano railway project in Nigeria, where the Kano-Kaduna section received a $973m loan. By comparison, there were five transport projects worth $1bn in 2021, and two valued at $143m in 2022. While investments in transport have rebounded, they remain lower than the 38 projects worth $4.4bn in 2018, 12 projects worth $2.9bn in 2019, and the nine projects in 2020 worth $1.0bn.

Energy: After a near hiatus in energy lending, with only one project in 2021 worth $178 m and none in 2022, China renewed its focus on the sector in 2023 with three renewable energy projects totaling $501 m, predominantly in solar and hydropower. This shift reflects China's alignment with President Xi Jinping's 2021 pledge to halt international coal financing and boost funding for renewable energy.

Water and Sanitation: Investment in water and sanitation sharply declined between 2021 and 2023, with only one commitment: the Hann Bay Depollution Wastewater Treatment project in Senegal, backed by a $14.7m loan in 2022. This reduction is significant compared to four projects in 2018 worth $714m, and three in 2019, totaling $722m.

ICT: The number of Chinese investments in the ICT sector remained steady from 2021 to 2023, with two projects each year, totaling $228m in 2021, $69m in 2022, and $397m in 2023. However, this level of investment reflects a reduction compared to the $3.2bn committed from 2018 to 2020.

21 Global Development Policy Centerv: Chinese Loans to Africa Database (2025)

Although Chinese investments have not returned to pre-pandemic levels, the renewed commitment in 2023 demonstrates China's recalibrated strategy in Africa. This new "small and beautiful"[22] approach, focuses on fewer but more sustainable and impactful infrastructure projects, such as renewable energy initiatives and high-impact transport projects.

5.4.2 India

From 2021 to 2023, India has strengthened its presence in Africa by committing approximately $645m to key infrastructure projects. In Mauritius, India invested over $565m, including $465 m in equity participation, to finance initiatives such as the Metro Express—a light rail transit system designed to alleviate road congestion and modernize urban mobility. The project, led by Indian company Larsen & Toubro, was inaugurated in phases between 2019 and 2022, with significant financial support from the Indian government.

In the Democratic Republic of the Congo, India allocated $180 m to resume construction of the Katende hydroelectric power station, a 64 MW facility intended to supply electricity to the cities of Kananga and Mbuji-Mayi. Originally initiated in 2011, the project faced delays due to regional instability but was revitalized through Indian support, including funding for associated transmission infrastructure.

These initiatives represent New Delhi's targeted strategy focused on sustainable bilateral partnerships and the development of essential infrastructure, thereby reinforcing its role as a development partner on the African continent.

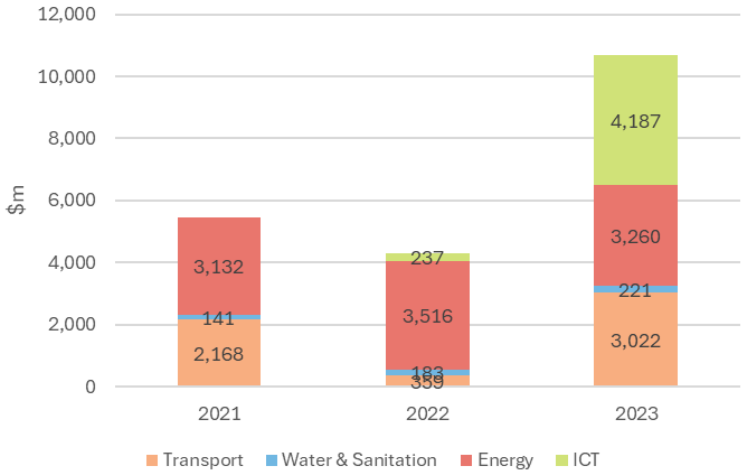


22 Ministry of Foreign Affairs, The People's Republic of China: Forum on China-Africa Cooperation Beijing Action Plan (2024)

5.5 Private Sector Financing

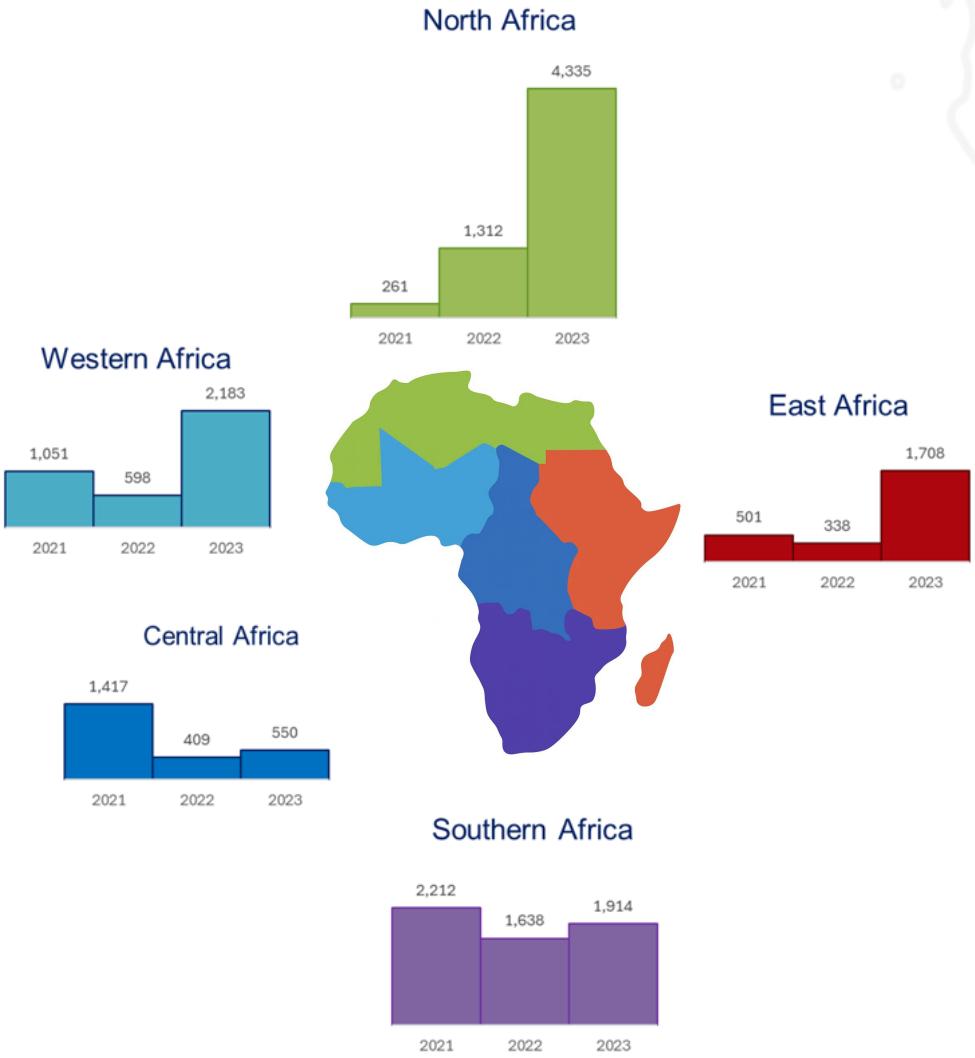
Private sector financing shrank from $19bn in 2020 (23%) to $5bn (6%) 2021. This reduction may be a result of the uncertainty and supply chain impacts of COVID-19. While private sector funding continued to decrease in 2022, it rebounded to pre-COVID levels ($10.6 bn) in 2023. Private sector funding was mainly focused on North and Southern Africa, as shown in Figure 5 5. The largest projects were Senegal's Port of Ndayane (2023), DRC's Port of Banana (2021), and South Africa's Kenhardt solar PV (2022).

Figure 5-6: Private sector investment in infrastructure by sector ($m) 2021-2023



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Figure 5-5: Private Sector Investment by Region 2021-2023 ($m)





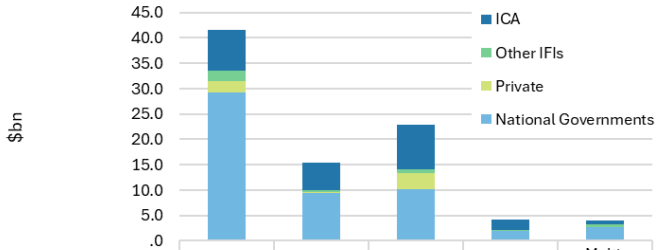
Sectoral Analysis

6

Chapter 6 analyzes the commitments to infrastructure financing by sector and compares them across regions, providing example projects for each sector

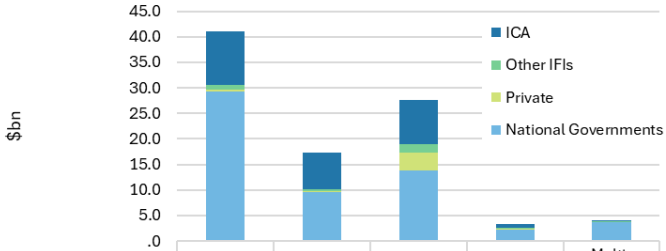
Figure 6-1: Sectoral Infrastructure Investments by Year and Source ($bn)

2021



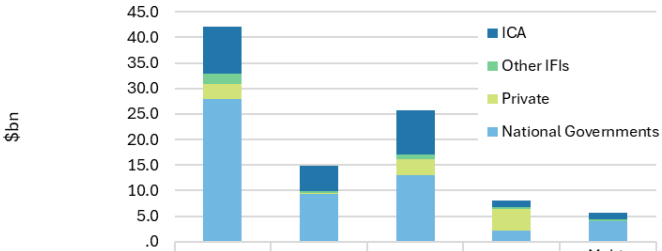
	Transport	Water	Energy	ICT	Multi-sector
ICA	7.9	5.5	8.7	2.1	.7
Other IFIs	2.2	.5	.8	.2	.5
Private	2.2	.1	3.1	.0	
National Governments	29.2	9.4	10.2	1.9	2.7

2022



	Transport	Water	Energy	ICT	Multi-sector
ICA	10.5	7.1	8.7	.9	.2
Other IFIs	.9	.3	1.6	.1	.1
Private	.4	.2	3.5	.2	
National Governments	29.2	9.6	13.9	2.1	3.8

2023

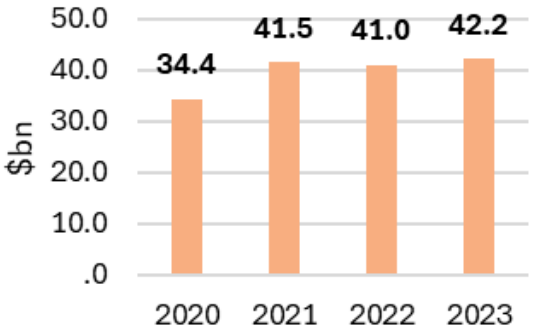


	Transport	Water	Energy	ICT	Multi-sector
ICA	9.2	5.1	8.7	1.3	1.4
Other IFIs	2.0	.3	.9	.4	.3
Private	3.0	.2	3.3	4.2	
National Governments	27.9	9.3	12.9	2.2	4.1

6.1 Transport

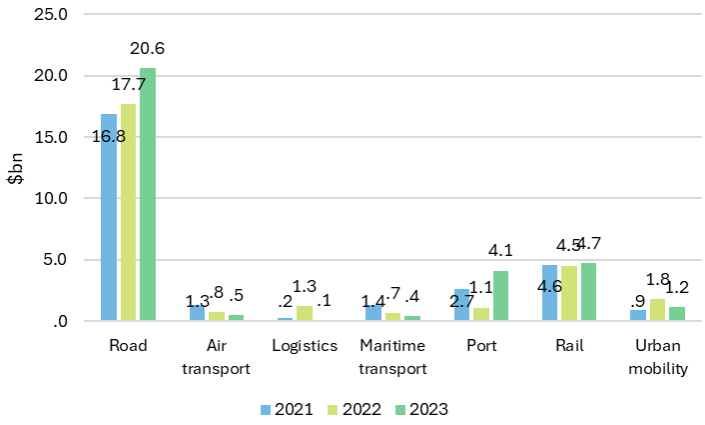
A well-functioning transport sector is vital for a thriving society and economy. It connects people, places, and opportunities. It drives economic growth by reducing trade costs and improving market access. Enhanced transport networks support regional integration, fostering ties between African nations and boosting intra-African trade, such as through AfCFTA. Better infrastructure also improves access to essential services like healthcare and education, particularly for isolated areas, and contributes to job creation and global competitiveness. Sustainable transport systems promote resilient, inclusive, and cooperative development across the continent.

Figure 6-2: Transport Sector Financing (2020-2023)



In 2021-2023 transportation represented the largest share of infrastructure financing, accounting for over 40% of total financing each year. This is the first year that the ICA report has attempted to break down sectors into subsectors. Where a specific sector was not available, the investment was put in a general category. Within the transportation sector, road construction and maintenance investments accounted for the largest portion (over 29%), followed by rail (7-8%) and ports (2-7%).

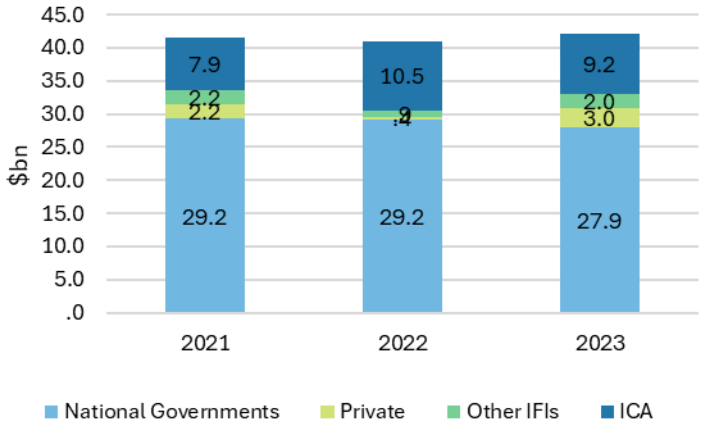
Figure 6-3: Transportation Subsector Financing (2021-2023)



6.1.1 Who is financing the transport sector?

National governments were the primary funders of transportation projects across the study period. There was an increase in ICA member financing from 2021 to 2022 followed by a decrease in 2023. Private sector financing captured by the PPI database represented only a very small portion of the total transportation financing in the study period.

Figure 6-4: Transportation Sector Financing by Source (2021-2023)



6.1.2 Major Projects

The table *below* highlights projects that received transportation financing. Only projects under construction, maintenance or expansion between 2021-2023 were included.

Country	Total Project Budget	Project Name	Highlights/ Description
Cote D'Ivoire	$831m	Abidjan Public Transport Project (PTUA)	• Transport improvement project for Abidjan. • Includes 100 km of new roads and construction of 4th Abidjan bridge, which opened in 2024. • Urban transport capacity building. • Majority financed by ADB loans (74%) and national budget.
Tanzania	$2.45b	Dar es Salaam – Isaka – Mwanza Standard Gauge Railway	• 1219 km railway carrying freight and passenger traffic with maximum speeds of 160 km/h. • Link to planned Isaka-Kigali Railway creating connection to Rwanda. • Undergoing construction on phase 3 of 5, as of 2022. • Financed by DFI and private loans coordinated by AfDB
Tanzania	$948m	Dar es Salaam – Chalinze – Morogoro Road Upgrade	• Upgrade of 197 km road to 6 lane expressway toll road to accommodate current traffic volumes. • Under construction since 2019. • Financing obtained through equity and DFI loans (20/80 split).
Kenya	$683m	Eldoret – Nadapal Road	• Provide interstate and regional connectivity by upgrading priority road section. • Detailed design for the road, part of a Build, Maintain, Operate contract. • Construction overseen by South Sudan and Kenya governments; multiple companies involved from both countries. • Financing provided by World Bank loans with additional phases subject to DFI resource availability.

Country	Total Project Budget	Project Name	Highlights/ Description
Tanzania	$628m	Dar es Salaam New Container Terminal	• Enhancing container handling capacity at Dar es Salaam Port. • Detailed design for a new container terminal with four berths and an annual cargo handling capacity of 1 million TEUs. • Undergoing transaction support and financial closing stage as of 2022. • To be financed by China Exim Bank and Government of Tanzania (85/15 split)
RoC, DRC	$459m	Brazzaville-Kinshasa Road/ Rail Bridge	• Construction of 1.5 km bridge featuring toll road and rail connection. • Construction expected to be completed in 2028. • Project development led by Africa50, with additional AfDB loans and additional funding from RoC and DRC governments.
Kenya	$455m	Mombasa – Voi Road	• Upgrade of 57 km road section, adding lane capacity. • Construction by local firms with expected completion by 2025. • World Bank and other IFIs providing loan financing.
Tanzania	$404m	Mpanda-Kasulu-Nyakanazi and Kasulu-Kigoma Roads	• Construction by local companies with overseen by TANROADS, expecting completion by 2025. • Financed through NEPAD-IPPF, and AfDB loans.
Uganda	$131m	Kampala-Mpigi Expressway	• Funding provided by Ugandan government and foreign loans from ADF, AfDB (20/80 split). • Construction by Chinese consortium. • Completion expected in 2027.

PIDA Project Database: PIDA Projects Dashboard - The Virtual PIDA Information Center
Tanzania Dar es Salaam-Isaka-Mwanza Railway: Third phase of Tanzania standard-gauge project inaugurated - International Railway Journal
Eldoret-Nadapal Road: South Sudan-Kenya road project advances despite objection – One Citizen Daily Newspaper
Eldoret-Nadapal Road: Juba Torit Kapoeta Nadapal Eldoret Road Project (DFS) | AUDA-NEPAD
Tanzania Dar es Salaam-Mogoro Highway: PIM Chal - DeS - v4.indd
Tanzania Dar es Salaam Port Expansion: Adani Ports signs 30-year concession to operate Container Terminal 2 at Dar es Salaam Port
Kinshasa-Brazzaville Road/Rail bridge: Congo_Project_factsheet_V8.pdf
Mombasa-Voi Road: KeNHA Explains Delays in Mombasa Road Construction - ODRi Media News - Breaking News, East Africa News, Sports News, Kenya News, World News
Mpanda-Nyakanazi Road: multinational_-_consulting_services_for_the_rehabilitation_of_the_selected_road_section_phase_ii_.pdf
Kasulu-Kigama Road: TANROADS :: News | PIC YARIDHISHWA KASI UJENZI WA BARABARA KIGOMA

6.2 Water and sanitation

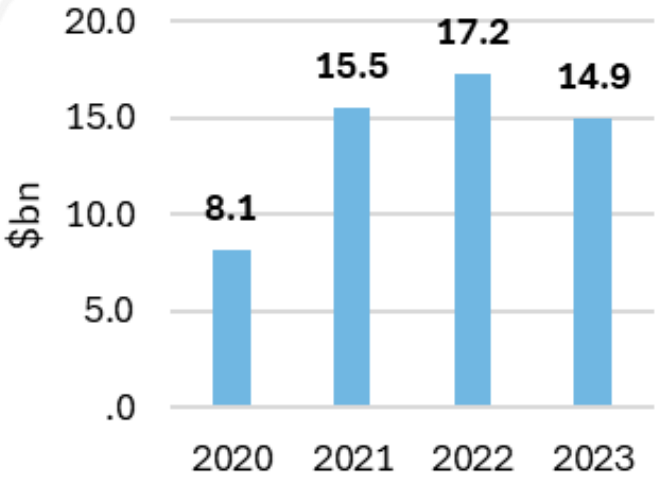
Water and sanitation infrastructure is critical to protect and promote public health and prevent disease. Improved public health reduces the labour lost to illness and the burden on healthcare systems. Clean, accessible water sources also reduce the gendered labour associated with water collection and can unlock human resources to contribute to economic growth.

Current estimates value the infrastructure finance gap at a minimum of $46.8bn annually, to achieve water security and sustainable sanitation in Africa by 2030. The achievement of SDG 6 requires "*achieving universal safely managed water and sanitation services for all by 2030*[23]." In 2022, the peak year for this study, only $17.2bn was invested in water and sanitation infrastructure.

6.2.1 Who is financing the water sector?

The major sources of finance or funding for the water sector are often referred to as *Transfers, Taxes, and Tariffs*. These include transfers from international or local donors, taxes from national or local governments, and tariffs, which constitute the rates charged for water services to local consumers.

Figure 6-5: Water Subsector Financing (2020-2023)



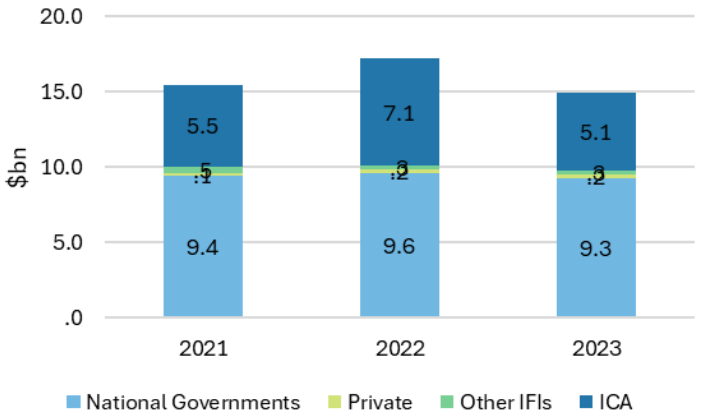
As indicated, transfers also include grant funding (including bilateral Overseas Development Assistance (ODA) and philanthropy) that have also been used to contribute towards the large upfront costs that are typical for water infrastructure.

Regarding the use of these sources, the OECD reports that *tariffs* are far from recovering the costs of water services. There is also significant scope for improving the mobilization and the use of *taxes* for water, including through pollution and resource taxes. It is argued that *Transfers* tend to be biased towards certain types of water sub-sectors or projects, and are concentrated on a limited set of countries, and often fail to reach the people that need them most. In addition, provided certain conditions are met, there is potential for making a more effective use of public-private partnerships (PPPs) for water.

23 International High-Level Panel on Water Investments for Africa. (2023). Africa Rising Investment Tide: How to Mobilise US$30 Billion Annually to Achieve Water Security and Sustainable Sanitation in Africa. [electronic resource]. Retrieved from: link

Between 2021-2023 national governments' financing of water and sanitation infrastructure remained largely stable over the study period between $9.3-9.6bn. ICA member financing peaked in 2022 at $7.1bn before falling to $5.1bn in 2023.

Figure 6-6: Water and Sanitation Sector Financing by Source 2021-2023



6.2.2 Major Projects

The table below highlights select projects that received financing in the water and sanitation sector. Only projects under construction, maintenance or expansion between 2021-2023 were included.

Country	Total project budget[24]	Project Name	Highlights/Description
Lesotho, South Africa	$2.8bn	Lesotho Highlands Water Project (LHWP) Phase II	• Water supply project seeking to provide 70 m3/s to South Africa and Lesotho • Serving water supply needs of Gauteng province in South Africa • Hydro generation planned to alleviate Lesotho's power deficit • Feasibility studies financed by World Bank, with construction funding from multiple sources, including AfDB and New Development Bank • Construction carried out by Italian consortium • Ongoing construction delayed with expected completion date pushed to 2030
Guinea	$590 m (2017 amount)	Fomi Multi-purpose Dam (Niger River Basin)	• Project aimed at regulation of the Niger River flow and construction of a 90 MW hydroelectric plant • Construction stalled after initial preparatory work at the site in 2019 • Chinese Yellow River Engineering Consulting Company contracted for construction in 2017 • Additional engineering studies commissioned in 2022

24 Amounts are based on 2023 exchange rates. So far as project documentation only indicated USD amounts from prior years, those have been used.

Country	Total project budget[24]	Project Name	Highlights/Description
Mauritania	$317 m	Kiffa Water Supply Project	• Project seeking to provide drinking water to population of 550,000 in Nouakchott province by collecting water from Senegal River • Funding for first phase provided by variety of Middle-Eastern DFIs and public investment funds • Construction of first phase ongoing with expected completion in 2024
Rwanda	$164.3 m	Karenge Water Supply Project	• Expansion of existing Karenge Water Treatment Plant to 36,000 m3 per day • Construction of water transmission and distribution systems • Financed via loans from OFID, AFDF, and Hungarian Exim Bank • Construction ongoing
Gabon	$183 m	Ntoum Water Treatment Plant	• Expanding treatment capacity in Libreville to 36,000 m3 featuring a 3.5 km long pipeline • Component of Libreville Integrated Water Supply and Sanitation Programme • Completed in 2022
Côte d'Ivoire	$181 m	Lagune Aghien Water Treatment Plant	• Construction of a 150,000 m3 surface water treatment plant • EPC contract awarded to American Fluence Corporation • Funding provided by DFIs and disbursed to contractors by government • Construction ongoing after 2024 addendum agreement

Kiffa Water Supply Project: Construction of Kiffa drinking water supply system in Mauritania to begin - Pumps Africa
Karenge Water Supply Project: $52 Million to be Utilized in Karenge Water Treatment Plant Upgrade in Rwanda
Karenge Water Supply Project: Rwanda signs with ADFD USD25 million loan agreement to enhance water security
PIDA Project Database: PIDA Projects Dashboard - The Virtual PIDA Information Center
Lesotho Highlands: Lesotho Highlands Water Project (LHWP) Phase II
Lesotho Highlands: Cost of delayed Lesotho Highlands Phase-2 balloons by R11bn – DA - POLITICS | Politicsweb
Noumbiel Dam: Relaunch of the Noumbiel hydroelectric and hydro-agricultural dam in Ghana
Lagune Aghien Water Treatment Plan: Fluence signs €165 million potable water contract in Ivory Coast | WaterWorld
Lagune Aghien Water Treatment Plan: Fluence Receives Notice to Proceedfor €48.4 million Ivory Coast Addendum

6.3 Energy

Africa's energy landscape is diverse, with considerable variation across its subregions. North Africa has relatively high energy access and infrastructure development compared to sub-Saharan Africa, where the energy access gap remains significant. According to the International Energy Agency (IEA, 2023), Africa accounts for around 3% of global energy demand, but this is expected to grow significantly by 2040 due to population and economic growth.

The continent holds a wealth of energy resources, both fossil-based (oil, gas, and coal) and renewable (solar, wind, hydro, and geothermal). Nigeria, Angola, and Algeria are some of Africa's largest producers of oil and gas, while countries like South Africa and Mozambique are known for coal and natural gas, respectively. However, renewable energy sources are rapidly gaining traction as African nations pursue energy diversification to enhance security, reduce reliance on fossil fuels, and meet climate goals.

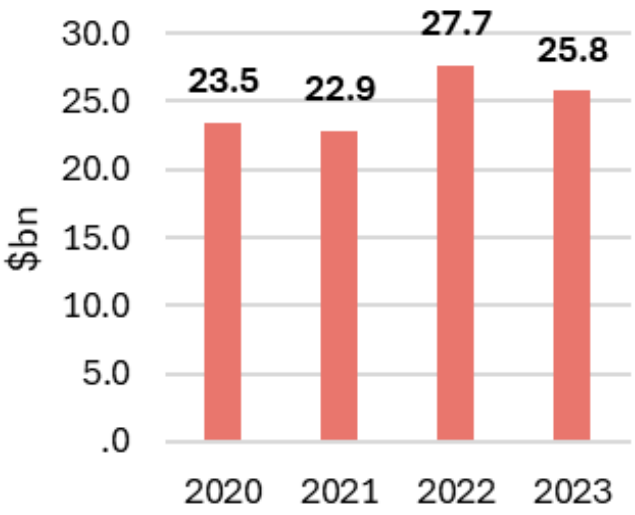
Energy consumption across the continent is tied closely to its population growth, economic expansion, and urbanization trends. Yet, despite these advancements, Africa continues to face significant challenges in providing reliable energy to all its citizens. As of 2023, Africa's electricity generation capacity reached 256 GW, accounting for only 4-5% of global capacity, even though the continent houses nearly 20% of the global population.

Moreover, renewable energy makes up just 23% of Africa's total capacity, with hydropower remaining dominant, while solar and wind energy have gained momentum in recent years (at an annual average growth rate of 44% and 21%, respectively).[25]

Universal access to energy is a primary goal of African governments, and international organizations. Initiatives like the New Deal on Energy for Africa led by the African Development Bank (AfDB) aimed to achieve universal access to energy by 2025[26]. The World Bank Group and African Development Bank Group are partnering on an ambitious effort to provide at least 300 million people in Africa with electricity access by 2030. The World Bank Group will work to connect 250 million people to electricity through distributed renewable energy systems or the distribution grid, while the African Development Bank Group will support an additional 50 million people.

After the transportation sector, the energy sector received the most infrastructure financing with $22.9bn invested in 2021, $27.7bn in 2022, and $25.8bn in 2023.

Figure 6-7: Energy Sector Financing (2020-2023)

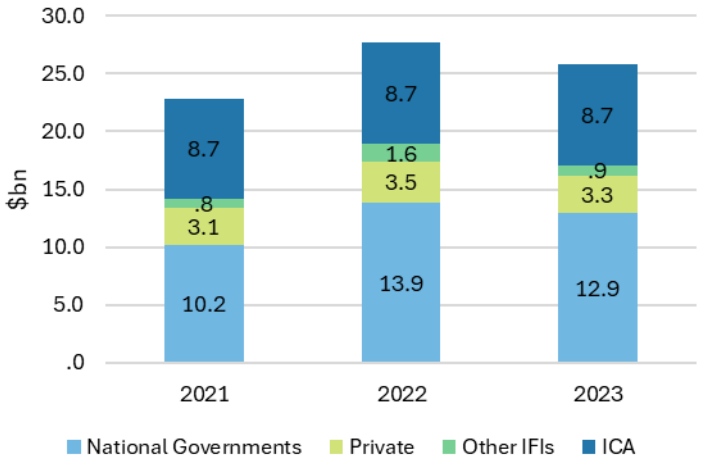


25 Source IRENA (2024), The energy transition in Africa: Opportunities for international collaboration with a focus on the G7, International Renewable Energy Agency, Abu Dhabi.
26 Source: https://www.afdb.org/fileadmin/uploads/afdb/Documents/Generic-Documents/Brochure_New_Deal_2-En.pdf

6.3.1 Who is financing the energy sector?

ICA members and governments were the two principal funders of the energy sector.

Figure 6-8: Energy Sector Financing by Source (2021-2023)



6.2.2 Major Projects

The table below highlights select projects that received financing in the energy sector. Only projects under construction, maintenance or expansion between 2021-2023 were included.

Country	Total project budget[27]	Project Name	Highlights/Description
Nigeria	$19bn	Dangote Refinery	• Project aimed at increasing Nigeria's refining capacity and reducing fuel imports • Process 650,000 barrels of crude oil per day, making it the largest single-train refinery in the world • Privately funded and operated by Dangote Group • Construction completed and operations initiated in December 2023
Tanzania	$4.5bn	National Grid Stabilization Project	• Transmission infrastructure upgrades, repairs in improvements to grid operating systems
Egypt	$3bn	Renewable energy for desalination plants	• 3.35 m3/day of desalination capacity planned by 2025 • Prequalification stage completed and 17 consortia selected • Investment led by Sovereign Fund of Egypt (TFSE) with structuring support from IFC and EBRD

27 Amounts are based on 2023 exchange rates. So far as project documentation only indicated USD amounts from prior years, those have been used.

Country	Total project budget[27]	Project Name	Highlights/Description
Tanzania	$2.9bn	Julius Nyarere Rufiji River Hydro Power Project	• 2,115 MW total capacity once completed • 5 of 9 turbines activated as of late 2024 • Project aim is to produce national power surplus and for Tanzania to become net electricity exporter
Tunisia	$1.08bn	NAWARA / South Tunisian Gas Project	• Natural gas extraction and pre-treatment and 370 km pipeline to treatment plant near the coast at Ghannouch • Maximum annual output volumes of 2.7 million m3 of natural gas and 7,000 bbl of condensate • Private development (JV between ETAP and OMV) with loan financing from EIB ($410 m) and AfDB ($75 m) • Extraction facilities operational, pipeline and treatment plant under construction
Egypt	$700 m	8 Waste to Energy plants	• Tender for design, construction, operation, and transfer of 8 plants • Signed contract for first plant in Giza Governorate with capacity of 1,200 tons per day and 30 MW annual electricity production
Egypt	$650 m	Obelisk PV Power Plant and BESS in Nagaa Hammadi	• Capacity of 1 GW including 200 MWh of battery storage • 25-year PPA for power supply to Egypt Aluminum's plant in Nagaa Hammadi singed in 2024 • Financing through $120 m bridge loan provided by EBRD • Expected full completion in 2026
Tunisia	$219 m	Solar IPPs	• Licenses for private construction and operation of four solar plants with a combined capacity of 500 MW • Output projected at 1,100 GWh per year, covering 5% of national demand for electricity • Awarded through utility-scale solar tender launched in 2023 • Expected operational by 2027

27 Amounts are based on 2023 exchange rates. So far as project documentation only indicated USD amounts from prior years, those have been used.

Country	Total project budget[27]	Project Name	Highlights/Description
Tanzania	$91 m	Rufiji-Chalinze-Kinyerezi-Dodoma 400kV Transmission Line	• Connection of the Rufiji River dam to urban centers of Dar es Salaam and Dodoma • Rufiji-Chalinze section 93% complete • EPC procurement underway with RfP in 2024
Tunisia	$61 m	Oum Lakhcheb Phosphate Mine	• Expected annual output of 2.4 tons • Project to be resumed pending government agreement with Chinese supplier • Financed and operated by state-owned Gafsa Phosphate Company (CPG)

Tunisia NAWARA: South Tunisian Gas Project (STGP) / Nawara Project - Offshore Technology
Tunisia NAWARA: Ministère de l'Energie, des Mines et des Energies renouvelables : Nawara
Tunisia NAWARA: Entreprise Tunisienne d'Activités Pétrolières
Tunisia Solar IPPs: Tunisia greenlights 500 MW of solar – pv magazine International
Tunisia Solar IPPs: Ministry of Energy, Mines and Renewable Energy: Annual Announcement
Egypt – PPP project matrix from FCCL Analysis (22277)
Egypt Desalination Plants : Egypt Prequalifies 17 Consortia for its Water Desalination Program
Egypt Masdar-Infinity Power Wind Farm : Masdar | 10GW wind farm in Egypt takes major step towards construction
Egypt Nagaa Hammadi Solar : Egypt set for giant solar-plus-battery storage project – pv magazine International
Egypt Nagaa Hammadi Solar : Egyptalum, Scatec sign 1 GW solar power station agreement - EgyptToday
Egypt Nagaa Hammadi Solar : Project Details PDF
Tanzania Rufiji Dam: The Mega $2 Billion Julius Nyerere Hydropower Project Nears Completion as its Fifth Turbine Goes Live
Tanzania Rufiji-Chalinze-Kinyerezi-Dodoma transmission line: TANZANIA ELECTRIC SUPPLY COMPANY LIMITED-260724.pdf
Tanzania National Grid Stabilization Project: en-1685521238-KIPEPERUSHI CHA BAJETI YA NISHATI 2023-2024.pdf
Tanzania National Grid Stabilization Project: TIC | THE POWER PROJECT PROVIDE AN OPPORTUNITY FOR AN INDUSTRIALISED ECONOMY
Nigeria Dangote Refinery: Nigeria: Why a new refinery is vital to the nation's economy
Nigeria Dangote Refinery: Dangote refinery receives 1m barrels of crude, to get second shipment in 3 weeks | TheCable
Ethiopia Renaissance dam: GERD: Two More Turbines Start Commercial Operations – Ethiopian Monitor
Ethiopia Renaissance dam: Financing the Grand Ethiopian Renaissance Dam | SpringerLink
Ethiopia Renaissance dam: Al-Arabiya Arabic| International decision not to finance Ethiopia's dam – Horn Affairs

6.4 ICT

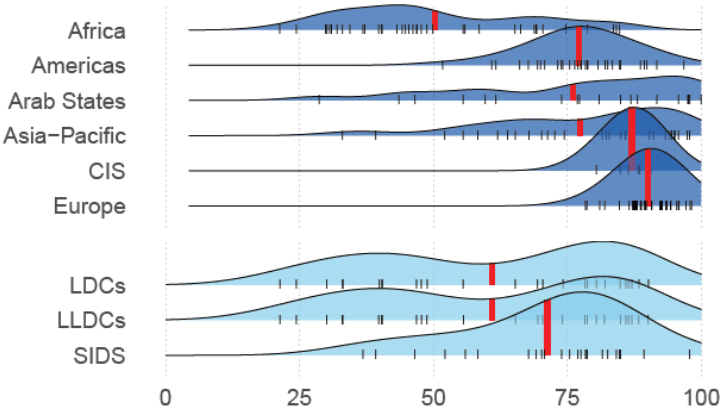
The ICT sector contributes to the economic development of the continent. Study shows that in Africa, a 10% increase in broadband penetration will lead to an increase of GDP up to 2.5% in the case of mobile broadband[28].

ICT continues to be a success story on the African continent for many subjects including mobile coverage, connection, usages, and private financing, however, significant disparities in digital infrastructure, internet usages, and digital literacy persist within the region. The ICT Development Index (IDI) 2024 shows that there are two distinct groups in the scores of African countries and presents a large gap between the region's best score (84,7 for Seychelles) and the worst (21,3 for Chad). The IDI average score is 50.3, improved by 7.8% from 2023 value.

ITU 2019 Economic contribution of broadband, digitization and ICT regulation: Econometric modelling for Africa.

According to ITU data, 79.2% of the African population is covered by at least 3G mobile network, and 51.1% of inhabitants have an active mobile broadband subscription. These indicators are below those of the other regions.

Figure 6-8: Energy Sector Financing by Source (2021-2023)



The mobile broadband Internet traffic per subscription increased by 26%, from 28.7GB (IDI 2023) to 36,3GB (IDI 2024), underlining the dynamism of the region. Similarly, the Telecommunications Infrastructure Index of the UN E-Government Survey 2024, which combines indicators of Internet users, mobile cellular subscribers, wireless broadband subscribers, and broadband affordability, also shows a 27.8% increase between 2022 and 2024 survey.

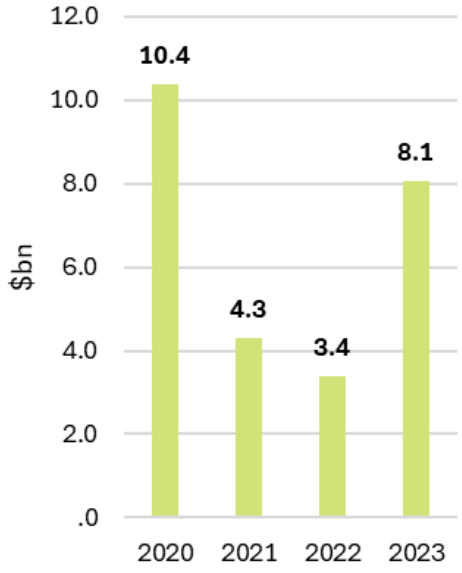
For nearly 30 years, all countries attributed mobile licenses to private operators with the aim to develop this sector and generate revenue with each technological progress (3G, 4G, Internet access…). Driven by the demand, private operators are more willing to develop their networks within the main towns, to connect these towns and participate in the international submarine cables development. However, rural connections are delayed due to their poor ROI.

Increasing the widespread availability of high-speed (broadband) internet remains one of the biggest objectives and investment opportunity for the continent to fully harness the full potential of digital transformation. The IMF estimates that nearly $90bn will be needed each year to achieve universal access to broadband connectivity in Africa by 2030[29], including CapEx, OpEx, regulation, ICT skills and content development. To meet finance this gap, key stakeholders including multi-lateral banks, development finance institutions, governments, and the private sector are called upon to work collaboratively to improve the enabling environment to foster investment.

28 ITU 2019 Economic contribution of broadband, digitization and ICT regulation: Econometric modelling for Africa.
29 IMF - Estimating digital infrastructure investment needs to achieve universal broadband – February 2023

In 2021, ICT infrastructure projects received $4.3bn in financing from all funding sources. The total dropped to $3.4bn in 2022 before increasing dramatically to $8.1bn in 2023. The total investment in ICT networks and infrastructure is likely higher because the investment from private companies in ICT is not publicly available.

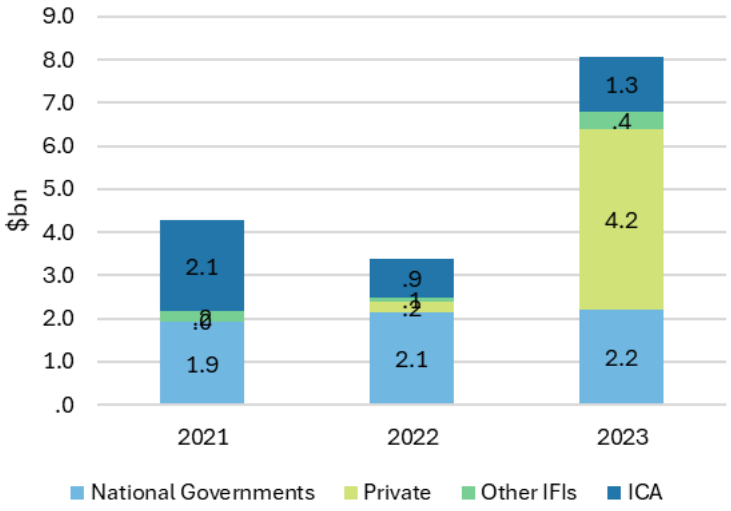
Figure 6-10: ICT Sector Financing (2020-2023)



6.4.1 Who is financing the ICT sector?

The private sector is a major investor in the ICT sector however these investments are not publicly available. Based on the information that is available, national government funding to the ICT sector was stable around $2bn in 2021-2023, moderately increasing to $2.2bn by 2023. There was a large increase in private funding in 2023 associated with the MEDUSA submarine cable projects and the SEACOM cable network expansion. These projects accounted for $3.2bn of the $4.2bn in private investments.

Figure 6-11: ICT Sector Financing by Source (2021-2023)



6.4.2 Major Projects

The table below highlights select projects that received financing in the ICT sector. Only projects under construction, maintenance or expansion between 2021-2023 were included.

Country	Total project budget[30]	Project Name	Highlights/Description
Cote d'Ivoire	$180 m	Northern Electricity and Digital Access (NEDA) Project	• Construction of 7,000 km network of fiber optic cables, of which 5,000 km have been completed as of 2021 • Full deployment planned for 2025 • Construction by Chinese firms CITC and Huawei • Funding by National Communications Fund and operations to be state owned

30 Amounts are based on 2023 exchange rates. So far as project documentation only indicated USD amounts from prior years, those have been used.

Country	Total project budget[30]	Project Name	Highlights/Description
Mali	$117 m	Bamako-Zaoutiere and Gap-Labezanga fiber optic cables	• Part of "Mali Numérique" partnership between Chinese CITCC and Government of Mali, which also involves construction of a Tier 3 data center video surveillance in Bamako • Expansion of fiber optic network, providing links to Algerian and Nigerien network • Funded in part by Exim Bank of Chian (circa 40%)
Liberia	$66 m	Freetown-Monrovia-Abidjan Fibre-optic Link (Liberia section)	• 350 km fibre optic backbone in Liberia expecting to provide internet access to 20% of population • Connections to networks in Cote d'Ivoire, Guinea, and Sierra Leone • Private sector Construction carried out by Csquared with USAID funding • Completed as of January 2024
Ghana, Kenya	$20 m	PAIX Data centres expansion	• Expansion of existing data centre to capacity of 1.2 MW • Equity investment by Africa50 fund
Kenya	$28 m	Poa Internet	• Capital injection for internet provider to expand operations in Kenya and other African markets • Equity investment from Africa50 and Novastar Ventures
Burkina Faso	$6.32 m	Burkina Faso-Benin Fibre-optic Link (Burkina Faso section)	• Construction of 160 km cable connecting Fada N'Grouma to Benin network at Porga • CAPEX wholly funded by World Bank loans • Second phase started construction in 2021 • Integrated into PIDA PAP 2020 and ECOWAS Regional Connectivity Integration Strategy

Burkina Faso-Benin Fibre link: Burkina Faso-Benin Fibre-optic Link (Burkina Faso section) | PIDA PAP
Liberia fibre-optic project: CSquared finalises 350km fibre backbone in Liberia
Cote d'Ivoire broadband: Ivory Coast fibre optic network to boost growth - minister | Reuters
Cote d'Ivoire broadband: Côte d'Ivoire plans to deploy 5,207 kilometers of fiber optic by the end of the year - We are Tech
Mali ICT: Mali Partners with Huawei to Speed Up Digital Transformation - Ecofin Agency
POA internet: Poa Internet annonce le premier closing d'un tour de financement de 28 millions usd mené par africa50 - Africa50
PAIX Data Centres: PAIX Data Centres Expands Capacity in Ghana



Regional Analysis

7

The regional breakdown for the 2021-2023 study follows the African Union categorization. This categorization has some small differences compared to previous versions of the IFT report. Most notably, South Africa has been included in the Southern Africa region rather than being treated as a separate category.

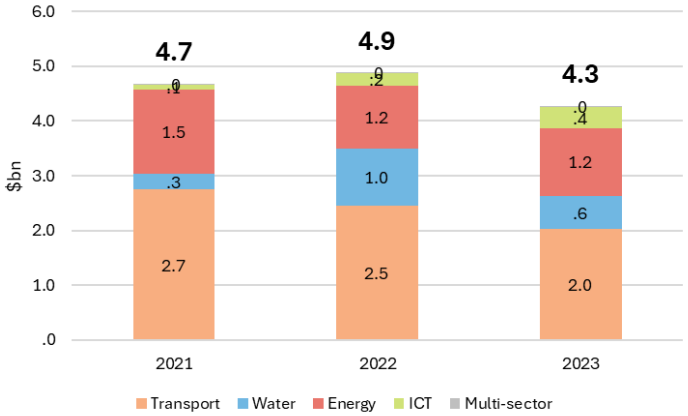
Each region includes information about the financing by sector and by source, and a list of regional projects (only projects where funds were committed to construction, maintenance, or expansion) have been included. There are a large number of regional projects that are at the planning or feasibility stages, but many have been at that stage for multiple years. There is a significant difference between the number of national projects (covered in Chapter 6) and the number of regional projects. There is often agreement on the importance of these projects, but less on moving to project implementation. To accelerate regional integration and the associated economic development, regional infrastructure projects must move from plans to action.

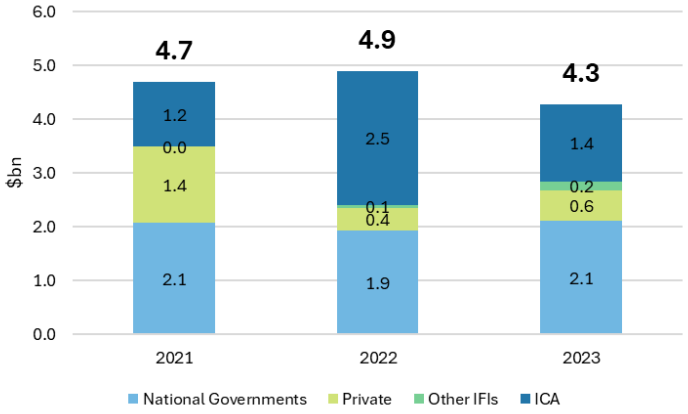
7.1
Central Africa

The Central region of Africa received the lowest portion of infrastructure financing across the entire study period (5-6%). This trend is consistent with previous reports. The financing for the region increased from $4.7bn in 2021 to its peak in 2022 at $4.9bn before falling to $4.3bn in 2023. National governments contributed the largest portion of infrastructure financing in 2021 and 2023 while ICA members contributed the most in 2022. The peak in private sector financing in 2021 is associated with an investment in the Port of Banana in the Democratic Republic of Congo, which was concessioned under a build, own, transfer PPP for $1bn.



Figure 7-1: Central Africa Infrastructure Financing





In addition to the sectoral projects highlighted in Section 6, The following regional projects attracted significant financing over the period.

Country	Total project budget	Project Name	Highlights/Description
CAR, Chad, RoC	$1.074 bn	Ouesso-Bangui-Ndjamena Corridor Road Project	• Upgrade and construction of new roads connecting Chad and CAR to Port of Ponte-Noire in ROC. • Construction underway on ROC side. • Component wise funding by World Bank through IDA grants.
Cameroon, Chad	$816 m	Douala-Bangui-N'Djamena Multimodal Transport Corridor	• Construction and rehabilitation of road and rail infrastructure providing connection to Port of Douala. • Construction on 330 km Belabo – Ngaoundere railway from 2022. • Financing provided by the World Bank, EIB, and other DFIs.

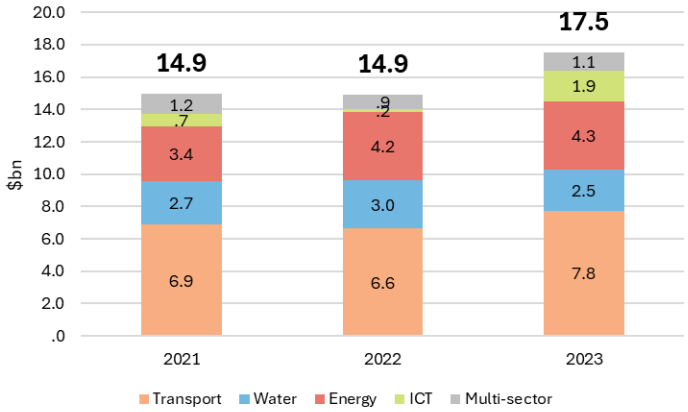
Douala-Bangui-N'Djamena Corridor: Douala-N'djamena corridor : A XAF471 bln project to improve road and rail transport
Douala-Bangui-N'Djamena Corridor: EIB and EU to finance rehabilitation of 330 km Belabo – Ngoundere railway line
Ouesso-Bangui-Ndjamena Corridor: AXE-1-ANGLAIS-1-1.pdf
Ouesso-Bangui-Ndjamena Corridor: Lancement des travaux de construction du pont sur la Sangha

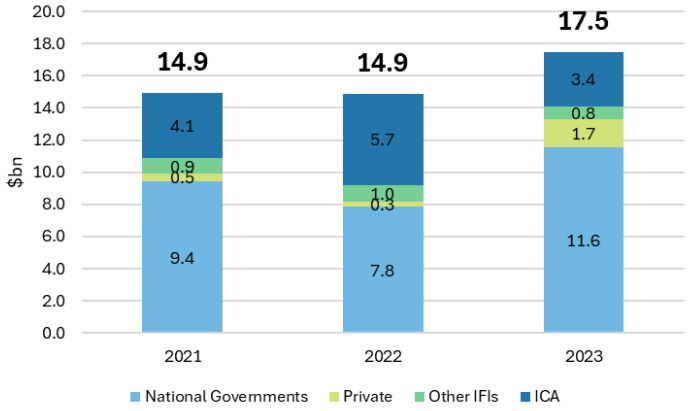
7.2
East Africa

East Africa received 18% of commitments in 2021 ($14.9bn), 17% of commitments in 2022 ($14.9bn) and 20% of commitments in 2023 ($17.5bn). The transportation sector accounted for the largest portion of investments across all three years, followed by energy which saw an increase in the volume and share of investment overall. Across the study period national government spending represented the largest portion dropping from $9.4bn to $7.8bn then increasing to $11.6bn. ICA member contributions to East African infrastructure peaked in 2022 at $5.7bn.



Figure 7-2: Eastern Africa Infrastructure Financing





In addition to the sectoral projects highlighted in Section 6, the following selection of regional projects are examples of projects which attracted significant financing over the period.

Country	Total project budget	Project Name	Highlights/Description
Kenya, Uganda, Rwanda	$26.98bn	Mombasa-Kigali Railway Project	• Multiple standard gauge railway lines connecting Mombasa, Nairobi, Kampala, and Kigali. • Ugandan and Rwandan sections in project structuring phase as of 2022, with Mombasa-Nairobi section finished.
Ethiopia	$5bn	Grand Ethiopian Renaissance dam	• Preparation of two 400 MW turbines to start second phase of operations. • Final capacity of 6,000 MW, making in the 8th largest dam worldwide. • Financed via domestic loans and bonds purchased by Ethiopian citizens after international investor withdrawal in 2014.
Burundi, Rwanda, Tanzania	$470m	Rusumo Falls Hydro Power Project	• Hydro power project with potential capacity 80MW and 220kV transmission lines providing domestic connection to Kigali and Burundi and Tanzania internationally. • Construction completed in 2024. • Financing for the transmission lines provided by AfDB, with World Bank, KfW, Government of the Netherlands providing.

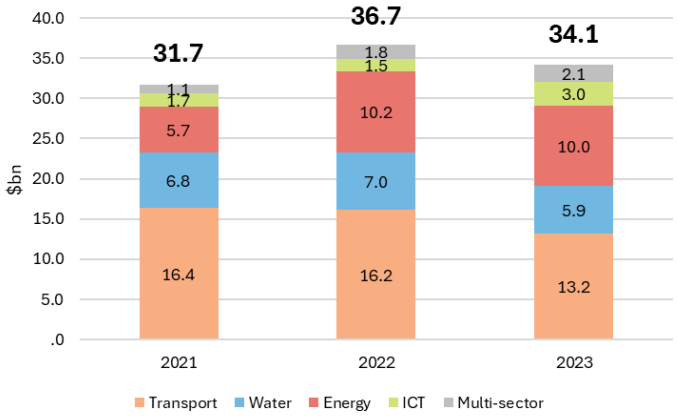
Ethiopia GERD dam: Douala-N'djamena corridor: Financing the Grand Ethiopian Renaissance Dam | SpringerLink
Mombasa – Kigali Railway: PIDA Projects Dashboard - The Virtual PIDA Information Center
Rusumo Falls: Rusumo Falls HPP: Factsheet_-_ENGLISH.pdf

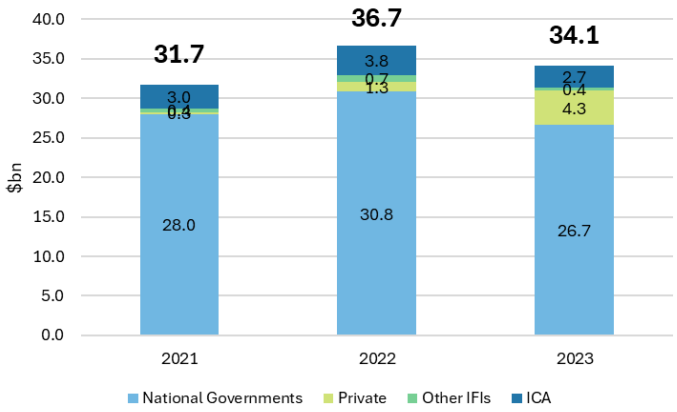
7.3
North Africa

North Africa represented the largest portion of infrastructure financing across the study period, with between $31bn and $37bn spent across sectors. Egypt is the largest contributor to infrastructure financing in the region, accounting for between 60-70% of total financing. Egypt reduced its infrastructure financing dramatically in 2023, which is reflected in the overall trend. All other countries in the region increased infrastructure financing year over year. As has been noted in Section 3, Egypt does not publish national budgets, so this information is based on public speeches and other public documentation.

Private investment in North Africa increased year over year from $0.3bn in 2021 to $1.3bn in 2022 to $4.3bn in 2023. North Africa received the second smallest amount of total ICA member financing over the study period.

Figure 7-3: Northern African Infrastructure Financing







In addition to the sectoral projects highlighted in Section 6, the following regional projects attracted significant financing over the period.

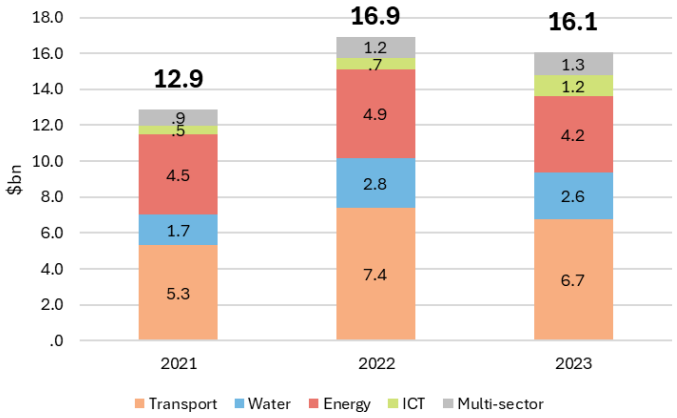
Country	Total project budget	Project Name	Highlights/Description
Chad, Egypt, Libya, Sudan	$5m	Nubian Sandstone Aquifer System	• Largest fossil water aquifer globally, providing fresh water to four countries. • Project scope includes development of monitoring systems, legal and regulatory frameworks for fair resource sharing among countries, and capacity building. • To be followed by strategic action program to implement relevant reforms in relevant countries. • Undergoing tendering as of 2022.

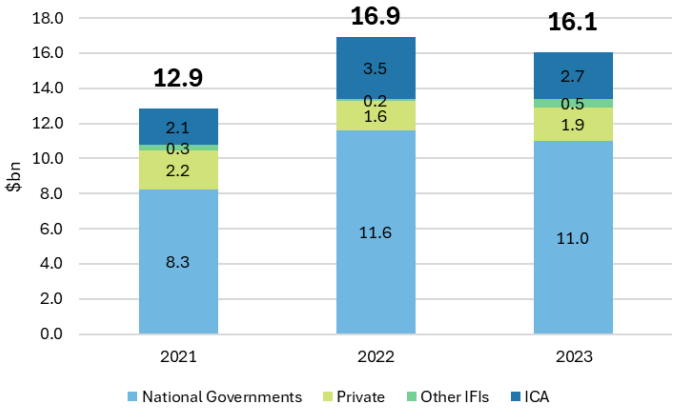
7.4
Southern Africa

Southern Africa's portion of infrastructure financing increased from 16% in 2021 ($12.9bn) to 20% in 2022 ($16.9bn) then fell to 18% in 2023 ($16.1bn). South Africa's national budget contributions represented between 38-42% of overall financing in the region. ICA member financing increased from 2021 to 2022, $2.1bn to $3.5bn, before dropping in 2023 to $2.7bn. Private financing had an inverse trend, dropping between 2021 to 2022 before increasing slightly in 2023 ($2.2bn, $1.6bn, $1.9bn).



Figure 7-4: Southern Africa Infrastructure Financing





In addition to the sectoral projects highlighted in Section 6, the following regional projects attracted significant financing over the period. The Lobito corridor project is a significant project which attracted a lot of attention over the study period however it remained at the feasibility stage. Agreement for the construction of the Zambia-Lobito Railway reached in 2023 with further development planned.

Country	Total project budget	Project Name	Highlights/Description
Botswana, Namibia, Zambia, Zimbabwe	$240m	ZiZaBoNa Interconnector Project	• Transmission project aimed at enhancing connectivity in Southern African Power Pool. • Features 422 km of transmission lines connecting the four countries. • At project structuring phase with • Part of NEPAD facility with concessional funding from AfDB, EIB, AFD, and EU.
Botswana, Malawi, South Africa, Zambia, Zimbabwe	$2.120bn	North-South Multimodal Transport Corridor	• Program for the construction and upgrade of roads and border crossings connecting Lusaka, Harare, Johannesburg, and Durban. • Allows for export of Zambian mined goods via Port of Durban. • Most components are still under construction, with road openings expected in 2026. • Financing provided by COMESA-led SPV as well as PPPs for individual components.

ZiZaBoNa Interconnector Project: Zimbabwe Zambia Botswana Namibia (ZIZABONA) Interconnector Project - The Virtual PIDA Information Center
Lobito Corridor: Signing of the Memorandum of Understanding on the Development of the Lobito Corridor and the Zambia-Lobito Rail Line
North-South-Multimodal Transport Corridor: Outcomes, Conclusions and Way Forward North South Corridor Pilot Aid for Trade Conference

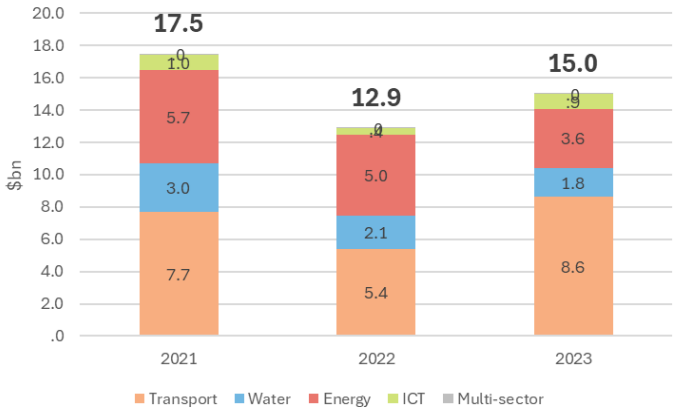
7.5
West Africa

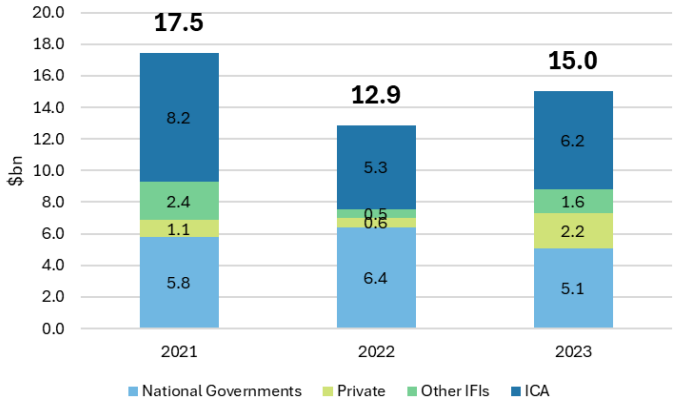
Inverse from many other regions which saw a peak in infrastructure financing in 2022, in West Africa the total financing decreased from $17.5bn in 2021 to $12.9bn in 2022 before increasing to $15bn in 2023. ICA member financing was the largest source of funds in 2021 and 2023, with national governments commitments making up the largest share in 2022. Of all regions, West Africa received the highest portion of ICA member financing. Chinese investment in West Africa peaked in 2017 at $11.5bn after which time it decreased to $1.2bn by 2021; in 2022 it hit the lowest value of $54m, recovering to $1.1bn in 2023.

Energy made up a more significant portion of infrastructure financing in West Africa than it did in other regions, reaching over 30% of total financing in 2021 and 2022 and 24% in 2023.



Figure 7-5: Western Africa Infrastructure Financing





In addition to the sectoral projects highlighted in Section 6, the following regional projects attracted significant financing over the period.

Country	Total project budget	Project Name	Highlights/Description
Côte d'Ivoire, Ghana, Togo, Nigeria	$3b	Abidjan-Lagos Highway	• Behind schedule but under construction as of 2022.
Côte d'Ivoire, Guinea, Liberia, Sierra Leone	$560m	Côte d'Ivoire – Liberia – Sierra Leone – Guinea Interconnection Project	• Construction of 1,303 km 225kV transmission line and substations. • Part of WAPP regional integration project. • Construction ongoing as of 2023. • Funding provided by AfDB, EIB, KfW, WB and national governments.
Côte d'Ivoire, Ghana	$196m	Côte d'Ivoire – Ghana Interconnection Reinforcement	• Construction of 296 km 330 kV double circuit high voltage transmission line and substations • Part of WAPP regional integration project • First phase of construction is ongoing with expected completion in 2024 • Funded by EU-Africa Infrastructure Trust Fund through EIB and KfW.

Côte d'Ivoire, Guinea, Liberia, Sierra Leone interconnection project: 225 kV Côte dIvoire - Liberia - S.Leone - Guinea Interconnection Project | Pipes
Côte d'Ivoire, Guinea, Liberia, Sierra Leone interconnection project: ENG_CLSG-PROJECT-PROGRESS-REPORT-FOR-Q3-2023_-Nov13_2023-1.pd
Côte d'Ivoire – Ghana Interconnection Reinforcement: 330 kV Côte d'Ivoire - Ghana Interconnection Reinforcement Project | Pipes

7.6
Multi-Regional and continental projects

In addition to the sectoral projects highlighted in Section 6, the following regional projects attracted significant financing over the period.

Country	Total project budget	Highlights/Description
African Integrated High-Speed Rail Network	12 000 km new construction – $36.2bn 17200 km of rail rehabilitation and modernization – $6.8bn	• The AIHSRN aims to connect African cities, megacities, commercial and industrial hubs, economic zones, and tourist destinations across the continent by developing a comprehensive high-speed rail network. • The AIHSRN is being developed in a phased approach, with the first phase spanning from 2013 to 2023 which included the development of a masterplan and two pilot projects. • In the study period several key rail lines have been expanded including the Tanzania and Kenya SGR lines.
The Grand Inga Dam Project	$18bn	• The Grand Inga Dam is a proposed project in DRC that will have a total installed capacity of over 42,000 MW, significantly contributing to the energy needs for the continent. • The site construction has not yet begun.

Programme for Infrastructure Development in Africa (PIDA): First 10-Year Implementation Report, 2023
TOWARDS THE AFRICAN INTEGRATED HIGH SPEED RAILWAY NETWORK (AIHSRN) DEVELOPMENT, African Union

Côte d'Ivoire, Guinea, Liberia, Sierra Leone interconnection project: 225 kV Côte dIvoire - Liberia - S.Leone - Guinea Interconnection Project | Pipes
Côte d'Ivoire, Guinea, Liberia, Sierra Leone interconnection project: ENG_CLSG-PROJECT-PROGRESS-REPORT-FOR-Q3-2023_-Nov13_2023-1.pdf
Côte d'Ivoire – Ghana Interconnection Reinforcement: 330 kV Côte d'Ivoire - Ghana Interconnection Reinforcement Project | Pipes



Strategic Trends

8

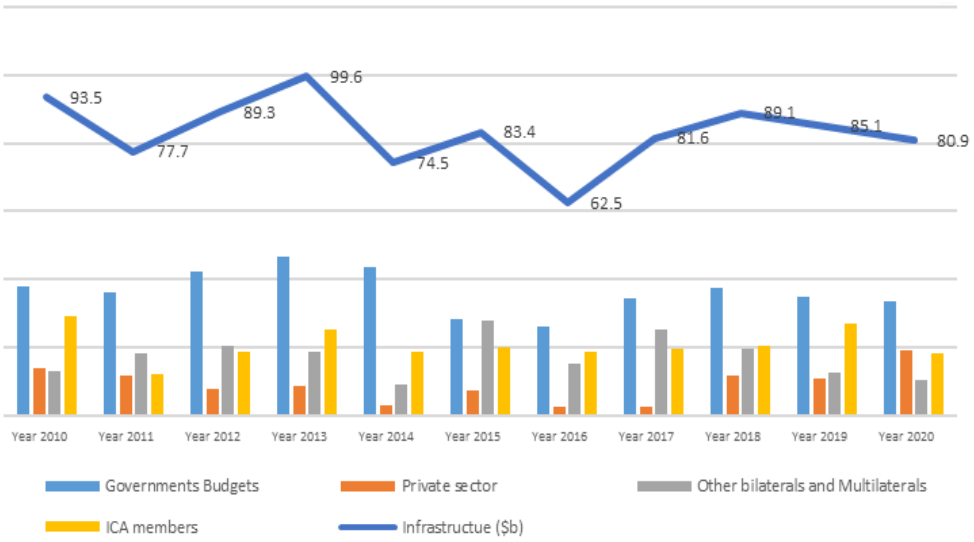
8.1 Challenges to Governments Contribution

8.1.1 Debt sustainability

Debt is an important source of financing for infrastructure development, but it needs to be sustainable. African debt has been growing significantly over the past decade, posing a risk for publicly financed infrastructure.

In the early 2010s, with the international financial institutions' (IFIs) support, a low interest environment (US FED rates) and rising commodity (crude oil and critical minerals) price levels, African governments were encouraged to use significant levels of external long-term debts for infrastructure investment. The graph below shows the share of debt in infrastructure financing and the associated investment in infrastructure.

Figure 8-1: Overall components of IFT 2010-2020

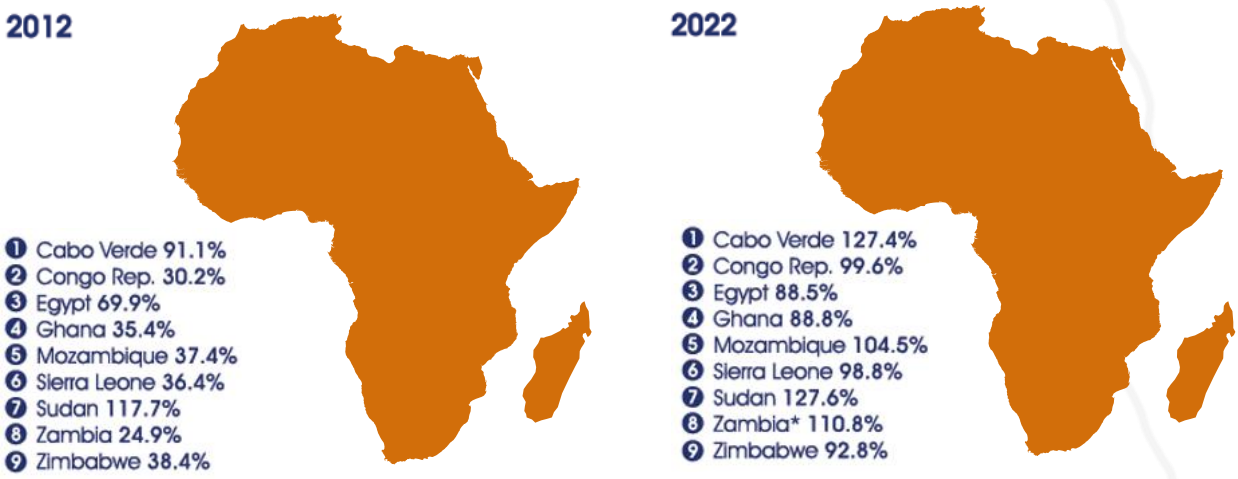


Source: ICA annual and IFT reports 2010-2020

On one hand, this has led to the African government-driven overall infrastructure financing across power, transport, information and communication technology (ICT) and water and sanitation (WSS) sector. The peak of US$ 99.6 bn infrastructure financing was reached in 2013.

On the other hand, given that the African sovereign and publicly guaranteed private debt-driven IFTs are highly correlated with real GDP growth and commodity price fluctuations, when the real GDP fell together with a significant reduction of commodity prices, many African countries were found beyond the threshold of debt sustainability.

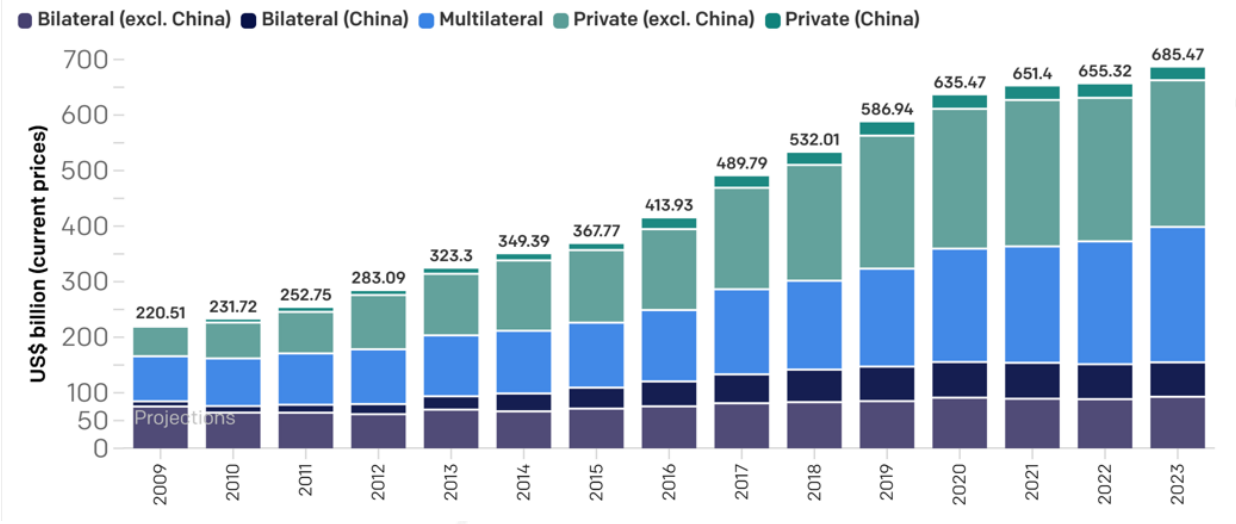
Figure 8-2: General government gross debt (% of GDP)



Source: State of Africa's Infrastructure Report 2024.
Africa Finance Corporation. 2024.

This debt comes from various sources, and its distribution between the different types of creditors is balanced.

Figure 8-3: External public debt, share by type of creditor in African ($bn, current prices)



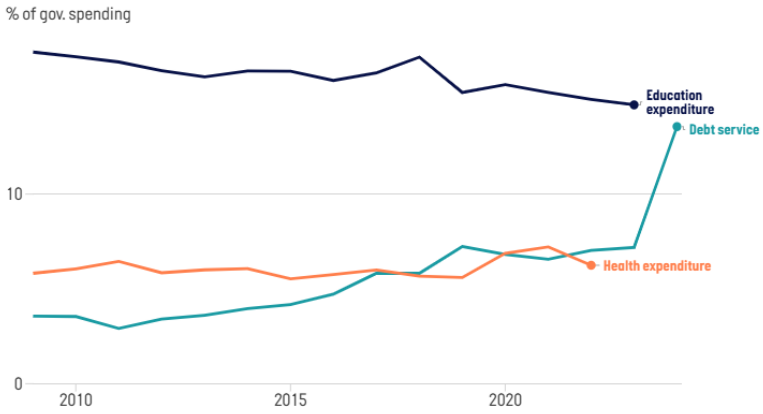
Source: International Debt Statistics (IDS) database. 2024.

Servicing this debt now accounts for a significant proportion of public spending. Even before the pandemic, more than 30 African countries spent more on debt service than on healthcare.

The chart below shows yearly external debt service[31] owed to bilateral, multilateral, and private creditors as a percentage of total government expenditure[32].

A significant share of African governments are now grappling with challenges stemming from over-leveraged balance sheets and soaring debt repayment obligations. A vicious circle is created as this in turn raises the risks of debt distress, making it harder and harder to finance much-needed infrastructure spending.

Figure 8-4: Debt service as a share of government spending (African median)

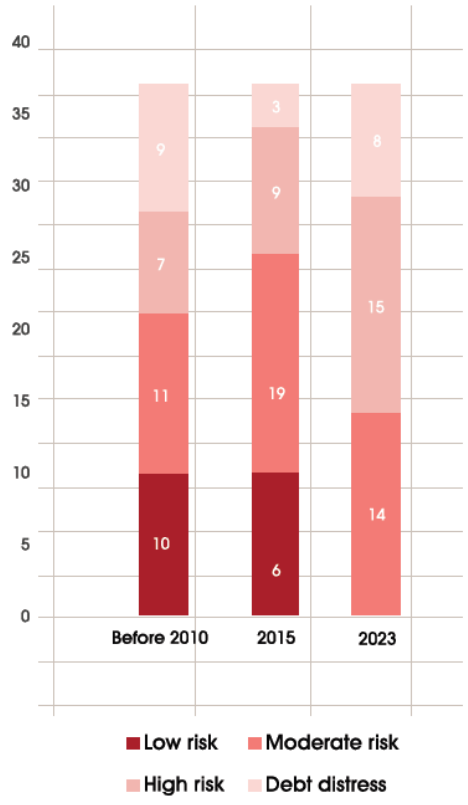


Source: Once Data from International Debt Statistics (IDS), UNESCO Institute for Statistics, WHO GHED, IMF WEO.

According to the World Bank's Debt Sustainability Analysis, there were eight African countries in 'debt distress', or unable to fulfil their repayment requirements in 2023. A further 15 African countries were already at high risk of debt distress, and another 14 at moderate risk.

31 Debt service is interest plus principal payments on public and publicly guaranteed (PPG) debt.
32 Government expenditure refers to general government expense, net of acquisition of non financial assets. Data for recent years are IMF estimates from the World Economic Outlook.

Figure 8-5: African countries classified as per risks of debt distress



Source: Debt Sustainability Analysis. World Bank.

8.1.2 Domestic resource mobilization

While debt represents a lever for financing infrastructure, its current level limits the ability of states to continue to make full use of it. It is therefore necessary to be more effective in mobilizing other potential sources of funds to bolster public budgets.

According to the United Nations Office of the Special Adviser on Africa (OSAA), the continent is marked by two contrasting realities: "the continent faces a significant financing gap while being a 'net lender' to the rest of the world as illicit financial flows out of the continent surpass what it receives in the form of foreign direct investments (FDI) and official development assistance (ODA)". According to the same source, $858 bn was lost through illicit financial flows from 2010 to 2018 in Africa.

The focus of the international narrative on external sources of funding may have limited the pursuit of endogenous and home-grown solutions to the infrastructure financing on the continent. Several instruments are not fully leveraged or optimized.

Africa's Financial Paradox

Source: Office of the Special Adviser on Africa. OSAA Report. 2022.

Rich in financial resources

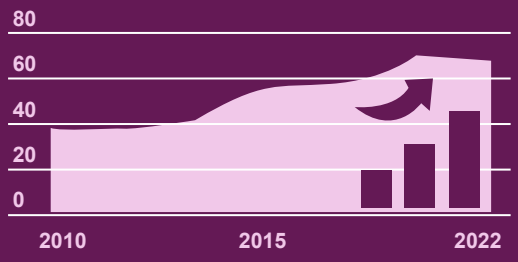
$100B	$427B	$24B	$1.3T	$483B
Remittances	Private savings	Sovereign wealth funds	Pension funds	Public revenue

But

- Illicit financial flows
- Missing policy action
- Redundant tax incentives
- Public expenditure inefficiencies
- Weak institutions

$500-$600 Billion
not mobilized

Debt stress



Mobilizing Pension Funds

Africa has important sources of funding that have not yet been fully tapped for financing development. These include pension funds, assurance funds, and Sovereign wealth funds, whose assets are to a large extent invested abroad. For instance, Botswana and Namibia, two countries with substantial pension funds, have more than half of their pension fund assets invested abroad[33].

African pension funds' participation in financing infrastructure development is minimal compared to other regions. Comparative data on pension fund investments in infrastructure in Africa versus other regions—particularly OECD countries—highlights a significant disparity in both the volume and proportion of assets allocated to infrastructure. The table below compares the average allocation to infrastructure from pension funds in different geographies.

Region/Country Group	Share of Large pension funds and Public Pension Reserves Average Allocation to Infrastructure (%)	Notes
OECD (Average)	3–10% (direct and indirect)	Includes both direct investments and infrastructure funds/vehicles.
Canada	~15%	Notable for its sophisticated pension model (e.g., CPPIB, OTPP) and strong internal capacity.
Australia	~8–10%	High allocations through superannuation funds and listed infrastructure.
Africa (average)	<1% (often 0.1%–0.5%)	Very limited exposure due to regulatory constraints, market underdevelopment, and risk aversion.
○ **South Africa (GEPF)**	~1–2%	One of the most active in infrastructure on the continent.
○ **Kenya, Nigeria, Ghana**	~0.1–0.3%	Only recently enabling infrastructure investment via regulatory reform.

Source: OECD (2022), Annual Survey of Large Pension Funds and Public Pension Reserve Funds and World Bank (2021), Mobilizing Institutional Investment for Infrastructure in Africa

33 https://brightafrica.riscura.com/pension-industry/

Still, pension funds' appetite for investment in infrastructure development is increasing in Africa and worldwide, provided the necessary conditions and mechanisms exist.

As shown above and below, pension funds in South Africa, Kenya, and Namibia are keenly interested in infrastructure financing as a key asset class and have started investing in projects in the energy, real estate, and transportation sectors. The Nigerian Pension Fund has also introduced regulations encouraging investment in green bonds for infrastructure (Table 1). The table below offers a snapshot of the progress made by several pension funds on the continent.

Figure 8-6: Selected African Pension Funds Investment in Infrastructure

Country	Pension Fund	Progress	Expected Impact	Challenges
South Africa	Government Employees Pension Fund (GEPF)	Investing in infrastructure projects, including renewable energy, housing, and transportation. Contributing to affordable housing and healthcare infrastructure.	Facilitating the development of renewable energy projects.	Regulatory frameworks and governance issues. Ensuring project viability and managing risks.
Nigeria	Pension Commission (PenCom)	Introducing regulations to encourage pension funds to invest in infrastructure bonds and funds. Collaborating with government agencies to identify viable infrastructure projects for pension investments.	Mobilizing long-term capital for infrastructure development.	Identifying viable infrastructure projects. Ensuring transparency and accountability in investment processes.
Kenya	National Social Security Fund (NSSF)	Partnering with the government and private sector entities to finance infrastructure projects, including affordable housing and transportation. Investing in the Nairobi-Nakuru-Mau Summit Highway project to enhance transportation connectivity.	Contributing to the development of affordable housing and improved transportation connectivity.	Assessing project feasibility and ensuring long-term sustainability. Managing construction delays and cost overruns.

Country	Pension Fund	Progress	Expected Impact	Challenges
Rwanda	Rwandan Social Security Board (RSSB)	Financing infrastructure projects such as the Kigali Convention Centre and affordable housing projects. Partnering with institutional investors to establish the Rwanda Investment Group for infrastructure investment.	Positioning Rwanda as a hub for conferences and events in East Africa.	Mitigating risks are associated with project financing and implementation. Ensuring proper project monitoring and evaluation.
Ghana	Social Security and National Insurance Trust (SSNIT)	Allocating funds for infrastructure investments, including projects like the Accra-Tema Motorway Expansion Project and the Kwame Nkrumah Interchange.	Improving transportation connectivity and reducing traffic congestion.	Balancing short-term liquidity needs with long-term infrastructure investment goals. Assessing and managing project risks.

Source: Synthesized compilation from UNDP – "Africa Investment Insights Report" (2022) and IFC – "Gauging the Appetite of African Institutional Investors for New Asset Classes" (2022)

Reforming the pension fund sector is therefore needed to maximize its impact on the continent's development. Building an African institutional investor base that can manage longer-term savings and finance sustainable economic growth effectively will enable pension funds to be a driving force for infrastructure financing, as it can be seen in OECD countries.

To do this, pension funds should diversify their assets across various categories, including equities, bonds, and other products, reducing investment risk while increasing the rate of return. Furthermore, pooling resources at national or sub-regional levels can help reduce management risk and benefit from economies of scale, as seen in Kenya's Pension Fund Investment Consortium.

By adopting similar initiatives, other African pension funds can improve their participation in infrastructure investments and significantly impact the continent's development. With these reforms and a focus on investing in infrastructure development and alternative assets, African countries can leverage their pension funds to achieve their development goals.

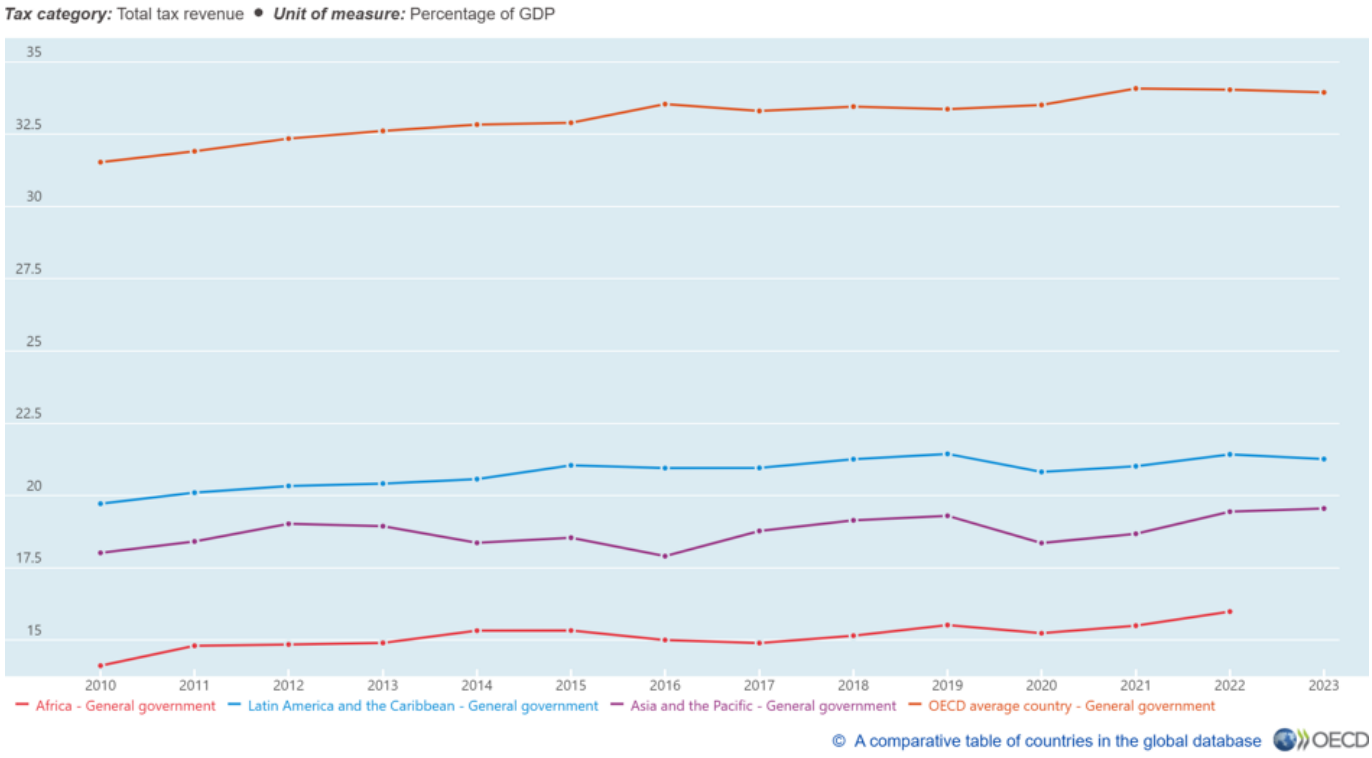
Building on the AUDA-NEPAD '5% Agenda', the objective is to mobilize African institutional investors — particularly pension funds, sovereign wealth funds, and insurance companies — to allocate at least 5% of their total assets toward financing African infrastructure projects. This initiative recognizes the vast untapped capital within the continent's own financial institutions and seeks to channel it into critical sectors such as energy, transport, water, and digital connectivity. By doing so, it aims to strengthen African ownership of development, and create sustainable, long-term returns for investors while addressing the continent's pressing infrastructure gap.

Enhancing Revenue Mobilization

Building robust country systems, such as those related to public financial management and revenue mobilization, is crucial since it leads to better service delivery and resource allocation. Strong institutions and collection systems can also attract investment into priority sectors and promote inclusive and sustained economic growth.

The positive impact of effective domestic resource mobilization on revenue collection and expenditures includes $46bn in potential taxes that are not collected due to redundant tax incentives, $70bn in inefficient expenditures and an increase in revenues of up to 2.5 per cent of the continent's GDP.[34]

Figure 8-7: Africa's domestic resources mobilization compared to the rest of the world



Source: OECD. Nominal GDP in US$.

34 Office of the Special Adviser on Africa. OSAA Report. 2022.

The Automated System for Customs Data (ASYCUDA) program is an example of a digitization initiative aimed at improving customs administration and trade facilitation. The program, developed by the United Nations Conference on Trade and Development (UNCTAD), is currently used in over 80 countries worldwide, including 47 African countries.

Automating processes and reducing reliance on manual procedures improves the efficiency and accuracy of customs procedures, reducing not only the time and cost of clearing goods at the border but also contributing strongly toward increasing taxes collection.

Addressing these challenges requires a significant investment in building the capacity of public institutions to promote transparency, accountability, and the rule of law. This involves strengthening the governance structures and national institutions to ensure efficient and effective management in revenue collection. Interventions can range from capacity building to improving transparency and accountability, such as implementing reporting requirements and regular audits of revenue collections.

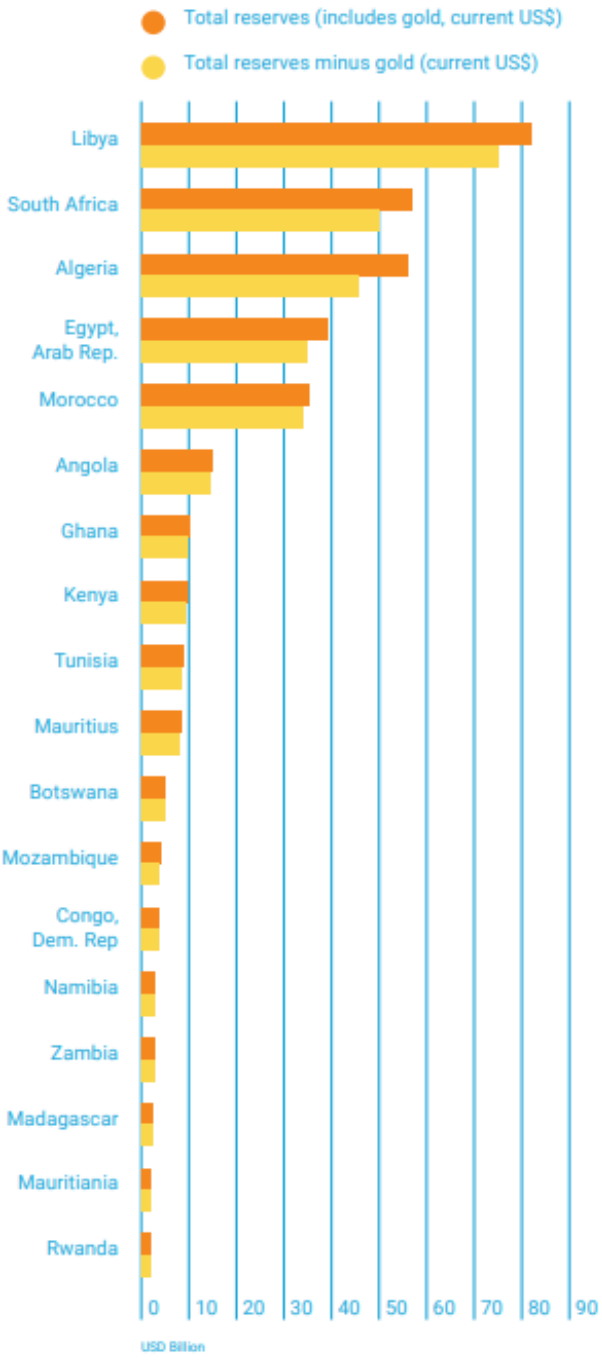
The use of technology and digital solutions can help improve the efficiency and effectiveness of revenue collection. For instance, by introducing the e-taxation system in South Africa, the time and cost of VAT compliance were reduced by 21.8 per cent and 22 per cent, respectively. In addition, digitizing tax filing and payment systems could result in significant benefits to countries similar to those recorded by Rwanda, which saw its tax revenue boosted by 6 per cent[35].

Foreign Reserves surplus as a pro-growth tool

Foreign reserves are important for maintaining economic and monetary stability, especially the exchange rate, servicing external debt, managing liquidity and financing imports during times of economic stress. In 2021, the total foreign reserves of African countries, excluding gold, were more than $320bn.

35 UNECA.2019

Figure 8-8: Foreign reserves of African countries. 2021. ($ bn)



Source: IMF, International Financial Statistic and data files.

While foreign reserves are pivotal in ensuring economic stability and improving the terms of trade of African countries, they come at a cost. These costs are known as “development trade-offs”. The opportunity cost of hoarding massive foreign reserves is substantial, as these resources, typically invested in low-risk, low-return assets, could instead be directed towards addressing countries’ development priorities.

Some countries, such as Nigeria or Angola, have historically built large reserves during oil booms but underinvested in infrastructure, leading to fragility during downturns. The IMF recognizes that while reserves are essential, reserves above "adequate levels" (measured in months of imports or % of short-term debt) yield diminishing returns and increase trade-offs with development needs[36].

Therefore, a balance between prudent reserve management and judicious allocation of a portion of excess from reserves towards critical areas of development could create additional infrastructure financing.

36 Optimal Reserves in Financially Closed Economies" (Working Paper No. 16/92). IMF. 2016

8.2 IFIs

As shown in previous chapters, particularly 4 and 5, the share of infrastructure financing provided by International Financing Institutions like multilateral banks or bilateral agencies remains significant. Such financing makes it possible to mobilize funds on favorable terms. However, as seen in chapter 8.1, this type of financing exposes recipient countries to a higher debt-to-GDP ratio.

Traditionally reliant on concessional financing from multilateral and bilateral development partners, recent trends indicate the countries of the Continent are now contending with less favorable terms and a dwindling pool of aid resources. This shift has significant implications for infrastructure financing and the overall development trajectory of the continent.

8.2.1 Deteriorating Terms of Concessional Financing

Concessional financing is defined as lending provided on terms substantially more generous than market loans. It typically includes low or zero interest rates, long repayment periods, and significant grace periods. However, recent evidence suggests that the "concessionality" of these loans is diminishing:

First, trends indicate a sequence of shorter grace periods and maturities. According to the World Bank[37], grace periods for concessional loans have fallen from around an average of 10 years in the early 2000s to 5–6 years by the early 2020s. Maturities have also decreased, reducing the time governments have to reap the benefits of infrastructure investments before repayments begin.

Second, there is a trend of rising interest rates on concessional loans. For instance, the WB IDA Blend Terms for countries transitioning out of full concessional eligibility now include interest rates between 2.0% and 3.3%, depending on the currency and repayment period, a marked departure from the previously common fixed rate of 0.75%[38]. Institutions such as the AfDB have also revised their terms. The AfDF's 15th replenishment framework (ADF-15) shows a decline in the grant element of its assistance, particularly for "blend" countries and those moving toward transition status[39].

Finally, the average grant element of official external financing for low-income countries fell from 42% in 2012 to 30% in 2022[40]. This trend indicates a substantial hardening of the financing terms.

37 World Bank. International Debt Report. 2023
38 IDA Financing Terms, World Bank
39 African Development Fund. ADF-15 Framework Paper. AfDB. 2022
40 World Bank. International Debt Report. 2023

8.2.2 Declining Volume of Development Aid from Donor Countries

Concurrently with the deteriorating terms of concessional financing, the actual volume of official development assistance (ODA) is stagnating or declining in real terms, especially in sub-Saharan Africa.

The OECD Development Assistance Committee (DAC) has documented and analyzed trends in ODA to Africa, highlighting shifts in both the volume and composition of aid over recent years. According to the report, in 2022, net ODA to Sub-Saharan Africa decreased by 7% in real terms, dropping from $36.6bn in 2021 to $34bn. This decline occurred despite a global increase in total ODA, which reached a record $204bn in 2022. The reduction in aid to Sub-Saharan Africa suggests a relative deprioritization of the region in the allocation of development assistance.

The global aid landscape is shifting in response to geopolitical crises and domestic fiscal pressures in donor countries. These shifts deprioritize traditional development financing in Africa.

The traditional model of concessional financing is therefore under stress. Countries of the continent, while still in need of long-term development finance, face shrinking access to affordable financing and increasing debt risks.



8.3 The Role of the Private Sector

Beyond the absolute value of infrastructure financing mobilized, enhancing the efficiency of delivering infrastructure services is fundamental to addressing the infrastructure deficit. The private sector is pivotal in this endeavor. Many countries have sought private sector involvement in infrastructure development to drive these efficiencies and attract private capital investments. Recent trends have shown that by leveraging private sector participation, countries can better finance and deliver infrastructure projects.

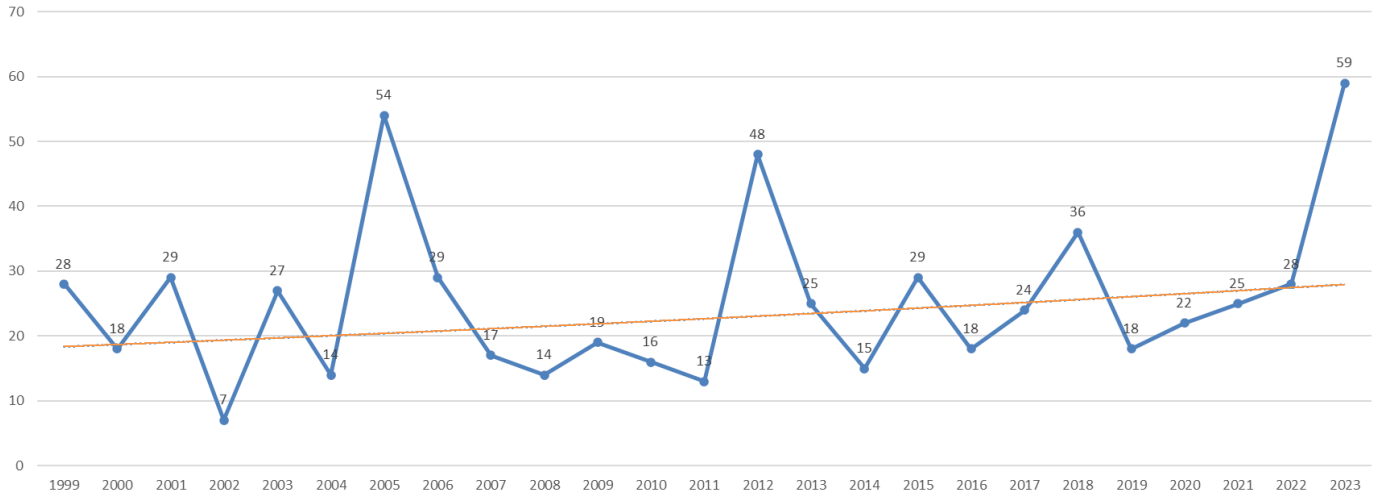
8.3.1 Public-Private Partnerships

Infrastructure PPPs are advantageous compared to traditional public procurement (e.g. EPC contracts) because they integrate infrastructure projects' design, construction, financing, and maintenance, ensuring long-term efficiency and quality. By bundling these phases into a single contract, PPPs align the incentives of private partners with public goals, fostering a life-cycle approach to project management. This integrated structure encourages innovative solutions and cost-effective practices during the construction phase, and guarantees ongoing maintenance, which helps preserve the infrastructure's functionality and value over time. Consequently, PPPs can deliver superior infrastructure performance, reduce the risk of deferred maintenance, and provide better service to the public and higher value for money.

In essence, through the application of PPPs, governments can leverage private sector expertise and efficiency, which can lead to higher quality infrastructure and better service delivery. This, in turn, can attract more private capital and contribute to reducing the financing gap.

Over the past few decades, African governments have increasingly used PPPs to boost infrastructure efficiency and financing. The figure below shows a general upward trend, with a significant increase in the last 5 years.

Figure 8-9: Number of Projects reaching financial closure by year in Sub-Saharan Africa. 1999-2023



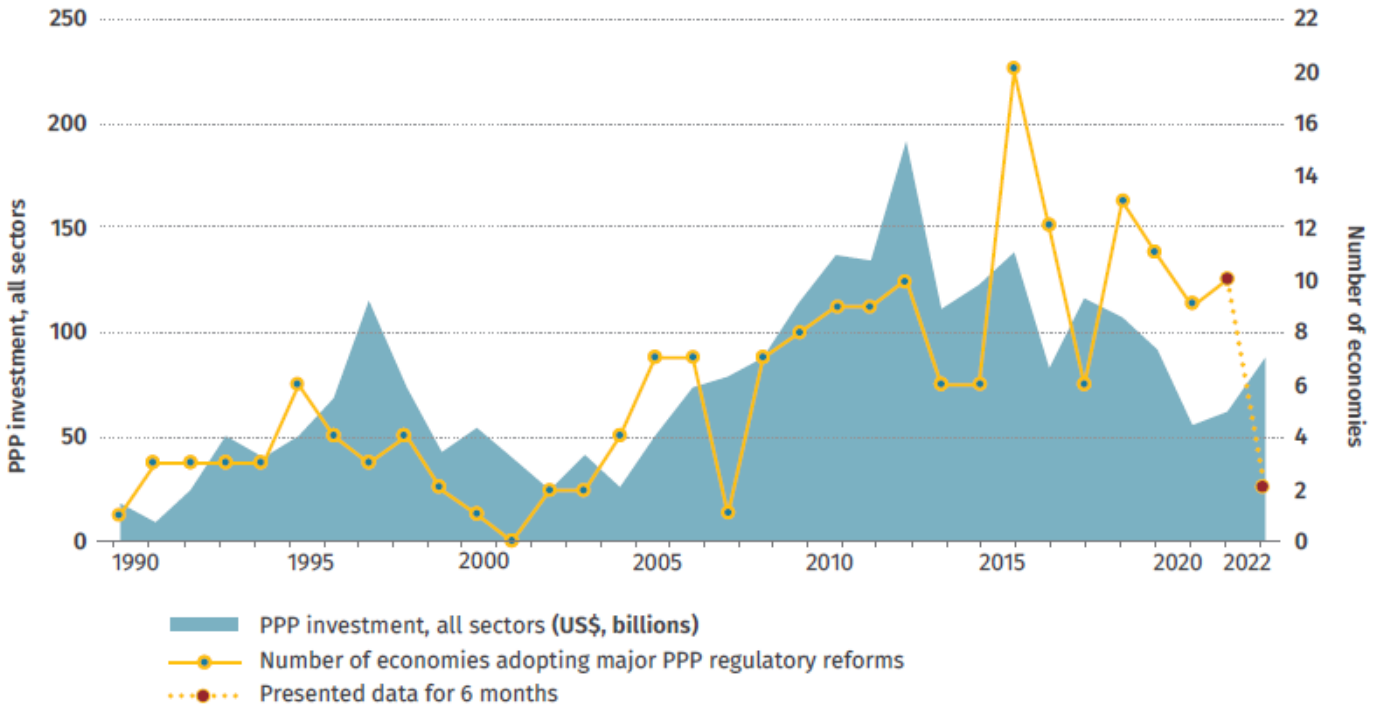
Source: PPI Database. The World Bank Working. Infrastructure Finance, PPPs & Guarantees. 2024.

This growing trend is also associated with the initiatives of numerous governments across the continent to establish a conducive setting for PPPs. While there are many factors influencing PPP infrastructure investments, the quality of PPP regulations is essential in fostering a supportive environment for success. As shown in the figure below, there is a correlation between regulatory reforms and total PPP investments.

According to the Private Participation in Infrastructure (PPI) 2023 Annual Report, PPPs in SSA facilitated $3.5bn in infrastructure investments across 66 projects, a 24% decrease from 2022 and a 46% decline from the five-year average.

Despite the drop in investment volume, PPP activity expanded, with Eastern and Southern Africa doubling project numbers to 45, driven by South Africa ($1.0bn, 11 projects), Senegal ($316m, 5 projects), and Tanzania ($308m, 5 projects) in 2023.

Figure 8-10: Number of Economies Adopting Major PPP Regulatory Reforms and Total PPP Investments ($bn), 1990-2022



Source: B¬enchmarking Infrastructur¬e Development. World Bank. 2024.

The energy and ICT sectors led PPP engagements, reflecting a strategic pivot toward sustainable and digital infrastructure, while transport PPPs, particularly roads, saw a sharp decline, underscoring a shift in regional priorities.

Development and export finance institutions were instrumental in bolstering PPPs, supporting 29 transactions in SSA, the highest globally, and covering 40% of all PPI projects. 26 nations secured $4.3bn across 53 PPP projects, an 18% rise from 2022.

The analysis shows that guarantees were a key enabler, with 9 of 17 global PPI projects receiving guarantees from institutions like MIGA, including in Botswana, Guinea, and South Africa, primarily for energy PPPs. This trend highlights a strategic reliance on IFI-backed risk mitigation to attract private capital for high-impact infrastructure.

A notable example of a recent Public-Private Partnership (PPP) project in Africa, endorsed by both the World Bank and the African Development Bank (AfDB), is the Kigali Bulk Water Supply Project in Rwanda. This initiative stands out as a pioneering model for PPPs in the water sector across Sub-Saharan Africa.

Project Overview

The Kigali Bulk Water Supply Project was conceived to address the pressing water scarcity in Rwanda's capital, Kigali. The project involves the design, construction, financing, operation, and maintenance of a new water treatment plant with a capacity to produce 40,000 cubic meters of potable water per day. This facility sources water from the Nyabarongo River and aims to supply clean water to over 500,000 residents, significantly improving access to safe drinking water in the region.

PPP Structure and Stakeholders

This project is Rwanda's first water sector PPP and one of the few in Sub-Saharan Africa. The key stakeholders include:

- Government of Rwanda: Provided the regulatory framework and support for the project's implementation.
- Metito Group: A UAE-based water management company selected as the private partner responsible for the project's execution and operation.
- African Development Bank (AfDB): Provided financial support and technical assistance, aligning the project with its PPP Framework.
- International Finance Corporation (IFC): Acted as the lead transaction advisor, facilitating the structuring and tendering process.
- Private Infrastructure Development Group (PIDG): Through its Emerging Africa Infrastructure Fund (EAIF), co-financed the project, each providing $19 million in senior debt on commercial terms.

Financial

The total investment for the project is approximately $60 million. The innovative financing structure combined public funds, development finance, and private investment, demonstrating a viable model for infrastructure financing.

It is worth noting also that foreign financing dominated SSA's PPP landscape, with 83% of projects backed by international entities, particularly in energy (97% renewable-focused) and ICT ($1.2bn, 26 projects).

The financing mix for PPPs showed 67% private funding, 20% IFI contributions, and 13% public sources globally (like Eximbanks), with SSA uniquely leveraging local debt (40% of regional debt), driven by South Africa's financial markets.

At the sector level, strategic trends include a decline in transport PPPs, with road investments dropping to $4.5bn globally from $41.8bn in 2022, poses challenges for connectivity-focused partnerships.

8.3.2 Asset recycling

Asset recycling refers to the process of leasing existing public assets, such as roads, bridges, or utilities, to private investors and using the proceeds to fund new infrastructure projects. This approach can generate significant capital for governments without increasing public debt, allowing for the development of critical infrastructure that might otherwise be challenging to finance. By monetizing existing assets, African governments can potentially bridge the substantial financing gaps that hinder their infrastructure development goals.

This process can also attract foreign investment, provide opportunities for local businesses, and spur economic growth. Furthermore, involving the private sector in managing public assets can lead to improved efficiency and innovation, delivering better services to the population.



Africa50 completes historic $100 million asset recycling program with The Gambia

Africa50, the pan-African infrastructure investor and asset manager, has officially assumed operations of the Senegambia Bridge after disbursing the first $15.5m tranche of a $100m Asset Recycling program with the Government of The Gambia.

Africa50 is pioneering the innovative model to mobilize private capital to accelerate the delivery of bankable infrastructure projects across Africa. Asset recycling enables governments to concession infrastructure assets to private investors for a predetermined period, releasing public funds to invest in other critical infrastructure projects. It enables African governments operating with limited fiscal space to free up valuable resources for development priorities.

Located on the critical Trans-Gambia road corridor linking Dakar in Senegal to Banjul in The Gambia, the Senegambia Bridge plays a pivotal role in facilitating the efficient movement of goods and people within the West African sub-region.

Despite its nascent potential, asset recycling faces several challenges in Africa. One of the primary obstacles is the lack of well-developed regulatory frameworks and institutions necessary to implement such programs effectively. Ensuring transparency and accountability in the selection and management of assets is crucial to gaining public trust and attracting investors. Additionally, there may be political and public resistance to the privatization of public assets, which can be perceived as losing control over essential services.

Another significant challenge is the capacity to structure and negotiate complex transactions that are attractive to investors while protecting public interests. Many African countries may lack the technical expertise and experience needed to execute asset recycling initiatives successfully. Moreover, the perceived political and economic risks in the region can deter potential investors, necessitating robust risk mitigation strategies and support from international financial institutions. Overcoming these challenges requires a concerted effort from governments, the private sector, and development partners to create an enabling environment for asset recycling and to build the necessary capacity for its successful implementation.

8.3.3 Other trends in private sector participation in the infrastructure sector

Sovereign credit ratings and impact on FDIs

Sovereign credit ratings play a pivotal role in shaping the investment landscape of SSA countries. These ratings, issued by major agencies like Moody's, Standard & Poor's, and Fitch, influence investor perceptions, borrowing costs, and access to international capital markets. In SSA, the implications of these ratings are particularly pronounced, affecting both public sector financing and private sector investment in infrastructure.

Trends indicate a strong influence of credit ratings on investment costs and liquidity. Low credit ratings often lead to higher borrowing costs for SSA countries. The United Nations Economic Commission for Africa (UNECA) highlights that unfavorable ratings contribute to a cycle of liquidity challenges and debt accumulation. This scenario not only strains public finances but also deters private investment due to perceived financial instability.

The United Nations Development Programme (UNDP) estimates that African countries could save up to $74.5bn if credit ratings were based on more objective assessments. Such savings could be redirected towards development projects in infrastructure, enhancing the continent's economic growth prospects.

Empirical studies also indicate a significant relationship between sovereign credit ratings and FDI inflows in SSA. Research[41] demonstrates that higher credit ratings correlate with increased FDI, while downgrades can lead to substantial declines in investment. For instance, a study focusing on South Africa[42] revealed that downgrades by major rating agencies had a pronounced negative effect on FDI inflows. This underscores the sensitivity of foreign investors to changes in sovereign credit assessments.

41 Arogundade et al.2022.
42 An Analysis of Sovereign Credit Ratings Impact on Financial Development in South Africa. Journal of Accounting and Finance in Emerging Economies. 2021

There is a growing concern that traditional credit rating methodologies may not fully capture the economic realities of SSA countries. Critics argue that these methodologies often rely on outdated data and may overlook regional nuances, leading to ratings that do not accurately reflect a country's creditworthiness. This perceived bias can exacerbate the "Africa premium," where countries face higher borrowing costs than warranted.

In response, initiatives like the proposed African Credit Rating Agency aim to provide more contextually relevant assessments, potentially improving access to capital for SSA countries.

The Private Sector Investment Lab

Mobilizing and leveraging private financing using PPPs or the structuring of blended finance remains a high priority for stakeholders in the development of Africa infrastructure. However, there is a growing awareness, among both the public MDBs and the private financiers, that, given the constraints of the local and international financial markets, these solutions will be largely insufficient to meet the needs.

Hence the Private Sector Investment Lab was launched in June 2023 at the Summit for a New Global Financing Pact. The Private Sector Investment Lab is a collaborative initiative between the World Bank Group and CEOs of leading global private sector institutions. Its goal is to develop solutions that address existing barriers to private sector investment in emerging markets and developing economies.

The core goal of this initiative is to enhance the World Bank Group's catalytic role in mobilizing private capital for emerging markets by mitigating risks for private sector investors and fostering enabling environments that support the development of bankable projects.

The Lab's core group of 15 CEOs and Chairs come from AXA, BlackRock, HSBC, Macquarie, Mitsubishi UFJ Financial Group, Ninety One, Ping An Group, Royal Philips, Standard Bank, Standard Chartered, Sustainable Energy for All, Tata Sons, Temasek, and Three Cairns Group.

Since the Lab's launch in 2023, private sector leaders have provided the World Bank Group with valuable feedback that has helped better align strategies, to increase the speed and scale of private finance, ultimately leveraging more private capital for development.

To date, the Lab has delivered recommendations to the World Bank Group in areas such as regulatory certainty, increased use of guarantees, foreign exchange risks mitigation and Increased use of originate-to-distribute models for mobilization of private capital; and undertaking specific actions including Guarantee Program, Foreign exchange risk solutions, Capital markets and securitization, Equity and junior capital and Country platforms.

8.4 Strategic Corridors for Industrialization and Integration in Africa

The launch of the African Continental Free Trade Area (AfCFTA) agreement in January 2021 has increased the urgency for infrastructure development on the continent, particularly trade facilitation infrastructure at the regional scale. This includes hard infrastructure such as ports and harbors, road networks, rail networks, airports, border posts and customs facilities, special economic zones and industrial parks, and energy infrastructure. It also includes soft infrastructure such as payment systems, other financial services and information and communication technology.

The table below lists some of the hard and soft infrastructure needs to accompany the AfCFTA.



Hard Infrastructure

Transportation Infrastructure

- Regional roads and highways: upgrading and expanding road networks for better connectivity between countries.
- Regional railways: developing new and enhancing existing rail networks for efficient cargo and passenger movement.
- Ports and harbors: modernizing and expanding seaports for improved maritime trade.
- Airports: upgrading airports to handle increased cargo and passenger traffic.

Energy Infrastructure

- Power generation: increasing capacity through new power plants, including renewable energy sources.
- Interconnexion networks: expanding and upgrading regional electricity grids for electricity exchange and reliable supply

Telecommunications Infrastructure

- Broadband networks: expanding high-speed internet access across the continent.
- Mobile connectivity: enhancing mobile network coverage and capacity.

Water and Sanitation

- Water supply systems: building and upgrading water supply infrastructure.
- Sanitation and waste management: developing efficient waste management systems and sanitation facilities.

Industrial Infrastructure

- Special Economic Zones (SEZs): establishing and enhancing SEZs for industrial development.
- Manufacturing hubs: developing infrastructure to support manufacturing industries

Soft Infrastructure



Trade Facilitation Mechanisms

- Customs and border management: streamlining customs procedures and border control for efficient trade.
- Trade logistics platforms: developing systems for efficient logistics and supply chain management



Data and Information Systems

- Trade information portals: developing platforms for sharing trade-related information.
- Data analytics and monitoring: implementing systems for monitoring trade flows and economic impacts



Legal and Regulatory Frameworks

- Harmonization of trade laws: aligning national laws and regulations with AfCFTA objectives.
- Intellectual property rights: establishing and enforcing a unified IP rights framework



Financial Infrastructure

- Payment systems: developing a unified payment system for seamless cross-border transactions.
- Access to credit: enhancing access to finance for businesses engaged in intra-African trade.



Human Capital Development

- Education and training: investing in education and vocational training to develop skills relevant to the needs of the free trade area.
- Health infrastructure: strengthening health systems to ensure a healthy workforce.



Institutional Capacity Building

- Strengthening AfCFTA institutions: enhancing the capacity of institutions responsible for implementing the AfCFTA

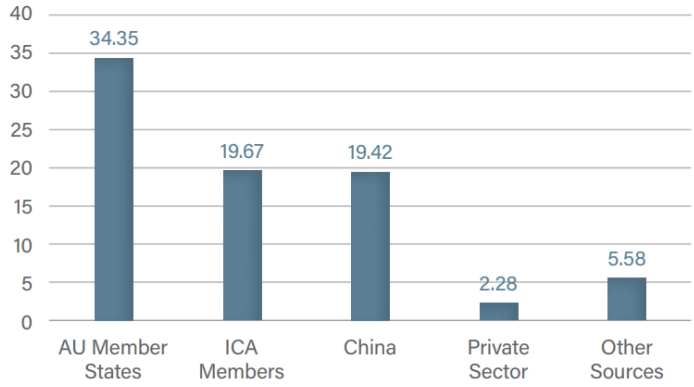
In addition to the list above, the global fight against climate change means that the response to the infrastructure needs under the AfCFTA will need to include environmental considerations, including sustainable transport networks, green energy infrastructure, eco-friendly industrial zones, digital infrastructure for trade efficiency, sustainable agriculture infrastructure and climate-resilient urban infrastructure. The need for climate-resilient or mitigating trade infrastructure widens the infrastructure financing gap and reduces the ability of governments to fill it.

Regional actors such as the African Union, the African Development Bank and the African Export Import Bank (AfreximBank) are playing a role in the development of this infrastructure. The African Union has launched plans such as the Program Infrastructure Development for Africa (PIDA) and is the champion of the Trans-African Highway Network. The AfDB has invested heavily in regional infrastructure development, and AfreximBank is managing a $1bn Adjustment Fund for the AfCFTA that may also invest in infrastructure.

Existing continental financing mechanisms remain underfunded. From 2012 to 2020, African Union (AU) Member States allocated circa $34bn to the Programme for Infrastructure Development in Africa (PIDA) Priority Action Plan 1 (PAP1), equivalent to just 0.2% of the region's nominal GDP over the same period[43].

The graphic below presents the source of financing for PIDA.

Figure 8-11: Sources of financing for PIDA ($bn).



Source: PIDA: First 10-Year Implementation Report

Despite AU Member States contributing 51% of the estimated financing requirement, PIDA still relies strongly on funding from IFIs. Private sector financing constituted only 3% of total investment, indicating PIDA's untapped potential in attracting private investment. To address this, PIDA's PAP2 Financing Strategy aims to enhance private sector participation by reducing risks, adjusting regulations, and building capacity for institutional investors.

43 PIDA: First 10-Year Implementation Report. AUDA-NEPAD

8.5 Climate Finance

Climate change poses a significant threat to development in Africa by exacerbating food insecurity, straining water resources, increasing the frequency of extreme weather events, and undermining progress in poverty reduction, economic growth, and infrastructure resilience. In response, strategic investment in climate-resilient infrastructure—such as renewable energy systems, sustainable transport networks, efficient water management solutions, and resilient urban planning—is essential not only to mitigate the impacts of climate change but also to strengthen adaptive capacity, support inclusive economic growth, and ensure long-term development sustainability across the continent.

To achieve that objective, climate finance is key to mitigating and adapting to the severe impacts of climate change. However, compared to global needs, Africa has shown a limited capacity to leverage this financing instrument. In 2019 and 2020, African nations collectively secured only 12-15% of the climate finance required for their response to climate change. The estimated annual need for climate financing in Africa is about $ 277 bn, yet only $ 29.5 bn was mobilized in 2020, according to a report by the Climate Policy Initiative[4445]. According to the same report, Africa needs approximately $2.8tn between 2020 and 2030 to implement its NDCs. South Africa, Ethiopia, Nigeria, and Egypt have the highest needs per year, together representing almost $ 151bn per year[46].

With limited climate finance flows, Africa is left with a large climate finance gap of around $200-400bn per year between now and 2030[47].

This climate finance gap poses an imminent threat to Africa's ability to adapt, mitigate, and build resilience against the adverse impacts of climate change.

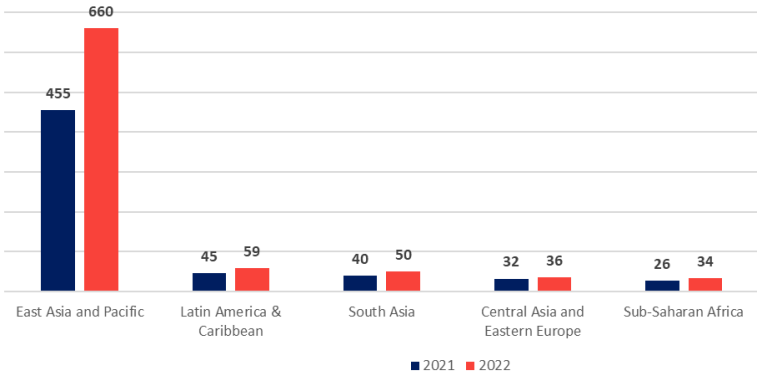
44 OECD 2023
45 Landscape of Climate Finance in Africa, September 2022
46 Current levels of climate finance in Africa falling drastically short of needs, fsdafrica, 2022
47 Three ways to scale up debt-for-climate swaps, ecdpm, 10 November 2023

8.5.1 Trends in climate finance mobilization

Climate finance is concentrated in too few countries. Ten countries (out of 54 African countries) absorb more than half of all investment. The Southern African region bears the largest financing gap in absolute terms. This is mainly attributed to the high climate finance needs identified by South Africa alone—$107bn annually, combined with one of the lowest regional levels of climate investment.

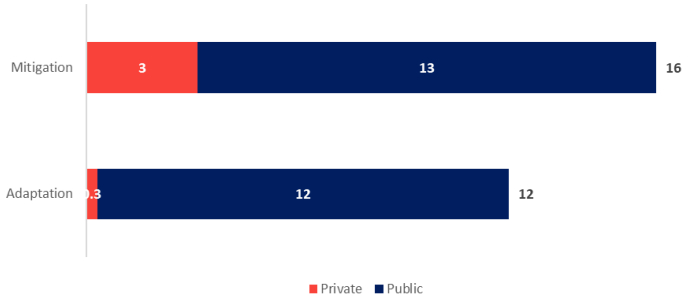
Africa strikes a better balance between adaptation and mitigation than other regions. Mitigation accounted for 49% ($14.6bn) of climate finance flows in Africa, followed by 39% ($11.4bn) towards adaptation, and 12% ($3.5bn) to dual benefits. This is in contrast to other regions where adaptation represents only 7%–16% of total climate finance. This is a positive trend, given Africa's disproportionately high vulnerability to climate change. Yet funding for both adaptation and mitigation must increase by at least six and 13 times, respectively.

Figure 8-12 Breakdown of global climate finance by region of destination ($ bn)



Source: CPCS from The Global Landscape of Climate Finance database

Figure 8-13: Breakdown of Africa climate finance for adaptation & mitigation split by public and private sources ($ bn)



Source: CPCS from The Global Landscape of Climate Finance database

8.5.2 Sources of climate finance

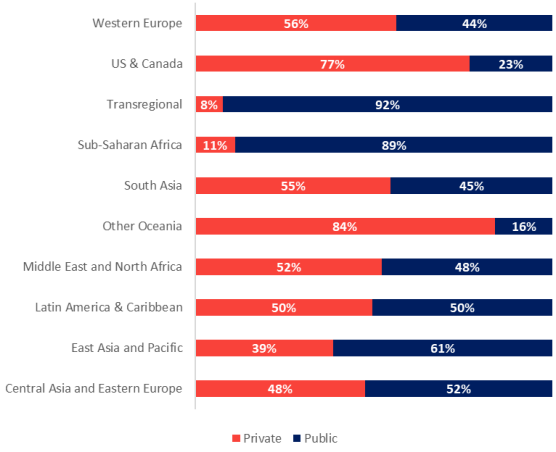
Climate finance in Sub-Saharan Africa was dominated by international flows (92%) in 2021/2022. IFIs and climate funds were the largest source of public climate finance (49%), followed by bilateral development partners including bilateral DFIs (22%), international governments (16%) and climate funds (4%).

8.5.3 Climate Finance and Private Sector Financing

Private sector contributed only 14% ($4.2bn) of total climate finance in Africa, much lower than in South Asia (37%), East Asia and Pacific (39%), and Latin America & Caribbean (49%) (CPI, 2021a). Sources of private sector investment were split between domestic (49%), international (39%), and unidentified sources (12%).

The private sector—largely corporates and commercial financial institutions—invested mostly in mitigation projects (81%). Supportive public interventions, growing maturity of renewable energy technologies, and better funding models for renewable energy projects versus adaptation-based projects largely drove this trend.

Figure 8-14 Share of private climate finance to total climate finance by region (2021/2022 average)



Source: CPCS from The Global Landscape of Climate Finance database

8.5.4 Barriers and opportunities to effective climate finance mobilization in Africa

Several barriers could explain the limited contribution of climate finance to infrastructure financing in Africa. First, high perceived risks—ranging from political instability and currency volatility to weak legal systems—discourage both domestic and international investors. This is seconded by the fact that climate adaptation projects in particular often lack clear revenue streams, reducing their attractiveness for private capital. Second, financial systems in many African countries are undersized, with limited access to green finance instruments and thin capital markets. Third, the cost of capital remains prohibitively high: sovereign borrowing rates in Sub-Saharan Africa average 8–10%, compared to below 2% in OECD countries (OECD, 2023).

Despite these constraints, there are significant opportunities to scale up climate finance across the continent. Expanding blended finance mechanisms—such as those led by the Global Energy Alliance for People and Planet (GEAPP) can help attract private capital by mitigating investment risks. Strengthening project preparation facilities and pipeline development, through platforms like the Green Climate Fund Readiness Programme or the AfDB's Sustainable Energy Fund for Africa (SEFA), is also critical. Domestic green finance markets are slowly emerging: countries such as Nigeria, South Africa, and Kenya have launched green bonds and are developing sustainable finance frameworks.

8.6 Sector Strategic Trends

8.6.1 Transport

The transport sector in Africa is undergoing significant transformation, driven by demographic growth, urbanization, regional integration, climate imperatives, and digitalization. These strategic trends have direct implications for financing mechanisms and the evolving landscape of transport infrastructure investment on the continent.

Rapid Urbanization and Urban Mobility

Africa's rapid urbanization is one of the most defining demographic trends of the 21st century. With the urban population expected to exceed 722 million by 2030 (UN-Habitat), cities across the continent are facing mounting pressure to provide efficient, accessible, and sustainable transport solutions.

Urban mobility systems, particularly in major cities like Lagos, Nairobi, Kinshasa, and Cairo, are strained by congestion, pollution, and unreliable service. In response, many African cities are investing in modern public transport systems such as Bus Rapid Transit (BRT), Light Rail Transit (LRT), and metro networks. Notable examples include the BRT systems in Lagos and Dar es Salaam, the LRT in Addis Ababa, and the metro expansion in Cairo and implementation in Abidjan.

These developments are often accompanied by the implementation of Sustainable Urban Mobility Plans (SUMPs), which aim to integrate land use and transport planning, improve non-motorized transport infrastructure, and promote inclusive access.

Consequently, urban transport investments in Africa are increasingly attracting diverse financing sources. IFIs such as the WB, AfDB, and AFD are among the principal financiers of urban mobility projects, particularly BRT and LRT systems. These institutions often combine sovereign loans with technical assistance and capacity-building components.

Climate finance is also playing an expanding role, especially in projects with strong mitigation co-benefits, such as the electrification of public bus fleets. The Green Climate Fund (GCF) and other climate investment funds have supported pilot initiatives for low-carbon urban transport in countries such as Senegal, Togo and Kenya.

Public-Private Partnerships (PPPs) are being explored for urban transport infrastructure, though they remain limited due to the complexity of farebox revenue models and high capital costs. Innovative models such as land value capture and transit-oriented development are under discussion in cities like Kigali and Nairobi but are not yet widely operationalized. Blended finance approaches—mixing concessional funds with commercial capital—are increasingly used to improve project bankability and to mitigate demand risk in large-scale urban mobility projects.



Image credit: CETUD
Sources: CETUD

The Dakar BRT system is expected to transport 300,000 passengers daily while significantly reducing travel times from 95 to 45 minutes. At maximum capacity, it will operate 144 fully electric articulated buses, marking a shift towards zero-emission urban transport in African cities. The BRT incorporates inclusive design features, ensuring accessibility for all, including women, children, and persons with disabilities, with features like level boarding platforms, walkways, cycle tracks, and adequate street lighting.

A highlight of the system is the use of solar-powered electric buses with a 560-kWh battery capacity and 120 kW charging power, requiring around six hours for a full charge. Real-time monitoring ensures efficient charging based on passenger demand. The system is also the first in Africa to formalize the informal bus network and integrate private sector participation, with companies like Dakar Mobilité overseeing bus operations through a 15-year concession agreement.

Within this PPP project, the World Bank and European Investment Bank financed the construction, with the private sector investing $144m, supported by $22m from the World Bank's Multilateral Investment Guarantee Agency (MIGA). At the 3rd IJGlobal ESG Awards 2024 held in London on October 17, 2024, Dakar's Bus Rapid Transit (BRT) project was awarded the IJ Global ESG PPP Award.

To accommodate low-income groups, fares are structured to be affordable, with a 50% fare reduction for marginalized riders, supported by government subsidies. Furthermore, 35% of the 1,000 jobs created by the project are allocated to women, and gender-based safety measures are being implemented

Passenger capacity:
300,000
passengers daily

Environmental benefits:
Approximately
59,000 tons
of CO2 emissions avoided per year

Social tariffs:
50%
fare reduction for target users

Key financial partners:
World Bank, the European Investment Bank (EIB), and the French Development Agency (AFD), with a total project cost estimated at
€300m

Local content:
30%
of the shares in the operating company are reserved for local operators and the State of Senegal,

1500
direct jobs will be created, not including indirect and induced employment.

Regional Transport Corridors and Trade Facilitation

Both the Programme for Infrastructure Development in Africa (PIDA) and the African Continental Free Trade Area (AfCFTA) are key initiatives to advance regional integration.

PIDA is currently in its second phase with 69 projects selected based on viability and alignment with the integrated corridor approach. Phase 2 has a total investment value of $160.7bn.

PIDA and AfCFTA initiatives are complementary, as infrastructure development under PIDA is expected to lower trade costs and accelerate regional economic integration under AfCFTA.

Still, corridor projects are typically capital-intensive and require long-term financing arrangements, often in the form of sovereign loans provided by IFIs and bilateral donors. Many of these projects are structured under regional financing frameworks, with cost-sharing arrangements among participating countries.

Corridor authorities or regional project implementation units are often established to manage coordination and implementation.

There is also increasing use of concessional finance to crowd in private capital, particularly in toll road development. For example, toll road concessions are emerging in countries such as Nigeria, Ghana, and Mozambique.

Furthermore, corridor-level investment plans are increasingly integrating climate resilience criteria, unlocking access to adaptation finance from sources like the Adaptation Fund and AfDB's Africa Climate Change Fund. Blended finance platforms such as the Africa50 Infrastructure Fund and the EU-Africa Global Gateway have started to play a role in structuring regional corridor projects with mixed financing.

Railway Modernization and Freight Transport

Railway systems in Africa are being revitalized as part of broader efforts to reduce logistics costs and promote more sustainable, bulk transport modes for commodities and manufactured goods. Several countries are modernizing their railway infrastructure, including Ethiopia, Kenya, Nigeria, and Morocco. The Standard Gauge Railway (SGR) between Mombasa and Nairobi, and the Addis Ababa–Djibouti Railway, are prominent examples of recent railway investments aimed at improving port-hinterland connectivity.

There is also renewed interest in regional rail integration projects such as the Lobito Corridor, connecting Angola to the Democratic Republic of Congo and Zambia. These projects are motivated by the need to unlock mineral resource corridors, reduce reliance on road freight, and lower carbon emissions in the transport sector.

Railway projects are among the most capital-intensive infrastructure investments and often rely on a combination of sovereign loans, export credit agency financing, and bilateral arrangements—particularly with China, which has been a dominant financier in East and Central Africa. MDBs are increasingly co-financing these projects, especially where debt sustainability is a concern.

Given the high operational and maintenance costs, railway concessions involving private operators are gaining interest. The success of such concessions depends on regulatory frameworks, freight volumes, and the clarity of state support mechanisms.

Blended finance is becoming essential in rail project structuring, with donor-backed risk mitigation instruments, such as guarantees and first-loss tranches, used to enhance private sector appetite. Freight-oriented railways also attract investment from mining companies and port authorities as part of integrated logistics strategies.

Ports, Maritime Transport, and Logistics Platforms

With over 90% of Africa's trade by volume passing through seaports[48], maritime transport infrastructure is pivotal to the continent's economic competitiveness. There has been a wave of port modernization projects, including the expansion of ports in Abidjan, San Pedro, Tema, Mombasa, Durban, and Walvis Bay. These investments aim to increase cargo handling capacity, reduce vessel turnaround time, and accommodate larger vessels. In parallel, there is growing development of inland logistics hubs and dry ports, particularly in landlocked countries, to improve hinterland connectivity and reduce logistics costs.

Port authorities are increasingly embracing automation, digital customs systems, and logistics performance measurement tools. Furthermore, Special Economic Zones (SEZs) and port-adjacent industrial zones are being promoted to capture more value-added activities in proximity to maritime gateways.

Port development in Africa has seen relatively greater success in attracting private sector investment, often under Build-Operate-Transfer (BOT) or concession models. Leading global terminal operators such as DP World, Bolloré (now part of MSC), and APM Terminals have been active investors and operators. These partnerships typically include upfront capital investment by the private partner in exchange for long-term operating rights.

Institutional investors, such as sovereign wealth funds and infrastructure-focused private equity firms, are also showing interest in port and logistics platform investments due to their stable cash flows and long-term returns.

48 Review of Maritime Transport. UNCTAD. 2023

Blended finance remains relevant for dry ports and logistics platforms in fragile contexts, where concessional support is needed to improve viability. Port upgrades that include climate resilience elements—such as elevation of quay walls and green energy integration—are starting to access climate finance instruments as well.

Air Transport and Aviation Connectivity

Although air transport represents a smaller share of Africa's transport sector by volume, it plays a vital role in connecting remote regions, landlocked countries, and facilitating business and tourism. Strategic initiatives such as the Single African Air Transport Market (SAATM), spearheaded by the African Union, aim to liberalize air services and promote competition among African carriers. New airport developments and expansions are ongoing in cities such as Addis Ababa, Accra, and Kigali, aimed at creating regional aviation hubs.

However, the African aviation sector continues to face challenges, including high operating costs, limited regional connectivity, and undercapitalized national carriers.

Airport infrastructure is increasingly financed through PPPs and revenue-backed models, with concessionaires investing in passenger terminals, cargo facilities, and related services. In some countries, airport authorities are corporate or partially privatized to improve governance and attract capital.

There is also a modest but growing interest in financing sustainable aviation infrastructure, such as solar-powered airport terminals and efficient air traffic control systems. AfDB and ICAO are working on policy frameworks to promote green aviation financing[49], although this remains nascent relative to other transport modes.



49 Air Transport in Africa: ways to promote a catching-up. AfDB. 2024

8.6.2 Energy

Regional Integration to Optimize Financing

Regional integration in the energy sector is crucial for optimizing the use of energy resources, reducing costs, and improving energy security across Africa. By connecting national grids and facilitating cross-border energy trade, countries can share surplus energy, balance supply and demand, and reduce the need for expensive backup capacity. This integration helps to:

- Optimize Energy Resources: Efficiently utilize diverse energy resources across regions, such as hydropower in one country and solar power in another.
- Reduce Costs: Lower electricity prices through economies of scale and reduced need for redundant infrastructure.
- Improve Energy Security: Enhance the reliability and stability of power supply by pooling resources and providing mutual support during shortages or outages.

Both the Continental Master Plan and African Single Electricity Market (AfSEM) are key initiatives in advancing regional integration on the continent.



Continental Master Plan (CMP) is vision for a well-integrated and efficient energy network across Africa aims to enhance energy security, economic growth, and regional integration. This vision includes the development of interconnected power grids, harmonized regulatory frameworks, and a unified electricity market that facilitates seamless energy trade across the continent. It is implemented by AUDA-NEPAD, supported by the European Union - Global Technical Assistance Facility (EU-GTAF), the International Atomic Energy Agency (IAEA) and the International Renewable Energy Agency (IRENA)[50].

CMP African Single Electricity Market (AfSEM) aims to establish a comprehensive marketplace for electricity throughout Africa by interconnecting the various power pools[51]. By integrating the continent's electricity grids, demand is better served at a lower cost. This approach, through efficiency gains and associated cost reductions, offers the advantage of reducing funding needs.

Additional Financing Needs for the Just Energy transition

The Just Energy Transition is a framework that seeks to reconcile the urgent need for decarbonization with the imperative of social and economic equity. Rooted in the principles of fairness, inclusivity, and sustainability, it calls for integrated policies that protect jobs, retrain affected workers, expand energy access, and ensure that the benefits of clean energy—such as improved health, energy affordability, and new employment opportunities—are equitably shared.

The Just Transition concept has gained prominence globally, especially in developing and emerging economies where energy access deficits and high reliance on fossil fuels intersect with limited fiscal space and institutional capacity.

In Africa, the Just Energy Transition Partnership (JETP) model has begun to take shape, with South Africa as the flagship case. At COP26 in 2021, South Africa secured a landmark $ 8.5 bn commitment from partners including the EU, US, UK, Germany, and France to support its transition away from coal. The deal aims to accelerate the retirement of aging coal plants, modernize the grid, and expand renewable energy while creating economic opportunities for workers and communities in coal-dependent regions.

Battery Energy Storage System (BESS)

Part of the strategic trend observed over the period and a critical component of this just energy transition is the integration of Battery Energy Storage Systems (BESS), which address the intermittency of renewable energy sources like solar and wind. Indeed, the integration of variable renewable energy sources, such as solar and wind, into the power grid requires effective energy storage solutions to manage fluctuations in supply and demand. Energy storage projects play a crucial role in ensuring grid stability and reliability. Investing in such infrastructure will create additional financing needs but also financing opportunities.

Battery energy storage projects support utilities and electricity consumers with backup power, frequency regulation, and balancing supply and demand. These uses, along with regional market and regulatory convergences, create varied revenue streams. In many areas, battery owners, including those co-located with solar or wind projects, earn revenue through multiple contracts and sources.

50 https://nepad.org/continental-master-plan
51 https://au.int/en/afsem

Here is an overview of some revenue models and financing considerations for utility-scale energy storage projects:

Type	Mechanism	Payment Structure
Fixed Price Contracts	Long-term agreements with creditworthy parties to pay a fixed price for a project's output.	Stable revenue regardless of market price fluctuations
Utility Tolling and Capacity Contracts	Buyer pays a capacity payment or "battery-use payment" for the right to dispatch energy.	Payments based on energy delivered to the battery whether used or not or a fixed monthly amount adjusted for performance.
Variable Revenue Sources	Provide potential increased revenues but are subject to market price volatility.	Not included in the initial sizing of project loans or equity investments.
Wholesale Electricity Sales	Pairing storage with solar or wind projects allows charging the storage system when market prices are low and discharging during high-price periods.	Maximizes revenue during peak pricing periods.
Ancillary Services	Storage projects sell ancillary services like frequency regulation, operating reserves, and voltage control to transmission owners or grid operators.	Market-based auctions or cost-based rates.
Hybrid Revenue Models	Combine fixed and variable revenue sources. For battery projects and solar + storage projects, there is rarely one single contract. Project developers mix both fixed and variable approaches	Mix of fixed-price contracts and variable revenue sources.



Hex BESS Project (South Africa):

November 10, 2023

Eskom's Hex BESS project is the largest battery energy storage system in Africa, with a capacity of 1,440 MWh per day and 60 MW of solar PV capacity.

It forms part of Phase 1 of Eskom's BESS project which includes the installation of approximately 833MWh additional storage capacity at eight Eskom Distribution substation sites

Sources: https://www.eskom.co.za/eskom-unveils-a-first-of-its-kind-largest-battery-storage-project-in-the-african-continent/

Hydrogen

With the global push towards carbon neutrality and in line with the Just Energy transition, momentum emerged to producing 'clean' hydrogen. This clean hydrogen is seen as crucial for reducing the carbon footprint of current hydrogen production methods and for decarbonizing other challenging sectors. Additionally, it offers potential as a long-term energy storage solution in systems dominated by renewable energy sources.

Africa holds significant potential for clean hydrogen production due to its abundant renewable energy resources which are essential for producing cost-competitive clean hydrogen.

These renewable energy resources position Africa as a key player in the global hydrogen market, with the potential to produce and export both green and blue hydrogen. Countries like Nigeria, Algeria, and Angola, with their vast natural gas reserves of 203.16 trillion, 159 trillion, and 343 trillion cubic feet respectively, can leverage blue hydrogen production as an alternative export product, aiding in the diversification of their fossil-fuel-dependent economies.[52]

52 Hydrogen Africa. (2024). Africa's place in the emerging hydrogen economy. Hydrogen Africa Magazine. Retrieved from https://hydrogen-africa.com/en/magazine/ , Chigozie Nweke-Eze, Founder, Integrated Africa Power (IAP) & Board member of Hydrogen-Africa.

Many countries are setting the stage and initiating several pilot or industrial projects. These projects are geared towards the production, transport and possibly export of green hydrogen as well as projects aimed at greening existing materials and chemical value chains.

While there are significant investments planned—over $50bn by 2030—the African hydrogen project pipeline is less mature than the global average. Only about 5% of project investment volume in Africa is at the front-end engineering design (FEED) stage or beyond, compared to 20% globally. Furthermore, only 1% of projects in Africa have passed the final investment decision (FID) stage, compared to 7% globally.[53]

These constraints highlight the need for careful planning, robust financial frameworks, and international cooperation to ensure the successful development of the hydrogen economy in Africa.

New Opportunities for Private Sector Participation in the Electricity Sector

Private sector participation in transmission projects

Expanding and upgrading transmission lines is crucial for the growth of Africa's electricity sector. Effective transmission infrastructure is necessary to connect power generation sources with consumers, ensuring a stable and efficient electricity supply. This need extends beyond national borders, requiring investments at both national and regional levels to facilitate cross-border electricity trade and integration of renewable energy sources into the grid.

Despite recent increases in investment in other areas of the power sector, investment in transmission infrastructure remains critically low on the continent. Historically, the investment in power generation has been about four times higher than that in transmission and distribution combined in sub-Saharan Africa. This significant disparity underscores a critical need for increased investment in transmission to ensure a balanced and efficient power sector.[54]

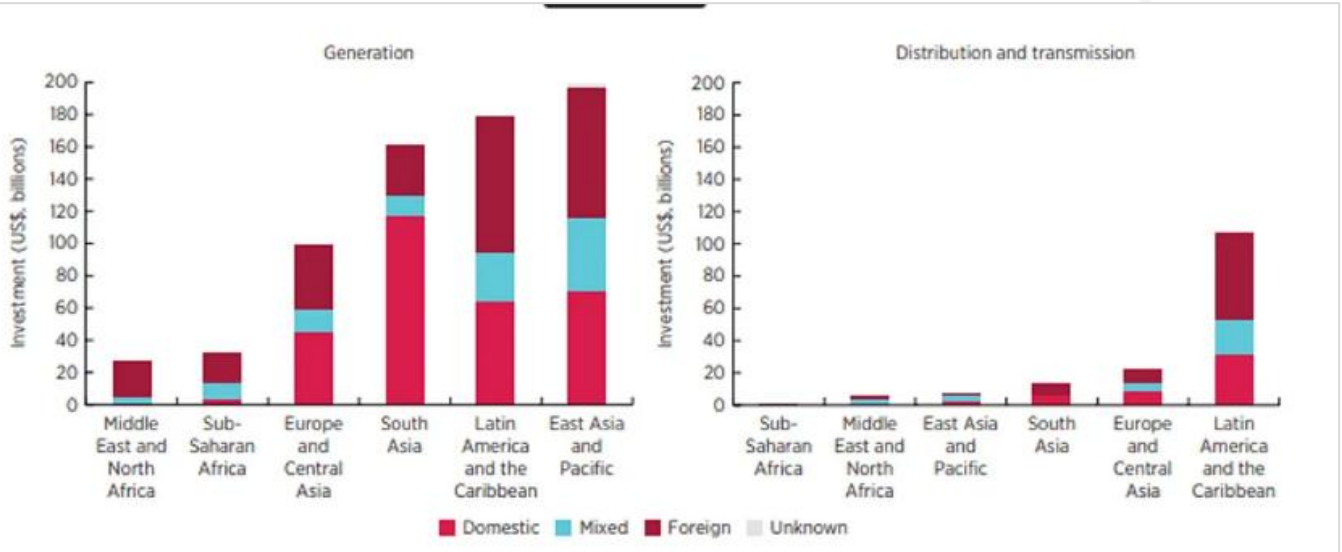


Figure 2. Global investment in Generation and Transmission & Distribution. Source: Based on World Bank, Private Participation in Infrastructure database, https://ppi.worldbank.org/

Source https://powerafrica.medium.com/the-missing-link-understanding-power-transmission-financing-d33ca4846fbe

53 Source : https://hydrogencouncil.com/en/the-africa-hydrogen-opportunity/
54 Source https://powerafrica.medium.com/the-missing-link-understanding-power-transmission-financing-d33ca4846fbe

The estimated annual investment requirement for the transmission sector from 2015 to 2040 ranges between $3.2 bn and $4.3bn. Currently, nearly all transmission investments in Africa are financed by state-owned enterprises (SOEs)[55]. However, public financing is limited, particularly in fiscally constrained environments. The heavy reliance on public capital for power sector investments can lead to high opportunity costs, especially in countries that need to address other pressing socioeconomic challenges.

State control of transmission networks is often justified on the grounds that power transmission is a natural monopoly, best managed by the public sector. While it is true that the operation of transmission grids cannot be competitive by nature, this does not preclude private sector investment in transmission infrastructure. The approach to private participation in transmission must differ from that in generation, but it remains a viable option for enhancing the efficiency and expansion of the transmission network.[56]

Private sector participation in transmission projects in Africa has been limited but is gradually increasing. There have been recent initiatives to introduce IPTs in various African countries in recent years. Among the countries, we note:

Kenya

Kenya is pioneering the continent's first Independent Power Transmission (IPT) project through a Public-Private Partnership (PPP) with Africa50 and Power Grid Corporation of India Limited (PowerGrid). This project involves the development, finance, construction, and operation of the 400kV Lessos-Loosuk and 220kV Kisumu-Musaga transmission lines. This initiative aims to improve electricity supply in Western Kenya and boost private sector participation in the transmission subsector64. This project represents a significant breakthrough and could signal the beginning of a new trend in Africa's transmission sector.

Tanzania

Tanzania is negotiating with the Adani Group for a $900 m project to build high-voltage power lines. Additionally, it is in discussions with Gridworks Development Partners LLP from the UK for a $300 m power-lines project.[57]

South Africa

The South African government is actively considering private participation in its transmission sector. In early 2024, the National Treasury announced a request for proposals for a pilot project involving off-balance-sheet financing to accelerate private-sector investment in transmission. This initiative aims to enable direct private sector involvement in financing, building, maintaining, and operating grid infrastructure without negatively impacting Eskom's balance sheet. Additionally, the Electricity Regulation Amendment Bill signed in August 2024 introduced reforms to establish a competitive electricity market and is facilitating the development of IPTs.[58]

55 source: World Bank Group. 2017. Linking Up: Public-Private Partnerships in Power Transmission in Africa. © World Bank, Washington, DC. http://hdl.handle.net/10986/26842

56 World Bank Group. 2015. Private Sector Participation in Transmission Systems: Making It Work. © World Bank, Washington, DC. https://documents1.worldbank.org/curated/pt/337861467990990322/pdf/100989-BRI-VC-PUBLIC-ADD-SERIES-Box393254B-Knowledge-Notes-LW52-OKR.pdf

57 https://energy.economictimes.indiatimes.com/news/power/nepal-signs-power-export-deal-with-bangladesh-and-india/113924805

58 https://www.fasken.com/en/knowledge/2024/06/financing-south-africas-grid-expansion-on-a-public-private-partnership-basis-a-viable-solution

Rethinking private sector participation in Solar PV projects: new business models emerging and Balancing Public and Private Financing

While Independent Power Producers (IPPs) are commonly seen as the primary model for solar production in Africa, there is no fundamental reason for solar projects to be entirely financed by private actors. Each financing approach—whether public, private, or a hybrid—has its own set of advantages and drawbacks.

New business models are emerging to address some of the constraints associated with IPPs, such as the leasing model operated by companies like Scatec RELEASE. These models offer flexibility and scalability, allowing for a more balanced approach between public and private financing. The leasing model for Solar PV replicates the leasing approaches used by companies such as Karpowership and Aggreko through the use of Containerized PV Power Rental. The initial leasing contract typically lasts 5 years and can be reconducted. After 15 years the power plant is transferred to the utility.

In conclusion, while IPPs play a crucial role in developing solar projects, a mixed or hybrid approach that includes public investment and potentially leasing is a viable steppingstone. This strategy not only builds local capacities but also provides public entities with more flexibility and better negotiation terms with private operators, ultimately strengthening the autonomy of African countries in the energy sector.

Case Study
RELEASE Project in Cameroon

Scatec's RELEASE project in Cameroon extends solar plants by 28.6 MW solar and 19.2 MWh BESS. The pros for considering leasing in Cameroon include:

- **Operational Flexibility:** The leasing model is often better suited in contexts where risk mitigation and easier integration of power plants are desired. It allows for greater flexibility in responding to changing needs without committing resources for the long term.
- **Complexity of Sovereign Guarantees:** Providing sovereign guarantees over long periods is complex, especially when the operator is under a concession regime with a limited duration. Sometimes, the duration of an IPP can exceed that of the concession, making the leasing model more appropriate.
- **Regional Security:** In the Sahel region, where security is a major concern due to the presence of armed groups like Boko Haram, the leasing model allows for the deployment of facilities while reducing the risks associated with the security of the infrastructure.
- **Response to an Energy Crisis:** Scatec's offer came at a crucial moment marked by water stress and the unavailability of hydroelectric power plants, leading to significant power outages. The ability to quickly build a power plant using containerized systems was a decisive factor.
- **Contract Flexibility:** The leasing contract offers flexible terms, allowing renewal based on needs and avoiding issues related to the end of Eneo's concession.

Sources: https://scatec.com/2024/06/10/release-by-scatec-extends-solar-plants-in-cameroon-by-28-6-mw-solar-and-19-2-mwh-bess/

Green bonds as innovative financing model in the energy sector

Green bonds have emerged as a pivotal financing mechanism for energy infrastructure projects across Africa, enabling the mobilization of both domestic and international capital towards sustainable development goals. These debt instruments are specifically earmarked for projects that deliver environmental benefits, such as renewable energy installations, energy efficiency improvements, and climate change mitigation initiatives. By aligning with global sustainability standards, green bonds attract a diverse range of investors seeking to support environmentally responsible projects.

A notable example is the green bond programme launched by EnVolt, the renewable energy subsidiary of Mauritius-based ENL Group. In October 2023, EnVolt initiated a MUR 2 billion (approximately USD 45 million) green bond programme[59] to finance the construction and operation of 13 solar photovoltaic plants across Mauritius, with a combined capacity of 14.4 MWp. This initiative represents the first green project bond issuance in Mauritius under the International Capital Market Association's Green Bond Principles 2021, setting a precedent for future sustainable financing in the region. The programme is supported by MCB Capital Markets and FSD Africa, aiming to enhance the country's renewable energy capacity and attract private capital investment into Mauritius' capital markets.

Another significant development is the $150 million solar green bond launched in February 2024 by the International Finance Corporation (IFC) in partnership with Social Investment Managers and Advisors (SIMA)[60]. This bond aims to finance productive-use solar projects throughout Africa, particularly focusing on small and medium-sized enterprises (SMEs) in sectors such as manufacturing, services, education, healthcare, and agri-processing. The bond's first close included contributions from various stakeholders, including the Finland-IFC Blended Finance for Climate Program, the Global Energy Alliance for People and Planet (GEAPP), and development finance institutions such as FMO and DEG. The initiative is expected to finance over 220 MW of on-site solar energy and energy storage projects, contributing to significant reductions in fossil fuel consumption and carbon emissions.

These examples underscore the growing role of green bonds in financing energy infrastructure projects in Africa.

59 https://fsdafrica.org/press-release/envolt-launches-pioneering-mur-2-0-billion-green-bond-programme-for-major-solar-energy-projects-in-mauritius-supported-by-mcb-capital-markets-and-fsd-africa/
60 https://www.ifc.org/en/pressroom/2024/ifc-and-sima-launch-150-million-solar-green-bond-for-african-solar-developers-alongside-finland-and-geapp

8.6.3 Water

Financing infrastructure in the water sector across Africa remains a significant and persistent challenge, despite growing recognition of its centrality to public health, food security, economic development, and climate resilience. Water infrastructure—ranging from urban water supply and sanitation systems to irrigation, storage, and flood control—requires substantial long-term capital investments. However, the sector often suffers from low financial returns, fragmented governance, weak cost recovery mechanisms, and limited creditworthiness of utilities, all of which deter private investment and constrain public budgets.

Furthermore, the cross-cutting nature of water—affecting agriculture, energy, industry, and urban development—complicates financing structures, which often lack integrated planning and clear institutional mandates. While IFIs and other donors continue to play a critical role, their contributions fall far short of the estimated $30–50 bn annual investment need to achieve universal access and resilience objectives[61]. Bridging this gap requires innovative financing models, improved utility performance, and stronger policy and regulatory frameworks to attract both public and private capital.



61 Mind the Gap – Invest in Water Campaign. Africa Water Investment Program (AIP). 2024

Lack of technical and financial capacity to develop projects that are bankable and meet communities' needs

A substantial body of research and practitioner highlights the persistent critical skills gap within many sub-Saharan African (SSA) water utilities and subnational governments. This deficiency in technical, managerial, and financial expertise undermines service delivery, leading to systemic inefficiencies, weak cost recovery, and reduced revenue generation. Since tariffs are a vital source of funding for both the expansion and the operation and maintenance of water infrastructure, this lack of internal capacity directly worsens the infrastructure financing gap. Without the ability to deliver services efficiently or to prepare bankable infrastructure projects, utilities struggle to attract sustainable investment.

Efforts to diversify sources of water sector financing are further constrained by human resource limitations, particularly in underperforming utilities. Staff at these institutions are often unfamiliar with innovative financing mechanisms and instruments and lack the necessary technical, financial, or managerial competencies to engage with them. According to the International High-Level Panel on Water Investments for Africa (2023), there are "critical skill gaps for leadership, management, financing expertise (planning, budgeting, auditing, blended finance), and basic engineering both in government and service providers." These deficits are not only technical but strategic, impeding both day-to-day operations and long-term investment planning.

The World Bank similarly underscored the importance of institutional strengthening, noting that "capacity building is an area that requires strong focus and attention because inadequate institutional capacity increases the risk to development outcomes of World Bank projects." Addressing these gaps is therefore essential not only for improving operational performance but also for unlocking the financial resources needed to meet Africa's water infrastructure needs.

Quest to develop an "economy-wide water lens"

The Organisation for Economic Co-operation and Development (OECD) advocates for the adoption of an "economy-wide water lens" to guide policy and investment decisions. This approach seeks to recognize the deep interconnectedness between water systems and broader economic activities, encouraging more integrated, cross-sectoral strategies for water management. In this framing, water is not treated merely as an environmental asset or service but as a strategic enabler of productivity, resilience, and inclusive development.

Water is a foundational resource for life and a critical input across a wide range of economic sectors. In Africa, the agriculture sector—which employs up to 60% of the workforce and contributes significantly to GDP in many countries—is heavily dependent on reliable water availability. According to the Food and Agriculture Organization (FAO), agriculture accounts for approximately 70% of global freshwater withdrawals, and this figure is even higher in water-scarce African countries where irrigated agriculture is essential for food security and rural livelihoods (FAO, 2023). Furthermore, water underpins energy production, especially in hydropower-dependent systems prevalent in sub-Saharan Africa, and is vital for various industrial processes, from mining to manufacturing and construction.

The intricate dependencies among the food, water, and energy sectors—often referred to as the nexus approach—are now widely acknowledged in policy and academic circles. The nexus concept highlights how water shortages or mismanagement can have cascading impacts on food production, energy generation, and economic stability. A study by the International Water Management Institute (IWMI) and the Global Water Partnership (GWP) underscores the need for nexus-sensitive planning, particularly in regions such as the Sahel and the Horn of Africa where climate variability and water scarcity pose significant threats to development outcomes (IWMI-GWP, 2020).

Despite this awareness, many investments in the water sector—both public and private—still fail to internalize the full economic value of water or to capture its indirect benefits to other sectors. Water is often undervalued, leading to underinvestment and inefficient allocation. The High-Level Panel on Water (convened by the United Nations and the World Bank) has stressed the importance of valuing water in all its dimensions—economic, social, and environmental—to guide better decision-making (UN/World Bank, 2018). This includes recognizing not just the direct utility of water services, but also the broader role of water in climate adaptation, gender equity, and conflict prevention.

In this context, African governments and their partners are increasingly called upon to adopt integrated water resources management (IWRM) frameworks that account for cross-sector linkages and long-term sustainability.

Doing so will require more robust data systems, cross-ministerial coordination, capacity building, and financial instruments that align water infrastructure investments with broader development priorities.

Climate Risks, Water Infrastructure, and the Financing Gap in Africa

Climate change continues to exert a profound influence on the global water cycle, with far-reaching implications for infrastructure development and financing across Africa. According to the World Economic Forum's Global Risks Report (2024), environmental risks—particularly those related to water—have come to dominate the global risk landscape. Two-thirds of surveyed experts identified extreme weather events as the most likely global crisis in 2024, highlighting growing international concern over the material consequences of climate-induced hydrological disruptions. These risks are no longer hypothetical; they are already reshaping national priorities and infrastructure investment decisions, particularly in climate-vulnerable regions like sub-Saharan Africa.

One of the most immediate climate phenomena affecting water infrastructure and financing is the El Niño–Southern Oscillation (ENSO). The warming phase of ENSO—El Niño—is expected to persist and intensify in the coming years, bringing increased volatility to rainfall patterns across the continent. Historically, El Niño events have had differentiated and severe impacts across African regions. For instance, in Eastern Africa, countries such as Kenya, Somalia, and Tanzania experience prolonged heavy rainfall and flooding, which damage roads, bridges, water treatment plants, and sanitation systems. The current cycle has already affected over 600,000 people through flood-related displacement and destruction of infrastructure.

These climate-induced shocks have direct consequences for infrastructure financing:

- Firstly, they raise the cost and risk profile of water-related projects, leading to reduced investor confidence, higher insurance premiums, and delayed disbursement of funds. Infrastructure that is not climate-resilient may quickly degrade, undermining long-term value and return on investment.
- Secondly, governments are increasingly forced to divert limited public resources toward emergency response and recovery, rather than into long-term infrastructure development. This crowding-out effect limits fiscal space for new capital investments, especially in already underfunded sectors like water supply, irrigation, and urban sanitation.

Moreover, from a development finance perspective, climate variability creates uncertainty that complicates project preparation. For example, designing a water reservoir or an irrigation system without accurate hydrological data in a region affected by ENSO-related variability results in infrastructure that may be overbuilt or underperforming, both of which are costly. Multilateral development banks and climate funds now emphasize the importance of climate-resilient infrastructure design and blended finance models that incorporate risk mitigation tools such as climate insurance, contingency financing, and adaptive infrastructure standards.

The intersection of climate shocks, water cycle disruptions, and infrastructure vulnerability necessitates an increase in financing.



Angola's "Bita" drinking water megaproject

The plant will operate through an intake installed in the Kwanza River, which flows near Luanda before emptying into the Atlantic Ocean. Therefore, the project's purpose is to provide large-scale access to clean drinking water in support of meeting SDG 6, "ensuring universal access to safely managed drinking water and sanitation" by 2030.

The project also aims to lay 82 km of water mains to supply four new distribution lines in peri-urban areas, which are currently unsupplied, south of the capital Luanda. These are Cabolombo, Mundial, Ramiros and Bita. Water mains will also be extended to supply two existing but undersupplied distribution centres in the suburbs of Luanda.

The Bita Water Supply Project has an estimated capital cost of US$1.08 bn. Finance was raised from several sources including the African Export Import Bank (AfriExim Bank), the French Development Agency (AFD), British Standard Chartered, Société Générale, Crédit Agricole Corporate and Investment Bank of the Crédit Agricole Group, BNP Paribas, and the World Bank.

Image credit: Afrik 21, 2022
Sources: World Bank Group, 2023. link

Innovative financing instruments in the water sector

Innovative financing mechanisms such as pay-as-you-go (PAYGo) models and blended finance structures are increasingly being utilized to fund water infrastructure projects across Africa. These approaches aim to bridge the substantial investment gap in the water sector, enhance access to clean water, and promote sustainable development.

The PAYGo model, initially popularized in the energy sector, is now being adapted for water services. This model allows consumers to prepay for water services in small increments, making it more affordable and accessible, especially for low-income households. For instance, in Kenya, M-KOPA has extended its PAYGo platform to include water pumps, enabling smallholder farmers to access irrigation services without the burden of large upfront costs.[62] This approach not only improves water access but also supports agricultural productivity and food security.

Blended finance, which combines public and private funding sources, has also shown promise in the water sector. The Maji ni Maisha program in Kenya is a notable example, where the World Bank collaborated with K-Rep Bank to provide loans for small-scale water providers. This initiative leveraged public funds to attract private investment, resulting in the expansion of water services to underserved communities.

Similarly, in Angola, a landmark blended finance structure was employed to develop a comprehensive water infrastructure project, including a treatment plant, transmission system, and distribution networks. This project, supported by various stakeholders, aims to enhance access to clean drinking water and bolster the country's resilience to climate change.

These examples demonstrate the potential of PAYGo models and blended finance to address the challenges in Africa's water sector financing.

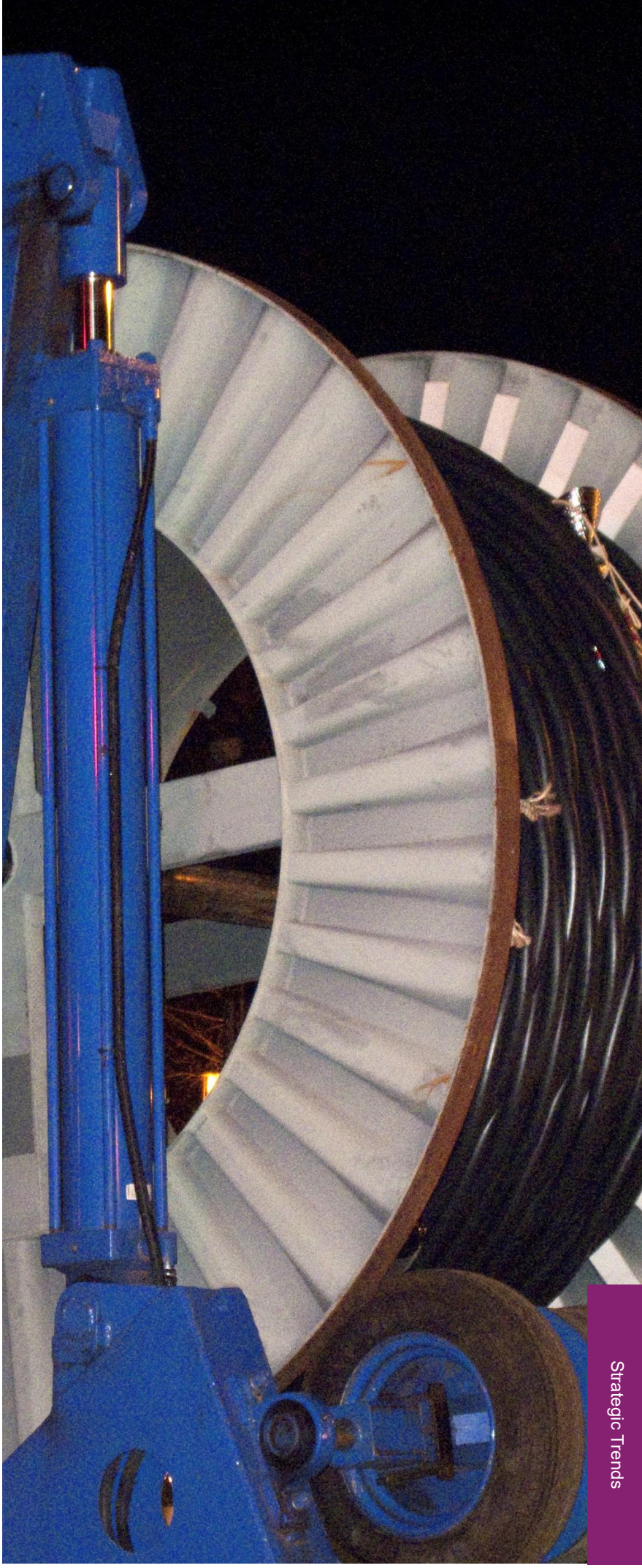
62 https://efficiencyforaccess.org/wp-content/uploads/M-KOPA-pay-as-you-go-models.pdf

8.6.4 ICT

Recent developments in ICT infrastructure financing reveal a shift toward integrated approaches that address all segments of connectivity. First-mile investments, such as submarine cables and landing stations, continue to be driven by consortia and public-private partnerships. Middle-mile infrastructure, including national fiber backbones, is receiving increased support from development finance institutions to enhance regional integration and network resilience. Satellite solutions are emerging as cost-effective alternatives for hard-to-reach areas. Last-mile access is being promoted through blended finance and targeted subsidies to expand rural connectivity. Additionally, "invisible mile" infrastructure—including Internet Exchange Points, spectrum regulation, and cybersecurity systems—is gaining prominence as a prerequisite for efficient and secure digital ecosystems.

First mile infrastructure

According to data provided by SubmarineCableMap.com, all African coastal countries—with the exception of Eritrea—are currently connected to at least one submarine fiber-optic cable. However, six of these countries rely on a single cable connection, exposing them to significant vulnerability in the event of service disruptions. In the case of a cable fault, repairs can take several weeks, and the alternative of rerouting traffic through terrestrial backbones to adjacent submarine landing stations may not provide adequate capacity to maintain normal traffic levels.



The best international practice recommends that each country should establish connections to a minimum of two independent submarine cable systems. This redundancy helps to mitigate the risk of traffic loss, even if the available capacity during a disruption is below normal operational levels.

To implement this redundancy effectively, national broadband operators are generally required to become members of submarine cable consortiums, particularly those with diverse landing points across the African continent. The level of participation is typically determined by the operator's expected bandwidth needs and geographical reach. Based on expert consultations, the minimum capital investment required to finance submarine cable infrastructure—including the laying of the cable and the establishment of a landing station—is estimated to range between $30m and $50m. In addition to capital expenditure, operators must enter into maintenance agreements, which commonly involve annual fees of approximately $1.5m.

These figures underscore the substantial investment needed to strengthen the "first-mile" segment of national ICT infrastructure. Enhancing this foundational layer is critical to ensuring network resilience, minimizing data traffic losses, and reducing the negative economic impact associated with service outages.

Middle mile infrastructure

Expanding national backbone networks across African countries requires substantial capital investment, which varies significantly based on geographic size and population distribution. In many cases, connecting to a newly targeted urban or peri-urban area involves the deployment of additional fiber infrastructure from the nearest node in the existing network. This may also necessitate upgrading the capacity of current links to accommodate increased data volumes driven by broadband demand. As the length and complexity of the national backbone increases, so too does the risk of service outages. To maintain adequate quality of service and network reliability, operators must implement resilient designs—typically by developing meshed network topologies that allow for traffic rerouting in case of failure.

In regions with sparse populations or low commercial viability, particularly in rural or remote areas, the financial return on such infrastructure investments is often insufficient to attract private capital. In such cases, public funding and concessional finance play a critical role in extending backbone infrastructure to ensure universal service objectives are met.

According to estimates by the International Monetary Fund (IMF), achieving broadband connectivity for 90% of the population in Sub-Saharan Africa would require annual aggregate costs of approximately $23bn for the "middle mile" segment alone, covering both investment and operational expenditures. In terms of capital investment, the total annual requirement is estimated at $ 91 bn, underscoring the scale of financing needed to bridge the region's digital infrastructure gap.

Possibility to use satellite access to deserve rural areas

The scale and geography of ICT infrastructure investment in Sub-Saharan Africa present significant constraints in rapidly connecting remote and isolated localities, particularly where terrestrial fiber deployment would require extensive and costly linear infrastructure.

In such contexts, satellite broadband solutions offer a practical alternative to extend services to small and dispersed communities without the immediate need to construct national or regional backbone links. However, this approach is contingent on regulatory conditions, including the issuance of operating licenses to satellite service providers, and typically involves routing data through hub ground stations located outside the country, raising potential concerns related to national data sovereignty and security.

In addition to regulatory considerations, satellite-based solutions are often associated with higher operating costs, which translate into elevated tariffs for end-users, especially for voice and data services in low-income areas. According to the International Monetary Fund (IMF), the estimated cost of delivering satellite connectivity to hard-to-reach regions amounts to approximately $200 per month, typically shared among a cluster of 12 users. This model implies an estimated annual operational cost of $5bn for Sub-Saharan Africa to cover these underserved areas.

As of 2025, Starlink, a leading provider of low-earth orbit satellite broadband, has obtained licenses to operate in only 18 to 20 African countries. In some major urban centers, available service subscriptions are reportedly at full capacity. Starlink also offers a “priority” service plan—featuring 1TB of data per month—targeted at small businesses or shared community hubs in rural areas. The cost for this service is approximately $250 per month and could be shared among 15 to 20 users in remote villages. However, price visibility and availability may vary by country, local currency settings, and language preferences on the provider’s platform.

Internet connectivity by satellite access

1. Malawi: Licensing and Challenges

In October 2022, the Malawi Communications Regulatory Authority (MACRA) granted Starlink three licenses to operate in the country: for network infrastructure, network services, and application services. This followed earlier engagements between the government and SpaceX, initiated in early 2022.

Starlink officially launched services in Malawi in July 2023, offering high-speed satellite internet. Initial user costs were estimated at approximately MWK 577,726 (~$ 550) for the hardware and MWK 52,000 (~$ 49) per month for the service. The service targeted underserved rural areas and was welcomed as a step toward closing the digital divide (Source: Connecting Africa).

However, in October 2024, Starlink suspended new sales of both residential and certain business subscriptions. The suspension followed a regulatory decision by MACRA to reject Starlink's request for a price adjustment, which had been proposed in response to the sharp devaluation of the Malawian kwacha. This incident highlights the complexities of operating in volatile macroeconomic and regulatory environments in Africa (Source: Techzim).

2. Somalia: New Market Entry in 2025

In April 2025, Somalia became the latest African country to authorize Starlink, after more than two years of regulatory discussions. The Ministry of Communications and Technology announced that the licensing aims to improve connectivity across Somalia, particularly in rural and conflict-affected areas with poor fiber or mobile infrastructure.

Elon Musk confirmed Starlink’s availability in Somalia via a public announcement, positioning the country among the growing list of African states embracing satellite internet for digital development (Source: Reuters).

Last mile infrastructure – Radio Access Network (RAN) sharing

The last mile infrastructure is built by the operators, but the investment of 2 or 3 RAN in the same area is not cost-effective. A solution, which is also used in developed countries, is RAN sharing.

RAN sharing is an approach where 2 or more operators decide to collaborate to build a single RAN (including frequencies, radio equipment, antennas) and to share its usage, based on an equal access while each operator has its own subscribers and proposes its own tariffs. Therefore, operators can reduce deployment costs, spectrum licenses, site acquisition issues and operating costs. RAN sharing can be agreed to be in a dedicated area or on a nationwide basis. This solution appears to be cost effective in the non covered rural areas. It is therefore recommended that ICT regulators could authorize this approach more

Of note, if operators use 4G technology which is more efficient than 2G or 3G, the annual investment costs of the RAN are estimated to be 25bn$ and the annual operating costs amount to nearly 30bn$ in Sub-Saharan Africa[63]. Depending on the number of operators in the countries, RAN sharing could reduce this last mile investment need by 25% or more.

Still, the regulatory framework for RAN sharing is critical for fostering efficient, inclusive, and sustainable telecommunications growth. A clear and supportive regulatory framework ensures fair competition, prevents monopolistic practices, and establishes guidelines for cost-sharing, quality of service, and spectrum allocation.

Moreover, a robust regulatory framework builds investor confidence and encourages private-sector participation in Africa's ICT market. It provides legal clarity on issues like liability, data privacy, and infrastructure security, which are essential for operator collaboration.

Effective regulations also align with international standards, facilitating cross-border RAN sharing initiatives that can optimize resource use at regional level on the continent.

Invisible mile

The expansion of broadband infrastructure across ICT networks necessitates a comprehensive focus on the "invisible mile", which encompasses all the underlying tasks and investments required to ensure security, reliability, and trust in digital services. While not immediately visible to users, these tasks are vital for safeguarding personal data, protecting against cyber threats, and maintaining the integrity of communication systems.

The invisible mile includes legal frameworks, regulatory oversight, and governance structures, all of which are crucial for protecting users and ensuring that broadband providers operate transparently and efficiently. Governments bear the responsibility for enacting laws and regulations, including data protection laws and cybercrime statutes, which require significant investments in policy development and enforcement mechanisms.

Operators, on the other hand, must invest in licenses, compliance with cybersecurity standards, and the creation of robust security infrastructures such as firewalls, antivirus software, and data encryption technologies. For example, African countries like Kenya and South Africa have introduced national cybersecurity frameworks to improve trust in ICT services and mitigate cyber risks. These efforts demand continuous investments in both technology and human resources to stay ahead of evolving digital threats.

63 IMF – Estimating digital infrastructure investment needs to achieve universal broadband p18 – February 2023

Service providers, including content platforms and cloud service operators, also play a critical role in the invisible mile. They invest in software development, content delivery networks (CDNs), and platform management to ensure the availability, scalability, and accessibility of online services. For instance, in Nigeria, the government has partnered with private sector players to improve digital literacy and ensure that ICT skills development aligns with market needs, fostering both local innovation and sustainable content ecosystems.

The International Monetary Fund (IMF) estimates that the annual cost associated with the regulation of ICT networks, as well as the development of skills and content, amounts to approximately $ 10 bn across Sub-Saharan Africa. However, this estimate does not account for additional investments needed in physical infrastructure such as data centers or the development of software platforms, both of which are also integral components of the invisible mile. These data centers are essential for hosting the enormous amounts of data generated by users, and their role in processing and storing data is becoming increasingly important with the rise of cloud computing and Big Data applications.

Supporting infrastructure, such as datacenters, electricity supply, and Internet Exchange Points (IXPs), is another critical component of the invisible mile. Without a reliable and uninterrupted power supply, for example, datacenters cannot function, thus leading to potential service disruptions. IXPs, which facilitate the efficient exchange of internet traffic between local networks, are crucial for reducing latency and ensuring faster, more reliable connections.

Countries like Kenya and Uganda have seen success in establishing IXPs that reduce reliance on international data routes, helping local networks operate more efficiently and reducing costs.

In addition, cloud services and platforms increasingly require robust and secure datacenter infrastructures. In countries such as South Africa and Nigeria, the development of private and public cloud services is being supported by investments in datacenters, which are also linked to larger regional hubs. This infrastructure is critical not only for hosting services but also for driving digital innovation across the continent. These investments have the potential to reduce operating costs for businesses and enable access to affordable, high-performance computing services.



Policy Insights

9

The key policy frameworks and strategies that currently guide infrastructure financing in Africa encompass a variety of recent initiatives aimed at closing financing gaps and enhancing project implementation. These policies include the African Union's Programme for Infrastructure Development in Africa (PIDA), which seeks to address the continent's infrastructure deficit by promoting cross-border projects and regional integration

The African Development Bank's (AfDB) High 5 priorities also play a significant role, particularly the "Integrate Africa" and "Light Up and Power Africa" initiatives, which focus on improving connectivity and energy access through substantial infrastructure investments.

Recent initiatives have further bolstered these frameworks, such as the Sustainable Development Goals (SDGs) and the African Continental Free Trade Area (AfCFTA), which emphasize sustainable and inclusive development. The effectiveness of these strategies can be seen in the increased mobilization of both public and private sector resources. For instance, the AfCFTA has stimulated investments in regional economic corridors, facilitating trade and industrialization.

Moreover, the implementation of innovative financing instruments like infrastructure bonds, PPPs, asset recycling and blended finance mechanisms have been instrumental in bridging the financing gaps. These tools have enabled more effective risk-sharing and leveraged additional capital, contributing to improved project outcomes.

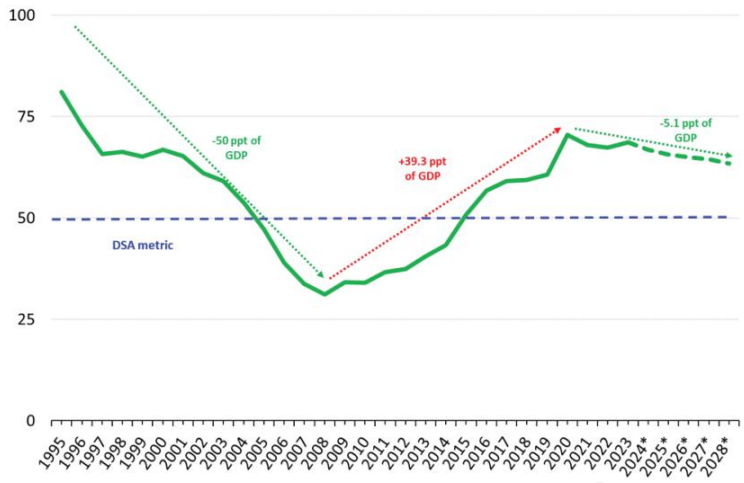
The impact of these policies and initiatives is evident in the enhanced project implementation across the continent as number of projects implemented kept increasing over the period, including flagship continental projects like Nachtigal Hydropower plant in Cameroon, the Abidjan-Lagos Corridor in West Africa or the BRT in Dakar, to name a few. By addressing regulatory and institutional barriers, these strategies have streamlined processes and fostered better coordination among stakeholders. This, in turn, has resulted in more efficient execution of infrastructure projects, ensuring that they are more efficient. Overall, the concerted efforts of African governments, regional organizations, and international partners are gradually transforming the infrastructure landscape, paving the way for sustainable development and economic growth.

Still, several policy challenges must be overcome to increase the volume and enable more targeted infrastructure financing. The points below offer a view on some of the most salient policy insights related to infrastructure financing in Africa.

9.1 Reforms to limit debt effects on IFT

As shown in section 8.1, the African governments leveraged debt in the early 2010s to enhance their fiscal space for development through infrastructure projects. The low-interest environment and rocketing commodity prices encouraged African countries to use excessive long-term debts for infrastructure investment. As a result, overall infrastructure financing reached its peak in 2013 amid the peak of commodity prices; bottomed out when commodity prices busted in 2016; recovered gradually in the late 2010s; before falling again under multiple shocks in the early 2020s.

Figure 9-1: Central Government Debt. African countries. 1995-2028 (Percent of GDP).



Source: Afreximbank. State of Play of Debt Burden in Africa 2024.

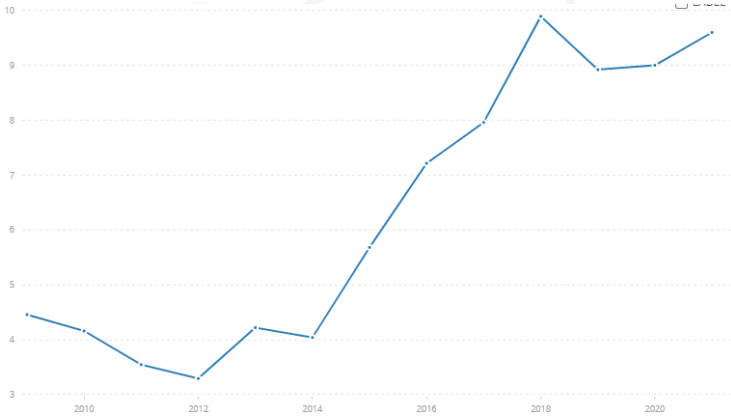
By 2020 as many countries had already accumulated substantial debt during previous periods of low interest rates and high commodity prices, they found themselves at high risk of debt distress.

This limited borrowing capacity hindered the ability of African governments to invest in necessary infrastructure developments, exacerbating the existing financing gaps and highlighting the urgent need for sustainable and diversified investment strategies.

Considering the growing debt concern, at the beginning of 2023 the United Nations called for reform of the International Financial Architecture[64] by:

- **Tackling the high cost of debt and rising risk of debt distress and creating a debt workout mechanism** to address the slow progress of the G20 Common Framework for Debt Treatment due to creditor coordination challenges and the lack of automatic debt service suspension clauses to participating countries.
- **Make the system more inclusive**, improving the real and effective participation of developing countries in the governance of international financial architecture.
- **Provide greater liquidity in times of crisis,** expanding contingency finance, so that countries are not forced into debt as a last resort, including through the strengthened use of Special Drawing Rights, a temporary suspension of IMF surcharges, and increased quota-access windows to IMF emergency financing.

Interest payments (% of revenue) Sub-Saharan Africa (excluding high income). 2009-2021



Source: International Monetary Fund, Government Finance Statistics Yearbook and data files.

- **More and better finance, massively scaling up affordable long-term financing**. The transformation and expansion of Multilateral Development Banks to support long-term sustainable development and scaling up private resources. More concessional finance; fulfilling aid and climate finance commitments.

In respect of the latter point, the World Bank Group has implemented a series of reforms and developed innovative financial instruments as part of the **Capital Adequacy Framework** review, which was recommended by the G20 expert group in 2023. These financial measures include:

- The provision of shareholder hybrid capital products to enhance the value of callable capital that can be called upon in extreme circumstances
- The lowering of the minimum Equity-to-Loans ratio to 18% from 19%
- The improvement of financing terms, which includes introducing a grace period for paying commitment fees on undisbursed balances, removing the pre-payment premium to widen clients' repayment options, introducing discounted pricing for short maturity loans with a final maturity of seven years, and extending IBRD's lowest pricing to more vulnerable, small states
- Increased limits for shareholder bilateral guarantees by up to $10bn.

64 United Nations Secretary-General's SDG Stimulus to Deliver Agenda 2030. February 2023

These measures could enable *"more than $150bn in additional financing over 10 years"* according to the World Bank. In other words, implementing the above recommendations could unlock substantial capital for structural transformation through infrastructure financing in Africa.

Another possible instrument to limit the effect of debt is debt swaps. Amid rising debt vulnerabilities across the African continent, debt swaps are emerging as a pragmatic instrument to relieve fiscal pressures while mobilizing resources for critical development needs. Debt swaps—particularly debt-for-development or debt-for-climate swaps—enable creditor countries or institutions to cancel a portion of a country's external debt in exchange for a commitment to invest domestically in agreed-upon sectors. For African countries grappling with high debt servicing costs and constrained fiscal space, such mechanisms offer dual benefits: immediate reduction in interest and principal repayment obligations, and the redirection of funds toward priority sectors such as infrastructure, energy transition, health, or education.

In a context where traditional sources of concessional finance are diminishing and external borrowing is increasingly costly, debt swaps provide an alternative route to bridge infrastructure financing gaps without exacerbating sovereign risk. They can also attract donor and private sector support when aligned with global agendas such as climate adaptation or sustainable development.

In January 2023, Cabo Verde and Portugal signed a bilateral debt-for-climate swap agreement, converting part of the archipelago's external debt into local investments for climate action. Under the agreement, Portugal agreed to restructure €12 million of Cabo Verde's sovereign debt, allowing those funds to be redirected toward projects that support climate resilience, renewable energy expansion, and environmental sustainability. The initiative reflects a growing international recognition of the need to link debt relief with sustainable development financing, particularly for climate-vulnerable countries.

The reallocated funds are intended to support Cabo Verde's national climate agenda, including its ambitious goal of achieving 100% renewable electricity production by 2040. The swap not only reduces the fiscal burden associated with external debt servicing but also addresses urgent financing gaps in the energy transition and environmental sectors. This case exemplifies how debt-for-climate swaps can serve as a practical tool for aligning creditor and debtor interests, fostering both fiscal sustainability and long-term development goals.

To be effective, however, debt swaps must be embedded in broader debt management and public investment frameworks, ensuring transparency, accountability, and alignment with national development strategies. When carefully designed, they can serve not only as a financial relief mechanism but also as a catalyst for sustainable investment.

9.2 Tackle Fiscal challenges

Policies are crucial to reversing these debt trends and maintaining the sustainability of public finances while achieving the region's development goals. A significant weakness in Africa's fiscal policy is the lack of a clear medium-term strategy or clear vision of the debt trajectory, with an excessive focus on short-term fiscal deficit goals. This "lack of anchoring" has led to frequent breaches of fiscal rules and rising public debt levels.

A more strategic approach to fiscal policy would be to set explicit debt targets that balance debt sustainability and development objectives. African countries would benefit from adopting a new method to estimate country-specific medium-term debt anchors, ensuring manageable debt service costs. According to studies[65], the median debt anchor for sub-Saharan Africa is about 55% of GDP, with slightly more than half of the countries exceeding this anchor by the end of 2022.

Hence, most countries in the region will need to reduce their fiscal deficits in the coming years. Regarding the composition of adjustment, sub-Saharan African countries tend to rely too much on expenditure cuts to reduce their fiscal deficits. While this may be necessary in some cases, revenue measures, such as eliminating tax exemptions or digitalizing filing and payment systems, should play a greater role. Although difficult, significant and rapid revenue increases have been observed in countries like Rwanda, Senegal, and Uganda, which relied on a combination of revenue administration and tax policy measures.

65 Navigating fiscal challenges in sub-Saharan Africa: Resilient strategies and credible anchors in turbulent waters. Fabio Comelli, Antonio David, Luc Eyraud, Peter Kovacs, Jimena Montoya, and Arthur Sode February 27, 2024

9.3 Engaging institutional investors to realize the long-term value of African infrastructure investments

Traditional sources of funding— such as public investment, development finance institutions, and private investors—have proven insufficient to bridge the infrastructure finance deficit. In this context, institutional investors such as pension funds, sovereign wealth funds, insurance companies, and asset managers represent a substantial, yet underutilized, source of long-term capital.

Institutional investors manage a large amount of financing, estimated at $100tn in global assets, with African institutional investors accounting for a modest but growing share (see section 8.2.1). As of 2022, African pension funds alone managed over $350bn in assets, with South Africa, Nigeria, Kenya, and Namibia representing the largest markets (OECD, 2023).

However, only a small fraction of these assets is currently allocated to infrastructure, less than 2% across most African countries (PPIAF, 2022).

The long-term and stable nature of infrastructure investments make them particularly well-suited to the liabilities and investment horizons of institutional investors. For instance, pension funds and insurance companies seek assets that provide predictable cash flows and hedge against inflation over 10- to 30-year periods - characteristics often associated with core infrastructure projects such as roads, energy, water, and telecommunications.

To unlock institutional capital at scale, several enabling conditions must be addressed.

First, investment-grade bankable projects need to be developed and structured appropriately to match institutional investor requirements, particularly in terms of risk-return profiles, governance, and liquidity.

Second, regulatory frameworks must be adapted to allow and encourage pension funds and insurers to diversify into infrastructure, including through pooled vehicles or listed infrastructure instruments. For example, regulatory reforms in Kenya and Nigeria have begun to allow pension funds to invest in infrastructure debt and equity under certain thresholds.

Third, instruments such as guarantees, credit enhancements, blended finance structures, and green bonds can be utilized to mitigate perceived risks and improve attractiveness for institutional investors. Institutions like the World Bank's Multilateral Investment Guarantee Agency (MIGA), the African Development Bank's Partial Risk Guarantees, and private risk mitigation facilities play a critical role in

66 In 2020, Kenya's Retirement Benefits Authority (RBA) amended its investment guidelines to classify infrastructure as a distinct asset class. This regulatory change permits pension funds to allocate up to 10% of their assets to infrastructure investments. "Pooling Pensions in Kenya. IFC. 2023"

67 Nigeria's National Pension Commission (PenCom) has been proactive in revising investment regulations to enable pension funds to participate in infrastructure financing. Under the amended guidelines, pension fund administrators can invest up to 5% of their assets in infrastructure projects.

9.4 Under-developed capital mark

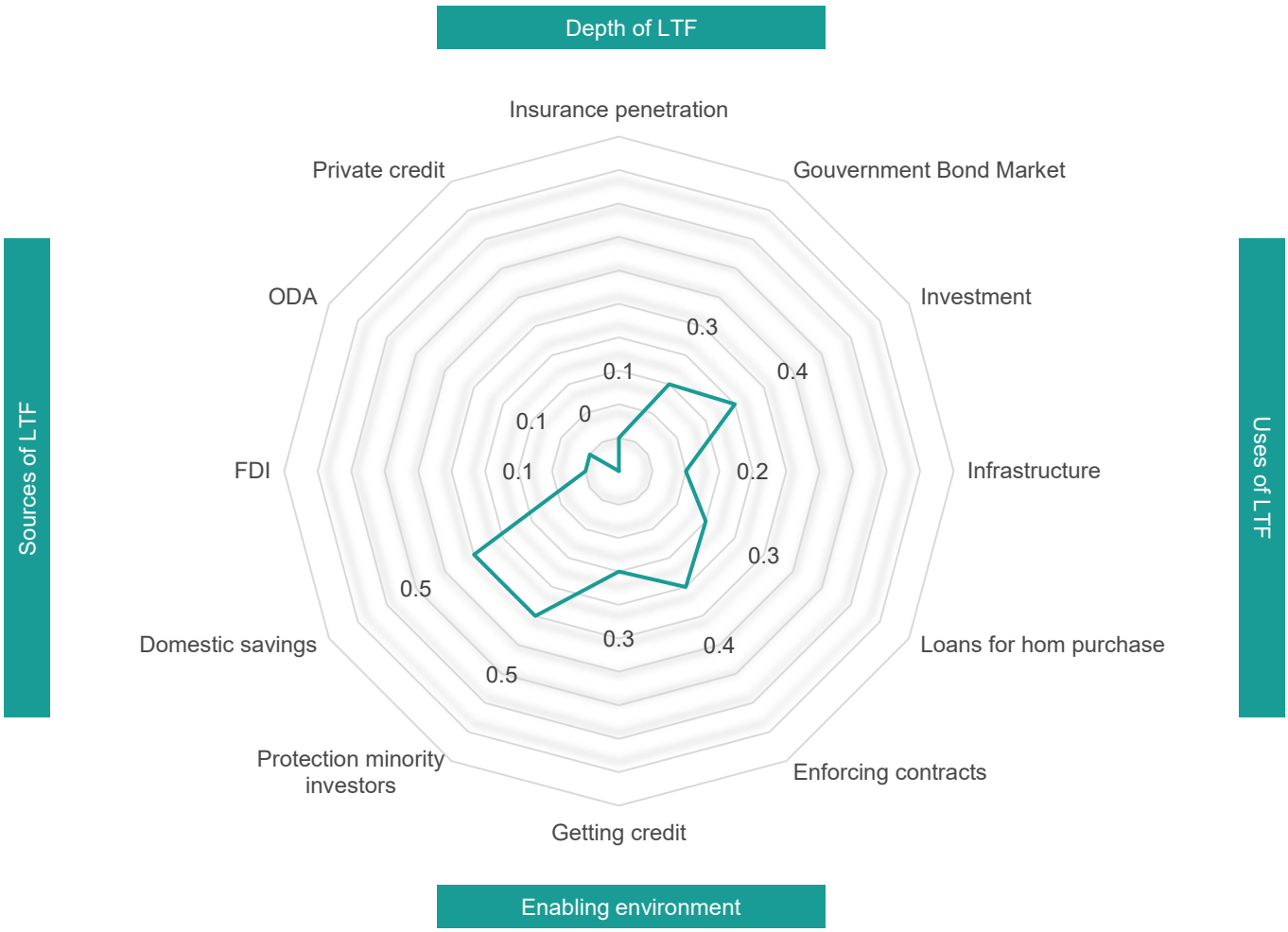
Liquid, diverse, and well-regulated local capital markets are an essential source of local-currency financing for governments and financial sector participants. Better developed domestic capital markets, particularly debt markets, can help allocate investment more efficiently and allow for better risk-sharing, while providing an alternative funding source to complement bank financing.

Capital markets in Africa have the potential to support the financing of priority activities in vital development sectors such as infrastructure, agribusiness, and housing. However, many African markets are still at a nascent stage. Equity markets are small, with low liquidity and few listed securities. Bond markets suffer from limited benchmarks for pricing securities, low liquidity, rigid regulatory frameworks, and inefficient infrastructure.

The continent's stock exchanges have relatively low market capitalization and amount together to 1.4% of global market capitalization[68].

The graphic below illustrates the limited scores of key indicators for Long-Term Finance on the continent.

Figure 9-2: The Long-Term Finance's (LTF) Radar
(rescaled indicators over 2013-2020 – scale 0.1 to 1)



Source: Making Finance Work for Africa. Annual Report 2023.

68 African Institute for Economic Development and Planning (IDEP). Capital Market Development for Africa's Structural Transformation. UNECA. 2024

As shown above, this underdevelopment of capital markets in Africa is attributable to both supply and demand factors.

On the supply side, few institutions have the capacity to raise capital through capital markets. High cost and onerous regulatory requirements have prevented companies from coming to capital markets.

On the demand side, the investor base is narrow and dominated by local banks. Capacity is limited among domestic institutional investors for dealing in fixed income instruments, while regulators need to strengthen their skills to ensure effective market supervision.

These underdeveloped capital markets in Africa significantly hinder the ability to finance infrastructure projects. Bond financing for instance, essential for infrastructure development that requires predictable fixed income streams, is used in a limited manner due to the underdeveloped state of these markets. Such financing typically needs to rely on government tax revenues to pay back bonds, but the lack of well-established capital markets means there are insufficient mechanisms to support this.

Additionally, there is a notable deficiency in government guarantees that could mitigate investment risks. Even with these guarantees, infrastructure project bonds in Africa struggle to achieve the investment-grade ratings necessary to attract foreign investors. This is primarily due to the “sovereign ceiling,” which is determined by the noninvestment-grade ratings of the region's governments.

To overcome these challenges, African financial sectors' regulators are encouraged to issue coordinated policy guidelines to guide their institutions, including commercial banks, development finance banks, security companies, pension funds, and insurance companies. These guidelines should help match risk-averse institutional investor financing with infrastructure financing needs. Moreover, policy guides for infrastructure securitization and asset recycling are advised to foster a more robust investment environment.

9.5 Inadequate Tariff Structures

In many African countries, tariffs/prices set for infrastructure services like electricity, water, and transportation are not aligned with the actual operating costs. This misalignment creates financial imbalances and dissuades private and institutional investors from financing infrastructure projects. Inappropriate tariff structures are particularly problematic for projects which require substantial upfront investment and long-term operational sustainability.



The table below provides a sample of challenges associated with tariff structures and associated impacts on financing.

Challenge	Description	Impact on infrastructure financing
Underpricing of Services	Subsidized Tariffs: Governments often set tariffs below cost recovery levels to make essential services affordable for citizens, especially in low-income populations. While socially driven, this practice can result in:	• Insufficient revenue for service providers to cover operational, maintenance, and expansion costs. • Reduced financial attractiveness of projects to private investors who require predictable revenue streams. Example: Electricity tariffs in some African countries are lower than the cost of generation, transmission, and distribution, creating chronic deficits for utilities.
Lack of Cost-Reflective Pricing	Cost-reflective pricing involves setting tariffs that accurately reflect the full lifecycle costs of infrastructure, including: • Initial capital investment. • Operating and maintenance costs. • Risk premiums and returns for private investors.	In many cases, tariffs fail to account for these elements, leading to unsustainable financial models for projects.
Regulatory Interference	Political or regulatory bodies may intervene to freeze or reduce tariffs, especially during times of economic or political instability.	• Undermine long-term planning and financial modeling for infrastructure operators. • Create uncertainties for private investors, who require assurances of stable and predictable cash flows.
Subsidy Structures	• Unplanned Subsidies: Governments often provide ad-hoc subsidies to bridge the gap between low tariffs and actual costs, but these are not always reliable or sustainable. • Lack of Targeting: Subsidies often benefit wealthier urban populations (e.g., for electricity or water), while poorer rural populations remain underserved. • Fiscal Pressures: Heavy reliance on subsidies strains public finances, reducing funds available for infrastructure development.	• Subsidies directed towards unplanned projects or wealthier urban populations result in significant opportunity costs, as they divert funds from potentially beneficial project investments.

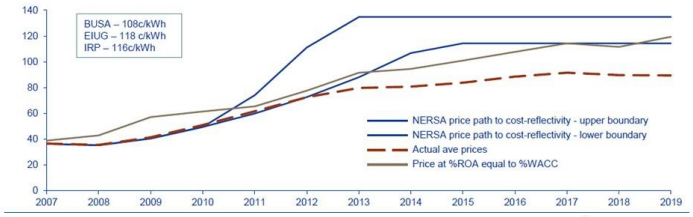
Challenge	Description	Impact on infrastructure financing
Tariff Collection Challenges	In some cases, even when tariffs are appropriately set, revenue collection is weak due to: • Inefficient billing systems. • High levels of nonpayment or theft (e.g., electricity losses due to illegal connections).	This results in lower-than-expected revenue for service providers, exacerbating financial gaps.

Inappropriate tariff structures create a range of financial and operational challenges which undermines the ability to finance infrastructure projects in Africa. First, low or non-cost-reflective tariffs erode investor confidence. Investors are generally reluctant to commit capital to projects where revenue projections are uncertain or insufficient to cover operational costs and provide reasonable returns. More specifically, the commercial viability of PPPs can be jeopardized by inappropriate tariffs. When pricing mechanisms fail to generate adequate revenue, private sector actors are discouraged from participating, as their ability to recover investments and earn profits is constrained. This reduces the attractiveness of infrastructure projects to private partners, leaving governments to shoulder the financial burden alone.

Moreover, low tariff levels often force governments and utilities to rely heavily on external support from international donors and development finance institutions. While such support can temporarily bridge funding gaps, it is not a sustainable solution and often leads to dependency.

The lack of robust tariff-generated revenue also limits the capacity of utilities and service providers to reinvest in their infrastructure, whether for routine maintenance, upgrades, or expansion to underserved areas. This, in turn, perpetuates service inefficiencies and limits access to essential services for growing populations.

Figure 9-3: Illustration of the impacts of non-reflective tariffs on utilities. ESKOM.



Source: A brief perspective on Eskom's electricity tariffs. Dr Ulrich Minnaar. Eskom

Lastly, inappropriate tariff structures can undermine the long-term financial sustainability of infrastructure projects. Without adequate revenue streams, project operators face chronic financial deficits, which may lead to underperformance or even failure of infrastructure systems. This cycle of financial instability diminishes the overall appeal of infrastructure as an investment class, further compounding the challenges of mobilizing capital in the sector.

9.6 Shaping regulatory frameworks to support blended finance and public-private risk sharing

In summary, inappropriate tariffs create a ripple effect of financial insecurity, limiting private investment, increasing dependence on external funding, and restricting the growth and sustainability of infrastructure projects. Addressing these issues through the establishment of cost reflective approaches together with planned and transparent subsidies is critical to unlocking the full potential of infrastructure financing in Africa.

Public budgets alone cannot bridge the infrastructure financing gap. Fiscal pressures—exacerbated by the COVID-19 pandemic, external debt burdens, and commodity price shocks—are constraining the ability of African governments to invest directly in infrastructure (see sections 8.1 and 9.2.1). At the same time, private sector investment remains limited due to perceived high risks, regulatory uncertainties, and underdeveloped capital markets (see sections 8.4 and 8.4.3).

In this context, blended finance and public-private risk-sharing mechanisms offer promising pathways to unlock new sources of capital, particularly from institutional investors and development partners.

Blended finance, defined by the OECD as "the strategic use of development finance to mobilize additional finance for sustainable development in developing countries," has gained traction globally but remains underdeveloped in Africa. According to Convergence Blended Finance Dataset (2023), Africa accounted for just 19% of global blended finance flows between 2017 and 2022, while the needs are the greatest. Moreover, within Africa, only a fraction of these flows targeted core infrastructure sectors like transport, energy, and water.

Region	Total Blended Finance Deals (2017–2022)	% of Global Total	Share of Infrastructure (%)
Sub-Saharan Africa	135	19%	21%
Latin America	110	16%	29%
South Asia	92	13%	24%
Global Total	**702**	**100%**	**26% (overall)**

Source: Convergence Blended Finance Dataset, 2023

One of the most significant barriers to scaling blended finance in Africa lies in the regulatory and institutional frameworks governing infrastructure financing. In many African countries, the legal basis for public-private partnerships (PPPs), is weak or fragmented, and the institutional capacity to assess, structure, and monitor blended finance transactions remains limited. Many governments lack the tools and mandates needed to absorb contingent liabilities, issue guarantees, or provide subordinated finance—tools that are critical for effective risk-sharing with private actors.

Furthermore, inconsistent regulatory oversight often deters private investors who require predictability, bankability, and enforceable contracts. According to the World Bank's Benchmarking Infrastructure Development 2023, many African countries score below the global average in key indicators related to contract enforcement, regulatory independence, and tariff-setting flexibility—all of which are essential for attracting blended finance.

To overcome these barriers, African governments must modernize their regulatory frameworks. This involves several key priorities:

1. Reinforcing their legal frameworks for PPPs and blended finance to ensure clarity and coherence, including guidelines for the use of guarantees, viability gap funding, and concessional finance instruments.
2. Strengthening institutional capacity within ministries of finance, PPP units, and regulatory authorities to structure and manage blended finance transactions.
3. Facilitating regulatory innovations, such as differentiated licensing regimes or sandbox environments for infrastructure technologies, to encourage private participation.
4. Promoting regional harmonization, particularly in cross-border infrastructure projects (e.g., power pools and transport corridors), where consistent regulatory environments can reduce investor risk.

IFIs can play a catalytic role by supporting these reforms and de-risking early-stage investment through concessional funding, technical assistance, and capacity building. For example, the Africa50 Infrastructure Fund has pioneered blended finance structures in energy and transport.

By designing, implementing or reinforcing enabling regulatory frameworks that promote blended finance and risk-sharing mechanisms, the continent will reduce its dependence on scarce public funds and leverage the trillions of dollars opportunity of private capital seeking impactful, long-term investment opportunities.

9.7 Reinforce Quality Infrastructure Systems

Bridging the infrastructure financing gap also lies in demand-side management. Ensuring quality in developing, constructing, operating, and maintaining infrastructure assets based on high standards and best practices increases the lifetime of the asset and therefore reduces the long-term demand for additional financing.

Across Africa, the concept of Quality Infrastructure (QI) comprising standards for construction inputs, testing infrastructure systems, certification, and accreditation of construction companies - has become increasingly relevant for infrastructure sectors such as transport, energy, and water. Ensuring that infrastructure assets are safe, interoperable, durable, and sustainable depends on the presence of robust QI approaches. In recent years, continental and regional bodies have launched a number of initiatives to systematically embed QI in infrastructure planning and implementation.

A major milestone was the adoption of the African Quality Policy (AQP) by the African Union in 2021[69], which calls for the harmonization of standards and certification systems across all sectors, including infrastructure. The policy encourages the alignment of national standards with international norms (e.g., ISO, IEC), the development of accredited laboratories, and the integration of QI in public procurement (African Union Commission, 2021).

Supporting the operationalization of the AQP, the Pan-African Quality Infrastructure (PAQI) platform—comprising AFRIMETS, AFRAC, ARSO, and AFSEC—coordinates the development of sectoral quality systems. For instance, AFSEC has advanced the harmonization of technical standards in the electricity sector, such as grid codes and renewable energy equipment specifications. ARSO works on standards for transport infrastructure, including road signage and axle load controls, while AFRIMETS supports the calibration of water measurement devices and material testing in civil works (PAQI, 2022).

AfCFTA provides further momentum through its Protocol on Trade in Goods, which includes specific annexes on Technical Barriers to Trade (TBTs). These provisions support the mutual recognition of standards and certification in infrastructure-related goods such as steel, cement, transformers, and vehicles—reducing costs and enabling smoother regional integration (UNECA, 2021).

Several development partners have also prioritized QI in infrastructure. The World Bank, through the Quality Infrastructure Investment Partnership (QIIP), promotes the integration of testing and certification standards into project design and procurement.

At the regional level, RECs such as ECOWAS, EAC, and SADC have developed harmonized infrastructure standards. ECOWAS has adopted common building codes and energy standards, EAC has worked on road safety and vehicle regulation, while SADC has issued norms for hydropower and environmental monitoring systems (SADCSTAN, 2020).

Despite these advances, many African infrastructure agencies still lack the capacity to apply QI systematically. Embedding QI throughout the infrastructure lifecycle, particularly in feasibility studies, procurement, and maintenance—is critical. Policymakers must also recognize QI as a strategic enabler of infrastructure performance and regional integration, not merely a regulatory requirement.

69 https://www.arso-oran.org/the-african-quality-policy/#:~:text=The%20AQP%20is%20the%20basic,as%20well%20as%20international%20needs

9.8 Overall Macroeconomic Parameters

The ability of African governments to finance and implement large-scale infrastructure projects is increasingly constrained by adverse macroeconomic conditions. Structural vulnerabilities in public finance, compounded by recent global and regional shocks, have significantly reduced fiscal space and raised the cost of borrowing, as shown in previous sections.

Several interrelated macroeconomic trends—particularly elevated inflation, fragile macroeconomic policy frameworks, currency devaluation, and budgetary constraints—are exerting downward pressure on the scale, quality, and sustainability of infrastructure investment.

High inflation rates across many African economies have eroded the real value of government spending and undermined investment planning. According to the IMF's *Regional Economic Outlook for Sub-Saharan Africa* (April 2024), average annual inflation in the region remained above 15% in 2023, with several countries experiencing rates exceeding 30% due to food price volatility, energy shocks, and local currency depreciation. Inflationary environments increase the cost of inputs for infrastructure projects, such as cement, steel, fuel, and labor, leading to frequent cost overruns and renegotiations. They also distort long-term financial projections, complicating the planning of public–private partnerships (PPPs) and discouraging private investment.

As Africa transitions toward climate-resilient and technologically advanced infrastructure, investment in adaptive QI systems will be essential. Robust standards and accredited conformity systems are needed to support innovation,

Finally, the integration of quality infrastructure reduces the demand for financing by reducing infrastructure lifecycle costs and mitigating project risks. According to World Bank estimates, incorporating quality assurance measures—such as certified materials, accredited testing, and harmonized standards—can lead to cost savings of 20% to 30% over the life of an infrastructure asset, through reduced maintenance needs, fewer technical failures, and extended asset life (World Bank, 2018).

Moreover, improved QI frameworks help de-risk infrastructure investments, making them more attractive to private financiers and concessional lenders by increasing predictability, reducing procurement disputes, and ensuring compliance with environmental and social safeguards. In fiscally constrained environments, these savings can translate into more infrastructure delivered per dollar invested, amplifying the development impact of public and donor financing.

Simultaneously, macroeconomic policy frameworks have come under stress. Weak revenue mobilization, limited tax bases, and rising subsidy burdens have contributed to unsustainable fiscal deficits in many African countries. The median fiscal deficit in Sub-Saharan Africa reached 5.2% of GDP in 2023 (IMF, 2024), a level that limits the ability of governments to finance infrastructure through their own budgets or to provide guarantees for private capital. Additionally, pro-cyclical fiscal policies (government spending and taxation decisions that amplify economic fluctuations rather than stabilize them) and limited usage of medium-term expenditure frameworks hinder the predictability of infrastructure budgeting, leading to chronic underinvestment, project delays, and maintenance backlogs.

As shown previously, 22 African countries were at high risk of debt distress or already in distress according to the IMF-World Bank Debt Sustainability Analysis (DSA). High debt servicing costs have crowded out capital expenditure, including infrastructure outlays. In some cases, more than 50% of domestic revenues are being used to service external debt, leaving little room for strategic investments. Countries like Ghana, Zambia, and Ethiopia have faced significant debt restructuring needs, which further delay infrastructure development pipelines and deter foreign investment.

Moreover, currency depreciation has intensified infrastructure financing challenges, particularly in economies reliant on imported construction materials and foreign-denominated loans.

Taken together, these macroeconomic pressures are narrowing the fiscal and policy space for infrastructure investment across Africa. In this context, several policy insights can help governments better manage macroeconomic constraints while continuing to build critical infrastructure. The list below builds on the findings of this report:

- Strengthening fiscal frameworks is essential. Governments should prioritize the adoption of medium-term expenditure frameworks (MTEFs) and infrastructure-specific fiscal rules to protect capital spending during periods of budget adjustment. Enhancing public investment management systems can improve project selection and reduce inefficiencies.
- Mobilizing domestic resources more effectively is critical to reduce dependence on external borrowing. Expanding tax bases, rationalizing subsidies
- Adopting risk mitigation instruments to manage exchange rate and inflation risks is increasingly important. Tools such as local currency financing, foreign exchange hedging, and blended finance facilities (e.g., guarantees, insurance) can help de-risk infrastructure investments and attract

The depreciation of local currencies—driven by balance of payments pressures, reduced capital inflows, and rising interest rates in developed economies—has increased the cost of servicing external infrastructure debt and exposed governments and private operators to exchange rate risks. In 2023 alone, several African currencies, including the Egyptian pound, Ghanaian cedi, and Nigerian naira, lost over 30% of their value against the US dollar (World Bank, Africa's Pulse, October 2023). This has raised the cost of foreign-funded infrastructure projects and led to payment arrears and credit downgrades in some countries.

- Enhancing concessional financing through deeper engagement with IFIs and climate funds can ease fiscal constraints. IFIs should be encouraged to increase their risk appetite and provide counter-cyclical support that sustains infrastructure investment during macroeconomic downturns.
- Improving the quality of spending is just as important as increasing its quantity. Embedding robust quality infrastructure (QI) systems—such as standards, testing, and certification—can ensure infrastructure resilience, reduce lifecycle costs, and improve value for money, especially in inflationary and resource-constrained environments.
- Finally, regional approaches to infrastructure development, especially in energy interconnexions and transport corridors—can create economies of scale and reduce duplication of efforts. Pooling resources and aligning macro-fiscal policies at the regional level can help mitigate individual country vulnerabilities.

9.9 SDG finance

The alignment of infrastructure investments with the Sustainable Development Goals (SDGs) is increasingly recognized as a powerful lever for mobilizing long-term finance in Africa. As investors and development partners seek projects that deliver not only financial returns but also measurable economic, social, and environmental outcomes, infrastructure that is explicitly SDG-compatible is gaining strategic importance.

In the context of tightening public budgets and rising debt pressures, such alignment can expand access to concessional resources, attract climate and impact finance, and enhance the bankability of projects in critical sectors such as energy, transport, and water.

SDG-compatible infrastructure refers to infrastructure that is intentionally designed and implemented to support progress across the 17 SDGs, particularly those related to universal access (SDG 6, 7, 9), climate resilience (SDG 13), inclusivity (SDG 10, 11), and governance (SDG 16, 17). For example, sustainable transport infrastructure supports SDG 11.2 by enhancing access to safe and affordable mobility, while clean energy infrastructure advances SDG 7.2 on renewable energy and contributes to emission reductions under SDG 13.

IFIs are increasingly prioritizing SDG-oriented infrastructure in their funding frameworks. The World Bank, AfDB, and EIB have all adopted results frameworks that evaluate projects against SDG contributions.

For instance, the Global Infrastructure Facility (GIF) and AIIB's Sustainable Development Bond Framework explicitly link investment eligibility to SDG performance indicators, such as GHG emissions avoided, the number of people gaining access to services, or enhanced resilience to climate hazards (World Bank, 2022; AIIB, 2023).

This shift is mirrored in the growing interest in private capital markets, where Environmental, Social, and Governance (ESG) criteria and impact investing principles are driving investment decisions. According to the Global Impact Investing Network (GIIN), global impact assets under management surpassed $1.1tn in 2022, with infrastructure being one of the top target sectors. Investors increasingly seek projects that embed sustainability metrics in their design and monitoring frameworks, which allow them to comply with international standards (e.g., the EU Taxonomy, IFC's Performance Standards) and report against ESG benchmarks.

In Africa, SDG-compatible infrastructure can play a catalytic role in accessing blended finance and climate finance, two critical sources of concessional capital. Blended finance instruments, such as guarantees, first-loss tranches, and viability gap funding, are more likely to be allocated to projects with high SDG alignment, given their developmental additionality. Meanwhile, climate finance mechanisms—such as the Green Climate Fund (GCF), the Adaptation Fund, or the Africa Climate Change Fund (ACCF)—are increasingly financing resilient infrastructure, particularly in water supply, coastal transport, and off-grid energy, when projects demonstrate alignment with national SDG-linked climate strategies (NDCs, NAPs).

Moreover, infrastructure aligned with SDGs is more likely to qualify for green and social bonds, which are gaining traction as a funding tool for African governments (see section 8.6.2). Countries such as Nigeria, Kenya, and South Africa have issued green bonds with proceeds earmarked for renewable energy, clean transport, and climate-resilient water systems. These instruments not only provide access to new investor pools but also enhance transparency and reduce the cost of capital when backed by credible sustainability frameworks (Climate Bonds Initiative. 2023).

Evidence shows that infrastructure with strong SDG alignment can benefit from lower risk premiums, better access to concessional funds, and higher levels of co-financing. According to the OECD, projects that integrate environmental and social performance criteria into their early-stage design are 30% more likely to reach financial close and attract long-term institutional investors (OECD, 2020). The World Bank also reports that projects with embedded SDG impact metrics experience fewer procurement delays and stronger stakeholder buy-in, contributing to improved implementation outcomes (World Bank, 2022).

To effectively mobilize SDG-compatible finance, African governments and project developers must strengthen the integration of SDG criteria in infrastructure planning, appraisal, and procurement. Key policy actions include:

- Mainstreaming SDG frameworks into national infrastructure plans and public investment management systems, ensuring projects are prioritized based on multi-dimensional impacts aligned with SDGs.
- Developing project preparation tools that incorporate SDG performance indicators, including social inclusion, environmental impact, and climate resilience.
- Adopting sustainability-linked procurement practices, where tender documents include ESG criteria and long-term value-for-money assessments.
- Enhancing the capacity of national infrastructure agencies to report on SDG-linked outcomes and engage with ESG-conscious investors.

A notable example of an SDG-aligned infrastructure project that has successfully leveraged climate finance is the Infrastructure Climate Resilient Fund (ICRF), a collaborative initiative between the Africa Finance Corporation (AFC) and the Green Climate Fund (GCF). This fund exemplifies how aligning infrastructure development with SDGs, particularly those related to climate resilience, can attract substantial financing.

Project Overview

The ICRF is a pan-African investment vehicle designed to finance climate-resilient infrastructure projects across sub-Saharan Africa. Its primary objective is to integrate climate adaptation and mitigation measures into infrastructure development, thereby enhancing the resilience of communities and economies to climate change impacts. The fund targets sectors such as energy, transport, water, and sanitation, aiming to address the continent's infrastructure deficits while promoting

SDG Alignment

The ICRF aligns with several SDGs, notably:

SDG 9 (Industry, Innovation, and Infrastructure): By fostering the development of resilient infrastructure that supports economic growth and human well-being.

SDG 13 (Climate Action): Through the integration of climate adaptation and mitigation strategies into infrastructure projects.

SDG 11 (Sustainable Cities and Communities): By enhancing urban resilience and ensuring access to safe and sustainable infrastructure services.

Financing Leveraged

The ICRF has successfully mobilized significant climate finance due to its SDG alignment.

Green Climate Fund (GCF): Committed $240 million in junior equity, marking its largest equity investment in Africa to date. This catalytic capital is intended to attract additional private sector investments by mitigating risks for other investors.

European Investment Bank (EIB): Invested $52.48 million in the fund, supporting its mission to accelerate climate adaptation and sustainable infrastructure across Africa.

Other Investors: The fund has also secured commitments from the Nigeria Sovereign Investment Authority (NSIA) and two private African pension funds, demonstrating robust institutional backing both continentally and internationally.

The total target size of the ICRF is $750 million, aiming to finance projects that will benefit up to 50 million people directly and 144 million people indirectly across 19 countries.

Impact and Significance

By embedding climate resilience into infrastructure development, the ICRF addresses the dual challenges of infrastructure deficits and climate vulnerability in Africa. The fund's approach serves as a model for how infrastructure projects can be structured to align with SDGs, thereby unlocking diverse financing sources, including climate funds, development finance institutions, and private investors.

9.10 The importance of project preparation to attract financing

Robust infrastructure project preparation is critical for attracting financing. Detailed feasibility studies, risk assessments, and transparent business cases reduce uncertainties, making projects bankable for multilateral banks, private investors, and PPPs. Strong project preparation secures major funding, boosting investor confidence, specially in perceived high-risk environments.

Proper studies showcasing sustainable benefits like job creation and connectivity also help attract impact-focused investment and facilitates access to international capital markets.

Project preparation facilities play a key role in this process. These facilities fund early-stage development, creating shovel-ready projects that draw private sector interest for transformative initiatives like renewable energy or transport corridors, driving sustainable development. An example of a project preparation facility is provided below through the case of the NEPAD-IPPF.

NEPAD Infrastructure Project Preparation Facility (NEPAD-IPPF) Special Fund

The NEPAD Infrastructure Project Preparation Facility (NEPAD-IPPF), a multi-donor Special Fund hosted by the AfDB, supports the preparation of bankable regional infrastructure projects in line with the priorities of African countries, the African Union Commission (AUC) and the African Union Development Agency (AUDA-NEPAD), Regional Economic Communities (RECs) and specialized infrastructure institutions such as Power Pools, River Basin Organizations and Corridor Authorities. The activities eligible for financing are prefeasibility studies; feasibility studies; project structuring; capacity building for infrastructure development; and facilitation and creation of an enabling environment for regional infrastructure development. The fund donors are: AfDB; Canada, Denmark, Norway, Germany, the United Kingdom, and Spain.

Between 2021 and 2023, NEPAD-IPPF committed a total of US$ 9.25 million to support eight operations across the transport, energy, and ICT sectors (see Table below). Annual commitments amounted to US$ 5.12 million in 2021, US$ 0.55 million in 2022, and US$ 3.58 million in 2023. Of the total amount, US$ 6.73 million was allocated to transport projects, while the energy and ICT sectors received US$ 1.425 million and US$ 1.55 million, respectively. No commitments were made for water sector projects during this period.

Between 2021 and 2023, NEPAD-IPPF disbursed a total of US$ 10.95 million for project implementation

Figure 9-4: List of NEPAD-IPPF projects approved from 2021 to 2023

N°	Year of Approval	Project Title	Sector	Beneficiary Countries	Region	NEPAD-IPPF Commitments (US$)
1	2021	Upgrading 183-Km Hargeisa - Odweine - Burao Road Project	Transport	Somalia, Djibouti	East Africa	**$500,000**
2	2021	Studies of an economic corridor between Nouadhibou - Nouakchott - Rosso - Dakar	Transport	Senegal, Mauritania	North Africa / West Africa	**$800,000**
3	2021	Multinational Kenya/Uganda: Kisumu – Kisian – Busia / Kakira –Malaba & Busitema – Busia Expressway Project	Transport	Kenya, Uganda	East Africa	**$1,399,587**
4	2021	Luapula Hydro Power Plant (Democratic Republic of Congo and Zambia)	Energy	DRC, Zambia	Southern Africa	**$1,425,000**
5	2021	Project to support the preparation of the Democratic Republic of Congo (DRC) component of the Central African Fiber Optic Corridor (CAB)	ICT	DRC	Central Africa	**$1,000,000**
6	2022	Africa Cloud Ecosystem project	ICT	COMESA Member states	East Africa / Southern Africa	**$550,000**
7	2023	Shikolondo - Nzagi - Dundo Road and Border Infrastructure in Shikolondo, Angola	Transport	DRC, Angola	Southern Africa	**$1,580,000**
8	2023	Establishment of a Navigational Line Between Lake Victoria and the Mediterranean (VICMED) (Phase 2 – Part 1)	Transport	Burundi, DRC, Egypt, Ethiopia, Kenya, Rwanda, South Sudan, Sudan, Tanzania, and Uganda	North Africa / East Africa	**$2,000,000**

During the same period, six project preparation studies were completed, advancing to the bankability stage (see table below).

Sector	Project name
Transport	EAC-Rehabilitation of selected road - OSBP Manyovu - Mugina border post (Burundi-Tanzania Road) Project
Transport	Standard Gauge Railway (SGR) connecting Ethiopia and Sudan
Water	Multinational - Support Project for the Creation of a Transboundary Basin Organisation (Ogooué, Ntem, Nyanga, and Komo) and Preparation of Investment Projects (PACOBT-PPI)
Water	Angololo Multipurpose Water Resources Development
ICT	Central Africa Backbone – Gabon component
Energy	400KV Zambia-Mozambique Multinational Power interconnection

9.11 The need for data

It is recognized that one of the most critical challenges facing infrastructure development in Africa is the insufficient availability of reliable and comprehensive data on infrastructure financing. Drafting this report has flagged the fact that government budgets are often presented in highly diverse formats, with varying levels of detail and transparency. In many cases, the infrastructure-related components of national budgets are neither clearly delineated nor consistently categorized. This lack of standardization significantly complicates the assessment of infrastructure spending at a continental level and to compare across countries.

The fragmentation and opacity of data on infrastructure financing are particularly pronounced in two key areas:

- the absence of project-level financial information, and
- the limited traceability of internal and external sources of funding.

While some governments report on aggregate levels of external support within their national budgets, these figures are seldom disaggregated by sector, project, or financing instrument. As a result, it is problematic to ascertain the total volume of financing mobilized for infrastructure, to understand the structure of blended finance packages, or to monitor the updated implementation status of infrastructure initiatives.

This lack of reliable and granular data has profound implications for both policy formulation and investment planning:

- At the policy level, governments are hindered in their ability to accurately estimate infrastructure financing needs, to identify funding gaps, and to align national development plans with sector-specific investment strategies. This limitation also affects the design of public financial management PFM systems, particularly in the areas of capital budgeting, medium-term expenditure frameworks, and performance-based budgeting.
- At the investment level, the absence of transparent and consistent data deters both public and private financiers. IFIs, commercial lenders, and institutional investors rely on robust financial and technical information to assess the bankability of projects, to identify co-financing opportunities, and to evaluate risk-adjusted returns. In the current data environment, many promising infrastructure projects fail to reach financial close not because of their lack of viability (economic and financial), but because of insufficient visibility in national investment pipelines and unreliable data on past and projected public commitments.

In this context, it is recommended that African governments, through the African Union, adopt concrete measures to improve transparency and harmonization of infrastructure-related budget information. A standardized presentation of infrastructure financing, broken down by sector, project, and funding source, would greatly enhance the quality of data available to decision-makers.

In recognition of this pressing need, the African Union has launched in 2025 the African Infrastructure Visualization and Information Platform (AVIP), an ambitious initiative aimed at creating a centralized and interactive database on infrastructure projects across the continent. AVIP seeks to improve the availability, accuracy, and usability of data related to infrastructure investments by aggregating project-level information, financing details, timelines, and geographic distribution. The platform is intended to serve as a decision-support tool for governments, investors, development partners, and regional institutions. It also supports the PIDA by improving visibility on the progress of regional projects, identifying implementation bottlenecks, and promoting greater coordination among stakeholders. AVIP represents a critical step toward enhancing transparency, enabling better policy formulation, and fostering more informed investment decisions across Africa's infrastructure landscape.

Still, for AVIP and similar platforms to reach their full potential, it is essential that African governments adopt harmonized budget presentation practices. In this context, governments could build existing continental frameworks such as the Strategy for the Harmonization of Statistics in Africa (SHaSA), which promotes the production of reliable, comparable, and policy-relevant statistics. Integrating infrastructure finance standards into SHaSA and linking national systems with AVIP would significantly improve data quality, facilitate evidence-based planning, and ultimately contribute to narrowing the infrastructure financing gap on the continent.

Annex 1
List of References

Algeria

Loi n° 20-16 du 16 Joumada El Oula 1442 correspondant au 31 décembre 2020 portant loi de finances pour 2021

Loi n° 21-16 du 25 Joumada El Oula 1443 correspondant au 30 décembre 2021 portant loi de finances pour 2022

Loi n° 22-24 du Aouel Joumada Ethania 1444 correspondant au 25 décembre 2022 portant loi de finances pour 2023

Angola

Summary of Dispenses by function, 2021, published 17/12/2020

Summary of Dispenses by function, 2022, published 15/12/2021

Summary of Dispenses by function, 2023, published 01/03/2023

Benin

Budget de l'État Gestion 2021 – Ministère de l'eau de des mines, Ministère de l'énergie, Ministère des infrastructures et des transports

Budget de l'État Gestion 2022 – Ministère de l'eau de des mines, Ministère de l'énergie, Ministère des infrastructures et des transports, Ministère du numérique et de la digitalisation

Budget de l'État Gestion 2023 – Ministère de l'eau de des mines, Ministère de l'énergie, Ministère des infrastructures et des transports, Ministère du numérique et de la digitalisation

Botswana

Summary by Organisation of Estimated Expenditure from the consolidated and development funds 2019-2020 and 2020-2021

Estimates of Expenditure from the Consolidated and Development funds 2021-2022

Estimates of Expenditure from the Consolidated and Development funds 2022-2023

Burkina Faso

DECRET Nº 2020- 0936/PRES promulguant la loi no 035-2020/AN du 19 octobre 2020 portant loi de finances pour l'execution du budget de l'Etat, exercice 2021

DECRET Nº 2021-1352 /PRES promulguant la loi no 042-2021/AN du 16 décembre 2021 portant loi de finances pour l'execution du budget de l'Etat, exercice 2022

DECRET Nº 2020- 1144 /PRES promulguant la loi no 029-2022/ALT du 24 décémbre 2022 portant loi de finances pour l'execution du budget de l'Etat, exercice 2023

Burundi

Loi Nº 1/13 du 15 mai 2020 portant fixation du Budget General de la République du Burundi pour l'exercice 2020/2021

Loi Nº 1/20 du 25 juin 2021 portant fixation du Budget General de la République du Burundi pour l'exercice 2021/2022

Loi Nº 1/22 du 30 juin 2022 portant fixation du Budget General de la République du Burundi pour l'exercice 2022/2023

Loi Nº 1/16 du 22 juin 2023 portant fixation du Budget General de la République du Burundi pour l'exercice 2023/2024

Cameroon

Loi Nº 2020/018 du 17 dec 2020 portant la loi de finances de la République du Cameroun pour l'exercice 2021

Ordonnance Nº 2022/001 du 02 juin 2022 modifiant et complétant certains disposition de la loi nº 2021/026 du 16 décembre 2021 portant loi de finances de la République du Cameroun pour l'exercice 2022

Ordonnance Nº 2023/001 du 02 juin 2023 modifiant et complétant certains disposition de la loi nº 2022/020 du 27 décembre 2022 portant loi de finances de la République du Cameroun pour l'exercice 2023

Cape Verde

2258 1 série – nº 142 B.O. de la Républica de Cabo Verde – 31 décembre 2020

3150 1 série – nº 129 B.O. de la Républica de Cabo Verde – 31 décembre 2021

2322 1 série – nº 125 B.O. de la Républica de Cabo Verde – 30 décembre 2022

Chad

Budget General de l'état pour l'exercice 2021

Fascicule Budgetaire 2022, Loi Nº 010/PR/2023 du 31 décembre 2021 Portant Loi de Finances pour l'exercice 2022

Fascicule Budgetaire 2023, Loi Nº 016/PR/2022 du 30 décembre 2022 Portant Loi de Finances pour l'exercice 2023

Comoros

Decret Nº 21-134/PR Portant promulgation de la loi Nº 21-017/AU du 20 novembre 2021 portant Loi de Finances rectificative 2021

Decret Nº 21-146/PR Portant promulgation de la loi Nº 21-025/AU du 28 décembre 2021 portant Loi de Finances rectificative 2022

Decret Nº 23-002/PR Portant promulgation de la loi Nº 22-012/AU du 27 décembre 2022 portant Loi de Finances rectificative 2023

Cote d'Ivoire

Projet de loi de finances portant budget de l'état pour l'année 2021 – Rapport presentation

Loi de finances nº 2021899 du 21/12/2021 portant budget de l'état pour l'année 2022 – rapport de présentation

Document de programmation budgetaire de economique pluriannuelle 2024-2026 – rapport de presentation

Egypt

Information from ICA required

Equatorial Guinea

Presupuesto IInversion Publica 1 2020-2022v

Eswatini

The Government of Kingdom of Eswatini Estimates for the years April 1, 2020 to 31 March 2023

The Government of Kingdom of Eswatini Estimates for the years April 1, 2021 to 31 March 2024

The Government of Kingdom of Eswatini Estimates for the years April 1, 2022 to 31 March 2025

The Government of Kingdom of Eswatini Estimates for the years April 1, 2023 to 31 March 2026

Ethiopia

Government of Ethiopia Federal Budget Proclamation Part 2 2020-2021

Government of Ethiopia Federal Budget Proclamation Part 2 2021-2022

Government of Ethiopia Federal Budget Proclamation Part 2 2022-2023

Government of Ethiopia Federal Budget Proclamation Part 2 2023-2024

Gabon

Loi n°044/2020 du 11 janvier 2021 déterminant les ressources et les charges de l'Etat pour l'année 2021

Décision n°017/CC du 22 juillet 2021 relative à la requête présentée par le Premier Ministre tendant au contrôle de constitutionnalité de la loi n°018/2021 portant modification de certaines dispositions de la loi n°044/2020 du 11 janvier 2021 déterminant les ressources et les charges de l'Etat pour l'année 2021

Loi n°031/2021 du 23 mars 2022 déterminant les ressources et les charges de l'Etat pour l'année 2022

Projet Loi de finances 2023 – Répertoire 001/22-23/CC/CC/GC

Gambia

Approved Budget of Gambia 2021 – Budget Appropriation Report

Approved Budget of Gambia 2022 – Budget Appropriation Report

Approved Budget of Gambia 2023 – Budget Appropriation Report

Ghana

Appropriation Act, 2021, Act 1069

Ghana Budget Statement and Economic Policy, 2021

Ghana Budget Statement and Economic Policy, 2022

Appropriation Act, 2022, Act 1090

Ghana Budget Statement and Economic Policy, 2023

Guinea

Décret D/2020/314/PRG/SGG portant Promulgation de la Loi L/2020/0029/AN du 30 decembre 2020 et Details par ministères et institutions

Loi de Finances 2022, Ordonnance O/2021/0011/PRG/CNRD/SGG Portant Loi de Finances pour l'année 2022

Rapport sur l'exécution du budget à fin juin 2022

Loi L/2022/0016/CNT Portant Loi de Finances pour l'année 2023

Guinea-Bissau

General State budget Proposal for 2021

General State budget Proposal for 2022

General State budget Proposal for 2023

Kenya

The Budget Summary for the Fiscal Year 2020/2021 and the Supporting Information

The Budget Summary for the Fiscal Year 2021/2022 and the Supporting Information

The Budget Summary for the Fiscal Year 2022/2023 and the Supporting Information

The Budget Summary for the Fiscal Year 2023/2024 and the Supporting Information

Lesotho

Kingdom of Lesotho, Budget summary 2020/21

Kingdom of Lesotho, Budget Estimates for the Financial Year 2021/22

Kingdom of Lesotho, Budget Estimates for the Financial Year 2022/23

Kingdom of Lesotho, Budget Estimates for the Financial Year 2023/24

Liberia

National Budget Fiscal Year 2020/2021

Special National Budget fiscal Year 2021 (July to December 2021)

National Budget Fiscal Year 2022

National Budget Fiscal Year 2023

Madagascar

Circulaire d'exécution budgetaire 2021, Numéro 002-MEF/SG/DGFAG

Loi N° 2021-027 Portant Loi de Finances pour 2022

Loi N° 2022-012 Portant Loi de finances Rectificative pour 2022

Circulaire d'exécution budgetaire 2023, Numéro 002-2023/MEF/SG/DGFAG

Loi N° 2022-015 Portant Loi de finances Rectificative pour 2023

Malawi

PUBLIC SECTOR INVESTMENT PROGRAM (PSIP) 2021

PUBLIC SECTOR INVESTMENT PROGRAM (PSIP) 2022

PUBLIC SECTOR INVESTMENT PROGRAM (PSIP) 2023

Mali

Projet de Loi de Finances 2021

Rapport sur la Situation d'Exécution Provisoire du Budget d'État au 31 mars 2022

Rapport sur la Situation d'Exécution Provisoire du Budget d'État au 30 juin 2021

Mauritania

Loi de Finances pour l'année 2021

Loi de Finances pour l'année 2022

Loi de Finances pour l'année 2023

Mauritius

Appendix B : Expenditure 2020 /2021

Appendix B : Expenditure 2022 /2023

Morocco

LOI DE FINANCES N° 50-22 POUR L'ANNEE BUDGETAIRE 2023

LOI DE FINANCES N° 76-21 POUR L'ANNEE BUDGETAIRE 2022

LOI DE FINANCES N° 50-22 POUR L'ANNEE BUDGETAIRE 2023

Mozambique

Document Justifying State Budget for 2021

State Budget for 2022 – Central Level Expenditure According to Budget Cell

Medium Term Fiscal Scenario (Macro Fiscal Framework 2022-2024)

Presentation of the Proposed Economic and Social Plan and State Budget 2023

Namibia

Estimates of Expenditure 2020/2021

Medium Term Expenditure Framework 2021/2022 to 2023/2024

Medium Term Expenditure Framework 2022/2023 to 2024/2025

Niger

Loi n° 2020-67 du 10 décembre 2020 portant loi de finances pour l'année budgétaire 2021

Loi n° 2021-50 du 20 décembre 2021 portant loi de finances pour l'année budgétaire 2022

Loi n° 2022-44 du 06 décembre 2022 portant loi de finances pour l'année budgétaire 2023

Nigeria

Appropriation Act 2021 – Summary by MDAs

Appropriation Act 2022 – Summary by MDAs

Appropriation Act 2023 – Summary by MDAs

RCA

Rapport D'Exécution Budgétaire au Premier Trimestre 2021

Rapport D'Exécution Budgétaire au Deuxième Trimestre 2022

Rapport D'Exécution Budgétaire au Troisième Trimestre 2023

RDC

Loi de finances N° 20/20 du 28 décembre 2020 pour l'exercice 2021 Volume II – Depenses

Loi de finances N° 21/029 du 31 décembre 2021 pour l'exercice 2022 Volume II – Depenses

Loi de finances N° 22/071 du 28 décembre 2022 pour l'exercice 2023 Volume II – Depenses

Republic of Congo

Loi de Finances pour l'année 2021

Loi de Finances rectificative pour l'année 2022

Loi N° 77-2022 du 27 décembre 2022 portant loi de finances pour l'année 2023

Rwanda

Citizens Guide to the Budget 2020/2021

Citizens Guide to the Budget 2021/2022

Citizens Guide to the Budget 2022/2023

Citizens Guide to the Budget 2023/2024

Soa Tomé and Principe

PROPOSAL FOR THE GENERAL STATE BUDGET FOR ECONOMIC YEAR 2021

GENERAL STATE BUDGET FOR ECONOMIC YEAR 2023

Sénégal

LOI N° 2020-33 DU 22 DECEMBRE 2020

Loi N° 2021-42 du 20 Décembre 2021 portant loi de finances pour l'année 2022

Loi N° 2022-22 du 19 Décembre 2022 portant loi de finances pour l'année 2023

Seychelles

2021 BUDGET ESTIMATES OF REVENUE AND EXPENDITURE FOR THE FISCAL YEAR ENDING 31ST DECEMBER 2021

2022 Budget – Assumptions and OBJECTIVES OF THE 2022 BUDGET

2023 BUDGET ESTIMATES OF REVENUE AND EXPENDITURE FOR THE FISCAL YEAR ENDING 31ST DECEMBER 2023

Sierra Leone

Government Budget and Statement of Economic and Financial Policies for the financial Year 2022

Government Budget and Statement of Economic and Financial Policies for the financial Year 2023

Somalia

End-Year Budget Fiscal Performance Report For Fiscal Year 2021

Budget Appropriation Act 2022 Act No. 000020

Budget Appropriation Act 2023 Act No. 000021

South Africa

South Africa Budget 2024 – Estimate of National Expenditure (with Historicals)

South Sudan

Quarterly Economic and Budgetary Review FY 2020/2021

South Sudan NATIONAL BUDGET BRIEF Fiscal Year 2021/2022, UNICEF

Draft Budget Tables Fiscal Year 2022/23

SOUTH SUDAN NATIONAL BUDGET ANALYSIS REPORT FOR THE YEAR 2023-2024

Sudan

Approved Budget 2021

Tanzania

CITIZEN BUDGET ENGLISH VERSION 2020_21

VOLUME III Estimates of Public Expenditure Supply Votes (Regional) - 2021-22

VOLUME IV Public Expenditure Estimates Development Votes (Ministerial and Regional Development Programmes) - 2021.22

VOLUME III Estimates of Public Expenditure Supply Votes (Regional) - 2022-23

VOLUME IV Public Expenditure Estimates Development Votes (Ministerial and Regional Development Programmes) - 2023.24

Togo

Loi N° 2021-0213 Portant Loi de finances Rectificative Exercice 2021

Loi N° 2022-014 Portant Loi de finances Rectificative Exercice 2022

Loi de finances Rectificative Exercice 2023

Tunisia

Loi n° 2021-3 du 15 novembre 2021, portant loi de finances rectificative pour l'année 2021

Loi n° 2022-69 du 22 novembre 2022, portant loi de finances rectificative pour l'année 2022

Portant loi de finances rectificative pour l'année 2023

Uganda

Approved Estimates of Revenue and Expenditure (Recurrent and Development) FY 2020/21 Volume 1

Approved Estimates of Revenue and Expenditure (Recurrent and Development) FY 2021/22 Volume 1

Approved Estimates of Revenue and Expenditure (Recurrent and Development) FY 2022/23 Volume 1

Approved Estimates of Revenue and Expenditure (Recurrent and Development) FY 2023/24 Volume 1

Zambia

Estimates of Revenue and Expenditure 2021 (OBB)

Estimates of Revenue and Expenditure 2022 (OBB)

Estimates of Revenue and Expenditure 2023 (OBB)

Zimbabwe

THE 2021 NATIONAL BUDGET STATEMENT

THE 2022 NATIONAL BUDGET STATEMENT

THE 2023 NATIONAL BUDGET STATEMENT

2023 Approved Estimates of Expenditure

