Infrastructure Financing Trends in Africa

2019–2020

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AFRICAN DEVELOPMENT BANK GROUP

NEPAD-IPPF
INFRASTRUCTURE PROJECT PREPARATION FACILITY

ICA
The Infrastructure Consortium for Africa

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About the ICA

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).

Origin

From the 1990's 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 had directed many investments away from transport, energy, water, and ICT programmes. The 2005 G8 Summit at Gleneagles offered the Commission for Africa an opportunity to present compelling information on the critical need to re-direct 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 infrastructure (transport, water, energy, and ICT). With that in mind, the Infrastructure Consortium for Africa (ICA) was established in July 2005 as a recommendation to the G8 Summit in Gleneagles (UK) by the Commission for Africa.

Membership

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

• All G7 countries: Canada, France, Germany, Italy, Japan, United Kingdom, and the United States

• Two members from G20: the Kingdom of Spain (recently joined) and the Republic of South Africa (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 Africa Finance Corporation (AFC), the European Investment Bank (EIB), the Islamic Development Bank (IsDB), 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

As part of its mission, the Infrastructure Consortium for Africa tracks investments in infrastructure on the African continent, by country and by source of financing. The objective is to follow trends and to identify ways in which the amount of financing for sustainable infrastructure can be increased in the transport, water and sanitation, energy, and ICT sectors in Africa. ICA is not itself a financing agency; it is a consortium of important financial partners who seek to maximize financing flowing to Africa to reduce the continent's infrastructure gap and improve the lives and livelihoods of all Africans. ICA thus plays a facilitating role in African infrastructure financing and development by pooling its members' efforts in such areas as information sharing, creation and dissemination of relevant knowledge, and identification of emerging policy lessons that will facilitate financial resource mobilization for infrastructure development at the national and regional levels.

The report on Infrastructure Financing Trends (IFT) 2019-2020 was prepared in highly unusual period during which the COVID-19 pandemic upended many economic and social trends worldwide. All countries were affected; in Africa, many key social services such as basic healthcare and education were curtailed and jobs were lost, which increased poverty and exacerbated hardship, particularly among people at the bottom of the pyramid. The reduction in economic activity and decline in exports negatively impacted the debt burden of many countries, some of which are now in debt distress. The IFIs responded with emergency support and debt relief packages such as the *IMF Covid 19 Financial Assistance and Debt Service Relief*[1]. But in the main, countries in Africa demonstrated a commendable resilience and a firm policy response that reduced the possible impact on the continent. For the infrastructure sectors the pandemic reduced financial flows in 2020, both from national governments and IFIs, as scarce fiscal resources were diverted to more urgent social uses.

Financing for African infrastructure flows from four sources. First, governments finance a significant share of infrastructure investments themselves (41% of the total in 2019-2020). This financing flows from current or future fiscal revenue and is deployed through the national budgetary process or issuing bonds. Second, ICA members, as partners to African countries, finance infrastructure projects through grants and loans (27%). Third, development partners which are not members of ICA (China, Arab Coordination Group, EBRD, non-ICA European bilateral organizations, African Regional Development Banks, NDB, AIIB, India, and Africa50) also participate in financing (14%). And finally, the private sector brings its financial muscle (18%) to fund some new infrastructure assets, often needing support such as guarantees from governments or IFIs.

Over many decades, African infrastructure has not been able to attract sufficient financing to fund its infrastructure investments and maintenance of existing assets. There remains a significant financing gap, which handicaps Africa's global competitiveness, constrains its productivity, and makes lives harder for the people of Africa. Exports are more expensive than they are in other regions because Africa's ports are inefficient, and its road transport is costly. Electric power is difficult to get and unreliable. Many communities are without safe drinking water and sanitation services. Only assets in information and communications technologies (ICT) have been able to meet international access objectives, and they have been for the most part financed by the private sector without the need for government support. ICT is a notable success story in Africa; in addition to communication services, mobile operators have rolled out financial services to low-income customers, improving financial inclusion among the poor.

The report presents several key messages. I wish to highlight two. A first key message that emerges in this report is that the shortfall in financing for infrastructure results in large part from the lack of financial sustainability in the sector. Poor financial performance of African utilities, both power and water, is not a recent phenomenon. The issue of financial sustainability, due largely to tariffs that do not sufficiently cover investment costs, cuts across

[1] https://www.imf.org/en/Topics/imf-and-covid19/COVID-Lending-Tracker

the entire infrastructure space and has plagued the sector for decades. It has been and remains a significant constraint on the financing available for new assets, exacerbating the inadequate amount of financing that flows to the sector both for new investments and for maintenance of existing investments. There is no magic bullet to fixing this problem. ICA members and other funding sources must work with utilities, regulators, and policy makers at the country level to ensure that the sector is well-managed and financially robust with adequate tariffs that also include targeted subsidies as necessary. Having well-run and well-financed infrastructure sectors is essential to increasing economic growth and reducing poverty and inequality.

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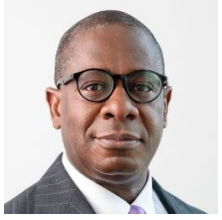
A second key message is that the contribution of private finance for infrastructure is way below its potential. African institutional investors manage very significant amount of contractual savings (estimated at $1.85 trillion in 2020), practically none of which finances the continent's infrastructure. This contrasts with the practice in other regions of the world. Africa needs to create an infrastructure asset class that can attract institutional investor financing. It needs to explore securitization of existing assets with stable cashflows to attract private sector investors, thus recycling existing financing. Some interesting innovations are beginning to emerge in this area and deserve to be considered for replication, for example the InfraCredit initiative in Nigeria and others.

We hope you will find this report informative, comprehensive in its analysis and engaging in its policy and operational recommendations. Above all, we hope that it will help attract more funding for infrastructure throughout the African continent.



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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.

ICA Members

G7 countries, Republic of South Africa, Spain, AFC, AfDB, Afreximbank, AUC, AUDA-NEPAD, UNESCA, BOAD, EC, EIB, IsDB, WBG (WB, IFC, MIGA), and VINCI, RECs (observers).

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

North Africa: Algeria, Egypt, Libya, Mauritania, Morocco, Tunisia.
West Africa: Benin, Burkina Faso, Cape Verde, Gambia, Ghana, Guinea, Guinea Bissau, Côte d'Ivoire, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo.
Central Africa: Burundi, Cameroon, Central African Republic (CAR), Chad, Congo, Democratic Republic of Congo (DRC), Equatorial Guinea, Gabon, Rwanda, São Tomé and Príncipe (STP).
East Africa: Djibouti, Eritrea, Ethiopia, Kenya, Seychelles, Somalia, South Sudan, Sudan, Tanzania, Uganda.
Southern Africa: Angola, Botswana, Comoros, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Swaziland, Zambia, Zimbabwe.
RSA: Republic of South Africa.

Regional Development Banks

Central African States Development Bank (CASDB), DBSA (an ICA member), EBID, EADB, BOAD (an ICA member).

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, satellite.
Multi-sector: Not sector-specific or cross-cutting projects. This could include implementation of a PPP unit or capacity building programs.
Unallocated: Commitments which cover multiple ICA sectors, but which are unable to be accurately allocated.

List of Acronyms

ACET	African Center for Economic Transformation
ACG	Arab Coordination Group
ADFD	Abu Dhabi Fund for Development
AfCFTA	Africa Continental Free Trade Area
AFC	Africa Finance Corporation
AFD	Agence Française de Développement
AfDB	African Development Bank
AFESD	Arab Fund for Economic and Social Development
AGFUND	Arab Gulf Program for Development
AIAC	Africa Infrastructure Asset Class
AIIB	Asian Infrastructure Investment Bank
AIIF	African Infrastructure Investment Fund
AMF	Arab Monetary Fund
ARTIN	African Regional Transport Infrastructure Network
AU	African Union
AUC	African Union Commission
AUDA	African Union Development Agency
AUM	Assets Under Management
BADEA	Banque Arabe pour le Développement Economique en Afrique
BCEAO	Central Bank of West African States
BOAD	Banque Ouest Africaine de Développement
BRI	China's Belt and Road Initiative
BRT	Bus Rapid Transit
CAPP	Central African Power Pool
CDC	Caisse de Dépôts et Consignations
CDG	Caisse de Dépôt et de Gestion
CENT	Caisse d'Épargne Nationale Tunisienne
COMESA	Common Market for Eastern and Southern Africa
COP	Conference of the Parties
DBSA	Development Bank of Southern Africa
DRC	Democratic Republic of Congo
EAC	East African Community
EAPP	Eastern Africa Power Pool
EBID	ECOWAS Bank for Investment and Development
EBRD	European Bank for Reconstruction and Development
EC	European Commission
ECOWAS	Economic Community of West African States
EIB	European Investment Bank
EU	European Union
EU-AITF	EU-Africa Infrastructure Trust Fund
FCDO	Foreign, Commonwealth & Development Office (UK)
GDP	Gross Domestic Product
GIF	Global Infrastructure Facility
HoA	Horn of Africa
IATA	International Air Transport Association
ICA	Infrastructure Consortium for Africa
ICT	Information and Communications Technologies
IDA	International Development Association
IDC	Industrial Development Corporation
IsDB	Islamic Development Bank
IFC	International Finance Corporation
IFED	Iraqi Fund for External Development
IPP	Independent Power Producer
JICA	Japan International Co-operation Agency
KFAED	Kuwait Fund for Arab Economic Development
KfW	Germany's Development Bank

List of Acronyms

LNG	Liquefied Natural Gas
MDB	Multilateral Development Bank
MIGA	Multilateral Investment Guarantee Agency
NAPP	North African Power Pool
NDB	New Development Bank
NEPAD	New Partnership for Africa's Development
NEPAD-IPPF	NEPAD Infrastructure Project Preparation Facility
NSIA	Nigerian Sovereign Investment Authority
ODA	Official Development Assistance
OECD	Organization for Economic Cooperation and Development
OFID	OPEC Fund for International Development
OPEC	Organization of the Petroleum Exporting Countries
PIDA	Programme for Infrastructure Development in Africa
PIDA/ PAP	PIDA Priority Action Plan
PIDG	Private Infrastructure Development Group
PPA	Power Purchase Agreement
PPDF	SADC Project Preparation and Development Facility
PPI	World Bank's Private Participation in Infrastructure
PPP	Public-Private Partnerships
PRI	Political Risk Insurance
PV	Photovoltaic
QDF	Qatar Fund for Development
QII	Quality Infrastructure Investment
rAREH	responsAbility Renewable Energy Holding
RDB	Regional Development Bank
RE	Renewable Energy
REC	Regional Economic Community
REDIT	Regional Economic Development for Investment and Trade
REIPPP	Renewable Energy Independent Power Producer Procurement Programme
REPP	Renewable Energy Performance Program
RIPDM	SADC Regional Infrastructure Development Master Plan
RPP	Regional Power Pool
RSA	Republic of South Africa
SADC	Southern African Development Community
SAPP	South African Power Pool
SEMed	Southern and Eastern Mediterranean
SFD	Saudi Fund for Development
SGR	Standard Gauge Railway
SPREF	SFMed Private Renewable Energy Framework
SPV	Special Purpose Vehicle
SSA	Sub-Saharan Africa
SSATP	Sub-Saharan Africa Transport Program
TDB	Trade and Development Bank
UNECA	United Nations Economic Commission for Africa
USAID	United States Agency for International Development
WAPP	West African Power Pool
WBG	World Bank Group
WRI	World Resources Institute

List of Boxes, Figures, and Tables

Boxes

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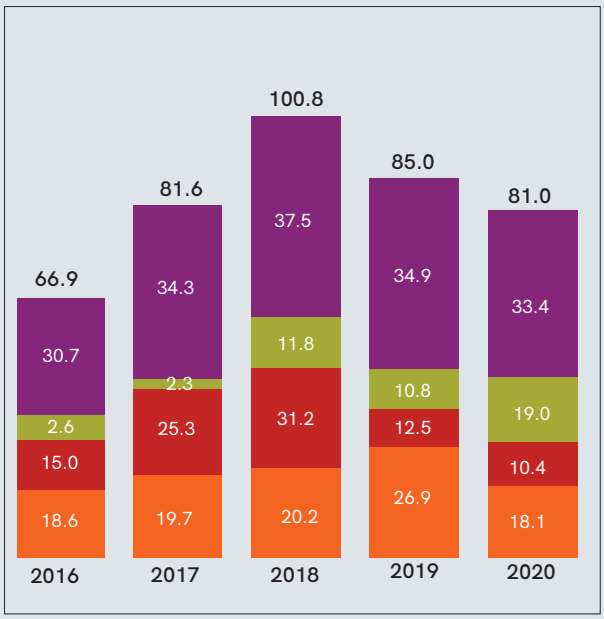
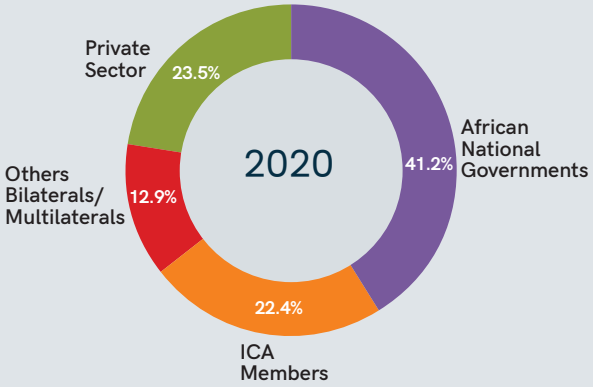
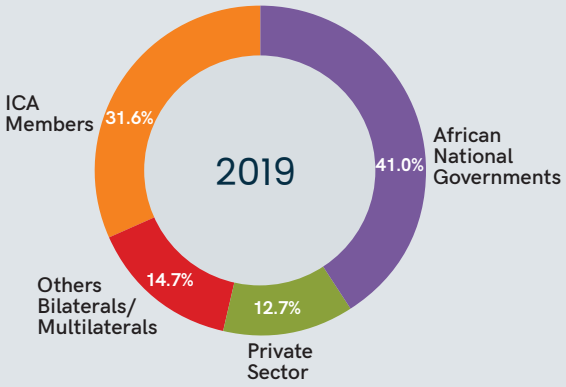
Table

The Big Picture

Average 2019-2020 funding of $83bn was below the 2017-2018 average of $91.2bn, and significantly lower than the highpoint of 2018





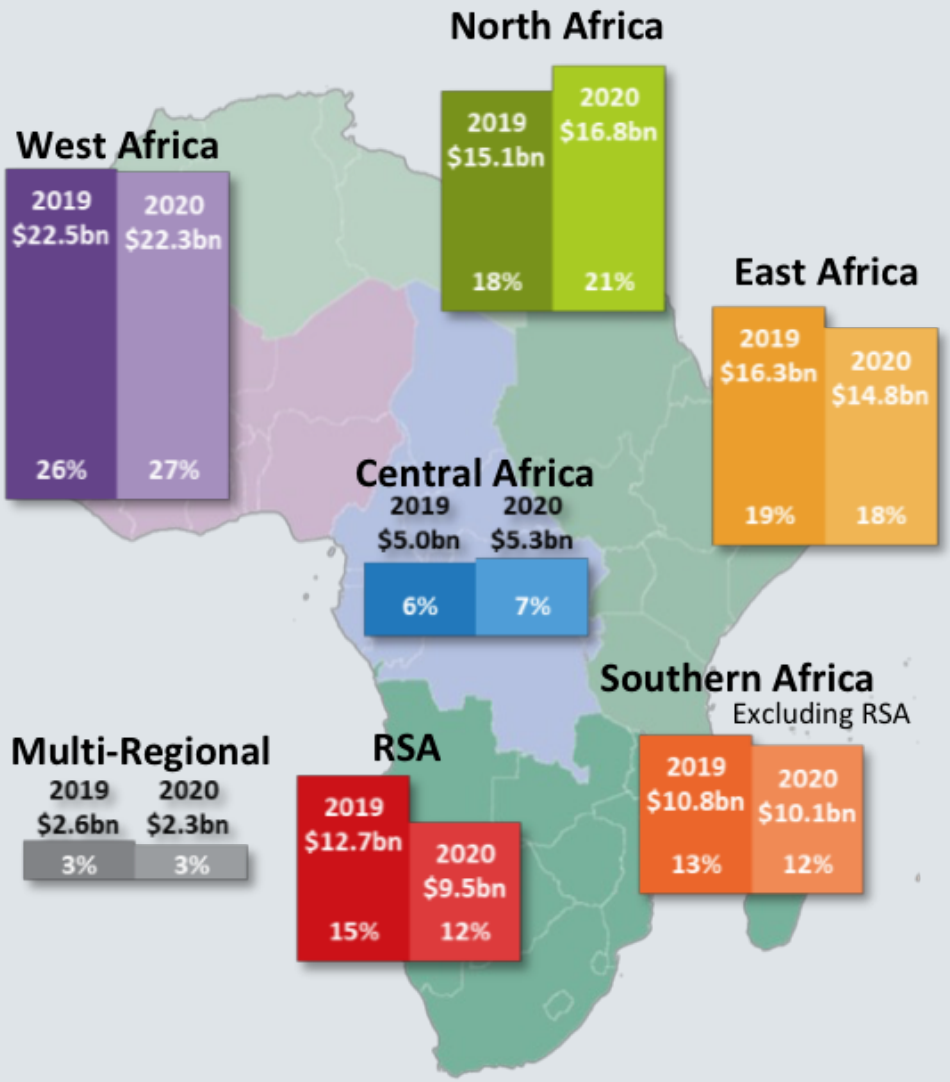


ICA members and other bilaterals and multilaterals contributed close to

$68bn

In 2019-2020

Funding went to these regions...



...and to these sectors.

TRANSPORT
$33.8bn in 2019
$34.4bn in 2020

WATER
$10.1bn in 2019
$8.1bn in 2020

MULTISECTOR
$3.7bn in 2019
$4.6bn in 2020

ENERGY
$25.9bn in 2019
$23.5bn in 2020

ICT
$11.4bn in 2019
$10.4bn in 2020

1. Key Messages

1. Key Messages

1 The COVID-19 pandemic has negatively impacted infra¬structure investment flows and, at the same time, high¬lighted the need for parallel action on social infrastructure. The reduction in infrastructure investment due to the pandemic has affected progress in reducing the annual financing gap for infrastructure in Africa. (The financing gap is defined as the difference between the cost of the annual financing needs estimated to achieve a basic level of service for the people of Africa by 2025, and the actual level of financing committed in a given year.) The year 2019 was historically the year with the lowest financing gap for African infrastructure. IFT 2019-2020 estimates the gap for 2019 at between $53bn and $93bn. This gap increased in the pandemic year 2020 to between $59bn and $96bn, due primarily to the shift in resources to the needs of the pandemic, thus setting back the target for achievement of basic infrastructure services on the continent.

Importantly, the pandemic has also shown the need for improvement in health-related infrastructure and services and has pointed to deficiencies in the resilience of educational infrastructure and services. While this report focuses on the infrastructure mandate of ICA, which covers energy, transportation, water, sanitation, and ICT, improved social infrastructure is equally important in most African countries. There is a linkage between traditional hard infrastructure and social infrastructure. Water and sanitation services, for example, are essential to improved health. Attention to social issues in the planning of hard infrastructure can also benefit the effectiveness of social services. Telecommunication networks and electricity distribution that favor connectivity to schools and health facilities are critical to increasing the resiliency of these facilities. Extending internet connections to low-income families is an important factor in improving educational outcomes and widening economic and financial inclusion.

2 Financial innovation is beginning to widen the financing options available for infrastructure, in particular to access domestic savings from the private sector. Scaling up and replicating these innovations deserve more attention. Recent years have seen a serious start in designing and testing important innovations in Africa, particularly financial innovations. It has long been an objective to attract the substantial domestic savings under management by African institutional investors to financing infrastructure. In the energy sector, where existing infrastructure assets with reliable revenue flows exist, financial recycling is beginning to take place through credit enhancement mechanisms such as securitization of revenue flows. One example is the Nigeria Sovereign Investment Authority's subsidiary, InfraCredit, a monoline guarantee agency, set up to wrap infrastructure bonds with domestic credit guarantees. InfraCredit is providing the kind of innovative credit enhancement that can attract domestic institutional investors to this new asset class.

In all sectors, efforts are being made to consider how to use public capital to crowd in the private sector, for example, by increasing the use of credit guarantees and other credit enhancement mechanisms to attract the private sector instead of automatically using public capital to directly finance projects. But public-private projects remain complex and time-consuming, and their high transaction cost, combined in many cased with lack of familiarity by national officials with successful models, handicaps their wide deployment.

Mechanisms to attract domestic savings will increase financing options for infrastructure

[2] Data on the annual financing that is required to achieve basic infrastructure service levels by the year 2025 is from AfDB, African Economic Outlook, 2018. The methodology for calculating the financing gap is explained in Section 3.1 of this report.

3 G20 Principles of Quality Infrastructure Investment (QII) and the recommendations of the OECD/ACET report offer a unique opportunity for G20 members to assist African countries improve the quality of infrastructure projects in Africa. The G20 principles, agreed by all G20 members, could also be very useful to improve infrastructure services in Africa. While most African countries would agree with the principles, it is the execution that has proven difficult, especially for large projects. Given that almost all bilateral ODA financial assistance is provided by G20 members, there is a unique opportunity for G20 members who are active in Africa to assist the countries that they work with to apply the QII principles to African infrastructure projects.

G20 Principles of Quality Infrastructure can be applied to projects in Africa

The OECD/ACET report also includes recommendations for improving quality. They propose the award of a Quality Label that certifies that a project has excelled in preparation at the early stages. They also propose a platform for real time peer learning among professionals in countries that are responsible for project preparation. The QII principles and the OECD/ACET recommendations deserve the attention and support of all ICA members and non-members wo are active in financing infrastructure in Africa.

4 While there have been recent success stories that are notable in terms of access to electricity and water services, for example electricity access in Kenya, there is an increasing realization that poor financial sustainability is holding back the expansion of access to the people of Africa. Action is needed to improve services while requiring consumers to pay cost-reflective tariffs. An overarching characteristic of the power sectors and water and sanitation sectors in African countries is their lack of financial sustainability in the sense that their income does not cover the full cost of operations, including investment. Average tariffs are set too low; billing and collection are insufficient; and operational efficiency of electric and water utilities is inadequate. This has led to a significant constraint on the financing for extension of service into unserved areas. Water utilities in particular rarely have tariffs that cover significantly more than direct operations and maintenance costs. Funds required for investment that do not come from consumers, must come from grants either from government or from donors. Private sector financing is only available when investments can be repaid. For the power sector this means that people and business go without electricity. For the water sector it means that people must self-provide, often taking water from unsafe sources including vendors who charge multiples of the cost of water from pipes. In both cases it is the poor who suffer and often end up paying more for poor service. Recognizing the political challenges, policy action should be taken to gradually invest in improvements -- while asking people to pay for services and shielding the most vulnerable from unaffordable costs through well-targeted subsidies.

5 Renewable energy represents a huge opportunity for African countries. As Africa electrifies, it would seem desirable that countries seek to invest in new generating capacity based on renewable energy (RE) to the extent possible. This would help them to comply with their climate commitments under COP21 and COP26. Also, renewable energy is now, for the most part, cheaper than new fossil fuel-based generating capacity. Yet despite some notable RE projects e.g., in Morocco and South Africa, countries on the continent continue in the main to invest in new fossil-fuel generating capacity and are slow to replace existing capacity with RE. The reasons for the slow deployment seem to be, first, that many RE projects are structured as Independent Power Projects with private sponsors, and the high transactions costs and lengthy timeframes in negotiating contractual arrangements of IPPs dissuade most private sponsors from proceeding. Second, the continent's power utilities appear to be conservative in their choice of technology and continue to rely on tried-and-true diesel and gas turbine units rather than following innovative practices in other developing regions of the world, e.g., India and China.

6 he Africa Continental Free Trade Agreement (AfCFTA) represents an opportunity to accelerate transformative projects. The African continent has 54 countries with an average country population under 26 million and is therefore highly fragmented. To achieve economic scale, African countries need to trade and to work together. But existing transport and trade links are weak, and logistics costs are very high. The result is that African countries trade significantly more with partners outside the continent than with their neighbors and are unable to develop world-scale industries and value-chains. Transformative projects, mostly multi-country and multi-sector could kickstart industrial development around strategic deep-water ports and transport corridors that open to the interior of the continent (including to landlocked countries). Such strategic projects are likely to involve investment in transport infrastructure, in dependable electricity generation, transmission and distribution capacity, and in soft infrastructure such as logistics and trade facilitation. The AfCFTA should provide a significant impetus to the advancement of transformative multi-country programs and projects.

More trade among African countries will increase economic scale

2. Financing Trends

2.1 Effect of COVID-19 on infrastructure investment

2.2 Who is financing Africa's infrastructure?

2.3 What sectors are attracting investment?

2.4 Which regions are the funds flowing into?

2.5 Impact of financing trends

2. Financing Trends

Key Findings

Total commitments in 2020 were 10% lower than in 2019, largely because of the impact of COVID-19.

- African Governments continued to provide the largest share of commitments.
- After a surge in 2019, ICA members' commitments in 2020 stabilized at 22% of total commitments, slightly higher than their 20% share in 2018.
- Commitments by the private sector reached $19bn in 2020, the highest level on record.
- The share of commitments allocated to transport has increased over the last few years, going from 32% in 2018 to 42% in 2020.
- Financing gaps remain substantial in all sectors except ICT and have increased markedly in water and sanitation over the last 4 years.

This introductory chapter reviews the impact of COVID-19 on infrastructure investment (Section 2.1) and, more specifically, how the climate of uncertainty and the need by financiers to shift resources towards the response to the pandemic resulted in a decrease in infrastructure financing. The next section (Section 2.2) provides an overview of the various sources of African infrastructure financing, organized along four groups – ICA members, African governments, other public sources, and the private sector. The chapter then presents a breakdown of the financing by sector (Section 2.3) and by region (Section 2.4) as an introduction to subsequent chapters that provide more details. Finally, Section 2.5 reviews how the shifting of financing from infrastructure to more-pandemic related sectors, has exacerbated financing gaps in certain sectors, and how the private sector could contribute to bridging the gaps in some sectors.

2.1 Effect of COVID-19 on infrastructure investment

COVID-19 impacted African countries differently in terms of cumulative cases, hospitalizations, and deaths. The resulting economic contraction also impacted African countries differently and reflected varying levels of declines in consumption and investment caused by considerable consumer and investor uncertainty, lockdowns, containment measures, and disruptions in supply chains (domestic and external). Service sectors, including construction, have been the most affected[3].

Infrastructure sectors, particularly the energy, transport, and water sectors, faced wide-ranging challenges. Country resources were diverted towards emergency spending on health, social issues, and economic stimulus efforts. Infrastructure projects suffered, as many countries and financial institutions were affected by rating downgrades that made it more difficult to obtain finance. Fifty-six percent of rated African countries were downgraded – significantly above the global average of 31.8% and the averages in other regions (45% in the Americas, 28% in Asia, and 9% in Europe)[4] .

[3] IMF, World Economic Outlook Update, April 2021.
[4] https://www.project-syndicate.org/commentary/africa-credit-rating-downgrades-hurt-economic-development-by-hippolyte-fofack-2021-08#:~:text=Fifty%2Dsix%20percent%20of%20rated,and%209%25%20in%20Europe

Travel restrictions and lockdowns resulted in delays in project preparation. Negotiations between the public and private sectors that were necessary to close complex PPP projects proved more difficult to do via video conference than face to face.

Supply chain disruptions and price increases affected the implementation of many energy projects, particularly solar. A number of projects under construction were affected by foreign contractors leaving the continent at the beginning of the pandemic.

The broad decline in economic activity also resulted in job losses that reduced the ability of consumers to pay tariffs, especially electricity tariffs. A recent report indicates that 30 million people are expected to lose electricity connections due to COVID 19, which affected the finances of multiple electric utilities[5]. Proposed power utility investments involving the private sector that were not closed before the pandemic hit, were affected by investor concerns about financial risks arising from COVID.

Total commitments in 2020 were 10% lower than in 2019, largely as a result of the impact of COVID-19.

The decline in total infrastructure commitments from $85bn in 2019 to $81bn in 2020 in part due to the shift by some bilateral and multilateral organizations from infrastructure to operations to address the effect of the COVID-19 pandemic, particularly in the health and macroeconomic sectors. The IMF provided emergency assistance to 39 African countries amounting to over $25.5bn in 2020 alone[6]. Without this assistance, infrastructure investments would likely have dropped even further.

Different financing institutions were affected in different ways[7]. For example, the two most active MDBs in Africa had different results in 2020. The 2020 three year rolling average for the AfDB infrastructure program dropped 16% compared with its 2019 three year rolling average. In comparison, the 2020 three-year rolling average of the World Bank infrastructure program in Africa was only 2% less than its three-year rolling average for 2019.

The relatively low drop off by the World Bank was partly due to the fact that it was able to finance a large COVID response while also financing its previously planned infrastructure lending program. Financial constraints on AfDB's lending program on the other hand, meant that its large COVID response reduced funding available for infrastructure lending. Also, the World Bank with a larger operating budget and access to numerous donor-financed trust funds typically completes feasibility studies and design before negotiations. Because of this, the preparation 2020 program of the World Bank was well advanced before the pandemic hit and was little affected. The AfDB often finances the completion of feasibility studies and project design using proceeds of the loan itself and agreement on what will be included in the loan is often finalized during negotiations. In 2020 this meant that project preparation for many projects were not completed when COVID travel restrictions were announced and this delayed or prevented project preparation consultants from completing their assignments during the year.

The Africa Finance Corporation was similarly affected by the limited ability of staff to meet with country officials, and private investors. Virtual meetings were an incomplete substitute that extended the time to complete negotiations. Uncertainty in demand caused by COVID had a particular impact on private sector projects such as airports and power utilities where financial risk assessments became difficult to conduct. The result was a drop of 28% in the 3 year rolling averages between 2019 and 2020.

AfreximBank established a $3bn, Pandemic Trade Impact Mitigation Facility in 2020 to assist member countries in managing the adverse

[5] Tracking SDG 7: Energy Progress Report (2021) issued jointly by the International Energy Agency, the international Renewable Energy Agency, the UN Department of Economic and social Affairs, the World Bank and the World Health Organization
[6] IMF, COVID-19 Financing and Debt Service relief Tracker, March, 9, 2022.
[7] Information in the next paragraphs is based on interviews with officials of the relevant institutions.

impact the COVID-19 pandemic, including supply chain issues. Nevertheless, preparation of its infrastructure operations was also affected by communication and travel delays, and perceived higher risks. There was a significant drop-off of 20% in infrastructure commitments by AfreximBank between 2019 and 2020.

While there was some rebound towards the end of 2020, the effects of COVID on infrastructure investment are expected to linger at least until the end of 2022.

2.2 Who is financing Africa's infrastructure?

Commitments to Africa's infrastructure operations have remained constant with regard to the 3-year rolling averages for 2017-2019 and 2018-2020. See Box 2.1 at the end of this chapter for discussion of infrastructure commitment data sources.

Several bilateral and multilateral organizations became ICA members in 2019, which resulted in a substantial increase in the commitment level for that group in 2019. At the aggregate level, this was more than offset by a marked decrease in commitments from other public sources including a sharp reduction in commitments from China from a 2018 level of $25.7bn to $6.7bn in 2019 and $6.5bn in 2020, reflecting the decision by the Chinese authorities to reduce their investments in Africa because of concerns about the external debt position of African countries.

After a surge in 2019, ICA members' commitments in 2020 stabilized at 22% of total commitments, slightly higher than their 20% share in 2018

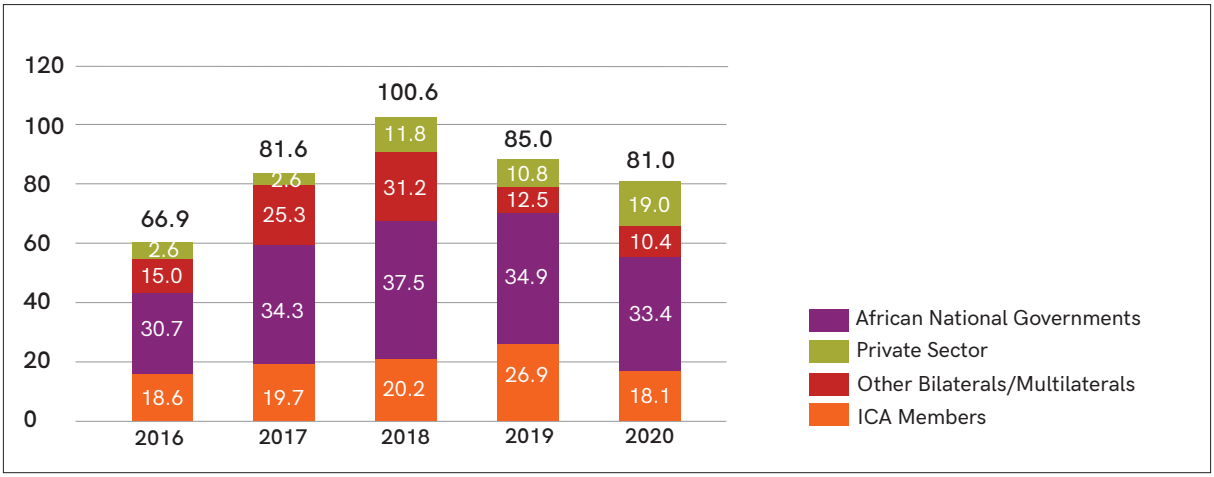
The decrease of $1bn in commitments by the private sector between 2018 and 2019 results from a sharp decline of $2.8bn in public-private projects, which was only partly offset by an increase in private sector commitments to projects without the support of governments.

There was a sizeable resurgence in private sector investment in 2020. African Governments provided the largest share (41%) of the investment in 2019 and 2020. It should be noted that no adjustments to the approved 2020 budget allocations could be found, for any country, to reflect the impact of the COVID-19 pandemic. The implication is that the allocations for African national governments include a level of overestimation[8]. Table 2.1 and Figures 2.1 and 2.2 show the 2019 and 2020 commitments by source group, with historical comparators, rolling averages and changes over time.

Commitments by the private sector reached $19bn in 2020, the highest level on record.

Figure 2.1: Total Commitments by Source ($bn), 2016-2020

Overall commitments decreased in 2020 largely because of the COVID-19 pandemic



[8] The 2020 commitments by ICA members and other non-ICA members, however, reflect actual approvals and thus these organizations' change of focus in their lending programs to accommodate substantially higher commitments in sectors that supported COVID-19 operations, such as health and economic budget support, and, consequently, reduced commitments in all dimensions of infrastructure.

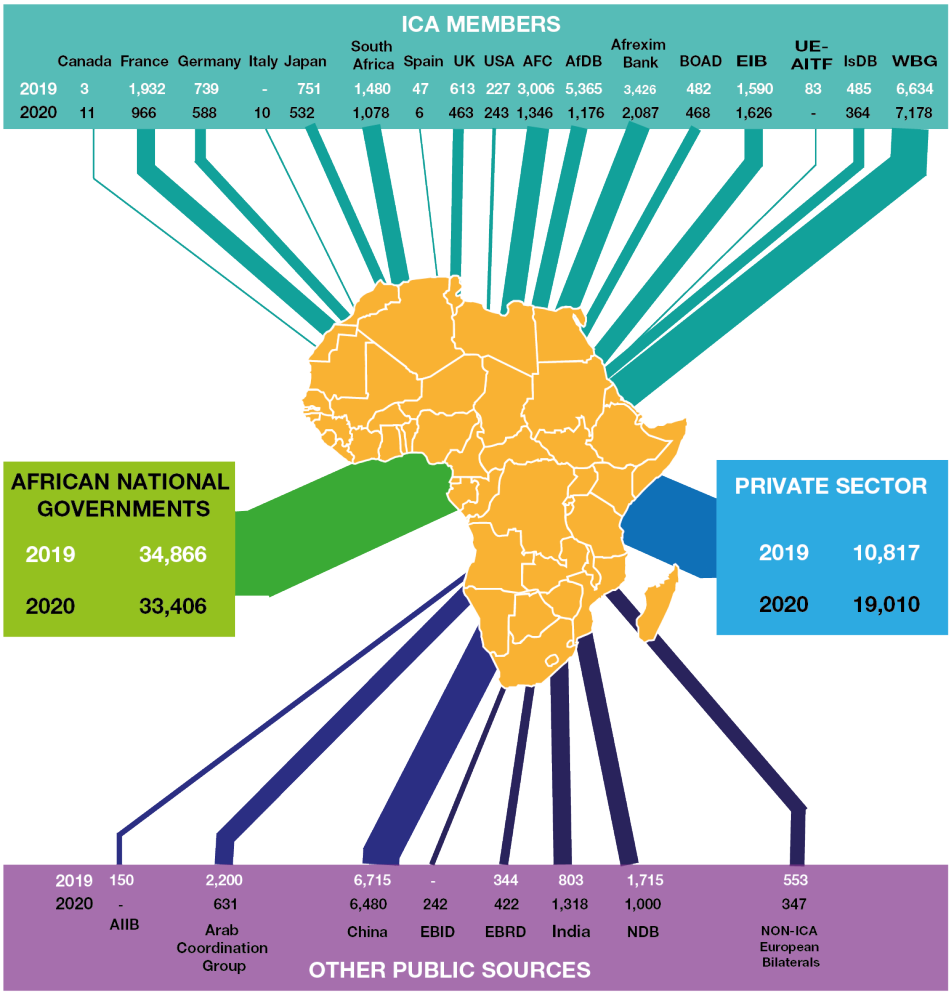
Table 2.1: Total Commitments and Average Financing by Source Group ($m), 2016-2020[a]
Non-ICA Members contributed close to three-quarters of total commitments in 2019 and 2020

SOURCE	ANNUAL			3-YEAR ROLLING AVERAGE[b]			CHANGE B/A (%)	CHANGE C/B (%)
	2018	2019	2020	(A) 2018	(B) 2019	(C) 2020		
Total ICA Members	20,243	26,863	18,142	19,503	22,252	21,749	14%	-2%
Total Other Public Sources	68,736	34,866	43,846	58,465	59,217	53,468	1%	-10%
Total African Governments	37,525	34,866	33,406	34,173	35,579	35,266	4%	-1%
Total Other Public Sources	31,211	12,480	10,440	24,292	23,638	18,202	-3%	-23%
Total Private Sector	11,824	10,817	19,010	5,581	8,320	13,884	49%	67%
Total Financing	100,803	85,026	80,998	83,549	89,789	89,101	7%	-1%

(a) Numbers may not add up due to rounding
(b) If data were not available for the 3 years, rolling averages are only for the years for which data were available.

Figure 2.2: Commitments by Source ($bn), 2019-2020

Africa, through African governments and African bilaterals and multilaterals, committed more than any other region in 2019 and 2020



2.3 What sectors are attracting investment?

The transport sector received the largest share of commitments, both in 2019 (40%, $33.8bn) and 2020 (42%, $34.4bn). This is noticeably more than the 32% share ($32.5bn) it received in 2018 (Figure 2.3). African governments contributed more than half of transport commitments each year, 55% ($18.7bn) in 2019 and 54% ($18.6bn) in 2020, albeit lower shares and a lower amount than in 2018 (60%, $19.6bn).

The water and sanitation sector accounted for 12% ($10.1bn) of total 2019 commitments and 10% ($8.1bn) of total 2020 commitments, markedly lower than the $12.9bn (16%) 2016-2018 average.

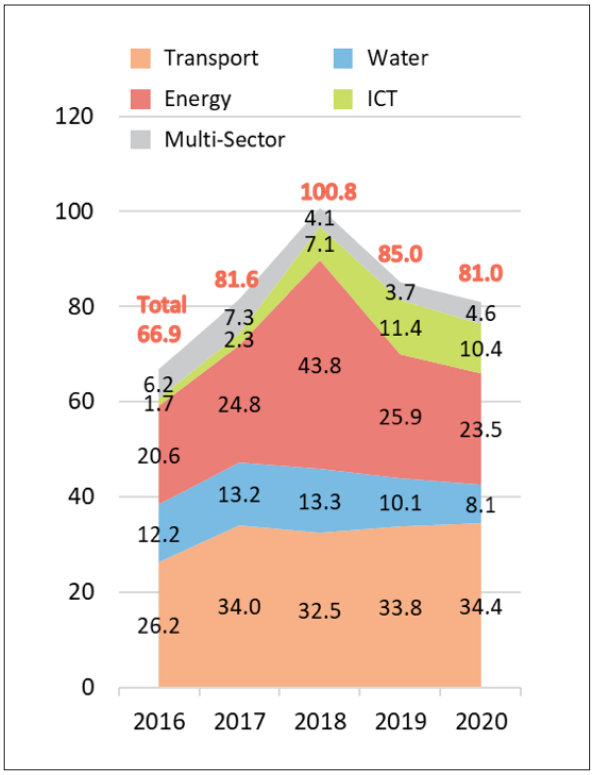
Commitments in support of energy operations, which had seen a sharp increase in 2018, to reach $43.8bn, were markedly lower in 2019 ($25.9bn) and in 2020 ($23.5bn). The share of energy in total commitments declined from 43% in 2018 to 31% in 2019 and 29% in 2020. ICA members contributed the largest share of 2019 commitments to the energy sector, 50% ($13.1bn), and a lower level of 30% ($7bn) of 2020 commitments. As in previous years, the bulk of financing went to finance generation facilities and their associated transmission lines to connect them to the grid. Lower financing amounts to the power sector reflect the worrisome financial situation of many the continent's power utilities.

Commitments to the ICT sector increased markedly from the 2018 level of $7.1bn (7% of total commitments), reaching $11.4bn in 2019 (13% of total commitments), and $10.4bn in 2020 (13% of total commitments). The private sector contributed the largest share, 61% ($6.9bn) of 2019 ICT commitments, and 63% ($6.5bn) of 2020 commitments. The private sector was able to maintain and increase its investment flows to this sector, which is not showing signs of demand saturation. Commitments to multi-sector operations remained steady at 4% ($3.7bn of total commitments) in 2019 and 6% ($4.6bn of total commitments) in 2020. This compares with a share of 4% ($4.1bn) of total 2018 commitments.

The trend in the sectoral breakdown of commitments is illustrated in Figure 2.3.

Figure 2.3: Commitment Trends by Sector ($bn), 2016-2020

The transport sector received the largest share of 2019 and 2020 commitments



2.4 Which regions are the funds flowing into?

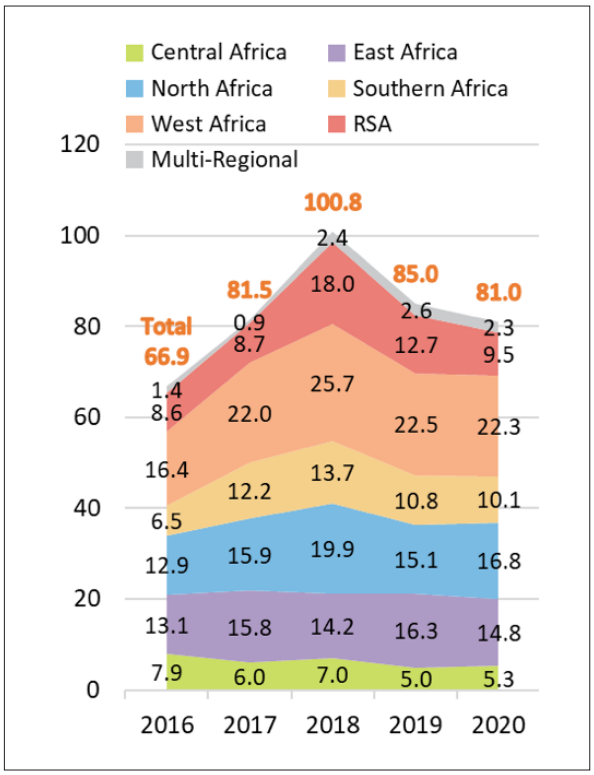
West Africa received the highest level of commitments in both 2019 and 2020, respectively $22.5bn (26% of total commitments) and $22.3bn (27% of total commitments), followed by North Africa $15.1bn (18%) in 2019 and $16.8bn (21%) in 2020. The Central Africa region received the lowest level of commitments, $5bn (6%) in 2019 and $5.3bn (7%) in 2020. Figure 2.4 shows commitment trends by region, 2016-2020. West Africa's strong showing reflects the high population density of this sub-region. Nearly half of total commitments to West Africa went to energy, a sector with a significant access gap.

The Central Africa region received markedly lower levels of commitments in 2019 ($5bn) and in 2020 ($5.3bn) than in 2018 ($7bn). But its overall share of commitments, at 6% in 2019, increased to close to 7% in 2020, the same share as in 2018. Some of the decrease comes from reduced commitments by China, $683m (which represented 14% of total 2019 commitments and $210m (4% of 2020 commitments, compared with $1.3bn (13%) in 2018.

Commitments in support of operations in East Africa reached $16.3bn in 2019, markedly higher than the $14.2bn level achieved in 2018, but decreased to $14.8bn in 2020. Its share of total commitments climbed to 19% in 2019 from 14% in 2018 and decreased slightly to 18% in 2020. African governments continued to be the largest contributor, with their commitments accounting for 53% of all commitments to the region in 2019 and 57% in 2020, a larger share than their 43% share in 2018.

Figure 2.4: Commitment Trends by Region ($bn), 2016-2020

West Africa continued to receive the largest share of commitments



The North Africa region received 18% of 2019 commitments and 21% of 2020 commitment, compared with 20% in 2018. Its commitment level showed a notable decrease in 2019, $14.8bn compared with close to $20bn in 2018 but rebounded in 2020 to reach $16.7bn. A major increase in commitments by the private sector in 2020 more than offset decreases by all other sources. Private sector commitments reached $7bn in 2020, compared with $2bn in 2019 and $1.2bn in 2018.

Commitments to Southern Africa decreased sharply in 2019 and 2020, totaling $10.8bn in 2019 and $10.1bn in 2020, compared with $13.7bn in 2018. Commitments to the region have fluctuated widely over the years, both in aggregate and by sources, going for example from a total of $15.6bn in 2015 to $6.5bn in 2016, and $12.2bn in 2017. The region's share of total commitments, however, has only experienced a small decrease from 14% in 2018 to 13% in 2019 and 12% in 2020. Some of the steepest fluctuations came from China whose commitments fell to $358m in 2019 from $5.6bn in 2018 but reached $2bn in 2020.

Commitments to West Africa, $22.5bn in 2019 and $22.3bn in 2020, represented the largest share of both 2019 and 2020 commitments, respectively 26% and 27%. These commitments are in line with previous years in terms of share, a 2016-2018 average of 26%, but higher in terms of amounts, when compared to a 2016-2018 average of $21.4bn. ICA members and African governments contributed the most to the region in both years.

The Republic of South Africa (RSA) saw commitments decrease steadily and sharply, from $18bn in 2018 to $12.7bn in 2019 and $9.5bn in 2020. Commitments from every source group declined in 2019 and 2020, except from non-ICA bilateral and multilateral organizations. The biggest decrease came from the private sector whose commitments fell from $7.7bn in 2018 to $2bn in 2019 to $1.7bn in 2020.

2.5 Impact of financing trends

The decline in infrastructure commitments in Africa in 2019 and 2020 caused by the more restrained financing by China and by the effects of the COVID pandemic, has resulted in an increasing "gap" between the annual investment needed to provide basic infrastructure services to the African population and the actual financing amounts committed to African infrastructure in 2019 and 2020.

Infrastructure financing gap is increasing

Figures 2.5 and 2.6 compare financing needs and actual investment provided for each sector in 2019 and in 2020.

Although transport was the only sector with an increase in commitments in 2020 over the commitments in 2019, its financing gap increased from a $3-15bn in 2019 to a range of $4-16bn in 2020. This is because the annual cost of transport investments required to keep up with provision of

basic services increased more than the increase in investment commitments.

As in past years, the gap in financial commitments for the water sector is far greater than for other sectors. In 2019, the annual financing gap for water was in the $46-56bn range and grew to a range of $49-59bn in 2020. The trend in support to water is also downward After significant investment in power and growth in electricity access in the latter half of the last decade, the energy sector gap was lowest in 2019 when it was in the $4-19bn range. This progress was reversed in 2020, when the gap increased to a range of $6-21bn, and the rate of electricity access declined for the first time in more than a decade.

This progress was reversed in 2020, when the gap increased to a range of $6-21bn, and the rate of electricity access declined for the first time in more than a decade.

The ICT sector has many active private sector operators that provide significant financing., and ICT was the only sector where the financing gap did not increase. The estimates of the financing gap indicate that investment commitments from the private and public sectors cover 100% of the financial requirements to provide basic ICT service (defined as basic connectivity) as estimated by the AfDB's 2018 AEO.

Private sector financing is beginning to become a significant share of infrastructure financing in Africa and has great potential to fill the infrastructure financing gap. Total private sector financing for African infrastructure increased significantly in 2020 to $19.0bn, compared to $11.8bn in 2018.

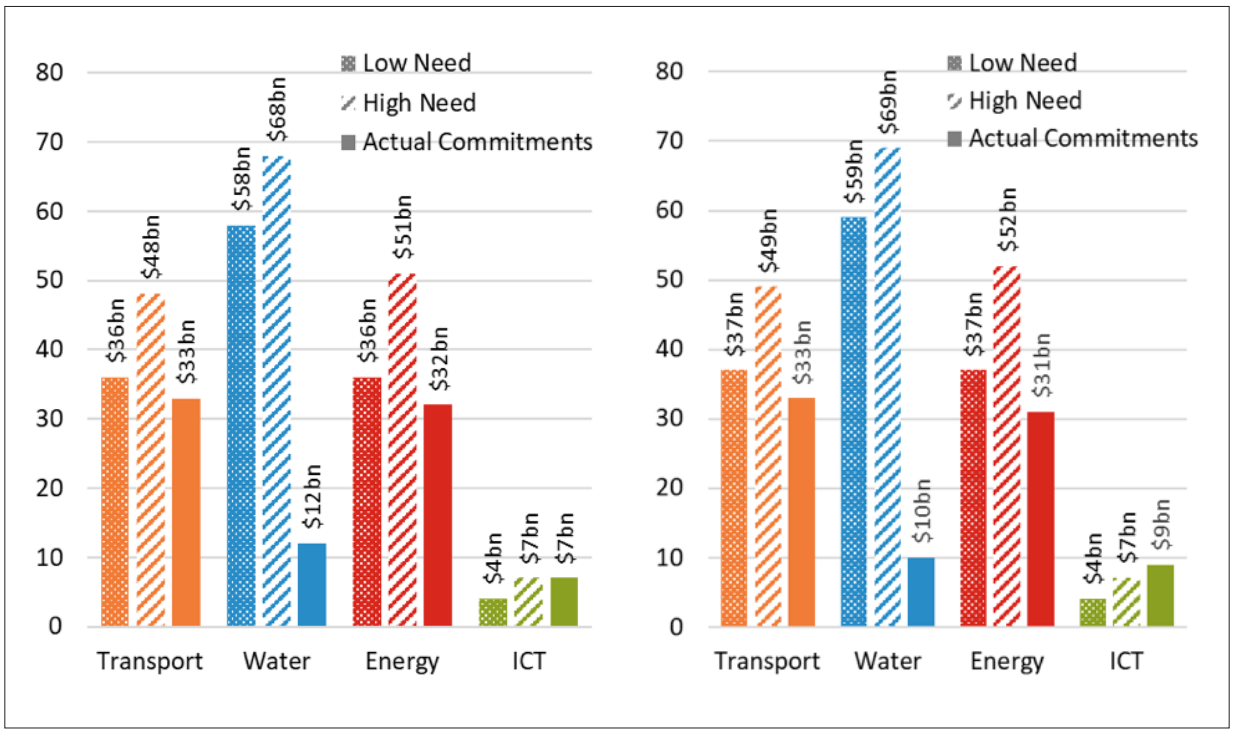
But despite this increase, not enough private sector financing is flowing to African infrastructure. The reasons for private sector underinvestment are multiple. They include a scarcity of "bankable" projects, i.e., projects prepared to a level of quality and detail (feasibility studies, financial models, environmental and social assessments) that permit financial close; lack of creditworthiness of Africa's utilities, notably power and water, which make it harder for them to borrow and thus to finance their investment programs; and a range of constraints such as perceptions of political risk and uncreditworthy off-takers that prevent the private sector from playing a greater role.

The Private Sector is playing a larger role, but is still far below its potential.

The financing gap and the role of the private sector in reducing that gap are discussed further in Chapter 3: Strategic Trends.

Figures 2.5 and 2.6: Financing Needs and Actual Investment by Sector ($bn), 2019-2020

Commitments in ICT exceeded estimated financing needs in 2019 and 2020



Box 2.1: Data Sources

Data generated in this report come from four types of sources: (i) direct submissions by financiers; (ii) publicly available annual and other reports; (iii) publicly available African governments budgets; and (iv) externally managed databases on China investments. Except for this latter category, this report did not rely on secondary sources, i.e., data available in reports that analyzed primary data, since the sources and methodologies of analysis could not be validated.

(i) Direct submissions by financiers: ICA members were invited to provide the list of infrastructure operations they had approved in 2019 and 2020 by sector and by country, with details on financing instruments, and commitments for soft infrastructure. They were also invited to provide information on the disbursements they had made against previous years' commitments.

(ii) Publicly available annual and other reports: Financing data for non-ICA members and for several private entities were generated from these organizations' annual reports. The African Economic Outlook (2018) was the source of basic infrastructure financing needs in each sector and the annual cost over a ten-year period to meet these needs. The financing gap was computed by subtracting the actual total commitments in a sector from the annual cost to meet basic needs. Data on Private Participation in Infrastructure was gathered from the World Bank Private Participation in Infrastructure database and data on the sector breakdown in government financed transport commitments was obtained from the World Bank SPI database. Data on PIDA and NEPAD investments were gathered from their respective websites.

(iii) Publicly available African governments budgets: For 50 out of the 54 African governments, their online publication of yearly budgets provided the data included in this report. No data could be found for the remaining four countries.

(iv) Externally managed databases on China investments. There are several well-respected databases on investments by Chinese entities. Unfortunately, not all of them provide time-series that could be used int this report. Further, they do not all use the same definition of "commitments", which explains why their numbers can be markedly different. Sources for this category are explained in Chapter 6.

3. Strategic Trends

3.1 Infrastructure financing gap

3.2 The role of the private sector – trends in private sector finance

3.3 Public-Private Partnerships

3.4 Infrastructure for regional integration

3. Strategic Trends

Key Findings

- Financing gaps are significant and growing for all sectors except ICT where targets for provision of basic connectivity have been reached.
- Funding from the private sector is growing, especially for ICT, but could make a much greater contribution to overall funding with more cost-reflective tariffs and user fees.
- With 27 new PPP projects closed in each of 2019 and 2020, Public-Private Partnerships continue to contribute to overall infrastructure investment but remain constrained in terms of providing greater amounts of private funding. They exhibit considerable variability from year to year.
- Infrastructure projects are a key driver of regional integration and are weaving the continent together.

Chapter 3 reviews the financing gap in infrastructure, compared to needs as assessed by the African Development Bank's 2018 African Economic Outlook (Section 3.1); and in Section 3.2, it reviews the evolving role of the private sector in infrastructure financing, including purely private financing in the ICT Sector. The role of Public-Private Partnerships is discussed in (Section 3.3). Finally, it presents the key role infrastructure plays in advancing regional integration, including the impact of initiatives such as PIDA and NEPAD (Section 3.4).

3.1 Infrastructure financing gap

The United Nations 2030 Agenda for Sustainable Development was launched by a UN Summit in New York on 25-27 September 2015 and is aimed at ending poverty in all its forms. The UN 2030 Agenda envisages "a world of universal respect for human rights and human dignity, the rule of law, justice, equality and non-discrimination", and is encapsulated by 17 Sustainable Development Goals (SDGs).

At least 5 of the 17 SDGs refer specifically to infrastructure: access to water and sanitation; access to affordable and clean energy; decent work and economic growth (underpinned by infrastructure services); industry, innovation, and infrastructure; and sustainable cities and communities. A sixth objective, climate action, is arguably also critically reliant on infrastructure in order to be met. For Africa, meeting the climate goals will mean continuing the concerted push to increased electrification (and phasing out biomass); and move from coal as a fuel for electricity generation to renewables (and natural gas as a transition fuel).

In September 2019, the United Nations General Assembly proclaimed the Decade of Action to deliver the Sustainable Development Goals (SDGs) to accelerate efforts to deliver on the ambitious, universal and inclusive 2030 Agenda. But it must be noted that SDG implementation, particularly in Africa, was already off track before the pandemic, and this is especially true for the infrastructure dimensions. How well has infrastructure investment progressed, in the light of the UN's urge to accelerate SDG implementation?

The picture is disappointing. Total infrastructure commitments in Africa declined in 2019 and 2020 after a peak in 2018. Key factors are the effects

of the COVID 19 pandemic on the health and the economy of all African countries in 2020 and more restrained financing by China in response to debt sustainability issues. These effects may linger beyond 2020.

The result is that the goal of achieving a basic level of services for the people of Africa was made harder to achieve. This is demonstrated in the analysis of the financing gap shown below.

The AfDB African Economic Outlook (AEO) 2018 presents a comprehensive assessment of service levels in transport, water, energy, and ICT. As part of the assessment, it set targets for achieving basic levels of infrastructure service in Africa by 2025. It also calculated the annual cost of achieving those targets. The annual financing gap for each sector is the difference between the annual cost of achieving the sector target, and the infrastructure financing actually committed each year. These basic needs, as defined by the AfDB in the 2018 AEO[9], are shown in Table 3.1 below for the transport, energy, water, and ICT sectors. The target for the energy sector in 2025 for example is 100% urban electrification and 95% rural electrification. The annual cost to meet the targets for each sector were also estimated for each sector in 2018. To compute the financing gap for 2019 and 2020, these cost figures were updated by conversion to nominal 2019 and 2020 values[10]. See Table 3.1. The annual amount of needed investment in 2019 and 2020 was then compared to the actual estimated commitments in that year to produce the financing gap for each sector (see also Figures 2.5 and 2.6 in Chapter 2).

Table 3.1: Financing Needs and Annual Financing Gap by Sector, 2019-2020
The water and sanitation sector had the highest financing gap in 2019 and 2020

SECTOR	TARGET BY 2025 TO MEET BASIC NEEDS	2019			2020		
		ANNUAL COST TO ACHIEVE BASIC NEEDS* ($BN)	3 YEAR ROLLING AVERAGE ACTUAL COMMITMENTS ($BN)	FINANCING GAP ($BN)	ANNUAL COST TO ACHIEVE BASIC NEEDS* ($BN)	3 YEAR ROLLING AVERAGE ACTUAL COMMITMENTS ($BN)	FINANCING GAP ($BN)
Transport	80% preservation 20% development	36-48	33	3-15	37-49	33	4-16
Water	100% access in urban areas 100% access in rural areas	58-68	12	46-56	59-69	10	49-59
Energy	100% urban electrification 95% rural electrification	36-51	32	4-19	37-52	31	6-21
ICT	Universal mobile coverage 50% of population within 25km of a fiber backbone Fiber to home/ premises internet penetration rate (10%)	4-7	7	zero	4-7	9	negative
Total		134-174	84	53-90	137-177	83	59-96

*Financing needs are derived from the African Economic Outlook report for 2018, adjusted to nominal 2019 and 2020 values based on regional inflation rates published by the World Bank.

[9] https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/African_Economic_Outlook_2018_-_EN.pdf
[10] Using regional inflation rates published by the World Bank

Transport Sector Financing Gap

The transport sector gap was between $3bn and $15bn in 2019 and between $4bn and $16bn in 2020. Transport is also the only sector with an increase in commitments in 2020 over the commitments in 2019. In 2020 total commitments covered 69% to 92% of requirements. This reflects the recognition of the importance to the productivity of African economies of improved connectivity, especially the interest in improvements in Intra-continental trade. It also reflects the relative maturity of the transport sector in Africa and the relative success in capacity building in the transport sector. It should be noted, however, that the United Nations Conference on Trade and Development (UNCTAD) noted that one of the impacts of the COVID-19 pandemic was to reduce Africa transport export revenues by $2.4bn, from $10.2bn in 2019 to $7.8bn in 2020[11] .

Water Sector Financing Gap

As in past years, the gap in financial commitments for the water sector is far greater than for other sectors. In 2019, the annual financing gap for water is $46bn to $56bn, compared to a gap of only $4bn to $16bn for transport and $4bn to $19bn for energy. The trend in support to water is also downward. Water sector commitments from all sources in 2020 were $8.1bn, compared to $13.3bn in 2018, a decline of about 39%. A decrease in commitments between 2018 and 2020 has widened the gap between what is needed and what has been committed.

As a result, on the continent, 418 million people still lack even a basic level of drinking water service, 779 million lack basic sanitation services, including 208 million who still practice open defecation, and 839 million still lack basic hygiene services[12]. In 2020, total water sector commitments covered only 14% to 17% of required annual investment to meet basic needs. In 2019 total commitments covered between 13% and 21% of required commitments. Given the importance of water to the health and productivity of the African population, additional support to the water sector seems called for both to encourage additional reforms in the water sector and to reduce the burden of poor water on Africa's most vulnerable. A recent UNICEF/WHO special report focused on Africa, says that achieving the Sustainable Development Goals (SDG) targets on water, sanitation, and hygiene in Africa will require a dramatic acceleration in the current rates of progress[13].

Energy Sector Financing Gap

After significant investment in power and growth in electricity access in the latter half of the last decade, the energy sector gap was lowest in 2019 when it was between $4bn to $19bn. This progress was reversed in 2020, when the gap increased to between $6bn to $21bn, and the rate of electricity access declined for the first time in more than a decade. The lower commitments in 2020 due mostly to the COVID-19 pandemic and the health crisis and economic downturn have significantly increased the difficulties faced by governments and power utilities in increasing electricity access. The current rate of growth in electrification rates is below population growth which now outpaces growth in access. This has pushed the goal of universal access further into the future. The 2020 total commitments in the energy sector covered between 47% and 68% of the required investment.

ICT Sector Financing Gap

The ICT Sector has many active private sector operators that provide significant financing. The estimates of the financing gap indicate that investment commitments from the private and public sectors cover 100% of the financial requirements to provide basic service as estimated by the AfDB's 2018 AEO. This defines ICT service levels as basic connectivity, i.e., voice communication and SMS access only, and not data communication supported by 4G and 5G. It should be recognized that the 54 countries of Africa are quite varied in their access to ICT services and that no single metric can capture this country level variability. The analysis of basic service level needs and the cost of meeting those needs thus represents an "average" for Africa. Some countries will need above average, and some below. Nevertheless, while there is considerable margin of uncertainty in the annual estimated cost to provide basic service, it does indicate that private operators are able to finance a competitive basic service where consumers are willing to pay. Significant gaps in other sectors, especially water, remain. This highlights the fact that there is still a wide gap between sectors (including social infrastructure)

Financing gaps are significant and growing for all sectors except ICT where targets for provision of basic connectivity have been reached.

[11] UNCTAD Stat 2022
[12] UNICEF/WHO special report prepared for World Water Forum, Dakar, Senegal, 22 March, 2022
[13] IBID

in their ability and suitability to mobilize private finance. The challenge now for ICT in Africa is to go beyond basic connectivity to increase the access rate to higher value-added services such as internet and other data services, which will require deploying 4G service (and preparing for 5G deployment); and ensuring data tariffs that are affordable for African consumers.

Reducing the Financing Gap

It is clear that not enough financing is flowing to African infrastructure and a substantial financing gap remains. There is not an absence overall of potential finance for projects in Africa. The reasons for Africa's underinvestment are multiple. They include a scarcity of "bankable" projects, i.e., projects prepared to a level of quality and detail (feasibility studies, financial models, environmental and social assessments) that permit financial close; lack of creditworthiness of Africa's utilities, notably power and water, which make it harder for them to borrow and thus to finance their investment programs; and a range of constraints such as perceptions of political risk and uncreditworthy off-takers (further discussed in Section 4 below) that prevent the private sector from playing a greater role. While it is not clear that projects in Africa suffer a greater degree of default than in other regions this perception is widespread and reduces financial flows, increasing their cost.

Between 2019 and 2020 the financing gap increased in each sector except ICT. See Table 3.2. Reducing the financing gap in the coming few years will be a major challenge for African countries due to both the effect of COVID-19 on national economies and the debt sustainability challenge. The different infrastructure sectors are affected in different ways, but reforms are needed to move ahead in all sectors.

The water sector faces the most urgent need to reduce the gap and is most in need of reform. In the water sector, efforts are needed to start a process that leads to more cost-reflective tariffs by utilities and rural providers. As is discussed further in Chapter 7, evidence is clear that such tariff structures that include the cost of investment, can be designed to shield the most vulnerable with targeted cross subsidies and basic lifeline tariffs. Without cost-reflective tariffs, investment will always depend on grants from government and donors, uncertain at best. Even the private sector cannot play a role in financing water service without consumers paying cost-reflective tariffs. Financial performance can also be improved by operational efficiencies. Improving routine maintenance can reduce expenditures by up to 60%. Improving bill collection performance, reducing leaks and non-technical losses, and competitive contracting out to the private sector can all improve financial performance.

In the energy sector, the stock of existing generation and transmission assets with reliable revenue streams is now sufficient to allow recycling of investment funds, taking out existing high-cost debt finance at lower interest and longer tenors, and recycling the financial resources thus released. In cases where substantial existing infrastructure assets with reliable revenue flow exist, the revenue flows can be pledged to back infrastructure bonds or other financial instruments that can provide fresh capital for new investment. Taking this a step further, the Nigeria Sovereign Investment authority's InfraCredit subsidiary, a monoline guarantee agency, has been set up with authority to wrap infrastructure bonds, to provide the kind of credit enhancement that would attract institutional investors. (See Box 4.1).

In the transport sector, there is still considerable political and social opposition to toll roads. This can be seen from the recent decision to scrap tolls in Gauteng Province in South Africa. Nevertheless, Kenya, Uganda, Tanzania, and Nigeria have all announced the intention to charge tolls. One possibility is to upgrade a section of a heavily travelled existing road through bidding with shadow tolls, i.e., the toll is paid to the investor by government. After some time-lapse, a conversion to actual tolls could be made with less risk than a toll road on a greenfield project.

In all sectors efforts are being made to consider how to use public capital to crowd in the private sector by, for example, increasing the use of credit enhancement to attract the private sector instead of automatically using public capital to directly

finance projects. In addition to financial innovation, new institutional arrangements are beginning to emerge that can contribute to bringing fresh financing for infrastructure.

Table 3.2: Trends in the Financing Gap by Sector, 2017-2020

The overall financing gap increased in both 2019 and 2020

SECTOR	FINANCING GAP ($ BN)			
	2017	2018	2019	2020
Transport	3-15	4-16	3-15	4-16
Water	45-55	43-53	46-56	49-59
Energy	8-23	5-20	4-19	6-21
ICT	2-5	0-3	zero	negative
Total	58-98	52-92	53-90	59-96

3.2 The role of the private sector – trends in private sector finance

Total private sector financing for African infrastructure increased significantly in recent years: $10.8bn in 2019 and $19.0bn in 2020, compared to $11.8bn in 2018 (Figure 3.1 and Table 3.3). The sharp increase in private sector investment in 2020 compared to the previous year is partly explained by several planned projects that were delayed in 2019 and shifted to 2020.

The 2019-2020 average level of financing of $14.9bn reflects a sharp increase over the 2016-2019 average of $5.6bn.

Figure 3.1: Private Sector Financing Trends by Sector ($bn), 2016-2020

Private sector financing nearly doubled in 2020

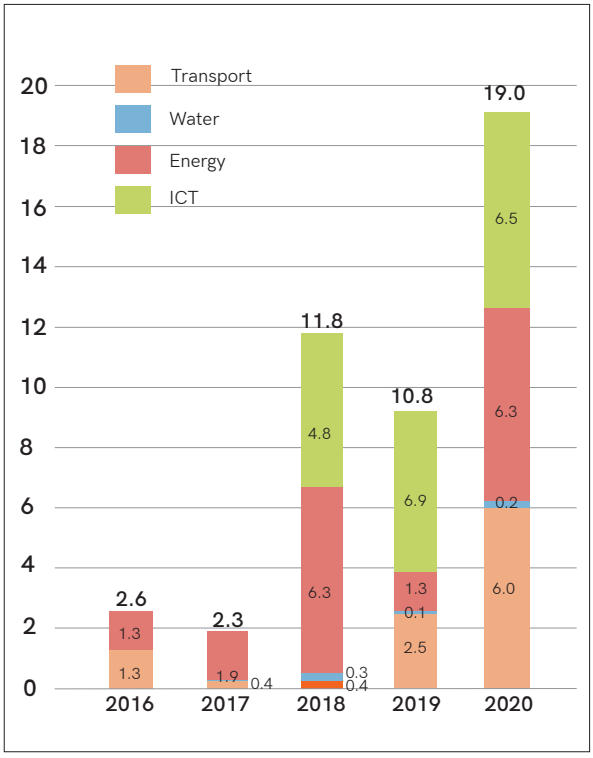


Table 3.3: Private Sector Financing for African Infrastructure ($m), 2016-2020

Private sector financing reached a record high in 2020

SOURCE	ANNUAL			3-YEAR ROLLING AVERAGE[b]			CHANGE B/A (%)	CHANGE C/B (%)
	2018	2019	2020	(A) 2018	(B) 2019	(C) 2020		
Total Private Sector	**11,824**	**10,817**	**19,010**	**5,581**	**8,320**	**13,884**	**49%**	**67%**
Government-Supported	6,778	3,988	12,499	3,899	4,362	7,755	12%	78%
Standalone	5,046	6,829	6,511	1,682	3,958	6,670	135%	69%

Figure 3.2: Private Financing by Region, 2019-2020

North and West Africa have the highest involvement of the private sector predominantly in the ICT sector

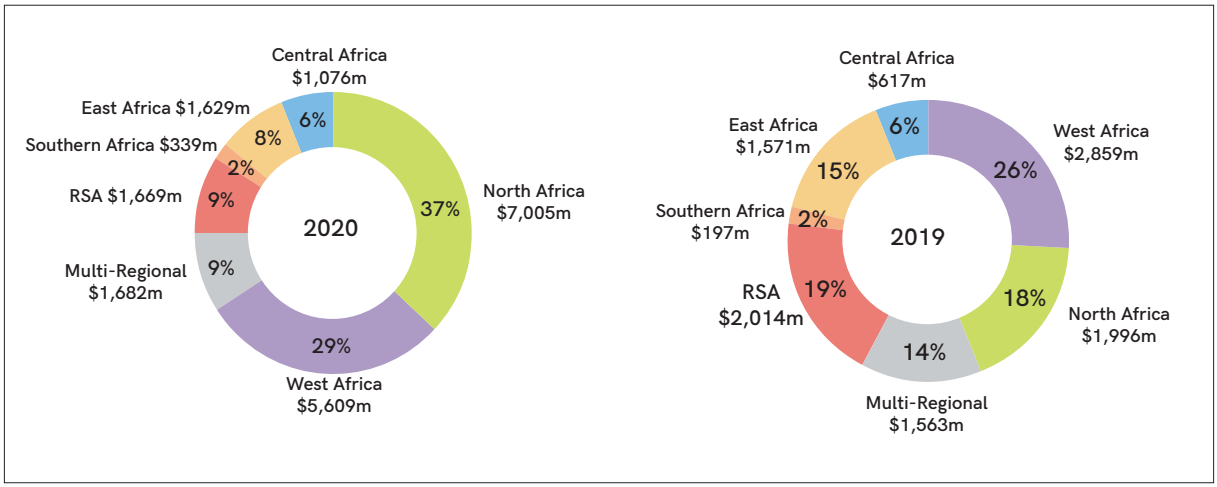


Figure 3.3: Private Financing by Sector, 2019-2020

ICT accounted for the highest level of private investment in 2019 and 2020

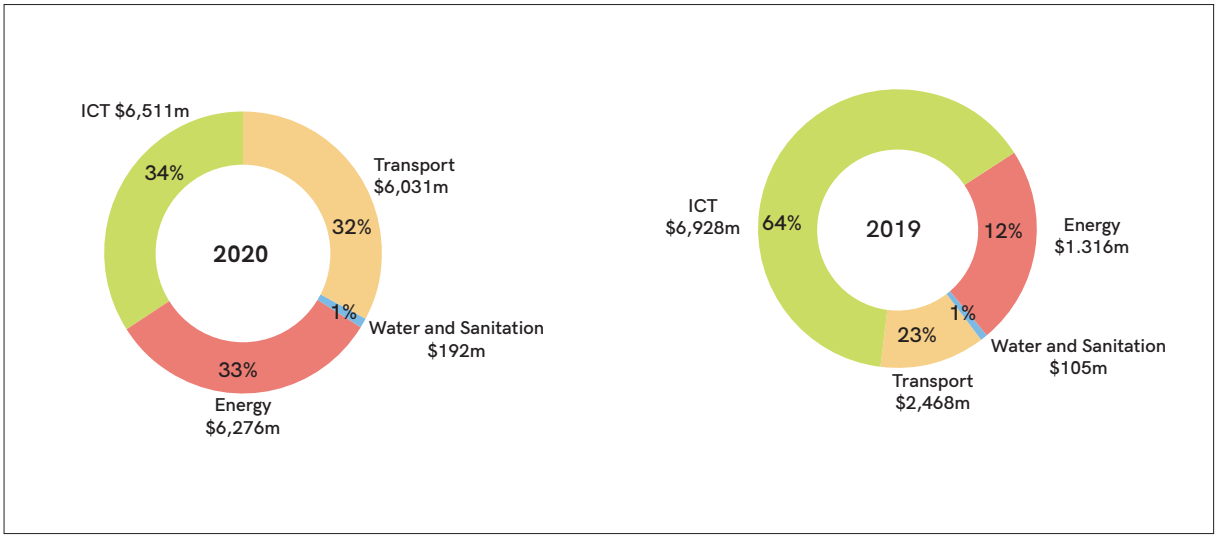


Table 3.3 shows a significant increase in private sector investment in 2020 compared to previous years. While there has been real growth, the numbers speak in part also to the inherent "lumpiness" of infrastructure investment. Mega-projects that close in a particular year can make a significant impact on yearly figures, hence rolling averages are a better overall indicator of trend. Such projects are prepared long in advance of financial close, so they were not significantly affected by COVID-19. In 2020 the totals reflect the financial close of two mega-projects: Cairo Public Monorail Transit System in Egypt ($5,019m) and the Ajaokuta-Kaduna-Kano Project (AKK) in Nigeria ($2,600m).

Regionally, private investment in infrastructure in 2019 and 2020 was greatest in North Africa, with an average of 30% of total 2019-2020 financing, followed by West Africa, with an average of 28% (Figure 3.2). In terms of sector focus, private investment for these two years was heavily concentrated in ICT, with an average of 45% of the total. Transport represented 28% (primarily in ports and aviation) and energy 25%, with water and sanitation making up a very small percentage of the total (Figure 3.3). These different shares of private sector participation speak to the revenue-generating capacity of the different infrastructure sectors – ICT customers have high willingness to pay, and the sector generates a strong revenue stream; ports, airports and electric power have moderate revenue-generating capacity, while water and sanitation has the lowest intrinsic revenue-generating capacity of the four infrastructure sectors (Table 3.4).

Differing revenue-generating capacities of each of the infrastructure sectors influence the level of private sector investment. Most ICT investment can be made without support from governments. The other sectors attract very little direct private investment without some form of support from the government, in the form of a Public-Private Partnership (PPP), government guarantees, multilateral/support, or loan from a foreign government.

Table 3.4: Private Sector Financing for African Infrastructure by Sector ($m), 2018-2020 »

Water and sanitation has received the lowest amount of private sector investment

	2018	2019	2020
Transport	439	2,468	6,031
Water and Sanitation	256	105	192
Energy	6,282	1,316	6,276
ICT	4,848	6,928	6,511
Total	**11,824**	**10,817**	**19,010**
Of which: without govt. support (ICT)	5,046	6,829	6,511
Percent of total	42.7%	63.2%	34.3%

Sources: For 2019 and 2020: World Bank PPI database, company reports.[14] For 2018: IFT 2018

Significant developments that impacted investment figures in 2019 and 2020

As indicated above, private investment flows to infrastructure fluctuated very significantly from year to year over the period from 2018 to 2020. This variability speaks in part to a differing project cycle in the private sector (project identification, preparation, and financial close) compared to that of the public sector. It is also due to the "lumpiness" of large infrastructure projects (significant capital expenditure amounts for individual projects), which impacts commitment trends for the year in which they are made. This variability was shaped by a small number of key projects, as indicated at the start of this section.

Funding from the private sector is growing, especially for ICT, but could make a much greater contribution with reforms in sector pricing.

In 2019 a major transport sector investment in West Africa made a significant impact on commitment numbers. The $1.1bn Nigeria Lekki Deep Sea Port (Phase I) is a multi-purpose, deep seaport located at the Lagos Free Trade Zone, Lekki will support to the growth in trade across Nigeria and the West African region.

[14] The data on which these investment trends are based come from two main sources:
- Government-supported private investment: the primary data source is the Private Provision of Infrastructure (PPI) database maintained by the World Bank.
- Non-government supported private investment: A review of a cross-section of annual financial statements of private infrastructure companies operating in Africa (ICT, ports, airports, and independent power producers) indicates that only ICT companies make significant investments without government support. The data above is compiled from the annual reports of the ten largest ICT companies on the continent, which represent over 90% of total ICT investment.

In 2020, several energy projects and one major transport project made significant impacts. Morocco closed two renewable energy projects, the 800 MW Noor Midelt concentrated solar power plant Stage I ($838m); and the Taza Onshore Wind Power Generation Project ($201m). In Nigeria the Ajaokuta-Kaduna-Kano Project (AKK) project consolidates the gas distribution network and provides gas to the power sector ($2.6bn). In Côte d'Ivoire, two significant projects were the Atinkou combined cycle gas turbine plant ($441m) and the extension to the existing Azito Gas-Fired Power Plant (Phase IV, $370m). In Egypt the ($5bn) Cairo Public Monorail System seeks to tackle mass transport in the capital, a major undertaking in critical urban infrastructure. This is one of the largest single self-standing infrastructure projects ever undertaken on the African continent.

Across both 2019 and 2020 a notable trend in private sector financing was the decline in private financial flows to South Africa, after bumper years in 2017 and 2018. The decline has mainly occurred in privately financed energy projects, particularly renewable energy. South Africa's power utility Eskom is currently undergoing significant financial stress, which has led to reduced private investment in generation. Also, ICT funding for South Africa, which has traditionally represented over half of all ICT financing on the continent, fell back as some telecom operators in the country (notably MTN, but also Telkom) reduced their investment plans. The South African telecoms market is sophisticated and may be approaching saturation.

ICT investments throughout the African continent grew in 2019, then fell back slightly (5%) in 2020 due to the COVID pandemic. The long-term trend of ICT investments continues to be upward, pointing to continued consumer demand, notably for more sophisticated handsets and faster data rates, as telecoms companies upgrade their equipment to 4G, and eventually 5G.

3.3 Public-Private Partnerships

Private sector financing is beginning to become a significant share of infrastructure financing in Africa and has great potential to fill the infrastructure financing gap. The nature of private finance differs from public sources, as discussed in the section below.

A potentially powerful way of involving the private sector in funding and operation of infrastructure projects – and the most common and long-standing – is through Public-Private Partnerships (PPPs). On the African continent, there were 27 PPPs closed for a total of $4bn in 2019, and 27 for a much larger total of $12.5bn in 2020.

Table 3.5: PPP Projects by Region and Sector ($m), 2019-2020

North and West Africa attracted the most PPP investment in both 2019 and 2020

	2019	2020
CENTRAL AFRICA	**577**	**1,018**
Energy	237	766
Transport	340	253
EAST AFRICA	**920**	**898**
Energy	316	272
Transport	604	626
NORTH AFRICA	**936**	**6,098**
Energy	371	1,079
Transport	460	5,019
Water and Sanitation	105	-
RSA	**14**	**-**
Transport	14	-
SOUTHERN AFRICA	197	339
Energy	123	339
ICT	74	-
WEST AFRICA	**1,345**	**4,146**
Energy	270	3821
ICT	25	-
Transport	1,050	133
Water and Sanitation	-	192
TOTAL ALL REGIONS AND SECTORS	3,989	12,499

Source: PPI Database

Table 3.6: Types of PPPs that Reached Closure in 2019 and 2020

BOOs are the most common type of PPP in Africa

		2019	2020
Build, operate, and transfer	BOT	3	8
Build, own, and operate	BOO	17	10
Build, rehabilitate, operate, and transfer	BHOT	3	1
Rehabilitate, operate, and transfer	ROT	-	1
Management contract	Mgt contract	3	1
Not Available	N/A	1	6
TOTAL NUMBER OF PROJECTS		**27**	**27**

Source: PPI Database

Table 3.5 shows their breakdown by region and sector. Examples of PPPs are presented in Boxes 3.1 and 3.2. All the PPPs which reached financial close in 2019 and 2020 in Africa are given in Tables 3.7 and 3.8. It is important to note, however, that PPPs are not the only manner for the private sector to participate in infrastructure investment in Africa. Among the different types of PPP, Build, Operate and Transfer (BOT) and Build, Own and Operate (BOO) projects represented the bulk of contractual arrangements, as indicated in Table 3.6.

Public-Private Partnerships continue to contribute to overall infrastructure investment, but bottlenecks need to be reduced.

Of 27 PPP projects in each of 2019 and 2020, six receive no support from bilateral or multilateral agencies in 2019 and five in 2020[15]. The other projects received support from a wide range of development partners, both bilateral and multilateral.

PPPs continue to be an important way to channel private financing for infrastructure in Africa, albeit in lower numbers of projects and lower financial flows than the continent needs. PPPs have the advantage of setting up contractual arrangements around the operation of the asset that are for the most part reasonably stable and provide shelter against regulatory and political risk. Some of the largest infrastructure projects cannot be undertaken under any other framework because there is simply not enough public money to finance the initiative and the private sector is reluctant to participate without some form of comfort from the government.

Existing PPP projects that rely on demand-based contracts (e.g., airports and toll roads), saw their financial performance decline in 2020 due to drops in passenger volumes resulting or from the Covid pandemic. Airline seat capacity in Africa for example, declined by 51% during the months after the pandemic was announced compared to pre COVID levels[16]. This negatively affected new airport PPP projects. Toll roads did not much affect the transport sector because toll roads are only a small part of transport investment.

Power utility PPP investments on the other hand, almost all have take-or-pay contracts which shielded them to some extent from the effects of COVID-related declines in demand, but were negatively affected more generally by investor concerns about the weak financial performance of power utilities and their lack of creditworthiness. The latter is only partly due to the COVID pandemic. Discussions with project sponsors and financing agencies point to the fact that infrastructure PPPs have very high transactions costs. Government decision-makers are often very slow to complete negotiations and process such projects, due to lack of experience with PPPs and concerns about rick identification and risk sharing between public and private parties. This results in significant delays and higher project preparation costs for both the sponsor and the government. Government decision-makers often do not engage the right level of financial and legal advisors to assist them in bringing such projects to fruition in a reasonable amount of time.

[15] In the case of some projects it was not clear whether or not the project received support from a bilateral or multilateral.
[16] AfDB, An Effective Response to COVID-19 Impacts on Africa's Aviation Sector. Draft background paper, Nov. 2020

Box 3.1: Egypt — Public-Private Partnership for Mass Transit

PPP - Cairo Public Monorail Transit System

The Cairo Monorail is a $5bn greenfield Build, Operate, Transfer (BOT) PPP project consisting of a two-line monorail rapid transit system. It is currently under construction in Cairo, Egypt, and will be the longest driverless monorail system in the world. When the project is complete the two lines will create the first public transport links from the New Administrative Capital and 6th of October City to the Cairo metropolitan area. The 54km line, connecting the New Administrative City with East Cairo, will take 60 minutes, and the 42km line connecting 6th of October City with Giza, will take 42 minutes.

Phase 1, extending over about 45km from the new capital to al-Moshir Mosque station, is set for opening by the end of May 2022; Phase 2, extending over 11.5km from al-Moshir Mosque station to Cairo Stadium station, is scheduled to open in February 2023. The project is expected to minimize traffic congestion and create an integrated public transport system. The project sponsors are Bombardier (63%); Orascom (20%), and a consortium of Arab Contractors (17%).

Source: PPI Database, EgyptToday (June 20, 2020)

Box 3.2: Mozambique — Public-Private Partnership for Renewable Energy

PPP- Namaacha Wind Farm

The Namaacha Wind Power Station is a 120-megawatt wind-powered electricity power station under construction in Mozambique. It is the first grid-ready wind energy infrastructure in the country and is under development by EleQtra Mozambique Limited, a subsidiary of the American independent power producer, EleQtra. It will add significantly to the power generating capacity of the country.

The power station will be developed in two phases of 60 megawatts each. The estimated capital expenditure is $280m. The energy generated will be sold directly to Electricidade de Moçambique, the Mozambican electric utility company, under a long-term power purchase agreement (PPA). The project received support from the African Development Bank.

Source: AfDB

Although PPPs have been and remain important ways to attract private finance for infrastructure in Africa over the last several decades, these partnerships have ultimately been disappointing in terms of mobilizing very large amounts of private financing. Consultation with the private sector point to concerns about the creditworthiness of utility off-takers, excessive bureaucracy, lengthy negotiation times, and the perception of political risk (notably regulatory risk). Discussions with governments, on the other hand, highlight the sometimes-unreasonable demands made by project sponsors and private providers of debt concerning for risk-mitigation, including in particular, excessive government guarantees and other credit enhancement provisions. Such support exposes governments to contingent liabilities. Governments need to be aware of the following issues:

- Government guarantees provided as a part of the financial structuring expose governments to considerable risk not always accurately reflected on the government's balance sheet.
- The contingent nature of this risk (i.e., contingent liabilities) exposes them to the possibility of sudden obligations over a short period of time which can lead to serious fiscal problems.
- Management of these contingent liabilities depends on the risk assessment and risk allocation strategy followed by the countries, the strength of their fiscal institutions and legal framework and their budget transparency.
- Integrated risk management systems will greatly improve governments' ability to manage and control risk.

For these reasons the financing of PPPs in Africa has until now relied heavily on debt finance from DFIs. Improving the expertise of national PPP units would greatly help. But project finance advisory consultants with project specific expertise will inevitably be required to avoid costly mistakes. This is especially important in sectors like roads and water utilities where PPPs are much rarer than in the power sector. There is perhaps scope for DFIs to provide greater assistance to national governments in negotiating PPPs, in identifying and analyzing the nature of contingent liabilities, and how they are managed. Development institutions could further assist by providing standardized bidding documents and experienced financial and legal advisory services, to streamline the negotiations process.

In Tables 3.7 and 3.8 below, Project sponsors cover a wide range of investors and partners, with some recurring names, e.g., Actis, AMEA Power, Infraco Africa, Meridiam, Africa Finance Corporation, Globeleq, etc. Debt providers include multilateral development agencies such as AfDB, Africa Finance Corporation, BOAD, EIB, IDB, IFC, etc., as well as bilaterals such as Abu Dhabi Fund for Development, CDC, China Development Bank, DBSA, FMO. KfW, OPIC, Proparco, Sinosure, etc. MIGA provided political risk insurance for a number of projects.

Table 3.7: PPPs in Africa, 2019

Full list of infrastructure PPPs in Africa in 2019[17]

COUNTRY	PROJECT NAME	TYPE OF PPI	SUBTYPE OF PPI	PRIMARY SECTOR	PRIVATE (%)	INVESTMENT ($m)
Cape Verde	EllaLink Submarine Cable - Cape Verde Link-Up	Greenfield	BOO 1/	ICT	100	25
Chad	Djermaya Solar PV Plant Phase I	Greenfield	BOO	Energy	100	70
Comoros	Comoros Telecommunication Infrastructure Expansion	Greenfield	BOO	ICT	100	74
Côte d'Ivoire	Singrobo-Ahouaty Hydropower Plant	Greenfield	BOT 2/	Energy	100	216
Egypt	West Bakr Wind Farm	Greenfield	BOO	Energy	100	335
Egypt	East Port Said Ro-Ro terminal	Greenfield	BOT	Transport	100	150
Gabon	Kinguele Aval Hydropower Project	Greenfield	N/A 3/	Energy	60	167
Gabon	New Owendo International Port	Brownfield	BHOT 4/	Transport	61.5	340
Jordan	Al Husainiyah Solar Power Plant	Greenfield	BOO	Energy	100	74
Kenya	Eldosol Solar Plant	Greenfield	BOO	Energy	100	76
Kenya	Malindi Solar Photovoltaic Plant	Greenfield	BOO	Energy	100	69
Kenya	Radiant Solar Plant	Greenfield	BOO	Energy	100	76
Malawi	Nkhotakota solar plant	Greenfield	BOO	Energy	100	67
Mauritania	Port of Nouakchott Redevelopment	Brownfield	BHOT	Transport	100	310
Morocco	Oualidia I	Greenfield	BOO	Energy	100	13
Morocco	Oualidia II	Greenfield	BOO	Energy	100	13
Morocco	Khenifra household waste management	Mgt/lease contract	Mgt contract 5/	Water	100	1
Morocco	Tangier city waste treatment services	Mgt/lease contract	Mgt contract	Water	100	104
Mozambique	Central Solar Metoro	Greenfield	BOO	Energy	100	56
Nigeria	Lekki Deep Sea Port Phase I	Greenfield	BOT	Transport	62	1,050
Senegal	Kael Solar PV Plant	Greenfield	BOO	Energy	80	25
Senegal	Kahone PV Solar Plant	Greenfield	BOO	Energy	80	29
South Africa	Durban's passenger terminal	Brownfield	BHOT	Transport	100	14
Sudan	South Port Container Terminal at Port Sudan Concession	Mgt/lease contract	Mgt contract	Transport	100	604
Tanzania	PowerGen Tanzania Mini-Grids Portfolio	Greenfield	BOO	Energy	100	9
Tunisia	Tataouine Solar Power Plant	Greenfield	BOO	Energy	50	10
Uganda	Kikagati Hydro Power Plant	Greenfield	BOO	Energy	100	87

1/ Build, own, and operate
2/ Build, operate, and transfer
3/ Not available
4/ Build, rehabilitate, operate, and transfer
5/ Management contract

Source: World Bank PPI Database

[17] Note that this table of PPPs excludes stand-alone private sector investment in infrastructure assets, notably investment in ICT.

Table 3.8: PPPs in Africa, 2020[18]

Full list of infrastructure PPPs in Africa in 2020

COUNTRY	PROJECT NAME	TYPE OF PPI	SUBTYPE OF PPI	PRIMARY SECTOR	PRIVATE (%)	INVESTMENT ($m)
Burkina Faso	Nagreongo solar plant	Greenfield	BOT 1/	Energy	100	30
Burkina Faso	Pa solar PV plant	Greenfield	BOT	Energy	100	36
Burundi	Mubuga solar PV plant	Greenfield	N/A 2/	Energy	100	16
Cameroon	Kribi multipurpose terminal concession	Mgt/lease contract	Mgt contract 3/	Transport	100	31
Chad	Gaoui solar plants	Greenfield	BOO 4/	Energy	100	150
Congo, Dem. Rep.	Kinshasa solar plant	Greenfield	BOT	Energy	100	600
Côte d'Ivoire	Atinkou CCGT Plant	Greenfield	Other	Energy	100	441
Côte d'Ivoire	Azito Gas-Fired Power Plant Phase IV	Brownfield	BHOT 5/	Energy	100	370
Côte d'Ivoire	Lagune Aghien Water Treatment Plant	Greenfield	N/A	Water	100	192
Djibouti	Ghoubet Wind Farm	Greenfield	BOO	Energy	90	124
Egypt	Cairo Public Monorail Transit System	Greenfield	BOT	Transport	100	5,019
Gabon	Transgabonais Railway Rehabilitation phase 2	Greenfield	BOT	Transport	100	222
Guinea	Solar Park Boke	Greenfield	BOO	Energy	100	77
Guinea	Gbessia International Airport expansion (Phase 1)	Greenfield	N/A	Transport	66	133
Kenya	Meru hybrid power plant	Greenfield	N/A	Energy	N/A	145
Kenya	Solar photovoltaic project Nyeri	Greenfield	BOO	Energy	100	2
Kenya	Nairobi expressway	Greenfield	BOT	Transport	100	576
Madagascar	Ambatolampy Solar PV Plant	Greenfield	BOO	Energy	100	19
Mali	Touna solar power plant	Greenfield	BOT	Energy	100	128
Morocco	Noor Midelt CSP-PV Plant Stage I	Greenfield	BOO	Energy	75	838
Morocco	Taza Onshore Wind Power Generation Project	Greenfield	BOO	Energy	100	201
Mozambique	Metoro solar power plant	Greenfield	BOO	Energy	75	40
Mozambique	Namaacha wind farm	Greenfield	BOO	Energy	100	280
Nigeria	Ajaokuta-Kaduna-Kano Project (AKK)	Greenfield	BOT	Energy	100	2,600
Somalia	Port of Mogadishu Rehabilitation and Operation	Brownfield	ROT 6/	Transport	100	50
Tanzania	Mwenga wind farm	Greenfield	N/A	Energy	100	1
Togo	Kékéli Efficient Power thermal power	Greenfield	BOO	Energy	100	104

1/ Build, operate, and transfer
2/ Not available
3/ Management contract
4/ Build, own, and operate
5/ Build, rehabilitate, operate, and transfer
6/ Rehabilitate, operate, and transfer

Source: World Bank PPI Database

[18] Note that this table of PPPs excludes stand-alone private sector investment in infrastructure assets, notably investment in ICT.

3.4 Infrastructure for regional integration

The African continent is highly fragmented. The 54 countries of Africa have an average country population under 26 million, ranging from 98,000 in Seychelles to 206 million in Nigeria, and would benefit economically from greater regional integration. However, transport and trade links are weak, and African countries trade significantly more with partners outside the continent than with their neighbors. Strengthening regional infrastructure links would play an important part in deepening regional integration.

Recognizing the importance of improving trade, the African Continental Free Trade Area (AfCFTA) agreement, was signed at the African Union (AU) assembly on 21 March 2018. This agreement was scheduled to go into effect on 1 July 2020. However, with the start of the pandemic and the measures put into effect such as travel bans, quarantines, and lockdowns, the operationalization of the AfCFTA was postponed to January 1, 2021, when trade officially commenced under the Agreement.

Infrastructure projects are a key driver of regional integration and are weaving the continent together.

Projections indicate that progress in AfCFTA can lead to increased income gains of 7% and boost African exports by $560bn[19]. A critical element in achieving these gains will be improving connectivity across the continent by investments in energy, and regional cross-border transport including roads, aviation, port, and railroads, as well as soft infrastructure such as logistics and trade facilitation, i.e., measures to reduce red tape and simplify customs procedures. The AfCFTA will provide significant impetus to investments in cross cross-border road projects, energy trading among countries, and more open skies for the aviation industry.

Cross-border road and rail corridors play a critical role. They promote international trade across the continent by reducing transport costs as well as transit time for imports and exports and they are a key element in efforts to strengthen regional value chains. They provide landlocked countries with access to seaports. This improves productivity and makes industrial clusters along routes more attractive to domestic private investment while improving prospects for attracting foreign direct investments. Development of viable economic corridors will improve productivity of workers living along the corridors and could make private investments in trucking and logistics services more attractive.

The African Development Bank's program in support of regional integration makes it the largest source of finance for cross border road corridors. In 2019, the African Development Bank financed six cross border corridor projects:

- The Ethiopia-Djibouti Transport Corridor Project – Phase 1, connecting Ethiopia to Djibouti
- The Bagamoyo-Horohoro-Lunga Lunga-Malindi Road Projects Phase 1, connecting Kenya and Tanzania
- The Nacala Corridor Development Project, connecting Mozambique and Malawi (with financing in both 2019 and 2020)
- The Mueda-Negomano Road Upgrade Phase 2, connecting Mozambique and Tanzania
- The Lake Tanganyika Transport Corridor Development Project Phase I Rehabilitation of the Bujumbura Port, linking Kenya, Tanzania, Zambia, and South Africa Road Corridors
- The Construction of the Ring Road, part of the Transport Sector Support Program Phase III, linking Cameroon and Nigeria.

In 2020 the AfDB supported four cross border corridors:

- The Lake Chad Basin Regional Road Network Integration Project - Construction of a Bridge over the Logone River, connecting Cameroon and Chad
- The Transport Facilitation Program Corridor - Bamenda-Enugu, connecting Cameroon and Nigeria
- The Mano River Union - Road Development and Transport Facilitation Program Phase 2, connecting Liberia and Côte d'Ivoire
- The Construction of Access Roads to the Road-Rail Bridge over the Congo River, connecting the Republic of Congo and the Democratic Republic of Congo.

[19] Brookings Institution, The state of Africa's free trade agreement and strategies for greater integration, Workshop, November 29

The World Bank is also an important supporter of African Regional Integration. It has recently updated and given more importance to its program of support in a new strategy document: Regional Integration and Cooperation Assistance Strategy 2021.

See Box 3.4 later in this chapter for a description of AfDB and World Bank projects.

Air travel and air transportation of people and goods connecting across countries can also have a significant benefit to African economies. An IATA survey suggests that if just 12 key African countries opened their markets and increased connectivity, an extra 155,000 jobs would be created and approximately $1.3bn in annual GDP generated in those countries. Opening access to air space creates new routes with shorter travel times, and lower costs for tourists, business travelers, and high value freight. This will facilitate diversification of economies, knowledge transfer, and higher GDP growth. The AfCFTA will be essential to realizing these potential benefits in that it is targeting the historical tendency of African countries to protect national airlines and preserve favored air routes.

Box 3.3: Regional Power Pools in Africa

Power Pools exist in every region

- Southern African Power Pool (SAPP)
- Eastern Africa Power Pool (EAPP)
- Central African Power Pool (CAPP)
- West African Power Pool (WAPP)
- North African Power Pool (NAPP)

In the energy sector, grid interconnections and power pools present an opportunity for power sharing and efficiency gains. Despite the continent's natural resource endowment of energy sources, sub-Saharan Africa (SSA) suffers from significant deficits in the supply and distribution of energy. Greater cross-border trade in electric power is a potentially cost-effective way of connecting excess capacity in one country or region with (peak) demand in another.

In the first decade of this century Africa made good progress in interconnecting national grids into regional power pools (Box 3.3). Real-time electricity trading is still a goal to be achieved, but there was significant progress in moving toward more efficient power sharing, notably in the Southern African Power Pool (SAPP) and the West African Power Pool (WAPP).

More recently, since 2018 in particular, progress has slowed, due to many different factors. Power pools across the continent are faced with:

- An overall deficit in investment in generating and transmitting power at the national level, reducing the amount of potential surpluses to trade
- Uncreditworthy power utilities unable to pay for the power they receive through such sharing arrangements
- Lack of trust among states and unwillingness to liberalize electricity markets
- Dominance of power utilities at the national level, and their unwillingness to change the status quo of direct control of their sources of electric power
- A distinct preference for bilateral over regional agreements.

The case of SAPP highlights the issues. South Africa initially played the role of champion, but this has now waned. Similarly, there is a lack of a real champion in the West and Eastern power pools, and this has limited their immediate potential. Even as Ethiopia becomes a key player with significant excess generating capacity it is not clear that this will lead to improved regional energy supplies through a power pool, given the political preference for bilateral deals and connections.

The AfDB, World Bank, and numerous ICA members and non-members are supporting PIDA PAP projects with feasibility studies, investment as well as policy and capacity building support. The 2019 Nacala Road Corridor Project Phase 5 in Southern Africa co-financed by ICA members AfDB and EU as well as the government of Malawi is a good example. It not only financed the physical infrastructure but also provided technical assistance in support of trade and transport facilitation and in designing solutions for legal frameworks, and technical, economic, environmental, and socio-economic options.

[20] Lexology, Under African skies - The liberalization of civil aviation in Africa Bryan Cave Leighton Paisner LLP, 2019

Box 3.4: Examples of Projects Supporting Regional Integration

Projects supported by the African Development Bank include:

- Bagamoyo – Horohoro/Lunga-Lunga - Malindi Road Phase I will constitute a link between the Northern and Central corridors, which serve the region's busiest ports of Mombasa and Dar es Salaam respectively. Complementary soft components of the project in the form of a trade and transport facilitation study, aim at optimizing the benefits of regional integration afforded by the coastal road.
- Cameroon Transport Sector Support - Phase III to improve conditions in the Northwest and add a transport link to Nigeria. The Bank is financing 280km of the 365km road. Works in this phase include the Misaje Dumbo border section, linking Cameroon to Nigeria and support for the employability of youths in the project area.

Projects supported by the World Bank include:

- The West Africa Regional Energy Trade Development Policy Financing Program is $300m project committed in 2020 to sustainably increase regional electricity trade in the six participating countries (Burkina Faso, Côte d'Ivoire, Guinea, Liberia, Mali, and Sierra Leone) with spillover effects for all member countries of the ECOWAS (Economic Community of West African States). The project objective is to increase energy security, reduce vulnerability to international oil price fluctuations and reduce the fiscal burden of the electricity sector through increased energy trade in the six participating countries. The increase in diversity of supply to a power system will increase resilience to shocks.
- The Horn of Africa (HoA) Gateway Development Project is a $728m project committed in 2020. The overarching objective of the HoA Program is to enhance linkages among HoA countries, improve access to seaports and the facilitation of domestic and regional trade and economic integration, and road safety. This first project focuses on Kenya, the gateway to HoA for East, South, and Central Africa. Follow-up phases will focus on improvement in Somalia and Ethiopia.

Program for Infrastructure Development in Africa – Priority Action Program Commitments

The Program for Infrastructure Development in Africa (PIDA) has the mandate to develop a vision and strategic framework for the development of regional and continental infrastructure to support regional integration. It covers Energy, Transport, Information and Communication Technologies (ICT) and Trans-boundary Water Resources.

Six projects, which are part of 4 programs, reached the financing approval stage in 2019[21]. They are presented in Table 3.9 below. No project reached the financing approval stage in 2020.

Table 3.9: PIDA Operations, 2019-2020

PIDA operations facilitated regional integration in 2019 and 2020

SECTOR	SUB-SECTOR	PIDA PROGRAM	PROJECT	COUNTRY	REC PARTICIPATION
Transport	Road	Central Multimodal Transport Corridor	Bujumbura - Rumonge (RN3) Road Section	Burundi	EAC
	Road	North-South Multimodal Transport Corridor	Gwanda - Beitbridge Road	Zimbabwe	COMESA, SADC
Energy	Hydro Power Plant	Inga 3 Hydropower	Inga 3 Hydropower Plant	DRC	SADC
	Power Interconnector	North-South Power Transmission Corridor	ZiZaBoNa Transmission Interconnector (Hwange - Victoria Falls - Livingstone section)	Zimbabwe	SADC
			ZiZaBoNa Transmission Interconnector (Livingstone - Katima Mulilo section)	Zambia	SADC
			ZiZaBoNa Transmission Interconnector (Namibia Section)	Namibia	SADC

Source: au-pida.org/pida-projects/

[21] The PIDA Project Dashboard (AU-PIDA.org/pida-projects) defines the financing approval stage, Phase S3B, as Transaction Support & Financial Close: Credit Enhancing Mechanisms in place.9

Transport

The two transport operations are the Bujumbura-Rumonge Road Project in Burundi and the Gwanda-Beitbridge Road Project in Zimbabwe. The Bujumbura-Rumonge Road Project is part of the Central Multimodal Transport Corridor which entails the upgrading and modernization of roads between Tanzania, Uganda, Rwanda, Burundi, and the Democratic Republic of Congo. The Bujumbura-Rumonge Road Project is an alternative way toward Dar Es Salaam Port.

The Gwanda-Beitbridge Road Project is part of the North-South Multimodal Transport Corridor program, the design and implementation of a smart corridor system for both road and rail on the multimodal African Regional Transport Infrastructure Network (ARTIN) corridor in Southern Africa. The project road is one of the six international trunk routes connecting Zimbabwe with Botswana and South Africa overall.

Energy

Four energy projects reached financial approval stage in 2019: The Inga 3 Hydropower Plant Project in DRC, and three projects which are segments of the ZiZaBoNa Transmission Interconnector.

The Inga 3 Hydropower Plant Project is the portion of the multi-decade Inga 3 Hydropower Program in the DRC, entailing the construction of a 4200-megawatt river-style hydropower with eight turbines. In addition to DRC, the beneficiary countries are Angola and South Africa.

The other three energy projects, one each in Zimbabwe, Zambia, and Namibia, are segments of the ZiZaBoNa Transmission Interconnector which is part of the North-South Power Transmission Corridor, an 8000-kilometer line stretching from Egypt through Sudan, South Sudan, Ethiopia, Kenya, Malawi, Mozambique, Zambia, and Zimbabwe to South Africa to transport energy generated by the Great Millennium Renaissance Dam. The Interconnector strengthens the Southern Africa Power Pool and will allow integration of the East and Southern African power markets.

NEPAD Infrastructure Project Preparation Facility

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.

NEPAD-IPPF committed $5.9m in 2019 and $12.3m in 2020 in support of 13 operations (Table 3.10), compared with commitments of $10.8m in 2018.

Commitments in support of 8 operations in the transport sector ($11.8m) represented 65% of total 2019-2020 commitments, compared with a representation of 77% in 2018. Commitments for 4 energy projects totaled $5.0m and represented 27% of total commitments, compared with 9% of 2018 commitments. One single water and sanitation operation ($1.5m) accounted for 8% of total commitments. There were no commitments in support of ICT operations.

Table 3.10: NEPAD-Supported Operations, 2019-2020

NEPAD commitments saw a sharp increase in 2020

YEAR	SECTOR	PROJECT	REGION	COMMITMENTS ($m)
2019	Transport	Standard Gauge Railway (SGR) connecting Ethiopia and Sudan	East Africa	2.00
2019		Rehabilitation of selected road sections of the Central Corridor (Phase II) connecting Rwanda, Tanzania, and Burundi	Central Africa East Africa	0.48
2019		Corridor studies linking Algerian and Tunisian borders	North Africa	1.00
2019	Energy	330 kV WAPP Ghana-Burkina-Mali Interconnection Project	West Africa	0.58
2019		225 kV Côte d'Ivoire-Liberia Interconnection Reinforcement Project	West Africa	1.88
TOTAL COMMITMENTS 2019				**5.94**
2020	Water/ Sanitation	Lesotho-Botswana Water Transfer Project	Southern Africa	1.50
2020	Transport	Access Roads and Connection Routes to the Future Road-Rail Bridge Between the Cities of Brazzaville and Kinshasa	Central Africa	2.67
2020		Praia-Dakar-Abidjan Transport Corridor Project	West Africa	1.61
2020		Multinational Luberizi - Kamanyola - Bukavu Road	Central Africa East Africa	1.60
2020		Multinational Burundi/Tanzania Roads	Central Africa East Africa	1.77
2020		Mozambique Machipanda railway rehabilitation project	Southern Africa	0.67
2020	Energy	220 kV (400kV) Uganda (Beni) - DR Congo (Beni-Bunia-Butembo) Power Interconnection Project	Central Africa East Africa	0.93
2020		Baynes Hydropower (Angola and Namibia) 400 kV Transmission Lines Project	Southern Africa	1.57
TOTAL COMMITMENTS 2020				**12.32**

4. Emerging Themes

4.1 Private sector financing for infrastructure in Africa

4.2 Newly emerging institutional models for infrastructure

4.3 Quality infrastructure

4.4 The energy transition in Africa

4. Emerging Themes

Key Findings

- The private sector is potentially a significant source of financing for African infrastructure, but is held back by concerns of sector creditworthiness, perceptions of political risk, and bureaucracy and red tape.
- New institutional models for infrastructure finance are emerging, like the creation of an Africa Infrastructure Asset Class and caisses de dépôts already established in several African countries.
- The 2019 G20 Quality Infrastructure Investment Principles offer a sound template for improving the quality of African infrastructure.
- While Africa has seen some notable renewable energy projects in recent years, the continent is lagging in the global energy transition from fossil fuels (notably coal) to natural gas (as a transition fuel) and renewables.

Chapter 4 illustrates mechanisms focusing on attracting increased amounts of finance for infrastructure in Africa, notably from private sources beyond the PPP model, by seeking to tap institutional investors and financial markets. This includes understanding the constraints to increased private financing, creating an Africa Infrastructure Asset Class, and new institutional models such as caisses de dépôts (Sections 4.1 and 4.2) that have the potential to attract African based institutional investors and help deepen domestic financial markets. Section 4.3 shows how the quality principles adopted by G20 in 2019 could help Africa increase its pipeline of bankable projects. Section 4.4 reviews the current status of Africa's transition to a lower carbon energy footprint, in line with commitments made under the UNFCCC climate agreements.

4.1 Private sector financing for infrastructure in Africa

Currently, financing for African infrastructure comes mostly from four sources: (i) governments' own resources (fiscal revenue or government-guaranteed borrowings); (ii) official development assistance (ODA); (iii) state-to-state financing (which in recent years has mostly come from China, notably under the Belt and Road Initiative); and (iv) the private sector, either under financing structures that require support from governments (e.g., PPPs) or direct financing without government support. The private sector provides around 18% of the total[22], significantly lower than in most other regions of the world.

As concerns the first source, Government debt in Africa has grown substantially over the past decade. In SSA it is estimated to have risen by 6.3 percentage points of GDP in 2020 to 57.8%, owing to a decline in economic activity and fiscal measures to mitigate negative the effects of the pandemic[23]. The accumulation of debt has led to concerns about debt sustainability problems, which already affect over a third of the SSA countries.

[21] Average 2019-2020.
[22] https://www.imf.org/external/datamapper/DG_GDP@AFRREO/ZMB/KEN/ETH/SSA

Debt sustainability issues suggests that many African countries are likely to adopt more cautious fiscal policies and thus limit their sovereign borrowing. At the same time, given the need for further investment in infrastructure (including social), there will be a need for increased private financing of infrastructure and a need to identify and develop project financing mechanisms that do not exacerbate government debt sustainability problems.

Of the four sources of financing listed above, the greatest potential is the private sector. However, as a general rule private sector financing in the form either of direct investment in projects, or equity and debt financing from banks and capital markets, does not flow to African infrastructure projects unless heavily protected by guarantees from the host government or from multilaterals. And even in these cases, amounts of private finance are small, and costs (notably of debt) are high. Again, this contrasts with other areas of the world which regularly call on private sector financing for a moderate to significant share of infrastructure investment. African ICT, on the other hand, is an exception to this rule: it attracts significant private investment without needing government support.

The robust flows of private finance for ICT with little to no public support are due to this sector's different risk profile compared to other infrastructure sectors. Financial returns for telecoms firms from their investments in ICT infrastructure are high, certainly higher than for other infrastructure sectors; pay-back times and amortization schedules for ICT projects are relatively short (typically 8 years or less, compared to 15 or 20 for conventional infrastructure); and clients' willingness and ability to pay is high (and the political costs of managing non-payment through interruption-of-service is low). Any residual political risk is usually managed though political risk insurance (PRI). Indeed, telecoms companies utilize project finance structures for their infrastructure projects to a much lower extent than in other infrastructure projects, mostly financing their assets "on balance-sheet", through their own financial resources (equity and corporate debt).

These favorable characteristics seem not to be easy to replicate in other African infrastructure sectors, even where revenue generation potential is high, e.g., ports and electric power. A review of significant port and airport projects across the continent taken in the context of this report reveals that private finance flows without government support are negligible. All such projects are either purely public or require government, MDB, or state-to-state support. Electric power is more nuanced, as solar home systems [24] are beginning to make some inroads into the power sector which, until recently, had been provided for through traditional grid-based power. But even in these cases, most of the solar home schemes are backed with some form of development partner support. The other infrastructure sectors have even less attractive return and credit characteristics and rely unconditionally on government or development partner support.

Constraints to Greater Private Sector Participation in Infrastructure

Even for those infrastructure subsectors that are amenable to some private investment (such as electric power and certain transport sub-sectors such as toll-roads, ports, and airports), investors and lenders are wary of investing in infrastructure in Africa for three reasons:

- **Creditworthiness issues** are the outcome of inadequate tariffs, poor payment by governments and other consumers for the services they receive, and weak operational and financial management. For the sector to become financially viable, users must pay the full cost for the service they receive. Policy makers must establish tariff mechanisms that cover costs and adjust to changing circumstances, government departments must avoid accumulating arrears to utilities (e.g., by prepaid cards), and better operational management must be sought, for example from increased participation in the sector from private operators.

- **Political, regulatory, and exchange risk** runs the gamut from expropriation, war, and civil disturbance, through breach of contract and changes to the regulatory framework. There is a strong perception among international investors that these are generally worse on the African continent than in other parts of the world.[25]

Political and regulatory risk can, for the most part, be mitigated by obtaining political risk insurance (e.g., from MIGA, certain private insurance providers and some Lloyd's syndicates) or through various instruments such as PPPs and partial risk guarantees.

[24] Investments by households in these systems have not been captured in this report.
[25] Bond, J. (2016). Infrastructure in Africa. Global Journal Of Emerging Market Economies, 8(3), pages 309-333.

• Exchange risk is a particular subset of project risk that results from the mismatch of user fees from the infrastructure asset (which are paid in local currency) and financial flows to investors and lenders (which need to be paid in hard currency). Such currency mismatch risk can only be offset by linking user fees to the exchange rate. All these mechanisms increase the cost of the project and lower its economic return, and hence lower attractiveness for the private investor.

The private sector is potentially a significant source of financing for African infrastructure, but is held back by concerns of sector creditworthiness, perceptions of political risk, and bureaucracy and red tape.

• **Bureaucracy, red tape, corruption, and long timescale needed for project preparation** is a problem associated with infrastructure investment the world over. However, on the African continent the lower administrative capacity of governments means that these are exacerbated; governments do not always have the skills needed to negotiate with the private sector and often impose prohibitive regulations on investors. Moreover, anecdotal evidence covering several projects over several years confirms that it takes considerably more effort and a longer period for investors to negotiate an infrastructure investment project in Africa than elsewhere.

Ways to address these barriers were widely discussed in IFT 2018. The analysis in this report will discuss the advantages of an Africa Infrastructure asset class, and new institutional arrangements to match demand for private sector finance with supply.

Financial markets and institutional investors

The development of an Africa infrastructure class to attract institutional investor funds from the African continent obviously holds the attraction, first and foremost, of bringing private funds with little or no exchange risk to finance African infrastructure. This offers the potential to help over time to deepen the domestic financial markets.

One of the banes of offshore private finance for infrastructure globally – not just in Africa but in other emerging markets like Latin America – is the exchange risk such offshore money brings, as user fees will be in local currency whereas debt and equity payments will need to be in hard currency.

The review of the data indicates that the constraints to increased private sector funding for infrastructure from Africa do not lie in inadequate private sector savings. African institutional investors (notably insurance companies, pension funds and sovereign wealth funds) manage contractual savings for nationals and African firms[26].

Across the continent, assets under management (AUM) by these three categories of institutional investors are estimated to amount to $1.8 trillion, as indicated in Table 4.1.

Table 4.1: African Institutional Investors ($bn), Projection to 2020
Institutional investors can potentially bridge the financing gap

Type of Investor	2017	2020 (proj.)
Pension funds	676	1,100
Insurance companies	329	445
Sovereign wealth funds	243	300
Total	**1,248**	**1,845**

Source: Unleashing the Potential of Institutional Investors in Africa (Katja Juvonen, Arun Kumar, Hassen Ben Ayed, and Antonio Ocaña Marin), African Development Bank, 2019, Table 2, page 8

[26] An institutional investor is a non-banking organization that invests on behalf of its members. Institutional investors are not subject to the same prudential regulation framework as banks and face fewer protective regulations, because it is assumed that they are better able to protect themselves; and because they do not pose the same systemic risks to the financial sector as banks.
There are six types of institutional investors: endowment funds, mutual funds, hedge funds, pension funds; insurance companies; and sovereign wealth funds. In Africa the bulk of assets under management (AUM) of institutional investors are mainly held by pension funds (both public and private); insurance companies; and sovereign wealth funds.

The annual investment amounts managed by institutional investors, and by extension the level of private contractual savings on the continent, thus dwarf the requirements for infrastructure. These are domestic resources that could be brought by the private sector to fill the infrastructure gap.

Currently, savings managed by institutional investors do not flow to infrastructure projects because asset managers have, by law and by national regulation, very specific requirements for how these financial resources may be invested. This is to protect the interests of individuals and firms whose money they manage. These savings are intended for future use, to be paid out as pensions or to victims of insured events. Asset managers have a fiduciary responsibility to their clients to avoid excessive risk and to preserve the value of the financial resources they manage. They therefore place their AUM in financial assets such as securities that demonstrate adequate liquidity and acceptable creditworthiness.

The IFT 2018 Report carried an in-depth analysis of the suitability of different infrastructure sectors and subsectors for private financing, as well as the risk categories and possible policy responses. It also reviewed different financial instruments that can be brought to play for the private sector. But most importantly, it noted the unsuitability of green-field projects for institutional investors (who have strict asset allocation requirements and cannot manage construction risk).

4.2 Newly emerging institutional models for infrastructure

As can be seen above, Africa does not lack private sector savings held by institutional investors, and it does not lack economically attractive potential infrastructure projects. But until recently there have not been institutional models to bring the two together. Now there are several new initiatives seeking to channel private savings on the continent to infrastructure projects, recognizing the inherent limits to the PPP model[27].

These new institutional models also recognize that investments, both in brownfield infrastructure assets (e.g., as asset-backed securities) and in greenfield projects, will require new players to provide the interface between institutional investors which manage the savings, and infrastructure investment possibilities. Private financial institutions such as banks have not in the main been successful in providing this interface.

Creating an Africa Infrastructure Asset Class

An asset class is a grouping of investments that exhibit similar characteristics and are subject to the same laws and regulations. Asset classes are thus made up of investments that often behave similarly to one another in the marketplace and simplify investment choices for investors.

In some cases, asset classes are defined to adhere to specific sets of criteria, e.g., region, sector, minimum credit rating, etc. To increase their attractiveness with institutional investors and with other participants in capital markets, asset classes may also be securitized, i.e., transformed into marketable securities by bundling assets of similar characteristics into a set portfolio which then obtains a credit rating, and can be issued on a securities market as an asset-backed security[28].

The advantage of securitization is first, that such securities can be sold on existing exchanges once they meet these exchanges' requirements (and thus refinance operating infrastructure assets). Second, under certain conditions, these securities can be attractive for institutional investors if they respect the latter's fiduciary requirements. Securitization involves refinancing of existing infrastructure assets that are already under operation, as these have clearly defined revenue streams and circumscribed risk profiles. Money that is thus released can then be recycled into new green-field projects which by their nature are riskier and thus find it more difficult to attract private financing.

[27] These African initiatives are in addition to initiatives seeking to attract increased institutional investor financing from outside the continent, which would be welcome but for the most part require some form of hard currency guarantee or similar credit enhancement mechanism, which translate into higher cost for the consumer.
[28] Securitization of infrastructure assets for placement with institutional investors, either as a direct placement or by issuance on a securities market, is common practice in advanced economies such as the US, Europe, the UK etc.

Box 4.1: Nigeria Credit Guarantee Company (InfraCredit)

Financial Innovation increases private financing for infrastructure in Nigeria

The highly innovative Infrastructure Credit Guarantee Company (InfraCredit) is a AAA-rated specialized credit enhancement company providing guarantees that enhance the credit quality of local-currency bond instruments issued in the domestic debt markets. It aims to finance infrastructure projects in Nigeria, by bringing together domestic private savings held by Nigerian institutional investors and high-quality infrastructure projects that generate a predictable cashflow.

InfraCredit aims to support up to $1.25bn in infrastructure financing over the next few years, by involving the private sector in infrastructure financing, essential to Nigeria's economic resilience. It helps to unlock long term local currency capital for infrastructure financing in Nigeria in a sustainable manner while concurrently contributing to the deepening of the domestic debt capital markets. It also undertakes capacity-building activities targeted at institutional investors, notably pension funds and insurance companies to motivate their involvement in investing in long-term non-sovereign bonds to finance infrastructure assets and the private sector.

PIDG companies GuarantCo and TAF worked with the Nigerian Sovereign Investment Authority (NSIA) to establish InfraCredit in 2016. The founding capital providers have been joined by the Africa Finance Corporation (AFC); InfraCo Africa (PIDG); KfW Development Bank (KfW), African Development Bank (AfDB); and Leadway Assurance Company Limited (Leadway) as its first private institutional Investor. As of September 2021, the Company's total qualifying capital base (paid-in and callable capital) stood at $183m (Naira 75.3bn). This translates to an aggregate guarantee issuing capacity of around NGN 376.4bn ($915m equivalent) based on its maximum capital leverage ratio of up to five time (5x) allowable by its rating agencies.

Its successful operation will address the constraints facing the Nigerian pension market and motivate their involvement in investing in long term bonds to finance infrastructure assets. Eligible sectors include renewable energy; electricity generation, transmission, and distribution; gas transportation, distribution, and storage; agricultural infrastructure; ICT/telecoms; inputs to Infrastructure; transportation; urban infrastructure, housing; healthcare and education; water distribution and treatment; and waste management services.

Source: African Development Bank, InfraCredit factsheet and website.

Creating an Africa Infrastructure Asset Class (AIAC) would thus be a highly attractive solution to tapping private sector savings held by African institutional investors and by foreign portfolio investors, particularly if the asset class could lead to asset-backed securities. Moreover, the creation of an AIAC would also open the way to issuance of labelled bonds including Green Bonds, Blue Bonds and SDG Bonds, in consistency with the COP21 Paris Climate Agreement and COP26 Glasgow goals. The ultimate goal would be for the AIAC to preferentially mobilize African contractual savings which would have the benefit of lessening exchange risk and the need for hard currency guarantees.

While there are currently many emerging initiatives in the field of securitization, three hurdles need to be overcome:

• **Fragmentation**.
As noted in Chapter 3, the African continent is highly fragmented. Shallow national financial sectors and differing legal systems (some countries follow French civil law while others follow Anglo-Saxon common law) are a constraint to having a truly unified African infrastructure asset class. This means that infrastructure assets with similar characteristics (e.g., electric power or ports) are likely to be spread across several countries, with differing legal systems, regulatory regimes, and financial sector regulations. This makes it difficult to include such assets into one class.

• **Weaknesses of national exchanges[29].**
Across the continent there are 29 exchanges, but only a few are able to handle the volume and sophistication of securitization. The top ten exchanges in Africa by market capitalization are given in Table 4.2 below. Of these, no more than a handful could successfully manage an issue of asset-backed securities of any reasonable volume.

• **Absence of a clear issuer and market maker.**
To create an asset class and proceed with a possible securitization there will be a need for financial institutions operating across many countries (if not the entire continent) with the skills, financial capacity and will to undertake the groundwork, e.g., IFC or African Development Bank.

In order to move forward, continent-wide or regional DFIs will need to take the lead on setting in place the necessary conditions for the creation of an Africa Infrastructure Asset

Table 4.2: Largest Securities Markets in Africa, 2021

Stock markets are developing in every region

COUNTRY	EXCHANGE	MARKET CAPITALIZATION
South Africa	Johannesburg Stock Exchange (JSE)	**$1,150bn**
Namibia	Namibian Stock Exchange (NSX)	**$138bn**
Morocco	La Bourse de Casablanca (CSE)	**$61bn**
Egypt	Egyptian Exchange (EGX)	**$44bn**
Botswana	Botswana Stock Exchange (BSE)	**$41bn**
Nigeria	Nigerian Stock Exchange (NGX Group)	**$32bn**
Kenya	Nairobi Securities Exchange (NSE)	**$26bn**
Mauritius	Stock Exchange of Mauritius (SEM)	**$21bn**
Zimbabwe	Zimbabwe Stock Exchange (ZSE)	**$19bn**
Ghana	Ghana Stock Exchange	**$13bn**

Sources: Tadesse, Fasika: «Top 10 largest stock exchanges in Africa». Nyongesa Sande (2021).

[29] A stock exchange, securities exchange, or bourse is an exchange where stockbrokers and traders can buy and sell securities, such as shares of stock, bonds, and other financial instruments. Stock exchanges may also provide facilities for the issue and redemption of such securities and instruments and capital events including the payment of income and dividends. Securities traded on a stock exchange include stock issued by listed companies, unit trusts, derivatives, pooled investment products and bonds. (Source: Tadesse, Fasika (2021-10-04). «Top 10 largest stock exchanges in Africa». Nyongesa Sande. Retrieved 2022-01-05.)

Class. They will then need to underwrite a series of securitizations on one or several major regional exchanges to demonstrate the clear interest of such an approach for project sponsors, institutional investors, and national authorities.[30]

Caisses de Dépôts

A particular institutional arrangement beginning to emerge is Caisse de Dépôts (see Box 4.2). This model is found for the most part in developed economies and is operated along commercial principles.

A caisse de dépôts is a public financial institution whose mission is to receive, preserve and manage private (and some public) resources and play an intermediation role in financing public-interest priorities. The model, whose expansion is relatively recent on the African continent, originated in France in the early 19th century. The French Caisse de Dépôts et Consignations (CDC) is one of France's largest institutional investors (see Box 4.3). Sister institutions also exist in Italy, Brazil, Portugal, Belgium, and Quebec.

Box 4.2: How do Caisses de Dépôts Differ from Development Banks?

Caisses de dépôts offer a model for attracting institutional investors

Almost every country in Africa, and most regional groupings, have one or more development banks. Caisses de dépôts differ fundamentally from development banks in two fundamental ways:

- First, they mobilize private savings, whereas most development banks obtain funding from public sources. Because of scarce fiscal space, private savings have far greater potential than scarce public money.
- Second, they have a rigorously independent management and governance, within the framework of their overall objectives, and therefore risk less political interference and corruption.

In Africa, eight caisses have been set up: Caisse de Dépôt et de Gestion (CDG) of Morocco (1959), by far the largest and oldest on the continent (see Box 4.4); Caisse de Dépôts et de Consignations of Senegal (2006); Caisse des Dépôts et de Consignations (CDC) of Gabon (2010); Caisse des Dépôts et de Développement of Mauritania (2010); Caisse des Dépôts et de Consignations (CDC) of Tunisia (2011); Caisse des Dépôts et Consignations of Niger (2017); Caisse des Dépôts et Consignations of Burkina-Faso (2018); and Caisse des Dépôts et Consignations of Côte d'Ivoire (2019). Cameroon, Chad, Togo, Benin, Congo, and Equatorial Guinea have plans to create similar institutions. Within the WAEMU region, it is expected that six out of the eight countries will have a caisse de dépôts in the next few years.

New institutional models are emerging, like the creation of an Africa Infrastructure Asset Class applicable to brownfield projects, and caisses de dépôts already established in several African countries.

In Africa, caisses can act as a sovereign fund, a development bank, a private equity fund, and in certain cases a commercial bank, to finance high priority projects. The fundamental characteristic that distinguishes African caisses from other public or private financial institutions is that they collect and manage regulated financial resources such as contractual savings, whether mandatory or voluntary; and seek additional funding from private sources such as the securities markets. Depending on the country and capacity, resources come from regulated savings funds; guarantees and other deposits; pension and/or notarial funds; public reserves; and fixed income securities issued on security markets. The caisse then allocates these resources to well-structured high return projects in sectors that are poorly served by the market, or to fund national public-interest projects and sectors where private actors do not necessarily have the capacity, the mandate, or the interest.

[30] The African Development Bank, together with the European Commission, Mariner Investment Group, Africa50, and Mizuho International plc, created and issued a $1bn synthetic securitization of a portion of AfDB's portfolio of private sector loans in September 2018 (the Room2Run initiative). The securitization instrument was a first for any multilateral development bank and offers other multilateral development banks and investors a roadmap for innovative financing of infrastructure.

Caisses have similarity to sovereign wealth funds (SWFs). Africa's first sovereign wealth fund—Botswana's Pula Fund—was established in 1994, and over the last two decades there have been a proliferation of SWFs across the continent. Africa now has more than 14 SWFs, valued at around $120 billion, and several more countries are in the process of establishing funds. Although the ultimate objectives of Caisses and SWFs might be similar, the source of the funding differs: SWFs harness fiscal surpluses resulting from exploitation of natural resources whereas caisses draw on private capital.

Box 4.3: Caisse des Dépôts of France

The first caisse de dépôts was established over 200 years ago

The Caisse des Dépôts et Consignations (Deposits and Consignments Fund, known as "the Caisse") is a French public sector financial institution. It is one of the government institutions under the control of the Parliament, the «investment arm» of the French State, and is defined in the French Monetary and Financial Code as a «public group serving the public interest» and a «long-term investor».

The Caisse was established in 1816 under King Louis XVIII to safeguard public funds, including civil servants' pension funds and retirement accounts. Three rulings of 3 July 1816 defined the major areas of activity of the new body: consignments of funds held in trust; voluntary deposits from individuals or public bodies and funds from the legal professions; and pension funds, notably of civil servants.

When the Caisse was founded, its rules of governance were established by law. They uphold two principles: the independence of the Supervisory Board, and the autonomy of the Chief Executive Officer. These two principles ensure the stability of the Group, the continuity of its activities, and its financial sustainability. The Caisse operates on a commercial basis, at arms-length with respect to the government in terms of investment decisions.

By law, the Caisse uses the funds it manages to purchase government securities and therefore contributes to the funding of the French state. It also, importantly, invests in public projects with clearly demonstrated financial and economic returns such as infrastructure assets; and holds the participation of certain key enterprises such as the postal bank. Finally, it plays the role of provider of public venture capital for initiatives of high potential return that cannot on their own attract private venture capital without an anchor investor.

The Caisse holds balance-sheet assets of €1.2 trillion and generated €777 million in income in 2020. Its financial resources come from equity; deposits and contractual savings from the Postal Bank; contractual savings from insurance companies; and debt.

Source: https://www.caissedesdepots.fr/en

Caisses have the potential to be vectors for allocating national savings to growth-bearing projects, intermediating between institutional investors and attractive projects. Where caisses differ from traditional institutional investors is that they do not have the same fiduciary constraints and are not limited to a highly circumscribed set of investment opportunities, but can also invest in high return projects that, for market failure reasons, have not been able to attract other sources of financing.

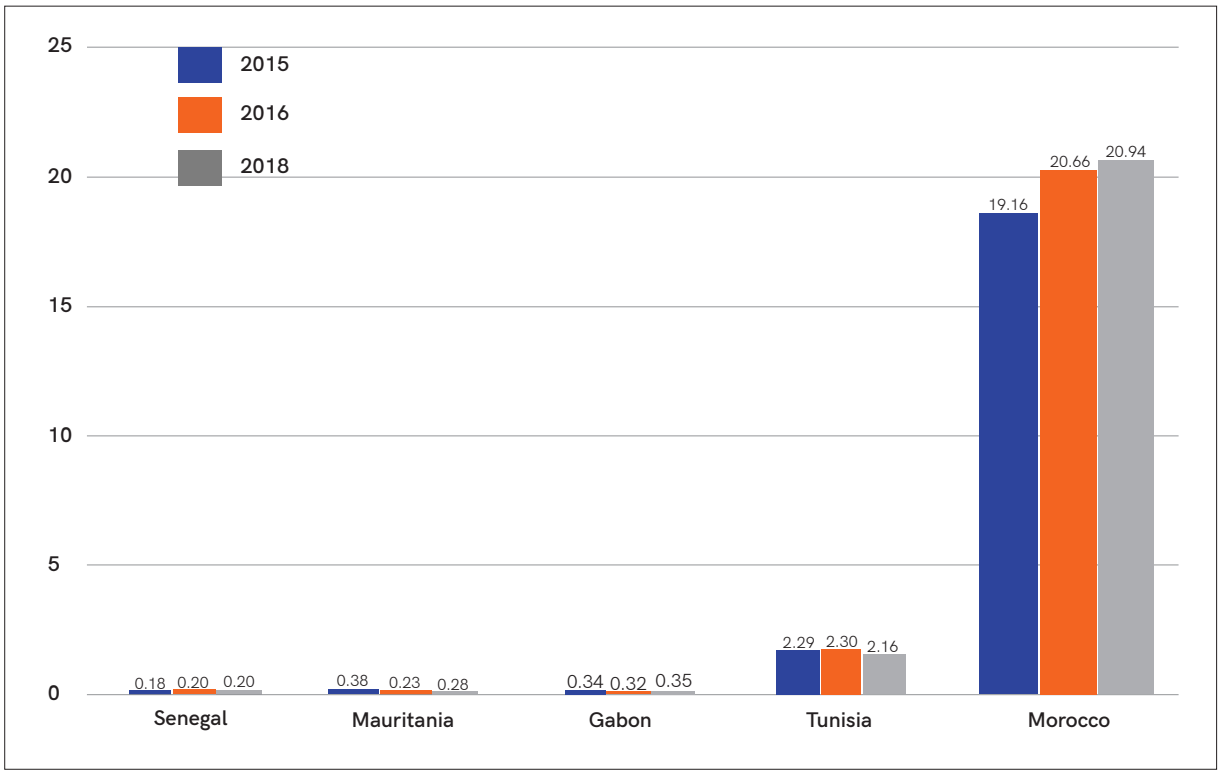
Within the framework of its own financial sustainability, a caisse primarily aims to support the economic and social development of its country of origin. The institution's economic model therefore serves a dual purpose: as guarantor of the savings it mobilizes, protects, and grows; and as a long-term investor serving to bolster the country's economic and social development.

In addition to their potential as long-term investors, caisses can also leverage private capital. In Europe, depending on the financial arrangements and the risks they bear, caisses can generally mobilize between 5 and 15 times the private investment for every euro committed, very significantly increasing the amount of private sector financial flows to investments that in other circumstances would have had difficulty in attracting such funds.

The operating model of a caisse de dépôts, therefore, offers several comparative advantages in terms of industrial and social development. In Morocco, with a total balance sheet of EUR 20.9bn (and to a lesser extent Tunisia, with a balance sheet of EUR 2.2bn), caisses de dépôts play an important role through the specific missions entrusted to them to meet national priorities. In sub-Saharan African countries, balance sheet sizes of caisses are considerably smaller and vary depending on the seniority of each caisse and the strength of each country's economy. Caisses are more recent south of the Sahara and thus their financial capacity is more limited than in North Africa.

In Morocco, a significant share of resources comes from the management of pension fund reserves. In Tunisia, most of the resources come from the savings deposits of the Caisse d'Épargne Nationale Tunisienne (CENT). In Gabon, Mauritania, and Senegal, resources come primarily from consignments and deposits collected. Figure 4.1 shows the changes in the consolidated balance sheets from 2015 to 2017 (in EURbn). All the caisses illustrated show positive net results.

Figure 4.1: Consolidated Balance Sheets of Selected African Caisses de Dépôts (EURbn), 2015-2017
The Moroccan caisse is the oldest in Africa



Source: Making Finance Work for Africa

Other than Morocco (and to a lesser extent, Tunisia), the track record of African caisses is not long. However, the emerging experience indicates that resources are mainly used for enterprise financing and construction projects determined by the government, with infrastructure holding an increasingly important part of investment strategies. In Tunisia, the CDC is establishing new infrastructure funds (AIIF, Hanon and Arkam). In Morocco, since 2002, CDG has relied on its infrastructure-focused subsidiary (MEDZ). The Mauritanian Caisse is financing a project to build several hundred social housing units in Zouerate and Nouadhibou. The Gabonese CDC devotes 40% of its resources to financing the transport, social housing, and energy sectors[31]. Although their financial capacities are, at this stage, not well adapted to finance large-scale infrastructure

[31] This section draws on material provided in a M4WA blog: "Institutional Investors and Infrastructure Financing in Africa: The Case for Caisses de Dépôts", Arnaud Floris, Financial Sector Advisor, Making Finance Work for Africa (2019)

projects, African caisses have the potential to play, within defined risk limits, a pioneering and priming role. To do this, a caisse can invest through a dedicated vehicle or by becoming a long-term lender to finance infrastructure assets. Moreover, by capitalizing on their public nature, caisses de dépôts can potentially assist government and local authorities in the design, implementation, and management of projects, particularly in segments that are less attractive to private investment such as social infrastructure.

Francophone Africa is beginning to see caisses as a viable funding source for public investments. Given the experience in France and other developed economies there is indeed considerable potential for this new institutional model. However, before the new caisses can make a significant impact, they will need to create a track-record of serious investment practice, adequate returns, and independence from government meddling, to provide confidence to institutional investors and others that the caisse is a safe place to invest their money.

Box 4.4: Caisse des Dépôts of Morocco

Caisse de Dépôt de de Gestion

Mission and Operating Model

Morocco's Caisse de Dépôt et de Gestion (CDC) is a public institution created in 1959 to manage and protect contractual savings and regulated funds which, by their nature or origin, require special protection.

The CDC Group has been involved in all the major strategic projects in Morocco. It is today one of the leading institutional investors in the Kingdom and a significant financial player in the national economy. It focuses on five sectors: savings and insurance; regional development; tourism; investments; and banking and finance. Its key figures are (2016):

Financial		Impact	
Net income:	$67m	Export Processing Zones:	4 in operation (288,000 m^2)
Consolidated balance sheet:	$20,660m	Industrial Zones:	907 Ha
sheet:	$20,660m	Hotel capacity:	28,000 beds
Equity:	$1,897m	Rental office space:	373,000 m^2
Deposits:	$10,623m		

Source: CDG website: CDG.ma

4.3 Quality infrastructure

In 2019 and 2020 the topic of how to improve the quality of Africa's infrastructure received a high level of attention. Reports by the G20, the OECD and ACET, PIDA, GIF, and private sector institutions focused on how to improve the quality of Africa's infrastructure. Each gave primary attention to deficiencies in project identification and preparation.

In 2019, the G20 adopted the Quality Infrastructure Investment (QII) principles. These are voluntary, non-binding principles that reflect the lessons learned by G20 members and express a common strategic direction and aspiration of the G20 members. However, these principles are even more important in Africa, where infrastructure has long suffered from problematic quality.

The six principles agreed by the G20 are:

1. Maximizing the positive impact of infrastructure to achieve sustainable growth and development.
2. Raising Economic Efficiency in View of Life-Cycle Cost.
3. Integrating Environmental Considerations in Infrastructure Investments.
4. Building Resilience against Natural Disasters and Other Risks.
5. Integrating Social Considerations in Infrastructure Investment.
6. Strengthening Infrastructure Governance.

Among these principles, there has been significant progress in the first five, partly as a result of consistent work on the environment and sustainability by the MDBs, by most bilateral organizations and by other development agencies over the past two decades. However, it is widely acknowledged that the sixth principle, governance of infrastructure, is still a major issue in many African countries. This is especially the case for projects where the MDBs or other Paris Club members are not involved. Good governance is most challenging during the project identification and preparation phase according to officials who were interviewed for this report. They felt strongly that good quality project preparation was the most important step for good quality projects.

The 2019 G20 Quality Infrastructure Investment Principles offer a sound template for improving the quality of African infrastructure.

The good governance principle calls for openness and transparency of procurement, putting in place effective institutions, anti-corruption efforts, and access to adequate information and data. This means that project preparation and feasibility studies should be prepared professionally, that documentation should be open to public scrutiny, and that contracts should be competitively bid. The elements of this broad principle are widely accepted by African countries. However, implementation is problematic in many cases. There are many exceptions granted, especially for large projects, often with a rationale of needing to cut steps to speed implementation. But these exceptions undermine good governance.

The importance of quality project preparation was strongly endorsed by another major report published in 2020 by the OECD and ACET titled Quality Infrastructure in 21st Century Africa.

The OECD/ACET report notes: "current upstream processes are not generating pipelines of 'ready to go' quality infrastructure investment projects and programs on a scale commensurate with the demographic dynamics[32]." This finding is despite that fact that there has been an increase in the number of project preparation facilities (PPFs) and their funding over the past 10 years. Africa benefits from many project preparation facilities, most of which belong to the ICA-sponsored Project Preparation Facilities Network (PPFN), a network dedicated to developing sustainable infrastructure in Africa. The PPFN was launched at a meeting hosted by the African Development Bank in Tunis in June 2014, and its main activity is to coordinate co-financing opportunities for feasibility studies and to improve coordination among the facilities active in Africa.

While these facilities have had the positive impact of improving the projects they have supported, PPFs are often set up by funding agencies to prepare projects for their own investments. Funding for project preparation for projects that do not involve MDBs, large bilaterals or large domestic financing institutions like AFC is still very scarce. The need for financing project preparation is beyond the current reach of existing funds, and existing PPFs do not sufficiently encourage privately financed projects.

Governments, almost all of whom face increasingly tight resource constraints, have found it difficult to allocate sufficient funds for feasibility studies and other aspects of project preparation through their own budgets. These studies are expensive.

[32] OECD/ACET (2020), Quality Infrastructure in 21st Century Africa: Prioritizing, Accelerating and Scaling up in the Context of Pida (2021-30
[33] McKinsey & Company. Solving Africa's Infrastructure paradox, March, 2020

Typically, one should expect to pay 2% to 5% or even up to 10% of capital costs on project identification and preparation. McKinsey has pointed out that only about 10% of projects that are identified by African governments as being priority projects succeed in reaching project closure[33]. The rest fall by the wayside during preparation due to inexperienced staff or lack of funds for proper feasibility studies.

To address the difficulty in moving from project concepts to bankable projects, the OECD/ACET report, like the G20, suggests a clear focus on governance through actions that include enhancing professional development, increasing standardization of project preparation processes within countries, reforms that insulate regulators from outside influence, and aligning prioritization of projects with the potential financing sources.

The OECD/ACET report also proposed two additional measures to enhance quality preparation and implementation:

1. Expand the PIDA Quality Label System to recognize quality infrastructure. The quality label is awarded to projects that excel in the preparation of PIDA projects at an early stage.
2. Create a platform to enhance real-time peer learning and the sharing of good practices in project preparation among African infrastructure professionals.

These proposals deserve serious consideration by African governments. In fact, the concept could be applied more broadly. While PIDA focuses on multinational cross-country infrastructure, it may be possible to also award quality labels to single country projects of a certain size that are outside of the PIDA mandate. The proper institutional framework for an expanded version of the PIDA Quality label would need to be developed.

The proposed platform to enhance real time peer learning, if successful, could also evolve beyond PIDA projects to regional or even a continent-wide program of staff exchanges, cross country technical assistance, even training programs, provided by senior staff from peer countries.

Given that G20 members provide almost all bilateral financial support to African countries, there is an opportunity for G20 members who are active in Africa, to support the adoption of the G20 principles in Africa and to support the OECD/ACET recommendations in conjunction with PIDA.

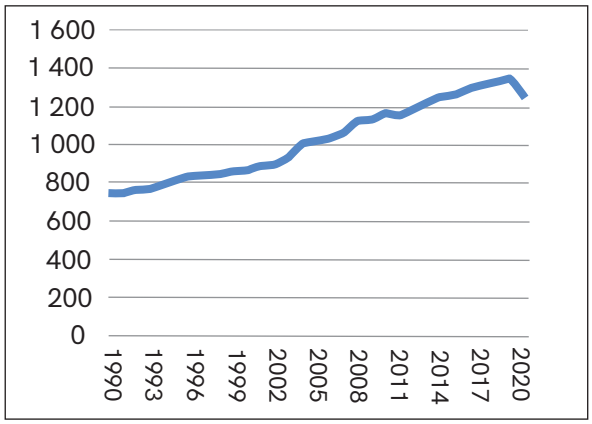
In addition to quality project preparation, quality infrastructure also requires good care of assets after the start of operations. This means greater attention to maintenance. As noted in the sector analyses, failure to conduct routine maintenance in transport, water, energy and ICT, results in premature rehabilitation or replacement costs which can be more than three times more expensive than the routine maintenance would have cost. As such there is great opportunity to reduce capital expenditures through rigorous attention to maintenance.

4.4 The energy transition in Africa

The Paris Climate Agreement is a legally binding international treaty on climate change, adopted by 196 Parties at COP 21 in Paris, on December 12, 2015. Its goal is to limit global warming to well below 2, preferably to 1.5 degrees Celsius compared to pre-industrial levels, and its implementation means that the world's energy sector will need to transition away from fossil fuels (coal, oil, natural gas, lignite, and peat) to renewables.

At the 2015 Paris meeting the countries of the African continent along with all the other signatories agreed to set Nationally Determined Contributions (NDCs) limiting their future emissions of CO2. Although Africa only represents 3.9% of global CO2 emissions, these have been growing consistently over the past three decades, doubling over the period, except for a COVID-induced decline in 2020 (Figure 4.2, below).

Figure 4.2: Carbon Dioxide Emissions in Africa (tonnes), 1990-2020
Carbon dioxide emissions have steadily increased besides a COVID-induced decrease in 2020



Source: BP Statistical Review (2021)

[33] McKinsey & Company. Solving Africa's Infrastructure paradox, March, 2020

At the follow-up COP26 meeting in Glasgow in November 2021, member countries agreed it was urgent for developing countries to accelerate the transition away from fossil fuels and promote the development of less carbon-intensive economies. The African Development Bank and partner institutions of the Africa NDC Hub published a flagship report for the meeting, providing the status of Africa's NDCs and the imperative for climate finance innovation on the continent. The report reviews the actions needed to bring African countries on course to meeting their COP21 commitments, including how to crowd-in private capital. It conveys the message of a continent with great potential to reach net-zero emissions and climate resilience within the timelines proposed by the UN's Intergovernmental Panel on Climate Change (IPCC) in its recent assessment.

While Africa has seen some notable renewable energy projects in recent years, the continent is lagging in the transition from fossil fuels (notably coal) to natural gas (as a transition fuel) and renewables.

In light of Africa's 2015 commitments for COP21 and subsequent encouragement made in Glasgow, the continent's progress in transitioning away from fossil fuels toward a lower carbon future has been mixed. It is true a number of significant renewable energy projects have been launched on the continent over the past five years, notably in Egypt, Morocco and earlier in the decade in South Africa, but also in other countries of the continent as well. The majority of these projects were sponsored by private investors under PPP arrangements. (The surge moderated in 2019 and 2020 in light of worrisome creditworthiness of power utility off-takers and the effects of the COVID epidemic.) There is significant interest from local and international developers in developing projects in Africa, along with initiatives to standardize project contracts to streamline the project development process (e.g., IFC's Solar Scaling Program). An entire industry ecosystem is now emerging around renewable energy in Africa.

On the other hand, the continent continues to rely heavily on fossil fuels, most egregiously in South Africa which consumes coal for its production of electric power. Of all the fossil fuels, coal has the highest carbon content which means that its use has the greatest negative climate impact per joule of energy provided. Coal should therefore be the first primary energy source to be eliminated. Also, Algeria and Nigeria still resort to flaring gas associated with their oil production rather than collecting it for use such as electricity generation. This is despite decades of global attention and government commitment. In addition to South Africa and Nigeria, Zimbabwe, Namibia, Tanzania, and others also rely on fossil fuels, especially for generation of baseload power.

What is particularly worrisome about the South African energy balance is that this country has a large economy, the highest per capita energy consumption on the continent (83 GJ/capita or six times the continental average) and is by far the biggest consumer of coal on the continent. According to the 2020 BP Statistical Review, coal represents 71% of South Africa's overall energy consumption (the highest share of coal in the energy balance in the world), compared to a global average of 27%. South African coal consumption represents by itself 85% of the continent's entire use of this fossil fuel.

The reason for the high use of coal in the continent's most industrialized economy is that this high-carbon fuel is cheap and available locally, and so supplies about 80% of South Africa's grid energy. The country's power utility, Eskom, is the continent's single biggest emitter of greenhouse gases. Eskom is in poor financial health after decades of mismanagement and corruption[34], relying on power cuts and costly diesel generators to address system failures. The South African government's reluctance to address the country's coal consumption and Eskom's mismanagement place it in a poor position concerning the transition to a low carbon future. Many new South African electricity projects could be renewable energy, but the country's 2019 energy blueprint allows for the development of 1500 MW of new coal capacity. South Africa is thus foreclosing on many lower carbon energy alternatives such as accelerated roll-out of renewable generating capacity or cooperation with Namibia on development of the Kudu offshore gas field[35] .

[34] https://www.businesslive.co.za/bd/national/2021-05-04-co-operation-led-to-r14bn-asset-freeze-of-former-eskom-bigwigs/
[35] Gas is seen as a lower carbon transition fuel to replace coal.

The wastage of natural gas through flaring in Algeria and Nigeria are also particularly disheartening. Africa represents 20% of world gas flaring (29.2 billion cubic metres in 2020), and these two countries represent over half the continental total. The rate of electrification in Algeria is 100% and uses of associated natural gas currently being flared other than for power generation are difficult to put in place. Nigeria on the other hand has still only managed to connect just over half its population to the electric power grid; and it consumes costly petroleum products to produce its electricity rather than harnessing its abundant natural gas. This problem is well known and has attracted declarations of intent over the years from Nigerian policy makers, but progress is slow.

Table 4.3: African Energy Balance (EJ), 2019-2020

*Primary energy: Consumption by fuel (traditional biomass excluded)**

2019							
	Oil	Natural Gas	Coal	Nuclear energy	Hydro-electric	Renewables	Total
Algeria	0.85	1.63	0.02	-	-	0.01	**2.50**
Egypt	1.48	2.12	0.08	-	0.12	0.06	**3.86**
Morocco	0.56	0.04	0.28	-	0.01	0.06	**0.94**
South Africa	1.17	0.15	3.64	0.12	0.01	0.11	**5.21**
Other Africa	4.21	1.66	0.30	-	1.08	0.11	**7.36**
Total Africa	**8.28**	**5.59**	**4.32**	**0.12**	**1.22**	**0.34**	**19.87**
Total World	**191.89**	**140.54**	**157.64**	**24.93**	**37.69**	**28.82**	**581.51**
of which: OECD	90.16	64.8	32.30	17.78	12.87	16.56	**234.48**

2020							
	Oil	Natural Gas	Coal	Nuclear energy	Hydro-electric	Renewables	Total
Algeria	0.72	1.55	0.02	-	-	0.01	**2.30**
Egypt	1.33	2.08	0.03	-	0.12	0.09	**3.65**
Morocco	0.50	0.03	0.28	-	0.01	0.06	**0.88**
South Africa	1.02	0.15	3.48	0.14	-	0.11	**4.90**
Other Africa	3.62	1.70	0.30	-	1.13	0.11	**6.86**
Total Africa	**7.19**	**5.51**	**4.11**	**0.14**	**1.27**	**0.38**	**18.58**
Total World	**174.20**	**137.62**	**151.42**	**23.98**	**38.16**	**31.71**	**557.10**
of which: OECD	78.52	63.28	27.46	16.67	13.14	18.04	**217.11**

Source: BP Statistical Review (2021)
1 exajoule (EJ) = 1 quintillion joules (1 x 1018)
* In this review, primary energy comprises commercially-traded fuels, including modern renewables used to generate electricity. Energy from all sources of non-fossil power generation is accounted for on an input-equivalent basis.

5.

ICA Member Financing

5.1 Trends in commitments

5.2 ICA member activities

5.3 Disbursements

5. ICA Member Financing

Key Findings

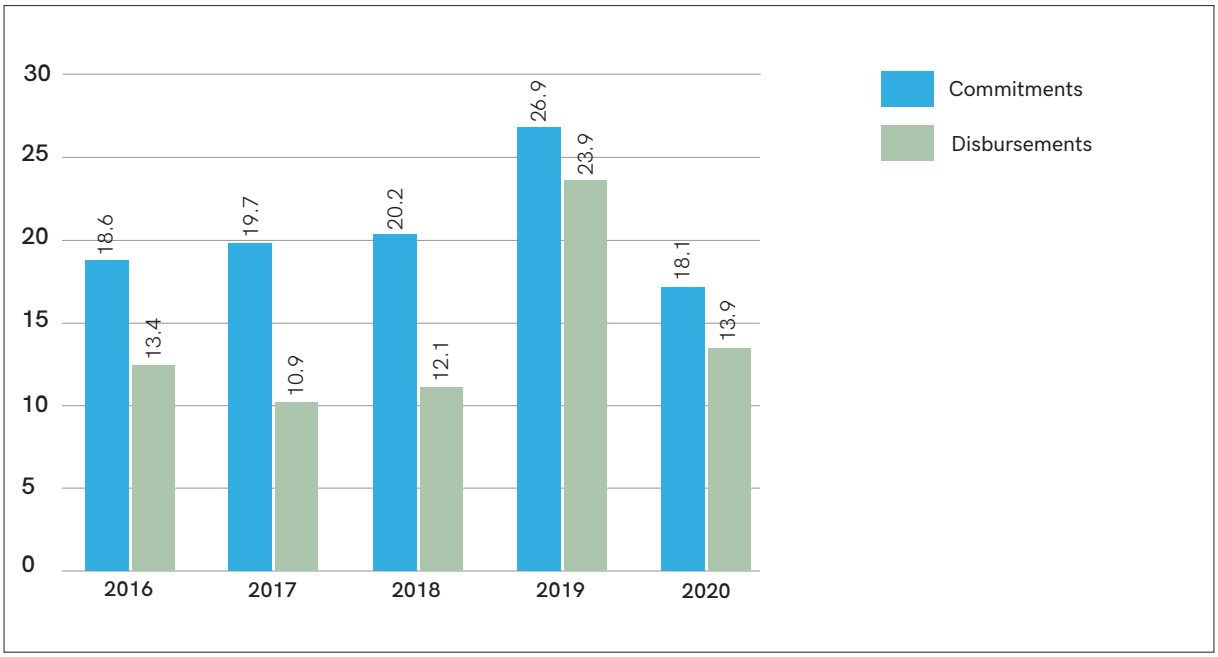
- Several institutions joined ICA in 2019 and helped deliver the highest level of commitments since 2011.
- MDBs accounted for 78% of ICA financing in 2019 and 79% in 2020.
- The energy sector received 49% of ICA commitments in 2019 and 38% in 2020.
- Commitments to West Africa accounted for 37% of 2019 commitments and 38% of 2020 commitments.
- Disbursements reached an all-time high of $23.9bn in 2019.

Section 5.1 of this chapter analyzes the commitments made by the 18 ICA members who provide direct financing in 2019 and 2020 and compares them to commitments of earlier years, with a sectoral lens and a regional lens. It also breaks down this funding by financing instrument. Section 5.2 highlights each ICA member's commitments, with a sectoral and regional analysis, and showcases several notable operations supported by ICA members. The last section, Section 5.3, reviews disbursements by ICA members, again offering a sectoral and regional breakdown.

Several new institutions have joined ICA since the preparation of the 2018 IFT Report. Spain's joining brings the total number of bilateral members to nine. Several African and non-African multilateral organizations also joined ICA: the African Export-Import Bank (Afreximbank), the Africa Financial Corporation (AFC), the Islamic Development Bank (IsDB), the African Union Commission (AUC), the United Nations Economic Commission for Africa (UNECA), and the Banque Ouest Africaine de Développement (BOAD). VINCI, a private firm specializing in concessions, construction, and energy joined as the first private sector ICA member. Contributions to the development of infrastructure in Africa by IsDB, and BOAD were already included in previous IFT reports in Other Public Sources of Funding. AUC, UNECA, and VINCI do not make direct financial commitments to infrastructure.

Several institutions joined ICA in 2019 and helped deliver the highest level of commitments since 2011.

Figure 5.1: ICA Member Total Commitments and Disbursements ($bn), 2016-2020
ICA member commitments and disbursements peaked in 2019



5.1 Trends in commitments

MDBs accounted for **78%** of ICA financing **in 2019** and **79% in 2020.**

Commitments by ICA Member[36]

ICA members committed $26.9bn in 2019 and $18.1bn in 2020, compared with commitments of $20.2bn in 2018 (Figure 5.1). 2020 commitments were substantially lower than in previous years since many organizations focused their funding on COVID-19 response and areas such as macroeconomic recovery and health.

Commitments by ICA members had been consistent over the last few years, ranging from $18.6bn to $20.2bn in the 2015-2018 period. An exceptional level of $26.9bn was reached in 2019. The 2020 level of $18.1bn was more in line with historical trends and reflects the major shift in commitments by many ICA members from infrastructure to operations to respond to the impact of the COVID-19 pandemic. Higher commitments reported in 2019 also reflect the contributions from new ICA members who, collectively, contributed $7.4bn (Table 5.1, Figures 5.2 and 5.3).

It should be noted that infrastructure investments are lumpy in nature, which can result in notable year-to-year ICA members commitment fluctuations. Further, MDBs respond to country priorities which can also affect the level of financing from year to year.

[36] The main purpose of this report is to present data on investments in infrastructure in Africa in 2019 and 2020, to identify and explain trends in comparison with previous years, and to discuss future implications. The following trend analysis presents six years of data points going back to 2016.

Table 5.1: ICA Member 2019 and 2020 Commitments and Historical Trends ($m)[a]
The sharp increase in 2019 commitments reflects the inclusion of several new ICA members

SOURCE	ANNUAL			3-YEAR ROLLING AVERAGE			CHANGE B/A (%)	CHANGE C/B (%)
	2018	2019	2020	(A) 2018	(B) 2019	(C) 2020		
Total ICA Members	20,243	26,863	18,142	19,503	22,252	21,749	14%	-2%
Canada	39	3	11	66	20	18	-69%	-14%
France	1,936	1,932	966	2,315	1,997	1,611	-14%	-19%
Germany	1,608	739	588	1,191	1,062	979	-11%	-8%
Italy	20	-	10	43	36	10	-16%	-72%
Japan	517	751	532	1,606	1,210	600	-25%	-50%
South Africa	1,055	1,480	1,078	921	1,011	1,204	10%	19%
Spain	_	47	6	-	47	26		-44%
UK 1/	623	613	463	605	620	566	2%	-9%
USA	297	227	243	295	272	255	-8%	-6%
AFC	-	3,006	1,346	-	3,006	2,176		-28%
AfDB	4,538	5,365	1,176	5,929	4,422	3,693	-25%	-16%
Afreximbank	-	3,426	2,087	-	3,426	2,757		-20%
BOAD 2/	-	482	468	-	482	475		-1%
EC 3/	1,000	-	-	1,132	1,000	1,000	-12%	0%
EIB	2,225	1,590	1,626	2,664	1,889	1,814	-29%	-4%
EU-AITF	20	83	-	80	60	34	-25%	-42%
IsDB 2/	-	485	364	-	485	425		-12%
WBG	7,989	6,634	7,178	6,520	7,380	7,267	13%	-2%

(a) Totals may not add up due to rounding.
1/ The 2018 amount was not included in the totals. It was an estimated based on the UK 2017 commitments.
2/ BOAD and IsDB were not ICA members before 2019. Their previous years commitments are included in Table 6.1 in Chapter 6 - Other Sources of Public Financing.
3/ 2018 and 2017 amounts were not included in the total. They were estimates based on the EC's 2012-2016 reported commitments. Amounts reported in 2016 and 2017 IFT reports included amounts provided to G7 bilaterals, who also reported separately, which created double counting. This table only shows the EU-AITF, managed directly by the EC

Figure 5.2: ICA Member Commitments by Source and Region ($m), 2019
New ICA Members contributed close to 30% of total commitments in 2019

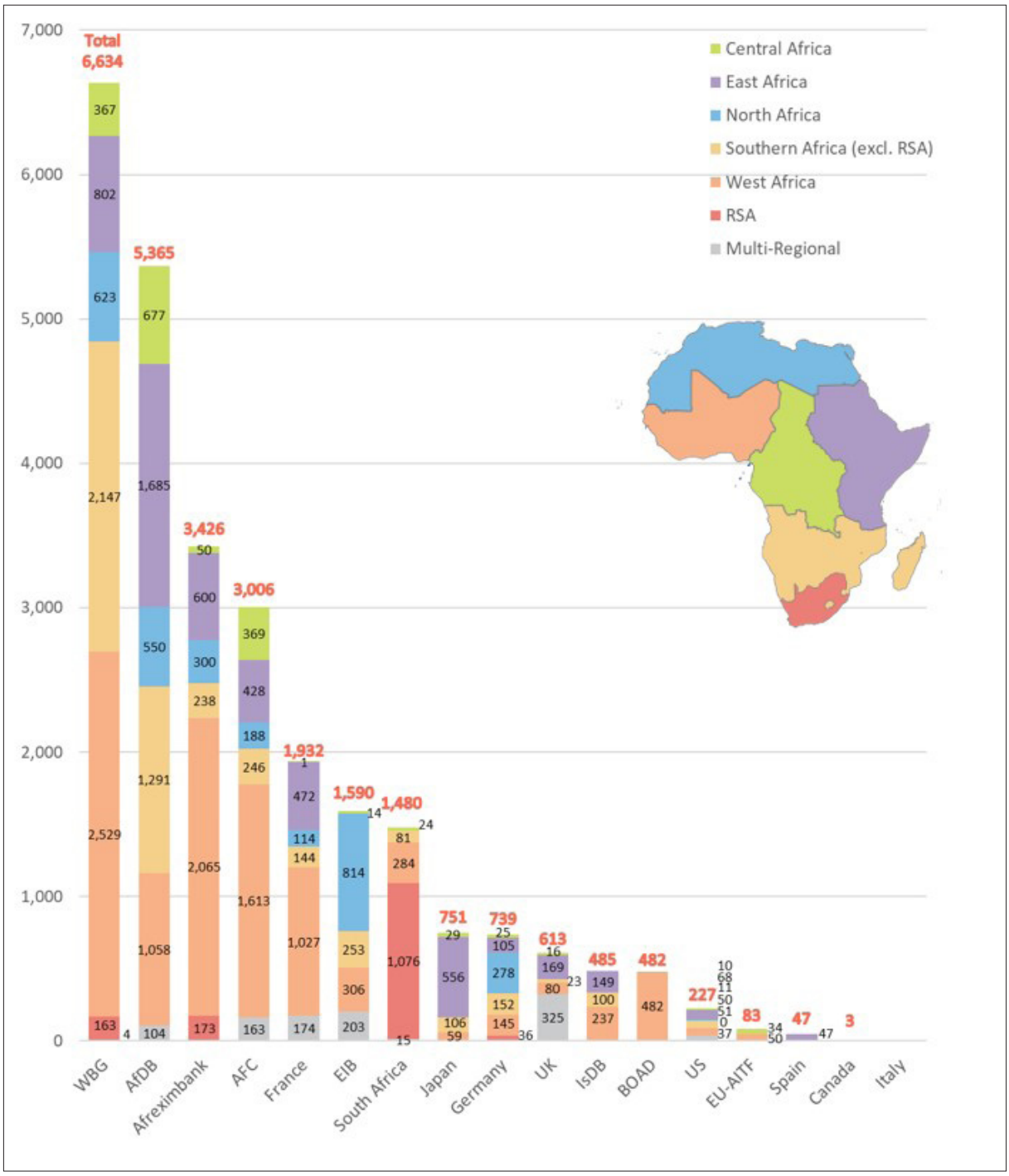
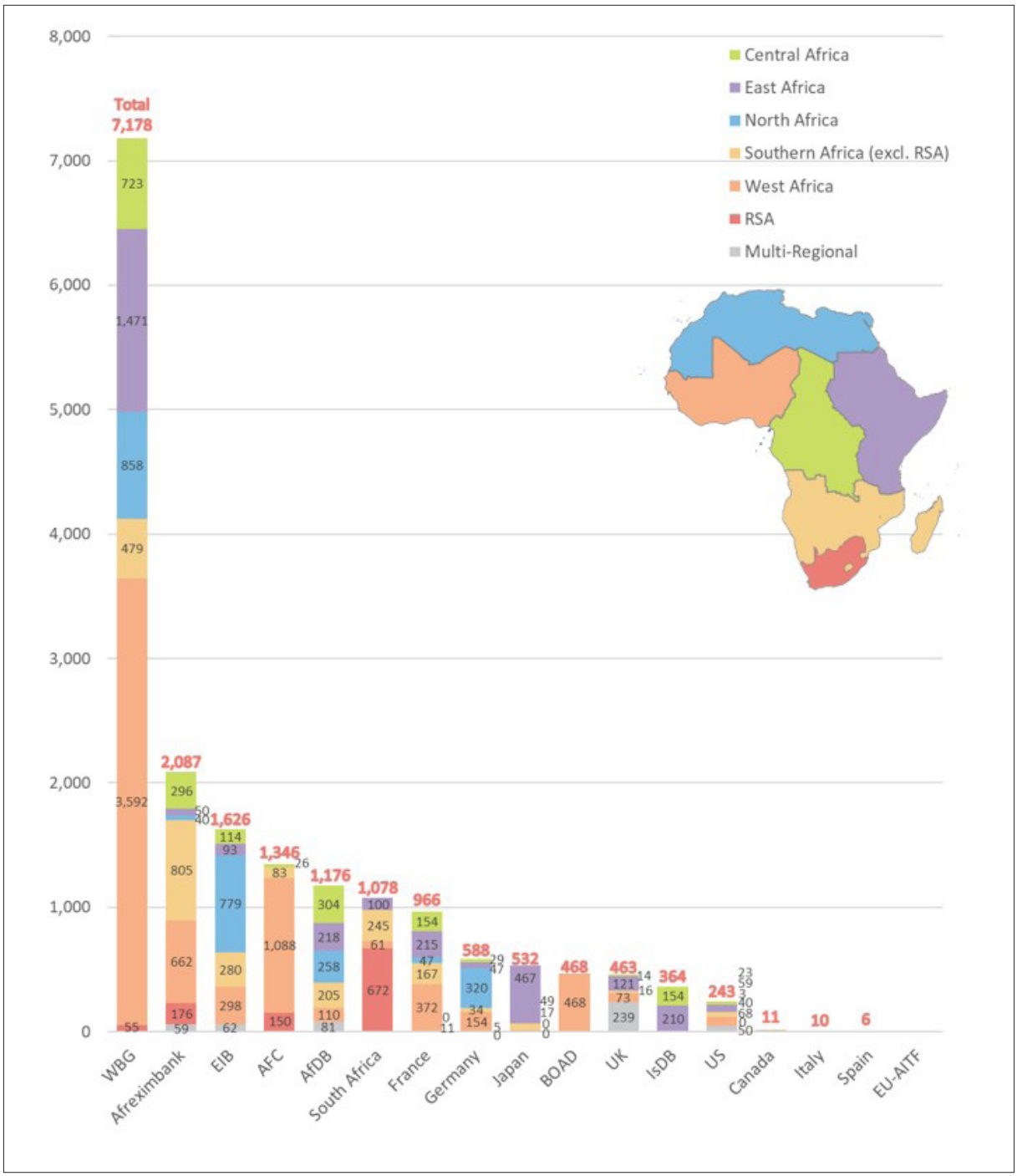


Figure 5.3: ICA Member Commitments by Source and Region ($m), 2020
2020 infrastructure commitments were affected by the COVID-19 pandemic



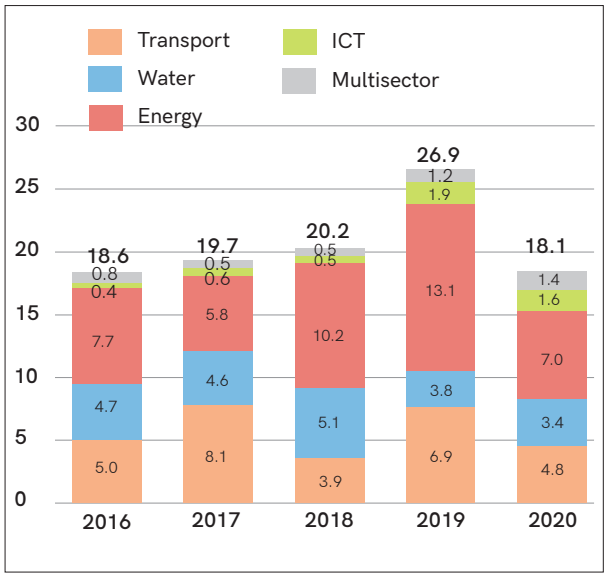
Commitments by Sector

The breakdown of commitments by sector is shown in Figure 5.4.

The energy sector received the largest share of ICA member financing, representing 49% ($13.1bn) of total 2019 commitments and 38% ($7bn) of total 2020 commitments. Commitments to the transport sector accounted for 26% ($6.9bn) of total commitments in 2019 and 26% ($4.8bn) of total commitments in 2020, substantially more than the share of 19% ($3.9bn) reported in 2018, and closer to its 2015-2017 average share of 34%. The water and sanitation sector represented 14% ($3.8bn) of 2019 commitments and 19% ($3.4bn) of 2020 commitments, a lower share than its 2015-2018 share of 25%. The ICT sector accounted for 7% ($1.9bn) of total commitments in 2019 and 9% ($1.6bn) of total commitments in 2020, markedly higher than the 2015-2018 yearly average of $500m, representing an average of 2% of total commitments during that period.

The energy sector received 49% of ICA commitments in 2019 and 38% in 2020.

Figure 5.4: ICA Member Commitment Trends by Sector ($bn), 2016-2020
Energy sector received the largest share of ICA member commitments in 2019 and 2020

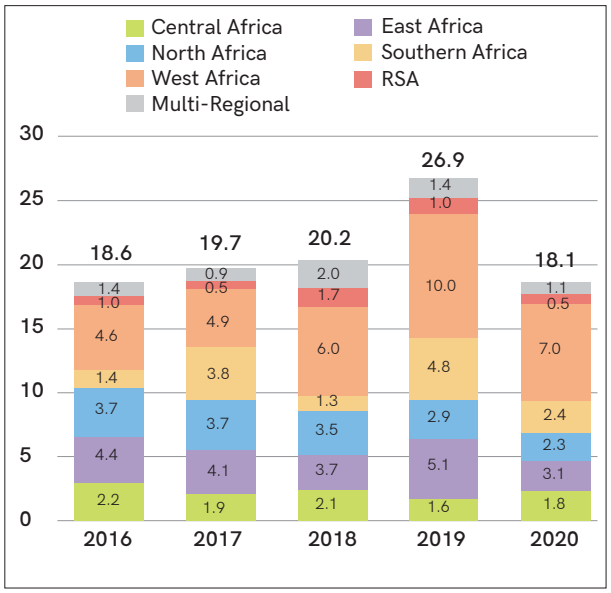


Commitments by Region

Commitments by ICA members experienced a surge in 2019, reaching $26.9bn, the result of the addition of new ICA members who, collectively, contributed $7.4bn ($3.4bn from Afreximbank, $3bn from AFC, $482m from BOAD, and $485 from IsDB), and the inclusion of MIGA, which is part of the WBG, and who contributed $655m in guarantees. MIGA's contributions had not been included in previous IFT reports. In addition, larger commitments from AfDB and WB to Southern and West Africa contributed to the overall increase, despite overall decreases in commitments to East and North Africa. Commitments in 2020 decreased sharply reflecting the shift by many ICA members from infrastructure to sectors most affected by the COVID-19 pandemic. The breakdown of commitments by region is shown in Figure 5.5.

Commitments to West Africa accounted for 37% of 2019 commitments and 38% of 2020 commitments.

Figure 5.5: ICA Member Commitment Trends by Region ($bn), 2016-2020
Commitments to Southern Africa tripled between 2018 and 2019



Types of Funding

Most operations in 2019 and 2020 were financed through loans, in line with historical trends. The share of loans in total commitments climbed to 74% in 2019 and 75.3% in 2020, compared with 70.8% in 2018. Grants accounted for 11.9% of commitments in 2019 and 9.6% in 2020, compared with 11.9% in 2018. The share of guarantees and export credits reached 5% in 2019 and decreased to 3,7% in 2020, compared with a level of 4.3% in 2018. The proportion of mixed instruments (i.e., a combination of at least 2 types of funding) accounted for 7.3% of total 2019 commitments and 14.8% of total 2020 commitments (Table 5.2).

Table 5.2: Amount and Share of Types of Funding
Loans represented the highest share of funding

TYPE	2019		2020	
	AMOUNT ($BN)	PERCENT	AMOUNT ($BN)	PERCENT
Loans	19.9	74.0%	12.7	75.3%
Grants	3.2	11.9%	1.9	9.6%
Guarantees and Export Credits	1.3	5.0%	0.7	3.7%
Equity Investment	0.4	1.6%	0.038	0.2%
Mixed	2.0	7.3%	2.7	14.8%
Other	0.06	0.2%	0.17	0.9%
TOTAL	26.9	100%	18.1	100%

Hard vs. Soft Infrastructure

Commitments in support of soft infrastructure (sector studies, policy work, project preparation, capacity development…) amounted to $162m in 2019 and dropped to $46m in 2020. These substantially lower amounts than reported in previous years are in part the result of several ICA members not identifying components of soft infrastructure among their commitments.

Country Allocations

In 2019, ICA members committed $23.7bn to country-specific projects, or 88% of total 2019 commitments. Of the remainder $3.1bn, $1bn supported multi-regional operations and $2.1bn supported multi-country operations within the same region. In 2020, commitments to country-specific projects totalled $16.1bn, or 89% of total

commitments. $502m supported multi-regional projects and $1.5bn supported multi-country projects within the same region.

Seven countries accounted for 47% of total 2019 country-specific commitments, five of which with commitments over $1bn: Egypt, Tanzania, Angola, Mozambique, and South Africa. Côte d'Ivoire received commitments of $2.2bn and Nigeria $3.2bn. Together, they accounted for 22% of total country-specific commitments. In 2020, there were only four countries with commitments over $1bn (23% of total country-specific commitments): Egypt, Côte d'Ivoire, Nigeria, and Kenya. Of these, Nigeria received commitments of $2.7bn.

The four largest 2019 commitments in the energy sector supported operations in Nigeria ($2.3bn), Côte d'Ivoire ($1.1bn), Mozambique ($858m), and South Africa ($781m) and, together, accounted for 44% of total country-specific commitments in energy. Commitments to Angola (602m), Tunisia ($546m), Morocco ($438m), and Sudan (420m) accounted for another 17% of total commitments to the transport sector in 2019. In 2020, Nigeria was the only country with commitments in energy over $500m, receiving $1.6bn.

In the transport sector, three countries received commitments over $500m in 2019: Kenya ($719m), Tanzania ($567m), and Côte d'Ivoire ($528m), accounting collectively for 30% of total commitments to transport in that year. In 2020, three other countries received commitments over $500m: Egypt ($767m), Kenya ($742m), and Nigeria ($520m) which, together, accounted for 45% of commitments to that sector.

In 2019, there were only three countries with commitments over $300 in the water and sanitation sector: Angola ($500m), Ethiopia (354m), and Egypt ($320m) which, collectively accounted for 31% of commitments to that sector in that year. In 2020, two countries received the highest levels of commitments: Côte d'Ivoire ($297m) and Nigeria ($272m), accounting for 17% of total commitments for that year.

In the ICT sector, commitments to Nigeria ($561m) accounted for 38% of commitments in 2019. Commitments to Morocco ($211m) and South Africa ($201m) accounted for another 28%. In 2020, commitments to Morocco ($270m) accounted for 21% of commitments that year. Commitments to Nigeria ($190m), Ghana ($129m), and Niger ($100m) accounted together for another 33% of commitments to ICT that year.

5.2 ICA member activities

AFRICAN DEVELOPMENT BANK GROUP

African Development Bank (AfDB)

AfDB reported commitments of $5.4bn in 2019, substantially higher than the $4.5bn reported in 2018 and the $3.4bn reported in 2017. It reported commitments of $1.2bn in 2020.

Energy commitments represented 44% ($2.4bn) of total 2019 commitments and 55% ($649m) of total 2020 commitments, a markedly higher share than the 31% noted in 2018. In 2019, commitments for a total of $2bn, in support of 9 operations each over $100m, accounted for 86% of energy commitments. One of these operations was the Nigeria Transmission Expansion Project Phase 1 ($210m) which aims to increase power transmission over the grid from 7,000MW in 2018 to 10,000MW by 2024. This will allow distribution companies to improve the electricity supply to end-consumers and increase electricity exports to the subregion through the West African Power Pool. Another commitment of $155m will support a project to develop and equip the power transmission grid in five governorates in Tunisia. Its goal is to improve electricity supply quality and to strengthen the electricity grid for the integration of renewable energies expected from solar and wind power plants that are being developed. In 2020, a notable operation was the Project to Strengthen the Structures of the Electricity System and Access to Electricity Phase I in Côte d'Ivoire ($71m), which will connect about 120,000 households to the national grid.

Commitments in support of transport operations were $2.5bn in 2019, higher than the $2.1bn reported in 2018. Transport commitments were $253m in 2020. In 2019, commitments for 8 operations exceeded $100m each and totaled $1.3bn, accounting for 52% of total transport commitments. The largest commitment, $224m, supported the Kampala City Roads Rehabilitation Project in Uganda. In 2020, a commitment of $46m supported the construction of a bridge over the Logone River between Chad and Cameroon to improve the transport system in the Lake Chad Basin Region.

Water and sanitation commitments amounted to $462m in 2019 and $275m in 2020. In 2019, a $122m commitment supported the Program for Integrated Rural Sanitation in Upper Egypt which will increase coverage of improved sanitation in rural areas and enhance sanitation service sustainability and performance at both local and national levels. Improved access to sanitation will benefit not only people in the catchment area, but also in the downstream area, as the effluent will be discharged to the drainage system with a quality level complying with Egyptian law. In 2020, the Water Sector Support Program in Namibia ($116m) will contribute to reaching universal coverage for water by 2030, from the 2020 level of 85%, and for sanitation services from the 2020 level of 54%.

AfDB committed $54m to ICT in 2019. A $14m commitment supported the Lesotho eGovernment Infrastructure Phase II Project, which aims at developing digital payment infrastructure and strengthening the digital services ecosystem in rural and unserved areas.

AfDB issued 3 guarantees for $167m in 2019, including a partial risk guarantee of $100m for the Madagascar Sahofika Hydropower Project which will add 205MW of renewable energy generation capacity to the national grid, benefiting more than 2 million people.

In addition to direct funding through loans and credits and provision of partial risk guarantees, AfDB is increasingly looking to deploy financial innovation in its infrastructure activities. The dual objective is to increase the leverage of its financial support by "crowding in" private financing and at the same time creating new financing mechanisms to tap the considerable financial resources of institutional investors. A notable example of the latter is the InfraCredit initiative in Nigeria (see Box 4.1), created in 2016, which is currently being replicated by the Bank in Kenya, Egypt, Morocco, Senegal, and Ivory Coast. The Bank is also, through its Africa50 initiative, recycling financial resources in existing infrastructure assets by selling down its share and reutilizing the freed-up funds to finance new projects.

AFRICA FINANCE CORPORATION

Africa Finance Corporation (AFC)

AFC reported commitments of $3bn in 2019 and $1.3bn in 2020. AFC is a new ICA member, and its previous years commitments were not included in previous reports.

In 2019 and 2020, the largest share of commitments (47% and 43% respectively) went to the energy sector, with commitments of $1.4bn in 2019 and $582m in 2020. Among the most sizeable 2019 commitments, was a $320m loan to the Liquified Natural Gas (LNG) Train 7 Project in Nigeria. This commitment was part of a $3bn financing package involving many financiers. The project will involve the construction of Nigeria LNG's seventh liquefied natural gas train and will add approximately eight million tons of LNG each year and increase NLNG's overall capacity to 30 million tons each year, while further bolstering Nigeria's competitiveness in the global LNG market. Another 2019 substantial commitment in energy was the $149m loan made in support of the Cap des Biches Project in Senegal, which will build a 300 MW combined cycle gas turbine power plant, nearly 25% of the power consumed in Senegal and the equivalent electricity needed to power approximately 500,000 Senegalese homes. Upon completion, the project will be the biggest power plant in Senegal. It supports the Government's objective to increase its generation capacity with a greater utilization of natural gas and renewables.

Commitments to the transport sector amounted to $860m in 2019 and $203m in 2020, representing 29% of total 2019 commitments and 15% of total 2020 commitments. In 2019, AFC provided $160m of debt financing to Arise Mauritania for the construction of a new container terminal in Nouakchott, with an initial capacity of 250,000 TEUs (Twenty-Foot Equivalent Units), and the potential to expand to 600,000 TEUs, and an oil terminal able to accommodate oil and gas vessels with up to 50,000 DWT capacity. The project includes a new wharf with the capacity to handle two Panamax vessels simultaneously, a 25-hectare storage area for exports and imports, a 20-hectare container freight station, and an administrative area including a 'one-stop shop' for port authorities and government entities.

The ICT sector received commitments of $385m in 2019 and $105m in 2020, representing 13% of total 2019 commitments and 8% of total 2020 commitments, in support of 4 operations in Nigeria. These included a $80m commitment to MTN Nigeria, the Nigeria subsidiary of the South African MTN Group, for the refinancing of its debt and the roll out of critical network infrastructure.

Multisector operations received commitments of $341m in 2019 and $456m in 2020, or 11% of total 2019 commitments and 34% of total 2020 commitments.

African Export-Import Bank (Afreximbank)

Afreximbank committed $3.4bn in 2019 and $2.1bn in 2020. Afreximbank is a new ICA member, and its previous years commitments were not included in earlier reports.

Commitments to the energy sector accounted for 79% ($2.7bn) of Afreximbank 2019 and 74% ($1.5bn) of its 2020 commitments. A key commitment in 2019 was a $400m loan to South Sudan to finance infrastructure development and oil well rehabilitation. The financing represents one of the first cross-border hard currency loans into South Sudan.

The ICT sector received commitments of $429m in 2019 and $240m in 2020. Two loans were made to support the Econet New ARX project in Southern Africa: $225m in 2019 and $240m in 2020 to support the company's expansion program. Econet is a diversified telecom company operating in Africa and other continents.

The transport sector received commitments of $189m in 2019 and $303m in 2020. A $100m loan in 2019 supported the construction of a 550-kilometre section of the railway between Dar es Salaam and Makutupora, part of the Standard Gauge Railway (SGR) in Tanzania. In 2020, Afreximbank committed a $34m to Gabon in the form of a revolving trade financing facility to Caisse des Dépôts et Consignations du Gabon to support the operations of the tenants of the Gabon Special Economic Zone and to provide them with the capacity to export their products, mostly directed at neighboring countries, which will strengthen regional economic integration.

Banque Ouest Africaine de Développement (BOAD)

BOAD committed $482m in 2019 and $468m in 2020, substantially more than the $307m committed in 2018. The largest share of commitments supported the transport sector, which represented 61% ($292m) of total 2019 commitments and 54% ($254m) of total 2020 commitments. In 2019, commitments of $24m were made to support the planning and asphalting of the Tillabéry urban thoroughfares in Niger, and commitments of $20m were made to support the rehabilitation and modernization of the Osvaldo Vieira International Airport of Bissau in Guinea Bissau. In 2020, BOAD committed $156m for a series of five road projects to build and asphalt sections of roads located on international corridors in Burkina Faso, Côte d'Ivoire, Mali, Niger, and Senegal.

Commitments in support of energy operations amounted to $123m in 2019, 26% of total commitments, and $179m in 2020, 38% of total commitments. In 2019, BOAD committed $43m for the construction of a 65MW combined cycle thermal power plant in Togo. In 2020, it committed $26m for the construction of a 124km 161kV line connecting several townships to the Benin-Togo border, and the associated HV/LV substations. The water and sanitation sector received commitments of $1.4m in 2019 and $35m in 2020. A commitment of $17m was made in 2020 to support hydro-agricultural improvements of 1,300ha in Niger.

Canada

Canada reported commitments of $3.4m in 2019 and $10.6m in 2020, compared with commitments of $39m in 2018, $19m in 2017, and $6m in 2016. It appears that several 2018 commitments included support for social infrastructure projects, which are not counted in this report. It should be noted that Canada's support to infrastructure in Africa is overwhelmingly in the social sectors which explains why the commitments presented in this report are very low.

Canada's commitments were equally apportioned between transport, energy and water and sanitation in 2019 and in 2020, with 33% of total commitments to each sector in 2019 and 31% of total 2020 commitments to the energy sector, 30% each in the transport and water and sanitation sectors. Commitments to multi-sector operations accounted for 9% of total 2020 commitments. The 2019 commitments were composed of nine grants to Egypt, Ethiopia, and Kenya in the context of the Initiative on Closing the Investment Gap in Sustainable Infrastructure which aims to link countries with sound low-carbon investment projects with investors. There were no commitments in support of the ICT sector in either 2019 or 2020.

European Investment Bank (EIB)

EIB committed $1.6bn in both 2019 and 2020, in line with the $1.7bn reported in 2018. Each year, the largest portion of commitments targeted the transport sector, 39% ($625m for 4 operations) in 2019 and 47% ($768m for 2 operations) in 2020. One of the two 2020 commitments was a $83m loan to Zambia for the upgrade and widening of the Great North Road (T2). The project has a strong regional dimension, connecting Zambia to neighboring Tanzania and Zimbabwe. It is also part of several important international transport routes including the continental Trans-Africa Highway from Cape Town to Cairo.

Energy commitments represented 31% ($497m) of total 2019 commitments and 17% ($269m) of total 2020 commitments. In 2019, a $144m loan to Morocco supported the Noor Atlas project, the second phase of ONEE's (Morocco's electricity and water utility company) program, focused on assuring electricity supply for regions "at the end of the line" or regions powered by 60 kV lines and sited at a long distance from transformation posts. In 2020, EIB committed $114m for the Electricity Access Project in Rwanda to finance low- and medium-voltage networks, and rehabilitation and upgrade of distribution networks. The new network investments will give access to electricity to approximately 190 000 new connections and the rehabilitation and upgrade of distribution networks will contribute to the increase of capacity, improvement of grid reliability and enhancement of operational efficiency.

EIB committed $437m to the water and sanitation sector in 2019, or 27% of total 2019 commitments, and $519m in 2020, or 32% of total 2020 commitments. A sizeable 2019 commitment was the $118m loan to Niger for the AEP Niamey II Project for the construction of a new drinking water treatment plant with a production capacity of 100,000 m3/day and related infrastructure to adapt the existing water distribution system. The project will increase the water production capacity for the city of Niamey, to cope with water demand until 2030, by enabling the delivery of the new volumes to a beneficiary population of about 2 million and will support the expansion of the city through over 25,000 new household connections. In 2020, EIB committed $114m in support of the Climate Resilient FL Project in Mozambique to support the building of resilience for future adversity through improved water supply, wastewater and drainage infrastructure in affected cities, and the reconstruction of water supply and wastewater infrastructure destroyed and damaged by the passage of cyclones Idai and Kenneth.

EIB commitments of $25m in 2019 (for two operations) and $29m in 2020 (for one operation) supported the ICT sector. The 2020 $29m loan to Mauritania for the COVID-19 Resilience Submarine Cable Project, which aims to deliver more international bandwidth and capacity for the country and to strengthen diversity and resiliency within the country's telecommunications infrastructure. It includes the deployment of a second international connection.

European Union Africa Infrastructure Trust Fund (EU-AITF)

In 2019, EU-AITF committed $83m in grants[37], substantially more than the $20m committed in 2018 and higher than the $76m committed in 2017 and the $64m committed in 2016. The 2019 commitments were in support of four operations, two each in energy, for a total of $39m and transport, for a total of $44m. A $28m energy grant to Guinea was in support of the construction of a new hydroelectric plant with a capacity of 8.5 MW and the associated transport and distribution network. Eventually, the project aims to bring electricity to 25,000 households and support handicraft activities in the region, improving the quality of life of more than 150,000 people. A $34m transport grant supported the Rehabilitation of RN1 and RN12 Road sections and the construction of the Maroua Bypass which will link Chad to Cameroon. The project will contribute to the economic development and competitiveness of the Cameroon-Chad transboundary zone.

Since the end of 2019, EU-AITF no longer accepts new grant applications. Its focus is on seeing existing grant operations through until completion.

AFD
AGENCE FRANÇAISE DE DÉVELOPPEMENT

France

France reported total commitments of $1.9bn in 2019 by the Agence Française de Développement (AFD) and Proparco, its subsidiary for private sector development. This is the same level as the $1.9bn reported in 2018, but lower than the $2.1bn reported in 2017. France also reported commitments of $966m in 2020.

As in previous years, the largest share of total commitments targeted the energy sector, 62% in 2019 ($1.2bn) and 46% in 2020 ($441m). In 2019, ADF adopted an energy strategy centered on supporting energetic transition in client countries. All its commitments are aligned with its strategy. One of the 2020 energy commitments was the $156m loan to Angola to improve its energy sector and increase access to electricity for at least 1 million persons, or close to 5% of the total population. The objective is the reduction of network losses and the shift for about 75% of power from individual diesel generators to hydroelectric power, thus reducing CO2 emissions by 150,000 to 250,000 tons.

The transport sector received commitments of $331m in 2019 and $376m in 2020, or a share of 17% of commitments in 2019 and 39% in 2020. A commitment of $115m was made in 2019 to support the upgrading of several airports in Ethiopia, with a focus on energy efficiency. A commitment of $203m was made in 2020 in support of the BRT (Bus Rapid Transit) system in Dar-Es-Salaam in Tanzania to improve urban mobility through the establishment and operation of a cost-effective sustainable transportation system to ensure fast and orderly flow of traffic on urban streets and roads.

Commitments of $389m (20% of total commitments) and $149m (15% of total commitments) were made in support of water and sanitation operations in 2019 and 2020 respectively. One notable operation was the 2020 Dakar Region Autonomous Sanitation Project in Senegal, for which AFD committed a $29m loan and a $6m grant. The project will provide 372,000 people with improved sanitation services, through the construction and/or rehabilitation of latrines and hand-washing facilities, the construction of wastewater pre-treatment plants, solid waste treatment plants, and sludge treatment plants.

KfW
Bank aus Verantwortung

Germany

Germany reported total commitments of EUR 660m in 2019 and EUR 512m in 2020, which were equivalent to $739m in 2019 and $588m in 2020 at average exchanges between euro and US dollars in the respective years, all from the KfW Group (KfW) on behalf of the German government[38]. These levels are much lower than the $1.6bn reported in 2018, but more aligned with the $838m reported in 2017. The largest share of 2019 commitments was in energy (59%, or $434m), followed by water and sanitation (40%, or $294m). Reversely, in 2020, water and sanitation commitments ($317m) represented 54% of total commitments and energy represented 46% ($271m) of total commitments.

[37] https://www.eu-africa-infrastructure-tf.net/attachments/Annual%20Reports/eu_africa_infrastructure_trust_fund_annual_report_2019_en_01.pdf
[38] Technical cooperation provided by GIZ, the German agency for international cooperation, was not quantified in this report.

KfW made commitments of EUR 76m ($85m) in 2019 to support Côte d'Ivoire in doubling its production of renewable energy by 2030. KfW also committed EUR 25m ($28m) in 2019 to facilitate the market entry of private investors in Mozambique seeking to generate electricity from renewable energies. The aim is to increase electricity access from just under one-third of the population today to the entire population by 2030.

In 2019, KfW committed EUR 18m ($20m) for the upgrading of sanitation in Zambia, under the Lusaka Sanitation Program. The EIB is co-financing this effort. The objective is to provide access to 525,000 additional families to sanitation, expanding wastewater treatment at two new plants, and constructing 520km of sewerage pipes. In 2020, KfW committed EUR 138m ($158m) for 1 loan to improve rainwater management and energy efficiency in public buildings in Tunisia toward protecting populations against floods, which are amplified in the rainy season by the Sidi Salem dam that is used for electricity production and irrigation. In addition, the Flood Storage and Protection Program aims at the valorization of rainwater, which will be stored for irrigation and drinking water supply.

In the transport sector, KfW approved a commitment of EUR 10m ($11.2m) in 2019 for the construction of access roads for climate adaptation in the northern regions of Namibia.

Islamic Development Bank (IsDB)

IsDB reported commitments of $485m in 2019 and $364m in 2020, compared with $518m committed in 2018. Commitments to the transport sector accounted for 53% of total 2019 commitments, and 100% of total 2020 commitments. In the transport sector, IsDB committed $80m in 2019 for the reconstruction of the Abakaliki Ring Road in the Ebonyi State of Nigeria to support the upgrade of road infrastructure which in turn would improve business activities through access to a quality road that ensures smooth movement of goods, services, and persons. Increasing economic activities resulting from access to good roads would lead to improvement in socio-economic development in the state and the region. In 2020, IsDB committed $154m for the construction of the Abeche-Abougoulem Road project in Chad, in support of the country's transport sector strategy. The goal is to improve year-round access to markets as well as to social and administrative services, thereby facilitating economic growth and contributing to poverty reduction.

Commitments to the energy sector amounted to $100m in 2019, in support of the Temane Transmission Project in Mozambique, which will expand infrastructure and upgrade technology to supply modern and sustainable energy services. The project is part of the objective of increasing the overall access rate of electricity from 27% in 2018 to 100% by 2030.

The water and sanitation sector received commitments of $89m in 2019, in support of two operations: $40m for the Freetown WASH and Aquatic Environment Revamping Project in Sierra Leone, and $49m for the Improving the Sanitation of Cities in Côte d'Ivoire. The project in Sierra Leone aims to meet the potable water needs of Freetown by 2025 through, among others, increased production capacity from 70,000 to 110,000 m3/day. The project in Côte d'Ivoire will help achieve sustainable improvement in the provision of sanitation services in Abidjan and 11 secondary cities by building sludge treatment plants with a total capacity of 839,500 cubic meters (m^3) per year.

A commitment of $39m was made in 2019 in ICT in Djibouti in support of the Regional Submarine Cable Project. The objective of the project is to provide efficient and reliable services to make Djibouti a regional ICT hub by 2024 and to contribute to providing internet access to 60,000,000 subscribers in the region by 2024.

Italy

Italy committed $10.3m in 2020 in support of the water and sanitation Agroforestry Green Berets to improve local employment prospects in the Kayes Region in Mali. The overall project objective is to contribute to strengthening resilience in areas with desertification and land degradation through the enhancement of water resources.

Japan

Japan reported commitments of $751m in 2019 and $532m in 2020 all from the Japan International Cooperation Agency (JICA), compared with commitments of $517m in 2018. The Ministry of Finance did not report any commitments. The transport sector accounted for 83% ($627m) of 2019 commitments, and 23% ($122m) of 2020 commitments. A substantial commitment of $440m to Kenya in 2019 accounts for the surge in commitments to the transport sector compared to the $186m reported in 2018. The loan to Kenya supports the construction of the Mombasa Gate Bridge. The project aims to mitigate traffic congestion and facilitate efficient transportation and logistics around the Mombasa area, which is the gateway of East Africa, through the construction of a large-scale cable-stayed bridge linking Mombasa Island and South Mainland (Likoni area). This will improve local development and is expected to contribute to regional economic activities and development of Kenya and the surrounding regions. In 2020, Japan approved a $91m loan to Ethiopia for the Jimma-Chida and Sodo-Sawla Road Upgrading Project (Jimma-Chida Section), which is part of the Ethiopia Integrated Transport Program Phase 1. The objective of the project is to improve connectivity and reduce transport costs and travel times by upgrading the Jimma-Chida Road section from a gravel road to an asphalt concrete road, thereby contributing to improved agricultural logistics and a better access to social and economic facilities.

In 2020, Japan committed a $349m multi-sector loan to Kenya for the Mombasa Special Economic Zone (SEZ) Development Project, thus resulting in multi-sector operations accounting for 65% of total 2020 commitments. The objective of the Project is to enhance transportation capacity and to stabilize the power supply, by building a berth, main road and electric facilities for the Mombasa SEZ,is located in Dongo Kundu, thereby contributing to improvement of the investment environment of that area.

South Africa

South Africa reported commitments of $1.5bn in 2019 and $1.1bn in 2020 by the Development Bank of South Africa (DBSA). These commitments are in line with the $1.1bn reported in 2018.

The energy sector received the largest share of total 2019 commitments, 42% ($626m), and a lower share of 27% ($294m) in 2020. In 2019, DBSA made 2 loans totaling $312m to Eskom, the South African power utility, to fund part of its capital expansion program. Eskom supplies 95% of the country's power and 45% of Africa's electricity, most of which is generated in coal-fired plants built more than two decades ago. The loans will support the increase of the base load generating capacity to keep up with growing demand, while generating a combined total output of approximately 9,000 MW.

Commitments to multisector operations represented 24% ($351m) of 2019 commitments and 29% ($310m) of 2020 commitments. A notable 2019 commitment is the $139m loan to the city of Ekurhuleni, a large suburban region east of Johannesburg, South Africa, in support of its Smart City strategy.

The transport sector received commitments of $287m (19%) in 2019 and $467m (43%) in 2020. A notable 2020 commitment was the $100m loan in support of the Tanzania Standard Gauge Railway (SGR) which will link the country to neighboring Rwanda and Uganda, and through these two, to Burundi and the Democratic Republic of the Congo. It is expected to decrease freight costs by 40%.

Commitments to the ICT sector amounted to $216m, or 15% of total 2019 commitments, and $2.3m, or 0.2% of total 2020 commitments. A $210m loan to Vodacom, the leading provider of mobile data and mobile payment services in Africa, in 2019 to support the expansion of its many services explains the large commitments that year.

Spain

Spain reported total commitments of $47m in 2019 in support of two operations, and $6m in 2020 in support of one operation. Spain is a new ICA member and its commitments to African infrastructure were not included in previous reports. In 2019, two loans (one ODA, one non-ODA), totaling $21m, supported the multi-sector airborne geophysical survey and geological mapping of Karamoja in Uganda. The project objective is to increase knowledge of Uganda's mineral resources and to help identify areas most suitable for more detailed prospecting and exploration through an extensive high-resolution airborne survey. Extracting mineral resources in a new region will involve the substantial development of infrastructure, such as roads, railroads, and water supply.

The other 2019 commitment was a $26m transport loan to Kenya for the upgrading of a road crossing in Nairobi through the construction of a four-lane flyover and the expansion of the adjacent roads. The 2020 water and sanitation commitment supported two desalination plants in Morocco to meet water needs in cities that are experiencing water stress.

Foreign, Commonwealth & Development Office

United Kingdom (UK)

The UK committed a total of $613m in 2019 and $463m in 2020. The 2019 commitments are in line with the $623m it had reported in 2017. Multisector operations received the largest share of commitments in 2019 (50%, or $308m) and in 2020 (44% or $202m). Two multi-country, multi-instrument commitments ($85m in 2019 and $49m in 2020) made in support of the Second phase of the UK's Department for International Development's (DFID) Support to the Private Infrastructure Development Group (PIDG) are noteworthy. PIDG is a multi-donor infrastructure development and finance organization which finances infrastructure in low-income countries, for activities such as the development of local capital markets through InfraCredit (Nigeria – see Box 4.1) and contributions to the Climate Investment Funds.

Commitments to the water and sanitation sector amounted to $179m in 2019 and $134m in 2020, representing 29% of total commitments for each year. In 2019, a $26m grant supported the improvement of access to climate-resilient water and improved sanitation services and good hygiene practices for 1.2m people in the prioritized drought-affected and drought-prone areas of Ethiopia. A $18m multi-country grant in 2020 will support the establishment of sustainable sanitation and water supplies for poor and vulnerable people. The main emphasis will be on sanitation, reflecting the fact that, for every person lacking access to safe water, three lack access to appropriate toilets.

The transport sector received commitments of $65m (11% of total commitments) in 2019 and $43m (9% of total commitments) in 2020. Grants of $19m in 2019 and $14m in 2020 supported the Regional Economic Development for Investment and Trade (REDIT) Program which aims at improving the efficiency and capacity of transport, logistics and trade infrastructure at Mombasa Port in Kenya and key border points, and investing in systems to improve trading standards, reduce non-tariff barriers and enhance transparency in trade processes.

Commitments to the energy sector totaled $61m (10% of total commitments) in 2019 and $84m (18% of total commitments) in 2020. Two multi-country, multi-instrument commitments of $26m in 2019 and in 2020 supported the Renewable Energy Performance Program (REPP) which provides support to private sector developers of small-scale renewable energy projects in sub-Saharan Africa. REPP supports solar, hydro, biomass, biogas, geothermal, and wind projects. There were no commitments to the ICT sector.

United States (USA)

The USA committed $227m in 2019 and $243m in 2020, all in grants, through the United States Agency for International Development (USAID), compared with the $297m committed in 2018. Commitments to the water and sanitation sector ($127m) accounted for 56% of total 2019 commitments and 74% of total 2020 commitments ($180m), even higher proportions than the 54% of total commitments targeted to this sector in 2018.

Total commitments are the sum of many small commitments, 240 in 2019 and 220 in 2020. In 2019, grants totaling $11m were made to Egypt to improve access to water and sanitation in underserved communities of rural Upper Egypt by providing access to safe water, constructing wastewater facilities or basic sanitation, and supporting water and sanitation policy and governance.

The energy sector received commitments of $99m in 2019 (44% of total 2019 commitments) and $60m in 2020 (25% of total 2020 commitments). In 2020, a $1.9m grant was given to Nigeria, as part of USAID's Power Africa initiative, to advance work, among others, on the development of a national electricity consumer metering policy. Commitments to the transport and ICT sectors were minimal.

WORLD BANK GROUP

The World Bank Group (WBG)

This section focuses on four WBG organizations: the World Bank (WB), the International Finance Corporation (IFC), and the Multilateral Investment Guarantee Agency (MIGA)[39].

WB reported commitments of $5.6bn in 2019 and $6.6bn in 2020. The 2019-2020 average of $6.1bn is in line with the 2016-2018 average of $6.3bn. WB commitments totaled $7.7bn in 2018, $7bn in 2017, and $4.1bn in 2016.

At $2.2bn, commitments to the energy sector accounted for 40% of total commitments in 2019. In 2020, the energy sector received 34% of total commitments. A significant commitment in energy was the 2019 $150m IDA credit for the Least-Cost Electricity Access Development Project in Madagascar to help create one of the largest Off-Grid Solar market funds in Sub-Saharan Africa to harness private sector financing for electrification and maximizing finance for development in the electricity sector in Madagascar. A commitment in energy of $300m was made in 2020 to sustainably increase regional electricity trade in the six participating countries (Burkina Faso, Côte d'Ivoire, Guinea, Liberia, Mali, and Sierra Leone) with spillover effects for all member countries of the ECOWAS (Economic Community of West African States). The project objective is to increase energy security in the six participating countries and the resilience of the power system.

WB committed $1.8bn to the water and sanitation sector in 2019 and $1.7bn in 2020, lower than the $2.3bn it committed in 2018. These commitments represent 33% of total commitments in 2019 and 27% in 2020, comparable to the 30% experienced in 2018. A significant commitment in 2020 was the $296m IDA Credit for the Urban Resilience and Solid Waste Management Project in Côte d'Ivoire. The project objectives are to reduce vulnerability to flooding in selected urban areas and improve solid waste management in targeted municipalities, including through green and grey infrastructures and nature-based solutions for erosion control and water retention.

Commitments of $814m in 2019 and $1.5bn in 2020 targeted the transport sector. These are substantially higher than the $597m committed in 2018. Commitments in transport represented 15% of total 2019 commitments and 23% of total 2020 commitments, a sizeable increase compared with the 8% share of transport in 2018 commitments. A $110m grant in 2019 provided additional financing for the Integrated Feeder Road Development Project in Mozambique. This financing is part of the WB response to support cyclone response in Malawi, Mozambique, and Zimbabwe. At $728m, the Horn of Africa (HoA) Gateway Development Project accounted for close to 50% of 2020 commitments in transport. The overarching objective of the HoA Program is to enhance linkages among HoA countries, improve access to seaports and the facilitation of domestic and regional trade and economic integration, and road safety.

Commitments in ICT totaled $689m (12% of total commitments) in 2019 and $1.1bn (17% of total commitments) in 2020, markedly more than the $435m committed in 2018. Two substantial policy loans were made to Morocco, $175m in 2019 and $250m in 2020 to improve financial inclusion, digital entrepreneurship and access to digital infrastructure and services for individuals and businesses and strengthen resilience of households and firms. The operations support the Government efforts to digitalize its payments and accelerate the development of an accessible, good quality and affordable digital broadband service over the country.

[39] The WBG includes five organizations: the WB, IDA (its concessionary window), IFC which focuses on the private sector, MIGA which provides political risk insurance and credit enhancement, and ICSID (the International Centre for Settlement of Investment Disputes). In this report, WB includes IDA.

IFC reported commitments of $416m in 2019 and 391m in 2020, markedly higher than the $328m reported in 2018. In 2019, commitments to the energy sector ($397m) represented 95% of total commitments, in line with a share of 98% in 2018. In 2020, commitments in energy represented a much lower share, 28%. One of the 2019 energy commitments for $29m was to provide debt financing for the 6-year capital expenditure program of Umeme, a regulated electricity distribution company in Uganda, supplying over 1.2 million customers. There were two commitments to the energy sector in 2020, among which $106m for the Atinkou (CIPREL V) 390MW Gas Power Project in Côte d'Ivoire, co-financed by AfDB. The project consists of the construction and operation of a 390MW natural gas-fired power plant, designed as a combined cycle including a 265MW gas turbine and a 125MW steam turbine to be built on a new site. The project is expected to bring affordable, clean, and reliable baseload power and encourage further private investment in Côte d'Ivoire.

Commitments of $130m were made in 2020 in support of 3 operations in the transport sector, or 33% of total 2020 commitments. There were no commitments in transport in 2019. A $30m commitment supported the priority investment program of the Region of Fes Meknes in Morocco for the financing of regional rural roads targeting underprivileged populations in remote areas. A $42m commitment was made in support of the Transgabonais railroad in Gabon.

The ICT sector received commitments of $18m in 2019 and $95m in 2020 (respectively, 4 and 24% of total commitments for 2019 and 2020). A $20m multi-country commitment was made in 2020 to fund the West Indian Ocean Cable Company's working capital and capital expenditure requirements during FY20 to FY21. WIOCC, an IFC client, is a carrier of carriers, offering connectivity to over 20 countries in Africa. It provides telecommunication carriers with regional and international capacity within, into and out of Africa. There were no commitments in water and sanitation in 2019 or 2020.

MIGA issued $655m in guarantees in 2019 and $193m in 2020, all in the energy sector. Information on MIGA had not been included in previous reports. One notable guarantee is the $150m guarantee issued in 2019 covering Bujagali Holding Power Company Limited's equity investment in the Bujagali Hydropower project in Uganda. The project was developed on a build-own-operate-transfer basis and reuses water flowing from two existing upstream facilities to generate electricity. Another guarantee issued in 2019 for $99m covered the UK Atlantica Yield PLC company for its equity investment in KaXu Solar One from South Africa for the KaXu Solar One Solar plant in South Africa, a 100MW concentrating solar-thermal power plant, consisting of a solar field with parabolic trough collectors and a heat transfer fluid system, a molten salt thermal energy storage system, a steam cycle and steam turbine generator, a cooling system and other auxiliary equipment.

In 2020 a $75m additional guarantee covered equity and shareholder loan from Globeleq Holdings (Cote d'Ivoire) B.V. of Netherlands (Globeleq) to the Azito Thermal Power Plant in Côte d'Ivoire in relation to its Phase IV expansion. In 2020, MIGA also issued 12 guarantees for a total of $76m to support the operation and maintenance of six solar power plants of 65MW each, located in the Benban Solar Park in Upper Egypt. The guarantees were issued to Scatec Solar and Norfund Investments covering 90% of their equity investments.

5.3 Disbursements

Reported disbursements by ICA members amounted to $23.9bn in 2019 and $13.9bn in 2020. This compares to the $12.1bn reported in 2018, and $10.9bn reported in 2017. The much larger level of reported disbursements in 2019 is explained, among others, by two large disbursements by DBSA: a $5.7bn disbursement against its equity bridge- loan facility in support of the business rescue process at South African Airlines, and a $2bn disbursement against its commitment to Transnet, the South African transport and freight logistics parastatal.

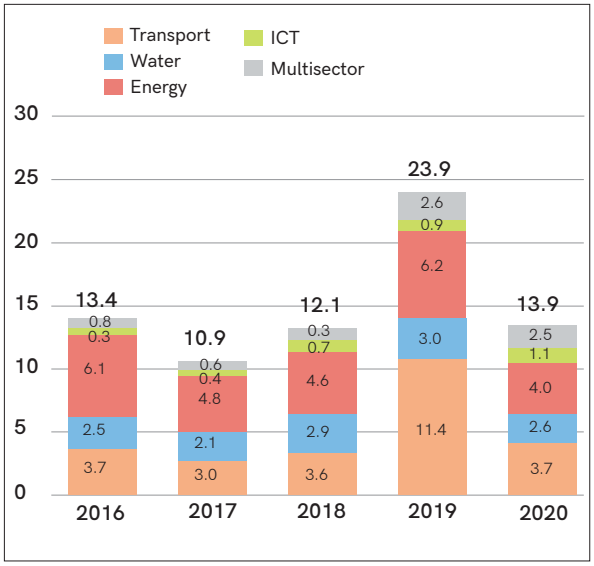
Reported disbursements amounting to $1.3bn by Japan also contributed to the markedly higher disbursement level reported in 2019. These exceptional disbursements altered the previous pattern by which multilateral organizations made most disbursements. In 2019, DBSA accounted for 35% of total disbursements. The Africa Finance Corporation (AFC), the African Development Bank (AfDB) and the World Bank Group (WBG, WB and IFC only) accounted for 6%, 9% and 24%, respectively. The pattern was re-established in 2020 with multilateral organizations accounting for $9.1bn (65%) of total disbursements, compared with $8.4bn (70% of total disbursements) in 2018

[40] Several ICA members did not report their disbursements by type of funding. It is therefore not possible to present an adequate breakdown of disbursements by funding type.

(Figure 5.6). In 2019, the largest share of total disbursements targeted the transport sector, 48% ($11.4bn). The Republic of South Africa received 36% ($8.3bn) of total disbursements.

Reported disbursements in 2020 were more comparable to historical disbursements. At $4bn, the energy sector represented 29% of total disbursements, a decrease both in amount and share compared with the $4.6bn (38%) observed in 2018. Historically, the energy sector had represented the largest share of total disbursements, averaging 42% in the 2015-2018 period. The transport sector accounted for 27% ($3.7bn) of total disbursements, in line with the $3.6bn (30%) observed in 2018, and a 29% average over the 2015-2018 period. Disbursements in the water and sanitation sector accounted for 18% ($2.6bn) of total disbursements, compared with 24% ($2.9bn) in 2018. Disbursements in the ICT sector represented 8% ($1.1bn) of total disbursements, compared with 6% ($700m) in 2018. At 18% ($2.5bn) of total disbursements, disbursements for multi-sector operations were substantially larger than in 2018 when they represented 2% ($300m) of total disbursements. This sharp increase is explained by disbursements of $1.1bn by Japan, $485m by AFC, $265m by the UK, $255m by Afreximbank, and $200m by South Africa.

Figure 5.6: Disbursement Trends by Sector ($bn), 2016-2020
Exceptional disbursements in transport pushed 2019 disbursements to the highest level ever recorded



Note: The exceptional level of disbursements in 2019 comes from 2 major DBSA disbursements amounting to $7.7bn

Disbursements reached an all-time high of $23.9bn in 2019.

The regional breakdown of 2020 disbursements was in line with 2018 disbursements for several regions: 19% for East Africa ($2.7bn), compared to 21% in 2018; 16% ($2.2bn) for North Africa, compared with 18% in 2018; and 7% ($923m) for the Republic of South Africa (RSA), compared with 7% in 2018. The share of disbursements for operations in West Africa reached 30% ($4.2bn), a substantial increase over the 23% ($2.7bn) observed in 2018. Disbursements for operations in Southern Africa saw a reduction in share, accounting for 10% ($1.3bn) of total disbursements compared with 14% in 2018. At 9% ($1.2bn) disbursements for Central Africa also experienced a decline compared with 12% in 2018. At 9% ($1.3bn), the share of disbursements for multi-regional operations increased markedly from the 3% ($415m) observed in 2018.

Among the multilateral organizations, the WBG (WB and IFC only) disbursed the largest amount, with $5.7bn in 2019 and $4.7bn in 2020, compared with the $5.5bn it reported in 2018. The energy sector accounted for its largest share of disbursements, at 40% ($2.3bn) in 2019 and 34% ($1.6bn) in 2020. The water and sanitation sector also received a large proportion of WBG disbursements, with 28% ($1.6bn) in 2019 and 26% ($1.2bn) in 2020. West Africa received the largest share of WBG disbursements, representing 39% ($2.2bn) in 2019 and 32% ($1.5bn) in 2020, a substantial increase over the $1.2bn (22%) it received in 2018. East Africa also received a large share of WBG disbursements, at 25% ($1.4bn) in 2019 and 27% ($1.3bn) in 2020, comparable to the 25% ($1.4bn) it received in 2018.

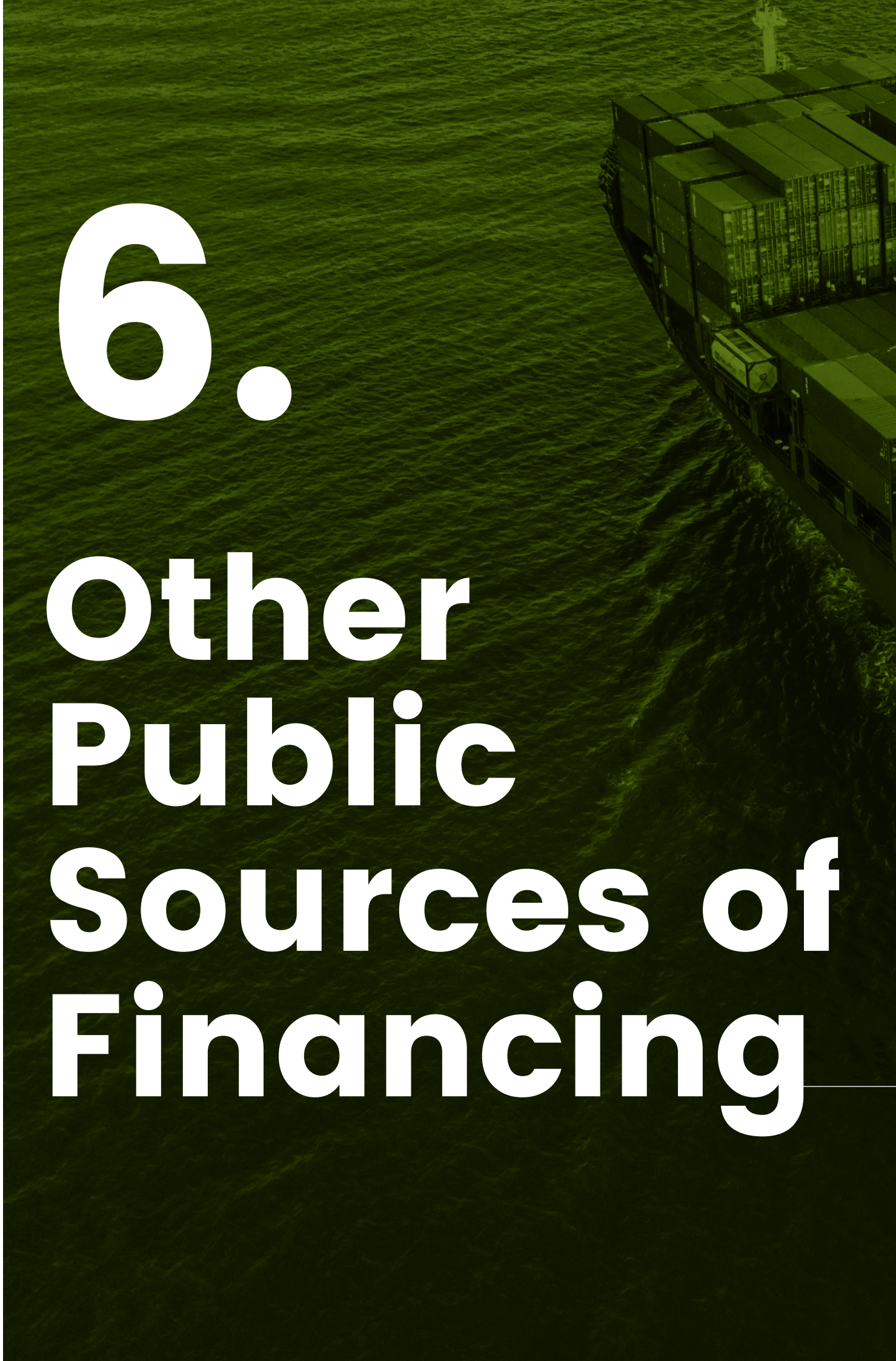
The AfDB reported disbursements of $2.3bn in 2019 and $2bn in 2020, compared with the $2.9bn it reported in 2018. The transport sector accounted for the largest share of disbursements, with 53% ($1.2bn) in 2019 and 47% ($916m) in 2020. Disbursements for energy operations accounted for 28% ($635m) of total AfDB disbursements in 2019 and 24% ($477m) in 2020, a sharp decrease compared with 2018 when they accounted for 32% ($920m) of total disbursements. The East Africa region received the largest share of disbursements, 37% ($844m) in 2019 and 38% ($741m) in 2020, a marked increase over the 22% ($639m) it received in 2018. Disbursements for multi-regional operations

dropped sharply representing only 1% of total disbursements in 2019 and in 2020 ($25m and $11m, respectively), compared with the $421m (15%) they had received in 2018, when several regional integration operations had disbursed.

Afreximbank reported disbursements of $1.6bn in 2019 and $909m in 2020. Afreximbank is a new ICA member, and its previous years disbursement data is not available. In 2019, the largest share of its disbursements, 76% ($1.2bn) supported the energy sector and 16% (255m) of disbursements went to multi-sector operations. The pattern changed in 2020, when the energy sector only received 33% (303m) of total disbursements, multi-sector operations received 38% ($341m), and the ICT sector received 27% ($242m).

The AFC reported disbursements of $1.4bn in 2019 and $1.1bn in 2020. Distribution by sector fluctuated markedly between 2019 and 2020, with the energy sector receiving 42% ($568m) of total disbursements in 2019 but only 28% (307m) of total 2020 disbursements, whereas the transport sector accounted for only 7% ($92m) of disbursements in 2019 but 51% ($555m) in 2020. West Africa received the largest share of disbursements, at 64% ($879m) in 2019 and 44% ($479m) in 2020, followed by Central Africa which received 14% ($192m) of 2019 disbursements and 34% ($370m) in 2020.

Bilateral agencies disbursed $12.6bn in 2019, accounting for 53% of total 2019 disbursements, and $4.8bn in 2020, accounting for 35% of total 2020 disbursements. As discussed above, DBSA disbursements in 2019 accounted for 35% of total 2019 disbursements. Disbursements by Japan were discussed earlier. France reported disbursements of $747m in 2019 and $815m in 2020, following by Germany with disbursements of $659m in 2019 and $645m in 2020, and the United Kingdom with disbursements of $535m in 2019 and $398m in 2020. Disbursements by other bilateral agencies were as follows, for 2019 and 2020 .



6.

Other Public Sources of Financing

6. Other Public Sources of Financing

Key Findings

- Non-ICA members committed the largest share of total financing in 2019 (56%) and in 2020 (54%)
- African governments provided about three-quarters of non-ICA public finance commitments.
- China markedly reduced its commitments, reflecting the debt sustainability challenges faced by many African countries.
- IsDB and BOAD became ICA members in 2019. Their contributions are therefore no longer included in the group of Other Public Sources, which accounts for some of the reduction in commitments.

Chapter 6 presents the financing and activities of the many governments and institutions who are not ICA members and the key role they play in the development of infrastructure in Africa. Section 6.1 presents an overview of the infrastructure financing provided by them. Section 6.2 analyzes the financing African governments contribute to their own infrastructure projects. Section 6.3 illustrates the contributions from all other public sources, both bilateral organizations – such as from China, India, and several non-ICA European countries – or multilateral organizations like ECOWAS EBID, members of the Arab Coordination Group, EBRD, NDB, and AIIB.

Non-ICA members committed the largest share of total financing in 2019 (56%) and in 2020 (54%).

6.1 Overview

African Governments committed around three-quarters of the 2019 and 2020 investments of the non-ICA public sources of financing. The remainder came from several bilateral and multilateral sources. As in previous years, China was the largest source within this group followed by the Arab Coordination Group. See Table 6.1.

African governments provided about three-quarters of non-ICA public commitments.

Table 6.1: Non-ICA Member 2019 and 2020 Commitments and Historical Trends ($m)[a]
African governments committed the largest share of other public sources, 73% in 2019 and 76% in 2020

SOURCE	ANNUAL 1/			3-YEAR ROLLING AVERAGE 2/			CHANGE B/A (%)	CHANGE C/B (%)
	2018	2019	2020	(A) 2018	(B) 2019	(C) 2020		
Total Other Public Sources	**68,736**	**47,346**	**43,846**	**58,465**	**59,217**	**53,468**	**1%**	**-10%**
African Governments	**37,525**	**34,866**	**33,406**	**34,173**	**35,579**	**35,266**	**4%**	**-1%**
Other Public Sources	**31,211**	**12,480**	**10,440**	**24,292**	**23,638**	**18,202**	**-3%**	**-23%**
China	25,680	6,715	6,480	17,165	17,266	12,958	1%	-25%
Arab Coordination Group 3/	2,442	2,200	631	3,652	2,542	1,758	-30%	-31%
EBRD	744	344	422	725	805	503	11%	-37%
IFAD	95	-	-	95	95	95	0%	0%
Non-ICA European Bilaterals	282	553	347	282	371	394	31%	6%
African RDBs 4/	328	-	242	598	435	285	-27%	-34%
NDB	500	1715	1000	340	1,108	1072	226%	-3%
AIIB	300	150	0	300	225	150	-25%	-33%
Africa50	78	-	-	26	26	26	0%	0%
India	762	803	1318	888	756	961	-15%	27%
South Korea 5/	-	-	-	221	10	-	-95%	-100%

a. Totals may not add up due to rounding.
1/ Empty cells indicate that data were not available. Cells with a zero indicate that there were no commitments made in that year.
2/ If data were not available for the 3 years, rolling averages are only for the years for which data were available.
3/ The 2019 and 2020 amounts do not include IsDB who became a member in 2019.
4/ The 2020 amount does not include BOAD who became a member in 2019. There were no commitments by African RDBs available for 2019.
5/ Commitments by South Korea for 2018, 2019, and 2020 were not available. There were, however, commitments in 2016 and 2017 which are included in the 3-year rolling averages.

6.2 Commitments by African governments in infrastructure

National expenditure allocations were gathered for 50 African national governments in 2019 and 49 in 2020. As in all previous years, data could not be gathered for Djibouti, Eritrea, Libya, and Sudan. For the first time, data for South Sudan was collected for 2019. No 2020 data could be found for this country. For all countries, data was collected from online, publicly available financial laws or decrees. In all cases, it is assumed that the data presented includes allocations for both capital and recurrent expenditures. Table 6.2 shows national allocations by country and by region for 2019 and 2020.

Table 6.2: National Government Budget Allocations ($m), 2019-2020
East Africa and North Africa had the largest infrastructure budgets in 2019 and 2020

CENTRAL AFRICA	2019	2020
Burundi	22	31
Cameroon	1,083	1,299
Central African Republic	51	63
Chad	83	67
Congo-B	124	116
DRC	78	70
Equatorial Guinea	265	218
Gabon	70	143
Rwanda	194	113
São Tomé and Príncipe	2	2
TOTAL	**1,973**	**2,124**

EAST AFRICA	2019	2020
Ethiopia	2,368	2,417
Kenya	1,033	838
Seychelles	42	29
Somalia	9	11
South Sudan	933	-
Tanzania	2,834	3,329
Uganda	1,357	1,790
Gabon	70	143
Rwanda	194	113
São Tomé and Príncipe	2	2
TOTAL	**8,575**	**8,413**

NORTH AFRICA	2019	2020
Algeria	985	794
Egypt	3,089	3,367
Mauritania	11	15
Morocco	1,544	1,502
Tunisia	1,626	925
TOTAL	**7,255**	**6,603**

RSA	2019	2020
South Africa	6,220	5,783
TOTAL	**6,220**	**5,783**

SOUTHERN AFRICA	2019	2020
Angola	1,616	1,233
Botswana	676	411
Comoros	131	37
Lesotho	115	137
Madagascar	89	52
Malawi	71	79
Mauritius	200	166
Mozambique	47	50
Namibia	202	170
Swaziland	39	92
Zambia	834	1,467
Zimbabwe	433	47
TOTAL	**4,454**	**3,939**

WEST AFRICA	2019	2020
Benin	142	183
Burkina Faso	256	297
Cape Verde	41	32
Côte d'Ivoire	1,783	2,124
Gambia	9	15
Ghana	234	376
Guinea	310	342
Guinea Bissau	1	1
Liberia	36	45
Mali	491	477
Niger	190	241
Nigeria	1,908	1,545
Senegal	778	617
Sierra Leone	13	6
Togo	197	243
TOTAL	**6,388**	**6,543**

NATIONAL BUDGETS	2019	2020
TOTAL	**34,866**	**33,406**

It should be noted that no adjustments to the 2020 allocations could be found, for any country, to reflect the impact of the COVID-19 pandemic. The implication is that the allocations for African national governments include a level of overestimation[41].

[41] The 2020 commitments by ICA members and most other non-ICA members, however, reflect actual approvals and thus these organizations' change of focus in their lending programs to accommodate substantially higher commitments in sectors that supported COVID-19 operations, such as health and economic budget support, and, consequently, reduced commitments in all dimensions of infrastructure.

Commitment by Country/Region

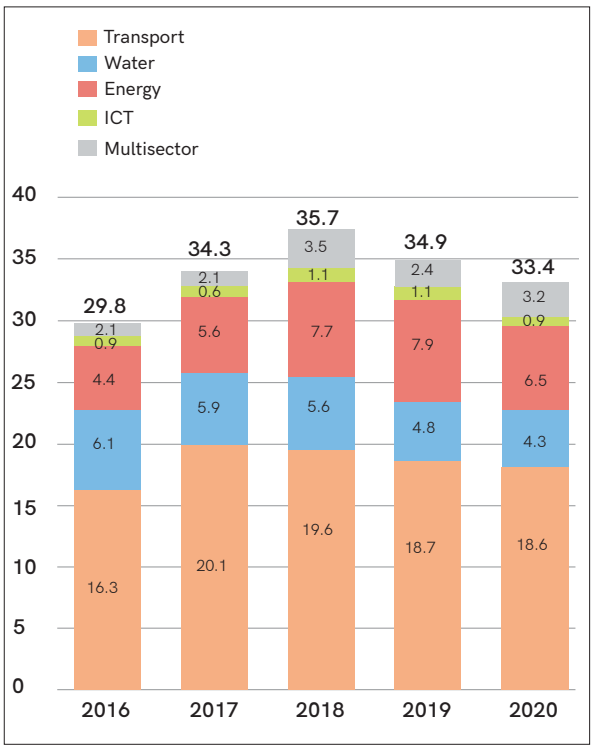
In 2019, commitments made by 50 African national governments totaled $34.9bn, or 7% less than the $37.5bn for 48 countries in 2018. The 2020 commitments made by 49 governments totaled $33.4bn, or 11% less than in 2018 (See Table 6.1).

East Africa is the only region that committed substantially more in 2019 ($8.6bn or 42% more than in 2018) and in 2020 ($8.4bn or 40% more than in 2018), thus reversing the decline over 2017 observed in 2018. The other 4 regions and the Republic of South Africa (RSA) committed less in 2019 and 2020 over 2018: Central Africa (reduction of 22% and 16%), North Africa (9% and 17%), Southern Africa (31% and 39%), RSA (8% and 14%), and West Africa (19% and 17%).

Commitment by Sector

The distribution of commitments by sector is shown in Figure 6.1.

Figure 6.1: National Government Budget Allocations by Sector ($bn), 2016-2020
Transport received the largest share of government support in both 2019 and 2020



Transport. National budget allocations to the transport sector, at $18.7bn in 2019 and $18.6bn in 2020 were 5% lower than in 2018. In 2019 and 2020, as in previous years, the largest share (54% and 56%, respectively) of infrastructure budgets supported transport operations.

This is slightly above the 52% noted in 2018. There were, however, wide variations at the regional level. See Figure 6.2. East Africa allocated a higher proportion of its infrastructure budget to transport in 2019 and 2020 (respectively, 66% and 65%) than it did in 2018 (58%). So did Southern Africa with 52% in 2019 and 47% in 2020 compared with 46% in 2018. West Africa's transport share in 2019 and 2020 were 41% and 43% respectively, in 2018 (41%). North Africa had a lower share in 2019 (46%) and a larger share in 2020 (60%) than it had in 2018 (53%). Central Africa transport allocation was a markedly lower share (18% in each 2019 and 2020) than it was in 2018 (34%). At the country level, RSA allocated the largest amounts ($4.4bn in 2019 and $4.2bn in 2020, or 72% of its total infrastructure investment in each year to transport). Several countries had allocations above $1bn in each year: Côte d'Ivoire, Ethiopia, Morocco, Tanzania, and Uganda.

Water and Sanitation. Allocations to the water and sanitation sector amounted to $4.8bn in 2019 and $4.3bn in 2020, compared with $5.6bn in 2018. The share of national infrastructure budgets allocated to water and sanitation operations was 14% in 2019 and 13% in 2020, slightly lower than the 15% experienced in 2018. The shares in 2019 and 2020 were in line with the 2018 share for Central Africa (8% and 7%, compared with 6%) and West Africa (14% and 13%, compared with 13% in 2018). East Africa showed allocated a higher proportion to water and sanitation (15% each year, compared with 11% in 2018). North Africa allocated a substantially lower proportion of total infrastructure budget to water and sanitation in 2019 and 2020 (3% and 6%, respectively, compared with 12% in 2018). Southern Africa also allocated a lower share (21% in 2019 and 15% in 2020, compared with 24% in 2018). At the country level, RSA allocated $1.1bn to the water and sanitation sector in 2019 and in 2020, slightly lower than the $1.3bn it had allocated in 2018. Ethiopia allocated over $500m in each year.

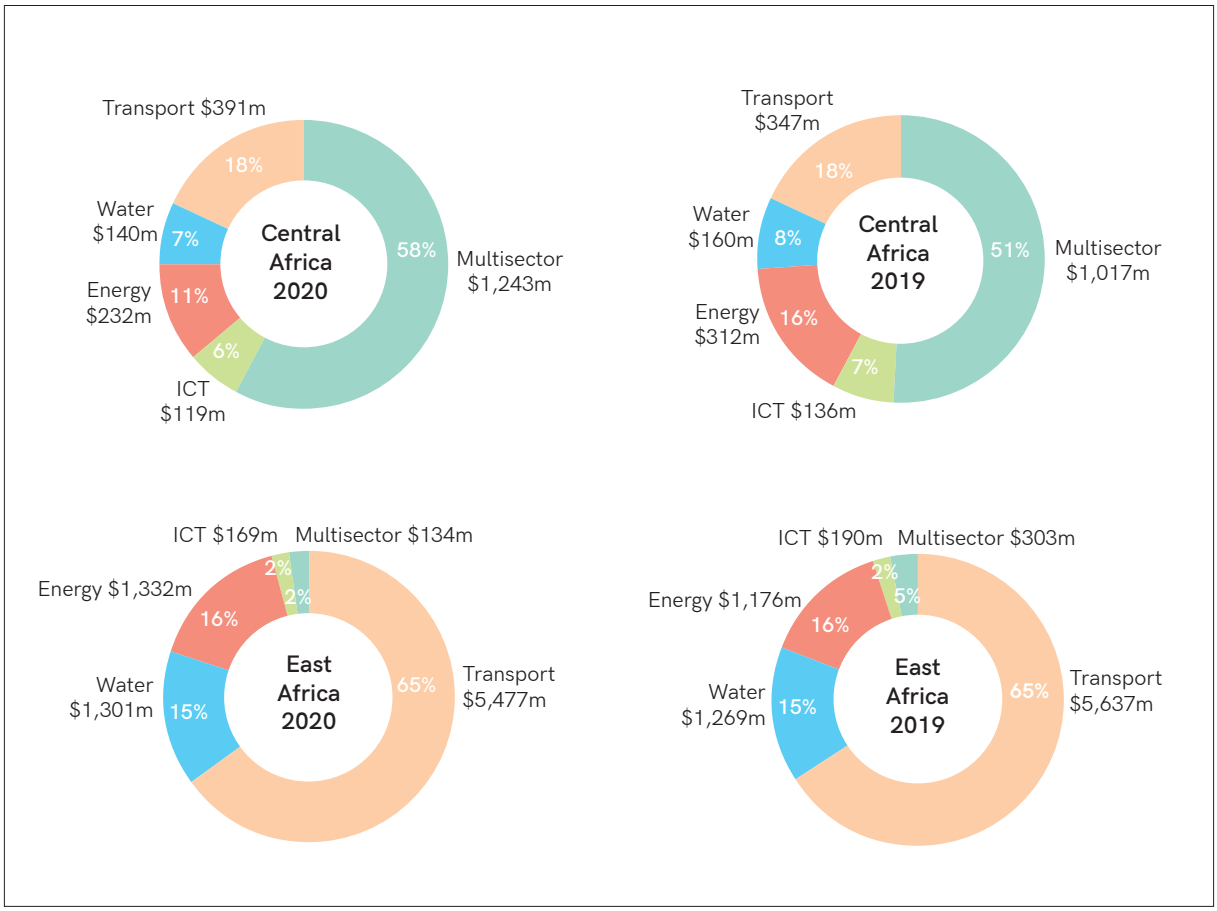
Energy. Allocations to the energy sector in national budgets amounted to $7.9bn in 2019 and $6.5bn in 2020, compared with $7.7bn in 2018. The share of allocations to energy rose from 21% in 2018 to 23% in 2019, the result of North Africa allocating 35% of its infrastructure budget

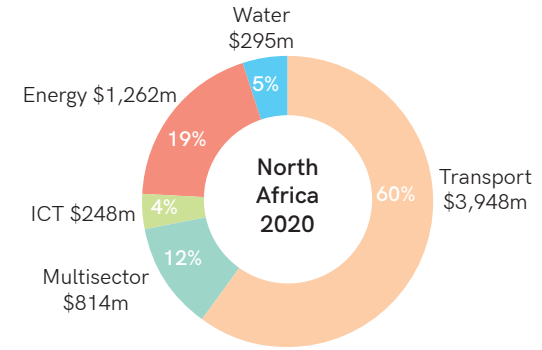
to energy operations, and West Africa allocating 37%, compared, respectively to 20% and 32% in 2018. Allocations in Egypt, Nigeria, and Tunisia accounted for 40% of energy allocations in 2019. The share of energy dropped in 2020 to 19% of total allocations. Tanzania had the highest allocation ($857m). Algeria, Angola, Côte d'Ivoire, Egypt, South Africa, and Zimbabwe each had allocation close to or higher than $500m.

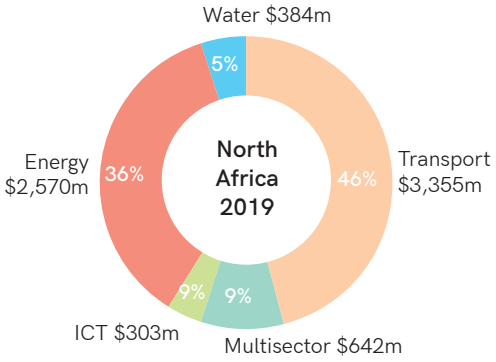
ICT. National allocations to the ICT sector remained stable, amounting to $1.1bn in 2019 and $0.9bn in 2020, compared with $1.1bn in 2018. They represented 3% of total allocations in each 2019 and 2020, the same proportion as in 2018. Allocations in Egypt and South Africa accounted for 26% of total country allocations in ICT in 2019 and 37% in 2020. They for the most part represented participation in financing for subsea cables and fiberoptic interconnection links.

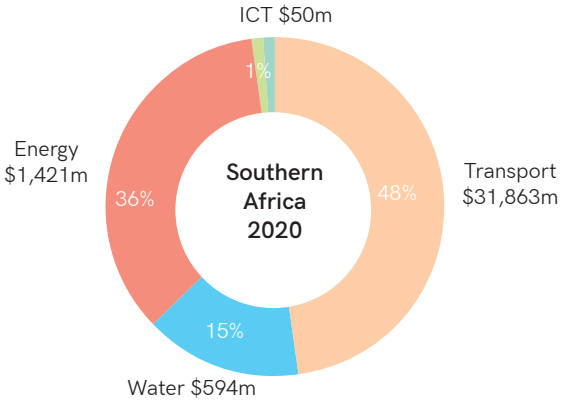
Multi-Sector. Multi-sector operations totaled $2.4bn in 2019 and $3.2bn in 2020, compared with $3.5bn in 2018.That corresponds to a share of 7% of total infrastructure budgets in 2019 and 10% in 2020 (compared with 9% in 2018), the highest share ever achieved. Central Africa had the largest proportion of multi-sector operations, which represented 52% in 2019 and 59% in 2020 of its total allocations, an even higher proportion than the 36% noted in 2018.

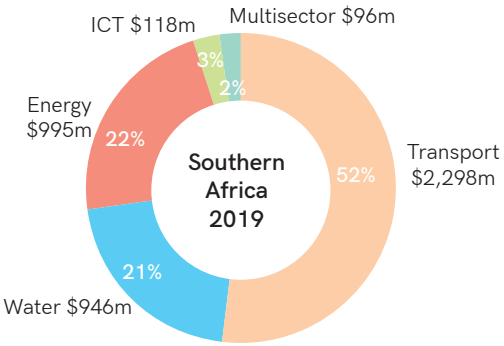
Figure 6.2: Regional National Government Budget Allocations by Sector ($m), 2019-2020
Transport remains the largest share of Government infrastructure budgets in many regions

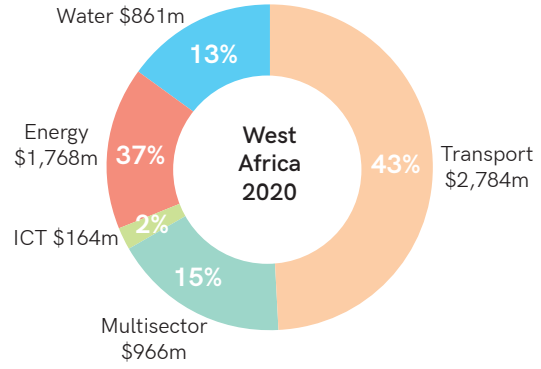


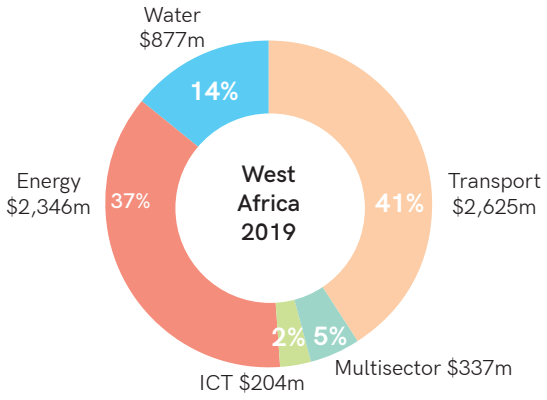

Water
$295m
Energy $1,262m
ICT $248m
Multisector
$814m
Transport
$3,948m
5%
19%
4%
12%
60%
North
Africa
2020

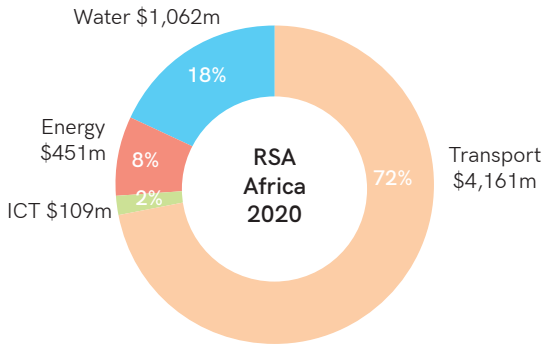

Water $384m
Energy
$2,570m
ICT $303m
Multisector $642m
Transport
$3,355m
5%
36%
9%
9%
46%
North
Africa
2019

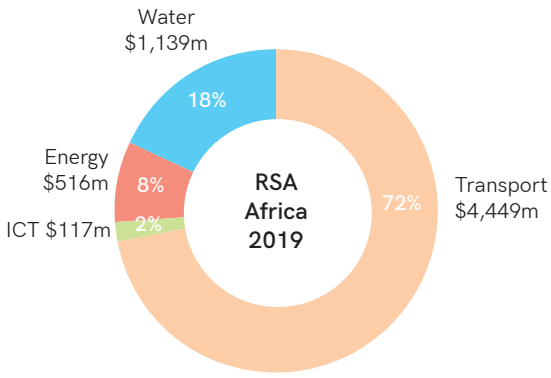

ICT $50m
Energy
$1,421m
Water $594m
Transport
$31,863m
1%
36%
15%
48%
Southern
Africa
2020


ICT $118m
Multisector $96m
Energy
$995m
Water $946m
Transport
$2,298m
3%
2%
22%
21%
52%
Southern
Africa
2019


Water $861m
Energy
$1,768m
ICT $164m
Multisector
$966m
Transport
$2,784m
13%
37%
2%
15%
43%
West
Africa
2020


Water
$877m
Energy
$2,346m
ICT $204m
Multisector $337m
Transport
$2,625m
14%
37%
2%
5%
41%
West
Africa
2019


Water $1,062m
Energy
$451m
ICT $109m
Transport
$4,161m
18%
8%
2%
72%
RSA
Africa
2020


Water
$1,139m
Energy
$516m
ICT $117m
Transport
$4,449m
18%
8%
2%
72%
RSA
Africa
2019

6.3 Other public sources

China

China's commitments to African infrastructure[42] amounted to $6.7bn in 2019 and $6.5bn in 2020[43]. This is substantially less than the $25.7bn reported as commitments in 2018 but in line with the Chinese Government's stated intention to reduce investments in Africa, and particularly in infrastructure, considering the debt position of several African countries. Past commitments from China have fluctuated considerably, going, for example, from $3.1bn in 2014 to $20.9bn in 2015 and down to $5.9bn in 2016. These year-to-year changes can be explained in part by Chinese funding of several very large projects the timing of which depends on country needs and where multiple large commitments can occur in the same year. At the same time various data sources define commitments in different ways complicating the identification of the year of attribution. See Figures 6.3 and 6.4.

The largest share of Chinese financing was for the transport sector, which accounted for 60% ($4.1bn) of total 2019 commitments and 55% ($3.6bn) of total 2020 commitments, a substantial increase over the 26% (($6.6bn) of the 2018 commitments. This reflects a major shift in sectoral priorities from the energy to the transport sector, as will be observed in the section below which provides information on commitments in the energy sector. In 2019, China committed $1.2bn to finance a 68km light rail system from an industrial city on the outskirts of Cairo, Egypt, to the new administrative capital. Commitments of $461 million will finance the tracks, stations, communications, and other infrastructure while commitments of $739 million will finance trains. A notable 2020 commitment was the $550m loan to Zambia for the development of the Lower Kafue Gorge Hydropower Station, the first hydropower station invested and developed by Zambia in 40 years. This plant has a designed installed capacity of 750,000 kilowatts and will lift Zambia's existing power generation capacity by 38%, helping meet the country's electricity demand in the coming decade and provide stable power for mining and agricultural development.

The energy sector accounted for 22% ($1.5bn) of total 2019 commitments and 42% ($2.7bn) of total 2020 commitments, a substantial decrease compared to the 71% share ($18.3bn) of the 2018 commitments. In 2019, China committed a loan of $286m for the 112MW Gribo-Popoli hydro project on the Sassandra River in Côte d'Ivoire. This project will increase the share of hydroelectric power generation by 112MW and provide 580GWh of annual output.

Commitments to the ICT sector have fluctuated widely over the last few years but remained overall low. They totaled $776m (12% of total 2019 commitments) in 2019 and $180m (3% of total 2020 commitments) in 2020, compared with $550m in 2018 (2% of total 2018 commitments).

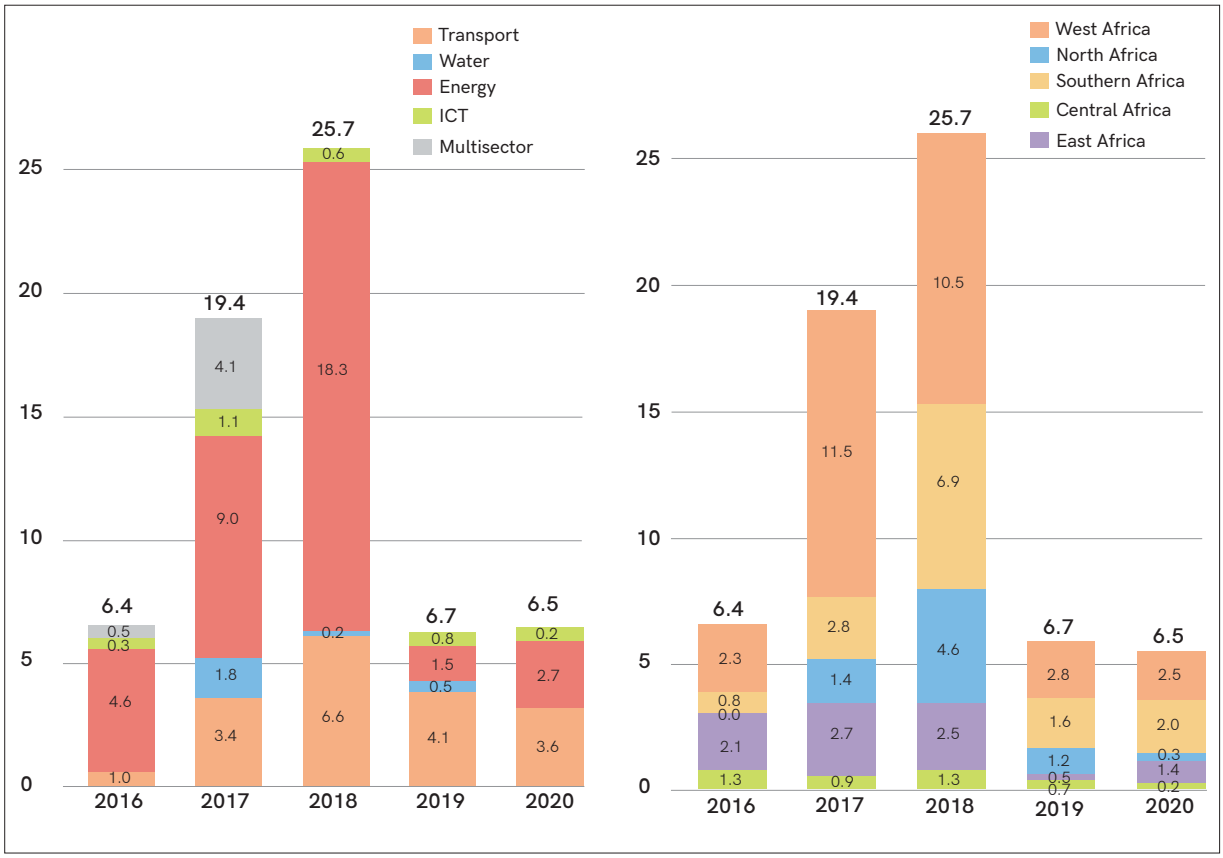
China markedly reduced its commitments, reflecting the debt sustainability challenges faced by many African countries.

The water and sanitation sector received two commitments totaling $390m in 2019 (6% of total commitments). There were no commitments in this sector in 2020. In 2019, China committed $106m in support of the Sumbe City, Kwanza Sul Province, Integrated Infrastructure Project in Angola. The project involves slope stabilization and relocation activities, and construction works, including water drainage, footpaths, street paving, and lighting and sanitation systems.

[42] The definition of "commitments" is not consistent across sources: it can mean projects that are notionally on a proposed list that do not always make the final cut. It does not necessarily imply a Chinese government or other Chinese financial institution approval of funding. Further, sources collect data from several separate ministries but are not always aggregating data from the same ministries.

[43] The source for the 2019 data is the China-Africa Loan Database of the China Africa Research Initiative (https://chinaafricaloandata.bu.edu/) managed by the Johns Hopkins University in the USA, commonly referred to as CARIBU. This database does not have 2020 data. The source for the 2020 data is the American Enterprise Institute – China Global Investment Tracker (https://www.aei.org/china-global-investment-tracker/). This is the database which had been used for the IFT 2018. Its definition of commitments is less rigorous than the CARIBU database, thus resulting in much larger numbers. This explains why it revised, retroactively and after the publication of the 2018 IFT Report, its 2018 "commitments", reducing them from the $25.7bn presented in the 2018 IFT to $14bn. The difference comes from the cancelation of several large operations. To ensure consistency of analysis and of data presentation, this 2019-2020 IFT Report maintained the amounts presented in the 2018 IFT Report.

Figures 6.3 and 6.4: Chinese Commitments by Sector and Region ($bn), 2016-2020
Investment in transport represented the largest share of Chinese commitments in 2019 and 2020



Arab Coordination Group (ACG)

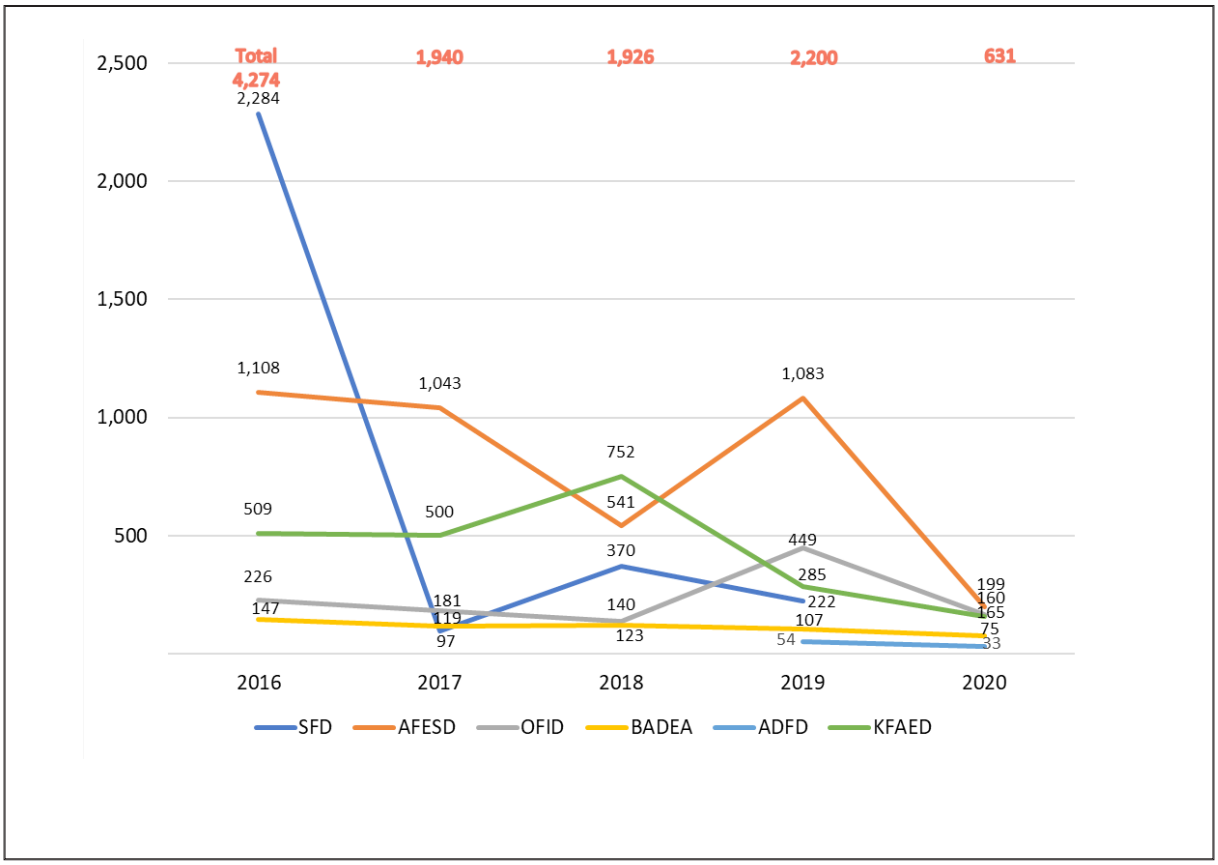
The Arab Coordination Group's main purpose is to optimize the application of resources and the giving of aid by the various Arab Development Funds. A further objective is to derive benefit from coordinating financing efforts and the accompanying procedures, particularly for major projects and programs 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.

ACG currently consists of eleven institutions, five 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), and the Iraqi Fund for External Development (IFED), and six regional organizations consisting of 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).

IsDB became an ICA member in 2019. Its contributions are therefore no longer included in the group of Other Public Sources, which accounts for some of the reduction in commitments.

IsDB is now an ICA member, and its contributions are covered in the previous chapter. ACG non-ICA members committed $2.2bn in 2019, markedly more than the $1.3bn committed in 2018 and the $1.8bn committed in 2017. They also committed $631m in 2020 (Figure 6.5).

Figure 6.5: Non-ICA Member ACG Commitments by Member ($m), 2016-2020
ACG commitments were lower in 2020 because of the pandemic



The Saudi Fund for Development (SFD)

SFD committed $222m in 2019 for six infrastructure operations: one in water supply and sanitation: a $61m loan to Tunisia for the protection of cities and urban areas from flood. The other five operations are in the transport sector: (i) in Niger ($20m), the rehabilitation of the Loga-Doutchi Road; (ii) in Ethiopia ($75m), the rehabilitation and upgrading of the "Debre Markos-Motta" Road; (iii) in Burundi ($6m), an additional loan for the Bujumbura-Nyamatinga Road; (iv) in Gambia ($11m) for the construction of a VIP lounge at the Banjul International Airport; and (v) in Gambia, ($50m) a loan to improve roads in the Greater Banjul Area.

No information was available for 2020 commitments by SFD.

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

AFESD committed $1.1bn in 2019 in support of six operations. This is double the $541m committed in 2018, and in line with the $1bn committed in 2017. Three transport loans ($540m) accounted for 50% of total 2019 commitments: $171m to Mauritania for a Mali border road project to contribute to the development of transport services on the main road network in the country; and $369m for two loans to Morocco for the construction of the Laayoune bypass expressway and the development of motorways. A water and sanitation loan ($247m) to Egypt aims at the establishment of a water system for the Bahr El Bakar Drain. Two energy loans ($296m) support the heightening of the Mohammed V dam in Morocco, and the construction of a 500kV transmission ring around Khartoum in Sudan.

In 2020, the Arab Fund committed $199m in support of one operation in energy in Djibouti ($98m) for the expansion and development of the Damerjog Power Plant, and two operations in water and sanitation in Mauritania, for a total of $101m, for the supply of drinking water to the Region of Aftout Elcharghi and the strengthening of the drinking water supply to the city of Nouadhibou.

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

KFAED committed $285m in 2019 in support of nine operations. This is markedly less than the $752m it committed in 2018 and the $500m it committed in 2017. The six transport loans ($229m) represented 80% of commitments for that year. There were also three water and sanitation loans. Among the transport operations were two loans (both second loans) to Egypt for a total of $168m for the establishment of the Sharm El-Sheikh Tunnel Road, and the construction of the Ardhi 4 road. The three water and sanitation loans ($56m) were in Benin, Sierra Leone, and Togo.

In 2020, the KFAED committed $160m in support of four operations. The $82m energy loan to Sudan aims to increase electricity generation at the Al-Foula Auxiliary Bower Station. The 3 transport loans were one each in Cameroon (construction of a portion of a road in the South), Mauritania (construction of a 150km road in the East), and Senegal (road rehabilitation).

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

OFID committed $449m in 2019 in support of 18 operations in energy, transport, and water and sanitation, compared with $140m in 2018 and $181m in 2017. Commitments for the nine energy operations ($288m) represented 64% of total commitments for African infrastructure. Some of these supported the Temane Transmission Project in Mozambique ($36m), $40m to support Egypt's energy security, and $45m to a private energy company in Côte d'Ivoire to develop a power plant. The OPEC Fund committed $81m in support of four transport operations, including $20m to Ghana for road construction and repair and $25m to Liberia for the upgrading of the Konia-Voinjama Road. The $80m commitments to water and sanitation operations supported, among others, $30m to DRC for the Ozone Water Supply Project, and $30m to Lesotho for the Lowlands Water Development Project in the Botha Bothe Region. The commitments also included $0.4m in grants to Chad and Ghana.

In 2020, the OPEC Fund committed $119m in support of four operations, one each in energy and transport, and 2 in water and sanitation, which, for a total of $60m, represented 51% of total 2020 commitments. One of these operations, the DRC Ozone Water Supply Project ($30m), aims to provide around 1.4 million people in western Kinshasa with clean drinking water by constructing supply infrastructure capable of producing 220,000 m3 of water per day. The $26m transport loan to Tanzania will support the upgrading of a 36 km stretch of the Kazilambwa-Chagu Road and will help ease transport constraints in in the central and western parts of the country. This will help boost agricultural and tourism activities and facilitate trade with neighboring Burundi and DRC.

The Arab Bank for Economic Development in Africa (BADEA)

BADEA committed $107m in 2019 in support of five transport operations. This is comparable to the $123m it committed in 2018 and the $97m it committed in 2017. The transport operations were: a $40m loan to Mali for the rehabilitation of a road and the construction of a bridge in the Mopti area; a $20m loan to Niger for the construction of a road in the Dosso Province; an additional loan of $7m to Burundi for the construction of a section of National Highway 5; a $20m loan to Madagascar for the construction of a bridge over the Mangoky River; and a $20m loan to Ethiopia for the upgrading of the Dila-Bole-Haro Wachu Road.

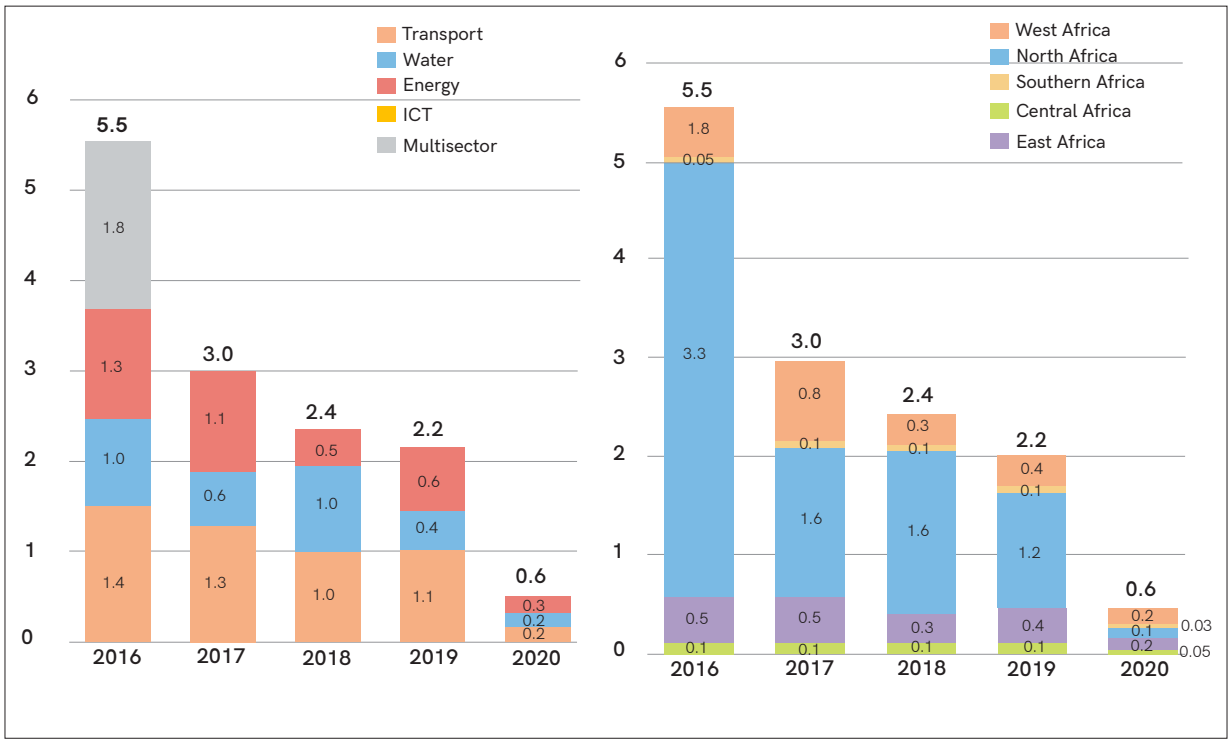
In 2020, BADEA committed $75m in support of two operations, one in energy and one in transport. The $50 million energy loan to Benin includes the supply and installation of high-tension lines, and three transmission stations. The $25m transport loan to Sierra Leone will support the construction of the Btemba-Matrojon Road.

The Abu Dhabi Fund for Development (ADFD)

ADFD committed $54m in 2019 in support of five energy and one transport operations. Three of the energy projects were grants, two to Comoros for the supply and installation of seven generators with total capacity of 12.5MW, and one to Somalia ($8m) for a solar power station. Mauritius and Burkina Faso each received a loan of $10m for renewable energy projects. Cameroon received a $15m loan in transport.

In 2020, ADFD committed $33m in support of three renewable energy operations, one each in Togo (solar power plant), Liberia (hydropower plant), and Niger (solar PV plant).

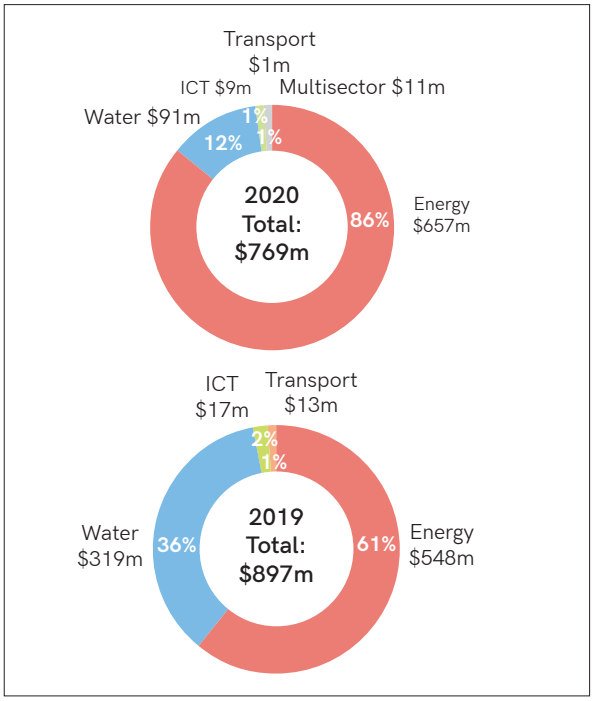
Figures 6.6 and 6.7: Non-ICA Member ACG Commitments by Sector and Region ($bn), 2016-2020
Non-ICA ACG members support favored the transport sector and the North Africa region



Non-ICA European Sources

European development organizations that are not ICA members committed $897m to African infrastructure in 2019 and $769m in 2020, compared with commitments of $1.1bn in 2018 and $1.6bn in 2017. The largest amounts supported energy operations: $548m in 2019 (61% of total commitments), and $657m in 2020 (86% of total commitments). The share of energy in 2018 was 49%. The share of water and sanitation fluctuated widely, from 36% in 2019 to 12% in 2020, compared with 19% in 2018.

Figures 6.8 and 6.9: Non-ICA European Commitments by Sector ($m), 2019-2020
Energy accounted for the largest share of 2019 and 2020 commitments

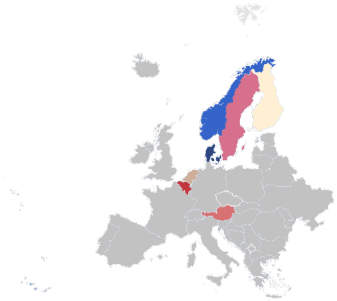


European Bank
for Reconstruction and Development

European Bank for Reconstruction and Development (EBRD)

EBRD committed $345m in 2019, 44% less than the $744m it committed in 2018, in support of 5 operations in North Africa, the only African region in which EBRD operates: (i) an equity investment ($60m) in the Egypt Infinity Energy SAE to finance the development, construction and operation of renewable energy projects and associated ancillary business including electricity distribution and electro vehicle charging stations in Egypt and across SEMED countries; (ii) a $4.5m loan for the SPREF - Global Energy project in Egypt for the construction and operation of a 6MWp ground-mounted solar PV power plant; (iii) the Morocco Saiss and Garet water conservation ($168m) will co-finance the construction of key components of the Saiss water transfer network, and the rehabilitation and modernization of the water distribution network and full conversion to drip-fed watering system in the Garet perimeter; (iv) the Morocco Noor Midelt Solar Project ($50m) for the construction and operation of a hybrid solar plant combining photovoltaic, concentrated solar power and thermal and battery storage technologies with 800 MW of installed capacity and five hours of energy storage; and (v) the Tunisia Southern Oases Hydraulic Infrastructure project ($62m) for the modernization of the public hydraulic infrastructure serving oases of four water-scarce southern governorates.

EBRD committed $421m in 2020 for three operations: (i) the Egypt Kom Ombo project ($54m) for the construction and development of a 200 MW solar PV project. The Project will be one of the largest privately developed utility scale solar plants in Egypt and will support the country in increasing its renewable energy capacity; (ii) the Morocco Project Green Light II ($25m) to replace inefficient and polluting heavy fuel oil burners in the region; and (iii) the Tunisia STEG (Gas and Electricity Company) Liquidity and Restructuring Facility ($342m) to assist in STEG's reforms and the development of the Tunisia's electricity sector.



Financing by Bilateral Agencies

Seven Non-ICA European bilateral agencies committed $553m in 2019 and $347m in 2020. This compares with commitments of $290m by four agencies in 2018. In 2019 and 2020, commitments were respectively: The Netherlands: $194m and $63m; Denmark: $175m and $127m; Sweden: $93m and $91m; Norway: $60m and $35m; Finland: $15.8m and $10m; Belgium: $8.3m and $12.4m; Austria: $6.9m and $8.9m. Energy operations represented 78% of these total commitments in 2019 ($433m) and 68% in 2020 ($235m). Regional breakdowns indicate that the largest share (45%, $246m) of 2019 commitments supported operations in East Africa, and that the largest share of 2020 commitments (36%, $126m) supported operations in West Africa. In 2020, 33% of total commitments supported multi-regional operations, compared with 10% in 2019, and 7% in 2018.

Other Sources

BIDC EBID

ECOWAS Bank for Investment and Development (EBID)

The ECOWAS Bank for Investment and Development (EBID) is the financial arm of the Economic Community of West African States (ECOWAS) comprising fifteen (15) Member States namely, Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, The Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, and Togo. EBID) started operations in 1999 as a holding company with two specialized

subsidiaries: ECOWAS Regional Development Fund (ERDF) for financing the public sector; and ECOWAS Regional Investment Bank (ERIB) for financing the private sector.
No data was available for commitments in 2019.

In 2020, EBID committed $242m, of which $146m (60%) in support of transport operations and $96m (40%) in support of energy operations. One notable commitment was the $37m loan for the rehabilitation of the 100km-long Kanawolo-Korhogo Road in Côte d'Ivoire. The objective of the project is to strengthen commercial activities along the road, and to strengthen cross-border commercial activities with neighboring Mali and Burkina Faso. In the energy sector, a $37m loan was made to Sierra Leone for a rural electrification project in seven district townships.

New Development Bank (NDB)

The New Development Bank share of financing to clients in South Africa increased from 9%of the Bank's cumulative approvals in 2018 to 16% in 2019, and 18% in 2020.

In 2019, NDB committed $1.7bn in loans, in support of five operations in the Republic of South Africa (RSA): three in energy for a total of $989m, one in transport ($498m), and one in water supply ($228m). Two of the energy loans were to Eskom, a state-owned electricity utility that generates approximately 95% of the electricity used in the country. One of these was a $480m loan to support the retrofit of flue gas desulphurization equipment on an existing thermal power plant of Eskom. The main objective of the project is to reduce the power plant's sulfur dioxide (SO2) emissions from the current level of 3,500 mg/m3 to below 500 mg/m3 by 2026, to comply with national environmental regulations. Another energy loan ($81.9m) went to the Industrial Development Corporation (IDC) for on-lending to renewable energy power projects, including independent power producers, which will support the country's efforts to diversify the energy mix away from coal, shifting towards a less carbon-intensive and more resilient development trajectory.

The transport operation was to support the South African National Roads Agency SOC Ltd (SANRAL) for a program aimed at strengthening and improving the network of national toll roads. To that end, 240 lane-km of new toll roads will be constructed, while another 240 lane-km of existing key toll road sections will be rehabilitated. Auxiliary infrastructure, such as bridges, intersections, and safety measures, will also be built or upgraded.

The water supply operation supported the Trans-Caledon Tunnel Authority (TCTA), a South African government agency, for the implementation of the second phase of the Lesotho Highlands Water Project. It will finance the construction of water transfer infrastructure in Lesotho designed to augment water supply in the Vaal River Basin, home to South Africa's most economically important province, Gauteng. The project aims to support economic growth and foster sustainable livelihoods of people by increasing water yield of the Vaal River System by almost 15%, thus reducing the need for water usage restrictions, and promoting South Africa's resilience to drought.

In 2020, NDB committed a $1bn sovereign loan in support of South Africa's Non-Toll Roads Management Program, which aims at maintaining and improving critical road infrastructure, thus contributing to lower transportation costs and increase the competitiveness of the economy.

Asian Infrastructure Investment Bank (AIIB)

In 2019, the Asian Infrastructure Investment Bank (AIIB) approved a $150m loan to the National Bank of Egypt (NBE) for on-lending to sub-projects in the infrastructure sector. The funding supports the Government of Egypt's initiatives to increase investments into infrastructure.

There were no approvals for infrastructure in Africa in 2020 by AIIB.

Africa50

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 28 African countries, the African Development Bank, the Central Bank of West African States (BCEAO), and Bank Al-Maghrib, with over $876m in committed capital.

In 2019, Africa50 participated in three operations: the Egypt Scatec Solar Power Plants, the Senegal Tobene Power Plant, and the Madagascar Volobe Hydropower Plant. The Egypt Scatec operation is a 400MW DC portfolio of six utility scale solar power plants located at the Benban site. The plants are expected to contribute to reducing dependence on imported oil and gas, thereby improving the country's energy security. The operation provides flexible grid-stabilizing baseload generation capacity at competitive tariffs, which helps close the electricity supply gap in Senegal. The 120MW Madagascar Volobe hydropower plant will be operated under a 35-year concession. The project includes the construction of a transmission line, refurbishment of the access road, and infrastructure for the neighboring villages.

In 2020, Africa50 acquired a 33% equity stake in Société de Gestion de l'Aéroport de Gbessia (SOGEAG), the airport Conakry Guinea concessionaire, for the upgrade and extension of the airport. The project includes the design, structuring, construction, and operation of new passenger and cargo terminals and related infrastructure, including aprons, parking areas and taxiways.

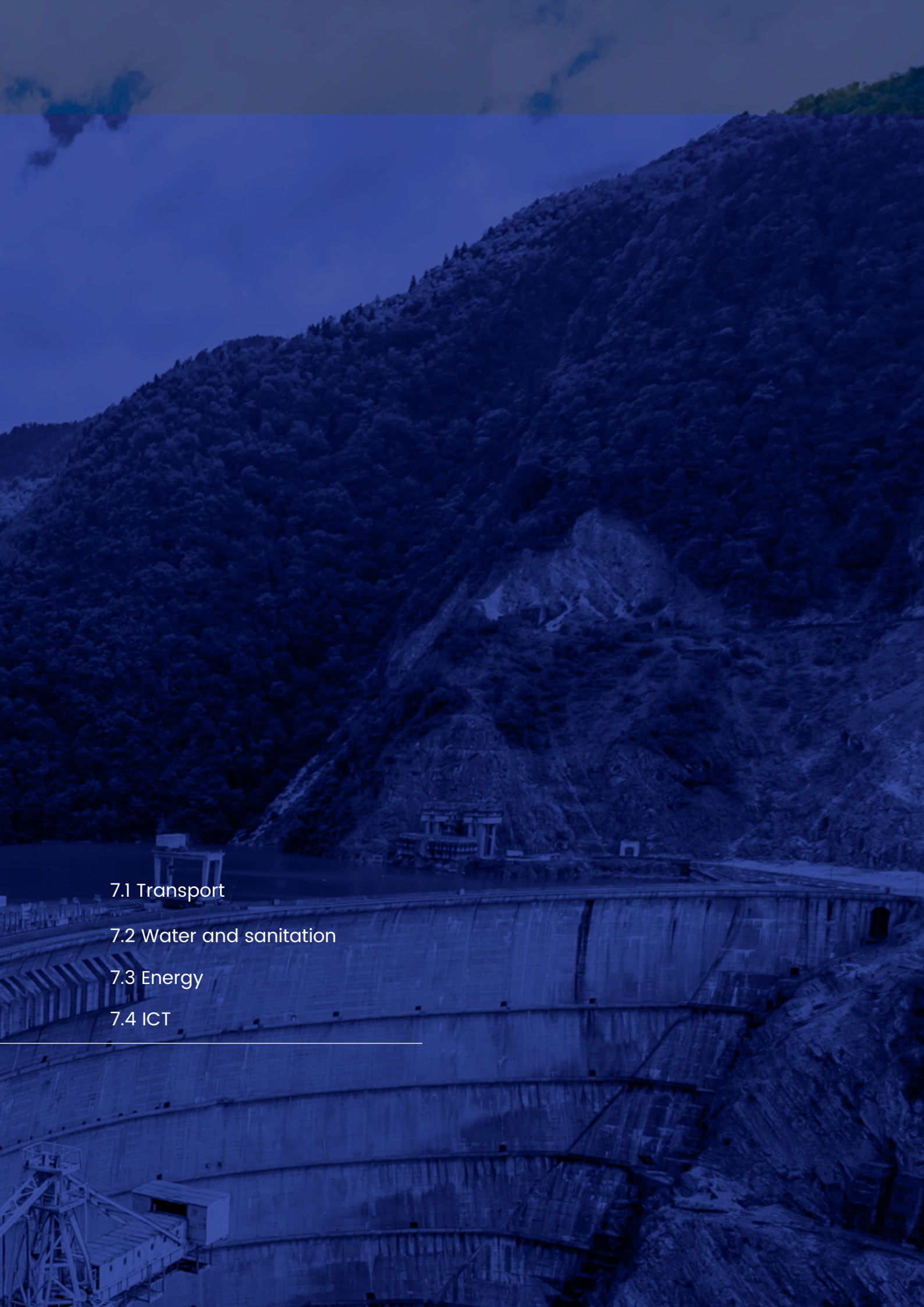
India

India committed $803m in 2019 and $1.3bn in 2020. These commitments included a $750m guarantee in 2019 for ICT to Network I2I Limited, a major Mauritius-based, wholly owned subsidiary of Indian Bharti Airtel. In 2020, Network I2I also received commitments of $1.2bn, a combination of guarantees, equity, and loans.

India's 2019 commitments also included $53m of loans, equity, and guarantees for several operations in Mauritius in transport and energy, and $3m in loans and equity in support of operations in Ghana, Côte d'Ivoire, Kenya, and Tanzania. The 2020 commitments also included $92m of guarantees, loans, and equity in support of transport and energy operations in Mauritius.

7.

Sectoral Analysis



7.1 Transport

7.2 Water and sanitation

7.3 Energy

7.4 ICT

7. Sectoral Analysis

Key Findings

- While financial commitments remained steady, the financing gap in transport has been increasing
- A new, more realistic approach to water and sanitation tariffs would help the financial sustainability of the sector and lead to the faster extension of service to unserved areas.
- The energy transition away from coal and hydrocarbons has high start-up costs but lower costs in the long term; it is advancing faster in some African regions than in others.
- The ICT sector is a major success story in Africa and its financing gap has been bridged, mostly by funding by the private sector.

Chapter 7 analyzes each of the four infrastructure sectors, presenting, for each, key achievements, challenges, and opportunities, as well as financing levels. The transport sector is reviewed in Section 7.1, water and sanitation in Section 7.2, energy in Section 7.3, and ICT in Section 7.4.

7.1 Transport

Progress is being made in the transport sector in Africa but there is still a long way to go to meet the Africa Union objective: "*well integrated networks of transport infrastructure that will enable the continent to realize its full economic potential and physical integration.*"[44]

While financial commitments remained steady, the financing gap in transport has been increasing

According to the sub-Saharan Africa Transport Program (SSATP) some 40% of the final price of goods in Africa is due to high transport costs (compared with 10% in other regions). This is a large deadweight burden on Africa's economies.

While total transport commitments from all sources have held steady over the past four years at between $33-34bn, the annual financing gap has increased, moving from a range of $3-15bn in 2017 to $4-16bn in 2020. Nevertheless, the transport sector in Africa is generally a robust one with substantial experience being developed in many African transport agencies.

Transport as a service

The years 2019 and 2020 have seen the concept of transport as a service being adopted on a wider scale, which implies the involvement of end users in the design of facilities. In the case of cross border roads for example, simply building a border post is not enough. Trade facilitation is a key objective of cross border roads, and the involvement of end-users, including private logistics companies in the design of individual border posts is now seen as necessary to determine how best to improve the trade facilitation services. The involvement of stakeholders beyond the transport agencies themselves, is now standard for projects supported by many ICA members.

[44] Paraphrased from the African Union objective for transport in Africa

Where regional and national roads are built, the focus on the service provided by the road infrastructure is equally clear. The residents of the communities through which the roads transit, are now often considered to be stakeholders. It is becoming common for roads developed with MDB support to include components to improve the lives and livelihoods of adjacent communities by including schools, health clinics, ambulances, water boreholes, water treatment, small scale community infrastructure, or other facilities that the community might need. This reflects the changing view that the connectivity service provided by roads should support the larger purpose of economic development along the route of the road, not just the end points. Such projects are beginning to be considered as economic development corridor projects rather than simply road construction projects. The Eastern Corridor Development Program in Ghana supported by ICA members AfDB and JICA, is an example that aims to turn challenged rural areas along the road into economically prosperous agricultural centers.

Road maintenance

Maintenance of roads continues to be problematic in many countries. Despite the existence of second-generation road funds and specialized road agencies in many countries, maintenance is not being funded at the level required to avoid premature reconstruction. Too frequently, road fund revenue is being diverted away from maintenance, towards new capital expenditures or even public expenditures in other sectors. Poorly maintained roads constrain mobility, significantly raise vehicle operating costs, increase accident rates, and make them more vulnerable to the effects of climate change. A World Bank report estimated that every $1 not spent on maintenance will eventually cost $3 to $4 in premature reconstruction. This cost is in addition the cost to road users for vehicle repair costs caused by damaged road surfaces.

Dedicated fuel levies have been the funding mechanism of choice for road funds. Distance based road user charges are being tested in Namibia and other countries. Looking to the future, alternative sources of finance such as distance-based charging may be necessary as electric or hybrid electric powered cars are introduced to reduce fossil fuel use. This transition will by its nature reduce traditional fuel levies. The goal should be that road maintenance regimes achieve financial sustainability as well as environmental sustainability. This requires that new road construction not exceed the volume of roads that can be cost-effectively maintained by existing sources of road maintenance finance. It also requires that roads be planned and upgraded to improve resilience against climate change.

Climate resilient infrastructure

The physical effects of climate change, including high winds, flooding, and extreme temperatures, will affect the functioning not only of roads, but of all infrastructure sectors. In the case of flooding, for example, OECD modeling of a flood in Paris estimated that most of the direct costs of damage and indirect costs to business were associated with the effect of the flood on infrastructure, including both transportation and electricity. Estimating the lifetime cost of new infrastructure requires that the effect of climate events be considered and that cost-effective resilience measures be built into the design. Preparing for climate change in advance can save the much more costly damage repair or retrofitting later. The maintenance and rehabilitation of existing infrastructure also needs to account for climate risks by building-in resilience measures when maintenance is planned. This may require more frequent maintenance to retain service standards or modifying existing assets by, for example, raising their height.

Private sector financing of roads

Toll roads have traditionally proven difficult to implement in Africa. This is in part because the continent is so large and the population density along regional connecting roads is relatively low. It is also true that paying tolls for road use has not been accepted by road users in many African countries. The Nigeria Lekki-Epe concession toll road, which was taken over by the Lagos State government in 2013, is often cited as a prominent example. South Africa has the leading toll road system in sub-Saharan Africa, covering 16% of the national network, with government agency tolling covering 1,832 km and three PPP toll roads covering 1,288 km. Even here, the national cabinet has recently decided to scrap a controversial e-tolls scheme on the Gauteng Freeway.

However, there is a feeling among many transport specialists that the recent debt sustainability issues facing many African countries will necessarily lead to a reconsideration. Kenya, Tanzania, and Uganda have all announced plans to begin charging on certain expressways built with Chinese financing. Even in Nigeria, the Federal Executive Council (FEC) has approved a new Federal Tolling Policy aimed at reintroducing tollgates on Nigerian

roads. For toll roads and PPPs to play a larger role in transport will require political willingness to ask road users to pay cost-relevant user fees.

For toll roads on national trunk roads, it is likely that viability gap funding to improve bankability would be necessary to attract private sector investment. High quality feasibility studies and experienced financial advisors will be essential for the success of future toll roads. It may also be necessary in some countries to start in ways that reduce project risks. Perhaps initially starting with shadow tolls (where the government pays the tolls) on an improved existing road and converting to user paid tolls later when project risks are better understood.

Transport sub-sectors

The transport sector includes the subsectors of roads, railways, ports, and aviation. Roads and railways currently receive the highest levels of commitments from ICA members, governments, and non-ICA institutions.

In 2019, the subsector commitments for which information is available indicates that rail accounts for 47%, roads account for 31%, ports 18%, and aviation 4%.

In 2020, rail commitments declined, roads were 50.2% of transport commitments, railways 43.3 %, ports were 4.5% and aviation 2%. The share of railway and road subsectors can vary considerably from year to year as these tend to be large capital-intensive projects and a shift of the approval date from one year to another for even one project can make a significant difference.

Ports and aviation are nevertheless important subsectors. Many ports and airports are managed by large operating companies and much investment is private within a public-private partnership framework -- often through a management contract or a concession contract. The support from governments and ICA members, while lower than for roads and railways ensures that development in ports and aviation conforms to national plans and national objectives.

PPPs in roads, ports, railways, airports

In 2019 there were five transport PPPs, with a combined capital value of $2.468bn, all in the ports sub-sector. In 2020, the total value of all transport PPPs was $5.871bn, with PPPs in all transport subsectors: $5.24bn in railways (of which $5.02bn for the Cairo Metro); $575.9m in the roads sub-sector for the Nairobi Expressway, $133m for an airport in Guinea; and $80m in the ports sub-sector. It is notable that in 2019 and 2020 there was only one toll road PPP, one rail PPP and one airport PPP.

The $2.468bn of PPPs for transport in 2019 was only 7.8% of the total of 33.8bn of commitments for all of transport in 2019. For 2020, the $5.871 PPPs in transport rose to 17% of the $34.4bn committed for all of transport in 2020. This further illustrates the dominance of public sector projects in the transport sector in Africa and suggests the need for more innovative approaches to private finance of infrastructure, as discussed earlier in this report.

[45] Data for this section is based on responses to questionnaires by ICA members, as well as the World Bank's PPI data on private sector transport involvement and its SPI database on government financing of infrastructure. Not all financing agencies identified commitments by sub-sector or provided information on individual projects. as a result, complete information of the financing of transport by subsector is not available.

7.2 Water and sanitation

Population growth, hunger, poor nutrition, agricultural productivity, health outcomes, poor access to clean drinking water, safe sanitation, and hygiene are important issues facing governments across Africa. Extreme events such as droughts, heat waves, and floods brought on by climate change are intensifying and are bringing new challenges to the African continent.

All these challenges are connected with and related to the management of water. Dealing with them will require effective, integrated water strategies, partnerships, a focus on institutional support, smart policies and innovation, and access to capital to ensure that the benefits that water can bring are achieved and accrue equitably to the people of Africa.

The contributions to the water and sanitation sector in Africa by ICA members and non-ICA members have been invaluable. Not only have they provided significant support to expanding availability of water and sanitation services, but perhaps more importantly, they have supported policy and institutional reforms that are having long lasting benefits. These have involved tariff reforms, professionalization of staff, modernization of accounting and information systems and moving in the direction of independent utilities. In rural areas there has been progress in the support to small scale private providers of water that has improved management and resulted in efficiencies.

Despite this progress, in many urban areas, the expansion of piped water supply to unserved areas is not keeping up with population growth, and sanitation lags as well. This is largely because of insufficient revenue generation which means that utilities or other suppliers do not have the resources to invest in new unserved areas where people want piped supply and are willing to pay for it.

Financial sustainability

The financial sustainability of water programs needs a fresh approach. Debt sustainability issues in many African countries will make reducing the water infrastructure financing gap substantially more difficult in the coming years and makes a fresh approach to financing the water sector more urgent.

Given these circumstances, moving the water sector towards greater financial sustainability must be a key priority. Many projects financed by MDBs and bilateral organizations do address the problem of financial sustainability, but rarely do the local institutions that they support achieve revenues that cover significantly more than operations and maintenance cost. This means that capital investments which are needed to expand systems to reach unserved areas, would need to be met by grants from donor institutions or from governments.

With government funds limited and borrowing from donor sources now seriously constrained, grants from donor sources will be woefully inadequate to meet the basic water needs of an expanding population. Even the private sector, which has considerable capital, is unable to play a significant role unless progress is made in raising additional resources from consumers of water to pay tariffs. Recovering only operations and maintenance costs is not enough if real progress is to be made in the water sector. Capital costs also need to be recovered.

Need for new approach to tariffs

Current low levels of tariffs benefit the well-off and hurt the poor. The reason often cited for low tariffs is that the population is too poor to pay higher tariffs. However, studies consistently show that it is the poor who suffer most from the resulting lack of access to clean water or sanitation. The World Resources Institute (WRI) gives the example of Kampala and Lagos where only 15% of city residents have access to piped water. The report cites a survey that shows that piped water would be by far the safest and most affordable option to supply water [46]. According to the report, "Households without access to municipal water self-provide or purchase water from private

A new, more realistic approach to water and sanitation tariffs, would help the financial sustainability of the sector and lead to the faster extension of service to unserved areas.

[46] World Resources Institute: Climate Change Is Hurting Africa's Water Sector but Investing in Water Can Pay Off. October 7, 2019 By Nathaniel Mason, Denali Nalamalapu and Jan Corfee-Morlot

sources, which cost up to 52 times as much as piped utility water." A recent case study analysis by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) has demonstrated however, that good utility performance in African urban areas is possible even in some of the poorest countries of the continent, such as Senegal, Kenya, and Burkina Faso [47]. According to GIZ, for urban areas, substantial coverage increases can be achieved with as little as annual investments of $10 per person.

African water sector experts interviewed for this report indicated that the reason that tariffs are insufficient is not because of unaffordability. Rather it is because tariffs are politicized.

Recognizing the political challenges, the WRI report suggests that policy action should be taken to gradually invest in improvements -- while asking people to pay for water services and shielding the most vulnerable from unaffordable costs through well-targeted cross-subsidies. With secure revenue streams, private finance is also more likely to flow into the sector.

This transition will not take place overnight, and there is a very large and important role for ICA members to play in facilitating the transition to sustainable water supply.

PPPs in the water and sanitation sector

In the water sector, there were two PPP projects in Morocco in 2019, both in sanitation and solid waste amounting to $105m. This is just 1% of the total water sector commitments of $10.1bn in that year. In 2020 there was only one water and Sanitation PPP in Cote d'Ivoire for $192m which is 2.4% of total water and sanitation commitments of $8.1bn in 2020. While it is very difficult to develop formal PPPs in the water sector because of non-commercial tariff levels, many countries engage small and medium scale private providers under contract for specific services.

Other steps to close the financing gap

While the key step to reducing the financing gap in the water sector is moving towards financial sustainability, there are other steps involving efficiency improvements that are required and that are the focus of many ICA member projects. These include professionalization of the staff of water utilities and creating incentives for efficiency; developing programs to reduce unaccounted for water; reducing the number of accounts in serious arrears -- including those of government agencies; and giving priority to maintenance. Maintenance is particularly important. Failure to perform routine maintenance in the case of water can lead to increases in overall capital replacement costs of at least 60%[48].

Looking to the future, another trend seen in MDB lending is to treat the water sector, which covers water resources management, water supply, sanitation, and hygiene in an integrated manor. The AfDB has recently drafted a policy paper on water resources management that emphasizes the need for integrated planning among the water sub-sectors. The World Bank is also active in country and regional analytic work on the concept of integrated water resources management, which will provide the context for future projects and programs in the water sector.

7.3 Energy

Investment in energy-based infrastructure continues to make up about one-quarter of total commitments consistent with previous years, except for 2018, when they represented 43% of total commitments, the result of exceptionally high commitments by China. In recent years there has been a rapid roll-out of electrification and further interconnection of electricity grids in certain countries that has required significant investment funding.

Energy Access

The seventh commitment of the UN Sustainable Development Goals commits to "*Ensuring access to affordable, reliable, sustainable and modern energy.*" Much progress has been made over the past decade in Africa; however, the continent still holds 75% of the world's 770 million people without electricity in 2019, although the share of the continent's population is only 17.5%.[49] The population without access to electricity in Africa is almost entirely concentrated in Sub-Saharan Africa, where only 47% of the population has access, whereas North Africa is to all intents and purposes fully electrified at 97%.

[47] GIZ, Access to Water and Sanitation in Sub-Saharan Africa by Rolfe Eberhard, 2019
[48] World Bank, Beyond the Gap, Julie Rozenberg and Marianne Fay, Editors. 2019
[49] International Energy Agency (https://www.iea.org/reports/sdg7-data-and-projections/access-to-electricity).

But there has been strong progress. Across the continent, the number of people gaining access to electricity continued to increase in 2019, maintaining its sustained growth since 2000. The rate of increase in access doubled from the last decade, where access grew at 9 million new persons connected a year, to 20 million people gaining access per year this decade, outpacing population growth. The population without access to electricity peaked in 2013 at 610 million and has since declined to around 580 million in 2019. This shows strong progress, concentrated in a small number of countries including Kenya, Senegal, Rwanda, Ghana, and Ethiopia. In Kenya in particular, progress has been astounding. The access rate rose from 20% in 2013 to almost 85% in 2019. The variation across the continent is very large: in addition to the countries of North Africa, Mauritius and Seychelles are fully connected and Gabon, South Africa and Ghana have connection rates of above 80% (see Table 7.1). At the other end of the spectrum, DRC, Niger, Burkina Faso, Central African Republic, Malawi, Burundi, Chad, and South Sudan have access rates below 20%.

Most of the progress over the past decade in Africa has been made through connections to the grid, but there has also been significant deployment of off-grid systems. Kenya, Tanzania, and Ethiopia accounted for around half of the 5 million people gaining access through new solar home systems in 2018 (up from only 2 million in 2016).

The year 2020 saw a reversal of this improving trend, due to the COVID-19 pandemic. The health crisis and economic downturn caused by COVID-19 has significantly increased the difficulties faced by governments and power utilities in increasing electricity access. Strong population growth now outpaces growth in access, which has pushed the goal of universal access further into the future. In the area of decentralized energy (notably renewable energy) the economic turmoil from supply-chain disruptions and social distancing measures have slowed access programs.

Table 7.1: Electricity Access Rates in Africa (%), 2010-2019
Electricity access rates have steadily increased over the past decade

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Angola	35	35	37	38	32	42	42	43	45	46
Burundi	5	6	7	7	7	8	9	9	11	11
Benin	34	37	38	35	34	30	37	35	39	40
Burkina Faso	13	15	15	15	19	16	17	17	14	18
Botswana	52	53	56	58	60	62	64	67	68	70
Central African Republic	10	10	11	11	12	13	13	14	15	14
Cameroon	53	54	55	56	57	59	60	61	62	63
Congo, Dem. Rep.	13	14	15	15	14	16	17	18	19	19
Congo, Rep.	40	41	42	42	43	44	45	46	47	48
Djibouti	56	56	55	56	57	58	59	60	61	61
Algeria	99	99	99	99	99	99	99	100	100	100
Egypt, Arab Rep.	99	99	100	100	100	99	100	100	100	100
Eritrea	40	41	42	43	44	46	47	48	49	50
Ethiopia	33	23	35	36	27	29	43	44	45	48
Gabon	89	89	89	86	87	87	88	86	90	91
Ghana	64	64	57	71	78	74	79	79	80	84
Guinea	28	29	26	31	33	34	34	35	44	42
Gambia	47	49	50	52	53	54	56	56	60	60
Guinea-Bissau	6	13	15	16	17	20	23	26	29	31
Equatorial Guinea	-	66	66	66	66	66	66	66	66	67
Kenya	19	36	38	40	36	42	53	56	61	70
Liberia	5	4	9	10	9	16	18	24	25	28
Lesotho	17	22	21	27	28	32	35	34	47	45
Morocco	93	93	94	97	92	97	98	100	98	100
Madagascar	12	14	19	13	19	21	23	24	26	27
Mali	27	29	26	32	34	38	39	35	51	48
Mozambique	19	20	21	22	25	24	26	24	31	30
Mauritania	34	35	36	37	39	40	41	43	44	46
Mauritius	100	100	99	99	99	99	100	100	99	100
Malawi	9	8	7	9	12	11	11	13	18	11
Namibia	45	42	47	47	49	52	50	53	54	55
Niger	13	14	14	15	16	17	17	18	18	19
Nigeria	48	56	53	56	54	53	59	54	57	55
Rwanda	10	11	18	15	20	23	29	34	35	38
Sudan	38	40	42	43	45	47	49	51	52	54
Senegal	57	57	57	57	61	61	65	62	66	70
Sierra Leone	11	14	17	14	19	20	20	23	26	23
Somalia	21	23	24	26	27	29	31	33	34	36
South Sudan	2	3	3	4	4	5	5	4	6	7
Eswatini	46	51	54	57	65	64	63	74	74	77
Seychelles	97	98	98	98	100	100	100	100	100	100
Chad	6	9	8	8	8	8	9	11	10	8
Togo	31	40	39	41	46	45	47	48	50	52
Tunisia	100	100	100	100	100	100	100	100	100	100
Tanzania	15	14	15	16	24	26	33	32	35	38
Uganda	12	15	20	14	20	19	27	33	43	41
South Africa	83	84	85	85	86	85	84	84	85	85
Zambia	22	27	27	28	28	31	35	40	40	43
Zimbabwe	40	37	44	38	32	34	40	40	41	41
North Africa	**96**	**96**	**95**	**97**	**96**	**97**	**97**	**98**	**96**	**97**
Sub-Saharan Africa	**34**	**35**	**37**	**38**	**38**	**39**	**43**	**43**	**46**	**47**

Source: World Bank

Financial Sustainability

A lasting characteristic of the power sectors in African countries is their lack of financial sustainability. Many of the continent's power utilities are technically bankrupt in the sense that their income does not cover the full cost of operating their assets, including depreciation of the original investment.

Poor financial performance of African utilities is not a recent phenomenon. It has plagued the sector for decades and has been a significant constraint on the financing available for new assets, exacerbating the inadequate amount of financing that flows to the sector both for new investments and for maintenance of existing investments. Lack of financial sustainability stems ultimately from three causes: (a) inadequate tariffs, that do not cover the full cost of operation; (b) poor billing and collection from consumers; and (c) inefficient management, financial and otherwise, of the utilities themselves. Ultimately, the issue is one of regulatory failure – policy makers are not upholding independent regulatory regimes that ensure financial sustainability, and they do not ensure that the utilities are run at arms-length from government, with operational criteria based solely on efficiency.

The energy transition from hydrocarbons faces high initial costs but is less costly in the long-term.

This issue is pervasive and is at the root of most issues in the sector. The lack of a financially viable utility off taker also limits the ability for private investors to participate in new electricity generation projects; dampens the growth in renewable energy (RE); and has stunted the development of inter-regional trading arrangements and power pools.

There is no magic bullet to fixing this problem. Ultimately there is little the IFIs can do to resolve it other than working with utilities, regulators, and policy makers at the country level to ensure that the sector is financially robust with adequate tariffs, and well managed. Having well-run and well-financed electric power utilities is the ultimate solution. Some countries seem to be moving in the right direction (e.g., Kenya, Côte d'Ivoire) whereas others seem to have lost ground.

Financing the Energy Transition

The focus on increasing the electrification rate is an emerging success story, although some countries are still lagging, as indicated above. The energy transition to more climate-friendly production of electricity, moving away from hydrocarbons and (in Southern Africa in particular) from coal, has not advanced as quickly despite some very impressive grid-based and off-grid renewable electricity projects. In Morocco two significant renewable energy projects were closed in 2020, both with private sector participation: the 800 MW Noor Midelt concentrated solar power plant Stage I ($838m); and the Taza Onshore Wind Power Generation Project ($201m). After the impressive push into private sector funded RE projects in 2018, South Africa has since fallen back. South Africa's power utility Eskom is currently undergoing significant financial stress which has led to creditworthiness concerns and to reduced investment in generating capacity, notably from the private sector.

While it is true that RE provides intermittent power, the degree of penetration of both solar energy and wind power is far below the network optimum in practically all African countries. Even Morocco, which has been seeking to reduce its dependence on imports of fossil fuels by developing renewable energy to meet domestic needs, still uses fossil fuels for more than 80% of its electricity generation mix.

The low level of investment in renewable energy by African utilities appears is due in part to the high transaction cost for the private sector of investing in electric power in Africa and the very long and protracted negotiations process to set up new facilities. This high cost, which is not proportional to the amount of the investment, handicaps smaller RE projects compared to larger traditional thermal projects such as gas turbines and diesel. Government-owned power utilities have been very conservative in their choice of generating technologies and have not pushed into RE either. But RE are for the most part cheaper sources of energy for generation than more costly fossil fuels, particularly for landlocked countries and those without efficient ports, and must become a priority for African governments.

7.4 ICT

ICT continues to be a notable success story on the African continent, in at least three distinct areas: first, the amount of money invested in ICT infrastructure every year to connect the continent's citizens and the resulting rate of growth of connectivity are very significant; second, unlike other infrastructure sectors, a substantial share of this financing is from the private sector, lessening the pressure on scarce public money; and third, the African continent is a forerunner in utilizing ICT to provide services beyond voice, notably in extending financial inclusion to low income groups.

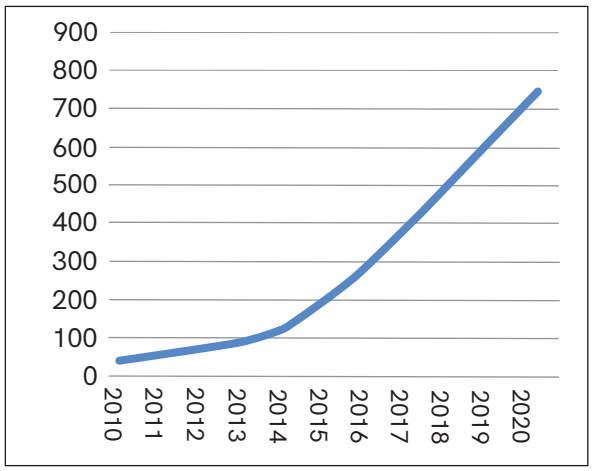
The ICT sector is a major success story in Africa and its financing gap has been bridged, mostly by funding by the private sector.

Connectivity

Sustained multi-year investment in ICT infrastructure, with a significant share from the private sector, has shown major results in terms of increased access. By the end of 2020, 495 million people subscribed to mobile services in Sub-Saharan Africa, representing 46% of the region's population – an increase of almost 20 million on 2019 alone. With more than 40% of the region's population under the age of 15, young consumers owning a mobile phone for the first time will remain the primary source of growth for the foreseeable future.

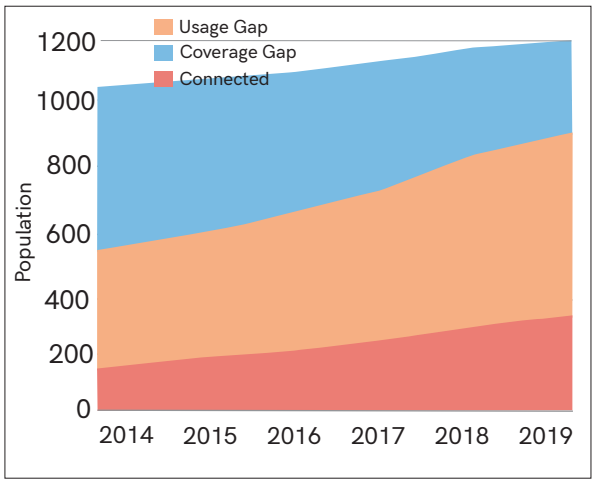
Over the period to 2025, 4G adoption in Sub-Saharan Africa will double to 28%, compared to a global average of 57%. It is still early stages for the adoption of 5G standards in Sub-Saharan Africa; as of June 2021, there were seven commercial 5G networks in five markets across the region. By the end of 2025, 5G is expected to account for 3% of total mobile connections on the continent. 4G is considered to be the minimum necessary for functional wireless internet usage, so only a minority of users in Africa are able to access the internet.

Figure 7.1: Number of Mobile Phones in Africa (m), 2010-2020
Mobile phone usage has grown exponentially over the past decade



Source: World Bank (2021)

Figure 7.2: Mobile Internet Coverage in Sub-Saharan Africa
Mobile internet coverage has steadily increased



Notes:
Connected = connected to mobile internet
Usage gap = population that lives with the footprint of a mobile broadband network who are not using mobile internet.
Coverage Gap = population that does not live within the footprint of a mobile broadband network.
Source: GSMA Intelligence

Internet

As more of the continent's inhabitants gain access to mobile communication, the next challenge will be to move to internet access as well. Fixed line access to telecoms and internet is limited outside mature markets like South Africa, Mauritius, Morocco etc., and this situation is unlikely to change in the near future. So, internet connectivity will for most Africans need to be via mobile data access.

Currently, only a small proportion of people on the continent owning mobile phones use them to access the internet in addition to voice and messaging services, because they do not have the requisite smart phone, because they cannot afford the cost of data, or because of network and bandwidth issues. As mobile operators extend access to 4G, an increasing number of Africans will fall within the "internet usage area" (geographic area covered by 4G and 5G); the challenge for operators will be to ensure affordability for data consumption to allow greater use.

Mobile Banking[50]

The COVID-19 pandemic has accelerated the roll-out of mobile banking services in Africa. Africa's mobile phone operators are ramping up plans for mobile banking, in some cases specifically targeting unbanked new clients, after the coronavirus crisis caused a surge in use of digital financial services. Orange, MTN, Telkom and Vodacom have lowered fees and introduced new lending services, expanding mobile payment networks with the aim of challenging the dominance of cash. Mobile operators' revenue is under threat as governments cap data prices and customers abandon voice phone services for free messaging apps. They have thus sought to leverage their reach into remote villages and urban areas to introduce new banking services and new revenue streams. The global health crisis has been an unexpected catalyst, with some African governments releasing COVID-19 stimulus grants via mobile money platforms and central banks easing regulations, including limits on mobile transactions.

Cash still dominates on the continent: it accounts for around 99% of transactions in Nigeria and dominates even in South Africa (90-95%) where banking penetration is relatively high. World Bank figures indicate just under 43% of sub-Saharan Africans over the age of 15 had a bank account in 2017, compared with 55% in Latin America and the Caribbean, almost 70% in South Asia, and around 74% in East Asia and the Pacific. This represents a major opportunity for telecoms companies on the continent, as they already have access to many of the "unbanked" via their existing communications services. Mobile phone penetration outstrips access to banks, and operators' distribution models are low-cost. Moreover, mobile operators possess a wealth of customer data they can use to assess lending risk, a big advantage in a region where most markets lack credit bureaus. In 2020 sub-Saharan Africa had 469 million mobile money accounts - more than any other region in the world[51].

Current new developments underway in mobile banking include:

- MTN, Africa's largest operator, is currently rolling out a mobile money offering for businesses, after a pilot in Rwanda, to other markets. It will also launch an initiative to digitize cash-heavy small businesses in South Africa, small shops known as "spazas" and often located in townships.
- Vodacom is moving to expand lending, insurance, and payment businesses currently available only in South Africa to other markets.
- Orange is focusing on Mali, Burkina Faso, and Senegal for Orange Bank Africa, although the roll-out timetable is dependent upon local regulatory approval.
- Both MTN and Telkom, meanwhile, are preparing to expand their existing South Africa operations by offering micro-loans

However, mobile operators still have a long way to go to overtake traditional lenders. Banking revenue pools in sub-Saharan Africa stood around $70bn in 2019[52], while the main mobile operators earned less than $3bn from financial services. Also, some regulators remain wary of mobile money, and some informal businesses still don't accept digital payments. Such factors mean mobile money adoption varies across the continent. M-Pesa, run by Safaricom (a unit of Vodacom), dominates the financial system in Kenya, and is the largest and best-known mobile banking operation on the continent. Both MTN and M-Pesa have in the past been forced to drop mobile money initiatives in South Africa, a sophisticated financial market, after struggling to attract customers.

Big banks, historically deterred by low incomes and poor infrastructure, are also responding to the incursions of mobile operators, and pushing into formerly underserved segments. They are creating partnerships with fintech firms, building their own networks of agents to distribute banking services and launching rival offerings. At the same time, they are also partnering with existing mobile operators, seeking to benefit from mobile firms' wide customer bases. An example is Absa, a South African bank, which has launched partnerships with mobile operators in Tanzania and Uganda. Absa is also expanding its Kenyan digital offering to cover full-service banking with rollouts in Zambia, Botswana and Mauritius in 2020 and 2021.

[50] Much of this section is based on a Reuters article of September 29, 2020 (https://www.reuters.com/article/us-health-coronavirus-africa-telecoms-fo/pandemic-spurs-africas-mobile-telcos-to-ramp-up-banking-bid-idUSKBN26K0RS) and on data from GSMA report "State of the Industry Report on Mobile Money 2021" (https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2021/03/GSMA_State-of-the-Industry-Report-on-Mobile-Money-2021_Full-report.pdf).
[51] Source: GSMA
[52] McKinsey estimate

8.

Regional Analysis


use_y = True
use_z = False
== "MIRROR_Z":
use_x = False
use_y = False
use_z = True
-add back the deselected mirror
ene.objects.active = modifier_ob
" + str(modifier_ob)) # modifier ob is the
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8. Regional Analysis

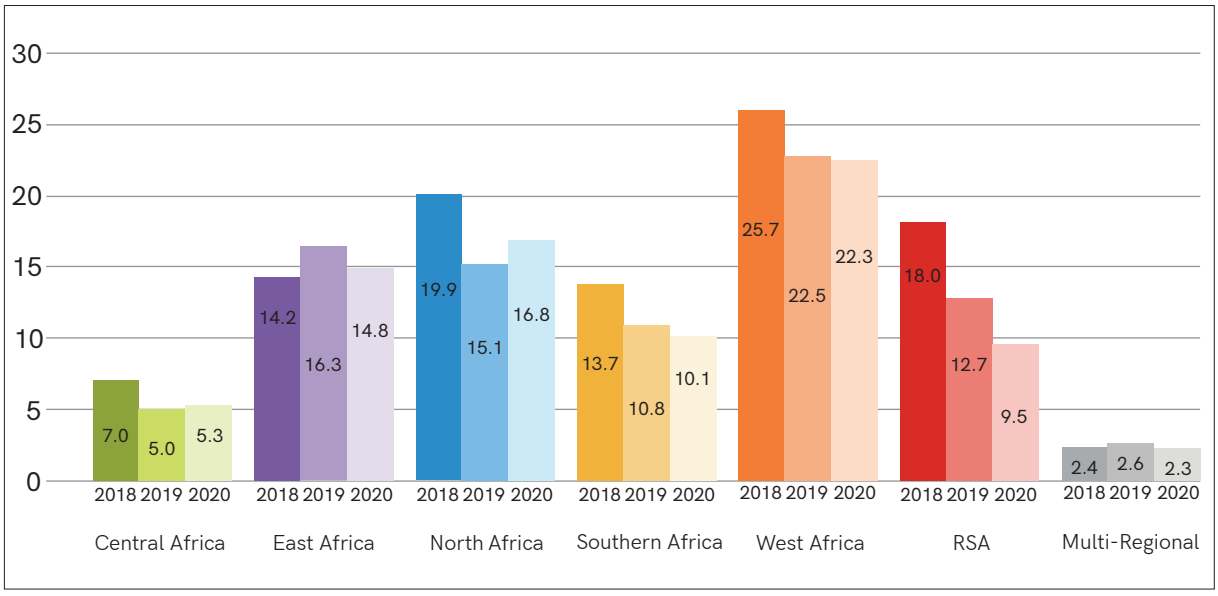
Key Findings

- West Africa received the largest share of commitments in 2019 and 2020, in line with its 2016-2018 average.
- Commitments to Central Africa sharply decreased in 2019 and stabilized at that lower level in 2020.
- North Africa commitments declined in 2019 but regained strength in 2020, exceeding their 2016-2018 average level.
- Commitments to Southern Africa and to RSA experienced sharp drops in 2019 and 2020 from their 2018 levels but stabilized above their pre-2018 average levels.

Chapter 8 analyzes commitment trends for each region and presents examples of projects approved in 2019 or 2020 in each region.

Figure 8.1 shows commitments by region for the last three years. North Africa was the only region with higher commitments in 2020 compared to 2019.

Figure 8.1: Total Commitments by Region ($bn), 2018-2020
Commitments to North Africa increased noticeably between 2019 and 2020



Central Africa

The Central Africa region received markedly lower levels of commitments in 2019 ($5bn) and in 2020 ($5.3bn) than in 2018 ($7bn). But its overall share of commitments, at 6% in 2019 rebounded to close to 7% in 2020, the same share as in 2018. Some of the decrease comes from reduced commitments by China, $683m (14% of total commitments to the region) in 2019 and $210m (4%) in 2020, compared with $1.3bn (13%) in 2018. Although they were the largest group of contributors, African governments also contributed less to amounts, although their share was higher in both 2019 and 2020 than it had been in 2018 (36%). Their commitments totaled $2bn (40%) in 2019 and $2.1bn (40%) in 2020, compared with commitments of $2.5bn (36%) in 2018. ICA members' contributions were also reduced, although their share was higher. ICA commitments totaled $1.6bn (32%) in 2019 and $1.8bn (35%), compared with commitments of $2.1bn (30%) in 2018. Figure 8.2 shows the breakdown of all commitments by sector.

Central, North, and Southern Africa, and RSA experienced sharp decreases in commitments in 2019.

One of the 2020 commitments was a $150m multi-country convertible debt package from the Africa Finance Corporation for the Arise Special Economic Zone in Gabon, which will offer infrastructure-ready land and end-to-end solutions covering needs of industries across the value chain. This would ensure access to supply, logistics services and support the marketing and commercialization of finished goods of the companies hosted in the Zone. The strategic vision is to build competitive industrial and logistics ecosystems in Africa, unleashing the full potential of economies, while creating jobs and leveraging on the success in Gabon to empower other countries. The initial focus will be on investing in, and expanding, the ecosystem in existing mineral and general cargo ports in Gabon, as well as developing new infrastructure that will support ecosystems in Mauritania, Côte d'Ivoire, Togo, and Nigeria.

Figure 8.2: Total Financing to Central Africa by Sector, 2019-2020
Central Africa had the largest share of multi-sector operations of all regions in 2020

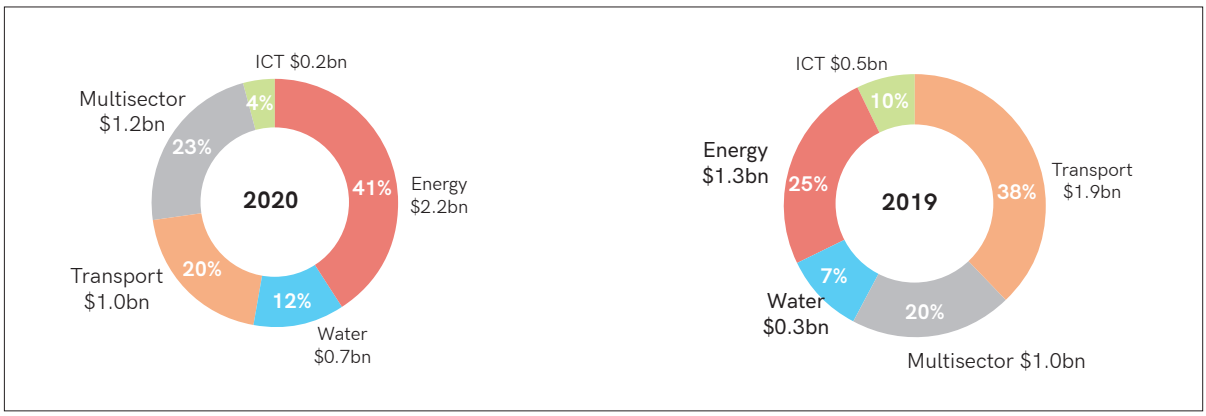
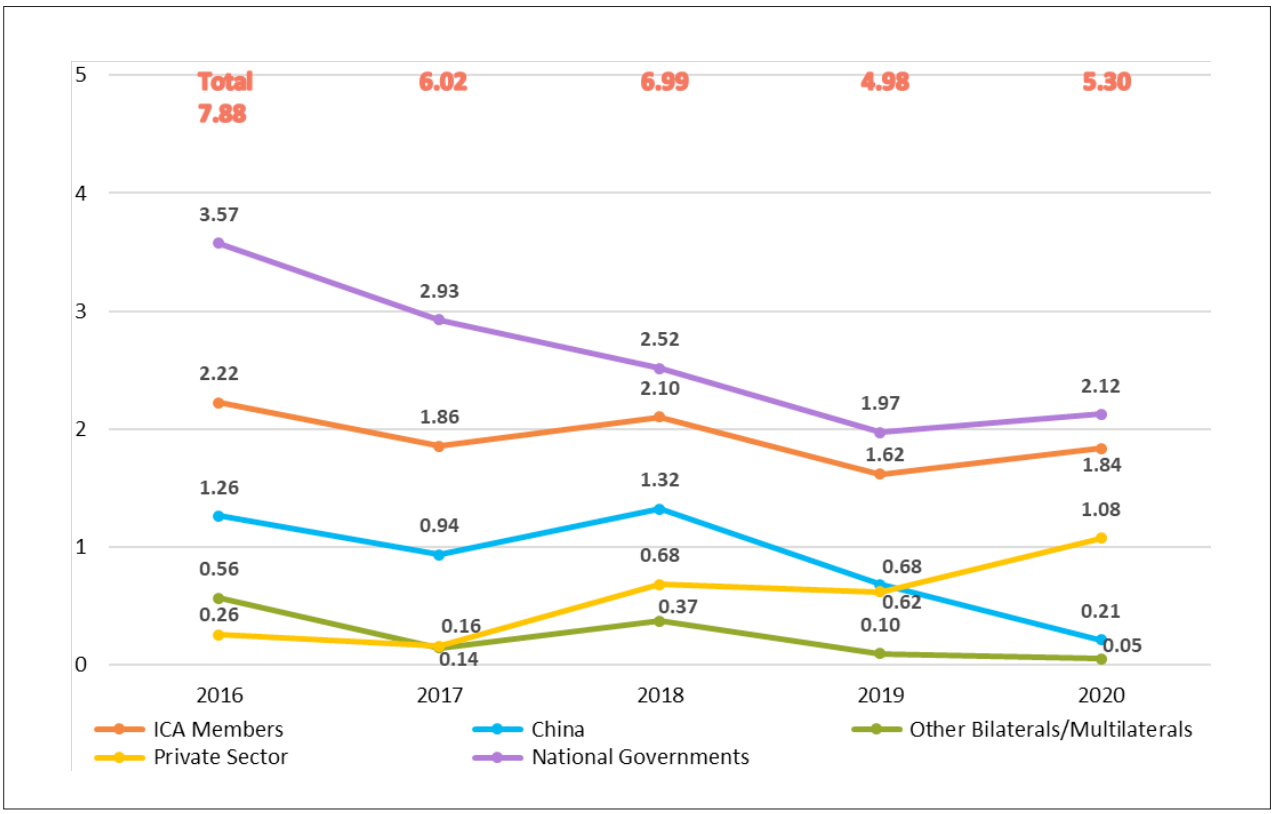


Figure 8.3: Trend in Commitments to Central Africa by Source ($bn), 2016-2020
Commitments decreased in 2019



East Africa

Commitments in support of operations in East Africa reached $16.3bn in 2019 and accounted for 19% of total commitments. They decreased to $14.8bn in 2020, a level comparable to the commitments of $14.2bn the region received in 2018 and a larger share, 18% compared with 14% in 2018. African governments continued to be the largest contributor, with their commitments accounting for 53% of all commitments to the region in 2019 and 57% in 2020, a larger share than their 43% share in 2018. Their contributions increased from $6bn in 2018 to $8.6bn in 2019 and $8.4bn in 2020. These higher commitments compensated for the reduced commitments from other contributors. Commitments from China decreased from $2.5bn in 2018 to $478m in 2019 but increased to $1.4bn in 2020. ICA member commitments experienced a surge in 2019, reaching $5.1bn, compared with their 2019 level of $3.7bn, but experienced a sharp decrease in 2020 with a total of $3.1bn. Commitments by the private sector also help compensate for decreased contributions from other groups: private sector commitments reached $1.6bn in both 2019 and 2020 compared with $1.1bn in 2018.

In 2019, AfDB committed $199m in support of the Msalato International Airport Construction Project in Tanzania. The project aims at meeting the anticipated increase in connectivity and access needs following the government decision to relocate administrative functions to Dodoma.

In 2019, China committed $168m in support of the Konza Data Center and Smart City Facilities in Kenya. The Konza Technology City is set to host East Africa's biggest data center, fully equipped with smart city facilities and services to support the technopolis as well as developers and small enterprises.

Figure 8.4: Total Financing to East Africa by Sector, 2019-2020
Transport accounted for close to two-thirds of 2020 commitments to East Africa

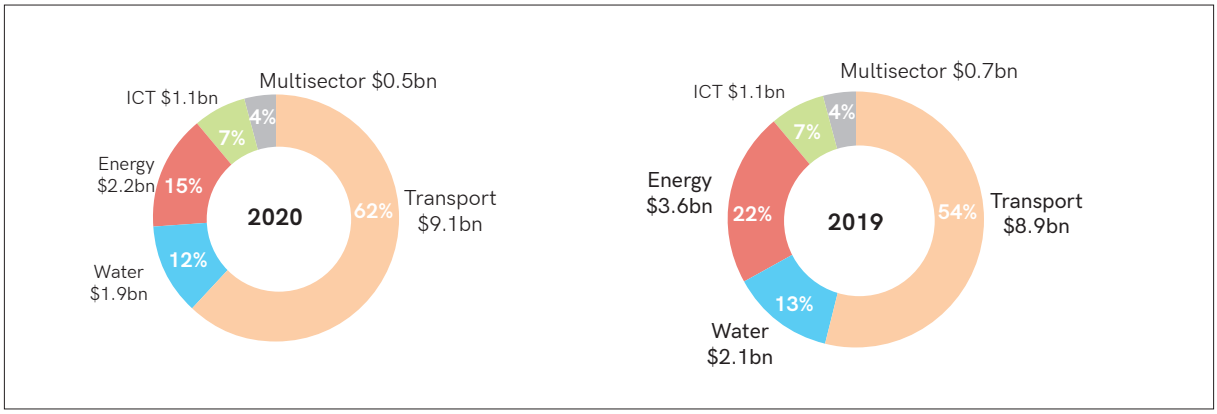
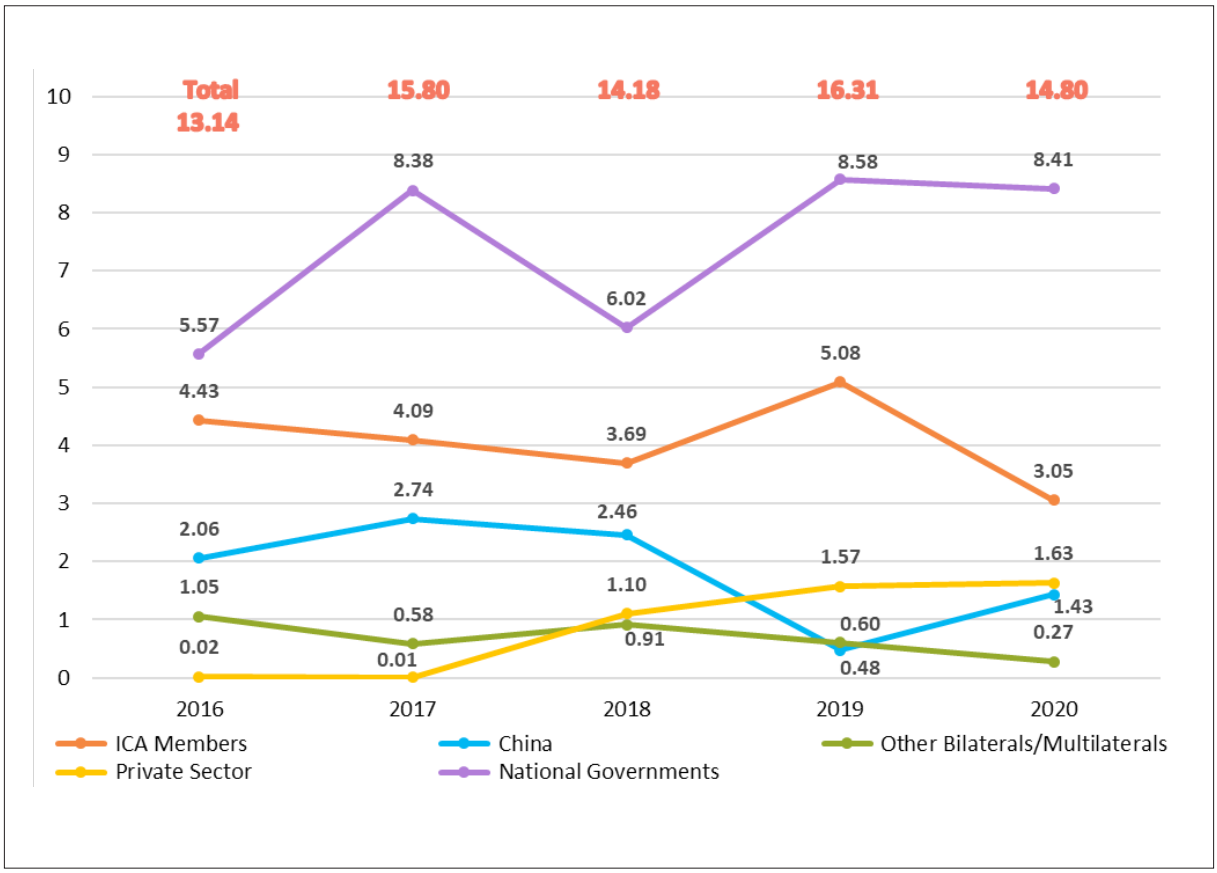


Figure 8.5: Trend in Commitments to East Africa by Source ($bn), 2016-2020
Commitments increased in 2019



North Africa

The North Africa region received 18% of 2019 commitments and 21% of 2020 commitment, compared with 20% in 2018. Its commitment level showed a sharp decrease in 2019, $15.1bn compared with close to $20bn in 2018 but rebounded in 2020 to reach $16.8bn. A major increase in commitments by the private sector in 2020 not only buffered decreases by all other sources but contributed to this higher level. Private sector commitments reached $7bn in 2020, compared with $2bn in 2019 and $1.2bn in 2018. In 2019, commitments from all sources decreased, except from the private sector. Commitments from China saw a substantial drop in 2019 and 2020, respectively $1.2bn and $290m, compared with $4.6bn in 2018. ICA member commitments decreased from $3.5bn in 2018 to $2.9bn in 2019 and $2.3bn in 2020. A sharper decline was noted for commitments by non-ICA bilateral and multilateral sources, whose commitments went from $2.7bn in 2018 to $1.7bn in 2019 and $555m in 2020. The move of BOAD and IsDB from this group to ICA members only explains a small proportion of this decrease.

North Africa commitments declined in 2019 but regained strength in 2020, exceeding their 2018 level.

The European Investment Bank made a sizeable commitment in 2019 of $392m in support of the upgrading and renovation of the Cairo metro line 1 in Egypt. The project aims to restructure the rail infrastructure of the first line, rail tracks and renovation of stations. It also includes developing electromechanical lighting, communication, and central control systems. About 4.1 million people use the Cairo metro every day. The project is expected to deliver significant time savings to existing users of metro line 1 and to provide additional capacity to accommodate an increasing demand that would otherwise be absorbed by less environmentally friendly modes of transport.

Figure 8.6: Total Financing to North Africa by Sector, 2019-2020
Commitments to transport grew by more than half between 2019 and 2020

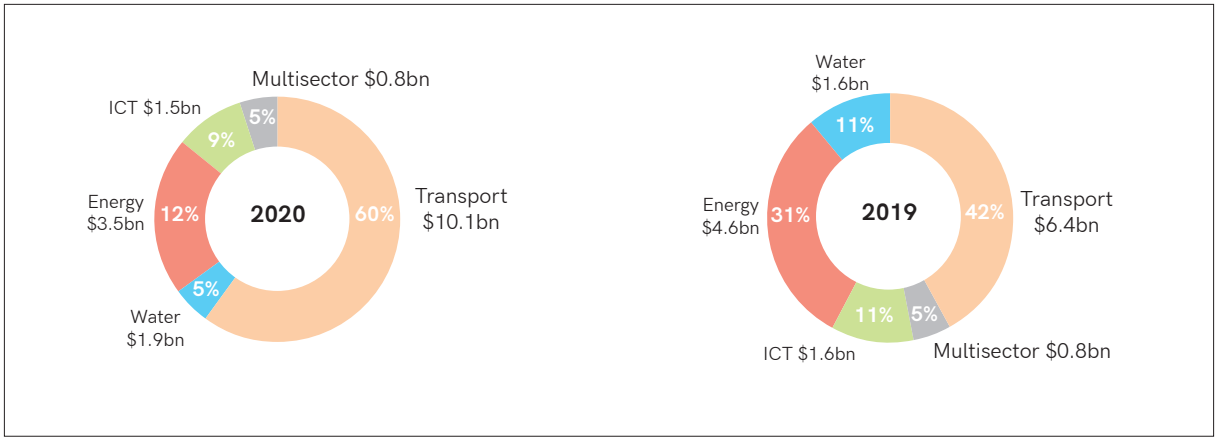
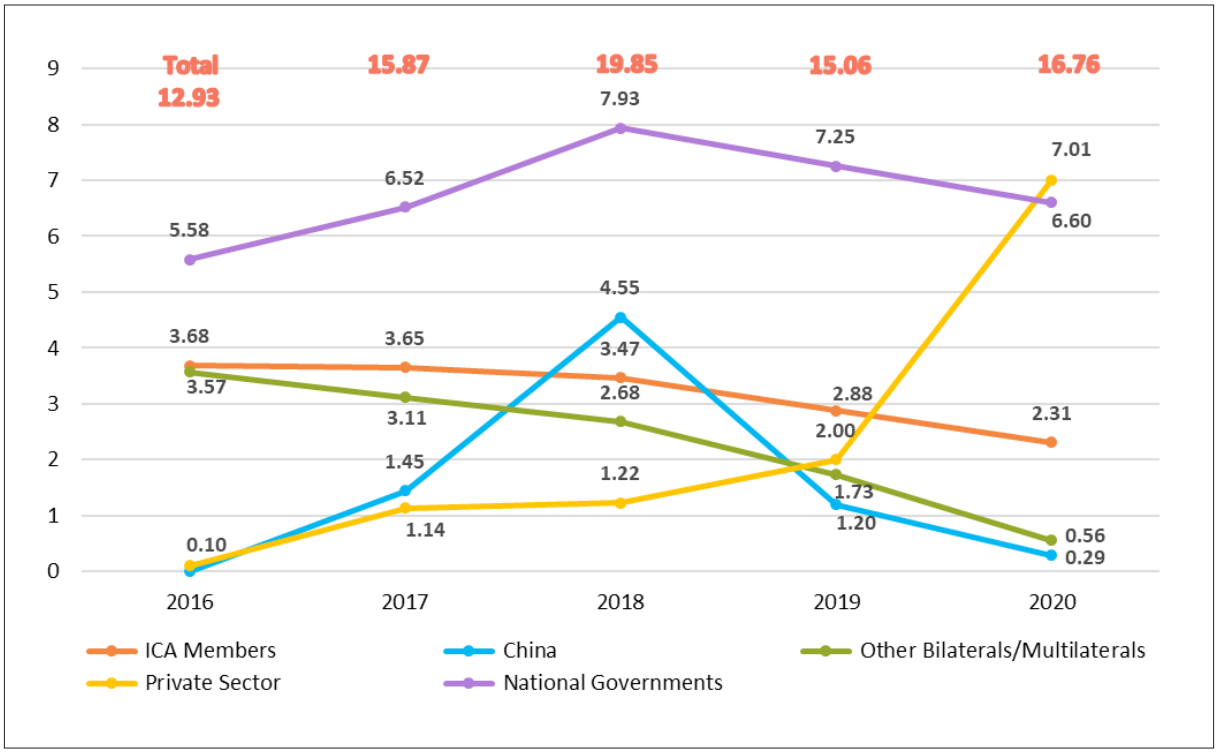


Figure 8.7: Trend in Commitments to North Africa by Source ($bn), 2016-2020
Private sector commitments reached an all-time high in 2020



Southern Africa

Commitments to Southern Africa decreased sharply in 2019 and 2020. They totaled $10.8bn in 2019 and $10.1bn in 2020, compared with $13.7bn in 2018. Commitments to the region have fluctuated widely over the years, both in aggregate and by sources, going for example from a total of $15.6bn in 2015 to $6.5bn in 2016, and $12.2bn in 2017. The region's share of total commitments, however, has only experienced a small decrease from 14% in 2018 to 13% in 2019 and 12% in 2020. Some of the steepest fluctuations came from China whose commitments fell to $358m in 2019 from $5.6bn in 2018 but reached $2bn in 2020. They also came from ICA members whose commitments went from $1.3bn in 2018 to $4.8bn in 2019 and $2.4bn in 2020. Non-ICA bilateral and multilateral sources' commitments went from $235m in 2018 to $1bn in 2019 and $1.4bn in 2020. Commitments by African governments showed a steady decrease from $6.4bn in 2018 to $4.4bn in 2019 and $3.9bn in 2020.

The World Bank committed a $500m guarantee in 2019 in support of the Luanda Bita Water Supply Project in Angola to improve access to potable water service in selected areas of Luanda by mobilizing commercial financing for the Government of Angola. The project will develop water supply infrastructure to supply currently unserved urbanized and urbanizing areas of South Luanda.

Afreximbank committed $400m in 2020 in guarantee and direct lending to the Mozambique Area 1 LNG project. The financing will be used to partially finance the project development activities required to extract natural gas offshore, its transfer to onshore processing facilities and then its conversion to LNG for export to various markets around the world. The project will play a key role in Mozambique's economic growth and support the wider region.

Figure 8.8: Total Financing to Southern Africa by Sector, 2019-2020
Each year, transport and energy accounted for 70% of commitments to Southern Africa

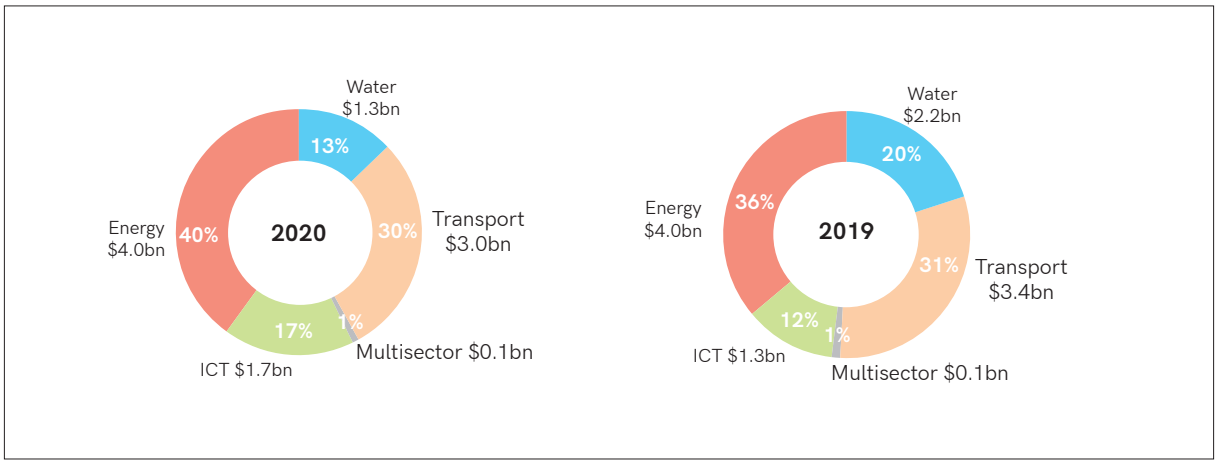
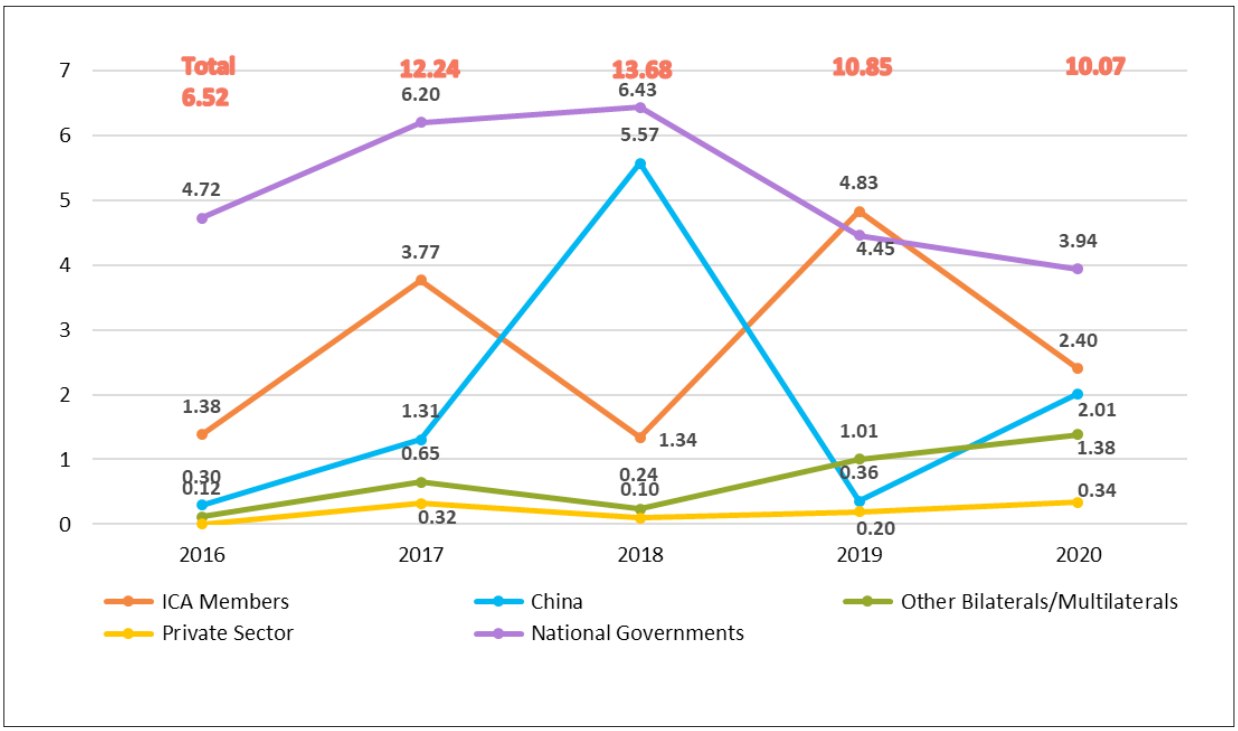


Figure 8.9: Trend in Commitments to Southern Africa by Source ($bn), 2016-2020
Commitments decreased in 2019 and 2020



West Africa

Commitments to West Africa represented the largest share of both 2019 and 2020 commitments, respectively 26% ($22.5bn) and 27% ($22.3bn). These commitments are in line with previous years in terms of share, a 2016-2018 average of 26%, but higher in terms of amounts, when compared to a 2016-2018 average of $21.4bn. ICA members and African governments contributed the most to the region in both years: ICA members contributed $10bn (44%) of 2019 commitments and $7bn (31%) of 2020 commitments, compared with commitments of $6bn (24%) in 2018. African Government contributed $6.4bn (28%) of 2019 commitments, and $6.5bn (29%) of 2020 commitments, compared with $7.9bn (31%) in 2018. In 2020, the private sector committed $5.6bn (25%), almost twice the amount it contributed in 2019, $2.9bn (13%), and substantially more than the $1bn (4%) it committed in 2018. Figure 8.10 shows the breakdown of all commitments by sector for 2019 and 2020.

China committed $199m in 2019 and $180m in 2020 to support the second phase of the Integrated National Security Communications Enhancement Project in Ghana. The project includes the installation of 10,000 CCTV cameras and cellular technologies at vantage areas in all regional and district capitals across the country to enhance the operational efficiency of the security and intelligence agencies.

Another notable commitment in 2019 was a $93m loan made by the Agence Française de Développement in support of the Yeleen Solar Plants Development in Burkina Faso, co-financed with AfDB and the EC. The project will increase and diversify electricity supply through the construction of four new 52MW photovoltaic plants, and connect 30,000 new households, or about 200,000 people.

Figure 8.10: Total Financing to West Africa by Sector, 2019-2020
Energy accounted for close to half the 2020 commitments to West Africa

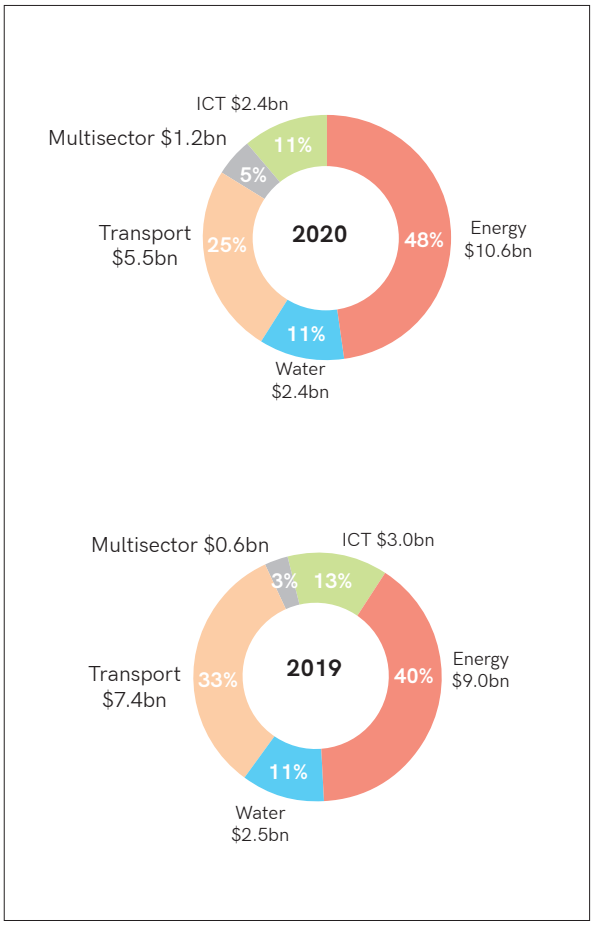
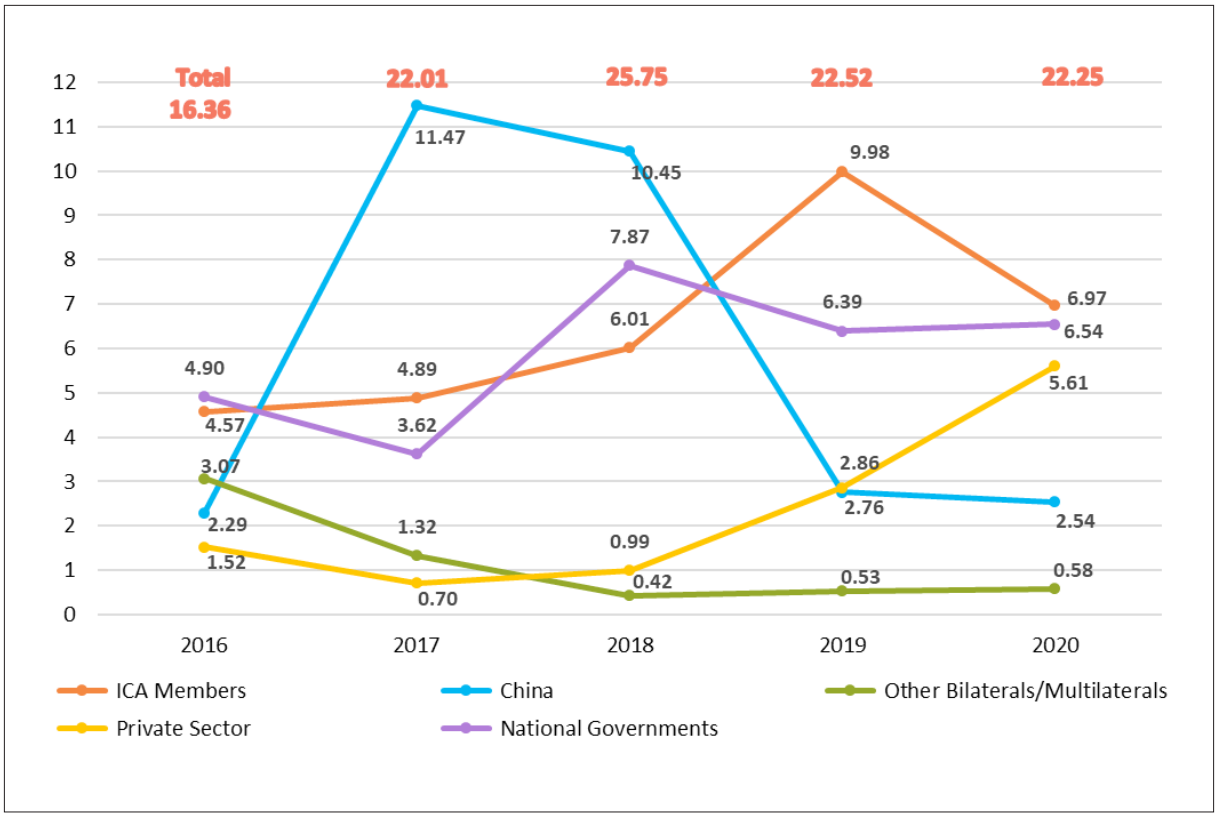


Figure 8.11: Trend in Commitments to West Africa by Source ($bn), 2016-2020
West Africa received the largest share of commitments in 2019 and 2020



The Republic of South Africa

South Africa (RSA) saw commitments decrease steadily and sharply, from $18bn in 2018 to $12.7bn in 2019 and $9.5bn in 2020. Commitments from every source group declined in 2019 and 2020, except from non-ICA bilateral and multilateral organizations whose 2019 commitments reached $1.75bn in 2019 and $1.1bn in 2020, compared with $500m in 2018. The biggest decrease came from the private sector whose commitments fell from $7.7bn in 2018 to $2bn in 2019 to $1.7bn in 2020. Commitments from other sources also declined but not as sharply: ICA members contributions went from $1.7bn in 2018 to $1.4bn in 2019 to $1.1bn in 2020. Commitments by African governments decreased from $6.8bn in 2018 to $6.2bn in 2019 to $5.8bn in 2020. No commitments from China for 2020 could be found.

In 2019, the New Development Bank committed a loan of $427m to set up Eskom's battery energy storage system, comprising 360 MW/1,440 MWh of distributed battery storage sites across four provinces in South Africa. This innovative battery energy storage system, the first of its kind in the African continent, can help address South Africa's electricity supply-demand mismatch by allowing energy to be stored during off-peak periods and released during peak periods.

Figure 8.12: Total Financing to RSA by Sector, 2019-2020
Energy commitments fell by 79% between 2019 and 2020

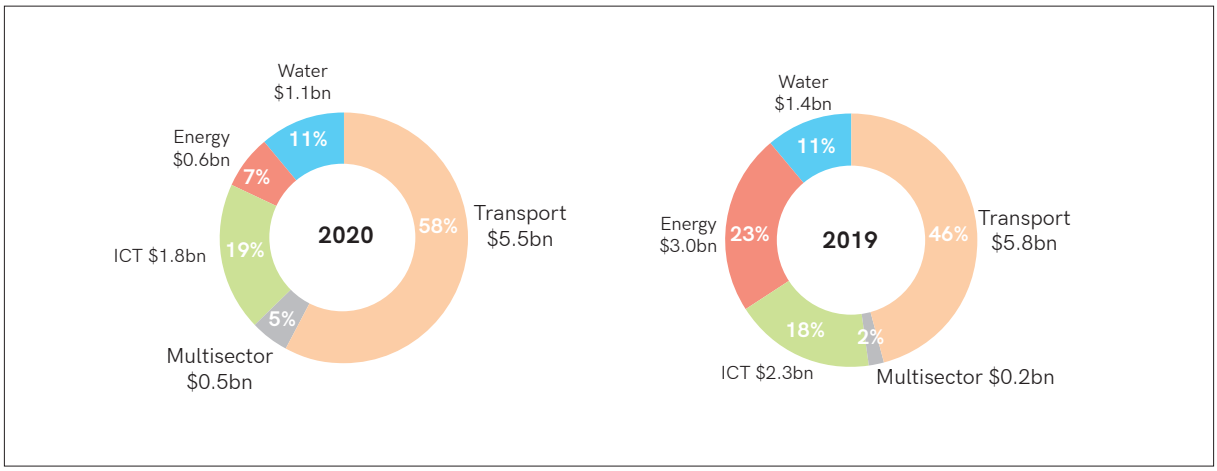
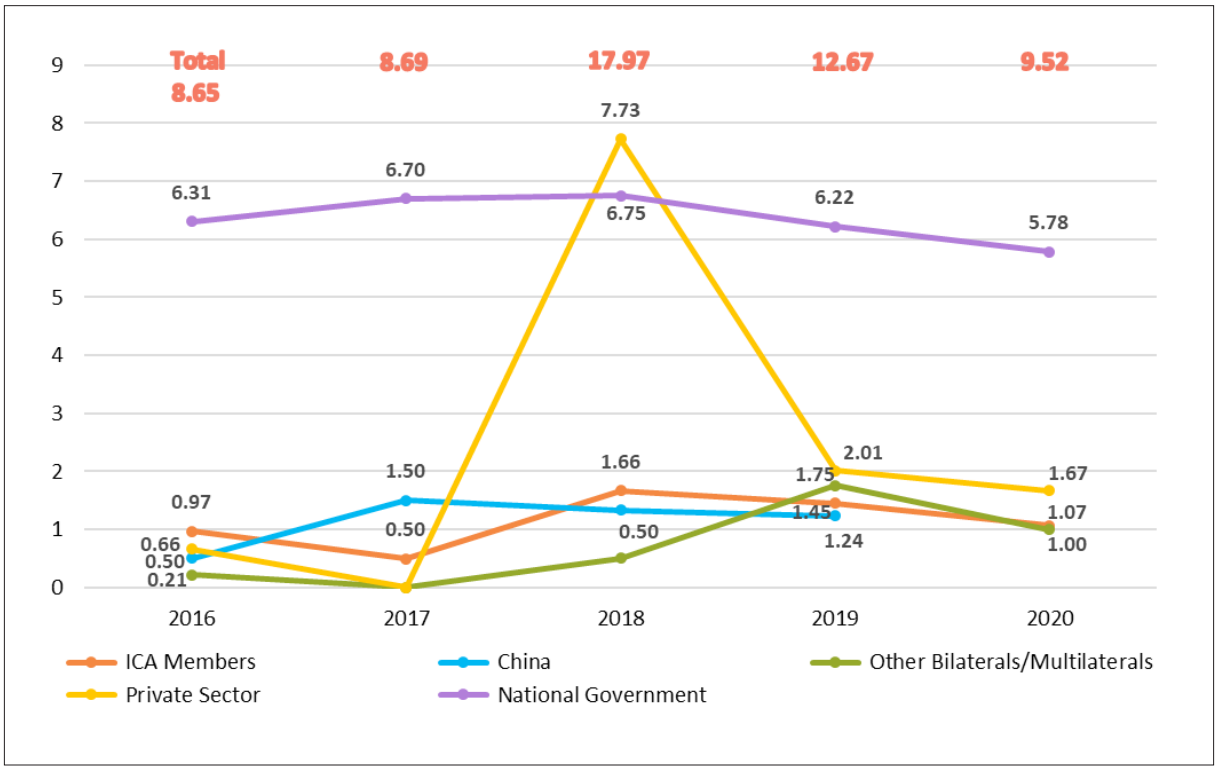


Figure 8.13: Trend in Commitments to RSA by Source ($bn), 2016-2020
Commitments decreased sharply in 2019 and 2020



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