

# Infrastructure Financing Trends in Africa – 2016



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# Infrastructure Financing Trends in Africa – 2016



**ICA REPORT – 2016**  
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# Acknowledgements

**The completion of Infrastructure Financing Trends in Africa – 2016 marks another milestone for the Infrastructure Consortium for Africa (ICA) in its consistent reporting of the mobilisation of financial resources to facilitate the development of the continent’s transport, water and sanitation, energy and ICT sectors. This report identifies key trends and looks to explain the processes and dynamics driving and restraining them and highlights emerging trends.**

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# Foreword



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**It is my pleasure to present to you the eighth edition of the ICA Annual Report - Infrastructure Financing Trends in Africa 2016. The report, while examining financing trends in a consistent manner, also identifies new opportunities for resource mobilisation.**

For the first time, the report examines how new resources are being mobilised at a country level, while continuing to present data on a regional basis to provide consistency with previous years' reports. This will provide better insight into jurisdictions where political and regulatory structures, alongside institutional capacity, have created enabling environments that attract investment.

Another innovation this year is sub-sectoral analysis to help stakeholders obtain a granular picture of who is providing the funds and what they are funding. We now know, for example, that the roads sub-sector attracted 44% of identified transport ICA member commitments while railways attracted just 4.1%. Non-ICA members, however, supported the maritime and ports sub-sector most strongly, with \$2bn of commitments. Nearly 75% of members' ICT sector commitments focused on broadband and fibre optic infrastructure development, while the mobile and wireless network sub-sector was the sole focus of identified sub-sectoral commitments in 2016 by non-ICA members.

Total reported financing for infrastructure development in 2016 was \$62.5bn, consisting of identifiable African national government budget allocations, financial commitments by ICA members, DFIs and state funders in China, Europe, India, South Korea and the Arab Funds, as well as private sector investments. This is the lowest amount since 2012. The drop in financing is largely due to Chinese investments announced in 2016 totalling \$6.4bn, substantially less than the \$20.9bn reported in 2015 as well as less private sector investment.

In this context, identifying emerging trends that will bring new types of funding and new investors in Africa's infrastructure development must be considered an important task. This includes the adoption of smart and integrated infrastructure, as well as more recognition of the role of corridor management for regional projects, to encourage investors.

As far as emerging instruments are concerned, new trends include an increased interest in blended finance, in which

concessional finance seeks to leverage non-concessional finance that would not otherwise have been available. This funding typology has the potential to attract new institutional, philanthropic and private sector investors, but according to public and private sector stakeholders consulted for this report, much work is needed to realise this potential.

Development capital is also providing much-needed early-stage equity funding to some innovative energy and ICT projects focused on mobile telecoms. This type of finance has yet to reach other sectors, but it is encouraging to read in this report that ICA members and non-member DFIs are increasingly interested in deploying development capital. Risk mitigation strategies have also been identified as a tool to leverage additional financing for early-stage project development and bring in new types of private sector and institutional investors.

This report also identifies an emerging trend of new infrastructure financing institutions. For instance, over the past year, new financial institutions such as the New Development Bank, the multilateral development bank established by the BRICS states and infrastructure development funds such as Africa50 have emerged to support African infrastructure development.

Going forward, the 2017 ICA report will include an analysis of Africa's financing needs. Thus far, we have been only addressing the issue from the supply side and it has become essential to complement this with a demand analysis in collaboration with the AfDB hosted African Infrastructure Knowledge Programme.

A still more diverse investor base, practical financial tools and an accessible range of funding types appear to be much needed. We are sure this report will help stakeholders grasp the opportunities available to mobilise greater resources for Africa's infrastructure development, so that the ICA's vision that all Africans should have access to reliable and sustainable infrastructure services can be realised.

**MOHAMED H HASSAN**  
Co-ordinator, ICA Secretariat

**The Infrastructure Consortium for Africa (ICA) was launched at the G8 Gleneagles summit in 2005. The membership is the G8 countries, the Republic of South Africa, the World Bank Group, the African Development Bank Group (AfDB), the European Commission, the European Investment Bank and the Development Bank of Southern Africa.**

African institutions such as the African Union, the New Partnership for Africa's Development (NEPAD) and the Regional Economic Communities all participate as observers in the meetings of the consortium. AfDB has hosted the Secretariat of the ICA since its inception in 2006.

At the May 2011 Annual meeting of the Consortium, the decision was made to enlarge ICA membership from G8 to G20. In November 2013, South Africa joined the ICA as the first G20 country non-G8, and first African country member of the ICA.

The ICA is a major initiative to

accelerate progress to meet the urgent infrastructure needs of Africa in support of economic growth and development. It addresses both national and regional constraints to infrastructure development with an emphasis on regional infrastructure, recognising the challenges at this scale. The Consortium is intended to make its members more effective at supporting infrastructure by pooling efforts in selected areas such as information sharing, project development and good practice.

Although ICA is not a financing agency, the consortium acts as a platform to broker more financing of infrastructure projects and programmes in Africa.

The main objectives of the ICA can be broadly defined as follows:

- Increase the amount of finance going to sustainable infrastructure in Africa from public, private and public and private sources;
- Facilitate greater co-operation between members of ICA and other

important sources of finance including China, India, Arab Funds and the private sector;

- Highlight and help remove policy and technical blockages and progress;
- Increase knowledge of the sector through monitoring and reporting on the key trends and development.

Increasingly, the ICA is working to improve the co-ordination of activities among members, and with other significant sources of infrastructure finance, including China, India, Arab and Islamic financiers, African regional development banks and the private sector. ■

## Power Pool Study

The **Regional Power Status in Africa Power Pools – 2016 Update** brings comprehensively up to date the 2011 **Regional Power Status in Africa Power Pools** report, which provided an overview of the status of Africa's five regional power pools: the Eastern Africa Power Pool, the Central African Power Pool, the Southern African Power Pool, the West African Power Pool and the Comité Maghrébin de l'Electricité.

The new report includes analysis of updated data detailing the progress made in each pool since the 2011 report. The 2016 update identifies findings, trends, challenges and possible solutions for the pools' respective regions and the potential to build effective power markets in the regions. The report also addresses private sector participation.

The report concluded that countries should mobilise investments for physical intra-regional infrastructure, including by agreeing strategies for the mobilisation of domestic resources such as pension funds and infrastructure bonds.

It also concluded that countries provide conducive legal and regulatory frameworks for private sector participation, including legally empowering the power pools to act on behalf of Regional Economic Communities (RECs) and governments. The power pools and directorates of energy in the RECs should focus on strengthening institutional capacity and skills. ■

## Atlas of Africa's Energy Resources

The new **Atlas of Africa's Energy Resources**, produced by the ICA in partnership with the United Nations Environment Programme and the Sustainable Energy Fund for Africa, compiles and synthesises regional and national information. It presents the scale and distribution of energy resources, production and consumption trends, and the potential for sustainable expansion.

**Atlas of Africa Energy Resources** features over 64 maps and 73 satellite images as well as some 50 graphics and hundreds of compelling photos. It highlights the opportunities and challenges for sustainable development of the continent's energy resources.

Showing both the potential and fragility of the continent's energy resources, the atlas highlights some successful sustainable energy development initiatives on the continent while also focusing on the major environmental challenges associated with energy infrastructure development.

Analysis in the atlas finds that while Africa is home for 16 per cent of the world's population, it consumes about 3.3 per cent of global primary energy and at the current rate of development it will be 2080 before the continent has 100% access to electricity.

Oil accounts for 42% of fuel used in energy production, while gas accounts for 28%, coal 22%, hydro 6%, renewable energy 1% and nuclear 1%. South Africa is the world's seventh largest coal producer and accounts for 94% of Africa's coal production.

Biomass accounts for more than 30% of energy consumed in Africa and more than 80% in many Sub-Saharan African countries. Africa's diverse renewable energy resources include a potential 10TW of solar potential, 350GW of hydro, 110GW of wind and 15GW of geothermal.

**Atlas of Africa Energy Resources** can be downloaded from the ICA and UNEP websites. ■

# Definitions and Acronyms

## 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 multi-sector or other infrastructure allocations are indicated separately.

## ICA Members

AfDB, DBSA, EC, EIB, G7 countries and Russia, Republic of South Africa and the World Bank Group. In 2011 all G20 countries were invited to join the ICA. The AU Commission, NEPAD Secretariat and Regional Economic Communities participate as observers at ICA meetings.

## 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 excluding RSA:** 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, West African Development Bank (BOAD).

## 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, (trans-boundary) 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 programmes.

## Acronyms

ACG – Arab Co-ordination Group

AFD – Agence Française de Développement

AfDB – African Development Bank

AfDB-OITC – Transport & ICT Department

AfDB-ONEC – Energy, Environment and Climate Change Department

AfDB-OPSD – Private Sector Department

AfDB-OWAS – Water and Sanitation

AfIF – Africa Investment Facility

AFESD – Arab Fund for Economic and Social Development

AMCOW – African Ministers' Council on Water

AREI – African Renewable Energy Initiative

ARMHIF – ARM-Harith Infrastructure Fund

AU – African Union

AUC – African Union Commission

AWF – African Water Facility

AWW – Africa Water Week

BADEA – Arab Bank for Economic Development in Africa

BCEAO – Banque Centrale des États de l'Afrique de l'Ouest (Central Bank of West African States)

BCP – Banque Centrale Populaire

BIO – Belgian Investment Company for



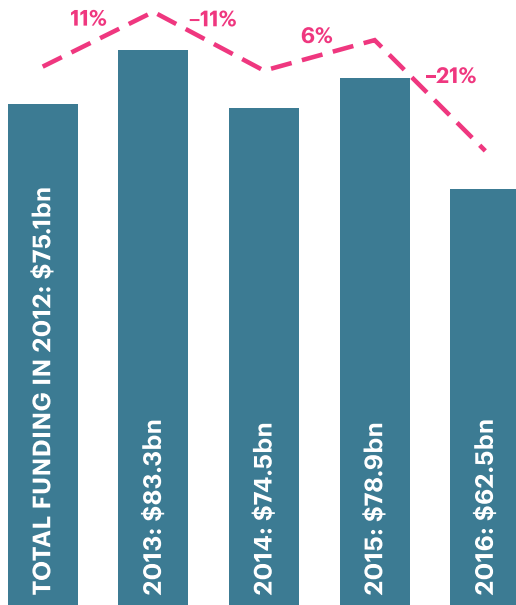
Developing Countries	Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, UK and US.	PIDA/PAP – PIDA Priority Action Programme
BMZ – Germany’s Federal Ministry for Economic Co-operation and Development	GIZ – German Corporation for International Co-operation	PPA – power purchase agreement
BNDES – Banco Nacional de Desenvolvimento Econômico e Social	GEIDCO – Global Energy Interconnection and Development Co-operation Organisation	PPDF – Project Preparation and Development Facility
BOAD – Banque Ouest Africaine de Développement	GMTN – Global Medium-Term Note	PPI – Private Participation in Infrastructure (project database)
CAGR – compound annual growth rate	GWCL – Ghana Water Company Limited	PPIAF – PPI Advisory Facility
CBN – PIDA Continental Business Network	IATA – International Air Transport Association	PPFN – Project Preparation Facilities Network
CCECC – China Civil Engineering Construction Corporation	ICBC – Industrial and Commercial Bank of China	PPP – public-private partnership
CDC – CDC Group plc., UK’s DFI	IFC – International Finance Corporation	PRODERRIC – Programme to open up regions at risk of insecurity and conflict
CDP – Cassa Depositi e Prestiti	IIPSA – Infrastructure Investment Programme for South Africa	PV – photovoltaic
COP 2 – UN Climate Change Conference	IPP – independent power producer/project	RDB – regional development bank
CSP – concentrated solar power	IRENA – International Renewable Energy Agency	RECs – Regional Economic Communities
DBSA – Development Bank of Southern Africa	IDB – Islamic Development Bank	REIPPP – South Africa’s Renewable Energy Independent Power Producer Procurement programme
DEG – Deutsche Investitions- und Entwicklungsgesellschaft	JBIC – Japan Bank for International Co-operation	Procurement programme
DFI – Development Finance Institution	JDA – joint development agreement	RIDMAP – (SADC) Regional Infrastructure Development Master Plan
DfID – UK’s Department for International Development	JICA – Japan International Co-operation Agency	SADC – Southern Africa Development Community
DMTN – Domestic Medium Term Note	JSE – Johannesburg Stock Exchange	SANRAL – South African National Roads Agency SOC Limited
EADB – East African Development Bank	KFAED – Kuwait Fund for Arab Economic Development	SDM – Service Delivery Mechanism
EAIF – Emerging Africa Infrastructure Fund	KfW – Germany’s development bank	SEFA – Sustainable Energy Fund for Africa
EASSy – Eastern Africa Submarine Cable System	LoC – line of credit	SEZ – Special Economic Zone
EBID – ECOWAS Bank for Investment and Development	MFAIC – Italy’s Ministry of Foreign Affairs and International Cooperation	SFD – Saudi Fund for Development
EBRD – European Bank for Reconstruction and Development	MoU – Memorandum of Understanding	SGR – standard gauge railway
EC – European Commission	NDB – New Development Bank	SMEs – small- and medium-sized enterprises
ECOWAS – Economic Community of West African States	NEPAD – New Partnership for Africa’s Development	SPV – special purpose vehicle
EDCF – Economic Development Co-operation Fund (South Korea)	NEPAD IPPF – NEPAD Infrastructure Project Preparation Facility	SSA – Sub-Saharan Africa
EDF – European Development Fund	NEPAD PPFs – Project Preparation and Feasibility Study	SUNREF – Sustainable Use of National Resources and Energy Finance
EIB – European Investment Bank	NSIA – Nigerian Sovereign Investment Authority	SWF – sovereign wealth fund
EU-AITF – EU-Africa Infrastructure Trust Fund	NRW – Non-revenue water	TA – technical assistance
FFEM – French Fund for the Global Environment	ODA – official development assistance	TDB – Trade and Development Bank
GAC – Global Affairs Canada	OFID – OPEC Fund for International Development	TEUS – Twenty-foot Equivalent Units
GIF – Global Infrastructure Facility	OMVG – Organisation for the Development of the River Gambia	TICAD V – Fifth Tokyo International Conference on African Development
4G LTE – 4G Long-Term Evolution (standard for mobile phones and data terminals)	OPIC – Overseas Private Investment Corporation	TTA – (DfID) Tripartite Trust Account
FDI – Foreign Direct Investment	OSBP – One Stop Border Post	UA – Unit of Account
FMO – Netherlands’ DFI	PAIDF2 – Pan African Infrastructure Development Fund 2	UEMOA – West African Economic and Monetary Union
G8 – Canada, France, Germany, Italy, Japan, Russia, UK and US.	PIDA – Programme for Infrastructure Development in Africa	UNECA – United Nations Economic Commission for Africa
G20 – Argentina, Australia, Brazil, Canada, China, European Union, France, Germany, India, Indonesia, Italy, Japan,		USAID – US Agency for International Development
		VRA – Volta River Authority
		WB – World Bank
		WBG – World Bank Group
		ZAR – South African Rand

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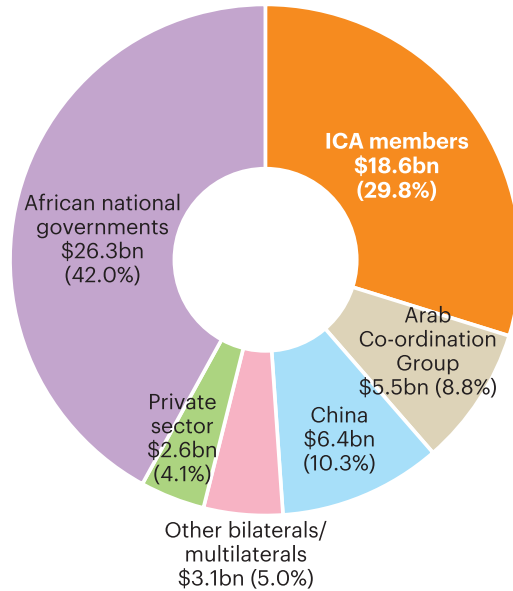
# 1. The Big Picture 2016

Total funding reached \$62.5bn in 2016

Funding decreased by 21%



It came from



And these sectors



Transport \$24.5bn (39.2%)



Water \$10.5bn (16.9%)



Energy \$20.0bn (31.9%)



ICT \$1.6bn (2.6%)

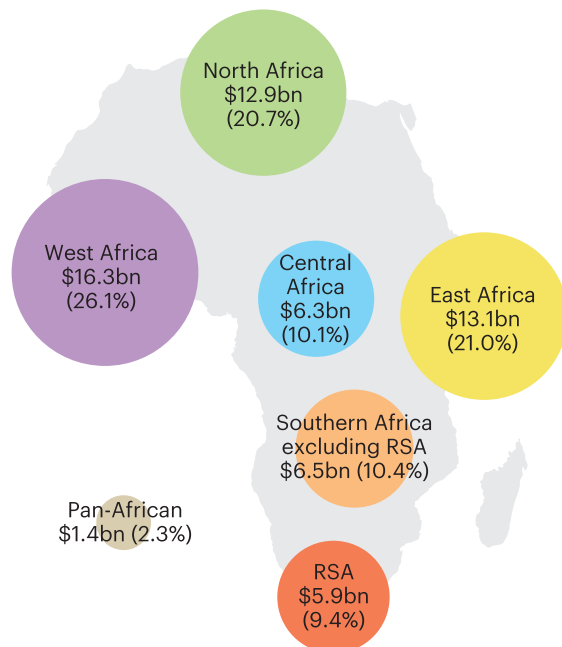


Multi-sector \$2.8bn (4.4%)



Other/unallocated \$3.2bn (5.1%)

Went to these regions



\* As part of the ICA's continued efforts to improve the accuracy and depth of historic data, the headline trends of overall spending on Africa's infrastructure over the last five years have been affected by a restatement of some national government budget data in the period 2012-2015. This is a result of a revalidation of historic figures.

# 1.1 Key Messages and Findings

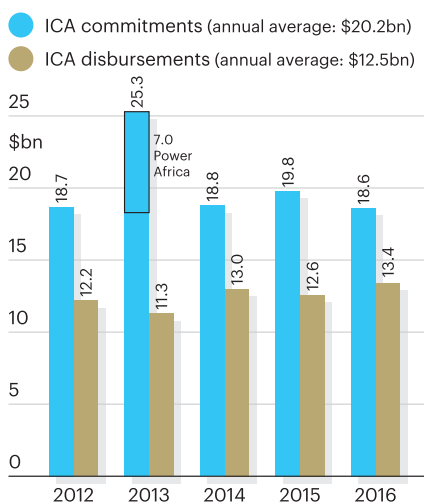
**Overall commitments to Africa's infrastructure from all reported sources declined in 2016 to \$62.5bn**, comprised of \$26.3bn of budget allocations from African national governments and external finance of \$36.2bn.

**External finance reached its lowest level since at least 2010**, largely due to a \$14.5bn reduction in reported Chinese funding from 2015 to 2016 and a \$4.9bn fall in private sector investment over the same period.

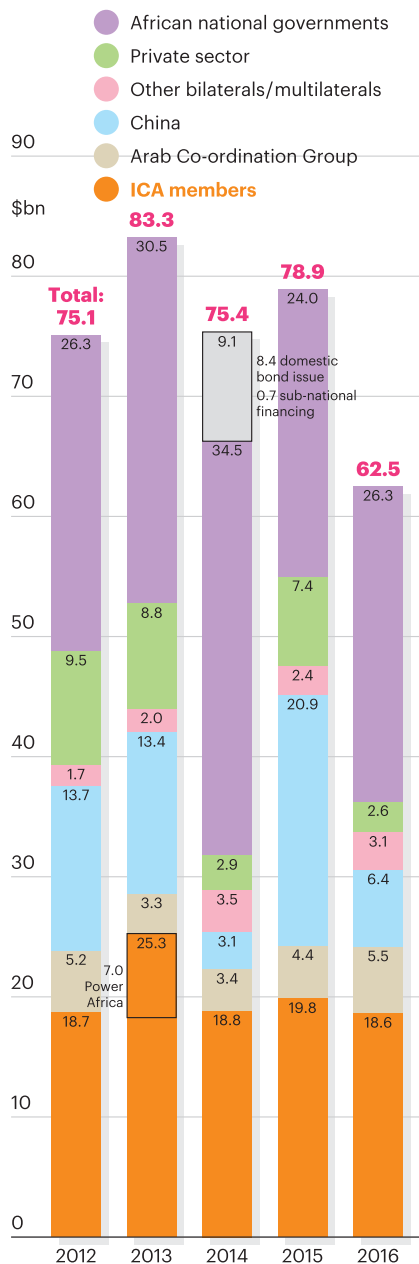
**Chinese funding has fluctuated substantially over recent years**, and this year's figure of \$6.4bn may be better compared with an annual average of \$12bn for 2011-2016, rather than the reported \$20.9bn in 2015 and \$3.1bn in 2014.

**In total, ICA members reported commitments of \$18.6bn, down 6% from \$19.8bn in 2015**. Excluding the exceptional \$7bn contribution from Power Africa in 2013, commitments have remained broadly constant for the past five years at an average of \$18.9bn (see Figure 1). Additional data were obtained this year from Italy, which reported commitments of \$28.8m.

**The total amount of identifiable infrastructure allocations across 46 African national government**



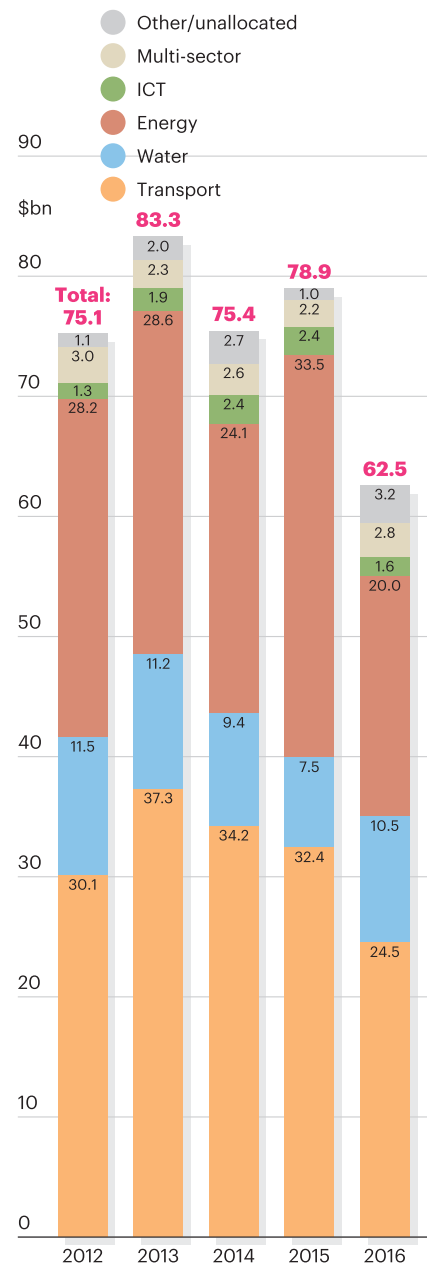
**Figure 1**  
ICA members' commitments and disbursements, 2012-2016



**Figure 2**  
Infrastructure commitment trends by source, 2012-2016

**budgets came to \$26.3bn in 2016**, compared with \$24bn based on 44 countries in 2015. Members of the Arab Co-ordination Group (ACG) committed \$5.5bn in 2016, a significant increase on 2015 (\$4.4bn) and 2014 (\$3.5bn).

**The value of projects with private sector participation reaching financial close in 2016 was \$3.6bn**, of which \$2.6bn was private capital as recorded on the World Bank's Private



**Figure 3**  
Infrastructure commitment trends by sector, 2012-2016

Participation in Infrastructure project database. This is a significant decrease on private capital recorded in 2015 (\$7.4bn) and 2014 (\$5.1bn) and less than one-third of that recorded in both 2013 and 2012 (\$8.8bn and \$8.7bn, respectively).

**India committed \$1.2bn to African infrastructure in 2016**, more than double its 2015 funding (\$524m), while South Korea committed \$432m to four

projects in 2016, compared with a single commitment of \$81m in 2015.

**The New Development Bank, the multilateral development bank established by the BRICS states, reported its first commitment to Africa's infrastructure in 2016 with a \$180m loan to South Africa's power utility, Eskom.**

**Total disbursements by ICA members in 2016 totalled \$13.4bn, up by 6% from 2015 (\$12.6bn).** Disbursements have now remained fairly constant for the last five years at between \$11.4bn and \$13.4bn.

**There has been a steady increase in energy sector disbursements over recent years.** These totalled \$6.1bn in 2016, compared with \$5bn in 2015 and an average \$4.7bn over the five-years to 2016.

**The gap between commitments and disbursements lengthened in 2016.** For projects completed in 2015, funds were committed in 2007 on average, a gap of eight years. For projects completed a year later, in 2016, the gap was nine years with the average year still 2007.

**Regional commitments by ICA members in 2016 totalled \$1.9bn, the same level as 2014, a decline from 2015 (\$3.4bn) and a long way from the \$4.5bn and \$4.2bn reported in 2012 and 2013, respectively.**

**Regional disbursements by ICA members in 2016 amounted to \$821.5m for the second year running, less than the \$1.8bn and \$1.9bn reported in 2014 and 2013, respectively.**

**Closer analysis of the infrastructure financing gap is needed.** A background paper commissioned by JICA and presented in 2017 at the Africa Emerging Markets Forum suggests an annual spending requirement of around \$120bn-\$140bn (at 2015 dollar rates) in the short-term. The *Global Infrastructure Outlook* prepared by the Global Infrastructure Hub estimates a current trends scenario projection of \$174bn per year or, if African economies were able to raise their performance to match that of their best performing peers, a total investment need of \$6trn up to year 2040, or \$240bn per year – a difference of almost 40%.

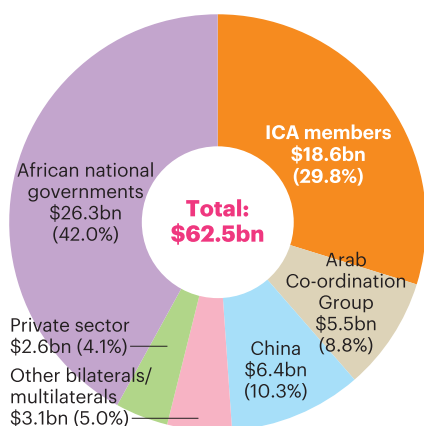
Many public and private stakeholders consulted in the preparation of this report said the main reasons for Africa's infrastructure deficit centre not on a lack of funds but a lack of bankable projects. But the sub-sectoral analysis conducted for the first time in this report coupled with stakeholder consultations reveals that while there appears to be a surfeit of finance and a project deficit in some sub-sectors, other sub-sectors – particularly larger

transport and water projects – still face a funding gap.

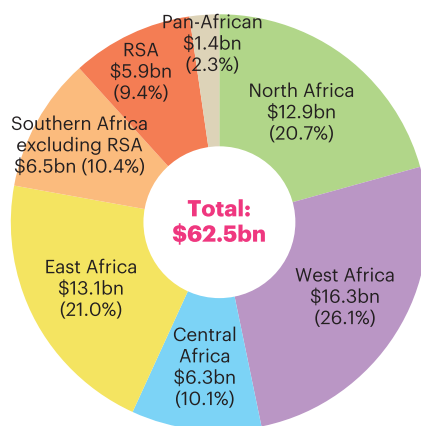
**Early stage project financing remains a challenge. Practical risk mitigation tools could encourage greater private sector participation in project preparation,** while a review of procurement processes could examine the efficacy of the current competitive tendering approach and consider the benefits of more collaborative approaches to project development.

**More investor types, including institutional and philanthropic investors, could benefit from participation in Africa's infrastructure development.** But for this to happen, alternative funding types such as blended finance and development capital need to be developed and deployed.

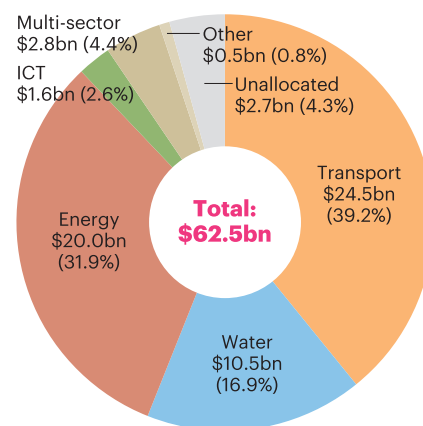
More sales and marketing is also needed, not just in terms of making the business case for stable long-term returns to institutional investors, shorter-term returns for private equity investors and social returns for philanthropic investors but also in making the case for infrastructure development to politicians, particularly in its capacity to create direct and indirect jobs alongside a host of social and economic benefits. ■



**Figure 4**  
Total infrastructure financing in 2016 by source

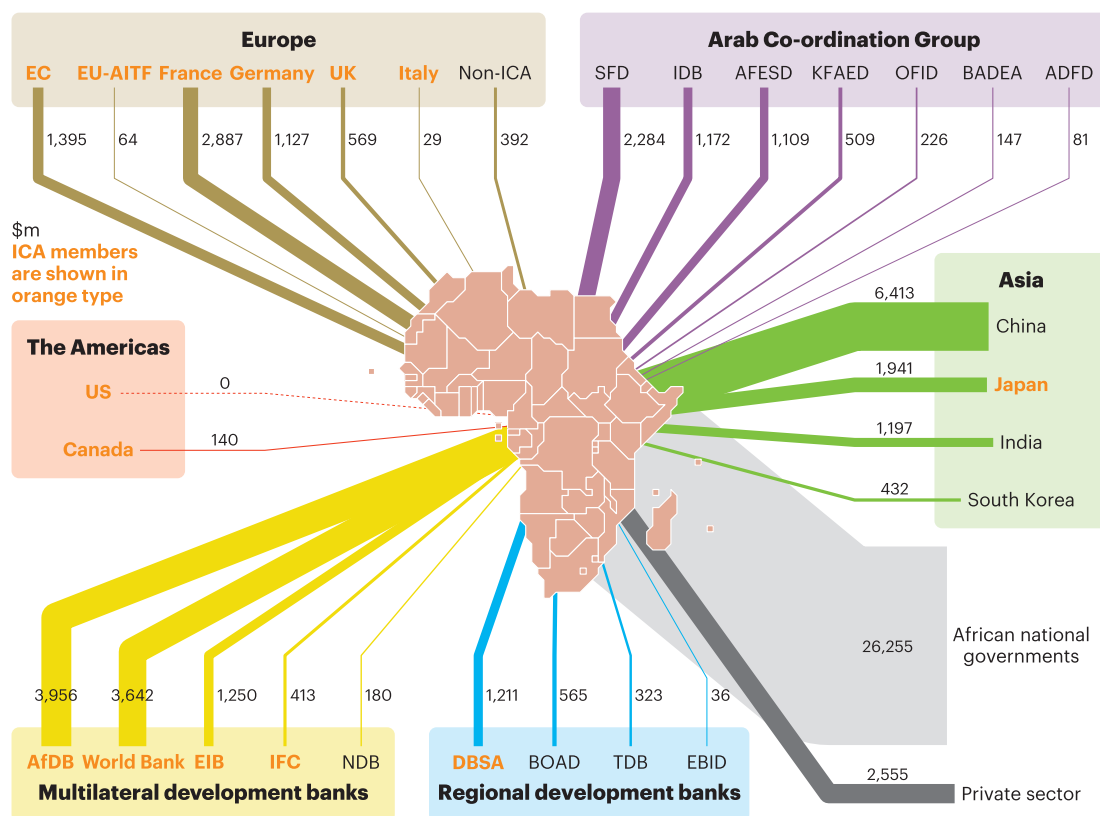


**Figure 5**  
Total infrastructure financing in 2016 by region



**Figure 6**  
Total infrastructure financing in 2016 by sector

# 2. Financing Trends



**Figure 7**  
Reported and identified financing flows into Africa's infrastructure, 2016

## 2.1 Who Is Financing Africa's Infrastructure

**Overall commitments to Africa's infrastructure from all reported sources declined to \$62.5bn in 2016, the lowest level in five years.**

This figure is more than the \$55.9bn and \$41.5bn reported in the 2010 and 2011 editions of this report, but those years did not include data from African national government allocations, which averaged \$28.4bn in the five years to 2016.

Falling commitments from 2015 to 2016 are substantially due to a large reduction of \$14.5bn of reported Chinese funding and a \$4.9bn reduction of private sector investment. Overall commitments fell by \$16.4bn from 2015 to 2016.

The fall in Chinese funding particularly hit the energy sector, with overall sector commitments falling by \$14.7bn (42%) between 2015 and 2016. China's \$1bn

funding for transport in 2016, compared with nearly \$10bn the previous year, explains most of the overall decline in funding (of 29% or \$10.2bn) for the sector.

Commitments of \$18.6bn from ICA members were reported in 2016. Excluding the exceptional \$7bn pledge from Power Africa in 2013, ICA members' commitments have remained broadly constant for the past five years, at an average of \$18.9bn.

The Arab Co-ordination Group (ACG) reported commitments of \$5.5bn in 2016, the third consecutive annual increase and the highest amount in the last eight years, over which period the average annual commitment has been \$3.8bn.

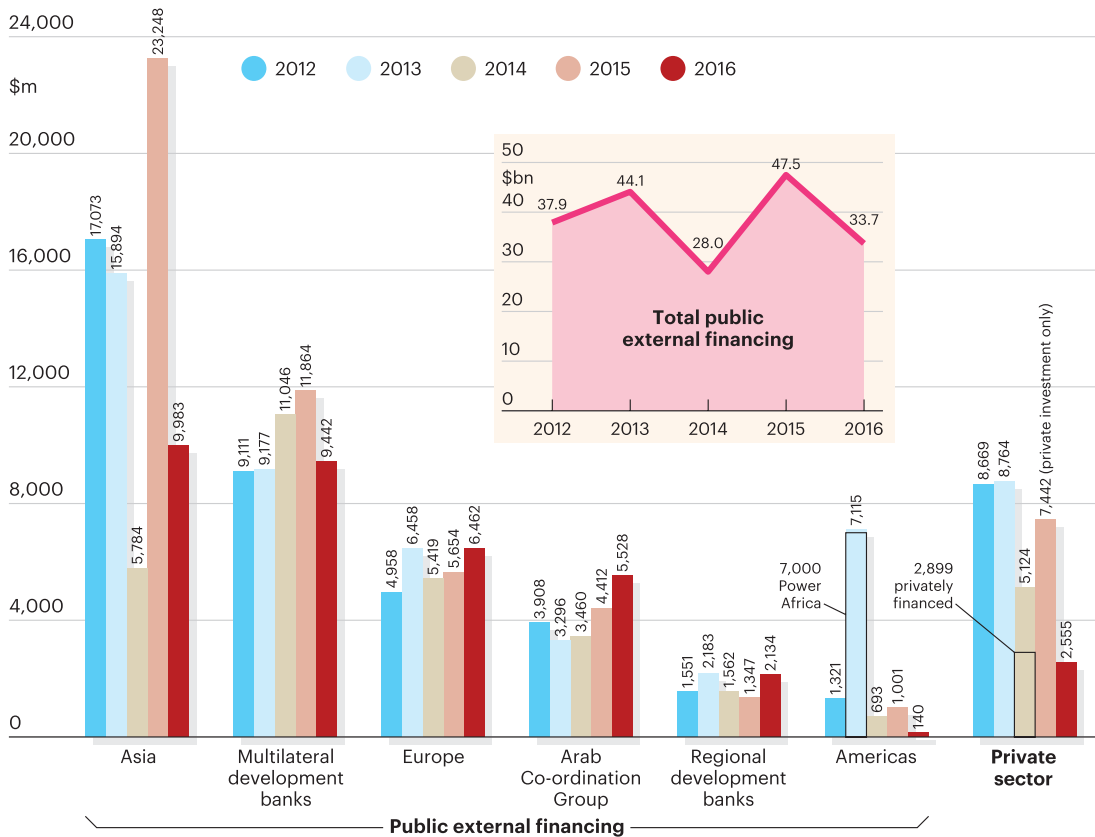
Internally funded African national government budget allocations, which were on an upward trend until 2014

remained depressed in 2016 at \$26.3bn, although this was a slight improvement over the \$24bn of internally funded budget allocations reported in 2015.

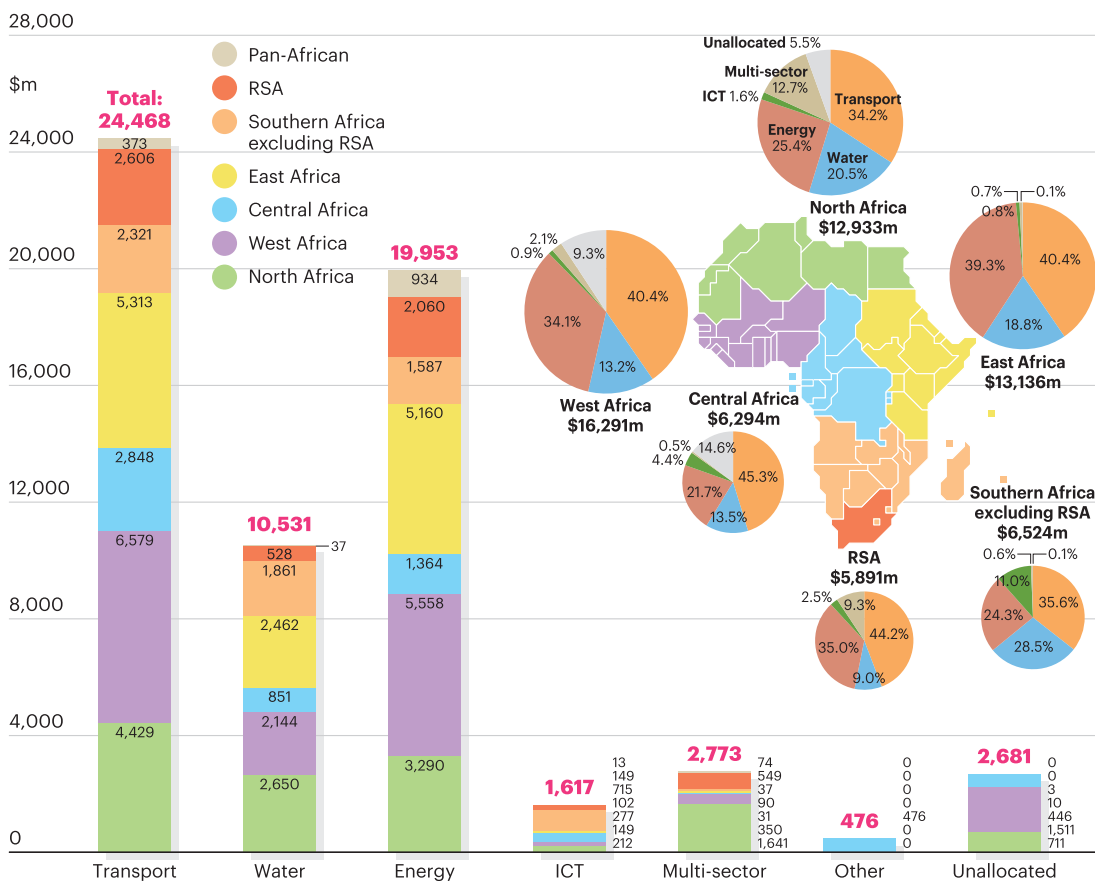
India's commitments more than doubled in 2016 to \$1.2bn, compared with \$524m in 2015. South Korea committed \$432m to four projects in 2016 compared with a single commitment of \$81m in 2015. Brazil announced no new commitments in 2016.

Commitments of \$924m, more than double 2015 (\$419m), were recorded for four non-ICA member regional development banks – BOAD, EBID, TDB, and EADB.

Commitments by non-ICA member European DFIs totalled \$392.2m in 2016, a significant decrease on 2015 (\$876m). ■

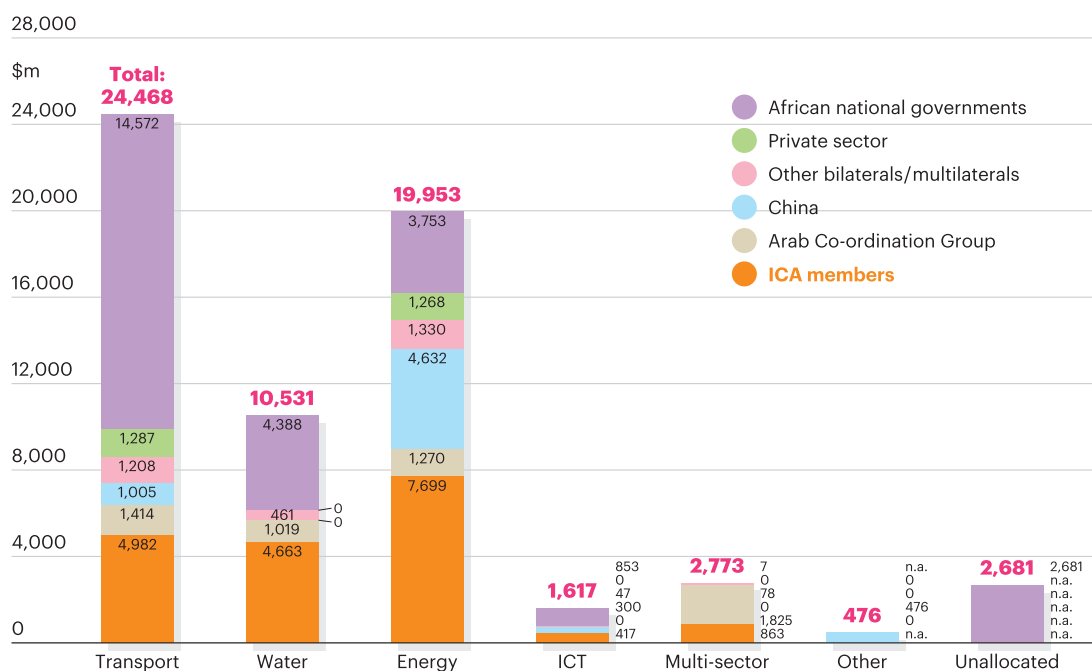


**Figure 8**  
Sources of finance 2016, public external and private



**Figure 9**  
Total 2016 infrastructure commitments by sector and region

## 2.2 Financing Trends by Sector



**Figure 10**  
Total 2016 infrastructure commitments by sector and source

### Transport

**Commitments to the transport sector fell sharply in 2016 to \$24.5bn, compared with \$32.4bn and \$34.4bn in 2015 and 2014, respectively.** The sector benefitted from strong Chinese support in 2015 while budget allocations to transport from national governments peaked at \$17.6bn in 2014 before they were depressed, during a period of weak oil and commodity prices, in the following two years.

African national governments nevertheless continued to be the prime funders of the continent's transport infrastructure in 2016, providing \$14.6bn (59.6%) of the \$24.5bn committed in the year. While ICA member commitments to the sector declined slightly to \$5bn, this once again accounted for approximately 20% of total financing for the sector.

Across the regions, West Africa received the highest level of transport commitments in 2016 (\$6.6bn or 26.9% of the total), compared with 2015, when East Africa was the top region for transport with \$11.8bn, or more than one-third, of commitments. In 2016,

North, Central and Southern Africa received \$4.4bn, \$2.9bn and \$2.3bn, respectively. South Africa received \$2.6bn.

### Water

**Commitments to the water sector increased substantially from \$7.5bn in 2015 to \$10.5bn in 2016** and surpassing the \$9.7bn reported in 2014. Of the 2016 commitments, ICA members provided \$4.7bn (44%), more than any other funding source. African national governments once again provided a substantial amount of funding to the sector, with \$4.4bn allocated, while bilateral and multilateral agencies committed the remaining \$1.5bn.

In keeping with previous years, North Africa (\$2.6bn) and East Africa (\$2.5bn) accounted for almost one half of total commitments to the water sector in 2016. West Africa received \$2.1bn in water sector financing in 2016, a substantial increase on 2015 (\$1.1bn). Financing for projects in Southern Africa stood at \$1.9bn (18%), while Central Africa and South Africa received \$851m and \$528m, respectively.

### Energy

**Financing of energy projects in Africa fell to \$20bn in 2016, from the record high of \$33.5bn reported in 2015,** which comprised African national government allocations of \$6bn, ICA member commitments of \$8.6bn and, notably, \$12.9bn from other bilaterals and multilaterals, of which \$10bn was from China. The private sector also made a significant contribution to the sector in 2015 with \$7.2bn.

ICA members' commitments to the sector in 2016 accounted for \$7.7bn (38.6%) of total funding, while African national government allocations of \$3.8bn were less than the \$4.8bn committed in 2015.

In 2016, Chinese commitments, almost halved to \$4.6bn, although this still accounted for 23% of total commitments to the sector.

The relative lack of renewable energy projects reaching financial close in South Africa, compared with previous years, was a major contributor to the overall decline in financing for the sector, with the private sector investing just \$1.3bn in 2016.



Southern Africa, including South Africa, historically a primary destination for investment in the sector, received only 18.3% of total commitments in 2016, compared to 50% in 2015. Instead, West and East Africa accounted for over one half of total commitments, receiving \$5.6bn and \$5.2bn, respectively. Commitments to North Africa fell from \$4.5bn to \$3.3bn over the same period, while those to Central Africa increased from \$1.2bn to \$1.4bn.

### ICT

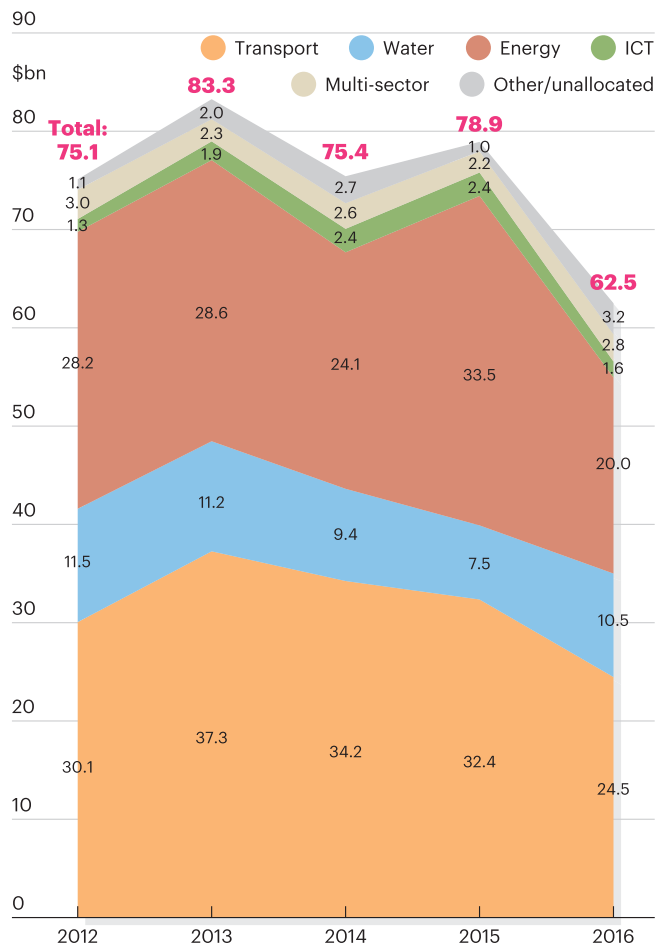
**ICT sector commitments stood at \$1.6bn in 2016, less than the \$2.4bn reported in 2015.** African national government allocations increased to \$853m, but Chinese investments declined from just over \$1bn in 2015 to \$300m. Chinese funding in 2016 reached just one project, the second and third phases of Zambia’s digital migration.

ICA member financing of ICT projects remained substantial, accounting for 26% of all commitments in 2016, although at \$417m this was less than the \$616m reported in 2015. Once more, Southern Africa (excluding RSA) was the largest recipient of ICT commitments from all sources, attracting 44% of the total (\$715m).

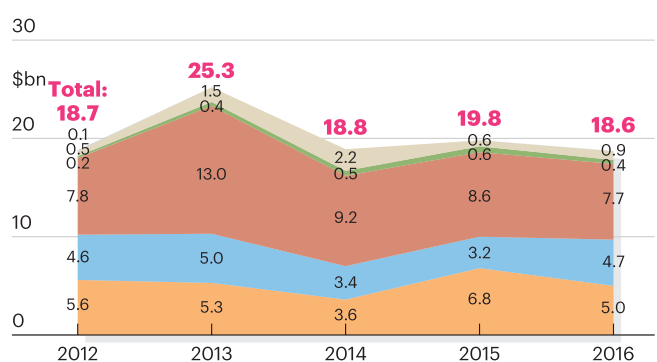
### Multi-sector

**Total multi-sector commitments increased from \$2.2bn in 2015 to \$2.8bn in 2016.** ACG members accounted for the vast majority of multi-sector financing in 2016 (\$1.8bn), largely due to the lack of a clear breakdown by sector of a \$1.6bn commitment by the Saudi Fund for Development to support a range of projects in Egypt’s Sinai region.

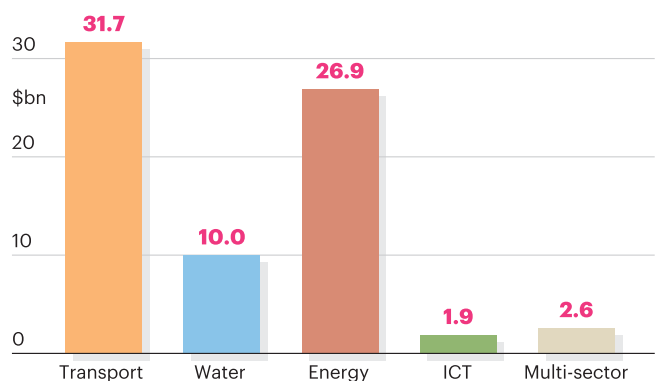
The SFD funding was the only 2016 multi-sector finance for North Africa, which unusually received more commitments than both South Africa and West Africa, which received \$549m and \$350m, respectively. ■



**Figure 11**  
Total infrastructure financing by sector, 2012-2016

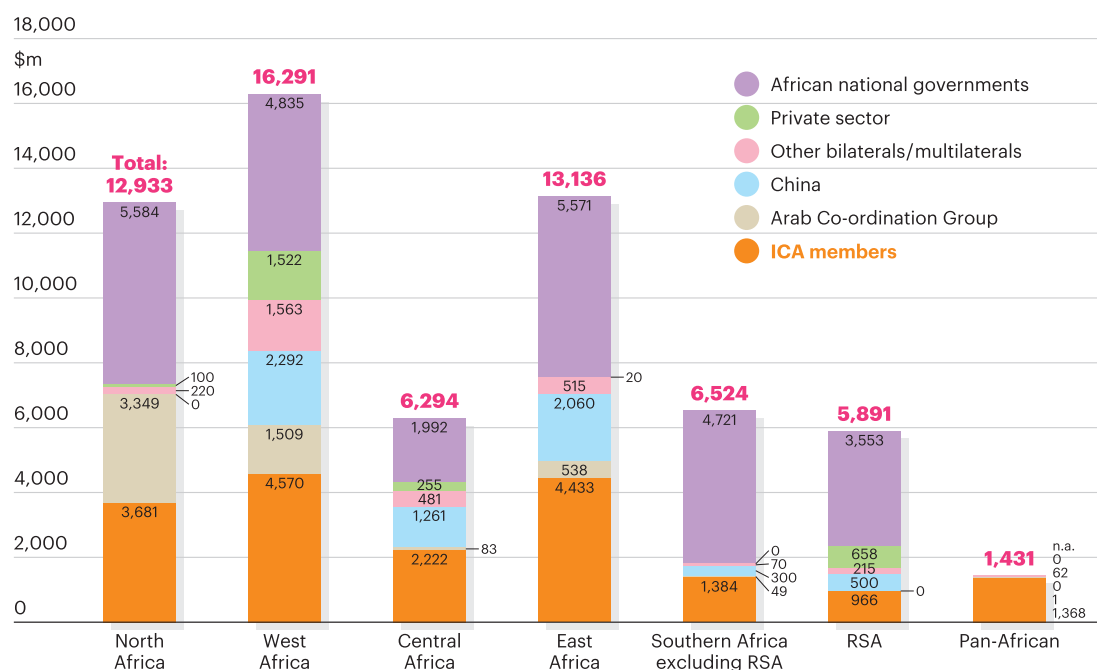


**Figure 12**  
ICA member commitments by sector, 2012-2016



**Figure 13**  
Average annual total infrastructure financing by sector, 2012-2016

## 2.3 Financing Trends by Region



**Figure 14**  
Total 2016 infrastructure commitments by region and source

Of the \$62.5bn committed to Africa's infrastructure in 2016, West Africa received \$16.3bn of commitments, followed by East Africa with \$13.1bn and North Africa with \$12.9bn. Southern (excluding RSA) and Central Africa received \$6.5bn and \$6.3bn, respectively, while RSA received \$5.9bn. Intraregional and pan-African commitments amounted to \$1.4bn.

The most dramatic decline in commitments was experienced by South Africa, which saw \$5.9bn committed in 2016 compared with \$11.7bn in 2015 – although that was an exceptionally good year with \$7.1bn of investments announced by China. Commitments in 2016 to South Africa are in excess of the \$4.9bn reported in 2014.

A relative lack of Chinese funding also contributed to a 33% reduction in commitments to East Africa from 2015 levels (\$19.3bn). Commitments declined less sharply in North Africa.

Infrastructure commitments in North Africa totalled \$12.9bn in 2016, of which national governments allocated \$5.6bn, a five-year high and more than 50% of all funding for the

region. ICA members provided \$3.7bn, less than the \$4.1bn provided in 2015 and commitment levels for both 2012 and 2014 (see Figure 16, below right).

ACG commitments increased from \$1.9bn in 2015 to \$3.3bn in 2016, largely due to a \$1.6bn commitment from SFD for several infrastructure projects in Sinai, Egypt.

Private investment, at \$100m, was significantly less than the \$1.2bn recorded in 2015 and targeted just one project, the Benban solar complex in Egypt.

Commitments to West Africa totalled \$16.3bn in 2016, the highest level since 2013, with the majority of investment going to the transport sector. Investments to the region from all sources, except China, increased in 2016. National governments provided \$4.8bn and ICA members \$4.6bn. China committed \$2.3bn to the region in 2016, compared with \$4.3bn in 2015.

ACG commitments to the region totalled \$1.5bn in 2016, a third consecutive annual increase, underlining a broader focus on African infrastructure financing, away from North Africa.

A total of \$6.3bn was committed to Central Africa in 2016, a marked increase on 2015 (\$4.7bn). The majority of funding was provided by ICA members (\$2.2bn), national governments (\$2bn) and China (\$1.3bn), with transport receiving the largest sectoral share (\$2.8bn), followed by energy (\$1.4bn), water (\$851m), ICT (\$277m) and multi-sector projects (\$31m).

ICA member support increased substantially in 2016 compared to 2015 (\$1.3bn) and is on a par with the \$2.4bn committed in 2013. Both years are substantially less than the \$3.7bn committed in 2014 but above the \$1.8bn six year average for 2011-2016.

Chinese funding for the region in 2016 expanded to \$1.2bn from the \$338m recorded in 2015 and while nowhere near the \$10.2bn recorded in 2011, is a considerable rise on the average \$390m for the 2012-2015 period.

Commitments to East Africa totalled \$13.1bn in 2016, a significant decrease from the \$18.7bn reported in 2015, largely due to decreased commitments from China, which announced \$2.1bn of funding in 2016, compared with \$6.8bn in 2015.

East African national governments allocated \$5.6bn in 2016, \$798m less compared with the previous year.

ICA members reported \$4.4bn commitments to East Africa in 2016, compared with \$4.7bn in 2015. Total ICA member commitments to the region have varied considerably over the last six years, ranging from \$2bn in 2014 to \$6.9bn in 2013 but average \$4.2bn over the six years to 2016.

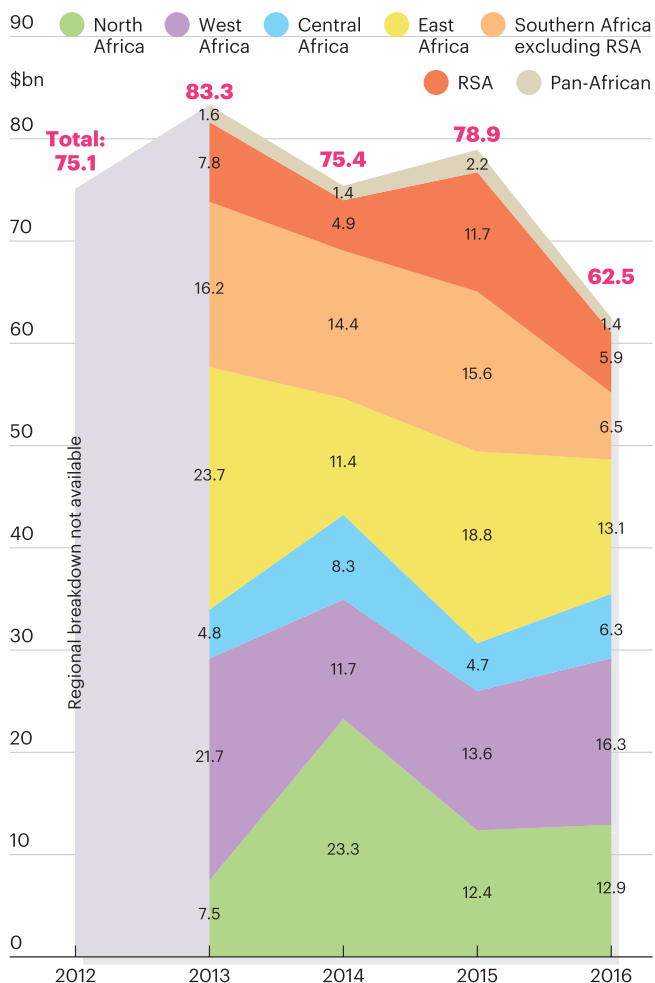
East Africa accounted for just \$19.6m of private sector financing compared with \$45m in 2015, suggesting the region has yet to develop effective ways of attracting commercial investors.

**Commitments to Southern Africa (excluding RSA) decreased significantly to \$6.5bn** compared with \$15.6bn recorded in 2015. The most notable decrease in financing was in Chinese investments, which fell to \$300m from \$7.1bn the previous year. ACG commitments declined to \$48.6m from \$325.2m over the same period.

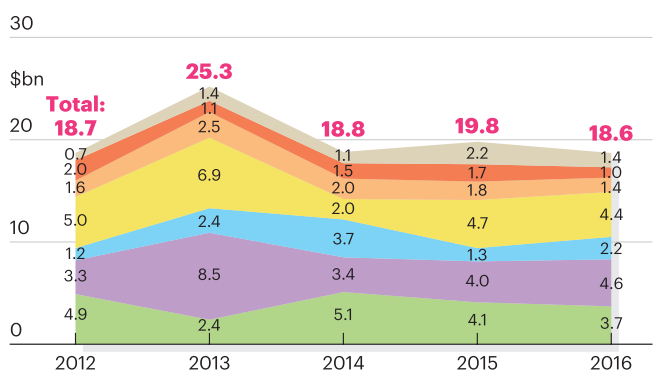
ICA member commitments to the region fell to \$1.4bn in 2016 from almost \$1.8bn in 2015, following a trend of steadily reducing ICA member funding for the region since 2013, when investment stood at \$2.5bn.

Commitments from other sources were reasonably consistent with previous years, although African national governments' spending fell to \$4.7bn in 2016 from \$5bn in 2015.

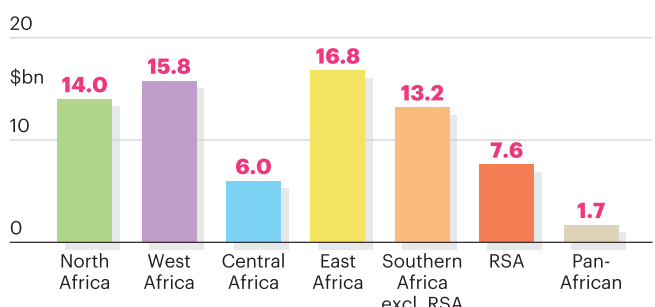
**Commitments to South Africa reduced significantly to \$5.9bn in 2016 compared with the \$11.7bn recorded in 2015** but due to two very clear factors – a significant reduction in financing from China to \$500m from \$2.2bn and the lack of private sector funds that has previously flowed into the Renewable Energy Independent Power Producer Procurement (REIPPP) programme (also a factor in previous years). Private investment fell to \$658m from \$3.8bn in 2015. ■



**Figure 15**  
Total infrastructure financing by region, 2012-2016



**Figure 16**  
ICA member commitments by region, 2012-2016



**Figure 17**  
Average annual total infrastructure financing by region, 2012-2016,

# 3. Strategic Trends



iStock/Getty Images

## 3.1 Towards the Promotion of Smart and Integrated Infrastructure in Africa

**Africa was high on the agenda at the 2017 G7 summit of Heads of State in May. Under Italy's presidency, the summit was held on the Italian island of Sicily, less than 100 miles away from Africa. Italy invited the leaders of Tunisia, Nigeria, Niger, Ethiopia and Kenya to take part in the talks. Italian prime minister, Paolo Gentiloni, called for a new "partnership" between G7 nations and Africa involving aid and investment.**

Ridding the world of as much carbon as possible was a top summit priority, and is incorporated alongside smart and integrated infrastructure, digitalisation and mobility in Italy's theme for the plenary meeting at the 2017 ICA Annual Meeting.

*Towards the Promotion of Smart and Integrated Infrastructure in Africa – an Agenda for Digitalisation, Decarbonisation and Mobility* identifies areas where practical action can help build and cement a new partnership between G7 nations and Africa.

Seven out of eight EU-AITF operations approved in 2016 had climate change mitigation or adaptation as a significant or principal objective. Climate change mitigation is an important issue for assessment of projects by the EC, which estimates that 40-50% of new programmes have climate related components. GIZ said around one-third of its commitments in 2016 had a direct climate-related component while IFC said three out of 16 committed and 6 of 25 disbursed projects were climate related. WBG said for its fiscal year ending June 2016, 19% of its total commitments were climate related – while this includes all projects, infrastructure accounts for the vast majority.

JICA supports client countries to develop low carbon power plants, such as geothermal power in the Great Rift Valley in East Africa, high efficiency thermal power plants, and hydropower.

The Facility for Energy Inclusion, announced by AfDB at the end of

2016, will provide senior and mezzanine debt financing to small scale projects (on-grid, mini-grid and off-grid) with total costs less than \$30m and to distributed energy companies and other entities focused on off-grid energy solutions.

AfDB has also approved a senior concessional loan of \$25m to fund the Segou Solar PV Project, Mali's first utility-scale PV power plant. Its 33MW will lead to a direct increase in the country's installed capacity and accounts for approximately 10% of the current generation capacity. The bank is also looking at programmes for home solar installations to reduce the use of kerosene and unhealthy biomass and in domestic and street lighting and cooking.

Decarbonisation is a consideration across all sectors, notably in the potential contribution ICT can make. Digitalisation can help manage and conserve scarce water resources while smart cities can use millions of sensors and all kinds of

communication channels to manage traffic flows efficiently and thus reduce greenhouse gas emissions.

One African country meanwhile is taking the lead in using smart infrastructure for social and economic development. The AU has now adopted Rwanda's rapid digitalisation strategy as a model for Africa (*see page 86*).

JICA is currently considering utilising Internet of Things technology for power plant operation and maintenance, while in Uganda it is providing support for digital signalling work to ensure smooth and stable traffic flows.

Italy's theme fits very well with AFD's new four-year plan to 2021, which has a strong focus on digitalisation. Thematic pillars also fit with the SDGs and the Paris Agreement. All actions in the plan must be SDG compliant. Climate adaptation and mitigation considerations are important in the way AFD identifies and finances projects. The agency also focuses on practical applications of technology in the transport sector, and recognises that big data offers the prospect of making a substantial difference to transport solutions. AFD's three pillars for transport are intercity and inter-country connections and urban mobility.

Digitalisation, decarbonisation and mobility can all be seen in a joint project developed by GIZ and the City of Windhoek's Ministry of Works and Transport. The Sustainable Urban Transport Master Plan for Windhoek resulted in the November 2016 launch of the city's Move Windhoek sustainable urban transport network. Instead of directly linking suburbs, all lines meet at Wernhil, where passengers can transfer between lines to reach their destinations. Timing is critical, so the fixed, reliable schedules allow passengers to accurately plan their trips while minimising time spent waiting at stops. Raising awareness for public and non-motorised transport is additionally achieved by continuous

media involvement. Move Windhoek is available on Facebook, Twitter, and YouTube.

Mobility is at the heart of Japan's focus on regional integration as it works towards realising economic corridor development projects in the Northern Corridor, Nacala Corridor and the West Africa Growth Ring. JICA says it is also expanding its One Stop Border Post (OSBP) operations in East, Southern and West Africa through financial assistance and technical co-operation to improve mobility.

Securing and expanding major ICT infrastructure is critical for digitalisation. The Eastern Africa Submarine Cable System (EASSy), the 10,000km cable that runs the length of the continent's east coast entered commercial service in July 2016. But with the support of financial commitments and disbursements from several development partners in 2016, it continues to be the highest capacity line serving sub-Saharan Africa, connecting the islands of Comoros and Madagascar with Mozambique, Tanzania, Kenya, Somalia and Djibouti. Those points serve a network that now reaches as far inland as Khartoum in Sudan and Kigali in Rwanda.

Digitalisation is more and more a priority in Germany's work and can play a key role in every sector from rural off-grid energy supply solutions to using balloons to provide Internet access. GIZ has published "Toolkit – Digitalisation in Development Co-operation and International Co-operation in Education, Culture and Media." The report points out that ICT can significantly help to make infrastructure sustainable. The use of intelligent electricity grids can improve energy access and affordability. ICT could become indispensable for water management, the development of weather forecasting models, gathering data on water resources and in the planning and administration needed to

secure access to supplies to meet users' needs.

In Kenya, GIZ is supporting the MajiData database, which contains data on some 2,000 urban areas, including details of their population, water supply, sewage disposal, topography and urban planning. These data can be easily retrieved and kept up to date and enable broad analyses of the situation at any specific location. Based on this, measures can be planned and tailored precisely to local needs.

Smart corridors are central to PIDA's work. Its Smart Corridor Programme is Africa's first, entailing the development of model smart corridor technology and the design and implementation of a continental and regional corridor efficiency monitoring system. Phase one will consist of six modules:

1. single electronic window;
2. cargo tracking;
3. commercial vehicle tracking;
4. container tracking;
5. freight train tracking, and
6. high visibility corridor efficiency monitoring.

Support from ICA and non-ICA members is continuing to target Mobisol, an off-grid pay-as-you-go (PAYG) energy provider delivering affordable alternative energy generation by combining solar energy with mobile technology. It now has installed nearly 10MW of capacity in Tanzania, Rwanda and Kenya, providing clean and reliable electricity to households and small businesses in low-income communities. It recently acquired Lumeter, one of the largest PAYG software providers to create a combined company with strong pricing power, expertise in the metering sector for stand-alone solar systems and mini-grid solutions and the ability to deliver PAYG functionalities for underserved areas. ■

# 3.2 Strategic Economic Corridor Development

## Japan's Corridor Development Approach

The cost of developing the infrastructure necessary to satisfy Africa's economic growth is beyond the reach of public resources alone. The expansion of private investment is crucial to meet demand but in Africa, inadequate infrastructure and the comparatively small size of many African markets has deterred many private sector investors.

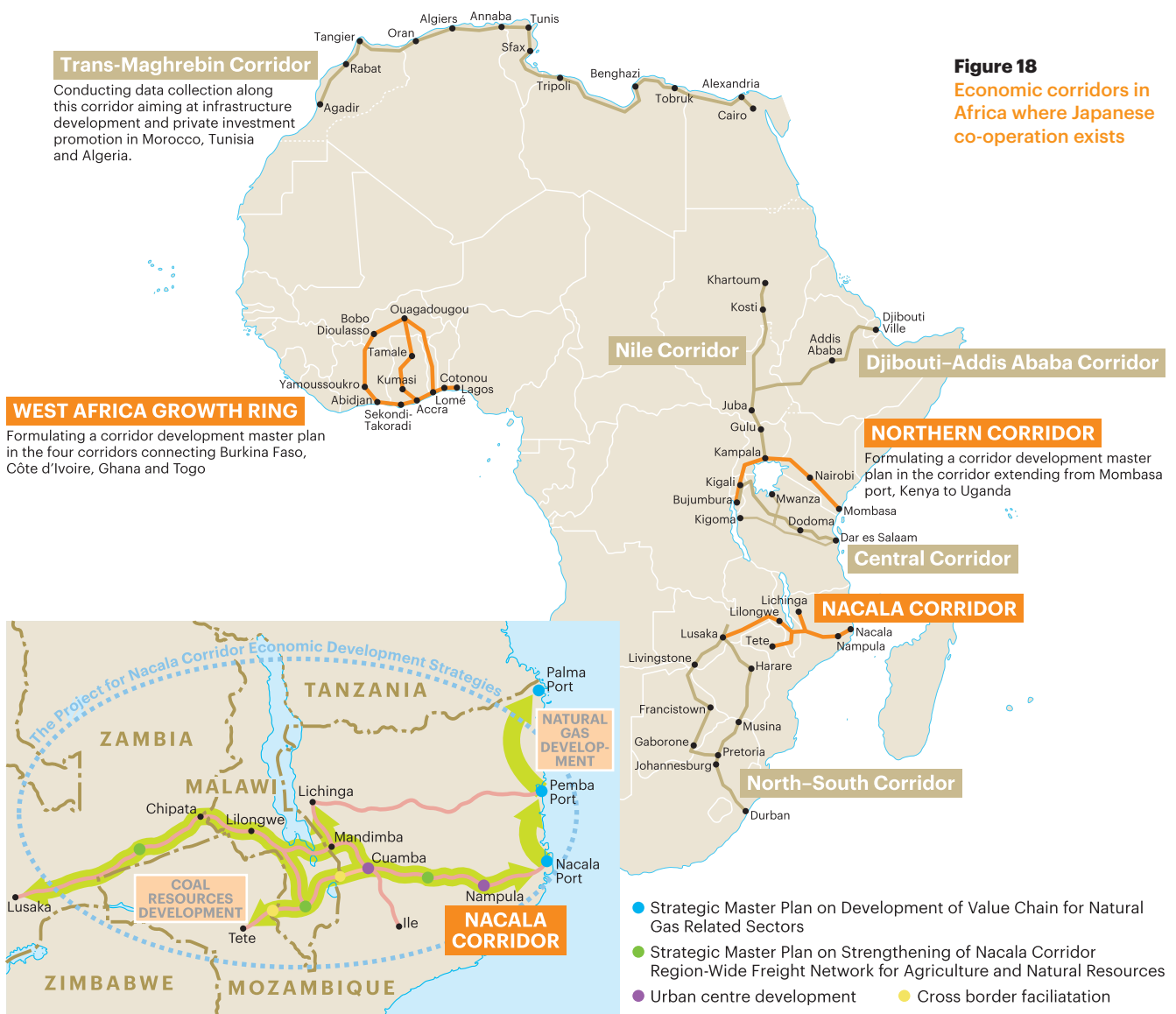
To address the issue in Africa, Japan

has been applying a strategic corridor development approach based on its own successful experience. In 1960, the Japanese government announced its Income Doubling Plan to significantly improve the living standards and introduced the Pacific Belt Zone Grand Plan, a spatial policy to influence the distribution of people and activities along Japan's industrial Pacific seaboard.

The plan aimed for balanced social and economic development across the

whole country by decentralising over-concentrated industry to regional cores in the Pacific Belt Zone. Large investments were needed to create infrastructure such as expressways and Japan's renowned Shinkansen bullet train. This infrastructure created a national development axis and resulted in the successful facilitation of export-oriented industry, which brought rapid economic growth to Japan.

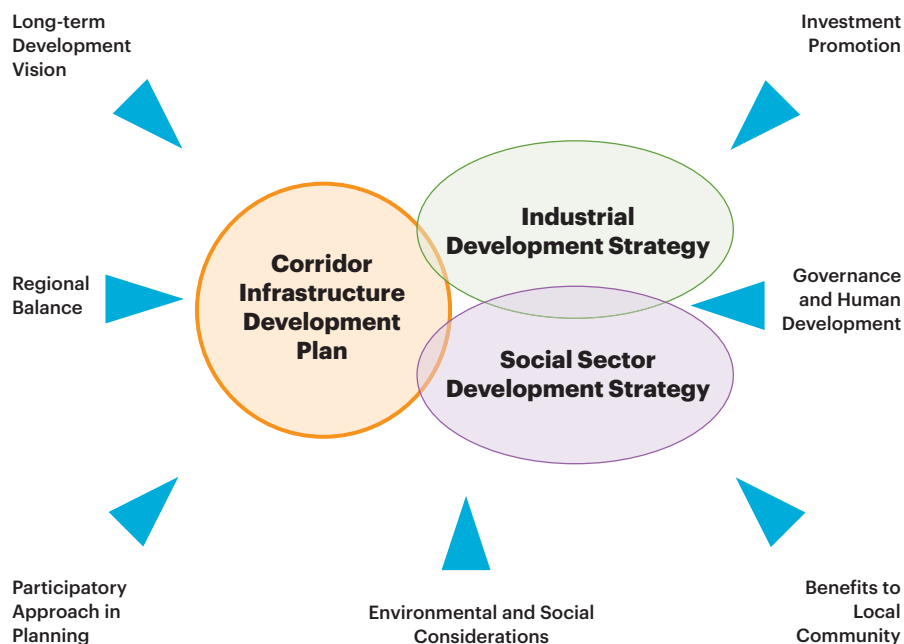
JICA's corridor development approach is described on the next page.



**Figure 18**  
Economic corridors in Africa where Japanese co-operation exists

## 1. Planning Stage – Corridor Development Master Plan, an Inclusive Economic Growth Scenario

JICA provides technical co-operation to formulate Corridor Development Master Plans. Each plan is unique, presenting a long-term development vision looking – from a multi-sectoral and wide area perspective beyond the boundaries of nations and regions – at the regional economy in twenty to thirty years' time. Plans provide comprehensive designs for corridor infrastructure developments that are the foundations of economic activity, such as transportation, energy, communication, logistics and trade. They also outline industrial development strategies, for example for the agricultural, mining, commercial and industrial sectors. A participatory approach in the planning process is encouraged to promote social sector developments such as medical care, public health and education. Environmental and social impact assessments are also carefully considered and integrated in the plans.



Figures 19 and 20 Japan's Corridor Development Approach, Planning Stage (above) and Project Implementation Stage (below)

## 2. Project Implementation Stage – Comprehensive support for the realisation of the economic growth scenario by making full use of a variety of co-operation tools

JICA provides a full range of assistance to support the realisation of the economic growth scenario by effectively combining a variety of development assistance typologies, including loans, grants, technical co-operation and PPPs.

Strategic inputs of finance and optimum technologies are provided to facilitate upgrades of both hard and soft economic infrastructure. JICA also helps promote industrial and social sector development, which contributes to stimulating dynamic economic regional growth.

Corridor Infrastructure Development Plan		Industrial Development	Social Sector Development
Facility Development (Hard Infrastructure)	Institutional Development and Technology Transfer (Soft Infrastructure)		
<b>Loan</b> <ul style="list-style-type: none"> <li>Development of, for example, ports, roads, bridges or railways (grant/loan)</li> <li>Energy supply facility development (grant/loan)</li> <li>One-Stop Border Post (OSBP) Facility development (grant/loan)</li> <li>Special Economic Zone (SEZ) development (grant/loan)</li> </ul>	<ul style="list-style-type: none"> <li>Building cross-border facilities and institutes (technical co-operation)</li> <li>Infrastructure operation and building management capacity (technical co-operation)</li> <li>Financial assistance for financial investment promotions (loan)</li> </ul>	Mining Industry Agriculture Tourism Technical Education	Medical care Public Health Education Water Supply
<b>Grant</b> <ul style="list-style-type: none"> <li>To support medium and long-term, stable economic growth, JICA supports the development of economic Infrastructures such as transport, power, energy and communication.</li> </ul>	JICA is promoting trade and investment through its support for OSBP, facilitating logistics and trade as well as encouraging private sector investments to strengthen growth-driving forces.		
<b>Technical Co-operation</b>			
<b>Public Private Partnership</b>			

## Strategic Economic Corridor Development Master Plans

Japan believes the private sector is an engine of economic growth and the public sector must promote its development as a catalyst. To help achieve this, the Japanese government has been actively assisting private sector development in Africa. One flagship activity stems from a Japanese commitment at the Fifth Tokyo International Conference on African Development (TICAD V) in

2013 to formulate 10 strategic master plans.

Three of these – Nacala Corridor, Northern Corridor, and West Africa Growth Ring – are strategic economic corridor developments. Japan firmly intends to contribute to quality infrastructure development in Africa utilising its experience and technologies.

The master plans were designed by JICA in close co-operation with countries within each plan and other stakeholders, in which desirable future scenarios for the regions were developed based on the results of thorough investigations into each area's industrial and economic potential.

### Strategic Master Plans for Economic Corridor Development in Africa

	Nacala Corridor	Northern Corridor	West Africa Growth Ring
<b>Countries</b>	Mozambique	Kenya and Uganda	Burkina Faso, Ghana, Ivory Coast, Togo, and the West African Economic and Monetary Union (UEMOA)
<b>Development opportunities and challenges</b>	Lack of transport infrastructure while rich natural resources (coal and natural gas) and arable land suitable for agriculture remain undeveloped.	Poor logistics networks and high transport costs due to three major bottlenecks: excessive imports, concentration of functions in primary cities and limited value added activity.	Poor infrastructure causing high transport costs, heavy dependence on imported goods in a huge regional market and disparities between urban-rural and coastal-landlocked areas.
<b>Characteristics</b>	<ul style="list-style-type: none"> <li>Diversified economic sector developments based on a region-wide corridor network utilising bountiful resources.</li> <li>Improvements to railways, ports and arterial roads projects using both private and public investment.</li> <li>Other economic infrastructure and social sector development projects are combined to realise inclusive development.</li> </ul>	<ul style="list-style-type: none"> <li>Designed by taking into account identified industrial potentials and importance of inclusiveness.</li> <li>Connecting industrial areas with logistics hubs through cargo-oriented development.</li> <li>Modal shift from truck to railways and pipelines.</li> <li>Expected outcomes: decreased transport costs (20-40% road and 30-60% rail) and increased exports such as tea, coffee, textiles and garments.</li> </ul>	<ul style="list-style-type: none"> <li>Designed by taking into account identified industrial potentials and importance of inclusive regional development.</li> <li>Promotion of intra-regional trade activities through a circular corridor over the four countries while taking into account the expected connection to Nigeria (ALH).</li> <li>Strengthen of trade facilitation, including OSBPs.</li> <li>Creation of regional value chains.</li> <li>Modal shift from truck to railways.</li> </ul>
<b>Priority projects</b>	<ul style="list-style-type: none"> <li>Nacala Industrial Park</li> <li>Nacala Industrial Belt Area Development</li> <li>Nacala Multi-Modal Terminal</li> <li>Railway Shunting Yard</li> </ul>	<ul style="list-style-type: none"> <li>Mombasa Port Development</li> <li>Mombasa Special Economic Zone</li> <li>Logistics Highway</li> <li>Rift Valley Geothermal</li> </ul>	<ul style="list-style-type: none"> <li>Abidjan-Lagos Highway</li> <li>Corridor development (Abidjan-Ouagadougou, Accra-Ouagadougou, and Lome-Ouagadougou)</li> <li>Railway-related projects</li> </ul>



## 3.3 Assessment of Financing Needs



Gautrain construction, South Africa. iStock/Getty Images

**A clear estimate of Africa's financing needs is a priority for stakeholders concerned with the continent's infrastructure development. It could also be considered a necessary companion to this report which, as well as identifying trends, endeavours to measure financing deployed each year.**

Africa's continental infrastructure investment needs for PIDA projects are an estimated \$360bn up to the year 2040. PIDA's Priority Action Plan (PAP) in 2012–20 is expected to cost \$68bn or \$8bn per year.

Estimates by PIDA identify financing needs in some specific sectors: The Africa Transport Sector Outlook – 2040 estimates the total financing needs of the transport sector at \$68bn per year. The Africa Energy Sector Outlook – 2040 supposes that \$43.6bn per year is required in the energy sector.

Measuring the difference between the amounts deployed and financing needs should indicate the financing gap. Of even more utility would be annual monitoring of financing needs, which, coupled with *Infrastructure Financing Trends in Africa*, would help identify whether the financing

gap is opening or closing and provide a framework for analysis to identify where, how and why the gap is narrowing or broadening in different locations and sectors.

Since the ICA-commissioned Africa Infrastructure Country Diagnostic (AICD) in 2010 estimated annual financing needs at \$93bn, there have been some attempts to recalculate that figure, with different methodologies producing very different results.

One of the more recent estimates was provided in a background paper at the *Africa Emerging Markets Forum* in Abidjan in March 2017. Commissioned by JICA, the paper supposes that 5-6% of GDP is needed for sufficient infrastructure investment, suggesting a spending requirement of around \$120bn-\$140bn (at 2015 dollar rates) in the short-term.

The report says Africa currently assigns just 3.5% of GDP to infrastructure and cites *Infrastructure Financing Trends in Africa's* \$83.4bn of reported commitments to indicate the size of the financing gap.

Another recently published report, *Global Infrastructure Outlook – Infrastructure Investment Needs*,

which reviewed the needs of 50 countries in seven sectors up to 2040, proposes a current trends scenario in which the total infrastructure investment forecast for Africa to 2040 is projected to be \$4.3trn, or \$174bn per year. The report, supported by the Global Infrastructure Hub, adds that if African economies were able to raise their performance to match that of their best performing peers the total investment need would be \$6trn, or \$240bn per year—a difference of almost 40%.

The AfDB-led Africa Infrastructure Knowledge Programme (AIKP), AICD's successor, is expected to publish an updated infrastructure financing needs figure soon after this report is published. This should enable next year's ICA annual report to provide much more granular analysis, not only of financing needs but also of the financing gap.

Against the annual variations in funds deployed as reported in *Infrastructure Financing Trends in Africa*, it would be prudent to establish the methodology for calculating the annual needs assessment and publish an updated AIKP report every three years. ■

## 3.4 Emerging Fund Sources and Types

**Initiatives to mobilise African capital, new sources of finance and funding types and a growing interest in patient development capital continued to emerge in 2016 but some types of investor, including pension funds and sovereign wealth funds, are still waiting to make a significant difference to Africa's infrastructure financing.**

The Africa50 infrastructure fund announced its first investment in 2016 when it signed a joint development agreement (JDA) for an 80MW solar PV IPP in Nigeria. The project will be co-developed with Scatec Solar of Norway and Norfund, the Norwegian investment fund. Under the JDA, Africa50, Scatec Solar, and Norfund will commit their resources and funding to complete the development phase of the project and prepare it for financial close.

Africa50, which was launched in 2015 with 20 African countries and the

AfDB subscribing to \$830m in its initial share capital, now has a total of 25 shareholders consisting of 23 African countries, AfDB and two African Central Banks – Bank Al Maghrib of Morocco, and Banque Centrale des États de l'Afrique de l'Ouest (BCEAO – Central Bank of West African States).

The infrastructure fund aims to facilitate infrastructure development by acting as a bridge between the public and private sectors, helping to eliminate bottlenecks for both private projects and PPPs.

It will largely invest equity as a strategic minority investor, and says it will always leverage funds from other investors, including multilaterals, institutional and private investors, with private companies taking the lead in project structuring.

Established by the five BRICS countries, the New Development Bank (NDB) also made its

first commitments to Africa's infrastructure development in 2016 with a loan to South Africa's state-owned power utility, Eskom.

The \$180m loan is to finance the construction of transmission lines to connect 500MW of renewable energy from IPPs to the national grid. This would reduce the country's carbon emissions by two million tons a year, an NDB spokesperson said.

The support for Eskom is one of a suite of NDB loans, totalling \$811m, to facilitate the development of an estimated 2,370MW of renewable energy capacity across member countries Brazil, India, China and South Africa. According to NDB, many more such projects are in the pipeline, including ones in Russia. The bank says its core focus is green and renewable energy.

Blended finance in various guises is in vogue with development partners but levels of awareness of this type of

### NEPAD Infrastructure Project Preparation Facility

The NEPAD Infrastructure Project Preparation Facility (NEPAD-IPPF), the multi-donor fund hosted by the AfDB, which supports African countries' preparation of regional infrastructure projects, provided commitments of \$14.8m and disbursements of \$7.8m in 2016.

The facility provided entirely ODA grant funding. Its commitments provided between \$3-3.6m to each of West, Central, East and Southern Africa as well as \$2m to the interregional Kolwezi-Solwezi 330kv Power interconnection connecting DRC with Zambia.

Energy projects received commitments of \$8.6m while the transport and water sectors received \$5m and \$1.3m respectively. Disbursements of \$4.2m were provided for transport projects while energy projects received \$3.1m and water projects \$473,692. ■

#### NEPAD IPPF Commitments, 2016

Project	Region	Commitment \$m
Nigeria-Benin Interconnector Reinforcement Project	West Africa	2.0
Secretariat for the Uganda -Tanzania Oil Products Pipeline Feasibility Study	East Africa	1.7
Route Multinationale Kribi- Campo-Bata	Central Africa	3.1
Multinational Orange-Sengu River Basin	Southern Africa (exc. RSA)	1.3
ECREEE/Ecowas Feasibility study-Women in a Changing Energy Value Chain in West Africa	West Africa	1.0
Kolwezi-Solwezi 330kv Power Interconnection	Interregional	2.0
Lamu Port development: Transaction Advisory Services and Technical Assistance - Phase 1	East Africa	1.9
Mozambique -Zambia 400KV Power interconnection Project	Southern Africa (exc. RSA)	1.9
<b>Total</b>		<b>14.8</b>

funding and its potential benefits are low among private sector investors and developers consulted in the process of preparing this report. This suggests promoters of blended finance need to think more about marketing, and some development partners recognise this.

As one ICA member put it, “without the marketing of clear business cases there is little possibility of selling the idea [of blended finance] to the private sector investors earmarked as participants in this type of financing.” Capacity building among development partners and other public sector actors is needed to communicate, market and deal with the private sector.

### Absent Investors

Pension funds and sovereign wealth funds (SWFs) could be big investors, but to attract this type of institutional investor will require reforms and new financial instruments in the countries where investable assets are located and reforms in the countries in which larger investors are regulated. One very prominent large infrastructure investor in South Africa has reported that new regulatory requirements are increasingly making it difficult for it to invest in infrastructure assets.

Pension funds and SWFs may be attracted to sovereign bonds to finance infrastructure such as those

that have now issued by several African countries, including Angola, Côte d’Ivoire, Ethiopia, Gabon, Ghana, Kenya, Namibia, Nigeria, Rwanda, Senegal, Seychelles, Tanzania and Zambia. Nigerian states and South Africa’s parastatals, among others, have issued bonds to raise finance. Morocco has launched a €100m green bond to refinance its investments in selected renewable energy projects in Morocco while Rwanda launched its treasury bond issuance programme in 2014 to finance infrastructure projects and develop the local capital market.

While institutional investors are seen as notable absentees in the African infrastructure sector, some development partners are making efforts to find a way in for them. AFD is engaged in the task of developing financial instruments to attract this class of investor. Several development partners are looking at ways to guarantee or mitigate risks in projects to attract institutional investment in some projects.

Deploying development capital to fund sustainable businesses rather than projects appears an ideal solution, allowing African enterprises and people to drive the continent’s infrastructure development.

But there are capacity issues attached. Finding local people and therefore local businesses with the capacity to deliver can be a challenge,

particularly for larger or high-tech projects.

Initiatives such as Germany’s Employment for Development may help. It is designed to build local capabilities and capacity. Skills developed could be applied across the labour market, including providing a base for new or existing local companies to grow the skills needed to work across the infrastructure sector. Until then, major and highly technical projects will most likely remain dominated by international contractors. But there are definitely sub-sectors in which local companies can grow, including small energy projects.

Among DFIs taking a keen interest in development capital in 2016 are established practitioners such as the UK’s CDC and Norway’s Norfund. One of the latest DFIs to adopt this practice is France’s AFD.

It says it is investing €600m (\$664m) of equity in projects over the next five years. The agency aims to play a catalytic role in risky projects and is focused on taking projects to financial close under a seven-year exit strategy. Energy sector investments are expected to focus on IPP projects while in the transport sector airport developments are under consideration. ■

## ICA Sponsors Africa Water Week

The ICA was a major sponsor of the 6th Africa Water Week (AWW) and the 10th General Assembly of the African Ministers’ Council on Water (AMCOW), which took place in Dar-es-Salaam in July 2016.

A key outcome from the meeting was the adoption of a roadmap to provide sustainable and universal access to safe water and sanitation across Africa, by over 30 African water ministers and delegations from over 50 African countries.

The strategic objective of the roadmap is to make considerable progress on water security and sanitation, through improving efficiency and transparency while creating a conducive investment climate.

Further information about the Dar-es-Salaam Roadmap is available at the AMCOW website.

The ICA’s sponsorship of AWW and the AMCOW exemplifies the work of the ICA’s Water Platform, which strives to

scale-up financing for sustainable water infrastructure in Africa, and is in line with the platform’s mandate to facilitate resource mobilisation and implementation of regional programmes.

The Water Platform also contributes to a key objective of the ICA’s work: to enhance co-ordination to harmonise ICA members’ priorities and activities with those of African stakeholders. ■

## 3.5 The Need for Improved Risk Mitigation

**A common theme found throughout feedback both from ICA members and private sector investors is the need for improved risk mitigation in infrastructure projects in Africa, especially at the earlier stages of the project cycle.**

It was suggested by several of those interviewed that better risk management would simultaneously ease longstanding bottlenecks in the implementation of infrastructure projects, and attract more investment from both traditional and non-traditional funding sources.

Despite this widely recognised need for improved risk management, only three ICA members – AFD, DBSA and WBG – reported making commitments by way of guarantees or insurance. These totalled at just \$58.9m in 2016, a very small proportion of the \$1.7bn of soft infrastructure commitments made in the year.

Private sector investors commonly cited a lack of effective risk mitigation strategies and issues associated with securing funding in the early stages of the project cycle as the greatest challenges in identifying suitable infrastructure projects. These two challenges go hand in hand, with the risks associated with projects in their preliminary stages deterring lenders.

As one power company executive explained; “Funding remains the biggest challenge. The expertise, both local and international, is readily available but the difficulty of raising cost-effective risk capital is blindingly painful.”

Similarly, an ICA member who works with African agencies on behalf of a European government explained how high perceived risk is causing large-scale projects, and certain sectors, to be overlooked by larger investors. The high level of risk associated with large infrastructure projects, especially in the water and road sectors, makes them considerably less attractive to investors than smaller projects in energy or ICT. So in order to attract larger investors, this ICA member supported risk mitigation tools and guarantee schemes that are currently under consideration by a number of development partners.

In addition to aforementioned issues regarding obtaining funding during the earlier stages of projects, private sector investors tended to stress the huge potential and need for investment from non-traditional funding sources, such as pension funds, family offices, philanthropic organisations and crowd-funding schemes. It was generally noted that “...pension funds and philanthropists should be embracing

these opportunities as they provide a basis for long-term, almost annuity-like, return profile.” Not only were many of those canvassed keen to highlight the potential for non-traditional funding sources, but some went as far as to deem them necessary, due to “inadequate flows from traditional sources,” as one senior REC officer explained.

Despite the apparent potential, and indeed need, for non-traditional funding sources, they are still largely absent in the field of African infrastructure. Both ICA members and private investors overwhelmingly suggested that a lack of security and stability surrounding investment opportunities could be holding potential investors back. As one private sector investor explained, there is ‘high potential [for non-traditional funding sources] if risks can be correctly allocated to give an acceptable level of risk for the expected rewards’.

In response to this, several stakeholders canvassed for this report support a greater use of guarantees, mezzanine finance and development capital, so as to de-risk projects to a large extent and therefore attract more funding from both traditional and non-traditional sources. ■

### Facilitating Regional Hydropower Development

The May 2017 World Hydropower Congress in Addis Ababa drew together leaders and specialists from government, industry, finance, UN agencies, academia and civil society to set the agenda for hydropower development over the next decade.

The ICA played a practical role in the congress. Installed hydropower capacity is set to more than double by 2050 and many proposed power generation projects have a regional dimension, so the work of Africa’s regional power pools will be critically important.

In this context, the ICA presented its recent report on the status of

Africa’s regional power pools, which provides a comprehensive and practical background against which initiatives from government, business, finance and civil society can converge to help deliver better hydro and, ultimately, sustainable development for all.

The Regional Power Status in Africa Power Pools report details progress made in each of the pools and identifies findings, trends, challenges and possible solutions for the pools’ respective regions, and the potential to build effective regional power markets.

The ICA co-convened the Hydropower and Interconnections in Africa session at

which the report was presented with the Global Energy Interconnection and Development Co-operation Organisation (GEIDCO), an international NGO based in China focused on promoting the sustainable development of energy worldwide. Following their work together at the Congress, the ICA and GEIDCO agreed to consider assessing areas of potential future collaboration.

Organised with the support of the African Union Commission and UNECA, this was the first time Africa hosted the World Hydropower Congress. ■



KfW Photo Archive, Ausloser-photographie

## Geothermal Risk Mitigation Facility

Established by the AUC on the one side and German Federal Ministry for Economic Cooperation and Development and the EU-AITF via KfW on the other side, the Geothermal Risk Mitigation Facility (GRMF) was launched in 2012 to fund geothermal development in East Africa. DfID is also making a contribution to the GRMF.

The programme co-finances surface studies and drilling programmes aimed at developing geothermal energy projects with the aim of reducing the risks involved in tapping a largely untapped indigenous and renewable energy resource. The GRMF programme currently comprises \$115m available for funding.

The objective of the facility is to encourage public and private investors as well as public private partnerships to develop geothermal prospects for power generation in Eastern Africa by providing grants for two types of activity:

- Surface studies to determine the optimal location of reservoir confirmation wells at the most promising geothermal prospects.
- Drilling and testing of reservoir confirmation wells at the most promising geothermal prospects to assist developers secure financing for subsequent reservoir confirmation and/or well field development wells.

GRMF will provide financial support to assist in mitigating the geothermal exploration risk. It aims to improve access to equity or other funding and thus play a catalytic role in establishing geothermal energy as a strategic option in power expansion planning of the participating countries of Eastern Africa. As a result, reduced risks and costs for early stage geothermal development are expected to encourage the development of further geothermal investments.

In conjunction with the GRMF, the WebGIS geothermal database aims at reducing the geothermal exploration risk in East Africa by sharing information.

The GRMF was launched in April 2012 and is implemented in a series of application rounds. The 3rd Application Round completed in 2015. The 4th Application Round was launched in June 2016, and the results were published on 1 June 2017. A fifth application round is anticipated.

The facility aims to induce positive social and environmental impacts and contribute to sustainable development by providing affordable and reliable power from sustainable sources. It aims to increase the amount of renewable energy by supporting exploration activities leading to the development of four geothermal power plants with a combined capacity of 300MW. ■

## World Bank Group Risk Mitigation Facility

The World Bank Group's Risk Mitigation Facility (RMF) seeks to catalyse private sector investment in large-scale infrastructure and Public-Private Partnerships (PPPs) by providing risk mitigation tools. These include liquidity support instruments backstopping payment obligations of state-owned enterprises to private projects; political risk insurance and government counterparty coverage for project finance loans and equity investments.

An example of the liquidity support guarantee would be in case of a project Special Purpose Vehicle (SPV) contracted to develop, build and operate a power plant, with an agreement from a state-owned off-taker to purchase the capacity and energy generated by the plant. The project SPV is exposed to the risk of non-payment by the state-owned off-taker, and the RMF liquidity support instrument would help mitigate this risk. The RMF instrument can be structured as a guarantee on a revolving standby letter of credit that the project SPV can draw upon for up to an agreed amount should the off-taker fail to honour its payment obligations.

Political risk insurance meanwhile could cover any or all of the traditional risks in this area, including expropriation, war and civil disturbance, currency convertibility and transfer risks, and breach of contract. ■

# 4. ICA Member Financing



Hydropower plant, Ghana, iStock/Getty Images

## 4.1 Overview

In 2016, ICA members reported commitments of \$18.6bn, down by 6% from \$19.8bn in 2015. Excluding the exceptional \$7bn contribution from Power Africa in 2013, commitments have remained broadly constant for the past five years at an average of \$18.9bn per year. Additional data were obtained this year from Italy with commitments of \$28.8m.

There have, however, been very substantial changes in commitments per sector (see Figure 21, right). Those to water increased by 46% in 2016 to \$4.7bn compared with \$3.2bn in the previous year. Commitments to all other sectors decreased. The amount for operations in energy declined by 11%, transport by 26% and ICT by 32% while multi-sector activities declined by 36%.

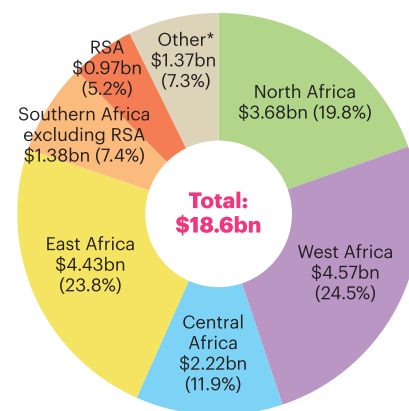
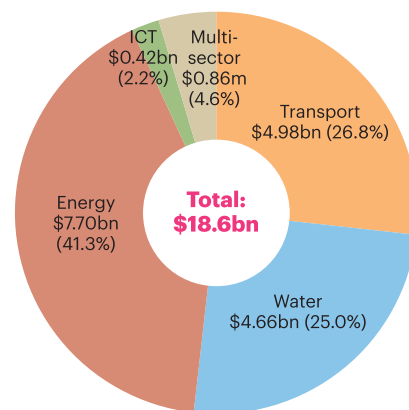
There have also been very substantial shifts in regional emphasis (see Figure 22, right). Commitments to RSA have dropped by 44% to slightly less than \$1bn, the lowest amount since 2012. Commitments to Southern Africa are down by 23%, North Africa by 10% and East Africa by 6%.

Commitments to Central Africa are up by 70% to \$2.2bn, but from the exceptionally low \$1.3bn reported in 2015. West Africa is the only other region to show increased commitments (14% up) in 2016 compared with the previous year.

Disbursements totalled \$13.4bn, marginally the highest level yet reported and up by 6% from \$12.6bn in 2015. Disbursements have now remained quite constant for the last five years at between \$11.4bn-\$13.4bn.

There has been little change in the regional distribution of disbursements in 2016 compared with the previous year, with the exception of a 44% increase to \$3.6bn in the amount disbursed to North Africa.

One year's commitments cannot be directly compared with the same year's disbursements, the latter of which will certainly relate substantially to funds committed in previous years. Moreover, a gap between commitments and disbursements over time can be expected due to decommitments which are not reported and the



\*Including Pan-African, regional and unallocated

**Figures 21 and 22**  
ICA members' 2016 commitments by sector (top), ICA members' 2016 commitments by region (bottom)

ICA Members' 2016 Commitments Matrix (\$m)						
	Transport	Water	Energy	ICT	Multi-sector	Total Commitments
North Africa	906.7	991.9	1,670.7	110.6	754.3	3,680.7
West Africa	1,389.7	1,414.6	1,599.9	59.6	106.3	4,570.1
Central Africa	954.6	382.6	734.3	119.2	31.2	2,221.9
East Africa	1,155.8	1,111.1	2,071.7	24.3	69.8	4,432.7
Southern Africa	198.5	688.5	453.0	11.9	31.2	1,384.1
RSA	3.3	37.5	297.6	78.3	549.5	966.1
Other	373.2	36.4	871.4*	12.6	74.4	1,368.1
<b>Total Commitments</b>	<b>4,981.8</b>	<b>4,662.7</b>	<b>7,699.5</b>	<b>416.7</b>	<b>863.0</b>	<b>18,623.7</b>

\*includes \$466.9m Sub-Saharan and \$348.5m Pan-African allocations

ICA Members' 2016 Disbursements Matrix (\$m) - not including CDC						
	Transport	Water	Energy	ICT	Multi-sector	Total Disbursements
North Africa	973.0	637.4	1,833.6	28.6	157.4	3,629.6
West Africa	800.5	697.0	722.7	42.6	37.4	2,300.4
Central Africa	412.2	247.3	327.0	26.3	3.0	1,015.9
East Africa	781.4	545.1	1,043.2	56.1	49.3	2,475.1
Southern Africa	359.3	312.5	842.6	16.1	2.5	1,533.0
RSA	327.2	43.3	914.5	36.3	545.4	1,866.7
Other	79.0	37.3	404.1**	45.8	13.6	579.9
<b>Total Disbursements</b>	<b>3,723.7</b>	<b>2,519.5</b>	<b>6,087.9</b>	<b>251.9</b>	<b>808.6</b>	<b>13,400.5</b>

\*\*includes \$226.8m Pan-African and \$49.5m Inter-regional allocations

reporting of commitments to funds, some of which are not subsequently reported as disbursements.

In terms of funding types, there has been a slight increase in the share of loans and an increase in the share of grants. There have been noticeable percentage increases in the shares of blended finance and equity finance.

Whereas ODA and non-ODA funding each accounted for half of all commitments in 2015, ODA accounted for 54% and non-ODA for 46% of commitments in 2016. ODA accounted for 57% and non-ODA for 43% of disbursements in 2016.

Soft infrastructure commitments increased to \$1.7bn in 2016 compared

with \$1.3bn in the previous year, but these amounts remain lower than the \$2.3bn and \$1.8bn reported in 2014 and 2013 respectively. Project preparation commitments amounted to \$245m in 2016.

Soft infrastructure disbursements increased to \$1.4bn in 2016, a substantial increase on the \$829m disbursed in the previous year, but much less than the \$3.1bn disbursements reported in 2014.

Support for regional operations amounted to \$1.9bn or 10% of all 2016 commitments. Levels of regional commitments have varied widely between \$1.8bn and \$4.5bn over the last five years.

Regional disbursements by ICA members in 2016 amounted to \$821m, less than the \$1.8bn, \$1.9bn and \$1.2bn reported in 2014, 2013 and 2012, respectively. ■

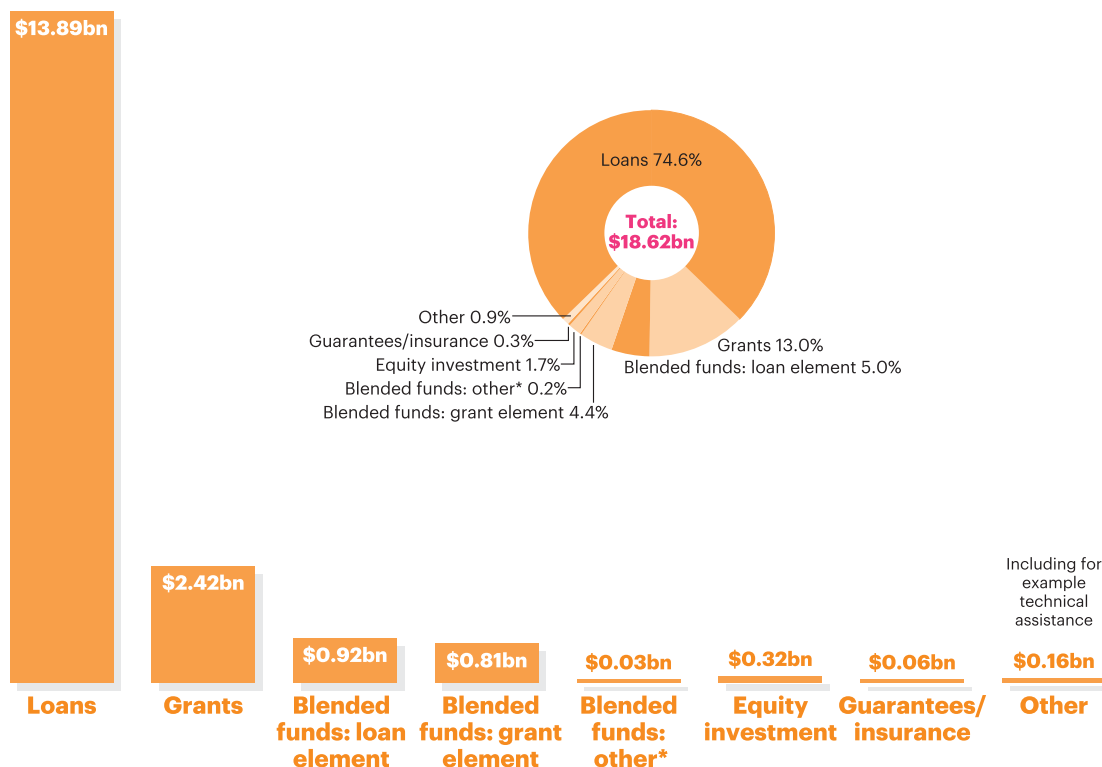
### Multilaterals and Bilaterals

In 2016, multilaterals made \$10.7bn or 58% of total ICA member commitments while bilaterals provided \$7.9bn or 42%.

In 2015, multilaterals made \$13.7bn or 69% of total ICA member commitments while bilaterals provided \$6.1bn or 31%.

Bilateral ICA members make financial contributions to multilateral development banks, including ICA members AfDB, EIB and WBG. ■

## 4.2 Types of Funding



**Figure 23**  
ICA members' 2016 commitments by type of funding

\*No additional information provided by members to help classification

**Three out of four commitments by ICA members comprised loan funding (see Figure 23, above), and projects in a variety of sectors and several countries benefitted from substantial loans.**

In Kenya these included the Olkaria V Geothermal Power Development Project (JICA \$416m loan), the Sirari Corridor accessibility and road safety improvement project (AfDB \$229.5m loan and \$11m blended finance) and a sustainable water supply and sanitation programme in several towns (AfDB \$402.5 loans and \$2.4m grant).

In Egypt, loan support was provided to its electricity sector rehabilitation and improvement project while Côte d'Ivoire benefitted from lending to fund the Abidjan Urban Transport Project (AfDB \$259.5m loan and \$7.3m grant). The Mamelles Sea Water Desalination Project in Senegal (JICA \$250m loan), the regional Busega-Mpigi and Kagitumba-Kayonza-Rusumo roads project in East Africa (AfDB \$241.9m

loan and \$22.1m blended finance) and the Kilwa Energy Company in Tanzania also benefitted from substantial loan funding (DBSA committed \$230m).

Significant grant funding was provided for Zambia's integrated

small towns water and sanitation project (AfDB \$122.8m loan and \$17.2m grant) and the rehabilitation of the RN1 highway from Tshikapa to Mbuji-Mayi in DRC (EC \$165m grant). Rwanda's energy sector reforms (EC \$195.7m grant) and the Lusaka Transmission and

### ODA and Non-ODA Funding

ICA members that committed only ODA funds included Canada, EC, EU-AITF, Italy and Japan. More than 95% of Germany's commitments were implemented via GIZ and KfW, which provide only ODA while DEG provides only non-ODA support. Support from the UK via DfID is 100% ODA while investments made by CDC Group are 59% ODA and 41% non-ODA.

AfDB's private sector department, IFC and DBSA provide entirely non-ODA support. Across all of its operations, some 31% of AfDB's commitments are ODA. France and the EIB provide 41% and 43% ODA support respectively, while 64% of World Bank (excluding IFC) commitments are ODA.

Substantial ODA funding of soft infrastructure included support for the African Investment Facility (AfIF). Other substantial recipients of ODA soft infrastructure support included the regional Busega-Mpigi and Kagitumba-Kayonza-Rusumo roads project in East Africa, Kenya's green mini-grid, Ethiopia's integrated transport programme and Cote d'Ivoire's operations to improve access to energy.

Significant amounts of non-ODA soft infrastructure support benefitted the provision of potable water in Angola, Abidjan's urban transport plans, Morocco's railway infrastructure, Cameroon's transport sector and Nigeria's urban water supply system. ■



Distribution Rehabilitation Project in Zambia (EC \$71.8m grant) also received substantial grant funding.

ICA members are increasingly reporting the use of blended finance and equity finance in their operations. AFD, AfDB and EU-AITF provided the majority of grant components in blended finance, with a total of 63 interventions in the energy sector targeting a range of sub-sectors, including electricity transmission and distribution, geothermal, hydropower, solar power, bioenergy and energy access, (including rural electrification). A substantial number of these interventions supported technical assistance to improve management effectiveness and governance in the power sector while others were to provide support to reduce equity burdens or interest rates.

Regional projects receiving grants in blended finance packages included the Côte d'Ivoire-Liberia-Sierra Leone-Guinea (CLSG) power interconnection and studies for the Guinea-Mali, Cameroon-Chad and Nile Equatorial Lakes Subsidiary Action Programme (NELSAP) interconnections. Support was also extended to the Ruzizi III (DR Congo/Burundi/Rwanda) and Rusumo (Burundi/Rwanda/Tanzania) hydro-power projects. Fourteen projects in the water and sanitation sector received either commitments or disbursements of grants in blended finance packages. Nineteen such projects were reported in the transport sector, targeting roads, aviation, and maritime industry projects. Grants provided under blended funds also supported the Trans-Sahara Optical Fibre Backbone project.

Just three projects received loan component support in a blended finance package, all in the form of commitments from the AfDB's Transport, Infrastructure, Cities and Urban Development. These included phase one in Ethiopia's Integrated

## PPFN Co-hosts Infrastructure Summit

The ICA is responding to the need to generate and facilitate bankable infrastructure investment projects. In May 2017, the Project Preparation Facilities Network (PPFN) partnered with Africa Investor (Ai) at the Ai CEO Infrastructure Project Developers Summit in Durban, South Africa.

The CEO-level summit specifically aimed to facilitate bankable infrastructure investment project pitches from developers and sponsors, one-to-one meetings with investors and direct dialogue with infrastructure regulators.

Ai co-hosted the summit with PPFN

member, Africa50, while the PPFN was a Strategic Project Preparation Partner. Other partners included the NEPAD Agency, IFC, AfDB and DBSA. The summit is an annual CEO gathering of Africa's top infrastructure project developers, project financiers, pension funds, co-developers, export credit agencies and insurers, infrastructure investors, project preparation facilities, PPP Units and infrastructure policy makers. It aims to promote the industry, forge partnerships and advance critical projects.

The PPFN held its annual technical meeting, hosted by the network's current co-ordinator, DBSA, immediately before the summit. ■

Transport Programme and the regional Lome-Cotonou road rehabilitation and coastal protection project. A notable financing in 2016 was the bank's support for Cameroon's transport sector support programme, with a commitment of \$317m. Work is underway to improve the Yaounde-Bafoussame-Bamenda road, which was commissioned in the 1980s but fell into an advanced state of degradation in most locations and accounts for about 11% of accidents and 16% of deaths recorded on Cameroonian roads.

CDC Group made some notable equity commitments, including \$39m to CEC Africa. CDC will divest from CEC Africa upon reaching financial close. Lenders to the IPP in Freetown, Sierra Leone include AfDB, CDC Group, Emerging Africa Infrastructure Fund, FMO and IFC. AFD, DEG and IFC between them have invested around \$140m in support of several energy projects, including some in renewable energy, solar power, gas generation and energy access.

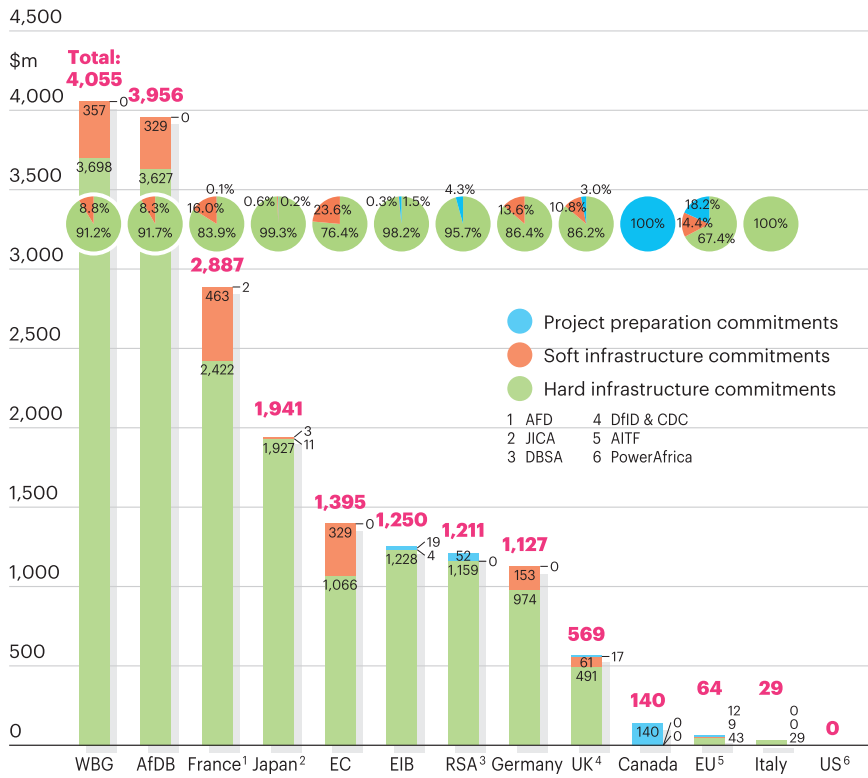
The only ICA member with new equity investments entirely outside the energy sector is IFC, with support for digital services. These include

Zoona, which provides mobile banking services for low-income people, small-scale entrepreneurs and rural populations in Zambia.

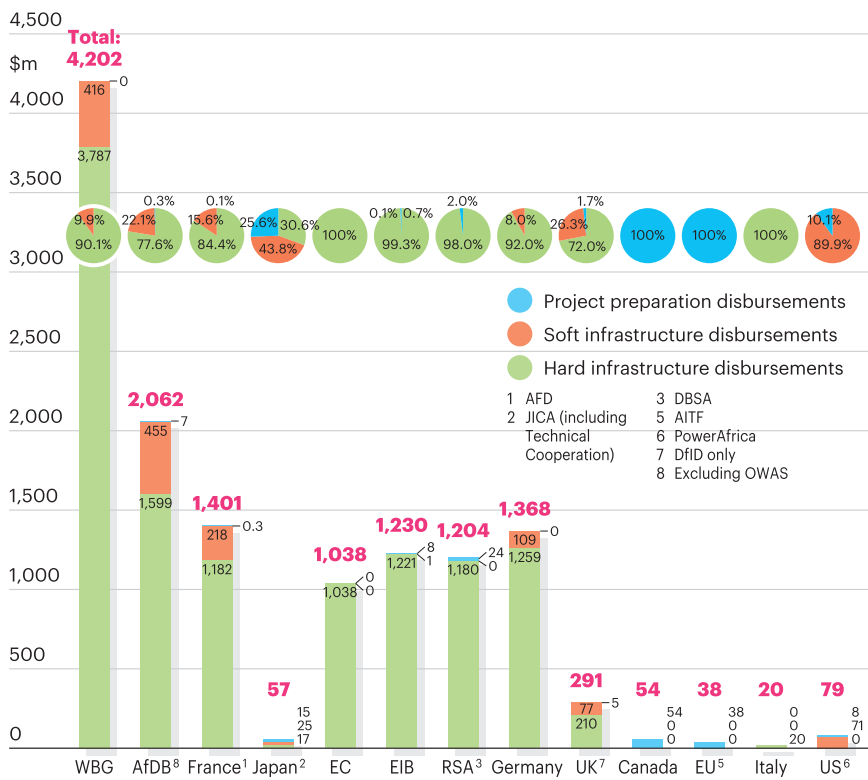
IFC is also supporting Andela, which trains software developers in Africa and gives them full-time roles at international companies. It already employs nearly 200 engineers in its offices in Nairobi and Lagos. IFC invests through its Learn Capital Venture Partners early-stage venture fund, which makes it possible for IFC to reach smaller companies at an earlier stage of development than an IFC's typical investee client.

Two 2016 commitments straddle the ICT and energy sectors. Mobisol, which IFC is supporting, combines solar energy with an affordable payment plan via mobile phone. In 2016 CDC invested in M-KOPA, which by May 2017 had connected over 500,000 homes to affordable solar power with 500 new homes being added every day. Current customers will make projected savings of \$375m over the next four years according to the company. It claims that customers will enjoy 62.5m hours of kerosene-free lighting per month. M-KOPA employs 1,000 full time staff and 1,500 sales agents in East Africa. ■

# 4.3 Hard vs Soft Infrastructure



**Figure 24**  
ICA members' 2016 hard/soft/project preparation infrastructure commitments



**Figure 25**  
ICA members' 2016 hard/soft/project preparation infrastructure disbursements

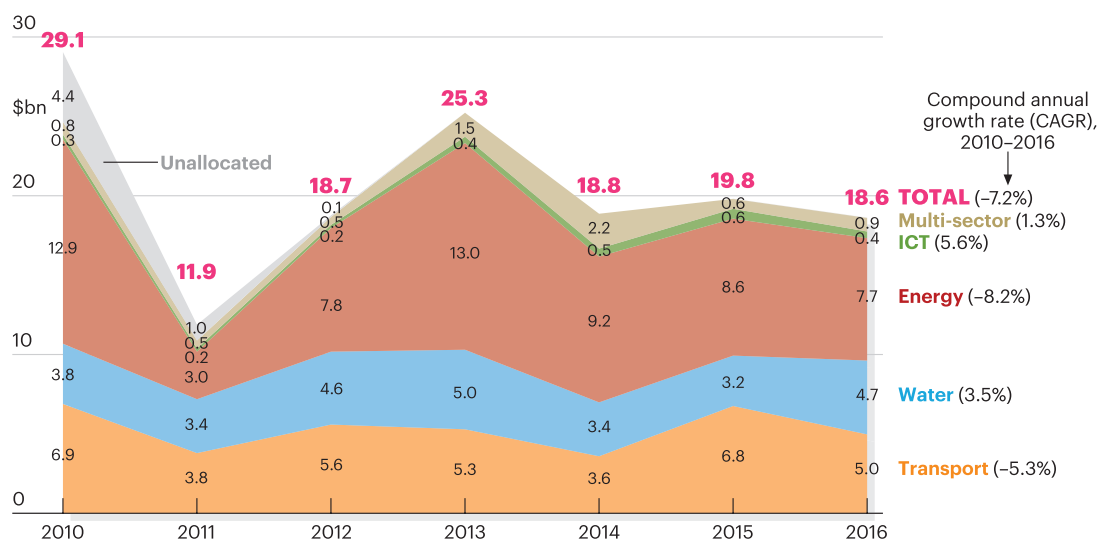
ICA members reported soft infrastructure commitments in 2016 of \$1.7bn, up from \$1.3bn in the previous year, broadly on a par with the \$1.8bn reported in 2013 and rather lower than the \$2.3bn reported in 2014. Soft infrastructure as a proportion of total commitments also increased, from 6.6% in 2015 to 9% in 2016.

Project preparation commitments in 2016 amounted to \$245m or around 1% of total commitments. This compares with commitments of \$165m in 2015. Project preparation disbursements in 2016 amounted to \$158.7m or around 1% of total disbursements. This compares with disbursements of \$79m in 2015. Project preparation commitments and disbursements were included within the broader soft infrastructure category before 2015.

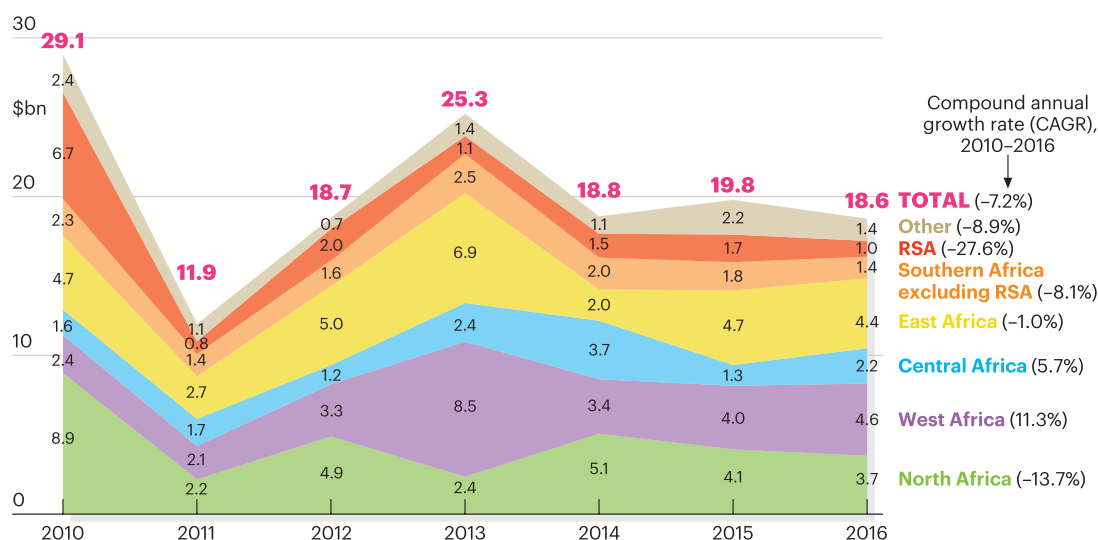
In 2016, soft infrastructure disbursements increased to \$1.4bn compared with the \$829m reported in the previous year but still substantially less than the \$3.1bn disbursed in 2014. Disbursements in 2013 amounted to just \$777m.

These wide variations may reflect the big impact of just a few large disbursements in a particular year. In 2016 for example, AfDB reported a \$400m soft infrastructure disbursement in favour of Angola's energy sector. The largest soft infrastructure commitment in 2016 was a \$79.2m EC grant for an initiative delivering access to modern, affordable and sustainable energy across sub-Saharan African. Clearly this commitment had a broad geographical focus. Of the 178 commitments, 41 were for amounts less than \$1m, predominantly with a sharp local focus. There were 92 soft infrastructure commitments in the \$1-\$10m range and 45 of more than \$10m. ■

## 4.4 Trends in Commitments and Disbursements



**Figure 26**  
ICA members' commitments by sector, 2010-2016



**Figure 27**  
ICA members' commitments by region, 2010-2016

**Trends reported in both commitments and disbursements in this section are based partly on aggregated data, reflecting technical difficulties experienced by some ICA members in terms of disclosing disaggregated financial information from the data sets available to them.**

Notable trends over the last five years according to data provided by ICA members include a very steady increase in disbursements to the energy sector and, for the second year running, much lower disbursements to transport projects (see Figure 32, page 37). Perhaps counter-balancing

these trends, commitments to the transport sector have been much higher in the past two years compared with 2014, while the amount committed to energy projects has decreased (see Figures 26 and 27, above). Water sector commitments in 2016 are up by 46% compared with the previous year. Commitments and disbursements to multi-sector projects for the second year running are much lower than in the previous two years.

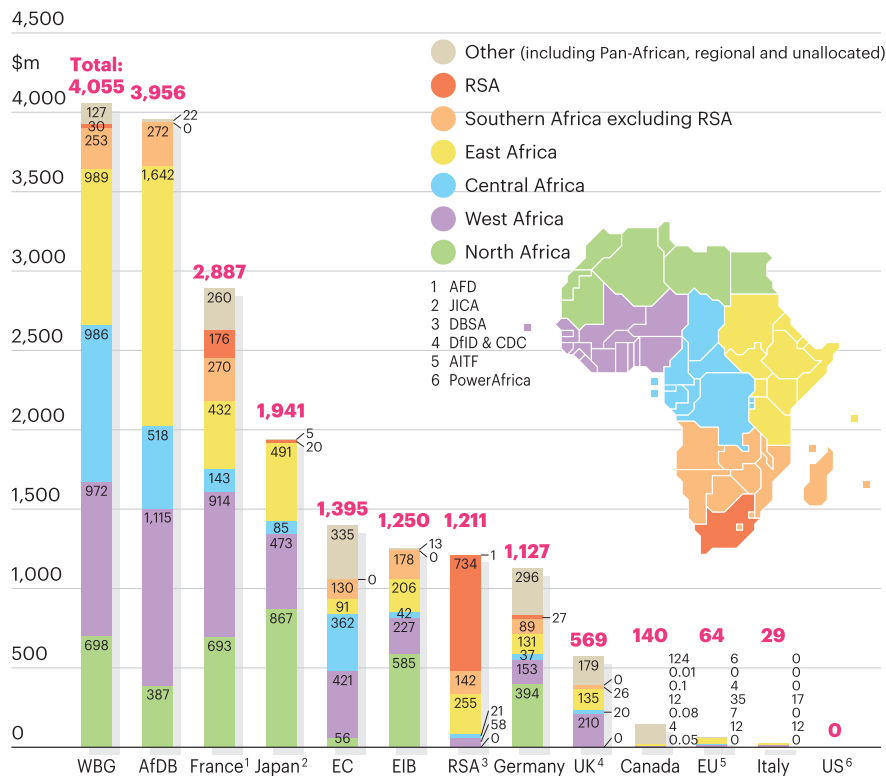
Total disbursements in 2016 totalled \$13.4bn, the highest yet reported and up by 6% from \$12.6bn in 2015. Disbursements have now remained quite constant for the last five years

at an average of \$12.6bn per year. Disbursements for the past seven years averaged \$11.6bn per year.

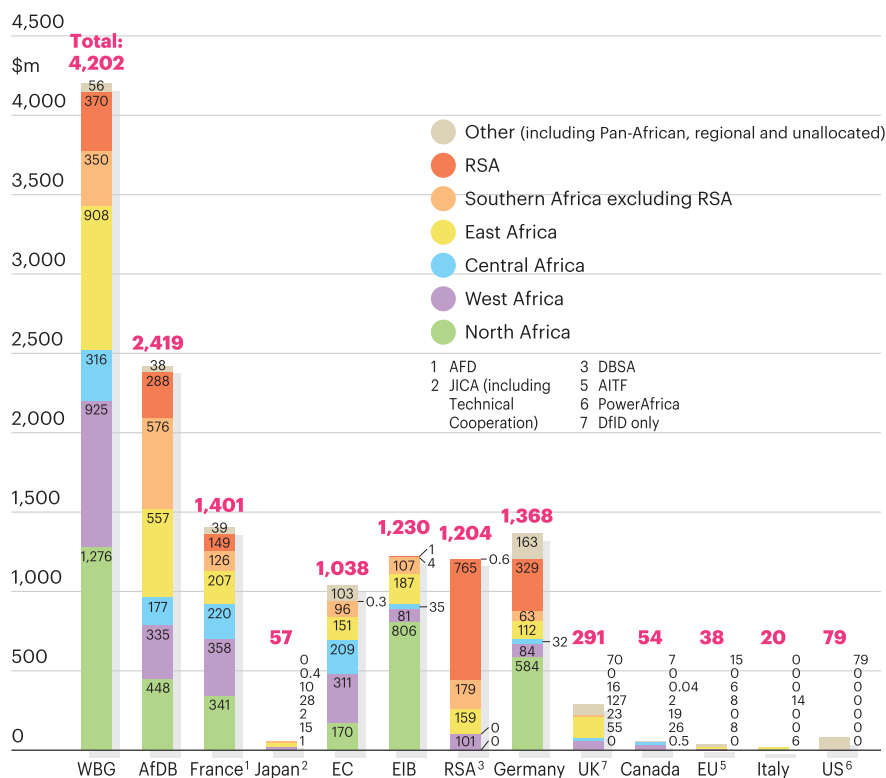
There has been a significant, steady increase in energy sector disbursements over recent years. These totalled \$6.1bn in 2016, compared with \$5bn in 2015 and an average \$4.7bn over the five-years to 2016.

Transport sector disbursements of \$3.7bn in 2016 are slightly higher than the \$3.5bn reported in 2015, but less than the \$4.1 to \$4.2bn reported in 2012-2014. Average disbursements to transport operations over the past five years are \$3.9bn.

# Trends in Commitments and Disbursements



**Figure 28**  
ICA members' 2016 commitments by donor and region



**Figure 29**  
ICA members' 2016 disbursements by donor and region

Water sector disbursements, at \$2.5bn in 2016, are in the same \$2.4bn - \$2.6bn range of disbursements reported in each of the last five years.

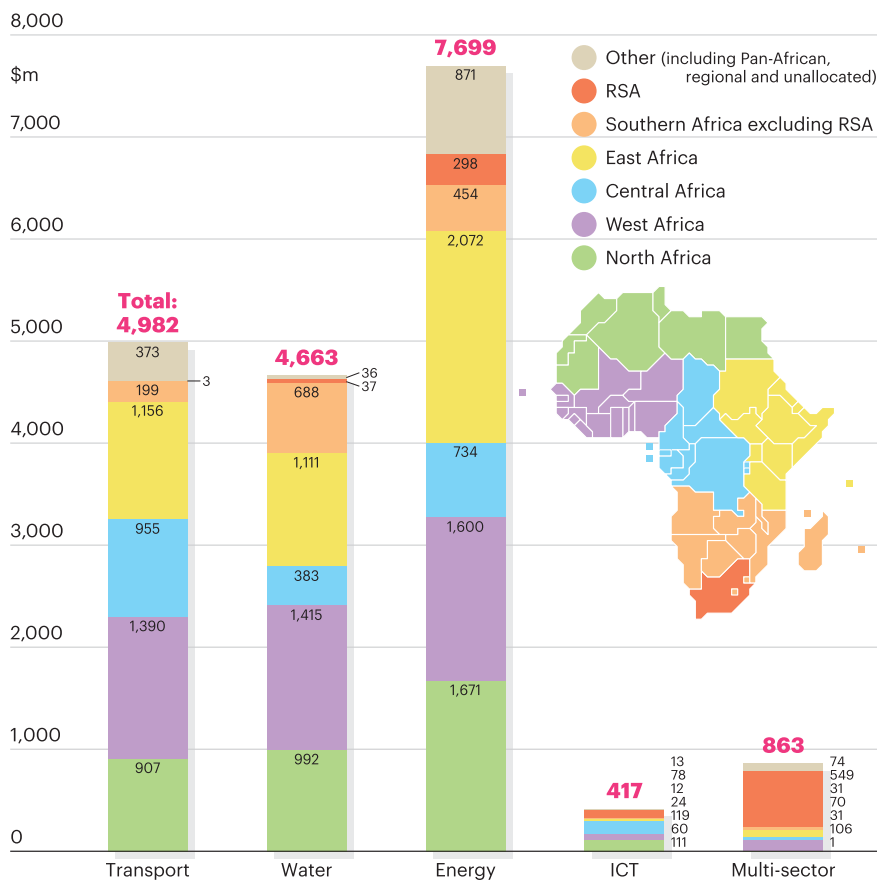
ICT sector disbursements, at \$252m in 2016, are back to the same level as reported in 2012 but much lower than disbursements of around \$400m reported in the three years to 2015. Multi-sector disbursements of \$809m in 2016 are much lower than the \$1.8bn and \$1.1bn reported in 2014 and 2015 respectively.

A 44% increase in disbursements to North Africa to \$3.6bn is largely due to \$2.8bn disbursed in the region's transport and energy sectors. These increases originate from support for projects aimed at improving Egypt's power sector, particularly its transmission and distribution network, and some major Egyptian water projects. The country benefitted from disbursements from a very broad range of ICA members totalling \$468m.

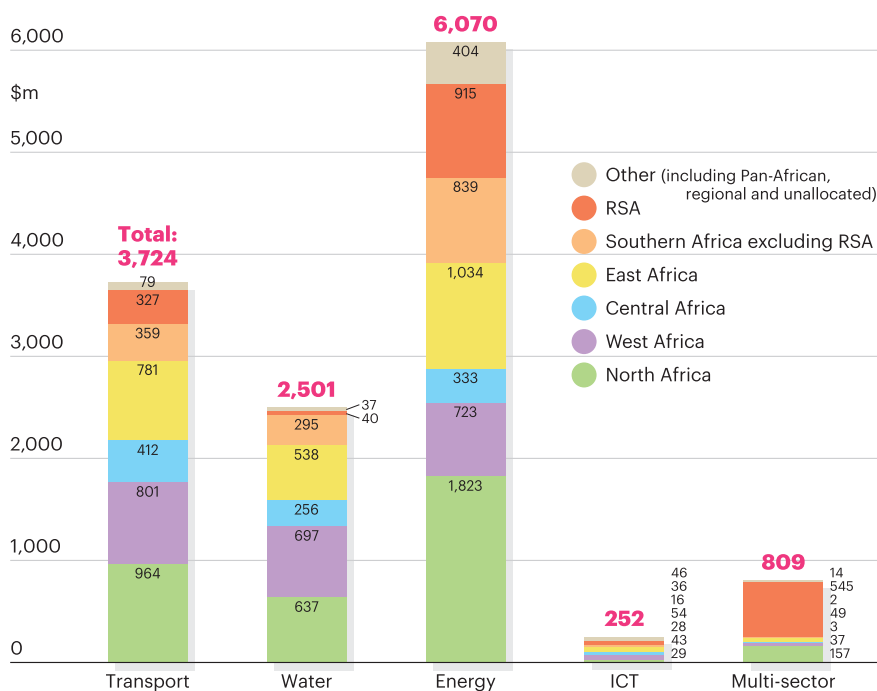
There have been very substantial changes in commitments per sector. Those to water increased by 46% in 2016 to \$4.7bn compared with \$3.2bn in the previous year. A substantial \$2bn of commitments is made up of thirteen commitments of between \$100m and \$396m. These targeted three projects in Senegal (\$462m), two projects in each of Kenya (\$528m), Nigeria (\$154m) and Zambia (\$226m) and one project in each of Angola (\$156m), Tunisia (\$134m) and Uganda (\$133m). All of these commitments related to two sub-sectors: potable water supply (\$1.2bn, with one project having a small sanitation element) and water distribution (\$790m).

While this year's water commitments increased significantly, the amounts committed in the previous two years (\$3.4bn in 2014 and \$3.2bn in 2015) appeared low when compared to the two years before that (\$4.6bn in 2012 and \$5bn in 2013).

Transport sector commitments decreased by a substantial 26% to



**Figure 30**  
ICA members' 2016 commitments by sector and region



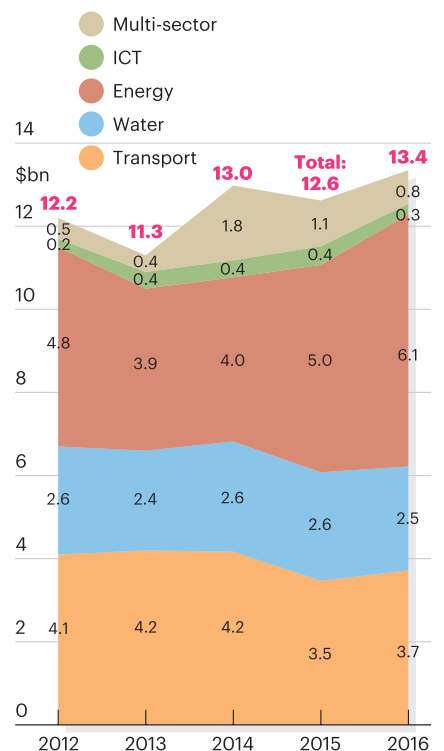
**Figure 31**  
ICA members' 2016 disbursements by sector and region

\$5bn in 2016 compared with the previous year when the \$6.8bn reported was the highest since 2010 and nearly double the \$3.6bn reported in 2014.

Commitments to almost all other sectors decreased. The amount for operations in energy declined by 11%, transport by 26% and ICT by 32% while multi-sector activities increased by 36% (see Figure 30, left).

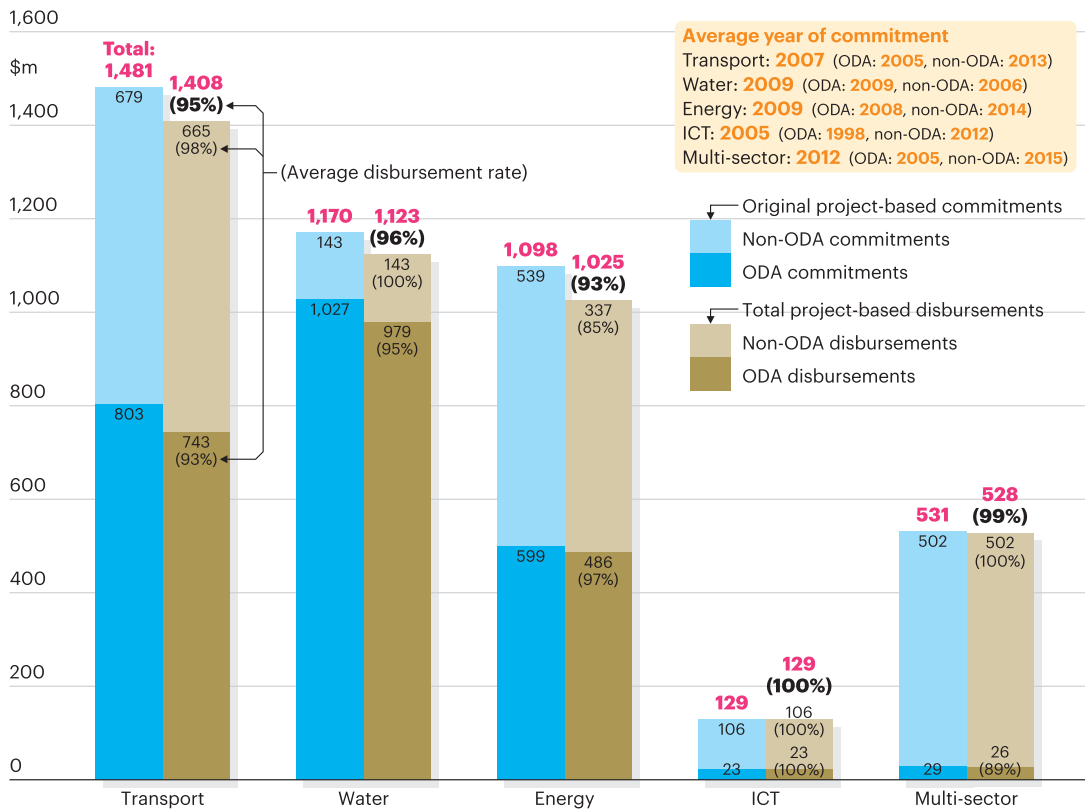
There have also been very substantial shifts in regional emphasis. Commitments to RSA have dropped by 43% to slightly less than \$1bn, the lowest amount year since 2012. Commitments to Southern Africa are down by 23%, North Africa by 10% and East Africa by 6%.

Commitments to Central Africa are up by 70% to \$2.2bn, but from the exceptionally low \$1.3bn reported in 2015. West Africa is the only other region to show increased commitments (14% up) in 2016 compared with the previous year. ■



**Figure 32**  
ICA members' disbursements by sector, 2012-2016

# Disbursement Rates and Average Year of Commitment



**Figure 33**  
 Disbursement rates per sector for selected ICA member projects completed in 2016

The disbursement rate is the percentage of disbursements to projects completed in the year 2016, compared with the original commitments to those same projects, some of which were committed to several years ago. The disbursement rate is therefore not an attempt to draw direct comparisons between commitments and disbursements in any single year.

An all-sector disbursement rate of 95% is slightly lower than the 97% reported in 2015 but still substantially higher than the 84% and 77% reported in 2014 and 2013 respectively.

Figure 33 shows the average disbursement rate in 2016 in each sector alongside the average year of

commitments related to those disbursements.

There is no change in 2016 compared with 2015 in disbursement rates in water and sanitation projects (96%) and transport operations (95%). The disbursement rate for the energy sector declined from 99% in 2015 to 93% in 2016. A disbursement rate of 100% for ICT projects in 2016 equals the 100% rate reported in the previous year.

Interestingly, this year, non-ODA disbursement rates are higher for all sectors except energy.

The sustained disbursement rate for the transport sector is encouraging, but the length of time it takes for a commitment to be fully disbursed in this sector has been underlined by the

data this year. In 2015, the average year for related commitments was 2007 (eight years). A year later, in 2016, the average year for related commitments was still 2007 (nine years).

Average years of commitment dates have lengthened in other sectors. In 2016, average commitment years were 2009 for energy (2010 in 2015) and 2005 for ICT (2007 in 2015).

For ODA and non-ODA rates combined, the period of time between commitments and disbursements has lengthened for all sectors except water and sanitation where the gap, seven years, is the same (2009 in 2016 and 2008 in 2015). ■

## Trends in Regional Infrastructure Portfolios

**Clear trends in ICA members' regional infrastructure portfolios remain hard to discern. Since 2012 commitments and disbursements to regional projects has fluctuated.**

Regional commitments reached a peak in 2012 and 2013 at \$4.5bn and \$4.2bn respectively, but fell sharply in 2014 to just \$1.8bn (see Figure 34, below). In 2015, regional commitments regained ground with \$3.4bn reported.

However, in 2016, they declined to \$1.9bn, less than \$100m more than the lowest recorded level of regional commitments reported in 2014 and short of the \$2.8bn and \$2.1bn reported in 2010 and 2011 respectively.

The two largest commitments in

members' regional portfolios are the Busega-Mpigi and Kagitumba-Kayonza-Rusumo Roads Project in East Africa and the Lome-Cotonou Road rehabilitation and coastal protection project in West Africa.

Energy projects were the most reported, with 41 projects and commitments of \$920m, representing 49% of regional commitments. Commitments to 15 transport projects amounted to \$705m or 38% of regional commitments.

With ten regional commitments each, the ICT and water sectors received \$79m or 4.3% and \$65m or 3.5% respectively of all regional commitments.

One interesting project in the ICT

sector is the Trans-Saharan fibre-optic backbone (DTS). In the first phase, the project will connect Niger, Chad, Algeria and Nigeria. Later it will be extended to Mali, Benin and Burkina Faso. Running along the route of the proposed Trans-Sahara Highway project, the project aims to connect people both within the region and to other African regions with the rest of the world via telephony, digital television and data networks including the Internet. It entails the completion of missing links in the region's existing fibre-optic backbones. Anticipated outcomes include improved inter- and intra-regional trade, access to mobile financial services and reductions in the cost of access to ICT services that remain inaccessible to the population. ■

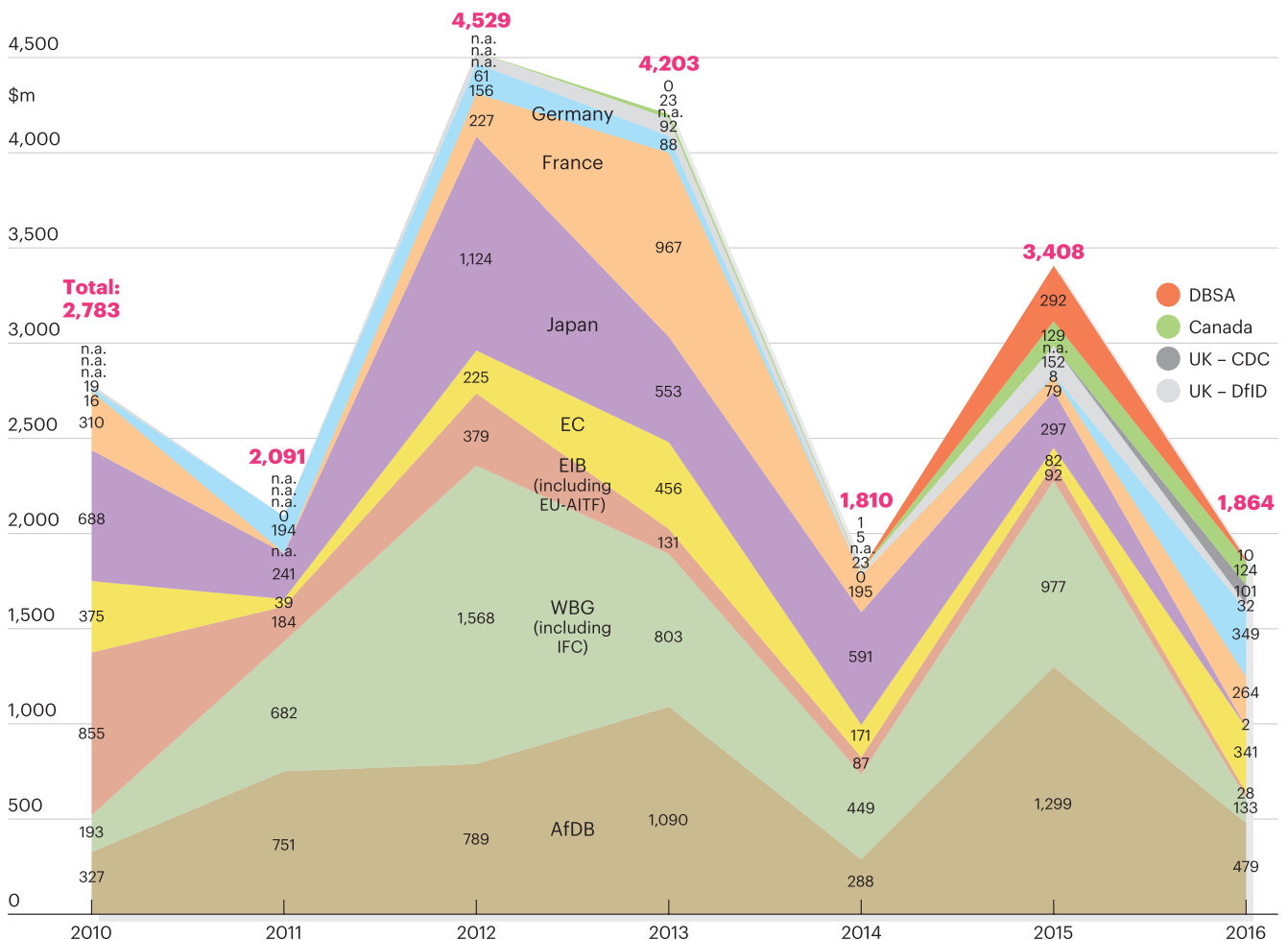


Figure 34 Trends in regional infrastructure portfolios, 2010-2016

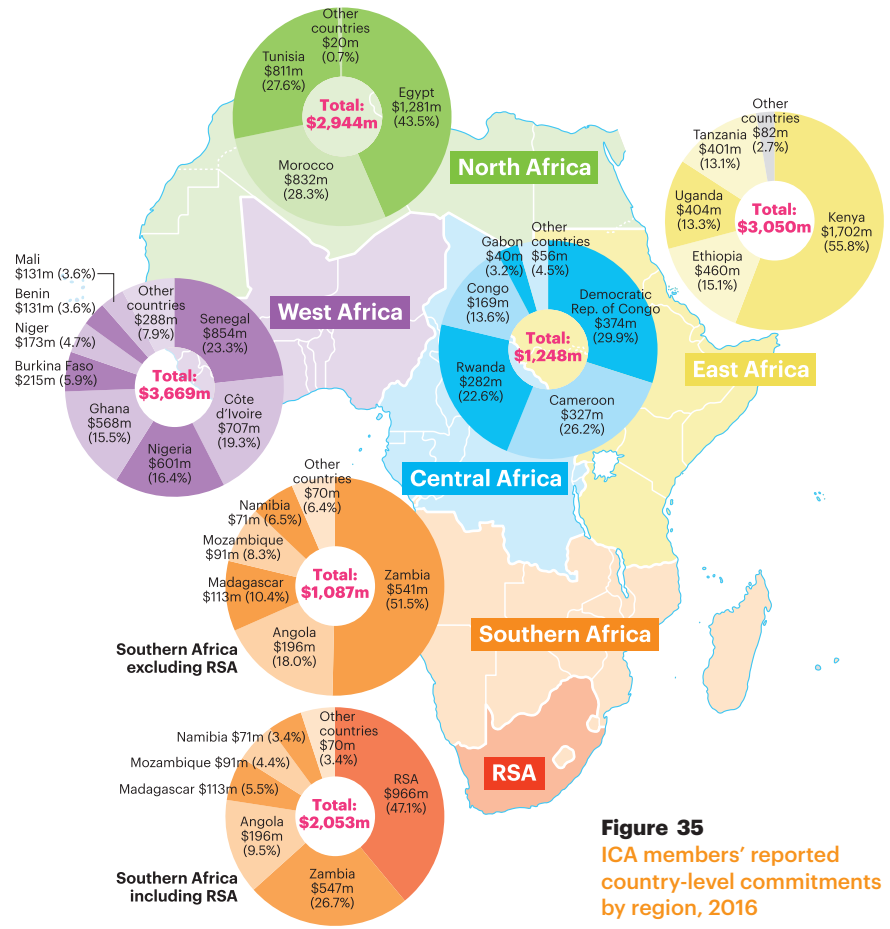
# 4.5 Country Allocations and Sub-sectoral Analysis

Country-level data provided by AFD, AfDB, Canada, CDC, DBSA, DEG, EC, EIB, EU-AITF, GIZ, JICA, KfW, IFC and Italy enables for the first time an analysis of how a substantial \$13bn of ICA member commitments is distributed across the continent to different countries. The data excludes \$1.8bn of commitments that were reported as regional commitments. Some \$3.8bn of members' commitments were not allocated to specific countries.

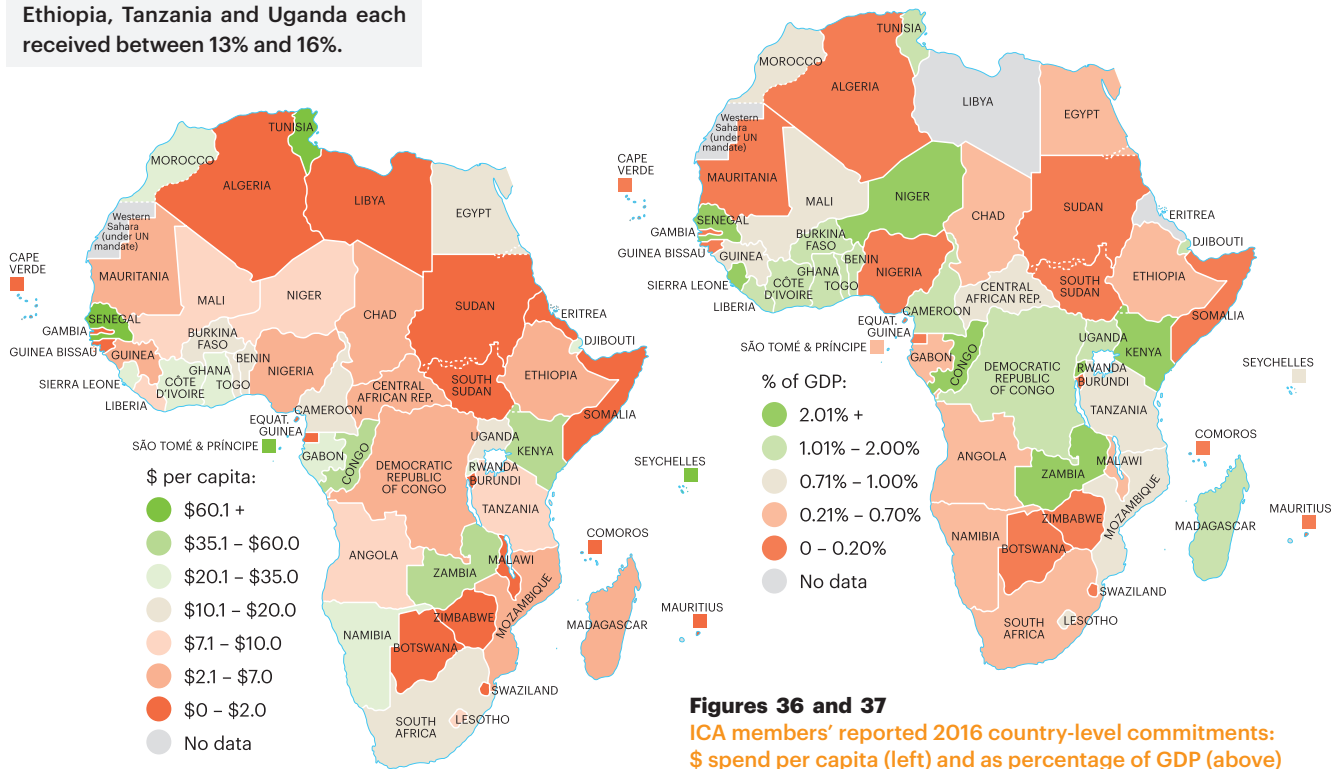
As this is the first year a substantial amount of country-specific data has been collected, no trends can be determined. However, this new analysis does shed light on how in some regions commitments may be going to relatively few countries.

Zambia received 50% of commitments to Southern Africa excluding RSA and 27% of the amount committed to the region if RSA is included (see Figure 35, right). RSA received a 47% share of commitments in the region. Botswana and Swaziland received no commitments from ICA members that reported country-level data in 2016.

In East Africa, Kenya received 56% of the region's commitments, while Ethiopia, Tanzania and Uganda each received between 13% and 16%.



**Figure 35**  
ICA members' reported country-level commitments by region, 2016



**Figures 36 and 37**  
ICA members' reported 2016 country-level commitments: \$ spend per capita (left) and as percentage of GDP (above)



## Sub-sectoral Analysis

Sub-sectoral data provided by AFD, AfDB, DBSA, DEG, EC, EU-AITF, EIB, IFC, JICA, EC and Italy enables for the first time an analysis of how a substantial \$12.7bn of ICA member 2016 commitments is distributed to different sub-sectors. The data used includes commitments defined by members as regional.

As this is the first year sub-sectoral data has been collected, no trends can yet be determined. However, this new analysis does shed light on how some sub-sectors appear to be attracting commitments while others are not. While this is useful, there are some caveats, notably that some projects fall under more than one or even multiple sub-sectors. For example, a multimodal transport project could

In North Africa, Egypt was the destination for 45% of the region's commitments. Morocco received 29% while Tunisia received 25%, leaving less than 1% shared by Algeria and Mauritania while Libya received no commitments.

Four countries – Ghana, Côte d'Ivoire, Nigeria and Senegal – between them received around 76% of commitments to West Africa.

Out of the ten countries in the region, more than 94% of funding for Central Africa went to Cameroon, Congo, DRC and Rwanda.

The Seychelles followed at some distance by Tunisia, São Tomé and Príncipe and Senegal received substantially more per capita than all other countries from ICA members that reported 2016 country level data. Kenya, Zambia, Namibia, Côte d'Ivoire all received commitments in the \$30-37 per capita range (See Figure 36, left).

Countries that captured large portions of a region's commitments with a relatively small amount per capita include South Africa and Egypt with spending of \$6.3 and \$14.5 respectively. Some larger and more populous countries received much less, for example per capita commitments were \$3.31 to Nigeria and \$0.28 to Algeria. ■

encompass work across several sub-sectors while several permutations of waste management and treatment, sanitation and drainage could form a single project.

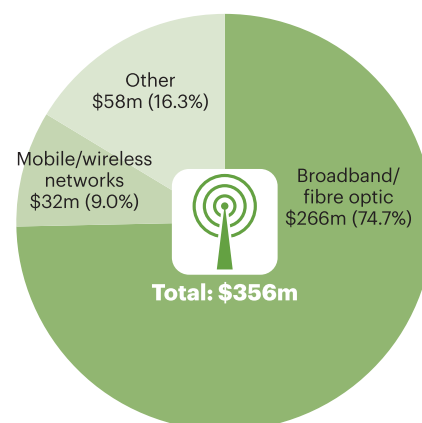
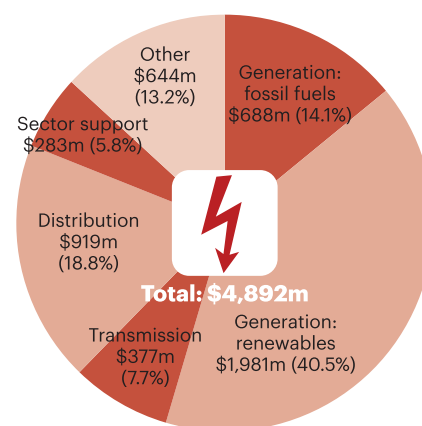
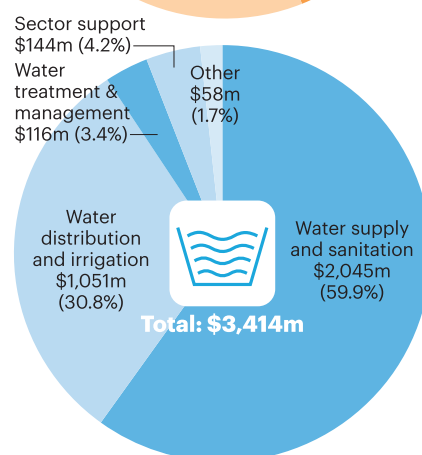
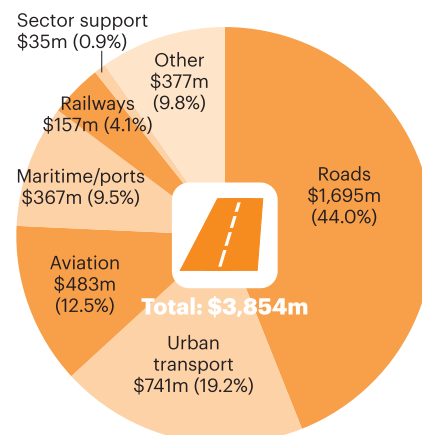
With \$1.7bn in 2016, the roads sub-sector comfortably attracted the most commitments to the transport sector based on data provided by ICA members, receiving 44% of the amount committed to transport. However, several of these commitments could also have been categorised as regional transport corridor projects. Urban transport received \$741m or 19%, aviation \$483m or 13% and maritime and ports \$367m or 10% of transport sector commitments.

The water distribution and, separately, the water supply sub-sectors received more than half of all water and sanitation sector commitments, with distribution receiving \$935m or 27.4%, and supply \$930m or 27.3% of water and sanitation sector commitments. Potable water supply with sanitation projects received \$720m or 21.1% of commitments while activities focused solely on sanitation infrastructure attracted \$388m or 11.4% of funding for the sector.

Power generation projects, taking account all sub-sectors, accounted for \$2.7bn or 54% of energy sector commitments while distribution infrastructure attracted \$918m or 19% and transmission infrastructure received \$377m or 8% of commitments. Of the power generation sub-sectors, gas attracted the most commitments of \$653m or 15% of all amounts committed to the energy sector. Solar and geothermal projects each received around \$520m or around 11% of all amounts committed to the energy sector.

Nearly 75% or \$266m of ICT sector commitments focused on broadband/fibre optic infrastructure while \$32m or 9% target mobile or wireless networks. Defining sub-sectors in ICT operations is more difficult than in other sectors given the variety of activities covered and the emergence of new activities in this fast-moving sector. As a result, other activities account for \$58m or 16% of all amounts committed to the ICT sector. ■

**Figures 38-41**  
ICA members' reported sub-sectoral commitments, 2016



## 4.6 PIDA/PAP Commitments, Disbursements and Trends



Tema port, Ghana, iStock/Getty Images

**Overall commitments to Programme for Infrastructure Development in Africa Priority Action Plan (PIDA) projects in 2016 amounted to \$2.1bn, nearly \$2bn of which was provided for two port projects in Ghana and Cameroon.** Both of these projects feature Chinese and private participation.

This is the first year that the ICA annual report has identified PIDA financings by non-ICA members. In 2016 at least, they appear to be showing a greater interest in financing projects than members. Reported ICA member commitments totalled \$447m while non-ICA members committed \$1.64bn, making a total of \$2.1bn.

While ICA member commitments to PIDA/PAP projects totalled \$447m in 2016, members disbursed \$292m during the year. AfDB, DBSA, EIB, EU-AITF, IFC, Germany through GIZ, Japan through JICA and the UK through DfID all reported commitments or disbursements to the programme. Overall member support for PIDA may be greater than these

data suggest since not all members provided project-level detail or an aggregated figure for PIDA financings.

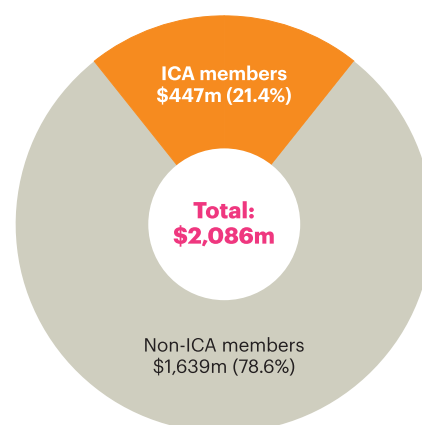
ICA members provided 86% of their 2016 PIDA projects commitments to the transport sector and 14% towards ICT projects. Around half of disbursements went to transport projects with the other half going to energy projects.

In the energy sector, ICA member disbursements from AfDB provided support to the West Africa Power Transmission Corridor, Inga III Hydro, the Central African Interconnection, the West Africa Power Transmission Corridor and the Inga III, Ruzizi III and Rusumo Falls power generation projects. EIB has supported work towards Inga III while EU-AITF has provided technical assistance or interest rate subsidies to several energy projects across Africa.

In the ICT sector, ICA member commitments included EU-AITF support for the Tanzania Backbone Interconnector project while AfDB provided funds for the Trans-Sahara

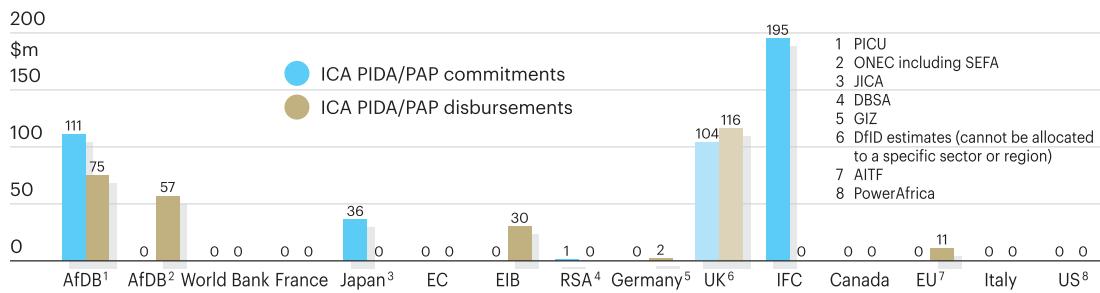
Optical Fibre Backbone Project.

IFC contributed to the largest commitment to a PIDA/PAP project in 2016, providing \$195m towards the \$1.5bn Tema Port Expansion in Ghana, of which \$1bn was privately financed. The project also represents IFC's largest port investment, its biggest infrastructure mobilisation to date in

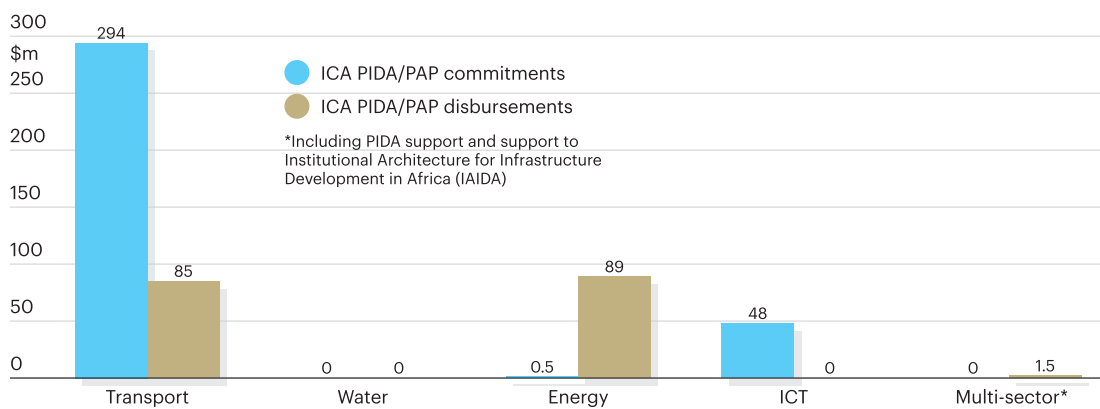


**Figure 42**  
Total reported PIDA/PAP commitments, 2016

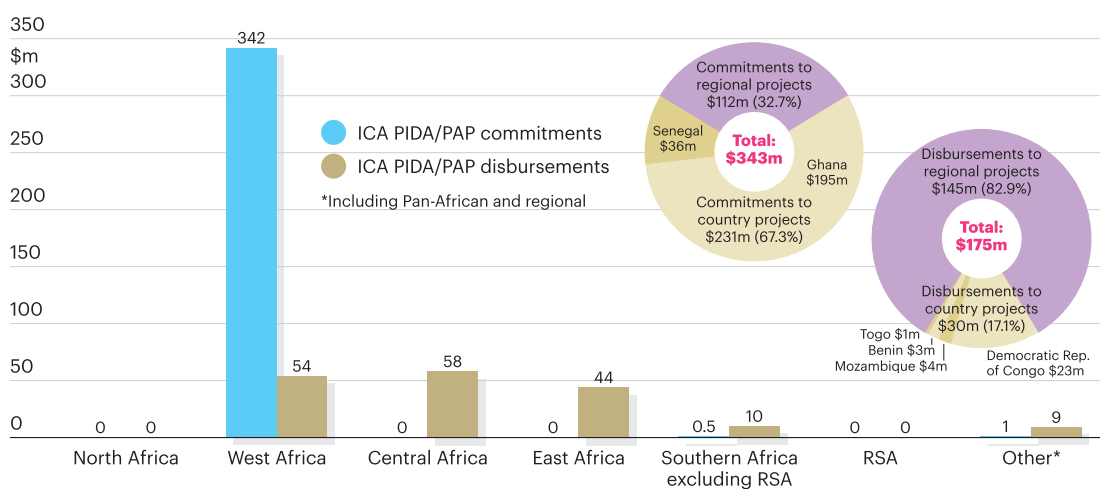
High non-ICA member PIDA/PAP numbers for 2016 are largely due to two major project commitments: Kribi port expansion in Cameroon (\$482.8m) and Tema Port Expansion in Ghana (\$1,032m).



**Figure 43**  
Reported 2016 ICA members' PIDA/PAP commitments and disbursements, by institution



**Figure 44**  
Reported 2016 ICA members' PIDA/PAP commitments and disbursements, by sector



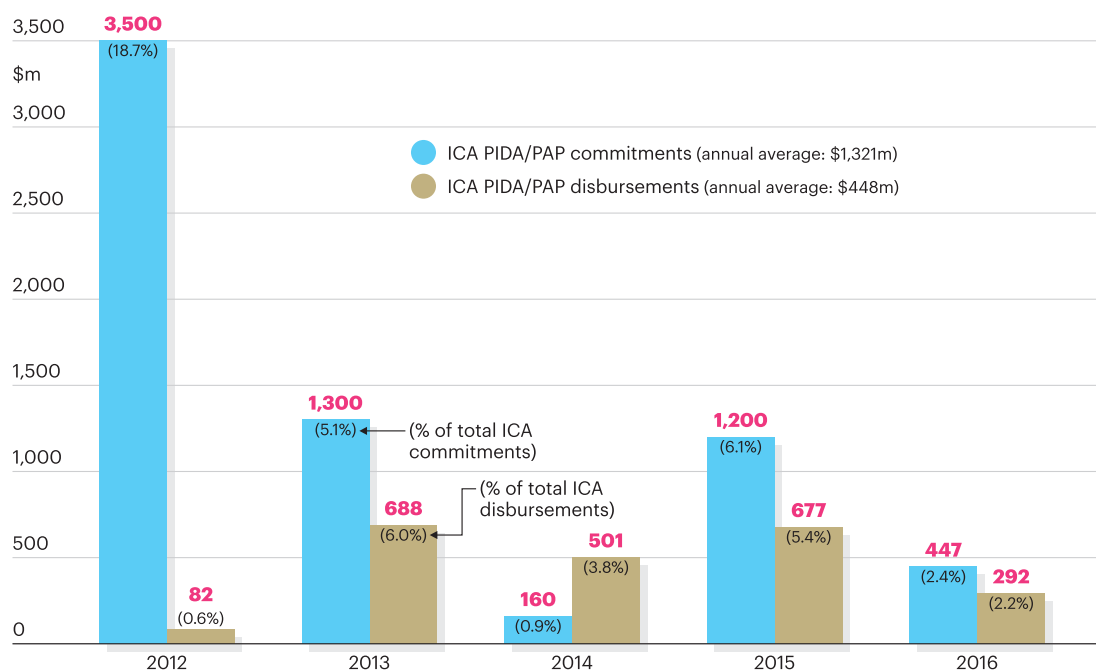
**Figure 45**  
Reported 2016 ICA members' PIDA/PAP commitments and disbursements, by region

Sub-Saharan Africa and the largest reported ICA member 2016 commitment to PIDA. As well as the \$195m from IFC's own account, the financing package includes \$472m from three commercial banks – Bank of China, Industrial and Commercial Bank of China, and Standard Bank – as well as the Dutch development bank FMO. Tema is a build, rehabilitate, operate and transfer project sponsored by Denmark's Maersk Group with 35% equity, French company Bolloré group,

with 35%, and undisclosed 'other shareholders' with the remaining 30%. China Exim Bank provided a \$482m loan for the expansion of Kribi port, which aims to open up Cameroon's mining potential and support the government's Vision 2035 ambitions. Work includes second phase works on the industrial-port complex and the construction of a second container terminal. In July 2017, a concession agreement for the management of the

container terminal of the Kribi Deep Sea Port has been signed between the Kribi Ports Authority and the consortium of the French groups Bolloré Transport & Logistics and CMA CGM, and the Chinese group CHEC. The consortium will finance and operate the containers terminal for the next 25 years. The terminal management will be entrusted to them under a PPP with Cameroon's government.

# PIDA/PAP Commitments, Disbursements and Trends



**Figure 46**  
Total ICA members' PIDA/PAP commitments and disbursements 2012-2016

Apart from the Tema Port Expansion, ICA member support for the transport sector has included Japan's \$36.1m commitment to the rehabilitation of Môle 3, a cargo pier at the Port of Dakar in Senegal. The project aims to improve goods handling processes, with an emphasis on health and safety. It also has a regional impact as it will facilitate the transportation of goods to and from Mali. DBSA has supported the rehabilitation and upgrade of the North South Rail Corridor while both AfDB and EU-AITF have provided support for a wide and varied range of transport projects across the continent.

GIZ's PIDA support programme is working to strengthen institutional capacity (see page 48). The Institutional Architecture for Infrastructure Development in Africa (IAIDA), which aims to create an integrated and enabling management environment capable of enhancing the capacity of the African Union and its institutions to streamline all efforts in infrastructure programme into tangible achievements, is also supported by GIZ.

Several members' projects and programmes complement PIDA

directly while some, such as Japan's One-stop Border Post and Dfid's TradeMark initiatives, predate and clearly dovetail with PIDA's aim of regional integration.

## Trends

Considerable caution should be used when interpreting this data, and especially trends in ICA member contributions to PIDA. Members reported aggregated data for 2012-14 while in 2015 and 2016, data is based on project-level data provided by members. Only some members report project level data while the set of members that reported data in 2016 is different from the set that reported in 2015. Several members have reported difficulties identifying PIDA projects, suggesting that PIDA disbursements and commitments by ICA members are actually higher than reported herein.

Relatively high levels of PIDA commitments from ICA members in 2012 may reflect a sharp focus on the programme soon after its January 2012 adoption by the African Heads of State. The \$3.5bn committed to PIDA represented 19% of total

commitments, while in subsequent years no more than 6% of total commitments targeted PIDA projects.

Disbursements to PIDA have been consistently much lower than commitments each year, perhaps reflecting the large size and complexity of these projects, many of which require cross-border cooperation between governments and agencies in different countries. Peak years for disbursements were 2013 and 2015 when they totalled \$690m and \$680m respectively. Disbursements of just \$290m in 2016 reached their lowest level since 2013.

The data presented here cannot claim to be complete, particularly in respect of non-ICA member PIDA commitments. Financing needs for PIDA/PAP between 2012 and 2020 have been estimated at \$68bn or around \$7.6bn per year. This estimate may now need revising and closer analysis of the demand-side of Africa's overall infrastructure financing gap is needed (see pages 6 & 25). Mechanisms to more accurately and reliably identify and analyse the supply of finance to PIDA projects also appears to be required. ■

## 4.7 Projects Completed

Ten ICA members reported 206 completed projects in 2016. Of these, financial information was provided for 196 projects showing \$4.6bn of commitments and \$4.4bn disbursements (see Figure 47). Some commitments were made many years ago, including 24 prior to 2000.

The transport sector was the beneficiary of \$1.5bn of commitments (33%) to 44 projects, while \$1.2bn (27%) targeted 73 water and sanitation projects (see Figure 48). Energy commitments accounted for \$1.2bn (26%) of projects while ICT and multi-sector projects accounted for 3% and 12%, respectively.

Of the total reported commitments, \$3.2bn (70%) were ODA funded while \$1.4bn (30%) were non-ODA funded.

The breakdown by funding type is

very different compared with new commitments reported in 2016. Whereas loan funding is contemplated for 75% of 2016 commitments, it accounted for just 26% of funding commitments for projects completed in 2016.

This apparently large difference should be contextualised. Loans, especially non-concessional loans, are difficult for some ICA members to report for confidentiality or administrative reasons and may be very substantially under-reported in the granular project-level detail required in this analysis of completed projects.

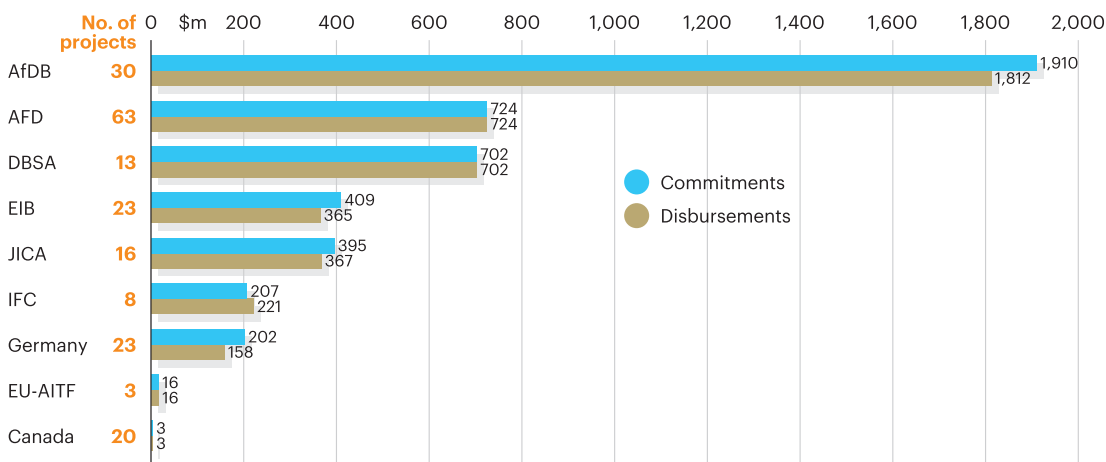
Grants were the most used funding type, accounting for \$1.5bn (33%) of completed projects in 2016, while loans accounted for \$1.2bn. Blended finance accounted for \$1.1bn (24%),

compared with \$1.7bn (slightly under 10%) of new commitments made in 2016.

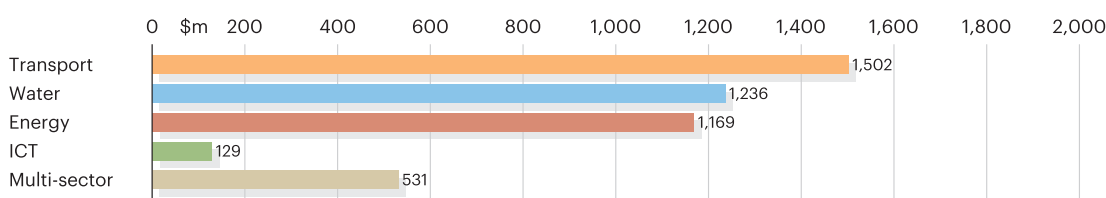
Some of these differences may be accounted for by differences in how the completed projects and new commitments are distributed regionally.

South Africa accounts for 25% and West Africa 22% of completed projects. In contrast, only 5% of completed projects are in Central Africa compared with 12% of new 2016 commitments for the same region.

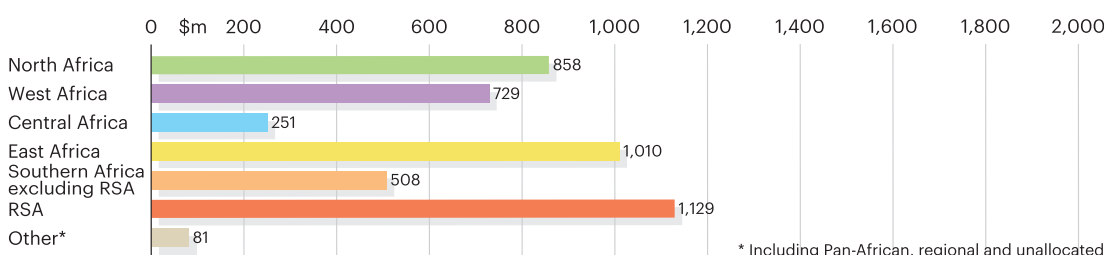
East Africa followed by North Africa and West Africa account for 22%, 19% and 16% of completed projects. The value of projects completed is noticeably low in Nigeria (just over \$1m) and Tanzania (\$142m). ■



**Figure 47**  
Projects completed in 2016, by reporting ICA member



**Figure 48**  
Projects completed in 2016, by sector



**Figure 49**  
Projects completed in 2016, by region

\* Including Pan-African, regional and unallocated

## 4.8 ICA Member Activities



Mombasa port, iStock/Getty Images, 1001 Slide

### AfDB

Commitments of very nearly \$4bn were reported in 2016 by AfDB, maintaining a steady flow that saw the bank commit \$4.2bn in 2015 and \$3.6bn in 2014.

Water commitments increased substantially in 2016 to \$1.2bn compared with \$519m in 2015 and \$443m in 2014. The bank committed the most to transport projects with \$1.7bn, compared with \$2.4bn in 2015 and \$1.4bn in 2014. Energy commitments, which reached \$1.7bn in 2014 and receded to \$1.1bn in 2015, declined to \$882m in 2016. ICT remained broadly level at \$119m in 2016 compared with \$122m in 2015

AfDB's energy complex says it is anticipating an increased flow of projects completed as projects approved in 2010-11 become operational. These include major power generation projects in North Africa as well as transmission and

distribution projects elsewhere on the continent.

Substantial transport commitments were made to several major projects with clear outcomes. Anticipated outcomes of the Sirari Corridor Accessibility and Road Safety Improvement Project in Kenya include reduced freight distances between Mwanza, Kisumu, Nairobi, and Juba thus fostering economic integration within the region.

With regional and national objectives, the expected outcomes of the Busega-Mpigi and Kagitumba-Kayonza-Rusumo Roads Project in Uganda are improved transport services (reductions in vehicle operating costs and travel time), improved processing time for clearance of imports and exports, and improved safety.

The Transport Sector Support Programme Phase 2 aims to have what the AfDB describes as a multidimensional importance for

Cameroon and is tackling the condition of the notoriously dangerous Yaounde-Bafoussam-Bamenda (RN1-RN4-RN6) road.

In December 2016 AfDB approved a \$263.7m loan to Côte d'Ivoire, to finance the construction of the Abidjan 4th bridge, connecting the municipalities of Youpougon and Plateau. By improving mobility and reducing traffic accidents, the project will impact the daily life of millions of commuters and reinforce the economic competitiveness of the city.

### Canada

Canada's \$110m of disbursements in 2016 substantially outweighed its \$6.1m of commitments. Multi-sector projects benefitted from \$51m, or nearly half of all disbursements. Water, energy, ICT and transport commitments amounted to \$42m, \$13m, \$5m and \$32,000 respectively.

Of its \$140.3m of commitments, Canada committed \$135.4m to energy

and \$4.6m to water and sanitation operations and \$312,986 to ICT projects. In 2015 Canada reported commitments of \$195m and disbursements of \$131m. All of Canada's support is ODA.

Canada is creating a Development Finance Institution (DFI) with an initial capitalisation of C\$300m. Based in Montreal, it will be established as a subsidiary of Export Development Corporation to enable quicker implementation. Canada's new DFI will be operational by January 2018 with a view to concluding transactions that same month. It is likely to include a strong infrastructure component.

Reflecting its strong commitment to renewable energy, Canada has also opened a 2017-2022 investment window to support projects – most likely on-grid solar, wind or hydro – via contributions repayable over 20-years under the African Renewable Energy Initiative (AREI).

Canada announced it would contribute C\$150m to the AREI as part of its pledge of C\$2.65bn between 2016 and 2021 to take action on climate change in developing countries. AREI aims to accelerate access to clean, appropriate and affordable renewable energy and create at least 10GW of new and additional renewable energy generation capacity by 2020. Canada hopes to disburse the first tranche of that \$150m by March 2018.

### **Development Bank of Southern Africa**

DBSA manages the South African government and EU developed Infrastructure Investment Programme for South Africa (IIPSA) and the Southern Africa Development Community's (SADC) Project Preparation and Development Facility (PPDF) which is funded by Germany (through KfW) and the EU. The aim of the PPDF is to assist SADC in addressing the implementation of the

SADC Regional Infrastructure Development Master Plan (RIDMP), which will promote and contribute to enhancing regional economic integration in the SADC region.

The bank also manages the New Economic Partnership for Africa's Development Project Preparation and Feasibility Study (NEPAD PPFS) and is a fund manager of the DfID Tripartite Trust Account (TTA). The TTA aims to finance priority infrastructure projects through pooled donor and other funds.

DBSA committed \$1.2bn in 2016, up from \$929m in the previous year. In 2016, energy sector projects received the most commitments (\$544.8m) followed by multi-sector (\$511.5m). The bank's disbursements in 2016 amounted to \$1.2bn for the second year running.

### **European Commission**

The EC manages the European Development Fund (EDF, for sub-Saharan Africa countries) and the Development Co-operation Instrument for Northern Africa countries. Data reported to the ICA for 2016 includes the contribution of the EDF to the EU-Africa Infrastructure Trust Fund (ITF) and Africa Investment Facility (AfIF), but does not reflect the projects approved and implemented with a contribution of the ITF or AfIF since loans for such projects are provided by other institutions and should therefore be reported by these institutions.

Commitments by the EC in 2016 amounted to \$1.4bn in 2016 for the second year running. Most commitments were directed at the energy sector (\$629.4m), followed by the transport (\$600m) and water (\$165.6m) sectors.

Disbursements amounted to \$1bn in 2016 compared with \$816m in the previous year. Most disbursements were directed at the transport sector (\$485.2m), followed by the energy (\$296m) and water (\$256.5m) sectors.

### **European Investment Bank**

Commitments from EIB in 2016 amounted to \$1.3bn compared with \$1.4bn in 2015. The energy sector once more accounted for the most (\$509m) commitments, followed by water (\$431m), transport (\$172m) and ICT (\$138m).

Disbursements amounted to \$1.2bn in 2016, very substantially up on the previous year's \$588m. EIB disbursed most (\$531m) to energy followed by transport (\$459m), water (\$90m), multi-sector (\$75m) and ICT (\$29m) operations.

Projects completed in 2016 included three in South Africa: the Ka Xu CSP solar project, and two water projects. The Umgeni Water project comprised new pipelines and upgrading of existing water supply, water treatment works, pumping and service reservoirs that will assure and improve access to water for over a million households across KwaZulu-Natal. In the same province, the EIB supported eThekweni municipality providing a long-term loan to Rand Merchant Bank to allow it to fund this project at reduced rates.

### **EU-AITF**

EU-AITF provided commitments of \$64m in 2016 compared with \$156m in 2015. The majority (\$58m) of 2016 commitments were directed at energy projects, while transport projects received \$5m. Disbursements in 2016 amounted to \$38m, of which the most benefitted energy (\$28m) followed by transport (\$8m) and water (\$4m) projects.

The fund blends long term loans from participating financiers with grant resources from donors. The fund provides technical assistance for preparatory work, project supervision and targeted capacity building. It provides interest rate subsidies to lower interest rates and hence reduce the total amount of debt. Investment grants are also available to finance project components or part of the

investment, to increase the concessionality of the financing package. EU-AITF also provides financial instruments to guarantee cost financing, equity or quasi-equity investments or participations and risk-sharing instruments.

## France

France reported commitments and disbursements via Agence Française de Développement (AFD), its Proparco subsidiary dedicated to private sector and Fonds Français pour l'Environnement Mondial (FFEM – French Fund for the Global Environment). Commitments in 2016 totalled \$2.8bn, rather higher than the \$2.5bn reported in 2015 and \$2.4bn in the previous year.

AFD says it is investing with CDC in a €600m investment fund. The agency aims to play a catalytic role in the financing of infrastructure projects, mainly in Africa, through long-term equity investments. Energy and transportation are identified as key sectors, while other sectors including water and sanitation, health, education and ICT are under consideration.

AFD is increasingly trying to mobilise EU grant money, blending this with its own loans. Typically, the agency anticipates subsidies from the EU for capacity building, environmental and social impact assessments and for social development activities. The agency is also increasingly working with the private sector.

AFD is decentralising its Paris-based operations. This aims to target support that is both thematically and geographically balanced. With country-based representation across the continent and nine regional directors, a more thematic approach aims to open up new opportunities. Under these arrangements, the agency hopes to see more opportunities to work at a regional level, with Africa's power pools for example.

The water sector received the most commitments in 2016 of \$1.1bn compared with \$282m in 2015 while energy commitments in 2016 totalled \$994m compared with \$1.4bn in the previous year. Multi-sector commitments are up to \$227m in 2016 compared with just \$72m in 2015. Transport commitments of \$470m in 2016 compares with \$684m in 2015. ICT commitments in 2016 of \$3.7m compare with \$23m in the previous year.

## Germany

Germany reported \$1.1bn of commitments in 2016, thus maintaining its 2015 commitments. Total commitments in 2016 include those reported by DEG, GIZ and KfW. Most 2016 commitments targeted energy (\$778.7m) followed by water (\$330.9m) and transport (\$17.1m) projects. Commitments to energy in 2016 were higher than the \$682m reported in 2015. KfW indicated substantial commitments to partner countries in North Africa

Germany is continuing its support to PIDA via financial co-operation implemented by KfW – for example through contributions to NEPAD IPPF for PIDA project preparation funding and direct PIDA project financing – as well as technical co-operation implemented by GIZ. German support for PIDA through KfW includes the funding of projects in the West African Power Pool and for the Ruzizi III power plant. Furthermore, Germany is preparing co-funding of PIDA transmission lines in the Southern Africa Region

The GIZ Support to PIDA programme includes:

- supporting PIDA's information, monitoring and reporting functions through the development of the PIDA information portal, Virtual PIDA Information Centre ([www.au-pida.org](http://www.au-pida.org)) and the PIDA Monitoring and Evaluation system;

- supporting PIDA marketing through initiatives such as the Continental Business Network to mobilise private sector investments in Africa's infrastructure;

- supporting early stage project preparation, for example by backing NEPAD's PIDA Service Delivery Mechanism;

- supporting knowledge and learning initiatives to develop best practice and guidelines for the planning and implementation of cross-border infrastructure projects, and

- supporting organisational development aimed at increasing the effectiveness of infrastructure departments within AUC and NEPAD. A handbook that clarifies the mandates and functions of the different actors in the Institutional Architecture for Infrastructure in Africa has also been developed.

## International Finance Corporation

IFC committed \$413.3m in 2016 compared with \$246m in 2015 and \$621m in 2014. Disbursements in 2016 of \$203m compared with \$292m in 2015 and \$747m in 2014.

Completed projects in 2016 included two final debt financings for Umeme, Uganda's privately-owned electricity distributor as well as financings for developers of mobile telecoms towers.

IFC also signed off as completed the 134MW Amakhala wind farm on South Africa's Eastern Cape. It is part of the country's Renewable Energy Independent Power Producer Procurement Programme (REIPPP), under which IFC also supported several other renewable energy projects. Commissioning work began in 2016 on the 100MW Xina Solar One facility, which is expected to produce clean energy for more than 95,000 households, create jobs and reduce carbon emissions. IFC provided a \$37m loan to support the facility.



## Italy

Italy reported commitments and disbursements via Cassa Depositi e Prestiti (CDP). CDP assumed the role of the National Financial Institution for Development Co-operation on 1 January 2016.

Italy, as Chair of the G7, is hosting the 2017 ICA Annual Meeting in Rome and in 2016 committed an amount of \$28.8m to the infrastructure sector, most of which went to water and sanitation projects.

In the same year, total Italian disbursements amounted to \$19.7m, of which \$1.7m was grant money invested in multi-sector projects.

Italy supports EU action for Africa by investing in a balanced and multidimensional partnership that is not only limited to infrastructure, and is extended to many different areas, including migration, security, SME development, financial inclusion, governance, democracy and human rights, the role of women, youth, education and employment.

In this context, in 2017 Italy established its €200m Fund for Africa to finance extraordinary interventions aimed at relaunching dialogue and co-operation with African countries located on migratory routes

## Japan

Japan reported commitments of \$2.4bn and disbursements of \$58m in 2016. In 2015, Japan committed \$1.8bn compared with \$2bn in 2014. Disbursements in 2015 amounted to \$960m compared with \$1bn in 2014.

In addition to its direct financial commitments, JICA has been contributing to African infrastructure development by dispatching JICA experts to several major institutions in Africa. These include the AfDB (ICA Secretariat and the Enhanced Private Sector Assistance (EPSA) initiative), NEPAD agency, Union Economique et

Monétaire Ouest Africaine (UEMOA) and DBSA.

JICA is continuing its Quality Infrastructure concept as featured in the 2015 ICA Annual General Meeting. The concept incorporates elements of economic efficiency, social inclusion, safety and resilience, and environmental sustainability. As discussed in the 2015 meeting, the significance of building quality into all aspects of infrastructure development is becoming increasingly recognised.

One key trend noted by JICA is the increased interest in the interrelation of infrastructure development with other sectors. In this context, Japan is adopting an approach of comprehensive co-operation in its economic corridor master plans for the Northern Corridor, Nacala Corridor and West Africa Growth Ring.

These three plans identify priority projects not only in transport, energy and water, but also in industrial and agricultural development with the aim of maximising economic impact.

Through programmes such as the strategic economic corridor developments and work in the power pools in Southern and Eastern Africa, JICA is taking an integrated and regional approach to infrastructure as well contributing to PIDA progress, both directly and indirectly.

## United Kingdom

Direct grant funding from DfID and equity investments by CDC totalled \$537m in 2016 compared with \$288m in 2015, with roughly half of all UK funding provided by each organisation in both years.

In 2016, DfID committed \$281.7m, of which the most went to water (\$103.8m) followed by transport (\$78.6m), multi-sector (\$57.9m), energy (\$33.7m) and ICT (\$7.7m) sectors. CDC committed \$287.7m, of which \$251m was provided for the

energy sector while \$36.7m was for multi-sector projects.

In the same year, DfID disbursed \$291m, of which the most went to water (\$109m) followed by transport (\$78m), multi-sector (\$57m), energy (\$41m) and ICT (\$6m).

Data for this year's report were provided by DfID and obtained from the UK's DFI, CDC Group. UK contributions not reported on in this report include commitments to multilateral institutions, which were provided with DfID African investment related funding including the AfDB, the EU and the Private Infrastructure Development Group.

## World Bank

In 2016, WBG committed \$4.1bn, of which the most went to energy (\$1.7bn) followed by the transport (\$1.3bn), water (\$890m) and ICT (\$100m) sectors. Commitments from WBG in 2016 amount to less than the \$6bn and \$5.9bn reported in 2015 and 2014 respectively.

For the third year running, WBG's disbursements have increased steadily and substantially, rising from \$1.8bn in 2013 to \$2.3bn and \$3.7bn in the following two years respectively, reaching \$4.2bn in 2016. Of the \$4.2bn, most of which went to energy (\$2bn) followed by the transport and water (\$1bn and \$1.1bn, respectively) and ICT (\$178.2m) sectors.

The World Bank projects are multi-sector in nature, driven by what suits each country based on its requirements. The bank takes a multidimensional approach tailored to each country. It does not have a priority list of projects. Rather, it adopts a decentralised approach where countries decide on priorities. However, for the needs of this report, the World Bank allocates its commitments and disbursements according to sectors. ■

# 5. Other Public Sources of Financing



Victoria, Mahe island, Seychelles, iStock/Getty Images

## 5.1 African National Budgets for Infrastructure

**Total identifiable infrastructure allocations across 46 African national government budgets came to \$26.3bn in 2016 (see Figure 50, right). This compares with a restated total of \$24bn across 44 countries, in 2015. The restated total has been reached by reducing the \$28.4bn in the 2015 report by \$4.4bn of budget allocations now identified as externally funded.**

To avoid double counting and to provide as accurate as possible data, identifiable external funding has been removed. The possibility of double counting nevertheless remains in some countries where budget data does not itemise external and internal funding for specific projects or sectors.

Additional countries for which 2016 data have been captured are: the Republic of Congo, Niger, São Tomé and Príncipe, and the Seychelles. Infrastructure allocations identified in the 2015 national government budgets for Chad and Guinea-Bissau could not be identified for 2016 as detailed budget breakdowns were not available.

### Transport

Reflecting priorities in previous years, transport accounted for the largest

proportion of combined infrastructure budget allocations across Africa, accounting for 55.5% of all funds. This is despite a modest 13% growth in total spending from \$12.9bn in 2015 to \$14.6bn in 2016.

Despite this overall growth, the detailed picture is far more varied. For example, while transport allocations in East Africa and South Africa suffered significant drops, those in North and West Africa almost doubled.

### Water

Allocations to the water sector totalled \$4.4bn, accounting for 16.7% of all allocations, the second highest proportion of combined 2016 allocations (in 2015, energy attracted the second highest allocations). Eight countries (Botswana, DR Congo, Burkina Faso, Gabon, Côte d'Ivoire, Madagascar, and Malawi) prioritised the sector; most notably, DR Congo allocated 44.3% of its infrastructure budget to water.

Other countries, such as Egypt and Angola, allocated significant amounts and proportions of their budgets, despite not making water their highest priority. Egypt allocated 32.2% of its infrastructure budget to water (it is likely that this figure

### Data Note

In the interest of consistency, all figures for budget allocations refer to internal allocations unless explicitly stated otherwise.

includes some external funding from development partners). Following years of water scarcity, this focus on the water sector is understandable, and by the end of the 2016 fiscal year, Egypt's Minister of Housing claimed that a total of 31 drinking water and sanitation projects had been completed in greater Cairo and Alexandria alone.

### Energy

Budget allocations to the energy sector in Africa declined by 20.8% in 2016, with overall internal spending totalling \$3.8bn. This is likely due to interrelated global issues including low growth rates and the falling price of oil and other commodities.

East Africa saw the largest decrease in energy spending, with a 44% drop. There was a clear dependence on external financing in many countries. For example, Uganda allocated \$49m from internal resources, and \$665m from external.

However, West Africa bucked this trend of decline, doubling its spending in the energy sector. Gambia, Côte d'Ivoire, Liberia and Sierra Leone all prioritised the energy sector, with Côte d'Ivoire dedicating the vast majority (78.3%) of its infrastructure budget to the sector.

### ICT

As in previous years, the ICT sector received the lowest amount of allocated spending across Africa, with a total of \$853m. Despite this, the sector had by far the highest level of growth with an

increase of 50% between 2015 and 2016.

Most noticeably, South Africa allocated six times more to ICT in 2016 (\$71m) than in 2015 (\$12m). A large proportion of this was put towards cyber infrastructure and satellites. Data suggests that the majority of African nations are increasing their support for the sector. For example, budget allocations to ICT in East Africa grew on average by 388% in 2016, despite totalling a modest \$55.7m.

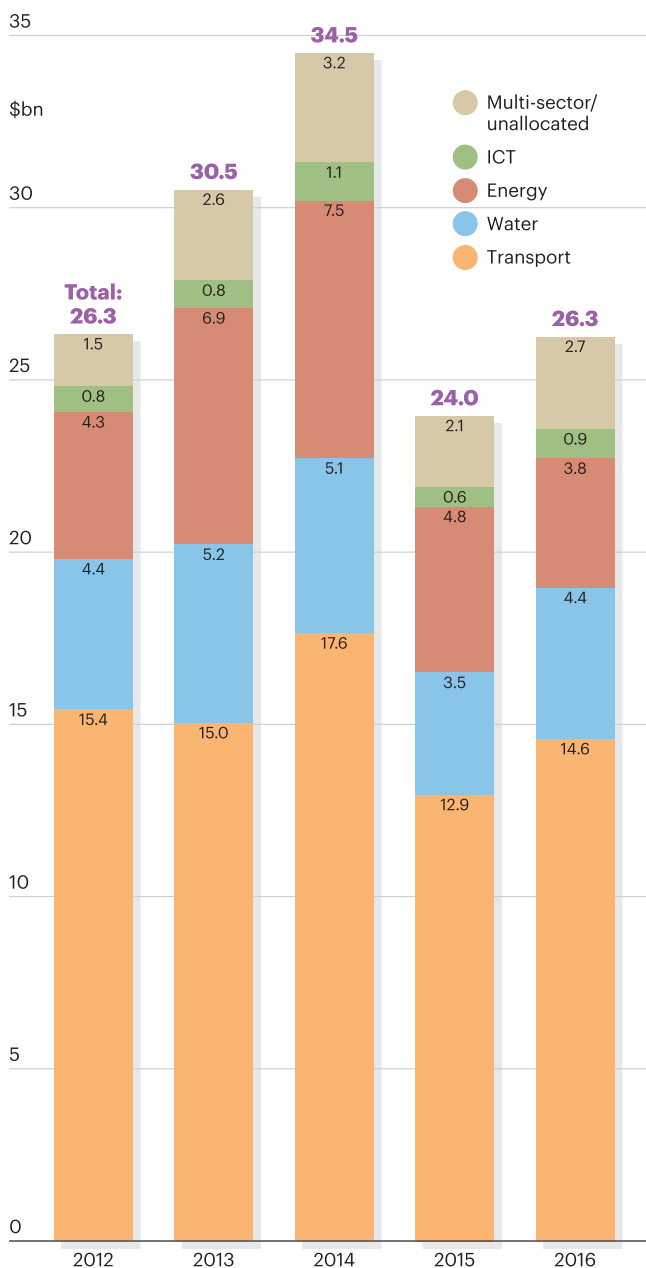
### Multi-sector and Unallocated

Unallocated and multi-sector budget allocations have been merged in this year's report to facilitate consistent trend analysis. In 2016 there was a 30% increase in allocations to these categories, all of which would have appeared in one of the ICA-defined sectors if identification had been possible. ■

### Oil and Commodity Prices

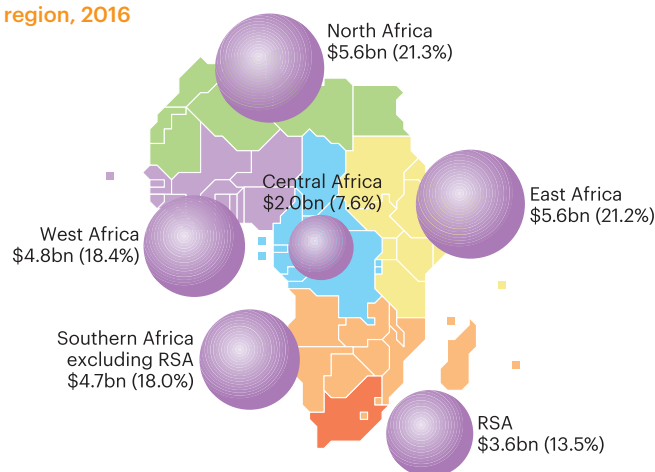
The rise in overall spending on infrastructure comes after significantly reduced allocations in 2015 compared with 2014, caused by the fall in global oil and commodity prices. While the negative economic impacts of this are still being felt, they are evidently less stark this year. The majority of oil-dependent African nations have either maintained or increased their internal spending on infrastructure between 2015 and 2016. Nigeria in particular has seen a significant rise in infrastructure allocations in a direct attempt to recover from the damage caused by the country's dependence on oil. In his 2016 budget speech, Nigeria's President Muhammadu Buhari stressed the need to move away from oil dependency, promising to deliver 'security, jobs and infrastructure'.

Some oil-dependent countries have continued to implement trimmed budgets. Gabon, for example, cut its 2016 national budget by approximately 14%, while South Sudan's was cut by 6% due to continued unrest in oil regions as well as the obvious strains created by weak global oil prices. ■



**Figure 50 (left)**  
National government budget allocations by sector, 2012-2016

**Figure 51 (below, right)**  
National government budget allocations by region, 2016



# African National Budgets for Infrastructure

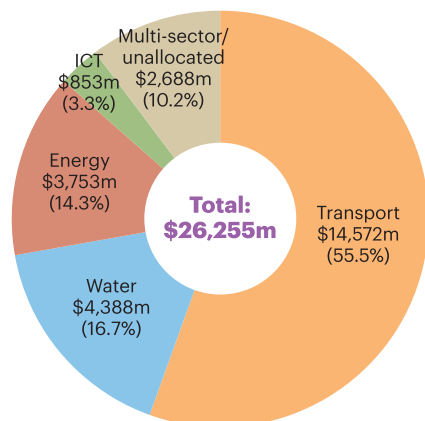
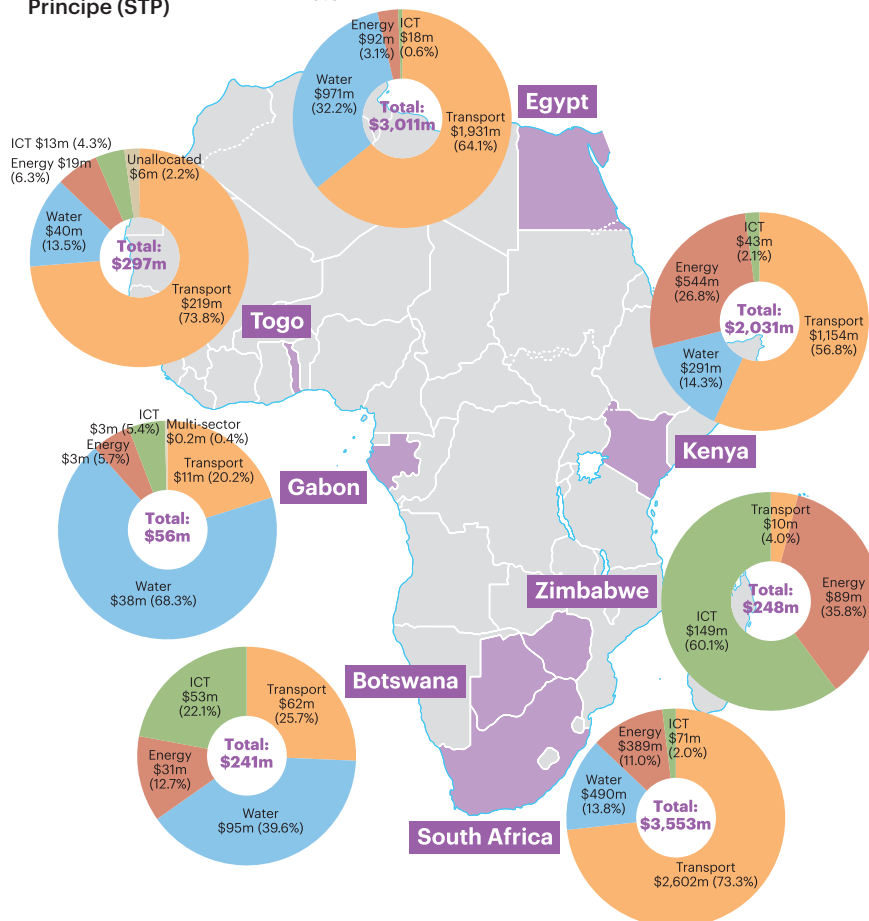
## Identifiable African National Budget Allocations in 2016 (\$m)

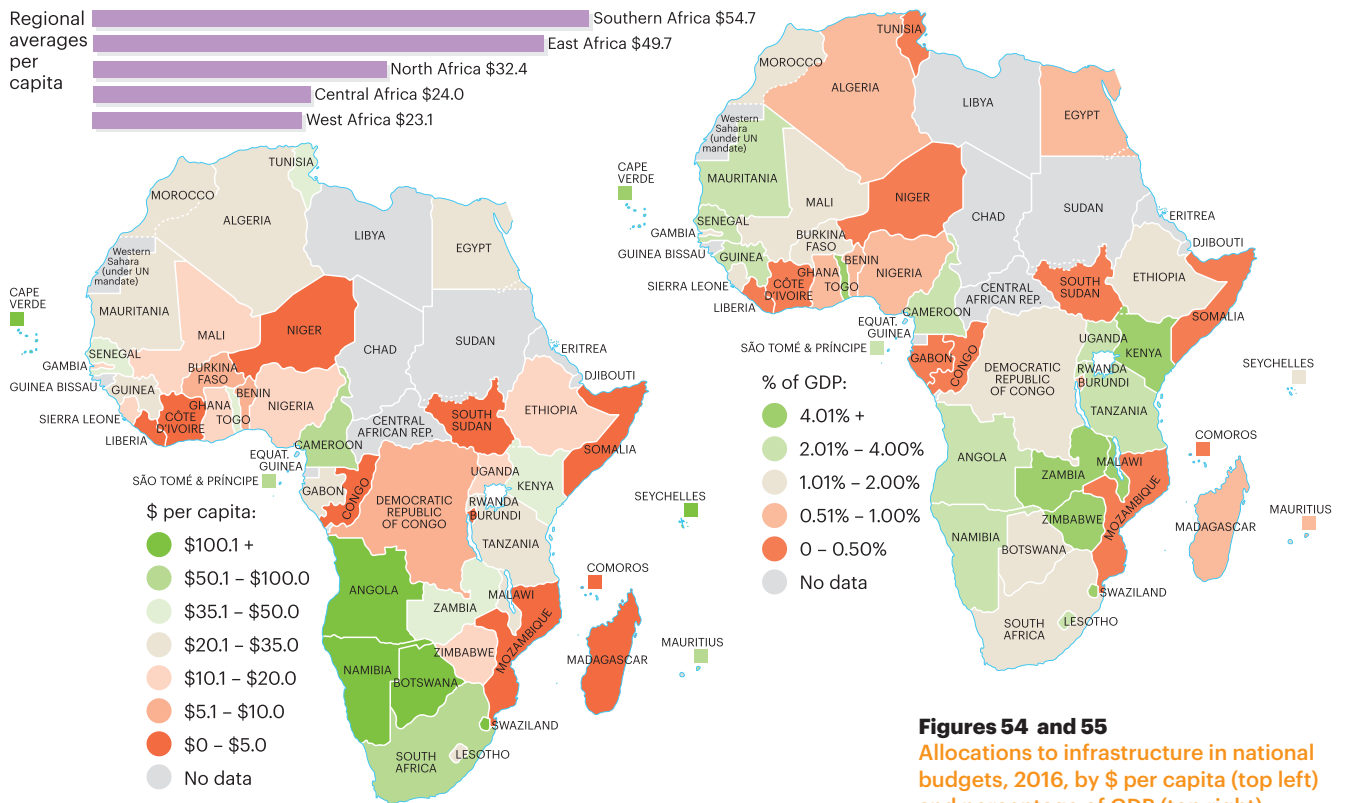
The countries where no 2016 data was available are: Central African Republic, Chad, Djibouti, Equatorial Guinea, Eritrea, Guinea-Bissau, Libya and Sudan.

North Africa		East Africa		West Africa	
Algeria	883.4	Ethiopia	1,338.7	Benin	75.2
Egypt	3,010.5	Kenya	2,030.7	Burkina Faso	179.3
Mauritania	118.7	Seychelles	23.5	Cape Verde	52.7
Morocco	1,128.9	Somalia	2.2	Côte d'Ivoire	64.5
Tunisia	442.3	South Sudan	2.4	Gambia	36.0
Southern Africa and RSA		Tanzania	1,605.4	Ghana	177.1
Angola	2,562.0	Uganda	567.7	Guinea	358.3
Botswana	240.7	Central Africa		Liberia	0.7
Comoros	0.2	Burundi	4.1	Mali	199.3
Lesotho	60.5	Cameroon	1,145.5	Niger	2.5
Madagascar	93.9	Congo	2.3	Nigeria	2,749.2
Malawi	342.4	DRC	532.4	Senegal	575.4
Mauritius	111.1	Gabon	55.7	Sierra Leone	67.1
Mozambique	29.6	Rwanda	241.0	Togo	297.5
Namibia	240.6	São Tomé and Príncipe (STP)	10.6		
South Africa	3,552.5				
Swaziland	136.2				
Zambia	655.6				
Zimbabwe	248.4				

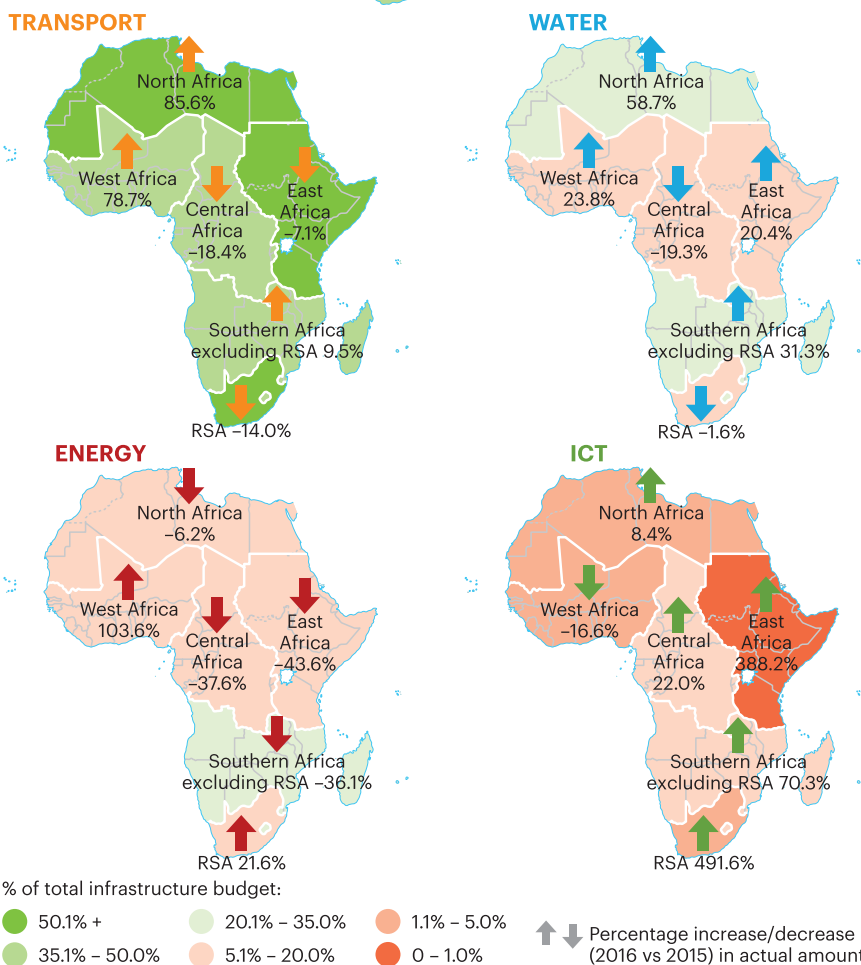
**Figure 52 (right)**  
Identifiable 2016 national budget allocations by sector for selected countries, illustrating wide variations in sectoral priorities

**Figure 53 (below)**  
Total identifiable 2016 national budget allocations by sector





**Figures 54 and 55**  
**Allocations to infrastructure in national budgets, 2016, by \$ per capita (top left) and percentage of GDP (top right)**



**Figure 56**  
**Percentage of infrastructure allocations in national budgets by sector and region, 2016 (left)**

### Regional trends

#### Per capita spending on infrastructure

Reflecting findings in 2015, in terms of infrastructure spending per capita, Southern African countries tended to spend more than countries further north. There are, however, some exceptions to this: Cape Verde and the Seychelles are prime examples, spending \$100 and \$242 per capita, respectively.

In contrast, West Africa displayed relatively low spending per capita, at \$23.1.

# African National Budgets for Infrastructure



Johannesburg Stock Exchange, iStock/Getty Images, Henrique NDR Martins

## Capital Markets

**African countries are adopting several approaches to tap capital markets. Sovereign bonds to finance Africa's infrastructure development have been issued by Angola, Côte d'Ivoire, Ethiopia, Gabon, Ghana, Kenya, Namibia, Nigeria, Rwanda, Senegal, Seychelles, Tanzania and Zambia. Nigerian states and South Africa's parastatals, among others, have issued bonds to raise finance.**

Morocco's Banque Centrale Populaire (BCP) launched a €100m green bond in November 2016 at the COP 22 climate change conference in Marrakech, the proceeds of which will be used to refinance its investments in selected renewable energy projects in Morocco. But while high-yielding sovereign bonds issued in 2016 attracted domestic and international investors, some more recent issues have failed to excite investors.

Rwanda launched its treasury bond issuance programme in 2014 to finance infrastructure projects and develop the local capital market. In February 2016, it issued a five-year \$20m infrastructure bond. It had a

final coupon and yield of 12% and was more than three times oversubscribed. A subsequent \$12m bond issued in May 2017 attracted less interest but even with a slightly higher final coupon and yield of 12.675% it had a subscription rate of 113%.

In October 2016, it emerged that the Kenyan government's first ever 15-year infrastructure bond had been oversubscribed by 16%. The Central Bank of Kenya accepted bids worth around \$300m from local and international investors at a rate of nearly 13.2%. In comparison, a \$2bn Kenyan sovereign bond reopening in 2014 was four times oversubscribed.

In South Africa, parastatals such as the South African National Roads Agency Limited (SANRAL) issue bonds to raise finance for projects. SANRAL manages around 21,490km of the national road network, 14.5% of which are toll roads funded by SANRAL – largely through a mix of toll revenues and capital market borrowing – or managed on its behalf by private companies or funded and managed by the private sector through public-private partnerships. The majority of bonds issued by

SANRAL are listed and traded on the Johannesburg Stock Exchange.

SANRAL has two government issued guarantees (approved July 2009 and November 1999) to issue bonds. As of 31 March 2016, SANRAL had issued a nominal R23.77bn (\$1.8bn) under its government guaranteed Domestic Medium Term Note (DMTN) programme and R5.080bn under the earlier government guaranteed programme. It also has a government-approved unguaranteed DMTN borrowing capacity of up to a nominal value of R15bn.

State-owned power utility Eskom, which has faced financial problems, issues government-guaranteed DMTN bonds and US Dollar denominated bonds in the international debt markets through the registered Global Medium-Term Note (GMTN). As of 1 June 2016, Eskom had issued a nominal R120bn of bonds in the domestic bond market through various instruments.

The first local currency bond to be listed in international capital markets was Transnet's R5bn (around \$520m at 2013 rates) global bond on the London

Stock Exchange in 2013. The successful bond was issued on the strength of the organisation's balance sheet without government guarantees.

The downgrading of South Africa's sovereign ratings in April-June 2017, however, has also led to downgrades for the parastatal and created more challenging conditions for raising finance through bond markets. During this period, three domestic bond issues by Transnet failed to entice. The company raised R55m out of a planned R600m from these auctions compared to R300m out of a planned R600m for the three auctions over the late February-March period.

Progress is, however, being made in the development of bonds for infrastructure projects in South Africa's Renewable Energy Independent Power Producer Procurement (REIPPP) programme. The bonds have been under development since discussions began between the World Bank, the JSE and the National Treasury in late 2015. The JSE has been looking for an anchor project to launch the process and discussions have been taking place about the possibility of launching with a securitised bond comprising several

projects in the REIPPP programme. This might comprise a number of operating REIPPP Round 3 and planned Round 4 projects, backed by DFI credit enhancements and packaged as a 'green bond'. Operating projects could be a significant source of deal flow, with developers looking to refinance bank loans with cheaper debt from capital markets and banks looking to refinance their lending to free up capital for further investment.

In Nigeria, where subnational financing plays a big role in infrastructure development, Lagos state plans to finance what it describes as fundamental reforms of all modes of transportation, including roads, waterways and pavements, with the issuance of a public transport infrastructure bond during the 2017 financial year. It would finance the urbanisation of the Marina area, complete with waterways, and establish parks and gardens and develop community sports centres and stadiums in locations across the state. Lagos state governor Akinwunmi Ambode has also said his administration would enter into PPPs to execute some road projects.

With a population estimated at 21m, of which 85% live in the city of Lagos, the state has a history of issuing bonds to support infrastructure as well as its general budget. A N100bn (\$317m) bond issuance programme and a combination of internal and external loans are expected to finance some N170bn of the 2017 state budget. The Kwara State government has also said it would seek to secure a N10bn bond for forthcoming infrastructure projects, while the federal government is considering drawing from the N5.14trn pension fund to finance critical infrastructure.

In June 2017, Nigeria successfully issued its first diaspora bonds in the international capital market to raise \$300m at the rate of 5.625% for a tenor of five years, making Nigeria the first African country to issue a bond listed in the US and the UK aimed at retail investors. It was 130% oversubscribed and the proceeds will be used to fund Nigerian infrastructure projects. The issuance of the bond followed the country's success in raising \$1.5bn from a 15-year Eurobond earlier in the year. ■

## Sovereign Wealth Funds

According to Sovereign Wealth Lab's 2016 sovereign wealth fund (SWF) rankings<sup>1</sup>, one of the most comprehensive datasets on SWFs, 60 countries reportedly manage \$7.2trn through 94 SWFs. Of this, African SWFs represent a small but growing share, currently constituting only around 2.1% (\$154bn). This figure represents a window of opportunity through which policymakers can tap resources for African infrastructure development.

Though not as sophisticated as those in Europe, Asia and the Middle East, the number of SWFs in Africa is increasing. New resource discoveries and robust commodity prices in the 2000s substantially increased the continent's stock of SWFs. According to Quantum Global Group, there were 19 African SWFs in 2014 compared with only 10 before

2010. So far they have not featured prominently in infrastructure sectors, though depressed oil and commodity prices over the last few years have not produced the most conducive conditions for some funds.

Several African SWFs – including those of Nigeria, Ghana and Kenya – have mandates to prioritise domestic investments, especially infrastructure and industrial development. The Nigeria Sovereign Investment Authority (NSIA), for example, manages surplus income from oil and has an asset base of \$1.5bn, of which \$600bn is allocated to the Nigeria Infrastructure Fund (NIF).

The authority is contemplating a new financing strategy for the Second Niger Bridge with the Federal Ministry of Works, Power and Housing and is also looking into other projects. In 2016,

NSIA entered into a partnership with Ogun State government and Lafarge Africa, for the Ogun State land reforestation and waste to energy project, which comprises three sub-projects: waste-to-energy, land degradation neutrality and biofertilisers. The project's goal is to help transform 108,000 hectares of heavily degraded land into an arable green area, using the latest techniques in agro-ecology and agro-forestry.

A fund for infrastructure is also contemplated for Kenya's SWF if it materialises as a significant source of development finance. The country is banking on a possible \$1.55bn annual income from oil once production starts in 2017. ■

<sup>1</sup> See [http://media.ie.edu/reports/Report\\_Sovereign-Wealth-Funds-2016.pdf](http://media.ie.edu/reports/Report_Sovereign-Wealth-Funds-2016.pdf)

## 5.2 China

**Chinese investments announced in 2016 totalled \$6.4bn, less than a third of the \$20.9bn reported in 2015 but more than double the \$3.1bn reported in 2014.**

Despite these wild fluctuations, financing levels averaged \$10.1bn over 2014-2016, not far behind the \$12bn average six-year trend for 2011-2016 (see Figure 57, right).

The largest reported Chinese financing in 2016 was a \$7.6bn China Exim Bank concessional loan for the construction of a proposed standard gauge railway (SGR) that would link Burundi and Rwanda with Tanzania. But as fund-raising by AfDB and others continued after the announcement and partners reported increasing difficulty concluding arrangements, this has been omitted from the report.

Two coal plants account for \$3bn of Chinese funding announced in 2016. Lamu coal plant in Kenya and the first phase of Ghana's Ekumfi Aboano each received \$1.5bn.

South Africa's Standard Bank, in which Industrial and Commercial Bank of China (ICBC) has a substantial share, said in its annual report that it had teamed up with its Chinese shareholder to fund the Lamu coal plant in Kenya, which is backed by a consortium of local firms under the investment vehicle Amu Power Company. ICBC provided \$1.2bn with the Chinese multinational and Standard Bank agreeing to jointly provide a further \$300m.

Work on the first phase of the Ekumfi Aboano project is being undertaken by Volta River Authority and China's Shenzhen Energy Corporation, with funding from the China African Development Fund, a Chinese private equity fund solely funded by state-owned China Development Bank. As one of China's three policy banks, it is primarily responsible for raising

funds for large infrastructure projects.

For the second year running, the energy sector received the most commitments, with \$4.6bn compared to transport commitments of just over

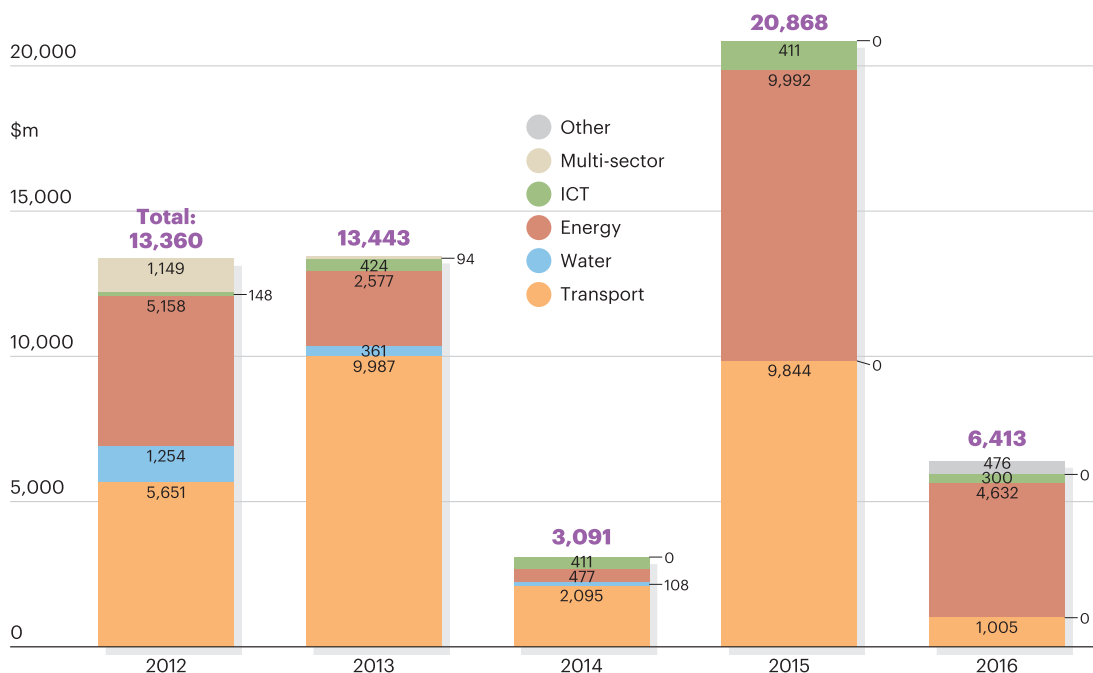
\$1bn – in 2015, commitments to energy stood at \$10bn and transport at \$9.9bn. The increased focus on energy contrasts starkly with data for 2011-2013, when China announced substantially more investments in transport than the energy sector.

### Chinese Financings Announced in 2016

Project	Funder	Country	Funding type	Amount (\$m)
Adjarala hydropower dam	China Exim Bank	Benin	Loan	270
Eskom credit facility	China Development Bank	RSA	Credit facility	500
Garissa 55MW solar farm	China Exim Bank	Kenya	Loan	135.7
Underground transmission lines, Nairobi	China Exim Bank	Kenya	Loan	128
Kribi deep seaport, Warak hydroelectricity plant & new parliament building*	ICBC	Cameroon	Loan	476
Lamu coal plant	ICBC with Standard Bank**	Kenya	Debt Financing	1,500
120MW wind farm, Aisha	China Exim Bank	Ethiopia	Project financing	218.5
Ekumfi Aboano coal power plant phase 1	China African Development Fund***	Ghana	Long-term loan	1,500
20MW solar plant near Winneba	Beijing Xiaocheng Company	Ghana	Corporate financing	30
75MW Warak hydropower plant	ICBC	Cameroon		302
300MW Ncondezi coal-fired power project	Shanghai Electric Power	Mozambique	Investment (60% stake)	25.5
Tema port container terminal	ICBC, Bank of China and Standard Bank	Ghana	N/A	472
New terminal at Monrovia's Roberts international airport	China Exim Bank	Liberia	N/A	50
Kribi port expansion	China Exim Bank	Cameroon	Loan	482.8
400kV power substation, Woldia	China Exim Bank	Ethiopia	N/A	77.8
Digital migration project	China Exim Bank	Zambia	Loan	200

\*Parliament not infrastructure under ICA definitions \*\*ICBC acquired 20% of Standard Bank shares in 2007 \*\*\*Private equity fund solely funded by state-owned China Development Bank





**Figure 57**  
Chinese commitments by sector, 2012-2016

Over the last six years – with the exception of 2015, when significant investments in Southern African (including RSA) energy and transport projects were announced – China made more commitments to East Africa than to any other region. While \$9.9bn of Chinese funding for Southern Africa was announced in 2015, only \$800m was announced in 2016.

No commitments to North Africa were announced in 2016, which is consistent with China’s sub-Saharan focus. It also tends not to invest heavily in water and sanitation. A private Chinese company, however, mooted a substantial investment in this region and sector in 2016.

According to a press statement, Shanghai Saifon Water Service Company is looking to invest \$1bn in Egypt to build water desalination and waste recycling plants. This would be the company’s first investment in the Middle East. The company said it plans to carry out four projects in the governorates of Kafr El-Sheikh, Cairo and Fayoum and will invest over a four-year period. ■

## Chinese Projects Made Progress in 2016

Trial service began on the Addis Ababa–Djibouti standard gauge railway (SGR) in October. The new line was built between 2011–2016 by two Chinese state-owned enterprises, China Railway Group and China Civil Engineering Construction Corporation (CCECC), at a cost of \$4bn.

The largest Chinese investment reported in Infrastructure Financing Trends in Africa 2015, a \$4.5bn loan agreement with ICBC to help finance the construction of the Caculo Cabaça hydropower dam in Angola, was officially signed in December 2016.

In November, the Nairobi-Naivasha SGR project was launched. It is being built by China Communications Construction Company and funded by China Exim Bank.

The Abuja-Kaduna SGR, linking Nigeria’s capital Abuja and the north-western state of Kaduna, was open for commercial operation in July. It was built by CCECC.

In April, Tanzania’s commercial capital Dar es Salaam added a new urban landmark when the Chinese-built Nyerere Bridge, or Kigamboni Bridge, opened to traffic as the largest cable-stayed cross-sea bridge in East Africa. It was built by China Railway Construction Engineering Group in a joint venture

with China Railway Major Bridge Engineering Group.

In December, Ethiopia inaugurated the Gibe III hydro-power plant, which has a generating capacity of 1,870MW and should raise Ethiopia’s power generation capacity to more than 4,260MW. An ICBC loan financed 60% of the cost.

Zimbabwe commissioned the Victoria Falls International Airport upgrade and expansion in November. Construction was undertaken by China Jiangsu International and financed through a \$150m China Exim Bank loan.

China Harbour Engineering Company started work in November on Tema Port and Kotokuraba Market in Ghana. A total of 120 hectares of land will be reclaimed from the sea. The project will also see the upgrading of the two-lane Tema-Accra Expressway into a six-lane road to ease traffic flow.

Burundi’s digital TV migration continued in December when a digital television project by Chinese media company StarTimes was completed. In the same month, Chinese tech giant Huawei also marked the completion of its metropolitan area optical fibre network project in Burundi, which involved laying 220km of optical fibre in the capital Bujumbura. ■

## 5.3 Arab Co-ordination Group

Members of the Arab Co-ordination Group (ACG) have consistently reported data for the ICA's reports, notably the Islamic Development Bank (IDB) and the OPEC Fund for International Development (OFID). The group committed \$5.5bn to African infrastructure projects in 2016, compared with \$4.4bn in 2015 and \$3.5bn in 2014 (see Figure 60, right).

Commitments by the Saudi Fund for Development (SFD) amounted to \$2.3bn, which includes an announcement made during Saudi King Salman bin Abdel-Aziz al-Saud's April 2016 official visit to Egypt that a \$1.5bn concessional loan and a \$200m grant would be made available from SFD to upgrade Sinai's infrastructure.

Identified commitments within this \$1.7bn to projects that fall outside the ICA's definition of infrastructure have been excluded to reach the SFD total commitment as reported here. The

Saudi funding contemplates projects in the transport and water sectors as well as education and agriculture projects.

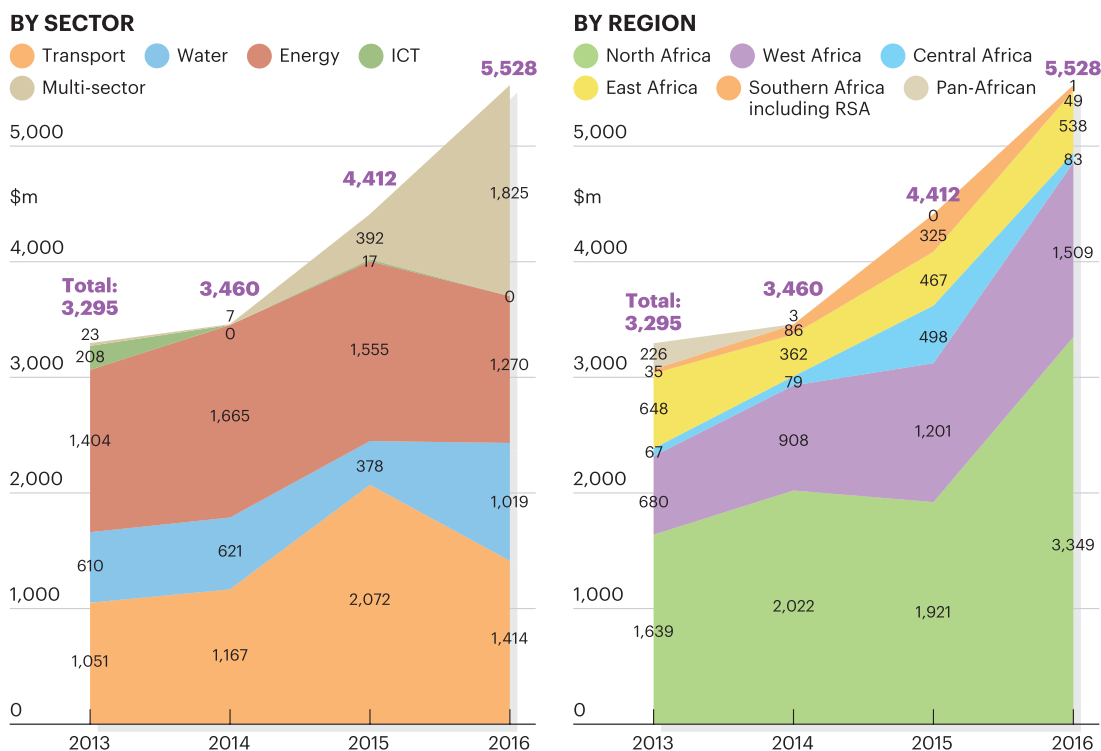
Of the remaining \$643m SFD commitments, the greatest proportion was directed towards energy (\$388m), focused solely on North Africa. This included \$123m towards the construction of the Mornaguia power plant and \$165m for electricity transmission lines between Nouakchott and Nouadhibou in Mauritania.

The IDB committed \$1.1bn in 2016, during which it focused on West Africa, which accounted for 91% of its commitments. In 2015, the bank's commitments were spread more evenly across the continent and included projects in Central, Eastern and Southern Africa.

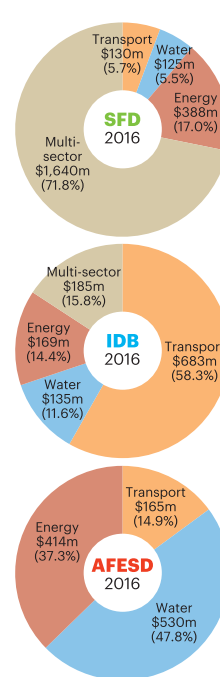
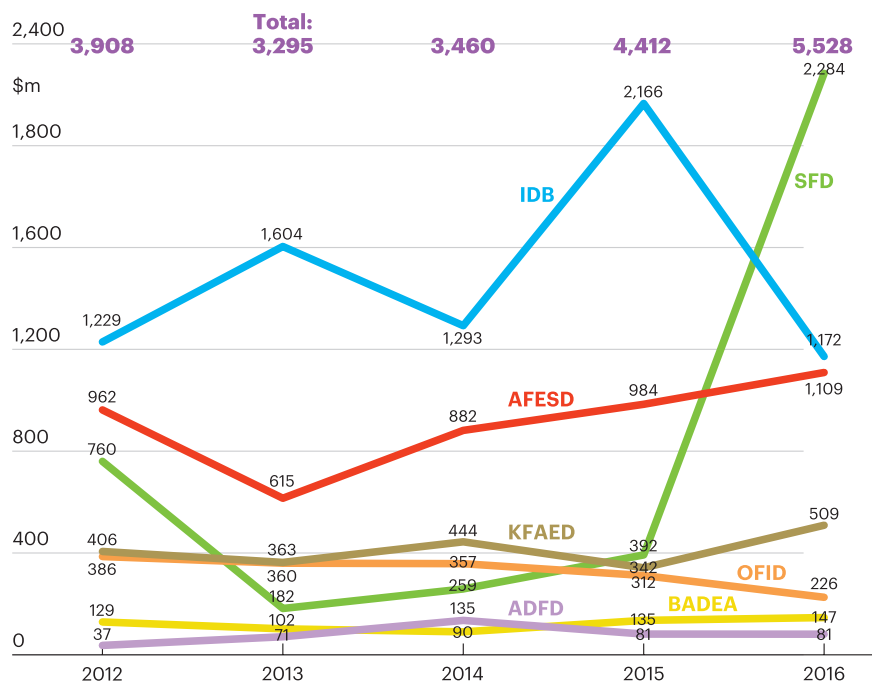
IDB directed the highest proportion of its commitments towards transport (\$682.9m), the largest contribution to

this sector made by ACG members in 2016. Almost half (\$332m) was targeted towards the development of the regional express train from Dakar city centre to Senegal's new Blaise Diagne International Airport.

The Arab Fund for Economic and Social Development (AFESD) in 2016 financed \$1.1bn, or 20%, of ACG's commitments to infrastructure projects. With the exception of one commitment in the East African region (18%), the remaining 82% was dedicated to projects in North Africa. AFESD directed the highest proportion of its commitments to water projects (47.8%), accounting for the largest contribution in this sector made by any ACG member in 2016. Projects included the Roseires Irrigation project (Phase 1) to support the irrigation of 51,000 hectares of agricultural land in Sudan; the project also features a \$198m hydroelectric power station. Of all ACG members, AFESD committed the greatest



Figures 58 and 59  
Arab Co-ordination  
Group commitments  
by sector and  
region, 2013-2016



### Arab Co-ordination Group Members

Arab Fund for Economic and Social Development (AFESD), Islamic Development Bank (IDB), Kuwait Fund for Arab Economic Development (KFAED), Abu Dhabi Fund for Development (ADFD), OPEC Fund for International Development (OFID), Arab Bank for Economic Development in Africa (BADEA), and Saudi Fund for Development (SFD).

**Figure 60**  
Arab Co-ordination Group (ACG) commitments, by member, 2012-2016

proportion to the energy sector (\$413.7m), with almost half (\$198m) directed at the 1,800MW Damanhour Combined Cycle Power Generating Station in Egypt.

OFID made a total commitment of \$225.8m in 2016; this was significantly lower than its 2015 figure of \$311.5m. Commitments made in West Africa have nearly doubled (from \$70m in 2015 to \$120.2m in 2016) but there were no commitments made in North Africa in 2016, compared with the previous year where OFID had directed \$70m towards the region. More than half of OFID's commitments went to the transport sector (54%); projects included the construction and upgrade of the Ravinala Airport in Madagascar (\$33m).

The Kuwait Fund for Arab Economic Development (KFAED) committed a total of \$509.4m to infrastructure projects, the greatest proportion directed towards North Africa, with \$267m, or 53%, of the fund's total commitment.

The Abu Dhabi Fund for Development (ADFD) continued its 2015 focus on solar projects, collaborating with the Abu Dhabi-based International Renewable Energy Agency (IRENA) to support the development of two solar projects in the Seychelles and Niger (representing \$41m, or 51%, of its total commitments). The fund also targeted \$40m or 49% of total commitments at the development of the Tangier-Kenitra high-speed rail project in Morocco.

La Banque Arabe pour le Développement Economique en Afrique (BADEA – Arab Bank for Economic Development in Africa) committed \$147.1m in 2016. The greatest contribution was targeted at the transport sector with a commitment of \$107.6m in support of eight road construction projects in the \$11m-\$20m range. Of BADEA's total commitments, the largest proportion was directed towards the West African region.

Projects receiving commitments in 2016 in which ACG members co-operated included the Gbarnga-

Salayea road project in Liberia, which was financed by KFAED (\$16.5m), SFD (\$19.5m), OFID (\$19.5m), and BADEA (\$8.6m). The project aims to enhance regional economic and social cohesion and development by linking Liberia with neighbouring Guinea and Sierra Leone. Work includes the reconstruction and rehabilitation of drainage facilities and bridges.

In terms of ACG sector preferences, transport received the most in 2016, with \$1.4bn of total sector-allocated commitments (see Figure 58, left). This compares with almost \$2.1bn in 2015, mainly due to some very large commitments to Sharm el-Sheikh International Airport.

Energy commitments declined in 2016 to just under \$1.3bn of total sector-allocated commitments. Support for the water sector increased noticeably from \$378m in 2015 to \$1bn in 2016. Historically, ICT has never featured prominently in the group's infrastructure portfolios, and in 2016 no commitments were made to this sector. ■

## 5.4 Non-ICA European Sources



iStock/Getty Images

**Commitments by non-ICA member European DFIs totalled \$392.2m in 2016, a significant decrease on 2015 (\$876m). Commitments were not evenly spread across sectors, with energy accounting for 75% of the total (\$294.9m), compared with 52% in 2015.**

ICT accounted for 12%, a greater share of the total than in 2015 (8.3%), but the value of commitments, at \$47.3m, was around 35% less than in the previous year. Transport commitments (\$50m) accounted for the remaining 12.7%, and were down significantly from 2015. There were no reported water sector commitments in 2016 (see Figure 62, far right).

The Netherlands' FMO and the European Bank for Reconstruction and Development (EBRD) dominated non-ICA European 2016 commitments, accounting for 61% and

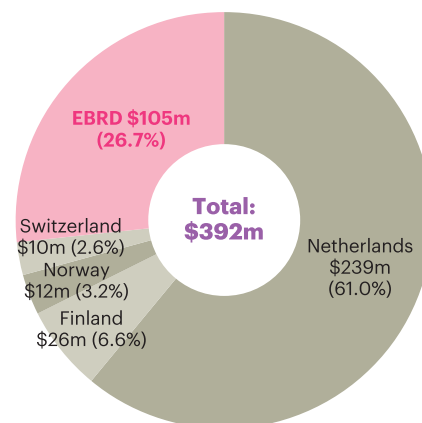
27%, respectively. In 2015, EBRD provided 73% and FMO 13% of all commitments (See Figure 61, below).

North Africa accounted for 27% of total commitments in 2016, the largest share of any region, with the EBRD, which pledged \$104.7m, the sole contributor. This included support for Tunisian state-owned utility company Société Tunisienne de l'Electricité et du Gaz to reinforce the electricity transmission network in north-eastern Tunisia. The project will enhance the performance and reliability of the electricity transmission and distribution networks and prepare the grid for future renewable capacity.

While commitments for North Africa decreased relative to 2015, it remains the region receiving most commitments (see Figure 63, far right). In 2015, significant commitments to the region included

\$638m from the EBRD, plus \$52.9m from Norfund's cost sharing agreement with Scatec Solar supporting solar projects in Egypt.

East Africa (\$72.2m) accounted for 18.4% and West Africa (\$66.2m) 16.9% of total commitments. Central Africa



**Figure 61**  
Non-ICA European commitments to infrastructure by source, 2016

(\$41.2m) attracted just 11% of total commitments, mainly support from FMO and Finland's Finnfund for Rwandan energy generation projects. These included FMO's support of \$1.2m for a combined PV solar and pump storage hydro hybrid energy project and Finnfund's commitment of \$15m to support the development of the Hakan-Quantum biomass fired power plant.

Of total commitments, some 15.8% were directed at pan-African initiatives, including support for Mobisol, an off-grid pay-as-you-go energy provider that aims to deliver affordable alternative energy generation by combining solar energy with mobile technology.

FMO dominated investments in the ICT sector, committing \$47.3m to finance the construction of telecommunication towers. Two investments by FMO supported Helios Towers or its subsidiaries in projects to install towers in Tanzania, and the continuation of an existing project in Congo.

In the transport sector, FMO committed \$39m to the construction and operation of a new container-handling terminal at Ghana's Tema port – a project also supported by IFC – that is reported to be the largest port investment and biggest infrastructure mobilisation to date in sub-Saharan Africa. Finnfund committed \$11m to the development of Ghana's Airport Cargo Centre in Accra to help increase its capacity and expand the country's airfreight industry.

Commitments to renewable energy projects featured strongly in non-ICA member European funders' portfolios for 2016. FMO committed \$152.9m to energy projects, providing the greatest proportion of the year's renewable commitments. Part of FMO's support was focused on the construction of

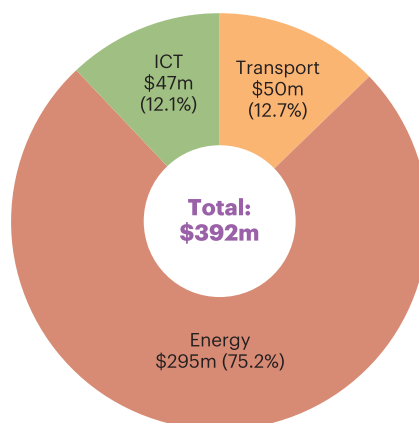


The Hague, iStock/Getty Images

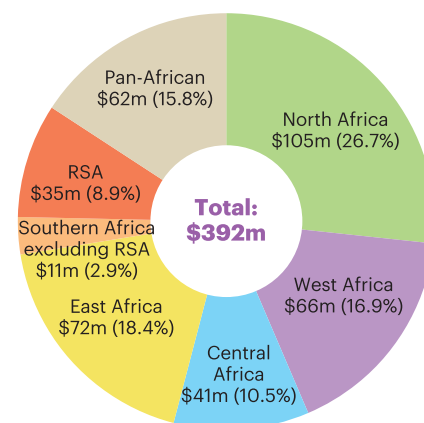
several hydropower plant projects in the KfW-led GET FiT programme, including two in Uganda: the Lubilia hydropower project, a run-of-river hydro plant with a total installed capacity of 5.4MW, and the Gulpur hydropower project, with a total installed capacity of 5MW.

FMO also supported solar projects,

collaborating with Building Energy to develop the Tororo Solar North PV IPP in East Uganda, another project in the GET FiT programme. Norfund has committed to solar developments too, with \$12.3m for projects in Nigeria and Mozambique as part of its established partnership with developer Scatec Solar. ■



**Figure 62**  
Non-ICA European commitments to infrastructure by sector, 2016



**Figure 63**  
Non-ICA European commitments to infrastructure by region, 2016

## 5.5 Regional Development Banks

Four non-ICA member regional development banks (RDBs) reported data for 2016: Banque Ouest Africaine de Développement (BOAD, West African Development Bank), ECOWAS Bank for Investment and Development (EBID), Trade and Development Bank (TDB, formerly PTA Bank) and East African Development Bank (EADB).

Together, these banks committed \$924m, more than double the \$419m reported in 2015. Of 2016 commitments, around 90% went to energy and transport projects. West Africa received 65% of all commitments and Central Africa 25%. All support was provided by loans. ICA member DBSA once more provided the most support of all RDBs with \$1.2bn of both commitments and disbursements. (See *Chapter 4*).

Three of these non-ICA member banks – EADB, EBID and TDB – reported disbursements in 2016 totalling \$267m, with around 62% directed to the transport sector (disbursement amounts in one year do not compare directly with commitments in the same year and may relate to commitments made in previous years).

EBID and TDB made commitments of \$359m in 2016 (see *Figures 65 and 66, below*). EADB reported no new commitments in 2016 but disbursed funds across four projects in the

transport sector in Uganda.

EBID committed \$35.6m to Africa's infrastructure, of which \$24.9m targeted the energy sector and \$10.7m was directed at transport projects. The bank disbursed \$4.5m, of which \$1.4m went to the transport sector, \$1.3m to water, \$1.1m to energy and \$695,000 to multi-sector projects.

TDB reported commitments of \$323.3m, with \$181m directed to the transport sector in Rwanda, \$122.4m to energy projects in Mauritius, Uganda and Zimbabwe and \$19.8m to multi-sector projects in Djibouti and Kenya.

In December 2016, when TDB announced its new trading name, it also said it would continue to increase financing for priority sectors. These include the infrastructure sector as per ICA definitions, notably energy and transport, as well as areas outside those definitions, including manufacturing, industry and agribusiness. The bank also wants to focus on trade finance.

BOAD committed \$565m, of which \$286m targeted the energy sector, \$211m went to transport and \$9m to water projects. Multi-sector projects accounted for \$59m of commitments (see *Figure 64, below*).

BOAD committed \$68m to three projects in Benin, all of which targeted the water and sanitation sector, including integrated projects to pave and provide drainage along roads in 32 towns. In Burkina Faso, BOAD

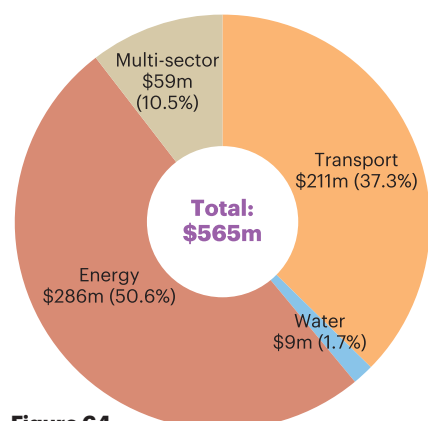
committed \$59m to support the development of renewable energy and a road management project.

The bank also committed \$105m to Côte d'Ivoire across five projects in the transport and energy sectors. BOAD is involved alongside several development partners in the expansion and modernisation of the Félix Houphouët-Boigny Airport in Abidjan. Banque Internationale pour le Commerce et l'Industrie de la Côte d'Ivoire is also partnering the project while Proparco of France is providing long-term finance with a second loan of €13m (\$15.5m) repayable over 11 years.

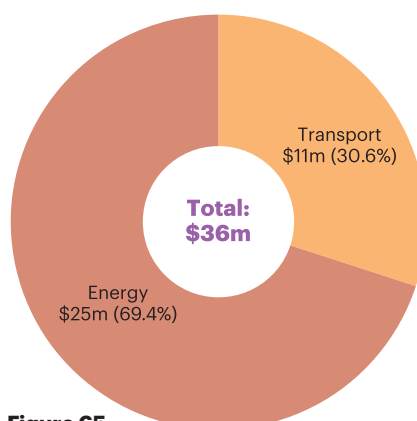
In Guinea-Bissau, BOAD committed a total \$43m to support three road projects and an energy project.

The bank is also working on the regional OMVG Interconnection. Aspects of this project supported by the bank in 2016 included the construction of the Sanankoroba-Guinea border 225kV transmission line and the expansion of the Sanankoroba high voltage substation in Mali.

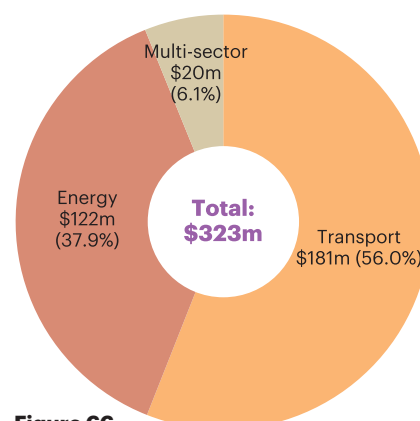
Elsewhere in Mali, BOAD committed a total of \$82.6m to four energy projects. In Niger, the bank committed \$71m to four projects, one in renewable energy, another in power generation and two in the road sector. BOAD committed \$136m to Senegal to support seven projects across thermal and geothermal power generation and distribution, energy access and road improvements. ■



**Figure 64**  
BOAD commitments by sector, 2016



**Figure 65**  
EBID commitments by sector, 2016



**Figure 66**  
TDB commitments by sector, 2016

# 5.6 India, South Korea, Brazil and New Development Bank

## India

**Export-Import Bank of India (Exim Bank India) committed \$1.2bn to African infrastructure projects in 2016, more than double its \$524m of commitments in 2015** (see Figure 67, below). The largest portion of commitments went to transport (\$513m) followed by energy (\$422m) and water (\$262m) projects.

Exim Bank India's commitments were substantially boosted in 2016 by its buyer's credit facility, which made \$399m available for the Tema to Akosombo railway line project in Ghana and \$200m for the extension and rehabilitation of Senegal's 225kV Tambacounda-Kolda-Ziguinchor transmission line. The facility allows the overseas buyer to open a letter of credit in favour of an Indian exporter and import goods and services from India on deferred payment terms.

In Ghana, an Exim Bank India line of credit (LoC) facility supported a sugarcane development and irrigation project. India also provided commitments to Congo-B, Niger, Mauritius, Rwanda, Liberia, Sierra Leone and Tanzania.

In June 2016, Exim Bank India's representative office in Abidjan was formally inaugurated. The office will look after Exim Bank's interests in West and Central Africa.

## South Korea

**The Export-Import Bank of Korea (Korea Eximbank) committed \$432m to four projects in the transport (\$242m) and water (\$190m) sectors in 2016**, compared with a \$81m commitment in 2015 to Senegal's Maritime Infrastructure Establishment II project.

Projects supported in 2016 include \$90m for the wastewater treatment system development project in Dar es Salaam and \$127m for the Gore-Tepi road improvements project, aimed at paving a 140km road in the south-west of Ethiopia. When completed, the Gore-Tepi project is expected to vitalise the local economy by reducing the transportation cost of crops such as coffee beans, the country's major export commodity.

Also in Ethiopia, a \$100m commitment was made to the Integrated Irrigation and Rural Development Programme, which aims to provide a comprehensive package of infrastructure projects and technical assistance for inclusive and sustainable rural development. Prior to the signing of the loan agreement and MoU, Korea Eximbank signed a framework arrangement for South Korea to provide \$500m to Ethiopia for the next three years to facilitate economic co-operation and development projects undertaken by the two countries.

A \$115m commitment to the modernisation of the railway signalling system for the Nag Hammadi and Luxor Corridor project is part of the Egyptian National Railway restructuring project established by the Egyptian government in 2008. Egypt urgently needs to improve the safety of its railway system, to stem repeated accidents. Korea Eximbank's loan includes support for the installation of advanced electronic and automatic safety devices for a 118km section from Nag Hammadi to Luxor. The World Bank (with \$337m) and the EBRD (with €126m) are expected to provide co-financing to the project.

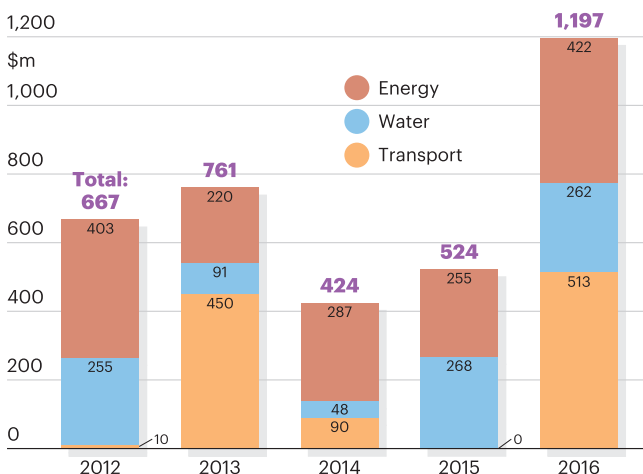
At the same time as announcing the railway project funding, Korea Eximbank signed a \$3bn MoU with the Ministry of International Co-operation to strengthen bilateral co-operation in large-scale infrastructure projects in Egypt. The financing package consists of \$700m in loans and \$2.3bn in export credit, mainly focusing on priority projects in the transportation and energy sectors such as the Cairo Metro and photovoltaic power plant projects.

## Brazil

**Brazil's Banco Nacional de Desenvolvimento Econômico e Social (BNDES) reported to the ICA that it made no new commitments to Africa's infrastructure in 2016.** In 2015, it made one commitment of \$500m to the 2,067MW Lauca hydro project in Angola.

## The New Development Bank

**The New Development Bank (NDB) made its first commitment to African infrastructure in 2016** with a \$180m loan to Eskom for transmission lines to connect 500MW of renewable energy IPPs to the national grid. NDB was established by the five Brics countries – Brazil, Russia, India, China and South Africa. ■



**Figure 67**  
Indian commitments by sector, 2012-2016

# 6. Private Sector



Kathu Solar Park, Gabriela Janick

## 6.1 Private Sector Engagement with the Public Sector

**The value of projects with private sector participation reaching financial close in 2016 was \$3.6bn, of which \$2.6bn (70.6%) was private capital. This is as recorded on the Private Participation in Infrastructure (PPI) project database, a joint product of the World Bank's Infrastructure Economics and the PPI Advisory Facility (PPIAF).**

This is a significant decrease on the \$8.5bn recorded in 2015, of which \$7.4bn was private capital. It is also lower than in 2014 (\$5.1bn), and substantially below figures recorded in both 2013 and 2012, which totalled \$8.8bn and \$8.7bn, respectively (see Figure 68, right).

The 12 projects that reached financial close in 2016 are limited to the energy and transport sectors, with none from ICT or water sectors. No multi-sector projects involving private sector participation reached financial close. Of the 12 projects to close, ten are

energy-related, compared with just two in the transport sector.

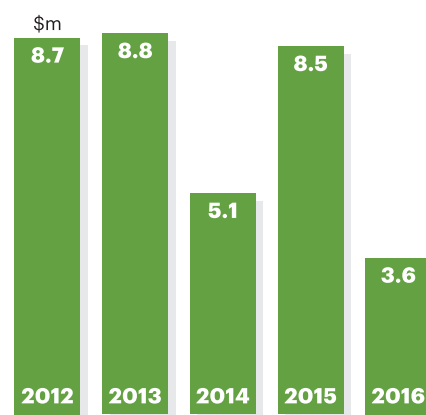
Despite this disparity, financing is split almost evenly between these two sectors, with \$1.3bn directed to transport and \$1.3bn to energy projects. This is largely due to the massive \$1.5bn Tema Port Expansion in Ghana, of which \$1.03bn was privately financed. Tema is a build, rehabilitate, operate and transfer project sponsored by Denmark's Maersk Group with 35% equity, French company Bolloré group, with 35%, and undisclosed 'others', which hold the remaining 30%.

The majority of investments in the energy sector were directed toward solar, representing six of the ten projects. These include the Bokhol Solar PV Plant and the Ten Merina PV plant, both in Senegal. The largest solar investment by a substantial margin was the \$779.4m Kathu Concentrated Solar Power plant in South Africa, \$657.9bn of which was privately sourced.

Other solar projects include the Soroti solar power plant and the Tororo solar PV plant, both in Uganda. The 100MW Benban solar PV plant in Egypt, a \$100m project that was entirely privately sourced, represented the only North African project to reach financial close in 2016.

Two hydroelectric power plants in Uganda reached financial close in 2016 – the Lubilia Kawembe hydro

Continued on page 66



**Figure 68**  
PPI Project Database trends, 2012-2016



# Major Projects Reaching Financial Close in 2016

## Tema Port Expansion

The massive Tema Port Expansion in Ghana reached financial close in 2016 with \$1.5bn of financing and is expected to be completed in the fourth quarter of 2019. The project has been backed by the IFC, with a \$195m loan, while \$472m was provided by three commercial banks – Bank of China, ICBC and Standard Bank – as well as the Dutch DFI FMO.

The Port of Tema currently handles over 90% of Ghana's container traffic yet is reaching capacity and lacks the necessary infrastructure to accommodate deep-water cargo ships. According to the IFC, the new container terminal includes "an up to 1,000 metre quay, a yard for containers, a new breakwater, and new access channel with a deep draft to accommodate some of the world's biggest container ships".

AECOM, a US multinational engineering firm, is supervising construction of the port expansion facilities. The project is

expected to treble Tema Port's capacity of 1m twenty-foot equivalent units (TEUS) to 3m TEUS, making it the largest container port in West Africa.

A study by QBIS Consulting showed that the new port at Tema will boost trade, increasing the revenues of Ghana's import and export companies, and leading to as much as a \$1.1bn rise in global value added to the Ghanaian economy. Ghana's former president John Dramani Mahama said in October 2016 that the project would directly create 5,000 jobs, and the "general economic impact will interpret into 400,000 jobs".

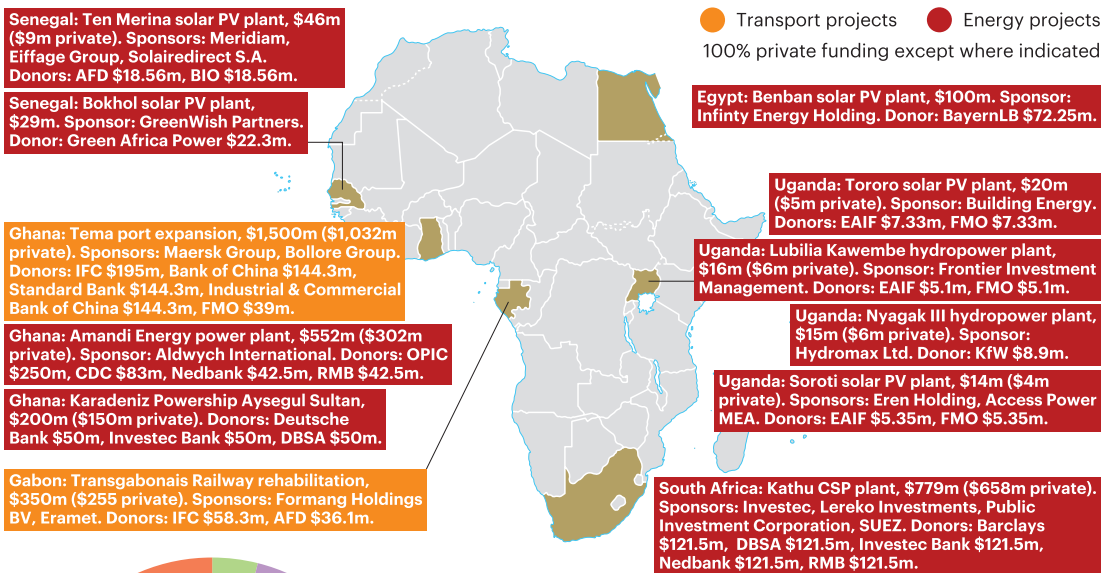
## Kathu Solar CSP

The 100MW Kathu concentrated solar power project in the Northern Cape of South Africa reached financial close in May 2016 with \$779.4m of funding, \$657.9m of which was privately sourced. DBSA provided \$121.5m. Construction began following the signing of a 20-year power purchase agreement (PPA)

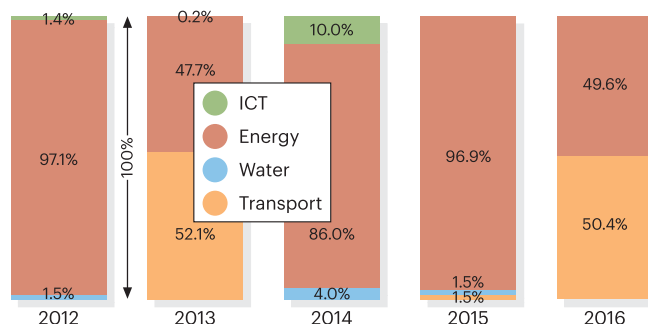
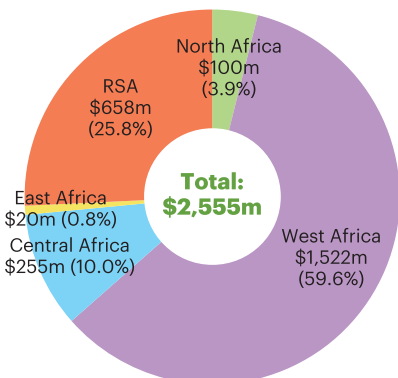
between Engie and South Africa's state utility, Eskom. The project, expected to be operational in the second half of 2018, has received praise for promoting sustainable development. Construction is expected to create approximately 1,200 jobs (around 430 sourced locally). Furthermore, it is estimated that the Solar Park will save 6m tonnes of CO<sub>2</sub> throughout the 20-year period.

The plant uses parabolic trough technology which is equipped with a molten salt storage system that allows 4.5 hours of thermal energy storage to extend the operational capacity of the plant after sunset. Once completed Kathu Solar Park will produce enough power to supply 150,000 homes.

Engie (49%), Investec (13%), Lereko Investments (13%) and Public Investment Corporation (13%) are the main equity shareholders, while 13% is held by other companies. ■



**Figure 69**  
Private sector projects reaching financial close in 2016



**Figure 70 and 71**  
Private sector financing by region, 2016 (left); Private sector financing trends by sector, 2012-2016 (right)

project reached financial close in June with a total value of \$15.7m, while the Nyagak III hydropower project closed at a value of \$14.5m.

In Ghana, two electricity generation projects reached financial close. This included the 225MW diesel-powered Karadeniz Powership Aysegul Sultan plant, which had a total value of \$200m (DBSA provided \$100m).

The \$522m Amandi 200MW gas-fired power plant, led by Ghanaian firm Amandi Energy partnered by US energy investor Endeavor Energy, reached financial close in December

2016 and is expected online in 2019. The \$418m in debt financing was provided by the US Overseas Private Investment Corporation (OPIC – \$250m loan), CDC Group, Nedbank Limited and Rand Merchant Bank. Equity in the project was provided by Endeavor Energy, Amandi Founder Group, Aldwych International, Pan African Infrastructure Development Fund 2 managed by Harith General Partners (PAIDF2), and ARM-Harith Infrastructure Fund (ARMHIF).

Once operational, the plant is expected to energise up to one million Ghanaian households and create 400

jobs, most of which will be filled by Ghanaians.

Regionally, West Africa was the largest beneficiary of privately sourced finance, accounting for \$1.52bn of the total \$2.56bn. South Africa received \$657.9m, and was the only destination for private investment in Southern Africa. Central Africa received \$255.2m, solely through the Gabonese Transgabonais Railway Rehabilitation project. East Africa accounted for just \$19.6m in private sector financing, represented by three projects, all of which are in Uganda. ■

## AfDB Private Sector Department

**Notable commitments made by the AfDB in 2016 include the Ethiopian Airlines expansion project and the Kainji and Jebba hydropower rehabilitation project in Nigeria.**

A \$159m loan was approved in December 2016 to help support an expansion plan for Ethiopian Airlines that includes doubling the size of its fleet. The package includes two tranches, the first of which is covered by African Trade Insurance Agency, Africa's export credit agency, and accounts for 85% of the loan's financing.

Ethiopian Airlines, owned entirely by the Ethiopian government, operates a modern and fuel-efficient fleet and in recent years has introduced new

routes and increased the frequency of existing ones. The expansion is therefore expected to improve both Pan-African and intercontinental transport links.

Also approved in December, the \$100m financing package for the rehabilitation of the underperforming Kainji and Jebba hydroelectric power plants in Nigeria comprises an \$80m loan and \$20m in equity investment. The project will increase available electricity capacity from the current 917MW to 1,338.4MW. The context for the financing is the AfDB's New Deal on Energy for Africa, which, among other objectives, hopes to achieve African universal electricity access by 2025, with "a strong focus on encouraging clean and renewable energy sources". ■

### AfDB Supports Ghana's Airports

Ghana Airport Company Limited (GACL) signed a \$120m corporate loan facility with AfDB in December 2016. The project was reported as a commitment in 2015 and reached financial close in 2016. The facility provides funds for GACL's capital investment programme, which consists of the construction of a new terminal at Kotoka International Airport (KIA) and the rehabilitation or modernisation of other airports in Ghana, including Tamale, Kumasi and Ho.

The estimated \$400m capital expenditure programme is supported by several commercial banks (\$195m) and DFIs (\$205m). The commercial tranche reached financial close on 16 June 2015. Participating financial institutions in the commercial tranche include Qatar National Bank, Ecobank, Africa Finance Corporation, Standard Chartered Bank, Barclays Bank, Nedbank, Ghana International Bank and UT Bank Ghana.

AfDB will contribute \$120m towards the DFI tranche alongside DBSA (\$55m) and Ghana Infrastructure Investment Fund (\$30m). Construction of KIA's new terminal is underway and it is expected to be operational in May 2018. ■

**AfDB Private Sector Commitments, 2016**

Project	Country	Sector	Funding type	Amount (\$m)
Segou Solar PV	Mali	Energy	Loan	9.2
Ethiopian Airlines	Ethiopia	Transport	Loan	159
Kainji and Jebba Hydropower	Nigeria	Energy	Loan/ Equity	80/20
Achwa 2 Hydropower	Uganda	Energy	Loan	20

## 6.2 Private Sector Survey

### The fifth African Infrastructure Investment Survey seeks to gauge views on a range of issues affecting the private sector.

Survey respondents represented infrastructure sector stakeholders from project developers to equity investors, lenders, contractors and providers of professional services (see Figure 72, right).

### Greatest Challenges

The survey asked respondents what they see as the greatest challenges in identifying projects suitable for their organisation. Many responses centred around bankability of projects, institutional capacity, political risks and interference and the legal and regulatory framework. Lack of infrastructure planning was also identified by a number of respondents as an area of concern.

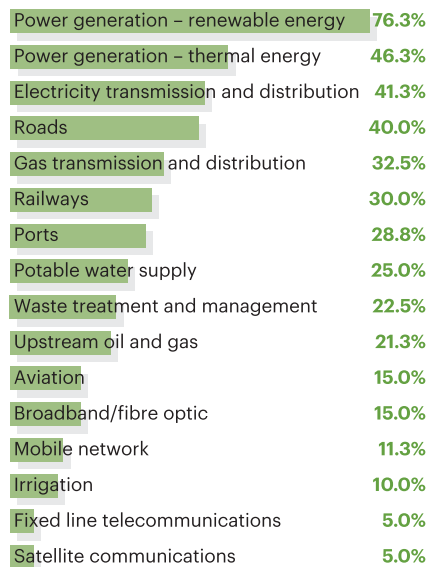
### Selected Responses

*Local understanding about bankability.*

*Finding government/bureaucrat counterparts that can put intention to action (although it is ever improving).*

*Appropriate procurement regimes and government decision making for selecting projects.*

*Lack of infrastructure masterplans and planning capacity at the governmental level.*



**Figure 72**  
Africa Infrastructure Investment Survey, respondents by sector (left) and role (above)

*Delays in decision making, lack of integrated planning.*

*Absence of a national infrastructure plan or a public investment plan.*

*Countries having the ability to fund projects, along with the red tape that aid agencies tie countries up in.*

*Finding projects that are sufficiently well-developed and mature in order to benefit from our expertise, realistic expectations of domestic equity investors, political instability.*

*Creditworthy offtakers able to meet the requirements of project financing.*

*Lack of adequate preparation, and failure to use effective risk mitigation strategies.*

*Willingness of governments and utilities to engage adequately with the private sector, sector liquidity, complicated land registration requirements.*

*The lack of effective management is the principal reason there are fewer viable offtakers than needed to support IPPs.*

*Being able to vet the folks where the project will take place and to truly get a safe, enabling environment to attract foreign investment. ■*

## Projects Commissioned in 2016

### Ressano Garcia

Gigawatt Mozambique's 120MW gas-fired power station was inaugurated in early 2016. The \$200m project reached financial close in June 2014, with construction commencing in August 2014 and concluding in December 2015. Some 600 jobs were created through construction, most of which were recruited locally.

Funding insurance was provided by the Export Credit Insurance Corporation (South Africa) and the Multilateral Investment Guarantee Agency (World

Bank Group). Gigawatt Mozambique supplies power to EDM (Mozambique's power utility) through a 25-year PPA. The project is expected to supply about 12% of the country's power demand.

### KivuWatt: Phase I

The first phase of Rwanda's 26MW KivuWatt gas-fired plant was commissioned in May 2016. This \$91.25m project has generated attention due to the risk associated with Rwanda's extensive methane deposits. It was conceived, along with others, as a risk mitigation strategy for the rising

concentration of methane in Lake Kivu, which experts have warned could cause a potentially dangerous leak of methane and carbon dioxide into the surrounding area, although the short-term risk is considered negligible.

Similar projects are expected to join KivuWatt phase I in utilising this massive store of gas. ContourGlobal plans to build two to three more barges, increasing capacity to 100MW. Symbion Power signed an agreement with Rwanda Energy Group in December 2015 to build a 50MW plant. ■

## Investment Destinations

Respondents were asked to list, in order, the top five African countries they considered to be the most attractive for investing in infrastructure. Each country chosen by respondents was assigned a score based on its respective ranking – the top 20 ranked countries are shown on the map opposite – with South Africa emerging as the top ranked country for the second consecutive year, ahead of Kenya Côte d'Ivoire, Ghana and Nigeria.

Comments from respondents demonstrated that rankings were largely based on political and economic security, as well as a clear and positive regulatory framework:

*Strong regulatory framework; Relatively strong offtaker, history of 'normal' relations with private investors, track record of IPPs (referring to South Africa Kenya and Côte d'Ivoire).*

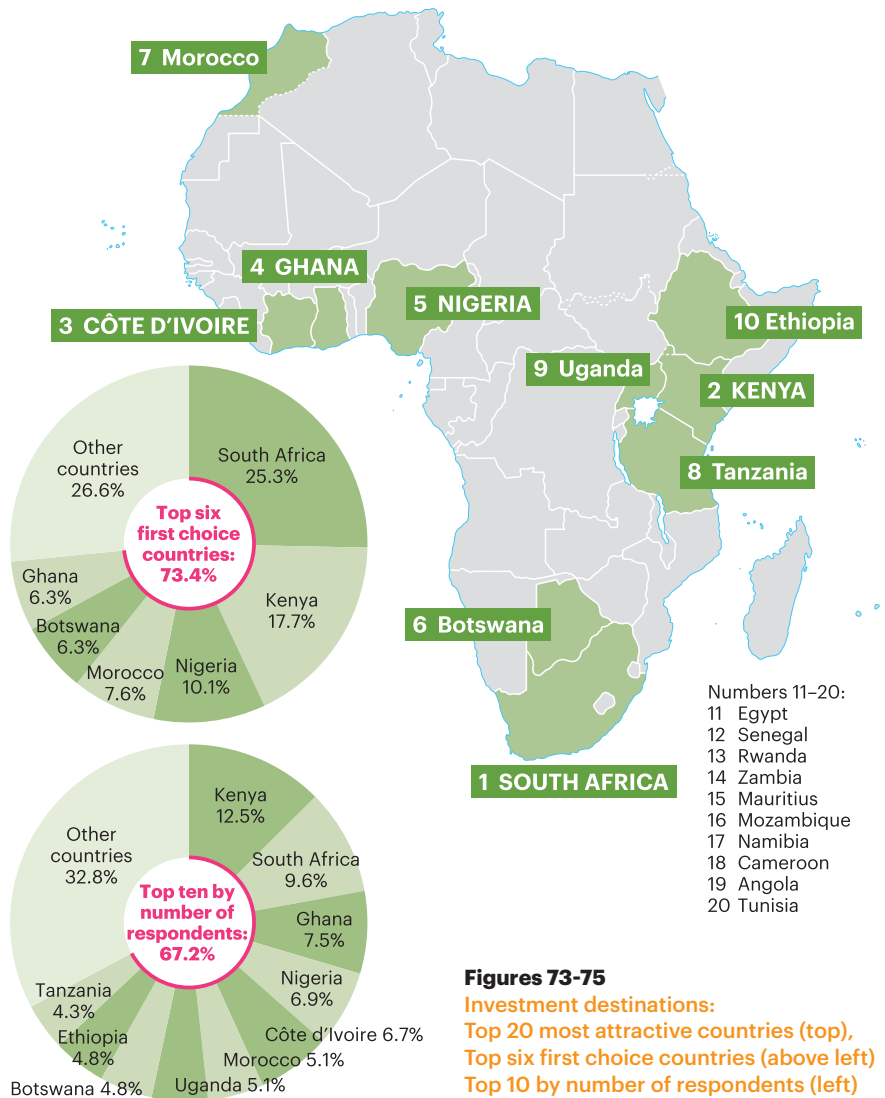
*Transparency and governance (Ghana)*

*Regulatory frameworks, legal systems that work, precedence of such projects, government support and availability of local management (Kenya, Uganda, Tanzania, Rwanda, Ghana).*

*Ethiopia and Nigeria have huge internal markets and their economies have room to grow substantially. Kenya has a number of geographical advantages but political nervousness is probably holding back real investment.*

*Reasonably stable economies, reasonable political environment and legal frameworks. A fair number of possible project opportunities (South Africa, Botswana, Egypt, Nigeria, Morocco).*

*Our market selection is a blend between the credit worthiness of the sovereign, and the market potential with priority placed on their ability to meet long-term contract obligations (Mauritius, Botswana, Kenya, Tanzania, Namibia)*



**Figures 73-75**  
Investment destinations: Top 20 most attractive countries (top), Top six first choice countries (above left) Top 10 by number of respondents (left)

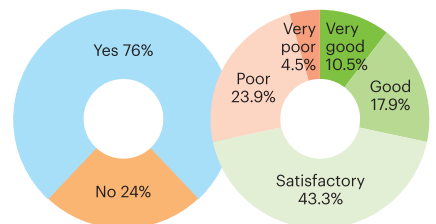
## Regional Projects

A total of 76% of respondents stated that they had worked on regional projects in Africa. When asked to rate their experience, 43.3% said it was “satisfactory”, 23.9% rated their experience as “poor” and 4.5% “very poor”. Overall, 28.4% rated their experiences as positive, with 17.9% describing their experience as “good” and 10.5% “very good” (see Figure 76, right).

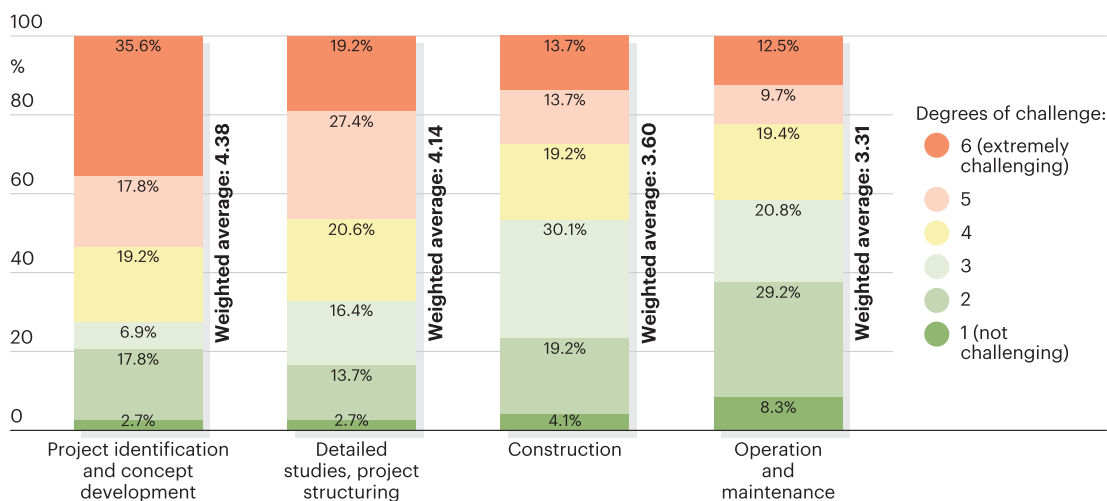
Of those commenting on their experiences, the vast majority were keen to emphasise the factors holding the projects back. One comment singled out “national differences” as a primary reason for gridlock, writing:

*Regional projects get bogged down in politics or failed to deliver their objectives. Others focused on regulatory issues, institutional weakness and corruption:*

*Too much inertia. There needs to be better engagement at regional economic community levels leading to*



**Figure 76**  
Survey respondents that have worked on regional projects (left); how they rate their experience (right)



**Figure 77**  
The level of challenge for organising finance for infrastructure projects throughout the project cycle

clear priorities and engagement of appropriate parties to develop and manage regional project opportunities.

Lack of reliable regional agreements on such projects.

Fraught with political issues, Not enough focus on upside potential for relevant countries, lack of governance and leadership.

Difficulty in reaching sustainable alignment of interests on cross-border projects. Short termism. Challenge of mitigating additional risks associated with regional investments in order to meet international financial needs.

Very good experience, but challenging.

Governments are the largest impediment to getting deals gone. Regional projects compound this issue.

## Organising Finance

Participants in the survey were asked to “rate the challenge of organising finance for infrastructure projects throughout the project cycle”. This was divided into the following phases, with a 1-6 ranking scale, where 6 represented ‘extremely challenging’ (see Figure 77, above): project identification and concept development, detailed studies and project structuring, construction, and operation and maintenance.

Respondents said the project identification stage was the most

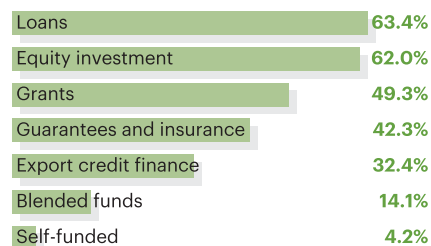
demanding, with some 35.6% of respondents rating it extremely challenging. As expected, the level of challenge reduced as the project cycle progressed, dropping from a weighted average of 4.38 for the project identification phase and 4.14 for the detailed studies and project structuring phase to 3.31 during the operation and maintenance phase.

## Funding and Guarantees

The survey asked respondents to identify the types of funding accessed to support their work (see Figure 78, below).

A good majority indicated that they had used loans (63.4%) and equity investments (62%), while grants had been accessed by just under half (49.3%).

Respondents were also asked to comment on their experiences of applying for and using public sector finance and guarantees. One of the clear messages to emerge was one of



**Figure 78**  
Percentage of survey respondents accessing different types of funding

frustration, with respondents describing the process as “time consuming” and “cumbersome”. A selection of responses follows:

*Cumbersome, too few instruments to fund small-scale projects.*

*Time consuming and bureaucratic – but can provide significant amounts of support.*

*Long leadtimes, but eventually rewarding.*

*An understanding of the requirements and the approval time-frame is important.*

*Difficult and challenging as rules and procedures are not very clear and transparent – often a moving goal post.*

*Public sector funding has been very difficult largely due to the very slow transaction times and lack of knowledge of individual markets.*

*DFIs are prepared to fund but many articulate same issues with delays in permitting/licensing, inefficient bid processes and project development that takes entirely too long.*

*Can be lengthy due to the necessary due diligence processes required.*

*It has usually been a cumbersome process, but we have seen significant progress recently. MIGA has done lots of work to be more commercial and streamline their process. Good, but slow. ■*

# 7. Sectoral Analysis



Oran, Algeria, iStock/Getty Images

## 7.1 Overview

**Of the \$62.5bn total financing commitments made in 2016, the transport sector was once again the largest recipient, accounting for \$24.5bn of total commitments (39%), although this was less than the \$32.4bn<sup>1</sup> recorded the previous year.**

The energy sector received \$20bn, equal to 32% of total commitments, while the water sector accounted for just over a sixth of the total at \$10.5bn. Financing of ICT infrastructure declined to \$1.6bn in 2016, while multi-sector projects received \$2.8bn (see *Figure 79, right*).

The remaining \$3.2bn not classified under any sector includes national government capital spending allocated to two or more of the ICA-defined infrastructure sectors, and financing commitments which also cover non-ICA sectors, for example a \$476m Chinese commitment to the Kribi deep seaport & Warak hydroelectricity plant and new parliament building in Cameroon.

### Transport

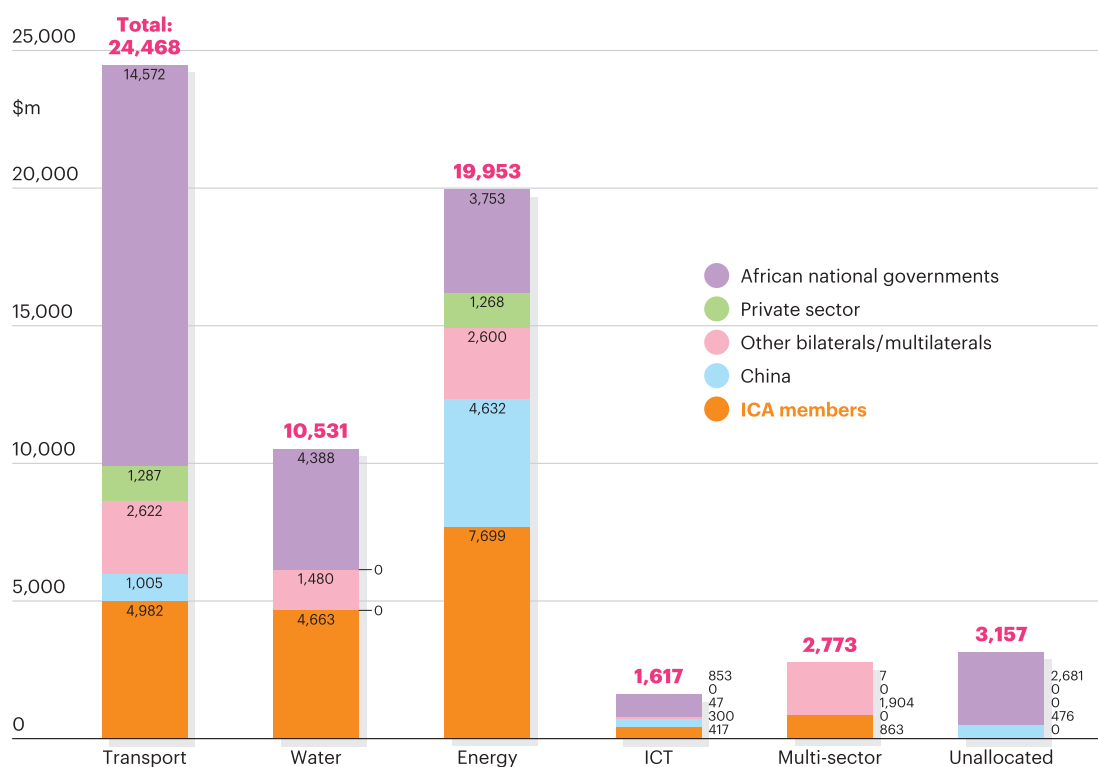
The historical trend of African national governments accounting for the lion's share of financing for transport infrastructure continued in 2016. Of the \$24.5bn committed to the sector in 2016, \$14.6bn (59.6%) was provided by national governments. Chinese funding to the sector fell considerably, from \$9.8bn (28%) in 2015 to \$1bn (4.1%) in 2016. While ICA member commitments to the sector declined slightly to \$5bn, this once again accounted for approximately 20% of total financing to the sector.

West Africa received \$6.6bn of commitments in 2016, representing 26.9% of the total. East Africa, which was the recipient of \$11.3bn or more than one-third of commitments the previous year, received \$5.3bn (21.7%) in 2016. North, Central and Southern Africa received \$4.4bn, \$2.9bn and \$2.3bn, respectively. South Africa received \$2.6bn (10.7%).

### Water

Commitments to the water sector increased from \$7.5bn in 2015 to \$10.5bn in 2016. Of this, ICA members provided \$4.7bn, more than any other funding source and representing 44% of all funding. African national governments once again provided a substantial amount of funding to the sector, with \$4.4bn allocated. Other bilateral and multilateral agencies accounted for the remaining \$1.5bn, of which the Arab Co-ordination Group committed \$1bn and India, South Korea and BOAD \$461m. No commitments were recorded for China or the private sector.

Continuing the trend from previous years, North Africa (\$2.6bn) and East Africa (\$2.4bn) accounted for almost one half of total commitments to the water sector in 2016. West Africa received \$2.1bn in water sector financing in 2016, a substantial increase on the \$1.1bn committed in 2015. Financing of water and sanitation projects in Southern Africa



**Figure 79**  
Total financing by sector and source, 2016

stood at \$1.9bn, equal to approximately 18% of the total, while Central Africa and South Africa received \$851m and \$528m, respectively.

## Energy

Financing of energy projects in Africa fell to \$20bn in 2016 from the record high of \$33.5bn reported in 2015. While ICA members' commitments of \$7.7bn to the sector in 2016 held up, and accounted for 38.6% of total funding, African national government allocations of \$3.8bn were less than the \$4.8bn committed the previous year.

The decline in funding for the energy sector was largely due to a lower level of Chinese commitments, which fell by almost half to \$4.6bn, although this still accounted for 23% of total commitments to the sector. The relative lack of financial closures of renewable energy projects in South Africa compared to previous years was also a major contributor to the overall decline in financing for the sector. As a result, private sector financing declined from \$7.2bn in 2015 to just

\$1.3bn in 2016. Nevertheless, ten of the 12 private sector projects to reach financial close this year were in the energy sector.

The fall in energy sector financing is reflected in the decline of Southern Africa and South Africa as the primary destination for investment in the sector. Combined they received only 18.3% of total commitments in 2016, compared to 50% in 2015. Instead, West and East Africa, receiving \$5.6bn and \$5.2bn, respectively, accounted for over one half of total commitments. Commitments to North Africa fell from \$4.5bn to \$3.3bn, while those to Central Africa increased from \$1.2bn to \$1.4bn.

## ICT

Commitments to the ICT sector stood at \$1.6bn in 2016, a significant decline from the \$2.4bn reported the previous year. While African national government allocations increased to \$853m, this was offset by a pronounced decline in Chinese commitments from just over \$1bn to \$300m. Chinese funding was directed

at a single project, the second and third phases of Zambia's digital migration project. ICA member financing of ICT projects remained substantial and accounted for 26% of all commitments, although at \$417m was less than the \$616m reported in 2015. Once more, Southern Africa was the largest recipient of ICT commitments, attracting 44% of the total (\$715m).

## Multi-sector

Multi-sector commitments, including financing of funds as well as projects which cover more than one of the ICA-defined infrastructure sectors, increased from \$2.2bn in 2015 to \$2.8bn in 2016. ACG commitments of \$1.8bn accounted for the vast majority of multi-sector financing in 2016. North Africa, South Africa and West Africa were the largest recipients of financing with commitments reaching \$1.6bn, \$549m and \$350m, respectively. ■

<sup>1</sup>2015 African national government budget allocations have been restated to exclude external funding, see Annex 1 – Data Notes.

## 7.2 Transport



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**Total commitments to the African transport sector amounted to \$24.5bn in 2016, a decline on the \$32.4bn<sup>1</sup> reported the previous year. This was largely accounted for by a decline in Chinese commitments from \$9.8bn in 2015 to \$1bn in 2016.**

Funding from African national governments rose to \$14.6bn, recovering from a notable fall the previous year. ICA member financing fell slightly from the record high reported in 2015, but still totalled some \$5bn in 2016 (see Figure 80, right).

India, South Korea and regional development banks all saw a significant increase in their financing of the African transport sector in

2016, with commitments of \$513m, \$242m and \$403m, respectively.

The private sector also financed \$1.3bn of transport infrastructure in Africa in 2016, having closed only \$113.5m worth of projects the previous year. The majority of private financing to the sector came in the form of the \$1bn invested in the \$1.5bn Tema port expansion in Ghana. The project was sponsored by Maersk Group (Denmark) via APM Terminals (Netherlands) and Bolloré Group (France), and with financing from the IFC, FMO, Bank of China, Industrial & Commercial Bank of China, and Standard Bank.

Once again, East Africa was a destination of choice for transport investments. However, the \$5.3bn of financing the region attracted in 2016 was eclipsed by the \$6.6bn committed to West Africa. Financing maintained previous years' levels for all other

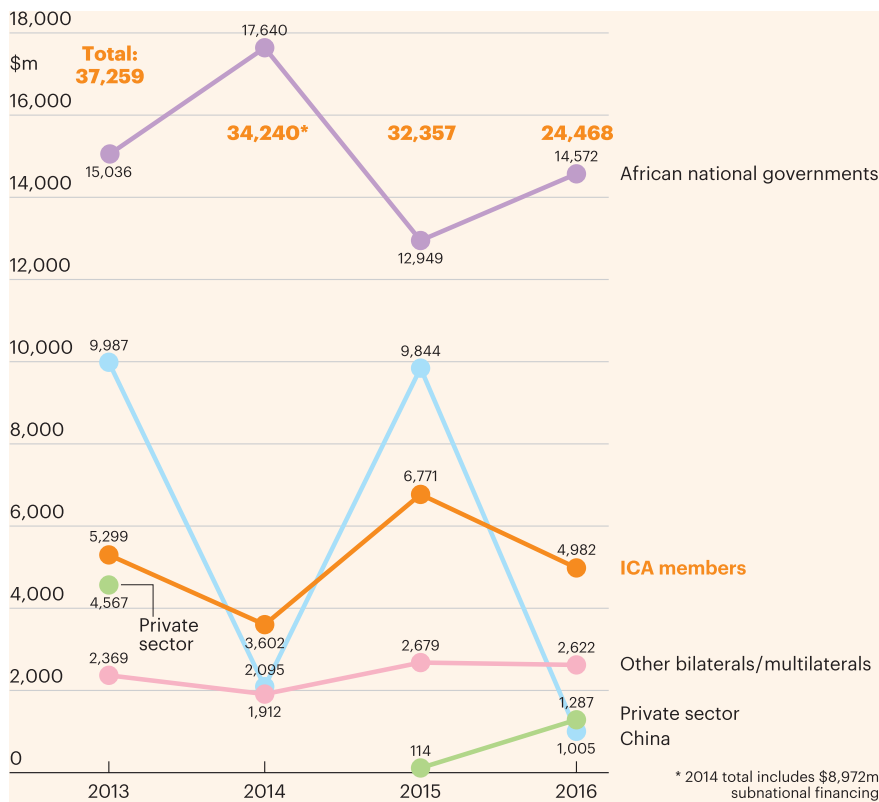
### Sub-sectoral Analysis

Identified sub-sectoral commitments (which exclude ICA member and African national government data) shows the maritime and ports sub-sector being the largest recipient of financing in 2016. A total of \$2bn was identified as being committed to this sub-sector, accounting for some 43% of identified funding. The Tema Port Expansion accounted for half of the maritime and ports sub-sector total, while a further \$955m of investments was financed by India and South Korea. Railways and roads also featured prominently, with commitments accounting for 30% and 22% respectively.

Aviation projects accounted for 3% of the total, which included a \$500,000 loan by BADEA to the Elaboration of Transport Master Plan in Antananarivo, Madagascar, and a \$50m China Exim Bank loan for a new terminal at Monrovia's Roberts international airport, Liberia. A single commitment was made to the urban transport sector in 2016, a \$26m Exim Bank India line of credit for a public transport system in Senegal. ■

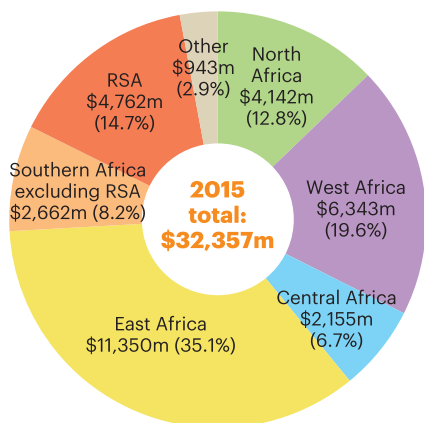
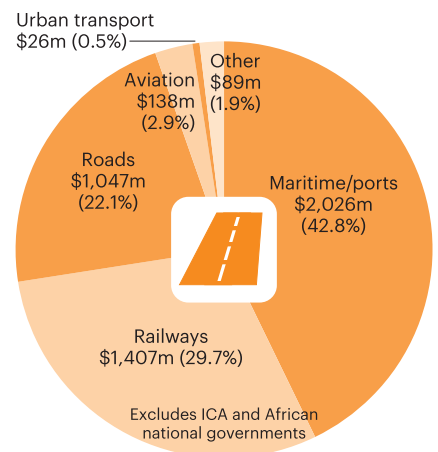
<sup>1</sup>2015 African national government budget allocations have been restated to exclude external funding, see Annex 1 – Data Notes.



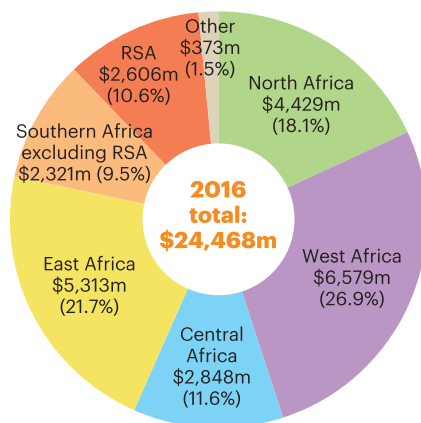


**Figure 80**  
Total transport sector financing by source, 2013-2016 (left)

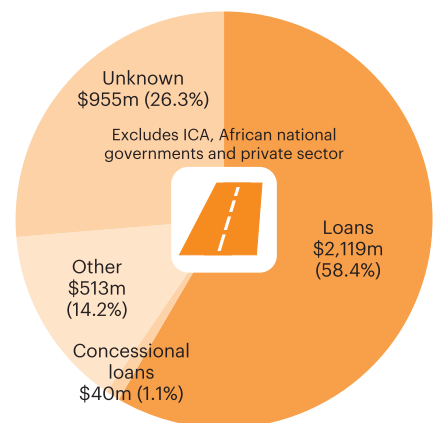
**Figure 81**  
Transport financing by sub-sector, 2016 (below)



**Figure 82**  
Total transport sector financing by region, 2015



**Figure 83**  
Total transport sector financing by region, 2016



**Figure 84**  
Transport sector financing by type of funding, 2016

regions, with the exception of South Africa where commitments fell to \$2.6bn from \$4.8bn. ICA members committed financing broadly equally to North, West, Central and East Africa. However, ICA commitments to pan-African projects fell to \$373m, from \$934m in 2015.

### Projects Financed

The AfDB and WBG were again the largest financiers of transport sector projects among ICA members, committing \$1.7bn and \$1.3bn, respectively. However, this was less than the \$2.4bn and \$1.8bn committed the previous year. The

World Bank directed nearly two thirds of its commitments to East (\$308.6m) and Central (\$368.2) Africa, while the IFC directed nearly the entirety of its transport commitments to projects in West Africa (\$248.8m).

Major projects financed by the AfDB in 2016 include a UA192m (\$264m)

blended finance commitment of loans and grants to an urban transport project in Abidjan, Côte d'Ivoire (also financed by JICA, Global Environment Facility, and the Ivorian government). The project will result in the construction of the 5<sup>th</sup> Bridge in Abidjan linking Yopougon to Attécoubé, road interchanges and the Y4 ring motorway.

The EC's financing of transport projects substantially increased from \$320m to \$600m. EC commitments included a €150m (\$166m) grant for the rehabilitation of the RN1 road between Tshikapa and Mbuji-Mayi in DR Congo, and a €90m grant for the development of roads in Niger as a part of the Programme de désenclavement des régions à risque d'insécurité et conflits. This programme is aimed at opening up regions of Niger heavily

affected by insecurity and conflict through the construction of adequate road infrastructure, which will allow socio-economic exchanges between the north and east desert regions of the country and the south.

Japanese financing of transport projects stood at \$494m in 2016, less than the \$909m committed in 2015. Among Japanese commitments was a ¥18.2bn (\$165.7m) loan for the extension of the Borg El Arab International Airport near Alexandria, Egypt. Since its opening in 2010, excessive demand at the airport has resulted in a decline in service level and operational restrictions. By constructing a new passenger terminal, and expanding and improving incidental facilities, the project will meet the demand for airport transportation at a level that

supports the tourism industry and overseas workers in Egypt, both of which are major sources of foreign currency for the country.

In 2016, DBSA disbursed \$157m to a Kenya pipeline project and \$17.8m for Zambia's road sector.

In 2016, West Africa overtook North Africa as the region attracting the most Arab Co-ordination Group commitments to transport. Of the ACG's \$1.4bn transport commitments, \$857m was committed to West Africa including the Islamic Development Bank's \$332m commitment for Senegal's Dakar-AIBD Airport Regional Express Train project, and \$219m to finance the Dabola-Kouroussa (151km) and Guékédou-Kissidougou-Kondembradou (116km) road projects in Guinea. ■

## Ethiopia-Djibouti Railway: a Major Step in China's Aim to Develop Regional Network

**Africa's second electric railway, which stretches more than 750km, commenced freight operations in October 2016 and passenger travel in early 2017, improving transport links between the Ethiopian capital Addis Ababa and Djibouti's recently inaugurated Doraleh Multipurpose Port.**

Described by Ethiopia's prime minister, Hailemariam Desalegn, as a project that will "change the social and economic landscape of [the] two countries", the line replaces a defunct French-built railway that was almost 100 years old.

The railway can transport up to 5,600 passengers on a daily basis, as well as 3,500 tonnes of cargo, and the journey time has been reduced from approximately three days by road to

just 12 hours. More than 90% of Ethiopia's trade passes through Djibouti, which accounts for approximately 70% of the port's activity. The line will therefore advance foreign trade, but equally will improve access to humanitarian aid – potentially improving agriculture in areas affected by drought, a major threat to Ethiopia in sustaining its rapid economic development.

At a cost of approximately \$4.2bn, the line will be managed by Chinese staff for the first five years of activity, after which operations will be transferred to graduates of the Railway Academy of Ethiopia – a training facility for railway professionals including managers, engineers, technicians and researchers. This focus on supply-side development underlines Ethiopia's commitment to long-term infrastructure expansion, with substantial finance from Chinese

banks providing credibility to the region's grand plans for transport links.

### Growing Commercial Diplomacy in East Africa

China's development ambitions for East Africa (and more broadly for the continent) are clear, with its presence in Africa advancing in line with the country's economic growth over the last 30 years. China overtook the US as Africa's largest trading partner in 2009 and consumes 15-16% of sub-Saharan Africa's total exports, according to World Bank estimates. This influence extends beyond railway infrastructure, as China has participated in the mining and telecommunications sectors and has financed construction of roads, airports, hospitals and schools. As a symbolic gesture of the growing relationship, in 2012, China built a

\$200m conference centre at the African Union headquarters in Addis Ababa that was described as “China’s gift to Africa”.

The impact on Ethiopia’s infrastructure development has been positive, which has helped drive economic expansion (with average GDP growth of 10.8% between 2003/2004 and 2014/2015, compared with a regional average of 5.4%, according to the World Bank) and rapid urbanisation, making the country an attractive destination for Chinese foreign direct investment (FDI). Trade between both nations has increased from \$353m in 2004 to \$2.7bn in 2013 as China has become Ethiopia’s biggest trading partner. FDI into the country totalled \$21.5bn as of 2016, according to the American Enterprise Institute.

Funding from China also played a key role in the \$475m Addis Ababa Light Rail transit, sub-Saharan Africa’s first light rail network, which was launched in late 2015 to alleviate traffic in the capital city. The transit system was 85% financed by Export-Import Bank of China (China Exim Bank) and is operated by China’s Shenzhen Metro Group.

Djibouti has also been a beneficiary of

Chinese infrastructure aspirations in the region. Chinese-funded projects include three ports, two airports and a water pipeline from Ethiopia. Several economic agreements were agreed in 2016 between the two nations, which included establishing a free trade zone and facilitating the involvement of Chinese banks in the country. The relationship is mutually beneficial, with China’s first permanent overseas military outpost under construction in Djibouti since early-2016. It is expected to be completed in 2017.

This form of “commercial diplomacy” extends further in East Africa. Plans are underway for a \$26bn, 5,000km regional rail network running through Kenya, Sudan, South Sudan and Ethiopia. This will address logistical hurdles that have inhibited foreign investment in the region, and is one part of a \$1trn ‘One Belt, One Road’ project that aims to knit together much of the East African trade bloc, with parts of the highway connecting Kenya and Ethiopia already complete.

The first phase of the project, a new railway connecting Nairobi and Mombasa that is replacing the so-called lunatic line built by colonial Britain in 1901, was completed in May

2017, 18 months ahead of schedule.

According to the China-Africa Research Initiative at Johns Hopkins University, some 90% has been financed by China Exim Bank, and is being built by state-owned China Road and Bridge Corporation. The Kenyan government has made lofty promises for the line, including a 60% reduction in transport costs and a tenfold increase in cargo-carrying capacity compared to the previous railway. While critics are concerned by the level of Kenyan debt to China accumulated in a relatively short period of time (around 6% of GDP), advocates suggest the locally sourced materials and employment prove a strong model for sustainable development.

China shows no sign of slowing down, with more railways envisioned for the region. The African Union Commission signed an agreement with China in October 2016 for a five-year action plan for an integrated high-speed railway network. This is a flagship project of Africa’s continental Agenda 2063, the African Union’s blueprint for long-term development, which ultimately aims to connect all Africa capitals and major cities by high-speed rail. ■

## Timboroa-Eldoret Road Rehabilitation Project

The AfDB-sponsored Timboroa-Eldoret Road Rehabilitation Project in Kenya was completed in 2016. The UA38m (\$53m) project involved the rehabilitation of the 73km road between Timboroa and Eldoret (A104), which forms an integral section of the government’s key priority Northern Corridor from the Port of Mombasa, a major transit route for Kenya and the landlocked neighbouring countries of Uganda, Rwanda, Burundi, DRC and South Sudan.

The rehabilitated road has seen the volume of transit goods along the Northern Corridor increase from 5.2m tonnes in 2010 to 7.8m tonnes in 2015, transit transport costs from Mombasa to Kampala fall from \$2.9 per 40ft

container in 2010 to \$2.14 in 2015, and travel time for heavy vehicles between Nairobi and Malaba fall from 24 hours in 2010 to 19.5 hours in 2015.

When committing UA35m to the project in 2011, the AfDB set a number of targets. These included an aim for trade between Kenya and neighbouring countries to grow from the \$1.3bn reported in 2010 to \$2.2bn by 2015, a figure which was reached the previous year. Other crucial key sector indicators are also well on their way to being met. Poverty in the Rift Valley region fell from 39% in 2010 to 28% in 2015.

In its June 2017 project completion report, the AfDB noted that “the main

physical outputs were fully achieved, and exceeded by way of additional works”. These included truck parking lanes, service roads, and footpaths. However, the AfDB noted that “some non-physical targets such as gender sensitisation and employment were not achieved”.

The project’s implementation also had a number of unintended benefits, including the rapid development of land along the road corridor, including a number of factories such as Toyota Tshuho’s multi-million shilling fertiliser blending plant in Eldoret, shopping malls, tourist class hotels, and the 26 storey Moi University Pension Scheme high-rise office block in Eldoret. ■

## 7.3 Water and Sanitation



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**Total financial commitments to the water sector stood at \$10.5bn in 2016, an increase from the \$7.5bn reported in 2015. African national government spending increased from \$3.5bn (excluding external financing<sup>1</sup>) in 2015 to \$4.4bn in 2016. ICA commitments rose from \$3.2bn to \$4.7bn, while Arab Co-ordination Group (ACG) commitments also increased from \$378m to \$1bn. Commitments from regional development banks fell from \$48m to \$9.4m and, as with last year, no Chinese investments in the sector were reported for 2016 (see Figure 85, right).**

For a second year running, North Africa attracted the greatest investment in water projects, with total financing reaching \$2.6bn, almost half of which was provided by African national governments.

East Africa saw an increase in commitments from \$1.8bn to \$2.5bn, with the largest proportion of this coming from ICA members. Financing of water projects in West Africa

reached \$2.1bn, a significant increase on 2015, with more than half provided by ICA members.

Commitments made to Central and Southern Africa (including RSA) water projects also increased relative to 2015 totals.

### Projects Financed

AfDB's commitments in 2016 increased from \$518m to \$1.2bn, accounting for almost half of the total

commitments made by ICA members. Major AfDB commitments included \$403m of ODA and non-ODA loans and grants for the Kenyan Towns Sustainable Water Supply and Sanitation Programme. This project seeks to improve the access, quality, availability and sustainability of water supply and wastewater management services in Kenyan towns.

Investments made by AFD increased significantly in 2016, rising to \$1.2bn

### Sub-sectoral Analysis

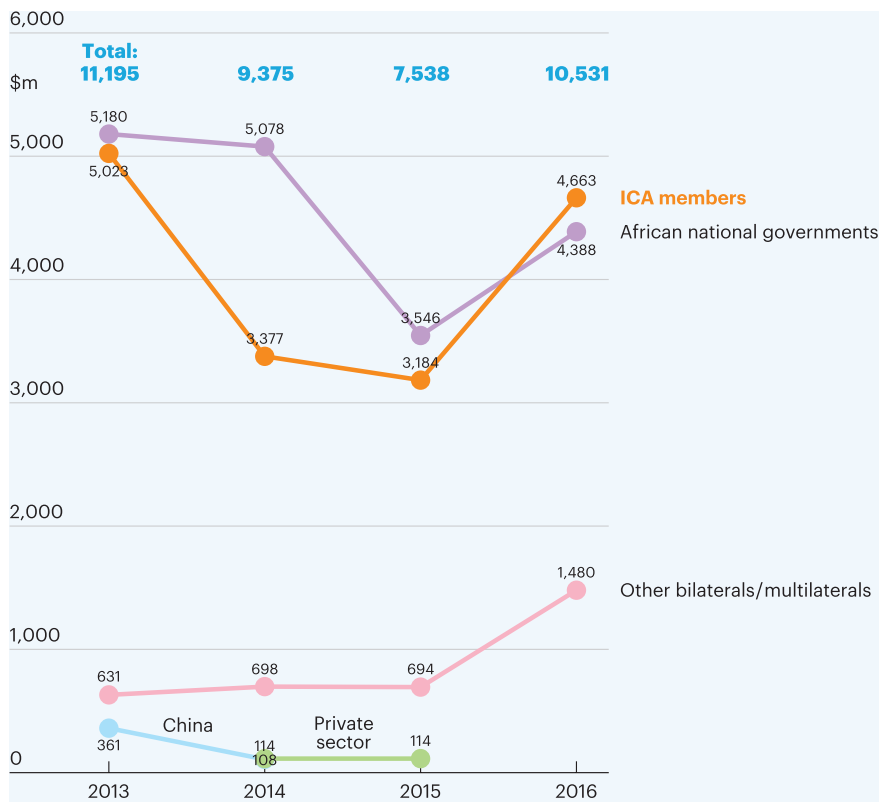
Irrigation and drainage accounted for the largest contribution of identified sub-sectoral commitments (which exclude ICA member and African national government data) in 2016. A total of \$699m was committed towards this sub-sector, equivalent to 47% of identified funding.

The largest projects within this sub-sector included the Export and Extension Targeted Modern Irrigated Agricultural Project in Rwanda, which received \$120m of funding from Exim Bank India. Korea Eximbank provided a \$100m loan towards the Integrated Irrigation and Rural Development Programme in Ethiopia and a \$90m loan towards the Wastewater Treatment System Development project in

Tanzania. The contributions made by India and South Korea account for half of the total contribution towards this sub-sector in 2016.

Potable water supply projects received 33% of identified sub-sector commitments in 2016, including a \$165m AFESD loan towards the construction of Saida and Kalaa Kebira Dams and related water conveyance facilities in Tunisia. Exim Bank India committed a \$25m loan for Potable Water for Semi Urban and Rural Communities project in Niger. Investments were also made towards the water distribution sub-sector, including a \$92m loan by the Exim Bank India towards a project for the rehabilitation and improvement of the water supply system in Tanzania. ■

<sup>1</sup>2015 African national government budget allocations have been restated to exclude external funding, see Annex 1 – Data Notes.

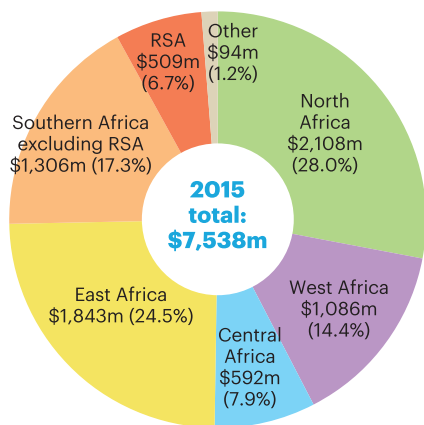
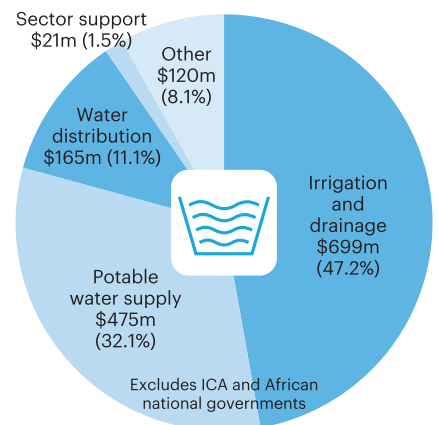


**Figure 85**

Total water sector financing by source, 2013-2016 (left);

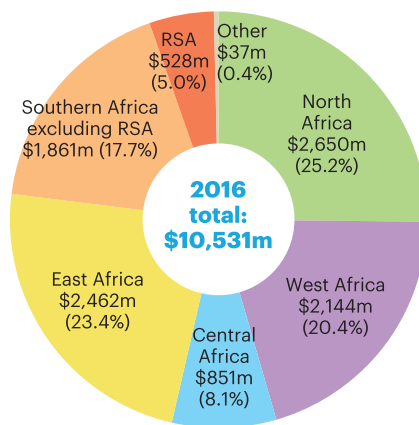
**Figure 86**

Water financing by sub-sector, 2016 (below)



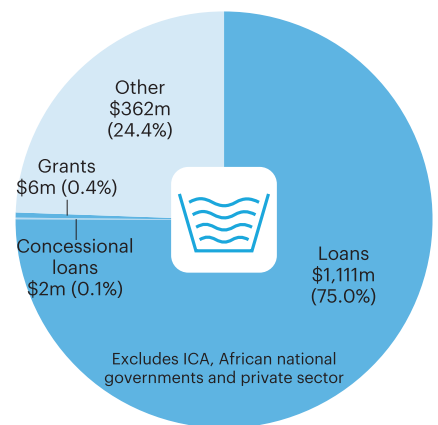
**Figure 87**

Total water sector financing by region, 2015



**Figure 88**

Total water sector financing by region, 2016



**Figure 89**

Water sector financing by type of funding, 2016

from \$282m in 2015, making it the second highest contributor to the water sector among ICA members. AFD commitments included a \$156m loan for the Water Sector Institutional Development Project II (WSIDP II) in Angola, co-funded by the World Bank (which has committed \$200m). The project aims to expand system capacity, increase service coverage

and improve the operating efficiency of the production and distribution systems in target cities.

World Bank Group commitments showed a significant drop, falling to \$890m in 2016 from \$1.5bn a year earlier. However, financing from the EC rose from \$103m to \$166m, which included a \$44.2m loan for the

Egyptian National Drainage Programme III – part of the framework of the Joint Integrated Sector Approach in the irrigation sector. This forms part of the government's water resource development strategy to improve the livelihoods of around 850,000 people by optimising water use, and improving efficiency and drainage.

EIB commitments increased from \$164m in 2015 to \$432m. Projects included a loan of \$113m for the Lusaka Sanitation Programme in Zambia, which aims to increase coverage and effectiveness of sewerage service delivery.

Japan directed \$291m towards water projects in 2016, which was significantly higher than the previous year. Of its contribution, \$250m went to the Mamelles Sea Water Desalination Project in Dakar, Senegal. The facility will support a production capacity of 50,000 cubic metres of water per day. By diversifying the water supply resources and strengthening the water supply capacity, the project aims to improve the living environment for people in the Dakar

Metropolitan Area. The UK's \$104m commitments, provided entirely by DfID, also increased on the previous year, while Canada's commitments fell substantially from \$86m to \$4.6m. The level of 2016 commitments made by Germany (\$331m) and DBSA (\$10.7m) was consistent with 2015.

No financial commitments were made by non-ICA European DFIs or China in 2016. As in 2015, the ACG took the lead among non-ICA member donors financing water projects in Africa, with commitments increasing significantly from \$378m to \$1bn. Among the financial commitments made by ACG members, the biggest contribution was made by the Arab Fund for Economic and Social Development (AFESD). Commitments from AFESD included a \$198m loan

towards the Roseires Irrigation project (Phase 1) in Sudan to support the irrigation of 51,000ha of agricultural land and the building of a hydroelectric power station, and a \$165m loan for improving the water supply and development of the agricultural system in the Sinai Peninsula within 15 development communities.

Regional development banks (excluding DBSA) committed \$9.4m in 2016, the entirety of which was from BOAD. The West African development bank's commitment was directed to upgrading and improving the water systems in the Beninese city of Parakou and the surrounding communities. In 2016, no private sector investments were made in water projects. ■

#### AfDB Water and Sanitation Projects Completed in 2016

Project	Country	Commitment year	Funding Type	Total Commitment (\$m)	Disbursement (\$m)	Project Disbursed (%)
Rural Water Supply and Sanitation Programme	Tanzania	2011	Blended Funds-Grant	278	278	100
Rwanda National Rural Drinking Water Supply and Sanitation Programme (PNEAR) Phase II	Rwanda	2009	Grant	33	33	99.98
Rural Water Supply and Sanitation Project in the Southern Zone	Comoros	2010	Grant	13.2	2.4	98.71
Supply of Drinking Water and Sanitation in the regions of Gao, Koulikoro and Ségou	Mali	2008	Grant	51.6	40.3	78.06
Nkana Water Supply and Sanitation Project	Zambia	2008	Loan	54.5	53.9	98.93
National Rural Water Supply and Sanitation Programme	Zambia	2008	Loan	20.8	16.7	80.43
Semi-Urban Drinking Water Supply and Sanitation Project (PEASU)	DR Congo	2008	Grant	98	87.7	89.42
Zanzibar water supply and sanitation project	Tanzania	2007	Grant	46.2	46.2	100
Accra Sewerage Improvement Project (ASIP)	Ghana	2008	Grant	66	66	100

# Completed Water Projects

## Ghana Urban Water Project

**The \$169.9m urban water system project in Ghana, financed by \$103m of World Bank IDA grants (and \$50m of additional funding), closed in June 2016, having met all objectives and key associated outcomes. With funding approved by WBG in July 2014, the project sought to significantly increase access to the piped water system in Ghana's urban centres, with an emphasis on improving access, affordability and service reliability to the urban poor. Among other objectives was to restore the long-term financial stability, viability and sustainability of the Ghana Water Company Limited (GWCL).**

Components of the project included a \$140m system expansion and rehabilitation to increase water supply to low-income communities, \$15.2m public-private partnership development and \$8.7m capacity building and project management programmes to restore GWCL to financial soundness.

Through the construction of water production and treatment facilities, rehabilitation and expansion of water distribution networks, and provision of maintenance equipment, 850,300 people in urban areas now have access to water, surpassing the target of 500,000 set by the WBG.

The project also included the implementation of a five-year management contract for GWCL, awarded to international private operator AVRIL from 2007-2012. Bringing in experienced international players into the Ghanaian water sector led to GWCL meeting 100% of its operation and maintenance costs through collected revenue in the five largest cities (accounting for 70% of total revenue).

There has been more modest progress in other areas. Non-revenue water (water that is pumped and then lost or unaccounted for) fell to 49%, but is still short of the 44% target, while collection

rates of 75% were slightly short of the 85% hoped for by the WBG. Tariffs came closer to cost-reflectivity, having increased by 300% between 2007 and 2015, although they still do not outpace GWCL cost increases. This is largely attributed to the government of Ghana transferring more than \$500m in debt back to GWCL in 2015, while operating costs have risen following the installation of Befesa's \$115m Teshie-Nungua water desalination plant, built by Spain's Abengoa and Japan's Sojitz Corporation in 2015. These challenges led to the WBG declaring the outcome of efforts to improve the financial stability of GWCL as "moderately unsatisfactory", and highlights the need for African utilities and governments to work hand in hand with international donors to achieve intended benefits. ■

## Tanzania's Rural Water Supply and Sanitation Programme II

**The Rural Water Supply and Sanitation Programme II (RWSSP II) was successfully completed in 2016 owing to the support of a consortium of international donors, including the AfDB – through loans from the African Development Fund (UA59m, \$82m) – RWSSI Trust Fund (UA6m, \$8m) and World Bank (UA50m, \$70m) and grant funding of UA10m (\$14m) from Dfid. Total donor financing for the project reached UA200m (\$278m), including UA60m (\$83m) from other development partners.**

RWSSP II evolved from the success of RWSSP I (2006-2015) and forms part of the National Poverty Reduction Strategy. The Tanzanian government identified the project as a key priority towards eradicating poverty, supporting the need to reform water and sanitation infrastructures throughout rural communities.

The components of the project included the construction of new water supply systems, the rehabilitation of existing water supply systems and the

employment of specific technical and service providers, which accounted for 82% of the total cost. The project focused on establishing the community-led National Sanitation Campaign and the School Water and Sanitation Hygiene (WASH) programme to encourage engagement among members of the community. The programme supported the installation of hand washing and sanitation facilities within schools (7.5% of the total cost).

The project also included the establishment of sector management support (10.5% of the total budget), encompassing the implementation of water point mapping systems, capacity development plans and overall programme management support.

The outcome of the project has had significant results, improving the livelihood of the intended beneficiaries. Over 7.1m people were given access to water, exceeding the estimated target of 4.6m by 54%. It was reported that the percentage of rural communities with access to water supply had increased

from 65% in 2010 to 74% in 2016. Access to sanitation facilities, which increased from 50% in 2010 to 80% in 2016, also exceeded initial targets. This was largely attributable to the Open Defecation-free (ODF) declaration, establishing latrines in over 6,500 villages and resulting in a total of 1.3m household latrines being constructed. This figure is significantly less than the appraisal estimate of 2m, however, there are still plans to meet this target in the foreseeable future.

The success of the National Sanitation Campaign and the WASH programme has led to behavioural changes within rural communities and the installation of latrines within 1,419 schools, exceeding targets by 537%.

The project's implementation has also had unintended benefits, which include the promotion of agricultural activities and increased migration of nomadic communities into settlements around the project areas. There has also been a decline in incidences of waterborne disease. ■

## 7.4 Energy



KfW Photo Archive, Ausloser-photographie

**Energy projects received financial commitments totalling \$20bn in 2016, a decline on the record high of \$33.5bn committed the previous year. However, when excluding commitments by African national governments, the energy sector remained by far the largest recipient of donor funding.**

ICA members were the largest financiers of energy projects in 2016, having been usurped by the Chinese the previous year. Of ICA members, the WBG (\$1.7bn) and Japan (\$1.1bn) provided the most commitments (see *Figure 90, right*).

The overall decline in energy commitments in 2016 was largely attributable to a fall in Chinese financing of energy projects, which despite reaching nearly \$10bn in 2015, fell to \$4.6bn in 2016. Almost half of China's commitments to the sector were accounted for by two \$1.5bn commitments to coal-fired power projects. Industrial & Commercial Bank of China agreed to finance the majority of the capital investment in Amu Power Company's

1,000MW plant in Lamu, Kenya, while China Development Bank-funded China African Development Fund provided a loan for the Ekumfi Aboano plant in Ghana.

Projects with private sector participation reaching financial close also declined owing to the continued hold-up of South Africa's Renewable Energy Independent Power Producer Procurement (REIPPP) programme. As a result, private sector financing to

the energy sector fell to \$1.3bn from \$7.2bn in 2015. The 100MW Kathu CSP plant was the only South African renewable energy project to reach financial close in 2016. Some \$657.9m of the project's \$779.4m total cost was funded privately by Nedbank, Investec Bank, Barclays, and Rand Merchant Bank.

At \$5.6bn, West Africa was the biggest recipient of infrastructure financing in 2016, while East Africa attracted

### Sub-sectoral Analysis

Identified sub-sectoral commitments in 2016 (excluding ICA members and African national government data) show coal and renewables generation projects as the predominant recipient of energy infrastructure financing, with commitments totalling \$3bn and \$2.3bn, respectively. Of renewable energy investments, over \$1bn was committed to solar energy projects, the majority from private financing.

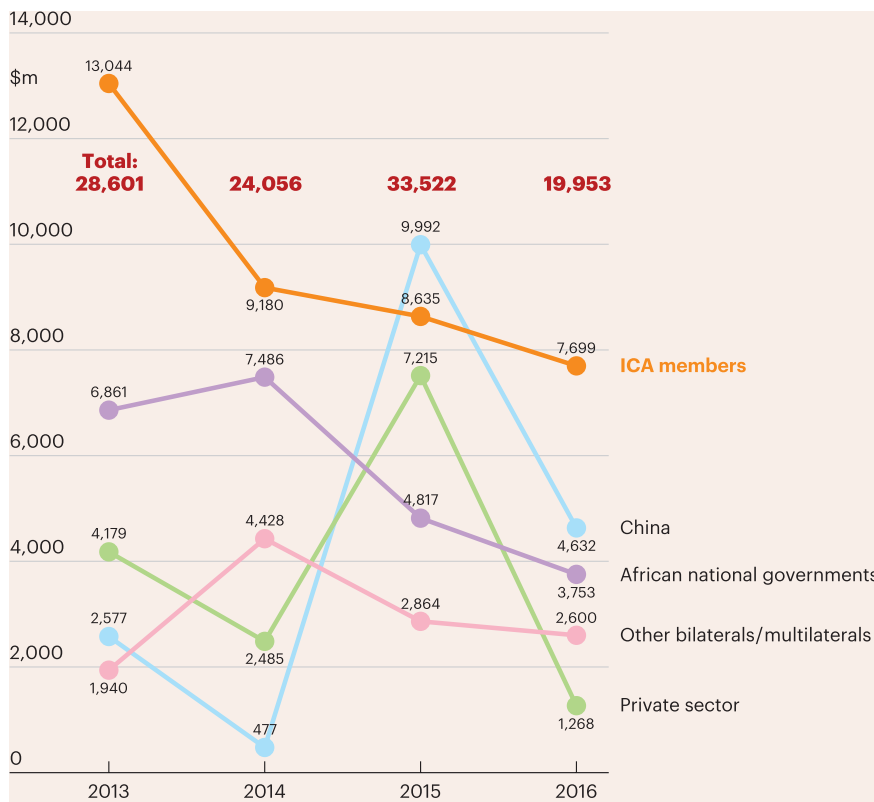
Hydroelectric projects attracted \$658.4m, with the bulk of financing coming from China, while wind was also a major recipient of financing. A China Exim Bank commitment to a 120MW wind farm in Aisha, Ethiopia, and AFESD

financing of the Boulanour wind farm in Mauritania led to a combined \$334m of commitments in the sub-sector. Another form of electricity generation attracting significant investment in 2016 was gas-fired power, with commitments of \$533.7m.

Transmission and distribution, increasingly identified as major blockages to developing the power sector in Africa, received substantial commitments in 2016 of \$955.3m and \$188.7m, respectively.

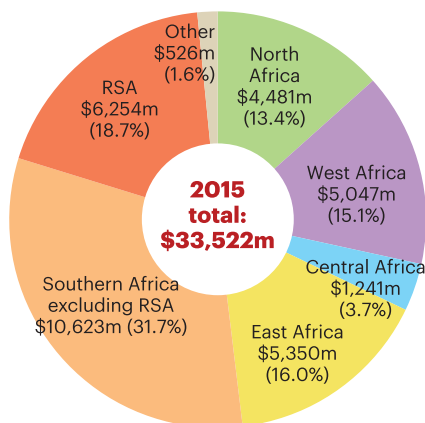
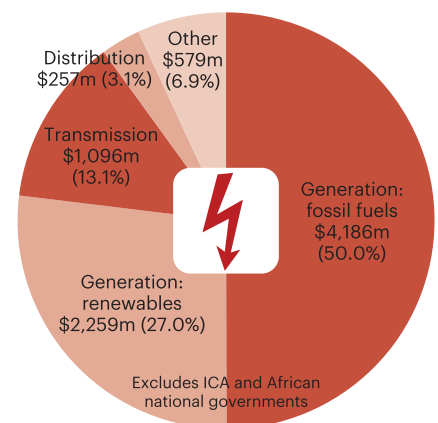
Major financiers of transmission infrastructure included China, India, and Arab funds. Meanwhile, the ACG was the lead donor of identified electricity distribution commitments in Africa during 2016. ■



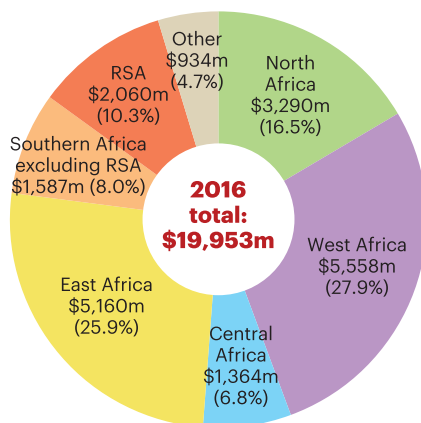


**Figure 90**  
Total energy sector financing by source, 2013-2016 (left)

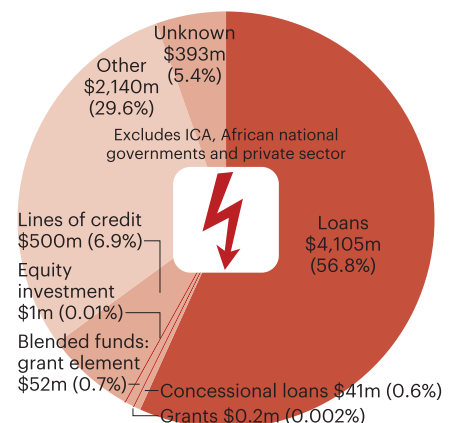
**Figure 91**  
Energy financing by sub-sector, 2016 (below)



**Figure 92**  
Total energy sector financing by region, 2015



**Figure 93**  
Total energy sector financing by region, 2016



**Figure 94**  
Energy sector financing by type of funding, 2016

\$5.2bn. Financing levels for both regions were fairly consistent with the previous year. North Africa benefitted from \$3.3bn in 2016, while Central Africa, Southern Africa, and Republic of South Africa received \$1.4bn, \$1.6bn and \$2.1bn, respectively. ICA members committed \$2.1bn to projects in East Africa, with North Africa (\$1.7bn) and West Africa

(\$1.6bn) being the members' other primary areas of focus.

Loans accounted for 57% of identified project financing for the energy sector in 2016, while 7% of total financing was via lines of credit. Just over 30% of financing was by instruments other than traditional loans, grants, blended finance, export credit, or equity investments.

## Projects Financed

Major financial commitments to the energy sector in 2016 included an AfDB loan of €137.8m (\$112m) to Côte d'Ivoire's national utility CI-Energies for the reinforcement of the country's transmission and distribution network. The project aims to accelerate the economy's structural transformation through

industrialisation and enhanced living conditions. This is to be achieved by the construction of transmission lines, substations, distribution lines, and by mitigating environmental and social impacts, thereby improving grid performance, and providing consumers with high-quality energy and increased electricity access rates. The project, of which the government of Côte d'Ivoire will bear 15% of the costs, is expected to be completed within 36 months and lead to the creation of 3,020 jobs, as well as reducing the number of localities supplied with environmentally damaging isolated diesel generators from five to zero.

Other commitments in 2016 included a €12m loan from the EIB for the São Tomé e Príncipe Power Sector Recovery Project. The \$29m, five-year

project, also financed through a \$16m World Bank IDA grant, provides technical assistance for implementation, capacity-building and sector reforms, and aims to increase renewable capacity and reduce losses in the network while improving overall system security and safety of supply. The objectives will be achieved through rehabilitation of the existing 1.9MW Contador hydropower plant, upgrading the low- and medium-voltage distribution network, and installing electricity meters. The project is expected to directly improve the quality of life of 90,000 people.

DBSA committed and disbursed \$100m to Zesco. The UK's CDC Group committed a £67.9m loan for the 200MW Amandi gas-fired power plant in Ghana. The \$552m project is led by Amandi Energy, partnered by US

energy investor Endeavor Energy. The project closed in December 2016 and was financed by OPIC, Nedbank Limited, Rand Merchant Bank, Aldwych International, Pan African Infrastructure Development Fund 2, and ARM-Harith Infrastructure Fund (*see private sector*).

The vast majority of Arab funds' \$1.3bn-worth of commitments were directed at North Africa (\$901m), with Egypt and Mauritania the major beneficiaries, with commitments of \$397.7m and \$380m, respectively. These included a \$115.8m loan from AFESD for a 100MW wind farm in Boulanouar, Mauritania, and \$99.3m from KFAED for the 1,950MW gas-fired Helwan South power station in Egypt (a \$2.4bn project which also benefits from \$585.4m of World Bank financing approved in 2013). ■

## CSP Spearheads Morocco's Renewable Push

**The commissioning of the first 160MW phase of the \$9bn Noor Solar Complex at Ouarzazate is a key milestone in Morocco's push towards reducing its dependence on fossil fuels, as well as in the development of concentrated solar power (CSP) across Africa.**

The project was officially opened by King Mohammed VI in February 2016. As part of the Kingdom's wider plans to achieve 52% of electricity generated from renewable sources by 2030, the introduction of innovative CSP technology provides advantages over more conventional forms of renewables, including energy storage and potential industrial applications.

The government's medium-term energy policy sets out a low-carbon growth strategy, recognising that some 97% of Morocco's electricity in 2014 was either imported or derived from fossil fuels. This includes ambitious renewable energy targets which initially aimed for an additional 6GW of new electricity generation

capacity sourced from renewable and clean energies by 2020.

The Noor project is central to this, and has underlined both the plan's credibility and Morocco's commitment to renewable energy targets. Once completed, the project will become the largest solar plant in the world, powering over one million homes by 2018, while reducing carbon emissions by an estimated 760,000 tonnes per year. Its planned 2GW capacity will equate to 14% of Morocco's total installed generation capacity.

The scope and success thus far has justified the faith shown by international institutions and private investors alike. The first two phases of the Noor project are financed on an 80:20 debt to equity ratio – with debt financing provided by a number of multilateral development banks and development finance institutions such as the World Bank, African Development Bank, AFD, the Clean Technology Fund, the European Commission, EIB, and Germany's

KfW. Saudi energy developer ACWA holds 75% of the equity, while the Moroccan Agency for Solar Energy (Masen) holds the remaining 25%.

With associated costs of CSP dropping considerably, the technology's value for Africa as an alternative to fossil fuels (as well as the more popular photovoltaic, PV, solar) is growing more apparent. Masen is heavily involved in the project and aims to be a leader and point of reference for CSP projects globally.

In light of the successful implementation of the project's first phase, Noor I, Morocco increased its renewable energy target from 42% of total capacity by 2020 to 52% by 2030, and has received praise from the United Nations for its commitment to renewable energy. The 200MW Noor II and 150MW Noor III are expected to commence operations in 2017, with construction of the 72MW Noor IV starting in April 2017.

## Could CSP Represent Africa's Solar Future?

PV has typically been viewed as the more attractive investment proposition for solar technology, with capital costs having dropped significantly in recent years. However, the costs of CSP are starting to fall. The cost of electricity from Noor I stood at \$0.245/kWh, while the costs for Noor II are expected to fall to \$0.19/kWh. However, this is still twice as much as solar PV and means that concessional financing, as well as private sector financing will still be needed to develop such projects in the short term.

Concentrated solar power provides a number of additional benefits, most notably heat storage systems allowing electricity supply at night or during adverse weather conditions. Noor I can store three hours of energy, Noor II is expected to store up to seven hours, while the full project is expected to supply electricity for around 20 hours per day once completed. Such innovations mean CSP is able to supply electricity on demand, making its application

competitive with traditional fossil fuels, but without any of the environmentally harmful side effects.

A second major attraction of CSP technology is the social and economic development opportunities provided for the local economy. Masen estimates that 35% of the costs of Noor I and II will be sourced locally, developing the industrial base while creating jobs. Furthermore, the steam that is created as a by-product of CSP has a variety of possible industrial applications. It has been used for heat-based water desalination, a process that could prove particularly important in the arid climate of North Africa and the Middle East.

International organisations view CSP in the region as attractive and with potential; the Noor project has had a significant impact on the technology's development in the region. Morocco is expected to significantly contribute to the scale-up of CSP technology via a strong learning effect, while the project's success will mean that associated costs of the global price of CSP fall. Although solar PV remains

more commercially viable, in the case of Morocco, CSP has presented an intriguing and promising alternative.

## A Regional and International Exporter

The future of Morocco's renewable energy sector is bright; the country's long-term ambitions include becoming an exporter of renewable energy to both Europe and other African nations. Morocco appears well placed to achieve this ambition, as highlighted by holding the presidency of COP 22, the UN Climate Change Conference held in Marrakech in November 2016. Both Moroccan and European grids are already connected through Gibraltar, are synchronised, and share common technical standards, while the Moroccan-Iberian Peninsula interconnection is expected to be strengthened via transmission lines installed between Morocco and Portugal. Furthermore, Morocco has more than 20 trade agreements with other African countries, and is quickly establishing itself as an African investment hub. ■

## Ain Sokhna Supercritical Power Plant

Egypt's 1,300MW Ain Sokhna thermal power plant, which started commercial operations in 2015, was the first project in Egypt to be based on the more advanced super critical boiler technology. This technology attains a higher efficiency that results in lower fuel consumption and emissions. The project, which cost at completion the equivalent of \$1.4bn, approximately 72.6% of the \$2bn cost estimated at appraisal, was financed by the AfDB, World Bank, AFESD, KFAED, and the Government of Egypt.

In its 2017 project completion report, the AfDB reported that despite an almost one year delay, all expected outcomes were achieved. Targets set included increasing installed capacity to 21,752MW by 2014, an aim which was comfortably exceeded by the 32GW reported in 2015.

The AfDB also hoped to see the number of consumers with grid connection

increase from 21.5m in 2005 to 22.6m in 2014. Again, this was another target exceeded, with 31.5m people reported as having grid connectivity as of 2015. Despite these achievements, the AfDB notes that meeting these targets was also heavily influenced by other interventions in the sector.

In addition, the project created some 3,000 direct jobs over its construction phase and up to 250 permanent jobs. More than 90% of the construction jobs and 100% of the permanent jobs went to Egyptians, ranging from engineers, technicians, administration and support staff to casual labourers and others.

On-the-job training was also provided, helping build the skills of staff,

especially younger workers who lacked practical experience. The AfDB estimated that 40-50% of the total project cost was spent in the local economy, helping boost local industries and services.

A key lesson learned during the project, as reported by the AfDB, was that Africa should not be slow to adopt modern proven technologies in order to quickly reap their benefits. ■

Financing source	Commitments (\$m)	Disbursements (\$m)	%
AfDB	390	374.2	96
World Bank	420.5	414	98.5
AFESD	181.5	157.7	86.9
KFAED	99	76.3	77.1
Government of Egypt	270.5	253.8	93.8
Total	1,361.5	1,276.1	93.7

**Total commitments to the African ICT sector stood at \$1.6bn in 2016, significantly lower than the \$2.4bn recorded in 2015 and the lowest figure recorded in the last four years (see Figure 95, right).**

Budget allocations made by African national governments increased to \$853m in 2016 from \$570m the previous year<sup>1</sup>. This increase is offset, however, by a significant decrease in commitments from China, ICA members and non-ICA European DFIs. The reduction in commitments from China is particularly pronounced, with just \$300m recorded in 2016 compared with \$1.03bn in 2015.

ICA member commitments to the sector totalled \$416.6m in 2016 (approximately 25% of the total), down from the \$616m committed in 2015 and follows three years of rising ICA commitments to the sector (2013-2015).

Southern Africa again was the largest recipient of ICT sector financing in 2016, with total commitments rising to \$715m from \$697m in 2015. West Africa and Central Africa both saw a decline in funding, to \$149m and \$277m, respectively.

Of ICA financial commitments, Central Africa was the largest beneficiary, receiving \$119.2m. Slightly less was directed towards North Africa (\$110.6m), while South Africa received \$78.3m. West African commitments stood at \$59.6m, with East Africa and Southern Africa receiving \$24.3m and \$11.9m, respectively.

## Projects Financed

A significant majority of China's funding of the African ICT sector in 2016 was destined for Zambia. Notable commitments include a 25-year, \$300m loan from China Exim Bank for phases two and three of the country's digital migration project. This project includes the development

of digital television broadcasting by constructing the public signal distributor and rehabilitating ZNBC and Zambia News and Information Services (ZANIS) studios.

The Netherlands' DFI FMO committed \$25m to HTT Infraco Ltd, one of three independent African telecom tower operators that provide passive infrastructure services to the continent's mobile network operators. The financing will result in the acquisition and upgrading of telecom towers and associated infrastructure of Bharti Airtel in the DR Congo, as well as partial funding for the construction and maintenance of new towers. Another FMO commitment, a \$22.3m loan to Helios Towers Tanzania, will contribute to the construction of approximately 680 built-to-suit towers over 18 months to support the development of the Tanzanian telecoms industry.

AfDB made commitments for \$118.9m of ICT funding in 2016, slightly less than the \$121.9m committed in 2015. A major project of focus for the AfDB was the Central African Backbone project, a \$58.2m commitment with \$6.4m reserved for developing soft infrastructure. This included the installation of 550km of optical fibre cables on the interconnection links with Cameroon and the Central African Republic and the establishment of a National Data Centre. Expected by 2019, successful completion of the project will result in a trebling of ICT interconnections with neighbouring countries, ICT's share of GDP increasing to at least 10% (from 4% in 2014) and internet service penetration rising to 30% by 2020 (from 7% in 2013).

In a similar project, a \$48.4m AfDB commitment went to West Africa for the Trans-Sahara Optical Fibre Backbone Project. This multinational project will connect Niger, Chad, Algeria and Nigeria, and later Mali,

## Sub-sectoral Analysis

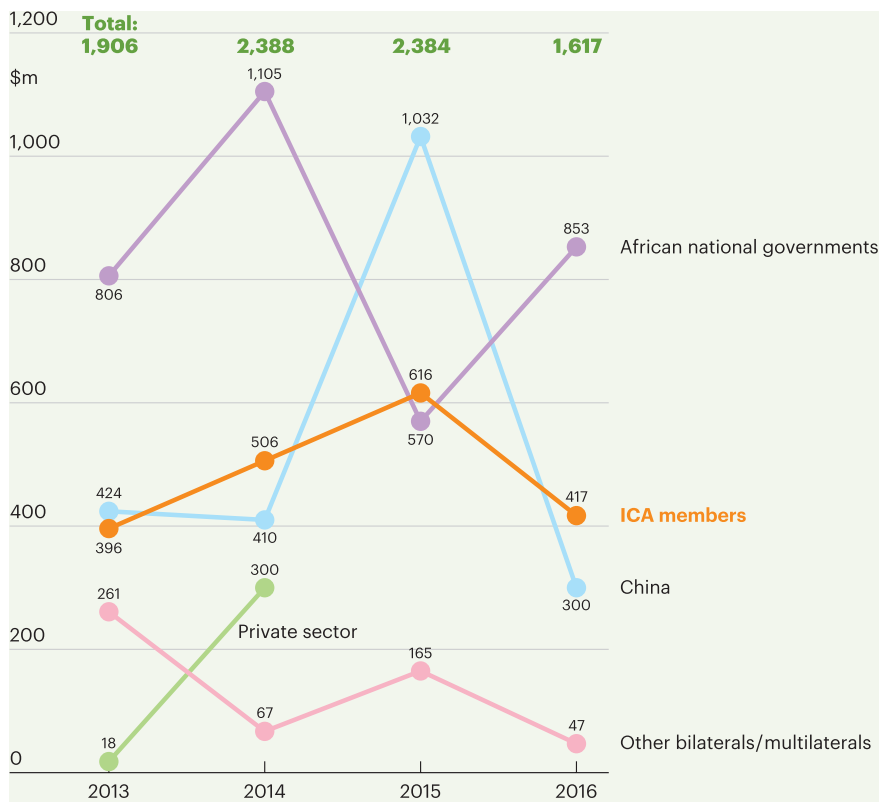
The mobile and wireless network sub-sector was the sole focus of identified sub-sectoral commitments in 2016. Data analysed (which excludes ICA member data and African national government allocations) show \$347.3m was directed at this sub-sector, all of which was issued as loans.

Benin and Burkina Faso. The project also includes the construction of a National Data Centre on the site of the High Commission for New Technologies in Niamey, Niger. The backbone project is aimed at developing the ICT network of Niger and Chad, which ranked as the bottom two countries in the International Telecom Union's 2016 Global ICT Development Index. The planned infrastructure includes 1,510km of optical fibre works, with 1,007km in Niger and 503km in Chad.

Another project of significance, the 50 Million African Women Speak Networking Platform, is being implemented across African regions with separate AfDB commitments in Southern (\$5.3m), Eastern (\$3.5m) and Western (\$3.5m) Africa. The project aims to improve female entrepreneurs' access to relevant financial information, engage in the exchange of ideas and improve market opportunities between urban and rural areas.

The EIB increased its commitments to \$137.6m in 2016, up from \$23.1m in 2015. This was largely down to a \$110.6m loan to Tunisie Telecom in September 2016 to fund the rollout of 4G data services in Tunisia. The project is the first InnovFin – EU Finance for Innovators loan outside Europe. The InnovFin initiative has the financial backing of the European Union under

<sup>1</sup>2015 African national government budget allocations have been restated to exclude external funding, see Annex 1 – Data Notes.

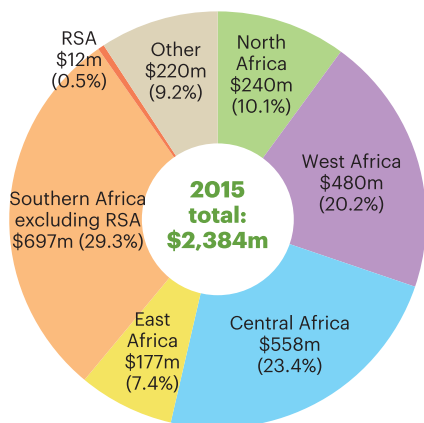
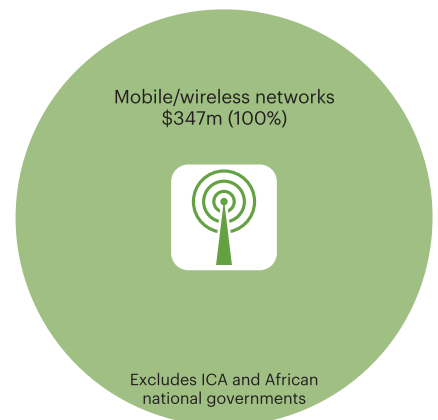


**Figure 95**

Total ICT sector financing by source, 2013-2016 (left)

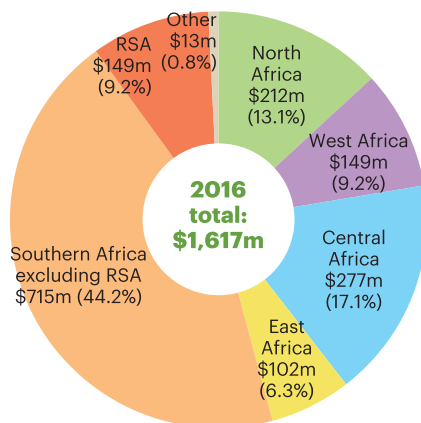
**Figure 96**

ICT financing by sub-sector, 2016 (below)



**Figure 97**

Total ICT sector financing by region, 2015



**Figure 98**

Total ICT sector financing by region, 2016



**Figure 99**

ICT sector financing by type of funding, 2016

Horizon 2020 Financial Instruments and is aimed at revitalising the corporate lending market and attracting private investors.

The IFC has again been a large contributor to African ICT projects in 2016. For example, in April 2016, the IFC announced a combined equity investment of \$107m in Net1 UEPS

Technologies Inc, a payment solutions and transaction processing service that is now deployed extensively in South Africa.

DBSA committed \$48.3m to the ICT sector in 2016, slightly down from its \$50m of commitments in 2015. This consisted of three separate commitments to the City of Tshwane

Broadband Project, one ZAR500m (\$34m) and two separate ZAR107.5m loans, all of which were approved in November 2016. The project enlisted Thobela Telecoms, a South African company, to rollout a terrestrial broadband fibre optic network for the City of Tshwane in a build-operate-transfer deal. ■

# Rwanda's Rapid Digitisation Adopted by AU as a Model for Africa



Kigali, iStock/Getty Images

**Over the past decade, a series of IT development programmes in Rwanda has enabled the government to integrate technology into critical public services such as health and education. This has given the East African country a position of leadership in the direction of the continent's digital agenda.**

Rwanda's favourable political and regulatory environment (ranked 12th globally in the World Economic Forum's Global Information Technology Report 2016, 1st in Africa and ahead of countries such as France and the USA) has been key to this, and has yielded impressive results including Wi-Fi in public areas and on transport, as well as cashless payment systems. Meanwhile, the digitisation of some government documents and services have put it at the forefront of e-governance on the continent. Such is Rwanda's success in the ICT sector, the African Union's 53 member states

have endorsed its approach as a model for other countries in Africa.

Central to Rwanda's plan has been the mobilisation of private sector investment. Among several major investments was a 2013 Public Private Partnership (PPP) with KT Corp, South Korea's largest telecom company. KT Corp agreed to invest \$140m in infrastructure and expertise and the implementing company (kt Rwanda Networks) says 4G LTE services reached 62% of the population by end-2016 – it hopes to cover 92% by end-2017.

A number of high profile telecom players have helped raise the profile of Rwanda's IT sector globally, including the UK's Inmarsat, which has launched a range of joint initiatives with the Rwandan government. One such initiative, the Smart Cities Education Programme, is aimed at improving Rwanda's labour capacity through educating students and entrepreneurs in the

'Internet of Things', the idea of embedding the internet and computers into everyday projects so they can send and receive data. According to Inmarsat, "the goal [of these projects] is to create a scalable solution that can be used across Rwanda as well as Africa".

This innovative approach has been applied in both public and private spheres and has yielded impressive results. Aggressive public investment and the introduction of transparent competition among private-sector telecom operators helped Rwanda achieve 96% mobile phone/data coverage in 2011. One of the keys to Rwanda's success has been a pragmatic approach to implementing IT projects. Ideas are implemented quickly, tested for viability, and then scaled up if successful. This has allowed the government to integrate IT into various critical public services, including healthcare, education, water and sanitation, agriculture and transport.

## A Model for Governance

In addition to improvements in planning and public services, technological advancements have, in the eyes of many experts, helped Rwanda create a model for better governance. Rwandan national ID cards and driver's licences, for example, are now digitised, and individuals can now apply for a visa online. According to the World Bank, this form of 'e-government' can be a route to greater government transparency. Other initiatives include the Rwandan Revenue Authority's creation of an online tax calculator for businesses to register companies and record their taxes. This process also ensures public officials can't excessively influence procurement processes.

## Africa's Digital Future

Rwanda is pressing for the rest of Africa to follow its ICT revolution. President Paul Kagame and the then secretary general of the International Telecommunications Union Dr Hamadoun Touré launched the pan-African ICT summit 'Transform Africa' in Kigali in 2013, in an attempt to accelerate the modest progress made in developing ICT infrastructure in parts of Africa in the 21st century. Smart Africa, chaired by Kagame, came out of the 2013 Kigali summit. It aims to put ICT at the centre of Africa's national socio-economic development agenda; improving access to ICT (particularly internet access), increasing accountability, efficiency and transparency of governance through technology, encouraging greater private sector engagement and promoting sustainable development. The Smart Africa manifesto has now been endorsed by all 53 members of the African Union.

During the third Transform Africa summit, held in Kigali in May 2017, Kagame unveiled the Smart Cities Blueprint, an ambitious framework that aims to serve as a catalyst to fast-track ICT-driven initiatives in cities

across Africa. The plan aims to roll out the 'Rwanda model' to a wider number of African nations. The development of these Smart Cities involves leveraging technology and using the large amount of data generated by citizens to optimise resources, connect people and improve business and trading. According to Kagame, "The report's key message is to integrate available technology at every level of urban management. Information dashboards powered by real-time sensors and data analytics can help to deliver better services at lower cost". Smart Cities will achieve this through the use of technology enablers, including using data and analytics (to improve services such as emergency response, transportation and education), social media and mobile broadband.

The plan comes in the context of Africa's rapid urbanisation, which soared from 15% in 1960 to 36% in 2010. With a population boom (80% of which is expected to take place in urban areas) two thirds of Africans are expected to live in cities by 2050, according to the United Nations Development Programme. Over 60% of urban African residents live in informal settlements, meaning that improving urban management is viewed as a priority.

## Can it be Replicated?

Whether other African states can replicate the achievements of Rwanda will be determined by their ability to create a business climate that appeals to prospective private sector investors. Rwanda scores highly in the World Bank's Ease of Doing Business Index 2017, ranking second in sub-Saharan Africa behind Mauritius. Much of Rwanda's success can be attributed to effective governance, but equally important has been competitive advantages such as an affordable, young and dynamic workforce and a period of relative economic and political stability that has enabled people to take advantage of the opportunities afforded by a business-friendly climate.

Events such as Transform Africa showcase the potential for the region and, crucially, bring together public and private sector players. Out of the event came the Smart Alliance, a partnership that brings together all countries adhering to the Smart Africa manifesto, and which hopes to raise funds from development partners to implement programmes in participating countries. Such partners include the private sector, as well as multilaterals such as the World Bank, African Development Bank, United Nations Commission for Africa, and New Partnership for Africa's Development. ■



Kigali, iStock/Getty Images

# 8. Regional Analysis



Dakar Harbour, iStock/Getty Images

## 8.1 Support for Regional and PIDA Projects

**Regional commitments by ICA members in 2016 amounted to \$1.9bn, the same level as reported in 2014, a decline from the \$3.4bn reported in 2015 and a long way from the \$4.5bn and \$4.2bn reached in 2012 and 2013, respectively.**

Regional disbursements by ICA members in 2016 amounted to \$821.5m for the second year running, less than the \$1.8bn and \$1.9bn reported in 2014 and 2013, respectively.

ICA member commitments to PIDA/PAP projects totalled \$447m in 2016 while members disbursed \$292m during the year. AfDB, DBSA, DfID, EIB, EU-AITF, GIZ, IFC and JICA all reported commitments or disbursements to the programme. Overall member support for PIDA may be greater than these data suggest since not all members provide

project-level detail or an aggregated figure for PIDA financings.

Some ICA member activities clearly assist PIDA, for example with its corridor projects. Few would doubt that complementary, sometimes pre-existing initiatives – such as Japan’s One Stop Border Posts and the EU’s work with the AUC on corridors – substantially contribute to the PIDA process.

Underlining an apparent lack of awareness in Africa as well as among development partners, an infrastructure specialist at one of Europe’s larger DFIs said: “We try to track what happens with PIDA, but we are mainly working with governments at country level. Governments are not asking for money for PIDA projects so we are not financing any.”

The programme needs to be more

actively sold to stakeholders, including at a political level in Africa, and the potential impact of PIDA projects on job creation could be highlighted.

The Africa-EU Infrastructure Reference Group Meeting in April 2017 heard that job creation outcomes may be substantial. The Inga III hydro project in Democratic Republic of Congo could create 7,000 jobs during construction and 3,000 permanent jobs once operational. Due to local content requirements, the 280MW Kaléta dam, a part of the OMVG Energy Project involving Gambia, Guinea-Bissau, Senegal and project host Guinea, would provide 2,000 jobs in small businesses that supply the project. The Trans-African Highway Network is expected to create 350,000 permanent jobs for maintenance as well as substantially improve prospects for job creation and



business growth due to increased trade.

### Projects Completed

When Mozambique's President Filipe Nyusi, Brazil's Foreign Minister Aloysio Ferreira Nunes and Murilo Ferreira, CEO of the Brazilian mining conglomerate Vale all joined celebrations at the deepwater port of Nacala-a-Velha in May 2017 to mark the formal completion of the 912km Nacala integrated logistics corridor project, it underlined that regional PIDA projects in which public and private sectors co-operate do make a difference on the ground.

Serving northern Mozambique, southern Malawi and the Moatize coalfield, the Nacala Corridor project included the rehabilitation of existing railway lines, a new heavy haul railway across the southern part of Malawi, a fleet of 85 new locomotives and 1,962 trucks and a coal export terminal at Nacala-a-Velha, with a storage yard able to accommodate around 1m tonnes of coal. About 150 ships a year will set sail from the port.

Jobs have been and will be created while passenger and freight services improve mobility, facilitate social and economic development and reduce transport costs and emissions, all of which will encourage economic growth in the region.

Started in 2012, the project has been led by Vale and Mozambique's state port and railway operator CFM, with support from Mitsui of Japan. ICA members reported component projects completed within the \$4.4bn corridor project in 2016, while several development partners have been involved in its implementation.

### ICA Members' Support

Among PIDA projects marked as complete by ICA members in 2016, several noted the Bamako-Dakar Corridor. DBSA is supporting the

rehabilitation and upgrade of the North-South Rail Corridor. This is a component of the North-South Multimodal Corridor project to facilitate the flow of people and goods across the borders between Botswana, DRC, Malawi, South Africa, Zambia and Zimbabwe. DBSA is also supporting the Central Corridor.

Japan committed \$36.1m to the rehabilitation of Môle 3, a cargo pier at the Port of Dakar in Senegal. The improved facility will improve port efficiency and thus Senegal's ability to trade with the rest of the world. It is part of the West African Hub Port and Rail Programme. Japan has also supported the Central Corridor and the Abidjan-Lagos Coastal Corridor.

The corridor connecting the commercial capitals of Côte d'Ivoire and Nigeria with Benin, Ghana and Togo also received AfDB support for studies on its hard and soft infrastructure requirements, and it is the pilot project for the PIDA Service Delivery Mechanism (SDM).

Supported by GIZ, the mechanism is designed to kick-start projects through improved early-stage project preparation. Established and managed by a dedicated NEPAD staff member, the SDM establishes the legal and institutional framework required for effective transnational management of the corridor.

The GIZ support programme helps strengthen the infrastructure departments of its AUC and NEPAD partners and offers services and products to accelerate PIDA project implementation in order to improve regional transport, energy, water and ICT infrastructure in Africa. As a result, private sector involvement in the programme is now strengthening through the PIDA Continental Business Network (CBN), and it is anticipated that private capital and participation can be mobilised to develop key projects. The CBN aims to facilitate dialogue between its members and high-level public sector representatives. ■

### Developing the NEPAD Job Creation Toolkit

Several initiatives are underway to facilitate progress on PIDA, including the development of a scalable methodology to estimate the number of jobs projects create. The NEPAD Job Creation Toolkit Methodology aims to estimate, track and maximise PIDA projects' impact on job creation.

NEPAD will provide project owners with initial job creation estimates to help them test alternative design scenarios to maximise job creation in a four-step process:

**Step One:** NEPAD Toolkit Manager uses the Toolkit to generate initial job creation scenarios using project documents and expert ratios.

**Step Two:** NEPAD provides its Job Creation Maximisation Service

• NEPAD experts present illustrative scenarios to project owners, showing how different project designs impact on

job creation, for example:

- i Local jobs created.
- ii Locally sourced inputs used, such as plant and machinery or construction materials, and the jobs created as a result of a project's demand for those inputs.

**Step Three:** Project owners and contractors provide NEPAD with details of inputs so project-specific job creation scenarios can be generated.

• This provides a tool for project owners to maximise job creation. It also serves to help, for example, cost-benefit analysis of different scenarios and possible needs for public sector support in training.

**Step Four:** Project owners use scenarios to finalise project design, having assessed how to maximise job creation. ■

## 8.2 North Africa

Commitments to infrastructure projects in North Africa totalled \$12.9bn in 2016, a small increase on 2015 (\$12.4bn). Of the total, national governments allocated \$5.6bn – a five-year high – with the vast majority of this directed towards the transport sector, while over 50% was provided by the ICA (\$3.7bn) and Arab Co-ordination Group (\$3.3bn). Private investment, at \$100m, was significantly less than the \$1.2bn recorded in 2015 (see Figure 101, right).

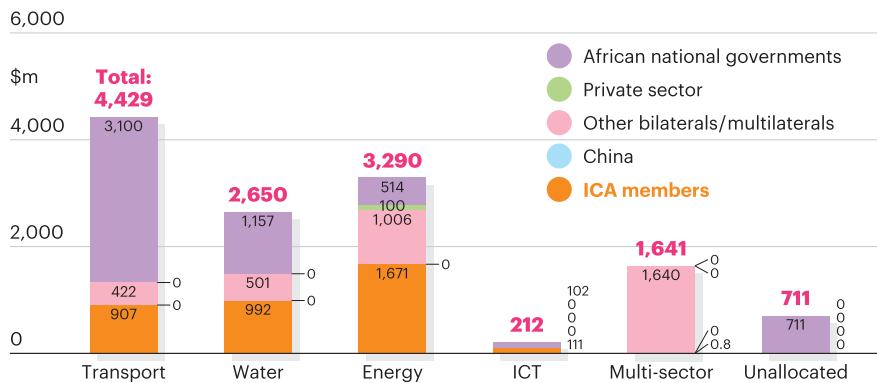
Transport projects received \$4.4bn of commitments – with the majority coming from national government financing – the highest sectoral allocation in 2016 and an increase on the \$4.1bn committed in 2015.

Investments in energy totalled \$3.3bn in 2016, a reduction of over \$1bn since 2015, while commitments to Water, Multi-sector and ICT projects amounted to \$2.6bn, \$1.6bn and \$212m, respectively.

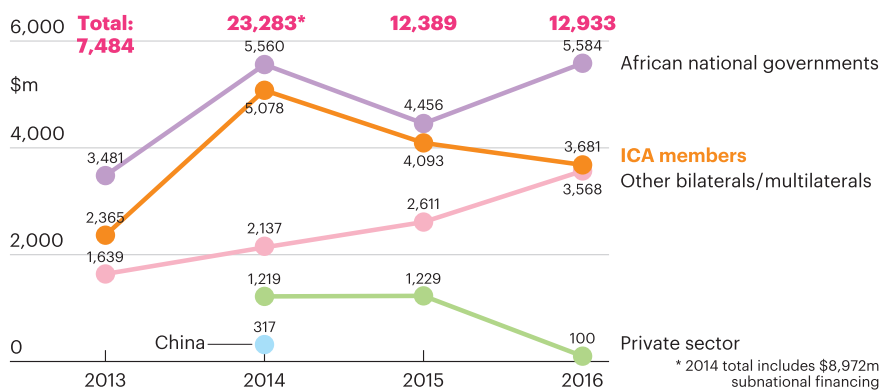
National governments committed \$3.1bn to the transport sector, \$1.2bn to the water sector, \$514m to energy, and \$102m to ICT projects.

Non-ICA members committed the largest share of their financing in 2016 to Egypt, which received \$5.6bn. Some \$2bn of this was directed to support for the country's transportation infrastructure, particularly roads and railways. Morocco received \$1.5bn, Algeria \$883m, Tunisia \$851m and Mauritania \$499m.

The ACG continued to invest strongly in the region, with the majority of funding going to energy (\$901m). Significant contributions included a \$198.5m AFESD loan for Egyptian Electricity Holding Company's 1,800MW Damanhour combined cycle gas-fired power station. Support for the plant also came from AfDB and



**Figure 100**  
Total financing to North Africa by sector and source, 2016



**Figure 101**  
Trends in North Africa financing by source, 2013-2016

EIB. The plant is expected to come online in 2023 and will use 2bcm/yr of natural gas supplied by the Egyptian Natural Gas Company.

AFESD also provided a \$165m loan for water supply and agricultural development in the Sinai Peninsula. In Morocco, AFESD and IDB provided loans of \$165m and \$101m, respectively, for the high-speed Tangier-Casablanca train.

SFD investments included a \$165m loan for electricity transmission lines between Nouakchott and Nouadhibou in Mauritania and a \$123m loan for the Mornaguia power plant in Tunisia. KFAED supported water projects in Egypt (\$96m) and Tunisia (\$73m) in addition to the Helwan Power station in Egypt (\$99m).

Of ICA members' \$3.7bn

commitments, the energy sector received \$1.7bn, followed by water (\$992m), transport (\$907m), multi-sector (\$754,292) and ICT (\$111m). Major contributions included JICA's \$374m loan for an electricity sector rehabilitation project around the Cairo and Alexandria areas. JICA also provided a \$102m loan for the development of the Hurghada Solar PV power plant in Egypt.

WBG commitments totalled \$698m, with \$403m directed to the energy sector, \$177m for water projects and \$118m for transport infrastructure.

The only private sector investment recorded was \$100m for the 64MW Benban Solar PV plant in Egypt – one of only three projects to go through the first round of Egypt's solar FiT programme. ■

**Commitments to West Africa totalled \$16.3bn in 2016, the highest since 2013, with the majority of investment going to the transport sector. Investments from all sources, except China, increased in 2016. Major contributions were made by national governments (\$4.8bn), ICA members (\$4.6bn) and China (\$2.3bn) (see Figure 103, right).**

The transport sector received \$6.6bn of commitments, followed by energy (\$5.6bn), water (\$2.1bn), multi-sector projects (\$350m), and ICT (\$149m). Ghana received the most funding of all West African countries, with commitments totalling \$4.7bn in 2016, followed by Nigeria with \$3.6bn, and Senegal with \$2.2bn.

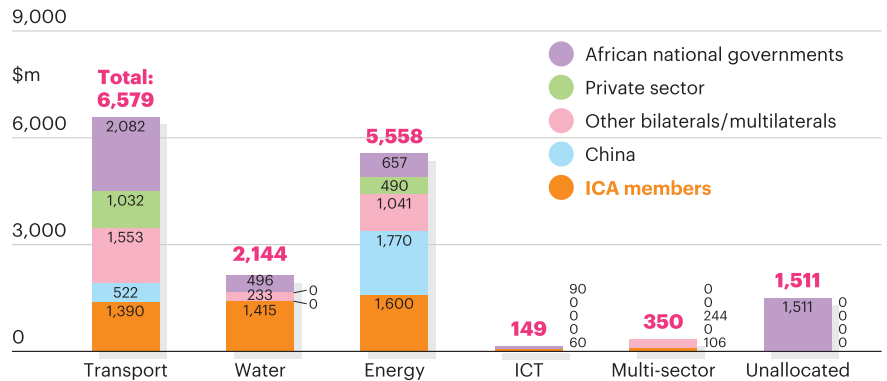
China's \$2.3bn of financing for the region was primarily directed at the energy (\$1.8bn) and transport (\$522m) sectors but its total commitments were significantly less than the levels recorded for 2015 (\$4.3bn).

Projects supported included the Tema port terminal in Ghana, financed by the ICBC and Standard Bank with investments totalling \$472m, and the 700MW Ekumfi Aboano coal plant, also in Ghana, for which China-African Development Fund provided a \$1.5bn loan.

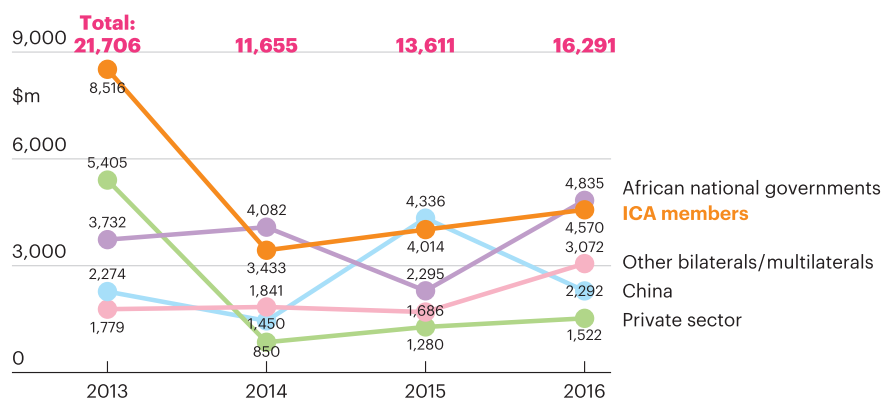
The majority of ICA member investments were focused on the energy sector (\$1.6bn), followed by water (\$1.4bn), transport (\$1.4bn), multi-sector projects (\$107m) and ICT (\$60m).

AfDB committed \$423m in loans and grants to the transport sector, including \$267m for the Abidjan Urban Transport Project, which will involve the rehabilitation and construction of major highways.

ICA members' support for the energy sector in the region includes a \$153m investment to Côte d'Ivoire from AFD



**Figure 102**  
Total financing to West Africa by sector and source, 2016



**Figure 103**  
Trends in West Africa financing by source, 2013-2016

as part of its Access to Energy for All programme. Also in Côte d'Ivoire, the AfDB provided a €137m (\$152m) loan to strengthen the electrical transmission and distribution networks.

JICA committed \$250m to the Mamelles Seawater Desalination project in Senegal, which aims to secure enough water to supply future demand in Dakar.

The World Bank Group committed \$972m to West Africa, of which \$407m went to the transport sector, \$299m to water, \$260m to energy and \$4.8m to ICT. Total disbursements from the WBG in 2016 amounted to \$925m.

Private investment in West Africa was at its highest since 2013, primarily due to \$1bn in private finance for the Tema port terminal project. Other notable commitments included the 200MW

Amandi Energy Gas power plant in Ghana, which is expected online 2019. Private capital was also invested in two solar PV plants in Senegal.

Arab Co-ordination Group (ACG) commitments totalled \$1.5bn, of which \$857m went to the transport sector, \$292m to energy, \$185m to multi-sector projects and \$175m to water and sanitation. IDB provided the majority of the group's investments in West Africa, with \$581m going to transport, \$185m to multi-sector projects, \$169m to energy and \$135m to water.

Notable IDB investments included a \$332m loan to Senegal for an express train service connecting Dakar to Blaise Diagne International Airport and a \$220m loan to Guinea for the Dabola-Kouroussa and Guékédou-Kissidougou-Kondembradou road projects. ■

## 8.4 Central Africa

A total of \$6.3bn was committed to Central Africa in 2016, a marked increase on 2015 (\$4.7bn). The majority of funding was provided by ICA members (\$2.2bn), national governments (\$2bn) and China (\$1.3bn), with transport receiving the largest sectoral share (\$2.8bn), followed by energy (\$1.4bn), water (\$851m), ICT (\$277m) and multi-sector projects (\$31m) (see Figures 104-105, right).

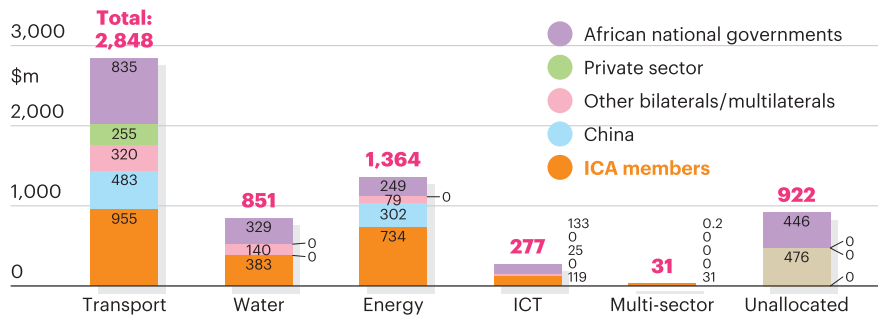
Cameroon (\$2.5bn) received the most investment, followed by the Democratic Republic of Congo (\$557m).

The Arab Co-ordination Group (ACG) committed \$83m to the region in 2016, substantially down from 2015 (\$498m) but generally in line with the 2011-2014 period. Chad and Cameroon were the sole beneficiaries of ACG commitments, with \$50m going to transport, \$20m to water and \$13m to energy. Notable investments included SFD's contributions towards Cameroon's transport sector for the development of road infrastructure and the construction of a school for industrial trade in Akwa, Douala.

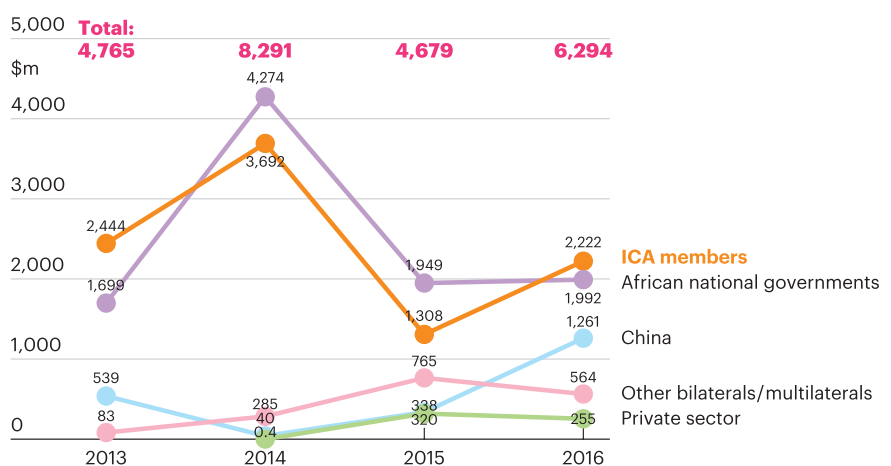
Commitments from China increased significantly compared with previous years, with all investments directed to projects in Cameroon. In the energy sector, the ICBC invested \$302m into the 75MW Warak hydropower plant. The project is expected online in 2018, and includes all electrical lines to MOUNGUEL.

In the transport sector, the China Exim Bank provided a \$482m loan for the expansion of Kribi port, which is hoped will open up Cameroon's mining potential and support the government's Vision 2035 ambitions.

A total of \$231m was committed by the Trade and Development Bank (previously the Eastern and Southern African Trade and Development Bank). Its investments



**Figure 104**  
Total financing to Central Africa by sector and source, 2016



**Figure 105**  
Trends in Central Africa financing by source, 2013-2016

were solely in Rwanda and included projects in the energy and transport sectors.

Of the \$2.2bn committed by ICA members, \$955m was directed to transport projects, followed by energy (\$734m), water (\$383m), ICT (\$119m) and multi-sector projects (\$31m). The WBG accounted for \$986m of ICA member commitments, with \$407m for the transport sector, \$341m for energy, \$204m for water and \$34m for ICT.

AFD provided a €100m (\$111m) loan to the Republic of Congo for the Société Nationale de Distribution d' Eau to extend and rehabilitate drinking services for 450,000 people.

In the transport sector, AfDB committed \$317m to Cameroon's Transport Sector Support Programme

phase 2, which will improve, extend and modernise major urban roads. The WBG has also partly financed this project.

In the transport sub-sector, 55% of identified sub-sectoral commitments were directed towards maritime ports, with the remainder financing rail and road projects. Irrigation and drainage projects were the recipients of the vast majority of commitments to the water and sanitation sector, while hydroelectric generation projects dominated energy sector financing.

There was only one recorded private project in the region that reached financial close in 2016. The \$255m financing will be used to rehabilitate the Transgabonais Railway from Libreville to Franceville in Gabon. ■

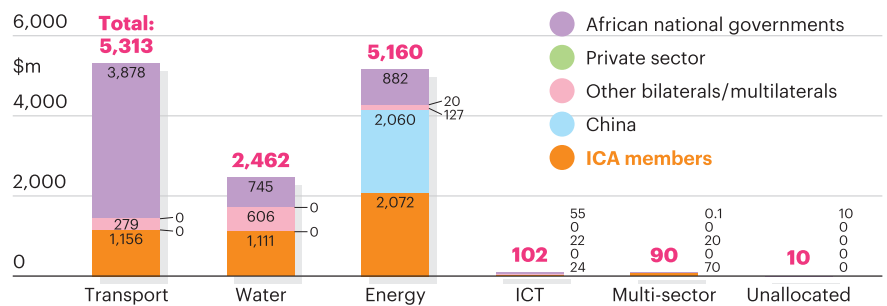
East Africa received commitments totalling \$13.1bn in 2016, a significant decrease from the \$18.7bn recorded in 2015. Of this, \$4.4bn was committed by ICA members, spending which was exceeded only by African national governments (\$5.6bn). China committed \$2.1bn. A large majority of total commitments to the region in 2016 was directed to transport (\$5.3bn) and energy (\$5.2bn), with the remaining finance destined for water (\$2.5bn), ICT (\$102m) and multi-sector projects (\$90m) (see Figure 106, right).

The \$4.4bn of ICA member funding represented a slight decrease on the \$4.7bn reported in 2015. Energy accounted for 47% of ICA member commitments to East Africa, while transport received 26%, water 25% and ICT 0.5%. The remaining funding was directed at multi-sector projects, which accounted for 1.6% of total ICA member commitments.

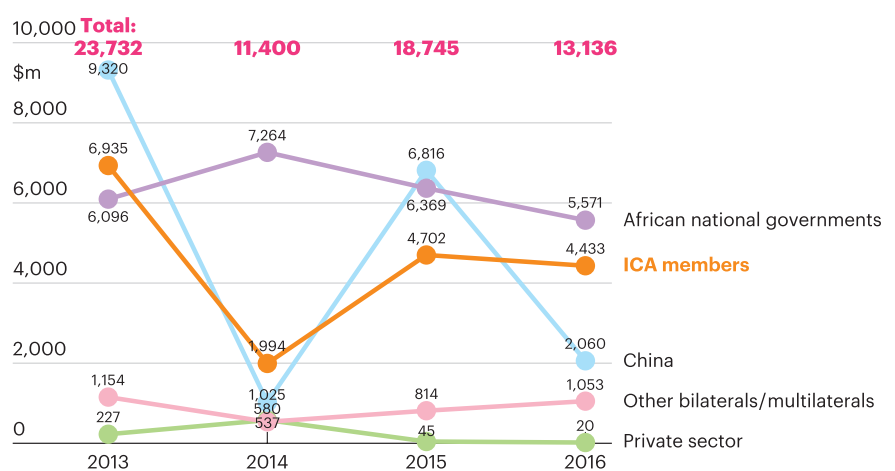
Of ICA members, the biggest contributors were AfDB (\$1.6bn), WBG (\$988.6m), JICA (\$490.6m) and AFD (\$431.7m). AfDB's commitments, of which 46.1% was directed to transport and 36.2% to water and sanitation, include the multinational Busega-Mpigi and Kagitumba-Kayonza-Rusumo Roads Project, which covers Rwanda and Uganda. The project, which received a commitment for UA189.8m (\$264m) of AfDB loans in 2016, involves the construction of a 23.7km four-lane express highway and the rehabilitation of 208km of roads, with \$48.6m dedicated to soft infrastructure.

WBG commitments were largely focused on the energy sector, which accounted for \$621m (63%) of its East African total in 2016. JICA concentrated its financing almost entirely on energy, whereas AFD invested 79% of its commitments in water and sanitation infrastructure.

A \$416m commitment from JICA



**Figure 106**  
Total financing to East Africa by sector and source, 2016



**Figure 107**  
Trends in East Africa financing by source, 2013-2016

supported the Olkaria V Geothermal Power Development Project in Kenya, one of the biggest projects in East Africa.

Kenya, Tanzania and Ethiopia were the destinations for the majority of East Africa's non-ICA member financing, with a clear trend towards substantial investment in the transport and energy sectors. Kenya was the most popular investment destination by a significant margin, with \$3.8bn of commitments. The majority of this was sourced from African national governments (\$2bn), with China committing \$1.8bn. Kenya's transport sector received \$1.2bn, while a further \$2.3bn went to the energy sector.

Tanzania received \$1.8bn of non-ICA member commitments in 2016. This was almost entirely (\$1.6bn) sourced from African national governments.

Transport was the most popular sector, attracting \$1.1bn in 2016.

Ethiopia also received \$1.9bn, of which \$1.3bn was African national government financing. The country's transport sector attracted \$1.3bn.

Chinese investment in the region fell dramatically to \$2.1bn in 2016 from \$6.8bn reported the previous year, and is well below the \$4.8bn four-year average. Kenya was a focal point for China's investments in 2016, which included a \$135.7m loan for the 55MW Garissa solar farm, a \$120m loan for transmission infrastructure in Nairobi, and a \$1.5bn loan for the Lamu coal-fired power plant. Other notable commitments from China included \$218m for a 120MW wind farm in Ethiopia, and \$1.7bn for electricity transmission in Ethiopia, consisting of a 400kV power substation with 450MW carrying capacity. ■

## 8.6 Southern Africa

A total of \$6.5bn was committed to Southern Africa in 2016, a significant decrease on the \$15.6bn recorded in 2015. The most notable decrease in financing was in Chinese investments, which fell to \$300m from \$7.1bn the previous year (see Figure 109, right).

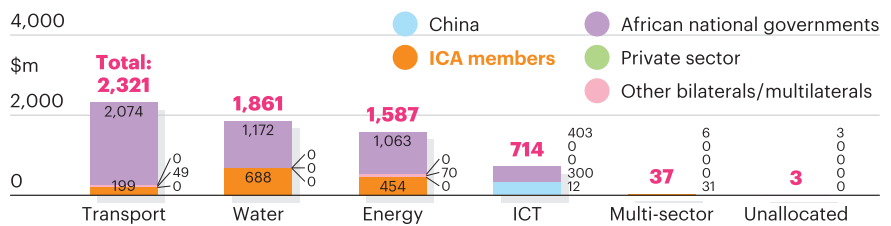
Arab Co-ordination Group (ACG) investment also dropped considerably to \$48.6m in 2016 from \$325.2m in 2015. ICA member commitments also fell to \$1.4bn in 2016 from almost \$1.8bn in 2015, and followed a year-on-year reduction of ICA member funding for the region since 2013, when investment stood at \$2.5bn.

Financial commitments from other sources were reasonably consistent with previous years, although African national governments' spending fell to \$4.7bn in 2016 from \$5bn the previous year.

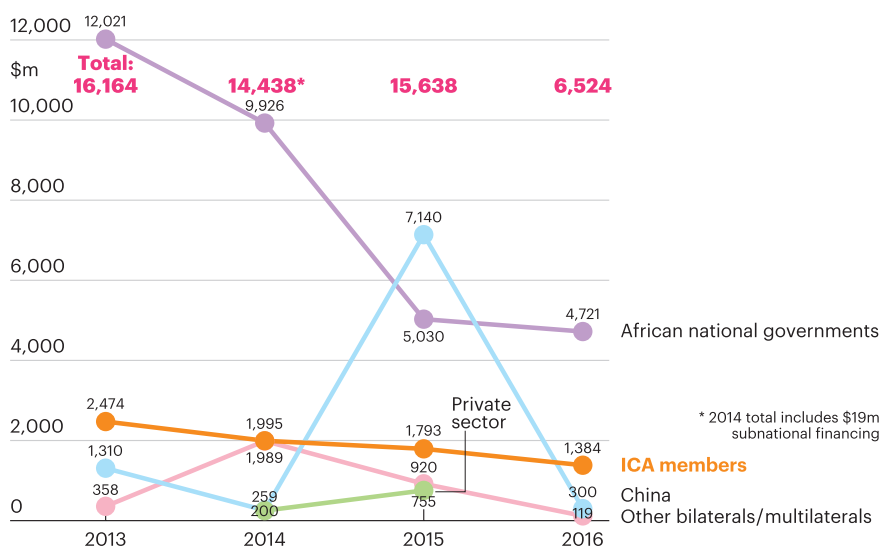
Financing commitments fell in 2016 to all sectors except water and ICT, with the most pronounced change in the energy sector, which had a negative percentage change of 85%, equating to a reduction of \$9bn between 2015 and 2016. Transport sector commitments fell 13% from \$2.7bn to \$2.3bn. The water sector saw a 42% increase in commitments, rising from \$1.3bn to \$1.9bn, while the ICT sector saw an increase of 2.4% from \$697m to \$715m.

ICA member commitments in Southern Africa were concentrated on the water sector, with \$688.4m (50.4%) pledged in 2016. Energy was also the focus of significant investment in the region at \$454m (33.3%), while transport received \$199m (13.1%) of total funding. The ICT sector was the smallest beneficiary, receiving just \$11.9m (0.9%). Multi-sector funding accounted for \$31.1m (2.3%).

JICA invested ¥2.1bn (\$19.5m) in the Angolan transport sector, financing the Southern Africa Hub Port and Rail Programme. This project involves the



**Figure 108**  
Total financing to Southern Africa (excluding RSA) by sector and source, 2016



**Figure 109**  
Trends in Southern Africa (excluding RSA) financing by source, 2013-2016

rehabilitation and modernisation of the Namibe port. AFD invested €52m (\$58m) into Namibia's energy sector as part of its Sustainable Use of National Resources and Energy Finance (SUNREF) programme to advance renewable energy, sustainable agriculture and tourism. This included €31m (\$34.1m) provided via grant funding.

Non-ICA member financing totalled over \$5.1bn, a considerable reduction from the 2015 figure of \$13.8bn. Almost half of this targeted Angola, which received close to \$2.6bn (54%), and was comprised entirely of investments by the national government. Other non-ICA investments included \$955.6m (18.6%) for Zambia, including a \$300m loan from China Exim Bank for the second and third phases of a digital migration project. Malawi

received \$342.4m (6.7%), sourced from African national government financing, of which \$150.8m was directed to the water sector, \$147.7m to ICT, and \$35.5m to transport infrastructure.

African national government budgets produced significant investment in all sectors. A total of \$2.1bn (44.5%) was recorded for the transport sector, followed by water (\$1.2bn or 25.4%), energy (\$1.1bn or 23.3%) and ICT (\$402.6m or 8.5%). Multi-sector projects received \$6.3m (0.1%) of finance.

Non-ICA European countries were represented solely by a \$11.3m Norfund investment in Mozambique's energy sector, which funded the 40MW Central Solar de Mocuba solar plant in the Zambézia Province. ■

## Republic of South Africa

Commitments totalling \$5.9bn were made in 2016, a drastic reduction from the \$11.7bn recorded in 2015 but still in excess of the \$4.9bn reported in 2014 (see Figure 111, right).

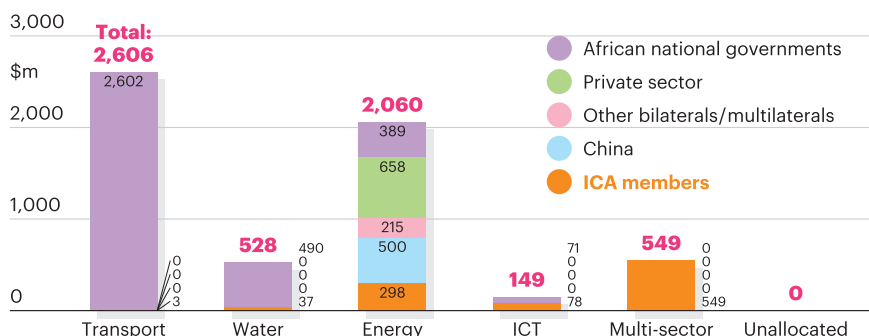
This decrease was reflected most clearly in the fall in private investment, which reduced to \$657.9m in 2016 from \$3.8bn in 2015, largely as a result of the continued hold up of the REIPPP programme, which has seen significant investment flow into the country's energy sector in recent years.

Commitments from China declined considerably, falling to \$500m in 2016 from \$2.2bn in 2015. African national government commitments did not reflect the radical overall reduction, but still fell to \$3.6bn in 2016 from \$3.9bn a year earlier. ICA member investment also dropped. The \$966m recorded in 2016 represents a significant decrease on the 2015 figure (\$1.7bn)

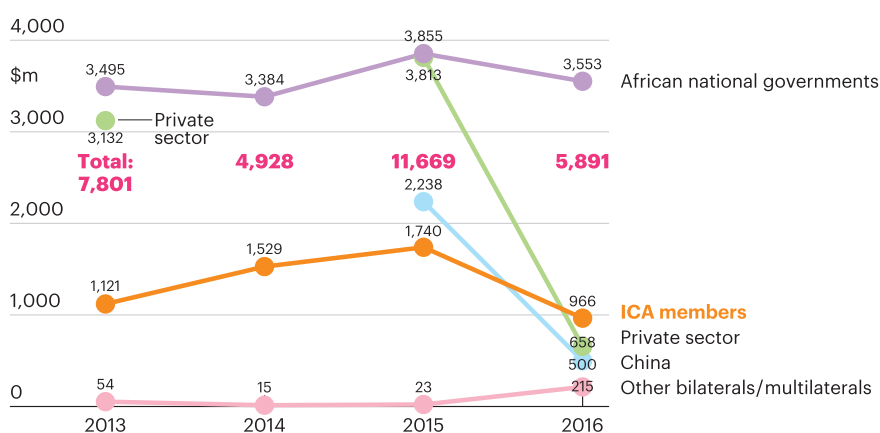
Transport was the most popular sectoral destination, accruing \$2.6bn in commitments in 2016, the equivalent of 10.6% of total spending on transport across the continent. However, this was still significantly below the \$4.8bn committed in 2015. The energy sector saw a similarly dramatic reduction, with investment falling to \$2.1bn (10.3% of total continent-wide energy investment) from \$6.3bn in 2015.

The water sector reversed this trend, with commitments increasing to \$527.7m in 2016 from \$509m in 2015, representing 5% of total water commitments across the continent. ICT sector investments increased to \$149m from \$12m, representing 9.2% of total commitments to ICT during 2016.

ICA members committed a total of \$966m to South Africa in 2016,



**Figure 110**  
Total financing to RSA by sector and source, 2016



**Figure 111**  
Trends in RSA financing by source, 2013-2016

approximately \$734m of which was invested by DBSA. Multi-sector projects received the most funding, accounting for \$549.5m (56.9%) of all commitments, including \$511.5m from DBSA, which was largely directed toward the ZAR4.01bn (\$271m) City of Johannesburg Capex Programme, a financial stability, growth and development plan for the city. The remaining multi-sector financing arose from a \$38m ADF commitment.

Energy was the second most popular sector among ICA members in South Africa, receiving \$297.6m (30.8%) of commitments. This included DBSA funding for the 100MW Kathu solar CSP plant (ZAR20.6bn), and three equity loans to Eskom in January 2016 (ZAR1.1bn).

ICT was the third most popular sector for ICA members, receiving \$78.3m (8.1%) of commitments. Projects of note include the ZAR607.5m invested in the City of Tshwane Broadband Project by DBSA. This large-scale project attracted more investment than both the water (\$37.6m, 3.8%) and transport (\$3.3m, 0.1%) sectors.

Chinese investment in 2016 was limited to the energy sector, with a \$500m loan from China Development Bank to Eskom to contribute to an expenditure programme and help stabilise liquidity. Some \$657.9m of investment was sourced from the private sector, all of which went to the 100MW Kathu solar CSP plant. There were no commitments from non-ICA European countries. ■

## 1. General Remarks

ICA member commitments and disbursements should be viewed in perspective given the very different strategies and purposes of each member. While some members provide between 90-100% non-ODA loan based funding, Canada, the EC, the EU-AITF, and DfID provide purely or mostly ODA grants, which means that their funding volumes are naturally much lower.

In describing the way ICA members deploy funds the distinction should be made between donor support that is attributed to them in this report and the considerable support bilaterals provide to multilaterals, which is not attributed to them in this report. For example, ICA members such as the UK, Canada, France, Germany, Japan and the US contribute to the AfDB's African Development Fund (ADF) and the World Bank's International Development Association (IDA).

As in 2015, this year's report covers data from the AfDB, DBSA, CDC, EU-AITF, EC, EIB, AFD, Germany (KfW, GIZ and DEG), IFC (which together with the World Bank is described as the World Bank Group (WBG), JICA, UK (DfID and CDC), the Power Africa interagency of USAID and the World Bank (WB).

Additional data for the 2016 report was submitted by Italy.

## 2. Exchange Rates

Exchange rates used for conversions into US Dollars are the averages of the respective currencies for 2016 as reported in publicly available African Development Bank Financial Information. (<http://www.afdb.org/en/documents/financial-information/exchange-rates>).

For ICA members the following exchange rates were used:

\$1 = 0.719142 AfDB Unit of Account (UA)

\$1 = 0.904251 Euro (€)

\$1 = 0.734345 British Pound (£)

\$1 = 1.326213 Canadian dollar (C\$)

\$1 = 14.797265 South African Rand (ZAR)

\$1 = 109.868187 Japanese Yen (¥)

## 3. Soft Infrastructure

Finance is allocated to soft infrastructure in many ways, thus making it hard to capture this type of funding in a granular way. For some ICA members, the distinction between hard and soft infrastructure is sometimes difficult to make and might therefore not be fully accurate. Also, the judgement of whether a part of the project is dedicated to, for example, capacity building or project preparation can sometimes be a challenge.

## 4. Project Specific Information

Information on projects completed in 2016 was provided by the AfDB, Canada, DBSA, the EIB, the EU-AITF, AFD, Germany, the IFC, and JICA.

Project-level information about commitments and disbursements in 2016 was available from the AfDB, Canada, CDC, DBSA, the EIB, the EU-AITF, AFD, Germany, Italy, the IFC and JICA.

## 5. Other Specific ICA Member Data Notes

### AfDB

Overall AfDB data consists of data gathered from the Power, Energy and Green Growth Complex (PEVP), the Private Sector, Infrastructure and Industrialisation Complex (PIVP) and the Agriculture, Human and Social Development Complex (AHVP) regarding Water & Sanitation. PEVP data reported includes African Development Bank Group (AfDB) own resources from the African

Development Fund (ADF) including the Transition Support Facility (TSF), the African Development Bank (AfDB), and the Nigeria Trust Fund (NTF). In addition it includes data from the Sustainable Energy Fund for Africa (SEFA). AHVP data includes the Africa Water Facility (AWF), which is hosted and administered by the department, the Rural Water Supply and Sanitation Initiative (RWSSI), and the Multi-Donor Water Partnership Programme (MDWPP).

### DBSA

DBSA data include South African operations and International Finance, including data from the Infrastructure Investment Programme for South Africa (IIPSA), the NEPAD Project Preparation Feasibility Study (PPFS) Fund, the SADC Project Preparation and Development Facility (PPDF) and the Tripartite Trust Account (TTA DfID).

### Canada

Canadian data are from Global Affairs Canada of the Government of Canada.

### EC

EC data consists of data from the European Development Fund (EDF, for Sub-Saharan Africa countries) and from the Development Co-operation Instrument (for North African countries). The EC also reports the contribution of the EDF to the EU-Africa Infrastructure Trust Fund (EU-AITF) and the Africa Investment Facility (AfIF) but this does not reflect projects approved and implemented with a contribution from the EU-AITF and/or AfIF since the loans are provided by other institutions and should be reported as such.

### France

French data were provided by AFD and consists of data from AFD, Proparco, and the Fonds Français pour l'Environnement Mondial (FFEM).



**Germany**

For 2016, German data were reported by KfW, GIZ, and DEG whereas in 2015 KfW and GIZ reported data and for 2014 only KfW data was available. In the 2013 report, data was provided by all three institutions.

**Italy**

Italian data were provided via the Cassa Depositi e Prestiti (CDP).

**Japan**

Japan reported data from Japan International Co-operation Agency (JICA).

**UK**

Data for the UK comprises DfID and CDC, the wholly-UK government owned DFI that manages capital provided entirely by DfID. CDC data is as reported by CDC to the International Aid Transparency Initiative.

**US**

US data were provided by USAID and, for the second year running, comprises information from the Power Africa interagency only.

**WBG**

Overall WBG data consists of data gathered from the WB and IFC. WB data comprises data from the

International Development Association (IDA), the International Bank for Reconstruction and Development (IBRD), as well as guarantees.

## 6. African National Government Budget Allocations

Data on national government spending were collected from 46 countries in 2016 compared with 44 the previous year. Data is drawn from budget statements and speeches, expenditure frameworks, or other official government documents.

The data reflect approved budget allocations for either the 2016 calendar year, or a country's budgetary year of which the majority falls within 2016. For the purposes of expediency as well as consistency, commitments made via approved budget allocations are captured rather than actual spending.

Wherever possible, only capital expenditure has been captured. In the case of 18 countries, recurrent expenditure and external budgetary support from multilaterals and bilaterals has been identified and excluded in order to avoid double counting of commitments made elsewhere in the report.

In order to continually improve the quality of the dataset used in the production of this report, the national

government allocations of previous years have been revisited to accommodate the publication of revised budgetary data, and to exclude recurrent expenditure and/or external budgetary support not previously identified. ■

### Restated Figures for African National Government Budget Allocations, 2015, \$m

	Transport	Water	Energy	ICT	Multi-sector	Unallocated	Total Commitments
North Africa	1,670	729	548	94	835	580	4,456
West Africa	1,165	400	323	108	239	61	2,295
Central Africa	1,023	407	399	109	11	-	1,949
East Africa	4,173	619	1,563	11	3	-	6,369
Southern Africa	1,894	893	1,665	236	14	329	5,030
RSA	3,024	498	320	12	-	-	3,855
<b>Total</b>	<b>12,949</b>	<b>3,546</b>	<b>4,817</b>	<b>570</b>	<b>1,101</b>	<b>970</b>	<b>23,953</b>

## Annex 2 – References

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