

THINGS
YOU SHOULD
KNOW ABOUT
INFRASTRUCTURE
IN AFRICA.

Things YOU should know about Infrastructure in AFRICA

INFRASTRUCTURE IN AFRICA – transport | water | energy

For the last twenty five years, Africa has enjoyed rapid economic growth. Across Africa, infrastructure (energy, water, transport and ICT) contributed 99 basis points to per capita economic growth from 1990-2005, compared with 68 basis points for other structural projects. This is almost entirely due to the phenomenal penetration of telecommunication services. However, at the same time the power infrastructure (access to reliable, quality energy & electricity) deteriorated – shaving 11 points from per capita growth for Africa as a whole and as much as 20 basis points for sub-Saharan Africa. Also, with the population explosion in Africa, the pressure on water resources is strained – so, while the impact of telecommunications and mobile connectivity has had a positive impact on Africa, the fact remains that **most Africans own a mobile telephone – but they do not have access to electricity or clean water.**

By almost every measure for infrastructure, African countries lag behind their peers in the developing world. This lag is most evident in Sub-Saharan Africa where electricity coverage, generation capacity, paved roads and main-line telephone density is extremely low – even compared to other low-middle income countries in the world.

Africa's infrastructure services are twice as expensive as elsewhere.

Power, water, road freight, mobile telephones and internet services cost more than almost any place in the world.

Power is, by far, Africa's biggest infrastructure challenge.

Whether measured in generation capacity or electricity consumption, Africa's power infrastructure delivers only a fraction of the services found in other parts of the world.

Meeting Africa's infrastructure needs requires a massive, sustained investment in power, transport, water and ICT services. **There is a large gap between current investments and the amount necessary to bring Africa's infrastructure to sustainable standards.** This is where the Infrastructure Consortium for Africa (ICA) plays a critical role. We are membership organization of G8, G20 and African Countries –as well as de-

velopment finance institutions and donor agencies. We function as a catalyst and advocate for increased funding for sustainable infrastructure projects in Africa. Our Secretariat is housed within the African Development Bank, where we work with a vast array of stakeholders – doing everything from developing project concept notes, to match-making, to training, to developing specific tools that will move ideas through the project preparation phase into bankable infrastructure projects.

We know these issues are not always photogenic. We also know how difficult it is to get accurate information. In the pages that follow, you will find specific facts about power, water and transport issues in Africa. These facts were generated with research and data from the ICA, The African Development Bank, The Programme for Infrastructure Development in Africa and the flagship AICD (Africa Infrastructure Country Diagnostic) report by World Bank – issued in 2010, as well as a variety of UN reports.

If you have any questions about the information in the pages that follow, please contact us at: www.icasecretariat.org. Also, if you would like to download current fact sheets on a specific sector or Africa infrastructure issue, please visit our website at: www.icafrica.org

ENERGY in africa



The household **electrification rate in Africa is 43%**
..... meaning more than **600 Million**
AFRICANS HAVE NO ELECTRICITY.

The continent of Africa is larger than China, India, The United States, Japan and most of Europe, but Africa **generates only 4%** of the worlds' electricity.



Per capita electricity consumption in Sub-Saharan Africa (excluding South Africa) averages only 124 kilowatt-hours a year, barely 1% of the consumption typical in high-income countries – or roughly enough electricity for every other African to have one single light bulb burning for six hours per day.

By 2050 the population of Africa is predicted to double **x2**
to at least **2.4 billion people.**

Power Demand in Africa will increase by **93% between today and 2035.**

Power is, by far, Africa's biggest infrastructure challenge.

Africa's energy generation capacity is woefully inadequate. The installed generation capacity of the whole of sub-Saharan Africa is 68GW -- less than Spain's -- and as much as one quarter of that 68 GW capacity is unavailable because of aging power plants and poor maintenance. Also the small scale of most national power systems and the widespread reliance on expensive oil-based power generation have kept power costs extremely high in Africa.

Only about one-fifth of the sub-Saharan population has access to any electricity at all. At current trends, less than **40%** OF AFRICAN COUNTRIES will reach universal access to electricity by 2050.

THE PROGRAMME FOR INFRASTRUCTURE DEVELOPMENT IN AFRICA (PIDA) has forecasted that between

2011-2040
ENERGY DEMAND IN **Africa** WILL GROW FROM **590 – 3,100 TWh.**

TO MEET THE ENERGY DEMAND IN AFRICA BY **2040: U.S. \$43 billion dollars** of annual capital investment is required. Of that \$43 billion dollars, U.S. \$5.4 billion dollars for regional interconnectors is required.

The current annual investment in Africa energy projects is less than \$5 billion dollars per year.



TRANSPORT in africa



ROADS



Roads are the main mode of transport in Africa - carrying at least

80% of goods and **90%** of passengers.

53% OF THE ROADS IN AFRICA ARE UN-PAVED; isolating people from basic education, health services, transport corridors, trade hubs and economic opportunities.

FOR 16 LANDLOCKED COUNTRIES IN AFRICA, the cost of trading is 50 times higher and the volumes of trade are 60% lower than in African coastal countries.

A typical road border point has two sets of identical controls on each side of the border.

<1/2 of Africa's rural population has access to an all-season road.

RAIL



IN TOTAL, THERE ARE ABOUT

84 thousand km of rail track in Africa.

THIS MEANS, ON AVERAGE THERE IS

30-50 km of rail track per million people in Africa.

IN EUROPE THERE IS ALMOST

1,000 km of rail track per million people.

Outdated infrastructure and limited maintenance of rail tracks in Africa have caused a significant reduction in usable tracks. .

The African rail system has the potential for expansion and, therefore could act as a catalyst for regional integration and, trade and economic development.

Most African exports are bulky primary commodities which could be transported more efficiently by rail than by road.

AIR | AVIATION



THE MOST SERIOUS PROBLEM FOR AFRICAN AVIATION IS **safety**.

IN **2012**, African airlines had **1 accident** FOR EVERY **270,000 flights**.
The global industry average was **1 accident** FOR EVERY **5 million flights**.

African airport infrastructure systems (air traffic control & runway management) are not on par with international standards.

Regulatory issues in many African countries restrict international airlines landing or route rights that are better-adapted to the market.

In most African countries domestic and inter-Continental markets are protected – leaving small, nonviable, state-owned operations to continue – particularly in Southern Africa.

Lack of competition keeps the cost of air travel in Africa very high.

By providing a quick link to export markets, air transport enables the trade of perishable exports such as cut flowers, vegetables, fruits, meat and fish, which are becoming increasingly important foreign-exchange earners for African countries.

Africa's infrastructure services are twice as expensive as elsewhere.

WATER in africa



water - An Economic Development Issue.....

OVER 40 BILLION work hours are lost each year in Africa due the time spent **fetching drinking water.**

Only 28% of Africa's' poorest countries have access to improved sanitation facilities.

Almost half of the Africans with no access to improved sanitation live on less than two dollars a day.

On average, inadequate **water** and sanitation costs Africa **5% of its GDP.**

In most African countries current investments in sanitation is **less than 0.1% of GDP.**

Rational mobilization of water resources is an essential condition for sustained economic prosperity in Africa. The challenges are significant at a national and regional level, particularly given the trans-boundary nature of African water resources such as Lake Victoria, The Congo, The Nile and other rivers that span several African countries

water - A Trans-Boundary Issue

ABOUT 80% of Africa's' available surface **water** is trans-boundary – meaning it shares a border with two or more different countries.

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AFRICA'S ECONOMIC EMERGENCE



DEMANDS THAT **water resources,** WHICH ARE MOST OFTEN TRANS-BOUNDARY IN NATURE, **are managed effectively through cross-border programmes.**

Additionally, with the dramatic impact climate change is having on water resources it is more important than ever to approach water resource management in a regional manner. The political will to improve water infrastructure in Africa is reflected in initiatives such as the Programme for Infrastructure Development in Africa (PIDA) and water resource-based organizations such as The Lake Victoria Basin Commission (LVBC). Groups such as these are defining specifically what kinds of projects and interventions are needed to overcome the consequences of high hydrological variability – aggravated by climate change.

This is where the Infrastructure Consortium for Africa (ICA) adds particular value. The ICA has expertise in developing concept notes and project designs. Also, the ICA has a strong and active membership who are dedicated to water programs in Africa. Our convening power has allowed us to facilitate workshops, meetings and donor conferences where complex water issues are addressed, projects are fine-tuned and financing is mobilized.

Most Africans own a mobile telephone – but they do not have access to electricity or clean water.

WATER in africa



water - A Climate Change Issue

Africa is expected to experience a significant rise in temperature of about **3-4°C BY THE END OF THE 21st Century.**

Africa has always had high hydro-climatic variability, but climate change is having a dramatic impact on water resources in Africa. For example, 40 years ago Lake Chad had over 15,000 square miles of water –it was roughly the size of the U.S. State of Maryland - bigger than Kuwait. Now there is less than 500 square miles of water in Lake Chad. Some say the lake could disappear completely in 20 years.

Lake Chad borders Nigeria, Chad, Cameroon and Niger. The drying up of this shallow lake is fueling conflict and migration to urban areas. This means the agriculture sector is suffering – which contributes to a food security crisis while the urban areas are becoming over-populated and energy grids are straining – so it is a viscous cycle.

Climate change is one of the reasons the shallow Lake Chad is drying up. Another factor is that Lake Chad had been the source for a poorly planned and climate insensitive hydro-electric project in the 1970's and 80's.

While efforts are being made to save Lake Chad, The ICA members are developing new requirements for making sure new infrastructure projects and programs (energy, transport, water and ICT) are climate sensitive. The ICA Water Platform is supporting the Global Water Partnership (GWP) in their efforts to implement the Water Climate and Development Program (WACDEP) of AMCOW (African Ministers Council on Water). The WACDEP was created to support the integration of water security and climate change adaptation into development planning processes and the design of financing and investment strategies. The ICA will assist in facilitating project preparation and resource mobilization for identified climate resilient projects in 8 countries and 4 Basins.



INFRASTRUCTURE CONSORTIUM FOR AFRICA.

Launched at the G8 Gleneagles Summit in 2005, the role of the Infrastructure Consortium for Africa (ICA) is to help improve the lives and economic well-being of Africa's people through encouraging, supporting and promoting increased investment in infrastructure in Africa, from both public and private sources. Using its convening power, ICA acts as a catalyst – enhancing, accelerating and precipitating the development of Africa's infrastructure.

ICA also works to help remove some of the technical and policy challenges and barriers to building more infrastructure and to better co-ordinate the activities of its members and other significant sources of infrastructure finance, such as China, India and Arab partners.

ICA is not a financing agency but acts as a platform to catalyse donor and private sector financing of infrastructure projects and programmes in Africa

ICA members include the G8, G20 countries, the World Bank Group, the African Development Bank Group, the European Commission, the European Investment Bank and the Development Bank of Southern Africa.

ICA is supported by a small secretariat that is hosted by the African Development Bank in Tunis, Tunisia. The secretariat is funded by voluntary contributions from ICA members and staffed by a combination of permanent staff from the African Development Bank, consultants and experts on secondment from ICA-member countries.

For more information about the ICA
please contact us at: icasecretariat@afdb.org
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