Africa's Opportunities under Clean Energy and Development Investment Framework

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Outline

- Gap analysis of AfDB activities
- Opportunities under CEDIF
- Conclusions

Energy access

Priority areas

- Scaled up programs of electrification especially in SSA
- Increase of generation capacity and development of transmission lines to serve newly connected households, enterprises and other users.
- Extension of energy services to key public facilities (schools, clinics)
- Provision of stand-alone lighting packages for households without electricity service.
- Diffusion of clean cooking, heating and lighting technologies

Sustainable economic growth

Priority areas

- The gap analysis highlights the sectors that could be prioritised

AfDB Sectors	Current AfDB engagement on climate change	GHG Emissions importance	Technological potential to reduce GHG emissions	Barriers to low carbon activities	*Priority to increase engagement on low carbon projects*
Agriculture					
Environment					
Human development					
Infrastructure					
Natural resources					
Power and Energy					
Private sector					
Transport					
Water					

Key -	Low	Medium	High

Adaptation to climate change

Priority areas

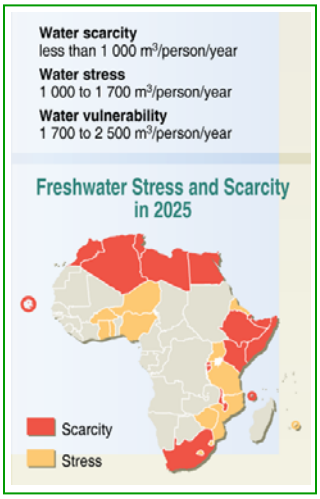
- The gap analysis reveals potential priorities for adaptation activities

AfDB Sectors	Current AfDB engagement on climate change	Climate vulnerability	Level of effort needed to adapt	Barriers to adaptation activities	*Priority to increase engagement on adaptation*
Agriculture					
Environment					
Human development					
Infrastructure					
Natural resources					
Power and Energy					
Private sector					
Transport					
Water					

Key -	Low	Medium	High

Climate change impacts

Stress on water resources

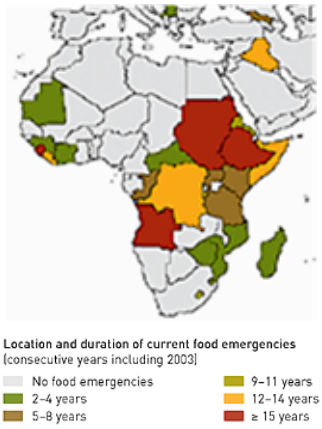


- Developing countries are highly dependent on water for their growth and development
- Many developing countries have low investment in irrigation systems, dams, and ground water and do not have enough water storage to manage demand
- Discharge reductions for the largest African water basins (Niger, Chad and Senegal) could be as high as 40 to 60%
- By 2050 the area experiencing water shortages in Sub-Saharan Africa will increase by 29%
- The number of African countries experiencing water stress will rise to 18 and affect 600 million people (WB)
- Due to the transboundary nature of many water basins, conflicts over water resources will be exacerbated

Source: UNECA

Climate change impacts

Agriculture and food security



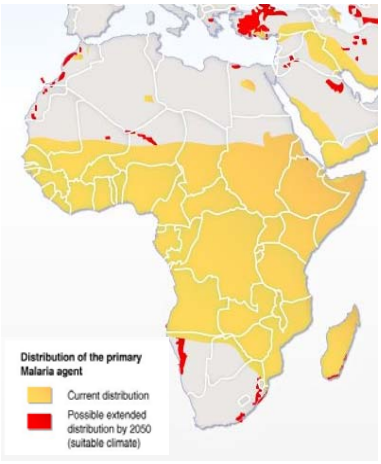
- Approximately 40% of the population of Sub-Saharan Africa (SSA) is undernourished
- Agriculture is a basis of African economy: it generates 1/3 of the GDP and employs 70% of the work-force in most countries
- Falling agricultural output and deteriorating conditions caused by climate change will directly increase poverty of households in poor countries
- SSA relies on rain-fed agriculture, climate change will intensify food insecurity for Central, Eastern and partially Western Africa
- Impact on the economy:
  - The IMF estimates costs of over 5% of GDP per large disaster on average in low-income countries between 1997 and 2001
  - Cereal deficits in SSA will grow from 9 to 35 Mt by the year 2025 and the countries will not be able to finance this level of imports

Source: FAO

Climate change impacts

Health

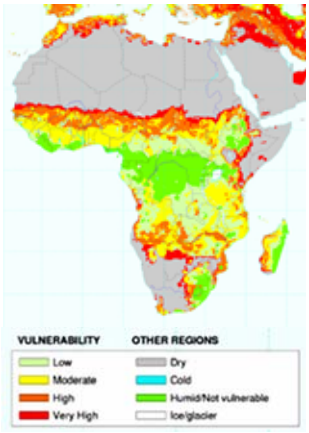
- Climate change will result in increases in occurrence and geography of vector-born diseases such as malaria, rift valley fever, cholera, meningitis
- if there is no change in malaria control, an additional 40 to 60 million people in Africa could be exposed to malaria with a 2°C rise in temperature
- More frequent floods and increased temperatures will be aggravating factors
- Areas with the existing poor water quality and sanitary conditions will be particularly vulnerable



Source: Roger Randolph - The Global spread of malaria in the future

Climate change impacts

Desertification



- Desertification has already affected 46% of the continent
- Climate change exacerbates desertification through changes in temperature and rainfall, insulation and winds
- Desertification reduces soil fertility, vegetation productivity, livestock yields, favors biodiversity loss
- Sahel, Northwestern Africa and western Madagascar are particularly vulnerable

Source: P.F. Reich, S.T. Numbem, R.A. Almaraz and H. Eswaran. 2001. Land resource stresses and desertification in Africa

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Energy access

Opportunities

- Existing policy and lending instruments are adequate to support energy access programs
- However, more funding and an evolution of way in which existing instruments are applied are needed. Main reforms include:
  - programmatic support and regional projects
  - effective use of capital subsidies to support scaling-up energy access programs
  - focused financing of electricity access for public facilities
  - support to the domestic private sector for the provision of energy services
  - increased support for sustainable wood fuel management
  - enhanced analytical support for policy reform and program preparation
- Substantial increases in grant and concessional funding will be required to achieve significant increases in energy access
- In terms of resource mobilization, carbon finance can be used when clean energies are considered and it can provide additional funding possibilities

Sustainable economic growth

Opportunities

- Integrating and mainstreaming clean energy in operational activities:
  - Agriculture and forestry: sustainable production, biomass supply and biofuels
  - Natural resources: emissions reductions in gas recovery projects and coal mining
  - Energy: screening tool to identify emission reduction potentials and mainstream the use of CDM as a provider of co-financing resources
- AfDB should consider creating a CDM facility to:
  - identify emission reduction opportunities in project portfolio
  - assist countries to build capacity, establish necessary institutions, set priorities
- Carbon finance options include: the proposed Clean Energy Financing Vehicle (CEFV), co-financing with BioCarbon Fund, and voluntary credits for:
  - Efficiency improvement in coal fired power stations, energy efficiency project, landfill gas to energy projects, and renewables: wind, biodiesel projects, solar energy, better use of wood resources

Adaptation to climate change

Opportunities

- Project climate proofing including adaptation screening should be completed at the project design stage
- Country climate risk profiles and NAPAs should guide decisions on investments
- Priority should be given to “no-regrets” measures and climate risk management should emerge from local communities consultations
- Available and potential sources of adaptation funding include: GEF, disaster relief, rehabilitation, and risk reduction financing, insurance/disaster pooling
- ADB should consider:
  - mainstreaming adaptation in lending operations and secure funding in project cycle
  - scaling up concessional lending for climate adaptation policy measures
  - using opportunities to leverage public-private partnerships
  - mobilising private sector capital through the use of risk mitigation products
  - introducing weather-related financial products

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Conclusions

- AfDB is uniquely placed to help countries in Africa manage the challenges presented by climate change
  - Pan-African financial institution that is owned by African member governments
  - Capacity to integrate climate change considerations into each sector of the economy
- CEDIF presents an opportunity for African countries to mainstream climate change by
  - technological leapfrogging
  - avoiding similar mistakes made by fast-growing countries in Asia or Latin America

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Origins of our perspectives

Highlights of Experience

- ICF International was founded in 1969 and has more than 18 years expertise advising governments and companies on climate change
- Market-leading expertise in emissions and energy; supported financial valuation of >100 GW in past 3 years
- Provided policy advice to >60 governments
- Providing carbon strategy advice to >55 companies in the FT Global 500
- Over 230 professionals globally with climate expertise out of total staff of 1,800

Challenges

- Different policy approaches being taken in different countries; many companies have assets in multiple regions
- Reducing emissions in a cost-effective manner is a major business and policy challenge
- Long-term adjustment to low-carbon technologies is required to achieve quantum reductions in emissions

Solutions

- ICF has pioneered innovative services for its clients to help assess risks and opportunities posed by carbon constraints
- Development of climate strategies aligned with key corporate drivers
- Helping companies assess their operations, products, and reputation value-at-stake under carbon constraints
- Identification of new climate-friendly products and services
- Design of projects to reduce emissions (CDM & JI) and due diligence of proposed projects

Since 28 September now on NASDAQ: ICFI