

INFORMATION BRIEF



Addressing the climate challenge: rational, approach and actions

Problem Definition

Africa: the most vulnerable continent

Africa is the continent most vulnerable to the effects of climate change due to the interrelation of economic, social, ecological, and political stresses. Its vulnerability is further compounded by the relatively low capacity of many countries across the continent to adapt to a changing climate. While climate change may bring benefits to some areas across the continent, overall these are outweighed by the range of possible negative impacts. In essence, the effects of climate change are likely to have serious implications for sustained economic growth, poverty reduction, human wellbeing and security.

Climate Change and Water

While climate change and variability will have a profound impact on sustaining economic growth and poverty reduction in general, it will have a particularly severe impact on the water sector. Africa's inherent natural fragility, water scarcity and low levels of water security make it particularly vulnerable to impacts of climate change. This is compounded by high population growth rates, dependency on rainfed agriculture, rapid urbanization, a lack of infrastructure, and complex governance regimes.

Current population trends and patterns of water use versus water availability show that an increasing number of African countries will exceed the limits of their economic usable, land-based water resources before 2025. Climate change will add both complexities and costs to addressing water sector challenges.

The risks of not addressing climate change are considerable. The population at risk of increased water stress in Africa is projected to be 75-250 million by the 2020s and 350-600 million by 2050. By 2025, water availability in nine countries (mainly in eastern and southern Africa) is projected to be less than 1,000 m³/capita/year. Twelve countries would be limited to 1,000-1,700 m³/capita/year.¹

Further risks closely associated with changes to the climatic and hydrological regime include a heightened threat to food security, degeneration of natural resources and agricultural productivity, diminishing biodiversity, increasing land deg-

radation, salinity intrusion, increasing desertification and coastal zone recession. Importantly, recent assessments have shown that the economic costs of climate change in Africa are likely to be significantly higher in relative terms than in other regions of the world.

The cost of climate change

A recent analysis by the African Development Bank (AfDB) indicated that the cost of both adaptation and putting the continent on a low carbon growth path was estimated to be between \$22 and \$31 billion per year by 2015, and about \$52 to \$68 billion by the year 2030. Climate proofing existing facilities will add 40% to the costs of meeting the MDGs in Africa.

80% of the total financing required to address Africa's climate change challenge will be needed for adaptation efforts, with most investments costs associated with the water sector and coastal protection. These costs comprise both the financing required to adapt to the current climate, necessary to spur accelerated development and provide social protection, and adaptation to anticipated future cli-

Impacts of climate change at a Glance:

- 20% more people may be at risk of hunger by 2050 due to the changing climate.
- Crop revenues could fall by as much as 90% by 2100, with small scale farmers being the most affected.
- Climate variability and extreme weather events including floods, droughts and cyclones could trigger infectious disease epidemics such as malaria, dengue fever and diarrhoea.

Source: AfDB 2011. The Cost of Adapting to Climate Change in Africa

mate change by addressing immediate priorities and capacity building as well as enhancing resilience, for future investments.

However, a recent assessment found that current levels of resources mobilization from dedicated climate finance instruments are well below financing requirements. Between 2004 and 2011, a total of \$350 million of adaptation funding was approved for Africa from dedicated climate finance instruments, of which approximately \$130 million has been disbursed. While this does not capture all climate change financing, it is apparent that actual disbursements are dwarfed by Africa's needs. It is therefore critical to mobilize additional resources to address both current development challenges and climate change in an integrated manner.

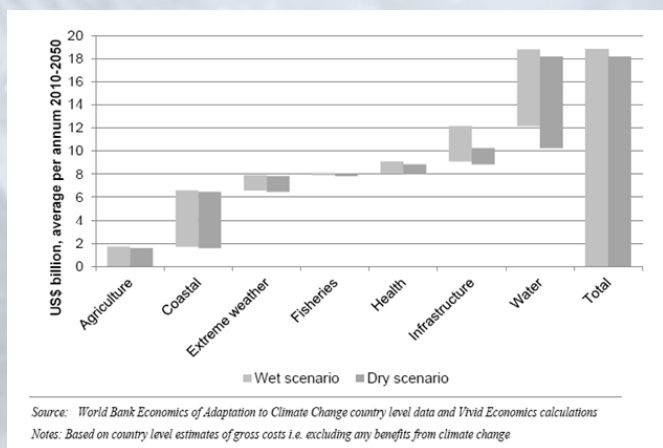
¹If the amount of renewable water in a country is below 1,700 m³ per person per year, that country is said to be experiencing water stress; below 1,000 m³ it is said to be experiencing water scarcity; and below 500 m³, absolute water scarcity. Falkenmark,



Addressing Climate Change: the AWF Approach

The African Water Facility has developed a Strategic Plan (2012-2016) to better address the principle constraints to progress in the water sector that have been identified by the African Ministers' Council on Water (AMCOW), namely (1) investments in infrastructure and institutions and (2) knowledge uptake. The new Strategic Plan sharply focuses on one overarching strategic objective of leveraging investments through three priorities: preparing projects, enhancing water governance and harnessing knowledge.

By embedding climate change adaptation directly into water investments, the AWF seeks to leverage financing that enables water and climate change adaptation and mitigation to be pursued in conjunction with key developmental challenges in the water sector. It further provides funding in support of cutting edge and innovative climate change approaches and initiatives, and facilitates the exchange of technology, know-how and innovative ideas in order to find appropriate solutions to the climate change challenges.



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Many AWF projects have a significant impact on climate change adaptation and mitigation. These include the preparation of climate change projects, development and implementation of integrated water resources management (IWRM) plans as a critical means to build adaptive capacity, and support to key sector stakeholders such as river basin authorities. AWF further supports the introduction of innovative technologies and approaches for water supply, sanitation, drainage, solid waste reuse, and improved agricultural water management to better cope with climate variability. It has helped to strengthen the information base on national and transboundary surface and groundwater resources as a basis for more informed decision-making regarding medium to long-term management plans and investments.

To improve climate resiliency, the AWF supports initiative across 5 areas of intervention, contributing to both adaptation and mitigation measures:

National Water Resources Management. AWF currently supports 9 IWRM projects and activities enabling countries to better quantify the impact of climate change and variability, and supports countries to factor climate change considerations into the water management and infrastructure investment decisions to achieve water security, and develop action

The AWF does not treat adaptation separate from development, but investments are designed and implemented with the understanding that both climate adaptation and water resources development consist of a suit of measures that address to various degrees both poverty alleviation and climate vulnerability. In fact, in many instances, socio-economic development and addressing urgent development challenges are a pre-requisite for a number of measures needed to address climate change impacts.

plans to mitigate and adapt to negative impacts. As part of its portfolio, the AWF also supports pilot adaptation projects in Kenya (ecosystem-based adaptation) and Morocco (recharge of aquifers).

Transboundary Water Resources Management. As most large African river basins cut across national boundaries, analyzing and understanding issues and constraints at the basin scale, and designing and implementing programs and strategies to cope with the impacts of climate change at a transboundary level, is of critical importance. Achieving water security in the face of climate uncertainties will require substantial financing, and improving transboundary water resources management arrangements is a critical factor to achieve an enabling environment which will create the confidence needed to attract addition resources. Currently, the AWF finances transboundary water resources management interventions in six regional transboundary water management projects (Congo, Volta, Kayanga-Geba, Lake Chad, The Bugesera area of Burundi and Rwanda, and the Economic Community of Central African States region) and four regional program preparation projects.

Water Resources Information Management.

Data, information and knowledge are necessary for establishing climate change impacts, as well as for planning and designing adaptation measures. Providing support to the development of information management systems to be used for the elaboration of national and regional plans, programs and project designs, and for generating data for M&E activities for decision-making, is a significant focus of the AWF, with six regional projects (the Congo, Nile and Volta river basins; the North-Western Sahara, Iullemeden and Taoudeni aquifer systems; and the Intergovernmental Authority on Development subregion) and four national projects (Ethiopia, Mali, Togo and Tunisia).

Water Supply and Sanitation.

Building resilience of water supply and sanitation to climate change impacts requires more resilient infrastructure as well as climate-responsive

planning, management and governance of supply options. Many AWF projects address these issues through pilot investments aimed at promoting mitigation and adaptation technologies such as the use of renewable energies for water pumping (Ethiopia); the recovery and reuse of methane emissions from sewerage treatment plants (Ghana); and the adoption of water conservation and efficiency measures

The gap between estimated financing requirements and actual allocation of resources highlights the pressing need to mobilize additional resources to address the continent's financial requirements to deal with climate change impacts, reducing vulnerabilities and spurring climate resilient development.

(Seychelles); as well as the strengthening of local capacities to widely adopt and scale up these types of interventions. In addition, projects aimed at preparing long-term programs and master plans include activities aimed at planning for adaptation to climate change impacts.

United Nations Framework Convention on Climate Change (UNFCCC) recognises AWF sanitation project in Liberia

The fostering Innovative Sanitation and Hygiene (FISH) in Monrovia Project, funded by the AWF, was the first initiative by the government of Liberia to provide fecal sludge management services to unsewered poor areas of Liberia since the end of the civil war in 2003, reducing greenhouse gas emissions while providing new or improved access to sanitation for 800,000 people.

In November 2013, The UNFCCC selected the FISH project as one of the 17 Lighthouse Activities showcased at the November 2013 UN Climate Change Conference. Lighthouse Activities projects are selected based on their innovative and transformative qualities, and are recognized for the value of the solutions proposed to address both climate change and wider economic, social and environmental challenges.

Water for Agriculture. AWF's projects support the improvement of agricultural and land management practices in order to strengthen both productivity and resilience to climate change. On-going projects include improving the control and management of on-farm water resources (Botswana), watershed protection (Kenya) and the piloting of more productive agriculture water technologies, such as the use of rainwater harvesting for multipurpose uses (Djibouti and Rwanda). Many projects are also help small-scale farmers adapt to climate change and ensure sustained agriculture-based livelihoods (Zambia and South Africa).

The Way Forward

Since its inception, the AWF has mobilized pledged financing of €935.3 million and committed financing totalling €526.3 million. Follow-on projects are being co-financed by a wide variety of partners including African Governments, the African Development Bank, the World Bank, BADEA, and AFD through investment funds and budgetary allocations. As many project preparation initiatives funded by AWF are now well advanced, it is expected that AWF would leverage \$2.5 billion worth of follow-on investments by the end of the current strategic plan (2016). These investments would have a considerable positive impact both in terms of addressing climate variability and change needs in Africa. Recognizing the particular impacts from climate change on the water sector, and to achieve the target for mobilizing funds, the AWF aims to support the development of climate change projects and ramp up its support to leveraging access to dedicated climate-finance instruments for RMCs.

Having gained considerable operational experience from implementing projects addressing water and climate issues, AWF will provide a platform for information and knowledge sharing and facilitate the exchange of experiences across sector professionals across the continent. To ensure all lessons are capture, AWF will conduct a



comprehensive review of the AWF's portfolio and disseminate water knowledge. findings to key African stakeholders, including RMCs and AMCOW. This would contribute directly to achieving the three strategic priorities of the AWF: (1) preparing investment projects, (2) improving water governance, and (3) promoting

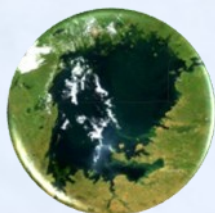
Addressing Climate Change

AWF climate change interventions address both current development challenges in the sector, while aligning with mitigation and adaptation measures

Preparing Projects

Enhancing Water Governance

Harnessing Knowledge



Transboundary Water Resources Management



National Water Resources Management



Water Resources Information Management



Water Supply and Sanitation



Water for Agriculture



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