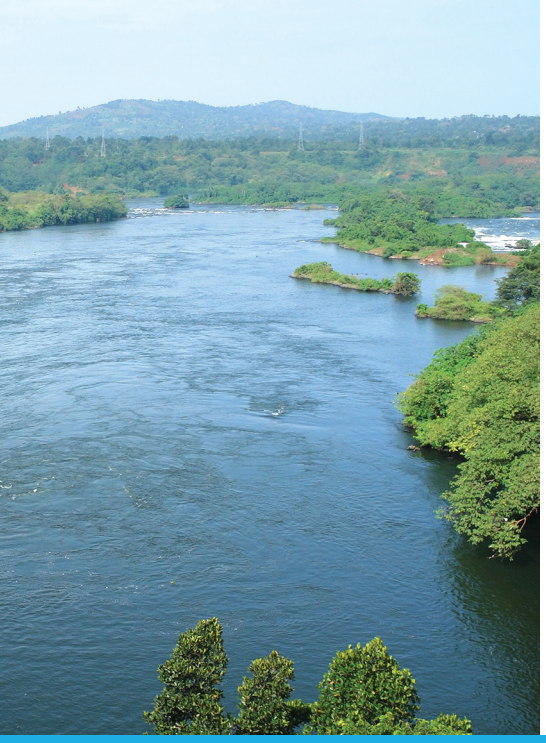

Investing in water security
for climate resilient growth and development

Summary – Strategic Framework for Water Security and Climate Resilient Development

Key messages:

- Water is at the heart of economic growth and development yet most African countries are far from achieving water security, and the onset of climate change will further compromise prospects.
- Ensuring water security through more effective water management contributes to development goals, climate change adaptation and disaster risk reduction – both now and into the future.
- The economic cost of inaction and investments derailed by water and climate impacts could be very high.
- A Framework for Water Security and Climate Resilient Development has been developed by the African Union and African Ministers' Council on Water (AMCOW).
- The Framework supports the implementation of commitments expressed by African heads of state and governments in the 2008 Sharm el-Sheikh Declaration on water and sanitation.
- The Framework is not a completely new process rather it strengthens and refines existing processes to build climate resilience into growth and development.

Water is a key input to economic growth sectors and contributes to employment, job creation and gross domestic product (GDP). Water is at the heart of development objectives across most sectors – for example health, energy, agriculture, environment, mining, industry and social protection. Yet, most African countries are far from achieving water security and the onset of climate change will further compromise prospects. Ensuring water security through more effective water management contributes to development goals, climate change adaptation and disaster risk reduction.

Why water security and climate resilient development?

The competitiveness of countries is increased by improvements in water security. "*Africa's weak capacity to buffer the effects of hydrological variability and unpredictability in rainfall and runoff can encourage risk-averse behaviour at all levels of the economy. It discourages investment in land, advanced technologies, or agriculture. An unreliable water supply is also a significant disincentive to investments in industry and services.*"[1] Water security, or rather the lack of it, is therefore seen as an economic and developmental risk as well as a business risk.

Climate change threatens the continent's water security – with predicted impacts on water resources and increases in the severity of natural disasters, including floods and droughts. It seems very likely that temperatures will increase throughout Africa, and at a higher rate than the global average. Rainfall patterns will change, with some regions seeing increasing rainfall and others decreasing rainfall; with storms, heavy rainfall and heatwaves also likely to become more intense. With many coastal cities making up the major urban centres, the predicted on-set of sea-level rise will increase vulnerability to flood and other climate induced risks.

The International Monetary Fund (IMF)[2] has warned that deteriorating climatic conditions could lower GDP growth due to reductions in output and productivity, particularly in the least developed countries (LDCs) and in sectors such as agriculture, fisheries, tourism and others that depend heavily on water.

1 Foster V. and Briceño-Garmendia C. 2010. *Africa's Infrastructure; a Time for Transformation.* World Bank, p. 272.
2 IMF Factsheet. September 2011. *Climate Change and the IMF.* Available at: http://www.imf.org/external/np/exr/facts/enviro.htm

Drought in sub-Saharan Africa is a dominant climate risk. It destroys economic livelihoods and farmers' food sources and has a major negative effect on GDP growth in one-third of the countries in the region[3]. Floods are also highly destructive to infrastructure and transportation, and hence to flows of goods and services. They contaminate water supplies and increase the risk of epidemics of waterborne diseases such as cholera[4]. In Kenya, the 1997–98 floods caused a drop of 11% of GDP, and the drought of 1999–2000 a further drop of 16% of GDP[5]. Average annual GDP growth rates in Ethiopia have been shown to fall by as much as 38% as a consequence of climate variability.

Such experiences provide a sober warning of what could be in store in future with the climatic changes that increasingly seem likely. For many countries, climate change implies the worsening of already familiar climatic fluctuations, with the addition of new threats and risks.

What can be done to enhance water security and climate resilient development?

To sustain jobs, employment, economic growth and social stability, African leaders of today and tomorrow must make investment decisions that promote water security and climate resilient growth and development. These investments are needed to manage both existing climate variability, and its impacts on productive sectors, as well as preparing to adapt to longer-term changes in climate that may alter the availability of water.

Managing current and future climate risks demands a balanced portfolio of measures. These include short-term investments for immediate implementation as well as longer-term measures as changes in climate become more evident. Strategies, plans and investments that promote sound water resources management are a cost-effective way of delivering immediate development benefits while building resilience to longer term climate change.

Adapting to climate change will benefit from the prioritisation of investments that perform well under a full range of climate scenarios. These investments are referred to as no/low regret investments and are a key recommendation of the IPCC on climate risk management[6] (see Box 1). Fast-tracking these investments allows action to be taken now to manage both current and future climate risks, despite uncertainties in the future climate.

Potential no/low-regrets measures would ensure that economically productive investments are more robust; for example, for water supply, sanitation, irrigation and drainage systems, and flood protection among others. Such measures might include climate-proofing of infrastructure; changes to design parameters; revisions to building codes; education and awareness campaigns; early warning systems; improved communication between decision-makers and local citizens; watershed management; land use planning; and ecosystem management and restoration.

Box 1
Characterisation of investments

Investments can be characterised by their sensitivity to climate change:

- **No/low regret** programmes are not affected by climate change or will give acceptable returns whichever climate change scenario materialises.
- **Climate change justified** programmes do not give acceptable returns unless some degree of climate change materialises.
- **Climate change risky** programmes give good returns without taking climate change into account, but give low returns if climate change materialises.

3 WWAP (World Water Assessment Programme). 2012. *The United Nations World Water Development Report 4: Managing Water Under Uncertainty and Risk. Overview of Key Messages.* UNESCO, Paris, France.
4 *Ibid.*
5 Lenton, R. and Muller, M. (eds). 2009. *IWRM in practice.* GWP, Earthscan, UK.
6 IPCC. 2012. *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation.* A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change [Field, C.B., Barros, V., Stocker, T.F., Qin, D., Dokken, D.J., Ebi, K.L., Mastrandrea, M.D., Mach, K.J., Plattner, G.-K., Allen, S.K., Tignor, M. and Midgley, P.M. (eds)]. Cambridge University Press, Cambridge, UK and New York, NY, USA.

A Framework for Water Security and Climate Resilient Development

Aims and objectives

The African Union (AU), through the African Ministers' Council on Water (AMCOW), has developed a Framework for Water Security and Climate Resilient Development. The Framework is a tool to help users to identify and develop no/low regrets investment strategies, to integrate these into planning processes, and to influence future development activities so they become more resilient to climate change and variability. The Framework builds on the work done by many countries since 2002 on Integrated Water Resources Management (IWRM) plans. It also helps to identify financing strategies for investments, exploiting new funds offering finance for climate adaptation in combination with funding from conventional sources.

Target users

Water security and climate resilience has to be built at all levels – from transboundary to national and sub-national. The Framework supports senior professionals and decision makers responsible for making investment decisions, or who may be influential in development planning, budgeting and investment.

The Framework is relevant to a wide range of water resource-dependent sectors – drinking water supply and sanitation, agriculture, energy, environment, health, tourism, industry, mining and others. It is also relevant to donors, IFIs and other development cooperation advisors and specialists.

The Framework

The Framework is centred on an iterative, cyclical decision-making process split into four Phases (see Figure 1). The generic nature of the cycle provides flexibility to apply the Framework at a range of planning levels, and to accommodate the wide range of institutional contexts across Africa. This is not a completely new process rather it strengthens and refines existing processes to build climate resilience into growth and development.

Phase 1 – Understand the problem

The aim of Phase 1 is to produce a case for investing in water security for climate resilient development, to identify stakeholders along with their roles in subsequent stages, and to identify studies and evidence for review in Phase 2.

Phase 2 – Identify and appraise options

The aim of Phase 2 is to identify and develop a balanced portfolio of investment options that enhance water security for climate resilient growth and development, to prioritise no/low regret options and to make a clear economic case for investment.

Phase 3 – Deliver solutions

The aim of Phase 3 is to take the balanced portfolio of no/low regret investment options and integrate these into existing development planning systems and project implementation pipelines. The aim is not to start a completely new planning process. In addition, financing strategies for these investments are developed. Mainstreaming climate resilience in development planning processes is recommended as a longer-term measure.

Phase 4 – Monitor and move forward

The aim of Phase 4 is to review the application of the Framework process, to capitalise on new skills and improve future iterations. Setting up a system for monitoring progress of the implementation of investments is recommended.

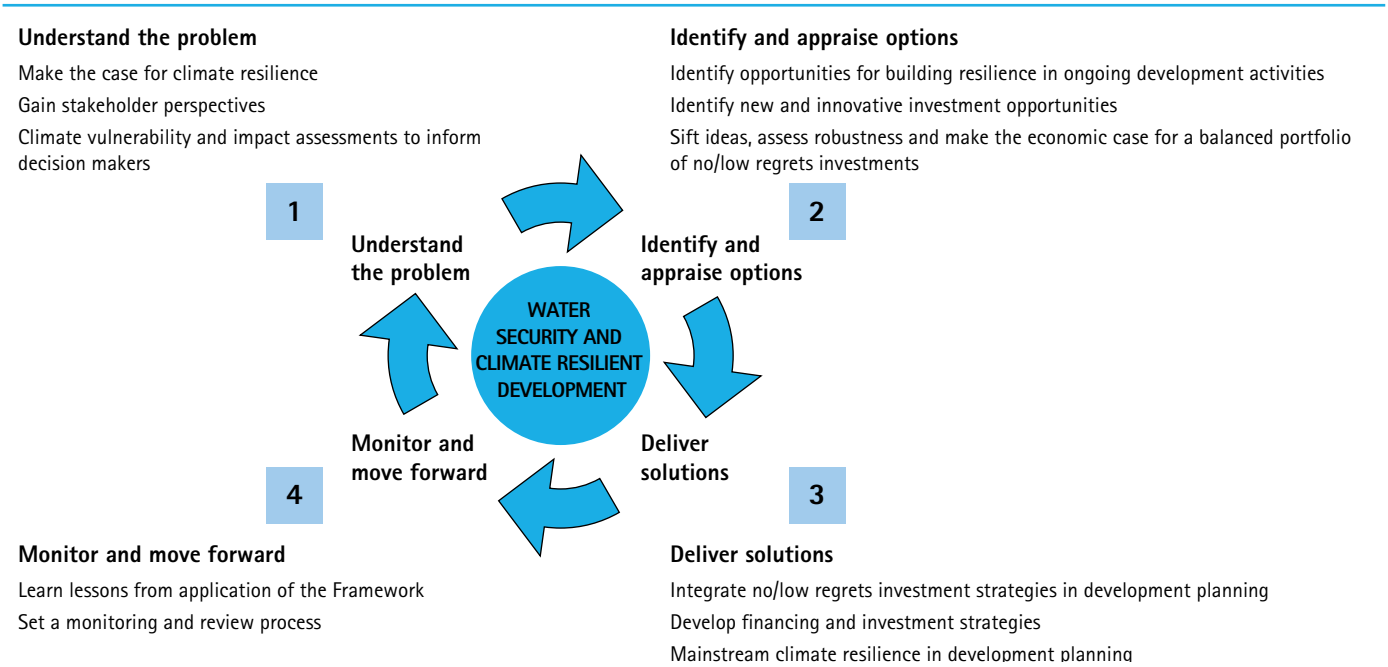

Figure 1. The Framework cycle.

Application of the Framework will support users to:

- identify and develop no/low regret investments, and associated financing strategies, aligned with national development goals and priorities across a wide range of sectoral and sub-sectoral interests;
- ensure measures and investments take into account current IWRM plans and future climate risks and conditions, socio-economic development pathways, and water use trends;
- promote practical, robust decision-making to ensure investments deliver benefits across a wide range of possible climatic and socio-economic futures;
- reinforce development pathways that are firmly grounded in sustainable development, and that facilitate transitions toward the greening of economies;
- increase investment in water security and climate resilience by drawing on a variety of domestic and international financing sources.

Recommendations

Governments should protect their development goals and ambitions against derailment by water and climate impacts. High-level advisors and decision makers are encouraged to increase the priority of water security and climate resilient growth and development. They are further encouraged to benefit from, and mandate the use of, the Framework in support of the following objectives:

- **To identify and develop no/low regrets investments, and to prioritise these in existing development planning, budgeting and financing processes.**
- **To influence existing and future development planning activities so they become more resilient to climate change and variability.**
- **To increase domestic and external investment in water security and climate resilient development.**
- **To identify innovative financing strategies for investments, exploiting opportunities from funds offering finance for climate adaptation in combination with conventional sources.**

Key references

Foster, V. and Briceño-Garmendia, C. (eds). 2010. *Africa's Infrastructure: A Time for Transformation*. World Bank, for the African Infrastructure Country Diagnostic (AICD).

African Development Bank. 2011. *The Cost of Adaptation to Climate Change in Africa.*

EU Water Initiative Finance Working Group. 2010. *Strategic Financial Planning for Water Supply and Sanitation in Africa*. May 2010. Available at: www.euwi.net/wg/finance

Recommended further reading:

Full details of the Framework and its application are available in the following documents:

GWP/AMCOW. 2012. *Water Security and Climate Resilient Development: Strategic Framework*. GWP, Stockholm, Sweden.

GWP/AMCOW. 2012. *Water Security and Climate Resilient Development: Technical Background Document*. GWP, Stockholm, Sweden.

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