

Adaptation to Climate Change Induced Water Stress in the Nile Basin

Summary for Decision Makers



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Acronyms

AU	African Union
AMCOW	Africa Ministerial Council on Water
AWW	Africa Water Week
СВО	Community Based Organization
CCA	Climate Change Adaptation
CIWA	Cooperation in International Waters
CMP	Catchment Management Plan
СМО	Community Management Officer
COMESA	Common Market for Eastern & Southern Africa
CWP	Country Water Partnerships
DGD	Directorate General Development
DEWA	Division of Early Warning & Assessments
DHI	(Formerly Danish Hydraulic Institute)
DRC	Democratic Republic of Congo
DSS	Decision Support System
DWRM	Department of Water Resource Management
EBA	Ecosystem-Based Adaptation
EAC	East African Community
ENTRO	Eastern Nile Technical Regional Office
ESMG	Environmental & Social Management Guidelines
ESP	Environment & Social Management Policy
FAO	Food & Agricultural Organisation of the United Nations

GCM	General Circulation Model		
GDP	Gross Domestic Product		
GIS	Geographical Information Systems		
GWP	Global Water Partnership		
IGAD	Inter Governmental Authority on Development		
ILRI	International Livestock Research Institute		
IPCCC	Inter-governmental Panel on Climate Change		
IWMI	International Water Management Institute		
IWRM	Integrated Water Resource Management		
LVBC	Lake Victoria Basin Commission		
NAP	National Adaptation Plans		
Nile COM Nile Council of Ministers			
Nile TAC	Nile Technical Advisory Committee		
NRM	Natural Resource Management		
PPE	Perturbed Physics Ensemble		
RCM	Regional Climate Model		
R&D	Research & Development		
SAP	Subsidiary Action Programme		
SWC	Soil & Water Conservation		
SIDA	Swedish International Development Agency		
UNEP	United Nations Environment Programme		
UNFCCC	United Nations Framework Convention on Climate Change		



Key messages for decision makers

- Countries in the Nile River Basin need to adapt to climate change in water management without delay.
- When planning adaptation across boundaries, riparian countries should focus on preventing transboundary impacts, sharing benefits and risks in an equitable and reasonable manner and cooperating on the basis of equality and reciprocity.
- Adaptation measures should strive to be cost-effective, environmentally sustainable, culturally compatible and socially acceptable. Prioritization of measures should be based on the results of vulnerability assessments, costs and benefits assessments, as well as on development objectives, stakeholder considerations and available resources.
- Ensuring that data and information are readily available is crucial for making climate projections and identifying vulnerable groups and regions. So sharing information, including that from early warning systems, between countries and sectors is essential for effective and efficient climate change adaptation.
- The process of developing and implementing adaptation measures should build on learning-by-doing.



Source: NBI Eastern Africa report on review of national climate resilience frameworks of the Nile Basin countries, 2013

Executive summary

In the Nile Basin region, increases in population, poverty, degradation of freshwater ecosystems and competing demands for shrinking natural resources coupled with climate variability and uncertainty have resulted into widespread impacts on human livelihood and survival. Water is one of several current and future critical issues facing Africa and the Nile Basin in particular. Water supplies from rivers, lakes and rainfall are characterized by their unequal natural geographical distribution, accessibility and unsustainable use. Climate variability is likely to impose additional stress on water resources in the Nile Basin region through increased evaporation losses due to rising temperatures; increased precipitation in some areas hence extreme flooding events; and reduction in precipitation in other areas leading to severe drought and low flow conditions during dry seasons. Additional challenges include, lack of sufficient institutional capacity and networking, inadequate climate variability monitoring and response mechanisms, lack of communication between science and policy communities, and inadequate technical capacity that is needed to cope with climate change related impacts.

About 238 million people inhabit the Nile basin area and this number is expected to double by 2025 (NBI, 2012). This rapidly growing population is the main driver behind the ever-increasing demand for water and is the chief factor that is responsible for land degradation and environmental pollution. Natural resource dependency by communities, particularly in water is likely to present potentially severe problems for the region in adapting to the challenges of climate change. Unless riparian countries understand these complexities, they cannot provide evidence-based solutions to address new problems, let alone the recurrent crises (water, food, energy) that affect and are affected by the way in which scarce and vulnerable water resources are managed. This situation challenges science to provide a basis for awareness and informed decision-making by practitioners and policy-makers at all levels, from the community to the regional level, in a way that takes into account the risks involved in decision-making under increasing uncertainty.

Although climate change has a fundamental role for water management, reforms in the water sector in the Nile Basin region often have very weak links to climate. Vulnerable sectors to impacts of climate change in the Nile region were identified as agriculture, water, energy and ecosystems and the identification of needs for adaptation to climate change is likely to include



satisfying access to water¹. Not all countries in the Nile Basin have a water policy, let-alone a comprehensive water policy. An analysis of the existing policy and legal framework in the eleven (11) riparian countries revealed that most do not have any policies or laws that deal directly and explicitly with climate change issues². Only seven of the eleven Nile Basin countries have existing National Adaptation Programmes of Action (NAPAs) and National Communications (NCs) respectively and are therefore committed to having

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