

# Hydropolitical Vulnerability and Resilience along International Waters

## AFRICA





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## ACRONYMS

ADF	African Development Fund	NBI	Niger Basin Initiative
AIDS	Acquired Immune Deficiency Syndrome	NBA	Nile Basin Authority
AMCOW	African Ministers' Council on Water	NSC	North-South Carrier
CIDA	Canadian International Development Agency	OKACOM	Permanent Okavango River Basin Water Commission
CGIAR	Consultative Group on International Agricultural Research	OMVS	Organisation pour la Mise en Valeur du Bassin du Fleuve Senegal
DGIS	Directoraat Generaal Internationale Samenwerking/the Netherlands Ministry for International Affairs	ORASECOM	Orange-Senqu River Commission
DNA	Mozambican National Department of Water Affairs	PCà CP	From Potential Conflict to Co-Operation Potential
ENWC	Eastern National Water Carrier	RAMSAR	The Ramsar Convention on Wetlands (1971)
EU	European Union	RBO	River Basin Organization
EU WI	European Union Water Initiative	RBC	River Basin Commission
FAO	Food and Agriculture Organization of the United Nations	SADC	Southern African Development Community
GCC	Global Climate Change	SARCCUS	Southern African Regional Commission for the Conservation and Utilisation of the Soil
GDP	Gross Domestic Product	SIDA	Swedish International Development Cooperation Agency
GEF	Global Environmental Fund	STI	Sexually Transmitted Infection
GEF IW	Global Environmental Fund - International Waters	TPTC	Tripartite Permanent Technical Committee
HADCM3	Hadley Centre's Third Generation Coupled Ocean-Atmosphere Global Climate Model	UN	United Nations
HIV	Human Immunodeficiency Virus	UNDP	United Nations Development Programme
IBT	Inter-Basin Transfers	UNEP	United Nations Environment Programme
IPCC	Intergovernmental Panel on Climate Change	UN – Water/Africa	Interagency Group for Water in Africa (formerly IGWA)
IUCN	The World Conservation Union	USAID	United States Agency for International Development
IWRM	Integrated Water Resources Management	WARAP – IWRM	West African Regional Action Plan for Integrated Water Resources Management
JPCC	Joint Permanent Commission for Cooperation	WB	World Bank
JPTC	Joint Permanent Technical Committee	WSSD	World Summit on Sustainable Development
JULBS	Joint Upper Limpopo Basin Study	WWF	World Wildlife Fund /World Wide Fund for Nature
KOBWA	Komati Basin Water Authority	ZACPLAN	Action Plan for the Zambezi River Basin
LBPTC	Limpopo Basin Permanent Technical Committee	ZACPRO	Zambezi River Action Project
LWC	Limpopo Watercourse Commission		
MAR	Mean Annual Runoff		



# PREFACE

Wherever a major river, lake, or aquifer system is shared by two or more sovereign nations, the shared (international) waters become vulnerable to indiscriminate exploitation and degradation. In a situation of rising populations and increasing urbanization, industrialization, and environmental degradation, nations sharing the water resources also become vulnerable to conflict. These vulnerabilities are made more acute by climate variations and variations in precipitation. Yet, historical evidence from around the world has also shown that faced with rising water scarcity for multiple societal and environmental needs, and recognising the vulnerability of their shared water resources, nations are compelled, often reluctantly, to seek cooperative and resilient ways to develop, manage, and use their shared water resources. This hydro-political vulnerability and resilience along international waters is a subject area that has increasingly become a critical arena of systematic enquiry requiring the development of comparable databases and analyses among the different regions of the world.

Africa is unique among the developing world-regions in that all major rivers and freshwater lakes and aquifers on the continent are shared by two or more countries, and each country in the continent shares one or more freshwater bodies with its neighbours, sometimes hostile neighbours. The diversity of political, social, and economic structures and organizations among the African countries, and the highly varied spatial and temporal precipitation and distribution of water in the continent, make the hydro-political climate in Africa very complex and vulnerable. Colonial legacies of arbitrarily demarcated national borders, leading to ethnically divided and contested living spaces and natural resources, add further to the hydro-political vulnerability in Africa. Often, a lack of scientific assessments of vulnerabilities, weaknesses in the governance structures, and absence of the required technical, human, and financial resources exacerbate the vulnerabilities along international waters. Currently, with only 64% of Africa's population having access to improved water supply, with the coverage being as low as 50% in the rural areas, the region has the lowest proportional coverage of any region of the world.

At the same time, Africa has the privilege of being the leading developing-world continent where multiple region-wide and sub-regional entities now exist that work in coordination to guide and support the efforts of nations to seek and develop cooperative ways of developing, managing, and sharing the multiple-use potential of their shared water resources. Multiple efforts by such entities as the African Union (AU), New Partnership for Africa's Development (NEPAD) and the African Minister's Council on Water (AMCOW), as well as many other regional, sub-regional and local bodies, often supported by the international community, have been and are continuing to ensure that bilateral and multilateral water-related agreements are developed, ratified, and implemented in all the shared water basins in Africa. This hydro-political resilience along the international waters in Africa needs to be highlighted and systematically presented to support informed policy-making and promote emulations of similar efforts in other regions globally.

Guided by the targets for safe water supply and improved sanitation (MDG 7 and Target 10) set by the Millennium Summit and the World Summit on Sustainable Development, UNEP's present and future commitments and activities relating to freshwater are embodied in the UNEP Water Policy and Strategy, including the work on transboundary water resources, and it comprises three main components: assessment, management, and coordination. This report, the first in a series of assessment reports on hydro-political vulnerability and resilience along international waters in different geographic regions of the world, presents a comprehensive assessment of the hydro-political vulnerability of Africa's international waters. It also presents concrete and comprehensive data on the cooperative agreements, in-place and being developed, in the major water basins in the continent to deal with the hydro-political vulnerabilities and to develop sustainable resilience and informed policies at the regional, sub-regional, and national levels.



A handwritten signature in black ink, appearing to read 'Klaus Toepfer', with a long horizontal stroke extending to the right.

KLAUS TOEPFER

United Nations Under-Secretary General  
and Executive Director, United Nations Environment Programme

# FOREWORD

At a meeting in Abuja, Nigeria in April 2002, the African Ministers' responsible for water adopted the "Abuja Ministerial Declaration on Water — a key to sustainable development in Africa." The declaration marked the launching of the African Ministers' Council on Water (AMCOW), a major step forward in forging region-wide collective action for sustainable development in the continent. AMCOW's mission is to provide political leadership, policy direction and advocacy for the protection, management, and wise utilization of all of Africa's water resources for sustainable social, economic, and environmental development, and for the maintenance of the integrity of Africa's ecosystems in furtherance of the vision and goals of the African Union (AU) and the New Partnership for Africa's Development (NEPAD).

Under the auspices of AMCOW, the Pan-African Implementation and Partnership Conference (Addis Ababa, 8-12 December 2003) aimed to address the implications of the outcomes of the World Summit on Sustainable Development on regional water initiatives, as well as the region's role in the implementation of the Summit's outcomes. Most importantly, the conference provided a platform for all African countries, the international community, UN agencies and development cooperation partners to reaffirm their commitment to solve Africa's water crises. Since the conference, renewed and concerted region-wide efforts have been directed at meeting the water policy challenges identified by the African countries themselves. These include:

- A higher level of political commitment expressed through appropriate policies and instruments;
- Greater attention being paid to improving and expanding the knowledge base on water resources, protecting ecosystems, providing equitable sharing of water among competing sectors; and
- Taking stock of the hydropolitical vulnerabilities and resilience along the region's international waters.

It is in this context that I, as President of AMCOW, welcome this new publication, *Hydropolitical Vulnerability and Resilience along International Waters: Africa*, being released by the United Nations Environment Programme (UNEP) as part of its contribution to the observance of the International Decade for Action: Water for Life. The close collaboration between AMCOW, UN agencies, particularly UN Water: Africa, of which UNEP is an active member, and the international community has already generated increased awareness of the vulnerabilities affecting our continent's shared water resources, as well as the resilience clearly demonstrated by collective action at all levels — national, sub-regional, and regional — to confront the challenges. This publication, the first in a series on the water-related vulnerabilities and resilience in the developing and developed world regions, should inspire the needed intergovernmental dialogues and collective actions to halt and reverse the water crises facing our world.

MRS. MARIA MUTAGAMBA

President, African Ministers' Council on Water (AMCOW)  
and Minister of State for Water Resources, Uganda



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