NILE BASIN INITIATIVE
INITIATIVE DU BASSIN DU NIL

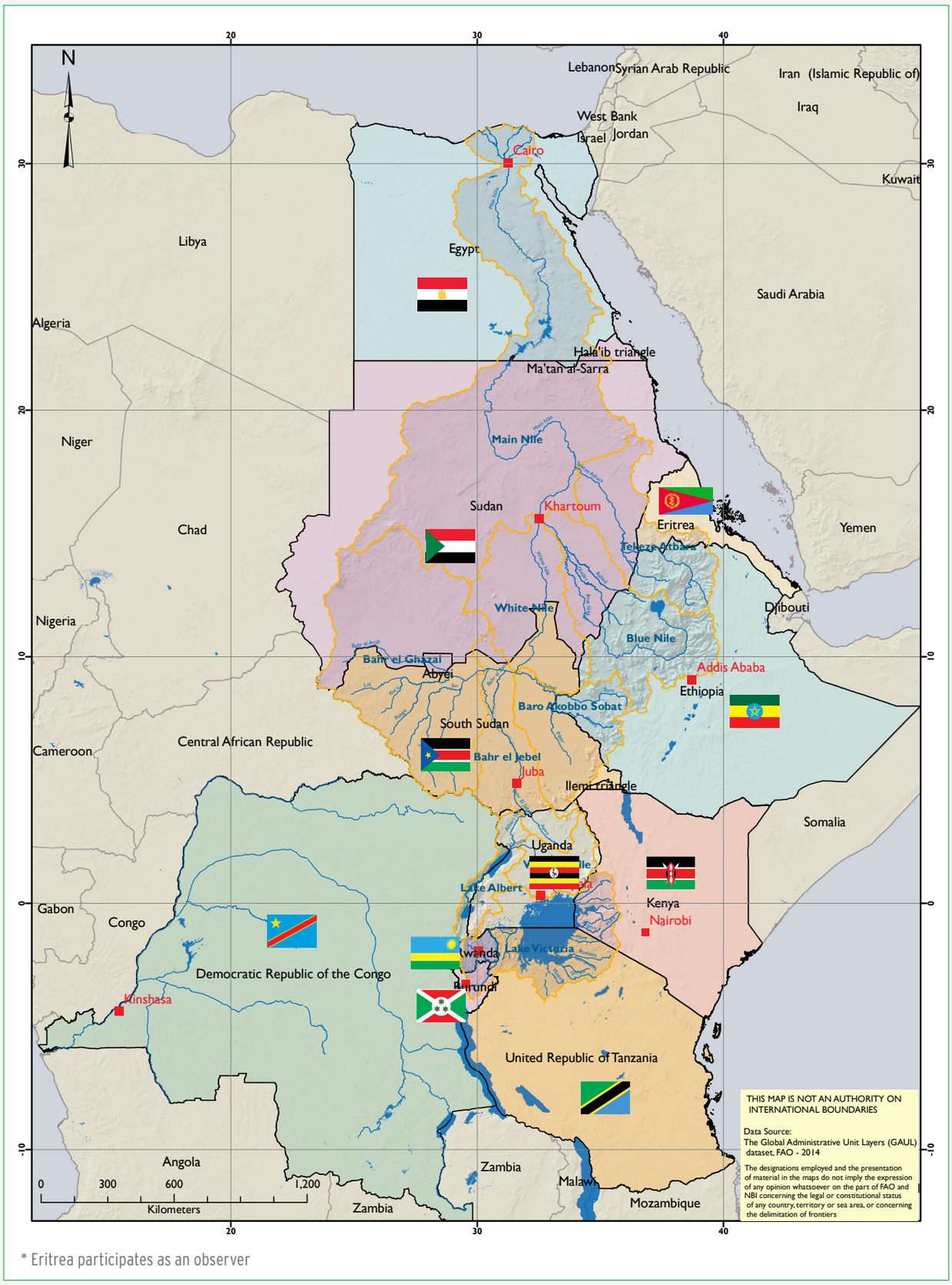
20 YEARS
STRONGER TOGETHER

A LONG RIVER JOURNEY

20 YEARS OF COOPERATION UNDER THE NBI

First Edition-February 2019

NBI MEMBER STATES



* Eritrea participates as an observer

TABLE OF CONTENTS

List of figures

List of boxes

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FOREWORD

The Nile is one of the world's longest rivers, stretching some 6,695 kilometers from Burundi to its delta in Egypt and into the Mediterranean Sea. Along this long journey, the River Nile feeds more than 250 million people who live within its Basin boundaries.

The Nile Basin – the entire watershed of the river – is shared by 11 countries and offers significant potential for cooperative management and development. Notable among potential 'win-win' benefits are clean energy (hydropower) development and trade, improved and expanded cultivation under irrigated and rain-fed systems in conjunction with greater water use efficiency, as well as preserving water resources and protecting the environment. Additional broader benefits include achieving long-term regional economic integration and the promotion of peace and security across the basin.

At the same time, the Nile Basin is facing a multitude of shared challenges, which include increasing water variability, ever-growing water demand and multiple impacts of climate change.

Realising the significant potential offered by the Basin and in order to adequately respond to the ever increasing challenges, which like the Nile itself, span across national borders, Nile Basin countries came together on February 22, 1999 and established the unprecedented Nile Basin Initiative (NBI). It was the first time in the Basin's history that all countries opted for multilateral cooperation and since then it has continued to demonstrate tangible benefits from, and future potential for, Nile cooperation.

Over the last 20 years, the NBI has been and remains the only basin-wide institution mandated to provide a platform for member states to dialogue on the joint management and development of the shared water resources.

As we mark the 20 year-long journey on February 22, 2019, despite considerable challenges the NBI has posted remarkable achievements.

It has helped to build a culture of dialogue, mutual trust and confidence within member states, the knowledge generated, capacity enhancement and policies developed support the countries and the people to better manage their shared water resources

Furthermore, joint investment projects worth US$6.5 billion that, like the Nile itself, span national borders have been prepared and these play an integral part in achieving water, food and energy security, as well as eradicating poverty in the Nile Basin.

Going forward, the NBI is focusing on implementing its 10-year Strategy (2017 – 2027) whose six strategic priorities, jointly identified by the member states, are aimed at contributing to the regional development agenda.

It is worth noting that NBI Member States have reiterated their commitment to Nile Cooperation as the only way to achieve effective management and development of the basin's shared resources. This publication, *'A Long River Journey'* provides insights into what countries have been able to achieve working together under NBI, and the challenges and highlights why cooperation is not a choice but a must, to achieve regional development and sustain the environment on which we all depend.

On behalf of the NBI Member States, I do hereby recognise the invaluable technical and financial support from all our partners. We re-commit to continue working together as member States, and with each one of you, to transform to transform the Nile Basin for everyone and for future generations to come.

Eng. Innocent Ntabana
Executive Director, NBI Secretariat

INTRODUCTION

The Nile – perhaps the longest river in the world – has witnessed an unparalleled record of human history. Monuments in the river basin from the Great Pyramids at Giza in Egypt, to the Stele of Axum, Ethiopia, are testament to the extraordinary civilizations that have grown up and been nourished by this great river. In more recent history the wider basin has seen huge transformations as societies have harnessed the Nile's resources for development by reducing flooding and evening out flows, by providing irrigation water to ever-larger expanses of cultivated land, and through the energy generation of huge hydropower dams.

As the Nile and its inhabitants progress towards the middle of the 21st Century, this is also a river under some of the greatest global pressures – from climate uncertainties and population growth, through to rapid economic development and political change. Many parts of the basin have been beset by conflicts over many years and levels of human development in some areas are in the bottom tier of international indices. In short the challenge remain huge, and, in some places, are growing.

Two decades ago, the basin states decided to put into action the Nile Basin Initiative. Mindful of wider development challenges, the NBI sought collective action solutions to sustainably developing the basin's resources, and to provide the basis for future equitable development across all Nile countries. This was no small task, but 20 years later it remains more important than ever – and as difficult. In any international context where country inhabitants number hundreds of millions – approaching a billion by 2050 in the Nile's case – supporting development processes is a complex undertaking involving difficult trade-offs amid competing (and growing) demands. In a system as dynamic as the Nile – in all economic, social, political, climatic and environmental senses – this is even more complicated.

The NBI has much to celebrate in terms of successful achievement over these two decades, but also much more still to do. This report outlines what the evolution and development of the NBI has amounted to and what lessons can be drawn to feed into future cooperation. It shows the range and complexity of the programs and activities undertaken as well as some of the major outcomes. It should be read not as an evaluation – that is not its purpose – but as a statement of intent: the intent being to show why the NBI is critical for the Nile to survive as one system that can benefit all; and to show what real collective action can and does achieve. We hope that you gain insights and inspiration from this work and, after 20 years, appreciate the need for continued and strengthened engagement. Please join us in working towards deeper and more sustained cooperation on this shared river for the benefit of all current and future generations.

Table of Acronyms

AFD	Agence Française de Développement
AfDB	African Development Bank
BCM	Billion Cubic Metres
CFA	Cooperative Framework Agreement
CIDA	Canadian International Development Agency
COMESA	Common Market for Eastern and Southern Africa
CRA	Cooperative Regional Assessments
DRC	Democratic Republic of Congo
DSS	Decision and Support System
EAC	East African Community
ED	Executive Director
ENPM	Eastern Nile Planning Model
ENSAP	Eastern Nile Subsidiary Action Program
ENSAPT	Eastern Nile Subsidiary Action Program Team
ENTRO	Eastern Nile Technical Regional Office
FAO	Food and Agriculture Organisation
FFEWS	Flood Forecast and Early Warning System
GDP	Gross Domestic Product
GEF	Global Environmental Facility
GERD	Grand Ethiopian Renaissance Dam
HoS	Heads of State
Hydromet	Hydro-meteorological Survey of the Equatorial Lakes
ICCON	International Consortium for Cooperation on the Nile
ICOLD	International Commission On Large Dams
IDEN	Integrated Development of the Eastern Nile
IGAD	Inter-Governmental Authority on Drought
ISP	Institutional Strengthening Program
IUCN	International Union for the Conservation of Nature
IWRM	Integrated Water Resources Management
JMP	Joint Multipurpose Project
kWh	Kilowatt Hour
LVBC	Lake Victoria Basin Commission

MoU	Memorandum of Understanding
MW	Megawatts
NBD	Nile Basin Discource
NBFP	Nile Basin Focal Project
NBI	Nile Basin Initiative
NBTF	Nile Basin Trust Fund
NCORE	Nile Cooperation for Results
NELSAP	Nile Equatorial Lakes Subsidiary Action Program
NELSAP-CU	Nile Equatorial Lakes Subsidiary Action Program – Coordination Unit
NELTAC	Nile Equatorial Lakes Technical Committee
NEPAD	New Partnership for Africa's Development
Nile-COM	Nile Council of Ministers
Nile-SEC	Nile Secretariat
Nile-TAC	Nile Technical Advisory Committee
NORAD	Norwegian Agency for Development Co-operation
NRBAP	Nile River Basin Action Plan
NTEAP	Nile Transboundary Environmental Action Project
NWA	Nile Waters Agreement
RATP	Regional Agricultural Trade Project
RBO	River Basin Organisation
REC	Regional Economic Community
SADC	Southern African Development Community
SAP	Subsidiary Action Program
SVP	Shared Vision Program
TECCONILE	Technical Cooperation Commission for promotion of development and environmental protection of the Nile
UN	United Nations
UNDP	United Nations Development Program
USBR	United States Bureau of Reclamation
WB	World Bank
WRPM	Water Resources Planning and Management Project

EXECUTIVE SUMMARY

On 22nd February 1999, in Dar es Salaam, Tanzania, the 10 Nile Basin riparian[1] states launched their first all-inclusive transitional institutional arrangement that was to succeed the then cooperation mechanism known as TECCONILE[2][3]. Later in May of the same year, in Addis Ababa, the riparian states through their Council of Ministers of Water Affairs (Nile-COM) endorsed the name 'Nile Basin Initiative' for the new transitional institutional arrangement.

On 22nd February 2019, the NBI will be 20 years old.20 years old and continues to serve as the only platform in the Nile Basin that includes all riparian states. In the same meeting that established the NBI, the Nile-COM also agreed to the Shared Vision Objective : *'To achieve sustainable socio-economic development through the equitable utilization of, and benefit from, the common Nile Basin water resources"*. In that meeting Nile-COM also adopted (guidelines for) a Strategic Action Program that consisted of a set of two sub-programs: the Shared Vision Program (designed to build technical and institutional capacities of participating countries to enable and facilitate the cooperation process) and the Subsidiary Action Programs (designed to facilitate embarking on joint water resources investments to demonstrate early benefits of the cooperation process).

The establishment of the NBI was a result of many intersecting processes within and outside the basin: prior cooperation among some Nile riparian states over hydro-meteorological studies going back to the 1960s; a renewed focus on challenges facing the basin towards the end of the 20th Century; and a post-Cold War international development environment that was supportive of regional integration efforts to strengthen peace and security and provide foundations for social development and economic growth.

Driven by Nile countries themselves, the establishment of the Initiative in 1999 marked the first time a truly comprehensive mechanism of cooperation had been agreed to among riparians.

The NBI was launched as a 'transitional' arrangement up until '...a final Framework for Cooperation is put in place', i.e. the Nile Basin Cooperative Framework Agreement (CFA) that would provide a permanent legal and institutional basis for Nile cooperation. These two parallel processes, the implementation of the NBI Strategic Action Program to which riparian countries agreed to, on the one hand, and the negotiation process to arrive at a Cooperative Framework Agreement, on the other, will be referred to as the 'NBI' and 'CFA' tracks respectively in this document.

The NBI started implementation of the Strategic Action Program in 2003 through a basin-wide Shared Vision Program which comprised 8 projects, and two Subsidiary Action Programs, one for the Eastern Nile and the other for the Nile Equatorial Lakes region. At

1 South Sudan joined the NBI in 2012 after it became an independent state.
2 Technical Cooperation Committee for the Promotion of the Development and Environmental Protection of the Nile River Basin
3 5th meeting of the Nile-COM, 22nd February 1999, Dar es Salaam, Tanzania

the end of the first Strategic Action Program, in 2012, as part of the Institutional Strengthening Project executed by Nile-SEC, member states agreed on three core functions of the NBI, namely facilitating basin cooperation, water resources management and water resources development.

The NBI has evolved into a strong institution operating from its three centres – the NBI Secretariat (Nile-SEC) in Entebbe, the Eastern Nile Technical Regional Office (ENTRO) in Addis Ababa and the Nile Equatorial Lakes Subsidiary Action Program Coordination Unit (NELSAP-CU) in Kigali. ENTRO and NELSAP-CU are mandated primarily to prepare infrastructure investments in the Eastern Nile and Nile Equatorial Lakes sub-basins, respectively. In contrast, the Nile-SEC serves as the secretariat for the Nile-COM, supports formulation of transboundary policies, carries out basin-wide analyses of water resources issues and generates shared knowledge for joint planning and decision making. With the adoption of the NBI core functions by member states, the Nile-SEC was given a lead mandate for facilitating basin cooperation and water resources management while ENTRO and NELSAP-CU are mandated to implement the water resources development function in the Eastern Nile and the NEL sub-basins, respectively.

The breadth and depth of work programs of the NBI centres has greatly evolved in the last 5 – 7 years adapting to changes in country priorities and funding situations. The three centres, especially ENTRO and the NBI Secretariat evolved differently responding to the specific challenges they faced and the circumstances under which they had to operate. In 2010, following the signature by 5 riparian states of the CFA, Egypt and Sudan suspended their full participation in NBI activities. Thus ENTRO, which was established by Egypt, Ethiopia and Sudan, was forced to operate with only one member state remaining. Further, one of the scenarios (or assumptions) underlying the Institutional Strengthening Program (ISP) project, namely that the

« Looking back over 20 years, this paper provides reflections on the successes and challenges along the way. Has the NBI succeeded in its mission? What has been accomplished and what still remains to be done? Expectation levels at the launch of the NBI were very high. There was also anticipation of major investment flows into the basin. Some 20 years later, a lot has changed both within and beyond the basin. Whilst much has been achieved, the NBI still has a long journey ahead. »

CFA would be signed and ratified by a sufficient number of countries with eventual transitioning of the NBI into the Nile River Basin Commission did not materialize. With impending closure of the NBTF in 2012[4] as per the original plan and with no prospect of a second NBTF being established, the future prospect of the NBI's finances and, by extension, its existence was put into question.

Egypt, Ethiopia and Sudan met in Addis Ababa in November 2012 to find a way of resuming participation by Egypt and Sudan in ENTRO programs. This facilitated Sudan's return to the NBI while Egypt continued to suspend its participation. The Nile-COM agreed in 2012 (21st Nile-COM meeting, July 2012) to gradually increase member country annual cash contributions and fully finance the core operations of the NBI by 2017. The agreed annual contributions of member states duly grew from US$15,000 (agreed in Dar es Salaam in 1999) to over US$300,000 by 2017. Those countries that contributed to all three NBI centres would now contribute over US$400,000 per annum. This was a significant step forward to ensuring the financial sustainability of the NBI's core operations in its three centres.

The three centres are now implementing their joint 10-Year Strategy (2017 – 2027), which has been structured along six priority areas, namely: water security, energy

4 The NBTF was later extended by 2 years and closed on 31st December 2014.

security, food security, enhancing environmental sustainability, climate change adaptation and strengthening transboundary water governance.

The NBI has been driving forward a cooperation mechanism that has brought new levels of understanding about the Nile, captured in a range of knowledge products and tools, including the Nile Decision Support System (Nile DSS). Under the first Strategic Action Program (2003 – 2012), the eight projects of the Shared Vision Program (SVP) established a stronger appreciation of the shared nature of the basin's resources and built alliances and structures – some formal, some informal – that persist to this day and propel forward the message of cooperation for development.

Under the Subsidiary Action Programs (SAPs) joint and cooperative investment projects have been prepared worth over US$6 billion with some that have moved to implementation. Construction of the Rusumo Falls Hydroelectric Power project commenced in 2017 and is progressing well. When completed, the project will have an installed capacity of 80 MW equally shared by Burundi, Rwanda and Tanzania. The Ethiopia-Sudan power transmission interconnection was inaugurated in 2015 by the Heads of State of Ethiopia and Sudan. Capacities of Eastern Nile countries have been strengthened for improved flood early warning and community preparedness. Flood-prone communities in the Eastern Nile have benefited from flood early warnings issued by ENTRO at regular intervals during flood seasons.

Slowly, the NBI has had to adapt to changes in the wider development context as new state entities emerged with South Sudan's independence and as countries left the initiative and then returned. New infrastructure has grown both as a result of the NBI's work, but also because countries have continued to develop their own national projects.

The idea that cooperation will generate important core public goods as well as a basket of benefits surpassing those available under conditions of non-cooperation in the Nile basin, has been well established. From its emergence on the cusp of the new Millennium to the present-day 10-Year Strategy, which takes the NBI through to 2027, the NBI has played a key role in changing this discourse. Whatever the economic and political developments in the countries and region in the next 10 years, the NBI has provided a flexible and constructive contribution to the development and management of Nile Water resources. Its 2017-2027 Strategy now offers a roadmap to achieving stronger multilateral cooperation, under which is nested the development of a portfolio of basin-wide multipurpose investment projects.

Although the story of the NBI may be 20 years old, it is far from complete. Climate change uncertainty, population growth and economic development remain as daunting as ever – challenges in common with other major river basins. A rise in population in Nile countries to more than 1 billion by 2050 will be felt acutely in all economic, environmental and social systems. Food security alone will pile pressure on rain-fed systems in vulnerable watersheds, and challenge other farming systems where the demand for irrigated cropping is increasing. Energy demand will also grow and, with it, pressure to develop hydropower. Knowledge of the right energy mix in different contexts will be key to identifying future solutions that work from the basin scale down to local levels.

Though the NBI was launched as a transitional institutional arrangement up until 'a final Framework for Cooperation is put in place', 20 years on the CFA process has yet to yield that intended result. This has affected the NBI in a number of ways – not the least as a result of Egypt and Sudan suspending participation in 2010 following disagreement among countries over the signing of the CFA document. Although Sudan returned in 2012, the continued abstention of Egypt from NBI activities has reduced the basin-wide coverage of key work programs. Efforts are being made by the countries to address the differences with Egypt to facilitate its full resumption of participation in the NBI.

Put simply, there is an imperative to manage a highly complex, life-sustaining system shaped by many different entities, including state and non-state actors, amid continued buffeting by trade, population movements, climate change and other system-level forces. In recent years, the NBI has moved to a stronger strategic planning approach and to using resource assessments to answer such key questions as: Given future scenarios of demand, is there enough water in the system? What to do under a range of different climate scenarios and how to establish and agree future management options at basin scale? Countries of the Nile will continue to pose such questions - and the NBI can and should continue to help in answering them, from a whole-system perspective.

Transboundary water cooperation is a long and arduous process. The commitment of riparian states and their development partners, Friends of the Nile, that established the NBI and nurtured the cooperation over the last 20 years needs to be reinforced in order not to lose the gains made so far and to ensure more tangible benefits are reaped from future cooperation.

The future capacity of the NBI to continue its mission will require a solid financial base as well as renewed commitment both within and beyond the basin to managing *one Nile system* for the benefit of all. Basin decisions made now in response to existing and future challenges will have ramifications for children of the Nile well into the 22nd Century.

That we 'don't know exactly' what the future holds in the basin also means that a set of rational, scientifically-backed products that inform decision makers will be essential for 'future-proofing' current decisions. As it progresses under the 2017-2027 10-Year Strategy, the NBI is ideally suited to continue the development of tools, instruments, policies and strategies, whether related to managing a sequence of dams, or agriculture. This should include assessing how water can be used most efficiently and effectively to help target poverty reduction and achieve gender equality in the basin.

Many of these policy issues are complex, but the NBI can continue to provide a robust and shared platform through which to present menus of strategic options and solutions (with an informed analysis of the costs and benefits of each option); and, above all perhaps, a neutral space in which to discuss and deliberate current and future potential trade-offs. The NBI's critical role in providing this knowledge and other services cannot be overstated. As one key participant of the last 20 years stated, "If the NBI didn't exist, it would have to be invented".

NBI @ 20: NILE COOPERATION MILESTONES

YEAR	NILE COOPERATION EVENTS
1992	Dec: TECCONILE launched Dec: Nile-COM established
1993	Feb: 1st Nile 2002 Conference, Aswan
1994	Jan: Nile 2002 Conference, Khartoum
1995	Feb: NRBAP approved
1996	Feb: Nile 2002 Conference, Kampala
1997	Jan: Institutional and Legal Framework Project (D3) launched
1998	July: First meeting of the Nile-TAC
1999	May: Eastern Nile Subsidiary Action Program (ENSAP) formulated Sep: NBI Secretariat launched
2000	Aug: Strategic Action Program approved Nov: Eastern Nile countries agreed to establish ENSAP secretariat (later named as ENTRO)
2001	Jun: ICCON 1 donors meeting held in Geneva May, the name: Eastern Nile Technical Regional Office (ENTRO) adopted
2002	Oct: Final Nile 2002 Conference, Nairobi NELSAP-CU launched Feb: Nile Basin Initiative Act passed Feb: ENTRO Headquarters Agreement signed, ENTRO formally established
2003	Nile Basin Trust Fund established Oct: Negotiation of the CFA[7] started
2004	Oct: 1st SVP Project launched
2005	First set of cooperative investments
2006	Nov 30 - Dec 2: 1st NBDF
2007	Feb: Annual Nile Day launched
2008	Dec: SVP closed ISP project established
2009	Feb: NBI's 10-year anniversary
2010	May 14: CFA opened for signature in Entebbe, Ethiopia, Rwanda, Tanzania, and Uganda sign Egypt and Sudan freeze participation in the NBI May 19: Kenya signs the CFA[7] in Nairobi
2011	Feb 28: Burundi signs the CFA[7] in Bujumbura
2012	Jan: CIWA[11] formed July: Sudan unfreezes participation in the NBI July: South Sudan joins the NBI
2013	June 13: Ethiopia ratifies the CFA[7] Jan: Nile Cooperation for Results Project launched Dec: Inauguration of Ethiopia - Sudan Power Transmission Line Aug 28: Rwanda ratifies the CFA[7]
2014	Dec: Closure of Nile Basin Trust Fund
2015	- Mar 26: Tanzania ratifies the CFA[7]
2017	- Jun: 1st Nile Basin Heads of States Summit, Entebbe

Figure 1: NBI Time Line

1. ESTABLISHMENT: THE 1990s

1.1 The drivers of the NBI

Introduction: The Nile Basin Initiative is a transitional arrangement established in 1999 to foster cooperation over the shared waters of the Nile Basin. It was established through the efforts of Nile countries[5] working closely together, and with a range of external partners.

This short report provides a reflection on the NBI from its origins through the 20 years of development to the potential pathways it could take in future. The report was written by the NBI to help a wider global public understand levels of achievements to date and the challenges faced; and to help build a stronger, more unified basin fit to face future system pressures and challenges.

<< Key question: While it is recognized that it has achieved a lot, has the NBI contributed to and/or enhanced cooperation in the Nile Basin, and if so, how? >>

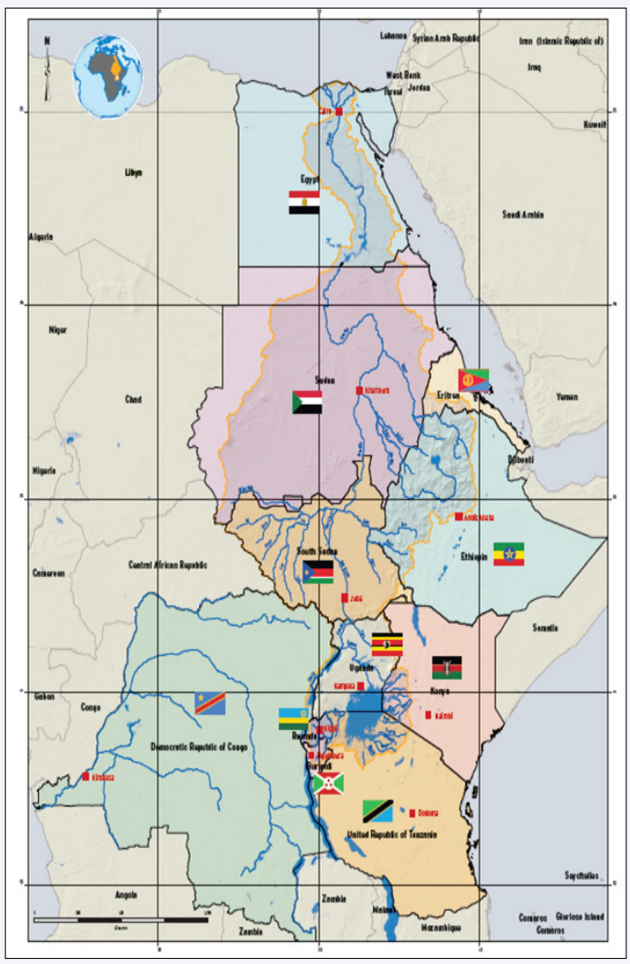


Figure 2: Map of Nile Basin showing sub-basins (Source: NBI 2016)

This chapter outlines the drivers behind the establishment of the NBI, examining the building blocks and processes followed.

Context: The Nile is a globally iconic river system spanning about 10% of the African continent. It is home to some 437 million people across 11 countries, of which about 238 million live within the basin boundary. By 2050 it is anticipated that the combined population of all basin countries will reach over 1 billion.

The basin has a rich and complex history. For much of the 20th Century large parts were under the control of European colonial powers. With the exception of Ethiopia following a five-year period under Italian occupation (1936-1941), no major part of the basin managed to escape European control.

During the Cold War period client states of the United States and Soviet Union fought occasional regional conflicts. Further civil conflicts within states during the 1980s and early 1990s continued to hinder development opportunities and exacerbated the impacts of droughts,

5 Burundi, DRC, Egypt, Eritrea (observer to the NBI), Ethiopia, Kenya, Rwanda, South Sudan, Sudan, Tanzania and Uganda.

including in Ethiopia and other countries in the Horn of Africa in the 1980s and 1990s.

At independence, Egypt became the first Nile country to seek construction of a new mega-dam, the High Aswan Dam. This would eclipse any previous structure in the basin and, at the time, became the largest such structure in Africa. It was built with the support of the USSR after the USA withdrew its financial offer, marking an era of superpower rivalry in the Nile basin that would last another 40 years. In response, the USA supported a study (by their own USBR) on a cascade of dams along the Blue Nile in Ethiopia, which was published in 1964.

External factors: The decade leading up to the NBI's establishment were turbulent years in global politics. At the same time new opportunities for cooperation and joint management of shared resources contributed to wider efforts at strengthening regional security and stability in the region. The international community began to speak of a wider 'African Renaissance', recognizing that the continent held unlocked potential and that processes of regional integration could help realise this potential through enlarging markets and expanding investment opportunities.

Integration was viewed as a 'regional public good' that could help unlock growth potential and was a dominant narrative in efforts such as the New Partnership for African Development (NEPAD) that emerged from the decade. It was also a time of unprecedented global action to tackle poverty, represented in the launch of the Millennium Development Goals in 2000. In the Nile Basin, early concerns were raised that a growing economically active population would outstrip available employment in what were then sluggish economic conditions (Fig 2). With the exception of Egypt, at the time most Nile countries had very low per capita GDP.

In the water sphere this was also a time of renewed emphasis on sustainable and equitable management of water resources, including in major river basins. The Convention on the Law of the Non-navigational Uses of International Watercourses (the 'UN Water Convention') came into being in 1997 and became the strongest international expression of the principle of equitable use of shared waters. Accompanying the notion of equitable use and shared benefits, a wider paradigm shift took place in the early 1990s towards the implementation

BOX 1. THE NILE HAS A LOT OF (MODERN) HISTORY TOO

The High Aswan Dam (HAD) enabled Egypt to **store nearly two years flow of the river in Lake** Nasser (Nubia) reservoir. This had major ramifications for national development and provided capacity to mitigate the worst impacts of flooding. The structure was enshrined in a new agreement with Sudan – the Nile Waters Agreement (NWA) signed in 1959. The NWA effectively apportioned the entire average annual flow of the Nile between Egypt and Sudan, with a proportion (about 10 BCM) assumed lost to evaporation at Aswan. Ethiopia protested at the signing of this agreement and for a long period some Nile states were locked in their own version of a 'cold war' over the Nile waters.

The NBI was testament to a thawing in this smaller 'cold war' and has continued to be a source of rational science-led development thinking since its inception in 1999.

« The most significant challenge is how to balance the existing Nile basin water uses by downstream Nile Basin States and new potential water uses by the upstream Nile Basin States » (key informant)

of Integrated Water Resources Management (IWRM) at a country level. Emerging from the Rio Earth Summit and preceding Dublin Meeting in 1992, IWRM came to dominate policy environments and was linked closely to growing concerns over climate change and the impacts of population growth on access to natural resources in watersheds and river basins.

Internal factors: Countries of the Nile Basin were a key part of this global environment, and soon adopted the principles of IWRM in policy instruments from the mid-1990s onwards. Some Nile Baisn countries were emerging from armed conflict and all realisted that mutual cooperation over shared resources would be key to avoiding conflict and ensuring sustainable development and maximum benefits from future investment in these resources.

A key element in the relationship between both internal and external drivers was the engagement of the World Bank, an early champion of the cooperation process. In 1995 Nile-COM invited the World Bank to take a lead role in coordinating external agencies under the Nile River Basin Action Plan (NRBAP). In 1997 the World Bank accepted and proposed that it should undertake the task in partnership with UNDP and CIDA, as well as prepare for a 'donor consultation' meeting, the International Consortium for Cooperation on the Nile – ICCON1 – that would bring together a wider basket of potential funders. A revised Action Program emerged that included both a basin-wide 'shared vision' and a series of 'actions on the ground', establishing the basis for the final form the NBI would take. In March 1998 the Revised Action Plan was endorsed and a Nile Technical Advisory Committee (Nile-TAC) established. This plan subsequently received agreement from the wider development community in 1998 and began to form the outline for what would become a Nile Basin Initiative agreement on a 'Shared Vision' and 'Action Program' on the ground.

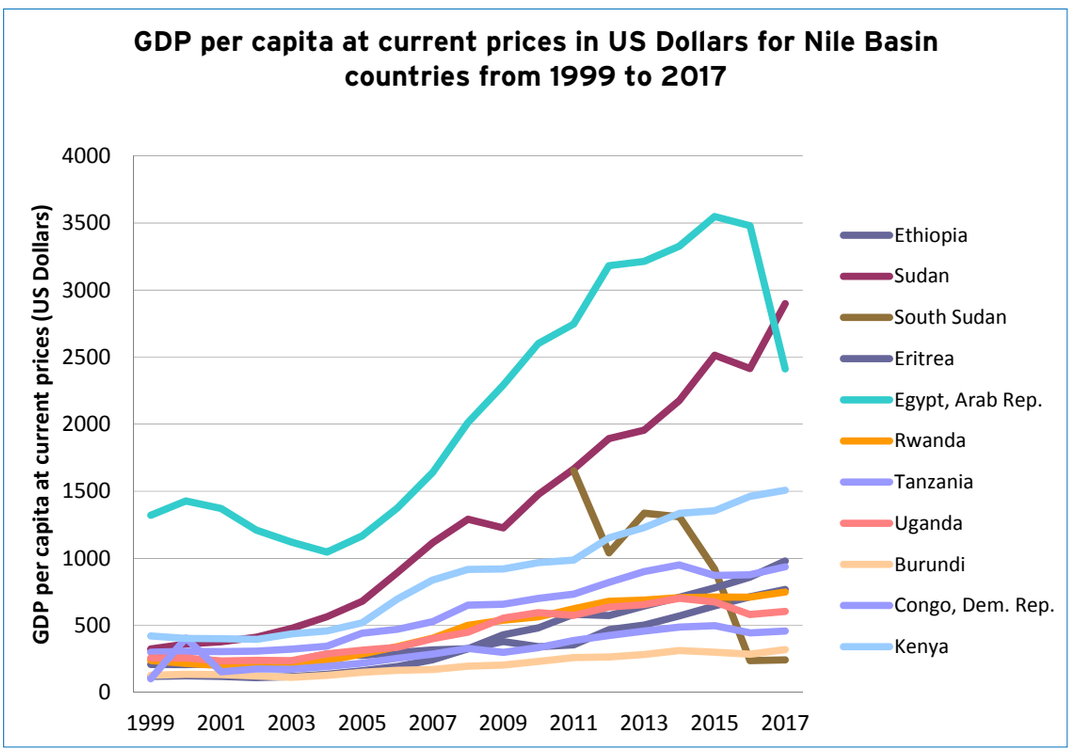
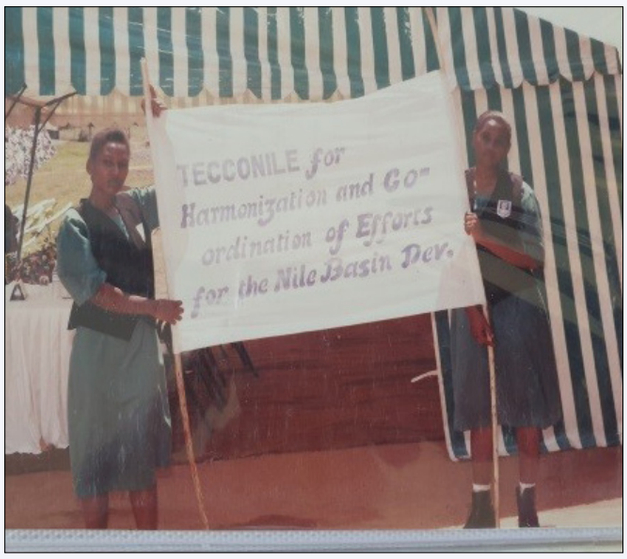


Figure 3: GDP per capita of Nile countries (1999-2017) (Source: World Bank Datasets)

1.2 Earlier Nile Cooperation Efforts



Earlier iterations of cooperation had existed since the 1960s, but none had been as comprehensive as the NBI, or gone beyond technical levels. Mostly these were efforts at sharing technical data including in response to an era of unprecedented rainfall during the 1960s and serious drought events during the 1970s and mid-1980s. These extreme events underscored the value of cooperation efforts such as the WMO/UNDP-supported Hydro-meteorological Survey of the East African Lakes (Hydromet) (1967-1992) which produced reports in 1974 and 1982, and its successor the Technical Cooperation Committee for the Promotion of the Development and Environmental Protection of the Nile Basin (TECCONILE) (1992-99) (Sutcliffe and Park, 1999). TECCONILE was established by the Nile Council of Ministers of Water Affairs of Nile Basin States (Nile-COM) and sought to promote cooperation and development across the basin. Six countries took part – DRC, Egypt, Rwanda, Sudan, Tanzania and Uganda – with the remaining four at the time participating as observers.

Undugu (1983-1992) focused on economic cooperation under the patronage of Boutros Boutros Ghali, Egypt's former foreign minister (NBI, 2013), but like the earlier efforts, was not truly basin-wide. Ethiopia joined Hydromet as an observer only after 1971 and DRC, similarly, in 1977.

« The major difference between the earlier cooperation arrangements and the NBI was that none of them involved all riparian, including major water source states and did not amount to truly comprehensive and basin-wide cooperation looking at the Nile as one system. »

A series of conferences that began at Aswan in 1993 (see Fig 3), the Nile 2002 Conference, would be held annually in a different Nile country for 10 years and provided an additional track for building confidence and strengthening networks in the basin. Although largely technical in nature and focusing on scientific knowledge, the process of convening provided space for discussions between participants, including government, science communities, development partners, and non-governmental organizations. These conferences were described by one key informant as an "innovation bridge" between past cooperation efforts and the NBI.

1.3 Emergence of a comprehensive dual track process

By 1995, and within a wider context of change, under the auspices of TECCONILE, the design of a Nile River Basin Action Plan emerged prepared by the same riparian states and supported by CIDA, a key partner in early efforts at transboundary cooperation in the Nile Basin. One of the key departures of the Nile River Basin Action Plan (NRBAP) was the inclusion of an element on a new legal agreement, otherwise known as the D-3 Project (see Box 2).

Out of the Action Plan grew the Transitional Institutional Arrangement (later renamed as the Nile Basin Initiative) and the Nile Basin Cooperative Framework Agreement (CFA) process under the D-3 project.

The combination of these two parallel tracks (referred to as the NBI and CFA tracks in this document) recognised that change was required in the basin, but that it needed to go beyond the purely technical and involve changes in the basin-wide political dynamics. It was also recognised early on that countries – and indeed different institutions within countries – could hold different perceptions of what cooperation meant at the same time.However, this was particularly the case with the political track (negotiations for a legal and institutional framework under D3/CFA), which would become a long-drawn out process.

On 22nd February 1999, in Dar es Salaam, Tanzania, the ten Nile Basin riparian states[6] launched their first all-inclusive Transitional Institutional Arrangement that was to succeed the existing cooperation mechanism known as TECCONILE[7]. Later in May of the same year, in Addis Ababa, the riparian states through their Council of Ministers of Water Affairs endorsed the name 'Nile Basin Initiative' for the new transitional institutional arrangement. In the same meeting, the Nile-COM also agreed to the proposed Shared Vision Objective: *'To achieve sustainable socio-economic development through the equitable utilization of, and benefit from, the common Nile Basin water resources'.*

The NBI was envisaged only to be a transitional mechanism that would run alongside the CFA. The intention was that once the CFA had been concluded the NBI could evolve into a full Nile River Basin Commission. Key milestones of Nile cooperation including those in the last 20 years of the NBI are shown in Figure 3.

BOX 2. THE D-3 PROJECT: THE ORIGIN OF THE CFA

The 'D3 project' began in February 1997, endorsed by the 3rd meeting of Nile-COM in Arusha and supported by UNDP. Though this set of negotiations towards establishing a Cooperative Framework Agreement was a separate track to the emerging Nile Basin Initiative it grew out of the same NRBAP and would also be presided over by Nile-COM.

The objective of the D-3 project was in the long term to "pave the way for the Nile River Basin countries to achieve milestones which would determine net equitable entitlements for each riparian country for the use of the Nile waters and therefore to enhance and promote the utilization of the Nile waters for optimum sustainable socioeconomic benefits for the inhabitants of the basin" (UNDP, 2000).

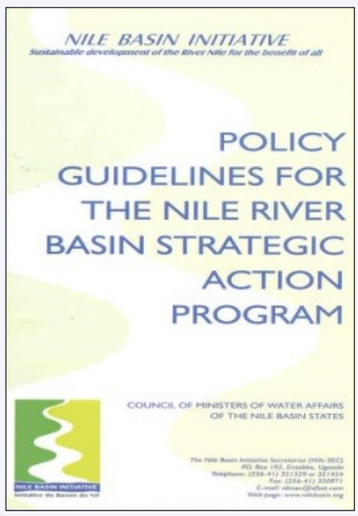
The evaluation report of the D3 Project in 2001 stated that, "To date, the main results of the D-3 project in the context of the Nile Basin Initiative have been: heightened trust among riparians and their recognition that cooperation around the Nile is indeed possible and would bring benefits to them all; [and the] conclusion of the draft document for a cooperative framework, to be further developed by specially appointed representatives from all the concerned countries." (UNDP, 2000).

6 South Sudan joined the NBI in 2012 after it became an independent state.

7 Technical Cooperation Committee for the Promotion of the Development and Environmental Protection of the Nile River Basin

1.4 The First NBI Strategic Action Program

In 1999, the Nile-COM endorsed the *Policy Guidelines for the Nile River Basin Strategic Action Program*. A defining document under the NBI, this set out the Shared Vision Objective: "to achieve sustainable socio-economic development through the equitable utilisation of, and benefit from, the common Nile Basin water resources".



The five specific objectives were: a) to develop the Nile Basin water resources in a sustainable and equitable way: b) to ensure prosperity, security, and peace for all its peoples; c) to ensure efficient water management and the optimal use of the resources; d) to ensure cooperation and joint action between riparian countries, seeking win-win gains; d) to target poverty eradication and promote economic integration; and e) to ensure that the program results in a move from planning to action.

<< Now the power politics has changed because of the NBI >> (key informant)

These policy principles helped define the structure of the NBI which was built on the notion of both geographic (subsidiary basins) and thematic duality: The first Strategic Action Program (2003 – 2012) comprised of two complementary programs, namely, the basin-wide Shared Vision Program (SVP) and the Subsidiary Action Programs – one for the Eastern Nile and, the other, for the Nile Equatorial Lakes (NEL) sub- basins.

The SAPs aimed at identifying cooperative development opportunities through action on the ground, emphasising the need for early delivery of benefits (see Section 2.3). The SVP would focus on establishing a wider enabling environment that could help underpin cooperation in the basin and, by extension, support the political process. The relationship envisaged is represented in Fig 4. Shared Vision Projects would help build trust that would then provide foundational support for investment projects, the completion of which could generate more belief and engagement in the vision – establishing, in effect, a 'virtuous circle' to reinforce and 'cement in' cooperation processes. Seven guidelines set for the SAPs included planning actions at the 'lowest appropriate level' related to the hydrological conditions of the Nile, the need to work at sub-basin levels, appropriate planning to include all those affected, building on the principles of equitable utilization, no significant harm and cooperation, and undertaking investigations on "solutions that both have benefits for all involved and distribute benefits, costs, and risks equitably as well as use resources efficiently and protect the environment" (Nile-COM, 1999).

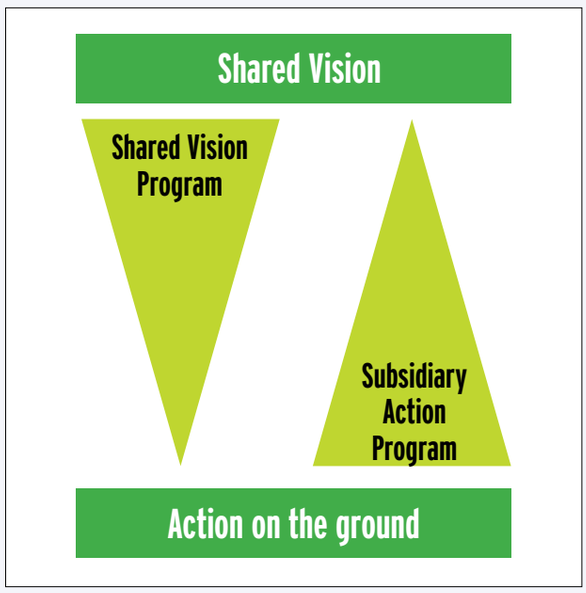


Figure 4: NBI Shared Vision and Subsidiary Action Program Concept (Source: NBI, 1999)

1.5 The Structure of the NBI

Overseeing both the NBI track and CFA track, the Nile-COM was originally established under TECCONILE and remains to this day the key policy and political decision-making body of the NBI. Approving annual work plans and budgets, overseeing the implementation of NBI activities, and helping to ensure the receipt of government contributions, Nile-COM also engages the external support of development partners and on the recommendation of the Nile TAC, selects a new Executive Director of Nile-SEC every two years (see Fig 6).

The NBI operates from its three centres – the NBI Secretariat (Nile-SEC) in Entebbe, the Eastern Nile Technical Regional Office (ENTRO) in Addis Ababa and the Nile Equatorial Lakes Subsidiary Action Program Coordination Unit (NELSAP-CU) in Kigali. ENTRO and NELSAP-CU primarily are mandated to prepare water infrastructure investments in the Eastern Nile and Nile Equatorial Lakes sub-basins, respectively.

The Nile-SEC was inaugurated in September, 1999 at the same premises where TECCONILE was headquartered. This was followed by the establishment of the Eastern Nile Technical Regional Office (ENTRO) on 13 February, 2002 under a separate Headquarters Agreement with the Government of the Federal Republic of Ethiopia, which provided the office premises in Addis Ababa. To implement the NEL-Subsidiary Action Program (NELSAP), a regional coordination unit was established in Kigali under the Nile-SEC.

Each NBI centre has its own governance structure involving a Council of Ministers of Water Affairs and a Technical Advisory Committee. Thus, the NBI structure involves the Nile-COM, which is the decision-making body for the Nile-SEC, the Eastern Nile Council of Ministers (ENCOM), which is the decision-making body for ENTRO and, similarly, the NEL-COM. Each of the Council of Ministers is supported by a Technical

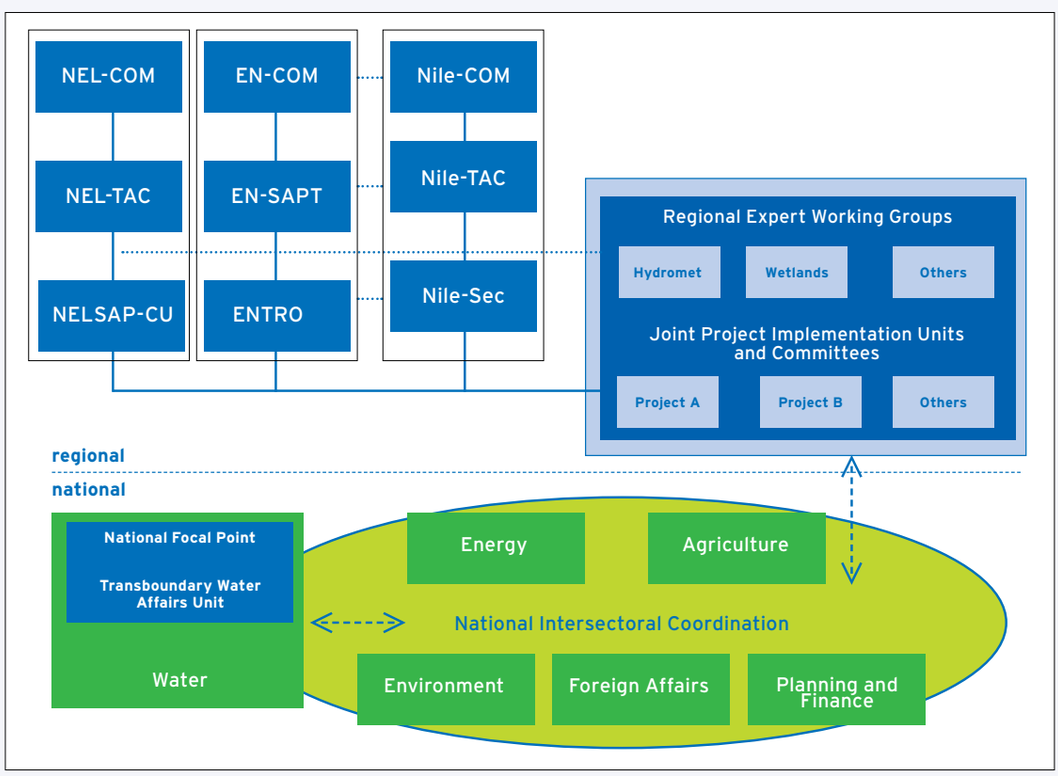


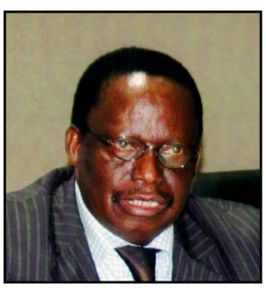
Figure 5: The NBI structure in 2018 (Source: NBI)

Advisory Committee comprised of two to three senior technical officials from the member states. Thus, Nile-TAC and NEL-TAC serve as advisory committees for the Nile-COM and NEL-COM, respectively. The Eastern Nile Subsidiary Action Team (ENSAPT) serves as the advisory committee for EN-COM. At national level, the ministry responsible for water affairs serves as the focal national institution for all NBI affairs.

The current NBI overall structure is shown in Fig 5. The Executive Director of the Nile-SEC is appointed by the member countries on rotational basis with a term of 2 years. The Executive Director of ENTRO has a term of 3 years and is selected through open competition. The position is offered to each member state on a rotational basis according to their alphabetical order. The Regional Coordinator of NELSAP-CU has a maximum term of 6 years and is also selected through open competition.

The NBI started implementation of the first Strategic Action Program in 2003 through the basin-wide Shared Vision Program, implemented by Nile-SEC, and the two Subsidiary Action Programs, implemented by ENTRO and NELSAP-CU.

At the end of the first Strategic Action Program, in 2012, as part of the Institutional Strengthening Project executed by Nile-SEC, the member states agreed on three core functions of the NBI, namely, *facilitating basin cooperation, water resources management and water resources development*. With the adoption of the NBI core functions by the member states, the Nile-SEC was given a lead mandate for the core functions of facilitating basin cooperation and water resources management while ENTRO and NELSAP-CU are mandated to implement the water resources development core function in the Eastern Nile and the NEL sub-basins, respectively.

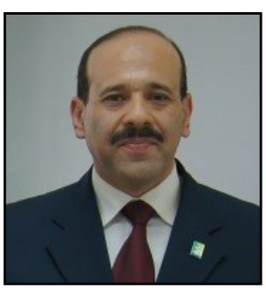


Mr. Meraji Msuya
1999 - 2004
Country: Tanzania

Eng. Patrick Kahangire
2004 – 2006
Country: Uganda

Mr. Audace Ndayizeye
2006 – 2008
Country: Burundi

Ms. Henriette Ndombe (R.I.P.)
2008 – 2010
Country: DR Congo



Dr. Wael Khairy
2010 – 2012
Country: Egypt

Eng. Teferra Beyene
2012 – 2014
Country: Ethiopia

Dr. John R Nyaoro
2014 – 2016
Country: Kenya

Eng. Innocent Ntabana
2016 – 2019
Country: Rwanda

Fig 6: Executive Directors of the NBI Secretariat

The Nile-SEC further serves as the secretariat for the Nile-COM, supports in formulation of transboundary policies, carries out basin-wide analyses of water resources issues and generates shared knowledge for joint planning and decision making. The breadth and depth of work programs of the NBI centres has evolved in the last 5 – 7 years adapting to changes in country priorities and funding situations. The three centres are currently implementing their joint 10 Year Strategy (2017 – 2027), which has been structured along six priority areas, namely water security, energy security, food security, enhancing environmental sustainability, climate change adaptation and strengthening transboundary water governance.

Over nearly 20 years, these three arms of the NBI, commonly known as 'centres', have grown in size and undergone important changes in their internal structuring as well as the size and scope of their work program. In addition to the Technical Advisory Committees for the three centres, a number of expert groups and steering committees have been formed to represent member states in NBI programs and provide the necessary technical support to the decision making process by the TAC, and eventually by the relevant council of ministers.

In tandem with the new SVP and SAP programs, there was recognition that these processes should be accompanied by civil society engagement in Nile Basin development. The Nile Basin Discourse (NBD) was established as separate to, but expected to engage with, the NBI and build civil society dialogue and action on Nile development issues from basin to local levels. The NBD was funded by a range of donors and initially run as a project by IUCN, before achieving regional organization status by the end of the 2000s. It was set up in Entebbe to be close to Nile-Sec operations, and had a structure based on national-level Discourse Forums that would meet annually at a General Assembly (see Box 3).

BOX 3. THE NILE BASIN DISCOURSE

Set up in 2001 just after the NBI's establishment, the Nile basin Discourse is a civil society network that has continued to function alongside and sometimes in partnership with the NBI. The idea for its establishment emerged out of concerns that country-driven processes could ignore (deliberately or inadvertently) views, needs and wishes of local civil society across the basin. Initially using the motto 'keeping an eye on the NBI', the NBD subsequently established a more collaborative approach, including the signing of an MoU with Nile-SEC in 2006, which states the NBI and NBD will: "exchange information, collaborate in the development [of] projects and activities, improve the mutual benefit of existing cooperation amongst all stakeholders and co-operate in identifying strategic alliances that promote social and development equity". The NBD continues to engage with the NBI at both a strategic basin level and national levels, where National Discourse Forums have been convened. For more information see: https://nilebasindiscourse.org/

1.6 Partnership with the International Community

Coordinated by the World Bank, the content of the Nile Equatorial Lakes Subsidiary Action Program (NELSAP) and the Eastern Nile Subsidiary Action Program (ENSAP) was agreed at the ICCON 1 meeting held in Geneva in 2001. This meeting also established the Nile Basin Trust Fund as a 'streamlined, cost-effective vehicle to administer the funds received from the donor community' (see Box 4).

The Nile-TAC and representatives of development partners meet once per year in what has become known as the Strategic Dialogue to deliberate on issues of mutual interest and concern. The Strategic Dialogue serves as a platform for feedback and exploration of options for addressing key emerging issues of Nile cooperation.

BOX 4. NILE BASIN TRUST FUND

Development partners attend annual Nile-COM meetings

The idea of the NBTF, established in 2003 at the request of Nile-COM, was to streamline and ensure cost-effectiveness in funding operations, helping to consolidate donor support and ensure the clarity and cohesiveness of the whole NBI program.

At basin level the NBTF also supported the process of NBI dialogue and engagement efforts to strengthen the capacity of NBI institutions. At sub-basin level the NBTF supported the preparation of joint investment projects. Nearly all NBTF-financed NBI projects were recipient-executed, helping to ensure ownership and build capacity.

Treated as a regional initiative, support to the NBI by the World Bank was part of wider efforts to strengthen regional cooperation after the launch of the New Partnership for Africa's Development (NEPAD) in 2001. Other efforts included the Senegal River basin and the West Africa Power Pool. The concept was to pursue regional integration to overcome Africa's fragmentation and reduce economic marginalization.

2. EVOLUTION AND CHANGE: THE NBI MATURES

2.1 Introduction

The NBI has gone through several phases of development over the last two decades. These include the early development of programming in order to fulfil the original vision of the initiative, accompanied by the development of projects at ground level across all countries to help demonstrate tangible results. Some of the changes that have taken place have been in response to external and internal pressures, including a change in the wider development partner environment towards the end of the second decade, and the shift to a more country-focused financial model from the beginning of the first decade onwards. This 'maturing' of cooperation has important implications both for the future capacity to sustain the NBI through country-level commitments, but also for the way the NBI works and acts – increasingly as a river basin organisation that maintains standards, protocols and knowledge systems underpinning robust decision making on investments across the basin and at all levels.

All in all, the NBI has evolved from an institution which has cemented a shared vision for the basin and identified several water-related investment projects towards an institution that is more programmatic in nature and that provides sound analytical and strategic directions to decision-makers at national level. The NBI – despite its continuing transitional nature – is now a mature institution that is central for regional and basin-wide decisions on how to manage and develop transboundary water resources. This chapter provides a brief account of the NBI's major milestones.

2.2 Enabling cooperation through the Shared Vision Program

The NBI started implementation of the first Strategic Action Program in 2003. This program comprised a set of two sub-programs: the Shared Vision Program (designed to build technical and institutional capacities of participating countries to enable and facilitate the cooperation process) and the Subsidiary Action Programs (designed to facilitate embarking on joint water resource investments to demonstrate early benefits of the cooperation process). The SVP was formally closed on 31 December, 2012. The SAPs were not designed to last for a specific period but rather were expected to grow in terms of portfolio as the NBI would grow towards preparing several large scale multi-purpose investment projects. Both SAPs are still under implementation, albeit with major changes in focus – especially in the Eastern Nile, as presented later in this chapter.

The Shared Vision Program (SVP) played a key role in enabling and strengthening the wider cooperation environment under the NBI. The SVP portfolio was approved for funding at the first ICCON meeting in Geneva in 2001 and included implementation of projects totalling some US$140 million. The program comprised seven projects with an eighth project on coordination across the portfolio (see Fig 7).

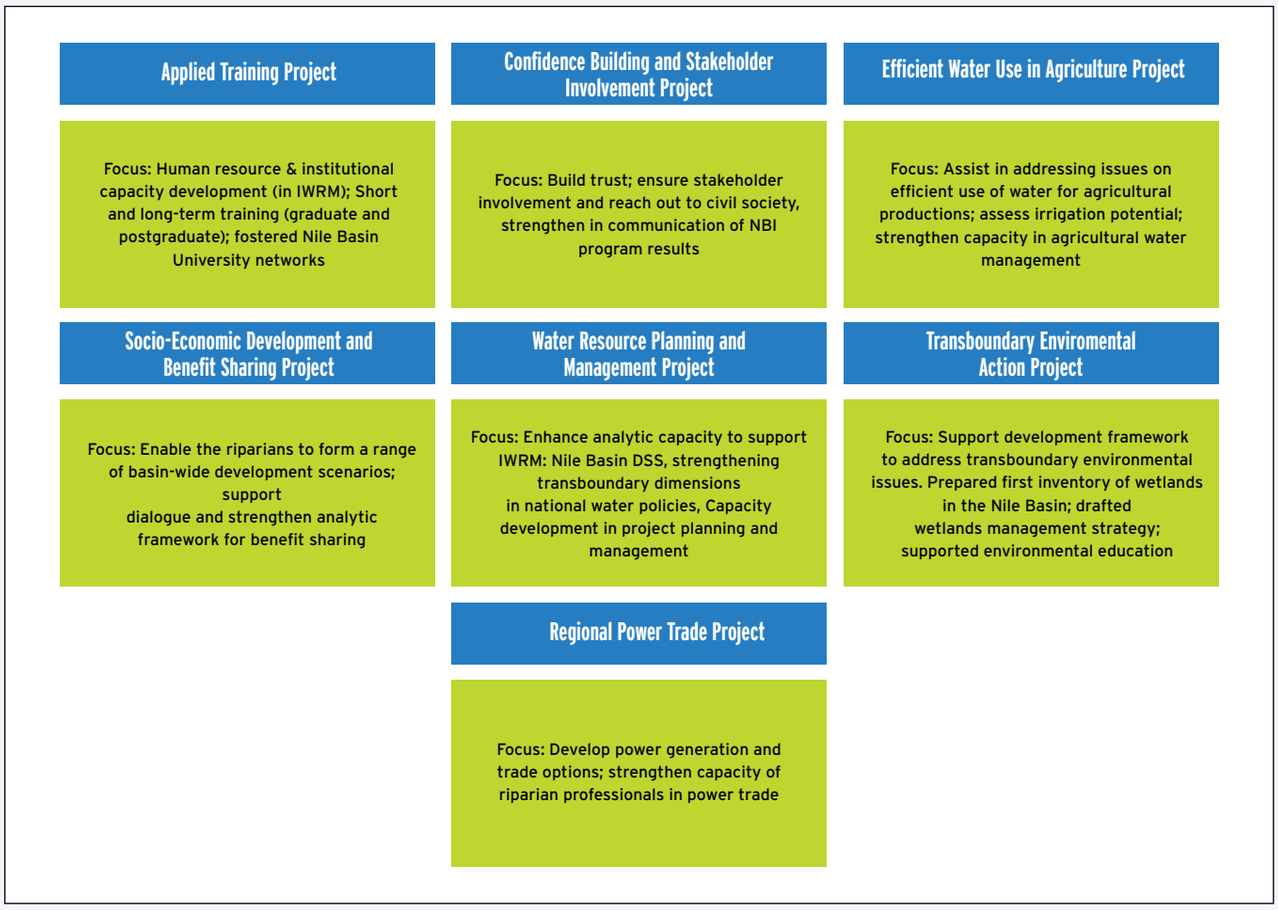


Fig 7: Portfolio of the seven thematic projects under the Shared Vision Program (SVP)

Beside promoting and fostering dialogue and engagement between riparian countries, the projects sought to develop common strategic and analytical frameworks and practical tools, as well as build stronger human and institutional capacity. The eighth project called the 'Coordination Project' had a cross-cutting mandate to build the capacity of the NBI to execute a basin-wide program and ensure effective oversight and coordination of thematic projects. The SVP program was transformational in ambition, changing the nature of the basin-wide discourse on cooperation and establishing 'new cooperation norms'.

The SVP projects were implemented in all countries thereby enhancing visibility of the NBI across the whole basin.

BOX 5. THE NILE BASIN DEVELOPMENT FORUM (NBDF)

Following on from the Nile 2002 Conferences, the NBDF allows space for debate and sharing on Nile development issues across institutions, countries and individuals – both from within and beyond the basin. The forum is a biennial science-policy dialogue that brings together stakeholders from across the basin and around the world to build consensus on Nile cooperation agenda and the way forward for sustainable development and management of the Nile Basin.

There have been five NBDFs to date: Addis Ababa, 2006 – which focused on poverty reduction and economic development; Khartoum, 2008 – with a focus on environment, water resources management, peace and regional cooperation; Kigali, 2011 – which focused on climate change and cooperation and Nairobi 2014, with a focus on sustainable cooperation in a complex river basin.

The 5th Forum's theme was 'Investing in Nile Cooperation for a Water Secure Future' (for more information, visit www.nbdf.nilebasin.org). More than 400 professionals, government officials and ministers, the media and students took part in the 5th Forum in Kigali in October 2017.

Figure 8: Nile Basin journalists receive awards at the 5th NBDF, Kigali, for excellence in reporting on Nile cooperation (Source: NBI)

BOX 6. AGRICULTURE, FOOD SECURITY AND NEXUS CHALLENGE

Agriculture accounts for more than 80% of water withdrawals in the Nile Basin (Timmerman 2005, Karyabwite 2000, FAO 2011b). The NBI has developed a greater understanding of water demand in agriculture, how to ensure sustainable watershed management to support rain fed-dependent upland agricultural communities, and improve water use efficiency including in economies where the agricultural sector is by far the most important productive sector and employer. Most irrigation is practiced in Egypt and Sudan, where topography and proximity to the Nile valley make this form of farming economically attractive. More than 90 per cent of the total area under irrigation in the Nile Basin is in Egypt and Sudan[8]. In fact, in most Nile Basin countries, cropped area is much less than area equipped for irrigation highlighting that irrigation is not just about water availability, but also economic feasibility. Many irrigable areas in the basin are far from markets, for example. Overall most agricultural output is produced on the 87% of lands under rain fed cultivation, including in upstream states. For more on the NBI's approach to water in agriculture, see: http://nilebasin.org/index.php/investments/agriculture

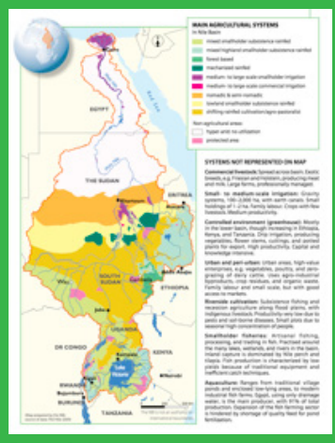
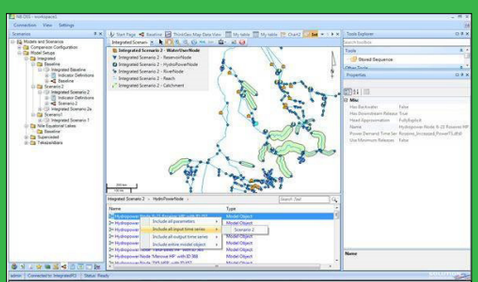


Figure 9: Agro-ecologies in the Nile Basin (Source: NBI, 2012)

BOX 7. DEVELOPING KNOWLEDGE MANAGEMENT AND DECISION SUPPORT



NB DSS Screenshot –river basin model schematic

To underpin the 'NBI track' a sound knowledge base has always been a priority area not least to reduce knowledge asymmetries between countries. One of the flagship information products of the NBI, the Nile Decision Support System, responds to this need for strong information systems built on comprehensive databases, helping support project planning, monitoring the state of the basin and ensuring optimal operation of infrastructure. The Nile Basin Decision Support System (Nile DSS) is a software framework delivering a shared analytical and knowledge system that assists member states in making rational decisions on water resources planning and management, and forms the backbone of the strategic planning process in the second decade of the NBI's development. The DSS provides communications, information management and analysis of water resources.

The development of the system during 2006 - 2012 generated a 'user community' comprising over 200 professionals from across the basin. The NBI developed the Nile DSS through a series of needs assessments to provide both policy and strategy-level and planning- and management-level inputs. For more information see: http://nbdss.nilebasin.org/support/home

8 NBI Strategic Water Resources analysis synthesis report, Nile-SEC (2016)

At the time of the mid-term review of the Shared Vision Program, which was conducted from July 16 – 27, 2007, there was the anticipation that the NBI would soon start its transition into a permanent institution. This wasn't surprising because, in February 2007, the remaining issue of the CFA negotiations, i.e. Article 14b, was referred to the Heads of State and there was expectation that this would possibly be resolved quickly. As a result, the SVP mid-term review recommendations focused, among others, on how the SVP can respond to this evolving context of Nile Basin cooperation. Already many of the SVP projects had passed their mid-term and would soon be completed. Therefore, it was critically important the SVP outputs needed to be captured and mainstreamed into the anticipated permanent institution. This was designed to happen through the Institutional Strengthening Project (ISP).

The NBI launched the ISP to pave the way for the establishment of a Nile Basin Commission (Cascao, 2012). This was to build on the successes achieved under the SVP, to prepare the NBI for the next phase of its development given uncertainty over the outcome of the CFA negotiations. The ISP was to provide an integrated package of strengthening to be implemented by NBI institutions.

BOX 8: THE INSTITUTIONAL STRENGTHENING PROJECT (ISP), 2008 - 2012.

The design of ISP was completed with optimism that Nile Basin countries would sign and ratify the Cooperative Framework Agreement (CFA) and establish a permanent institution within the lifespan of the project. With the delay in signing the CFA by some countries, the context changed significantly and called for a redesigning of the project.

With delay in ratification of the CFA and, hence, the non-establishment of a permanent institutional mechanism for the Nile cooperation changed the project context and the ISP had to be adapted to new realities during 2010 – 2012.

Under the ISP, the three core functions of the NBI were articulated as: Facilitating Basin Cooperation, Water Resources Management and Water Resources Development.

2.2.2 Action on the Ground; the Subsidiary Action Programs

The SAPs delivered tangible impacts on the ground, to complement the wider 'enabling' logic of the SVP. Preparation of SAPs cost some US$30 million and each project included two or more countries – the goal being to showcase that infrastructure and investment projects can deliver a multitude of benefits for several actors if the projects are studied and designed having a regional perspective in mind. The logic was to realize transboundary development opportunities within the agreed basin-wide framework. These projects provided 'fruits of cooperation' that were more tangible at country level. The expectation was that as benefits grew in number and extent, the purpose of cooperating over transboundary resources would then be reinforced, and countries would engage more actively in basin-wide projects rather than national and unilateral projects that would then provide a less optimal outcome. Developing the SAPs included not just project planning, but also wider analysis of socio-economic environments, including the role of gender-focused planning and development.

Most SAP projects focused on the major water resource thematic area with related joint investments in infrastructure, power and agricultural trade, the environment, and disaster management. SAPs

established programs that were driven, respectively, from Addis Ababa through the Eastern Nile Technical Regional Office (ENTRO) and from Kigali through the Nile Equatorial Lakes Subsidiary Action Program Coordination Unit (NELSAP-CU). In contrast to the Shared Vision Program, the SAPs were designed to evolve over time with a portfolio to be decided by the respective countries as the transboundary cooperation would progress and according to strategic directions about what, when and where to materialise those investments.

2.2.2.1 Eastern Nile Subsidiary Action Program (ENSAP)

ENSAP was premised on the recognition that Eastern Nile water resource management and development challenges are essentially transboundary in nature and cannot be addressed or tackled in isolation. The Eastern Nile Technical Regional Office (ENTRO), the executive arm of ENSAP, started operations in 2002. The first set of projects under ENTRO, the Integrated Development of the Eastern Nile (IDEN) program, included both fast and multipurpose track projects. With a legal status of its own, ENTRO was jointly owned at its establishment by Egypt, Ethiopia, and Sudan, and later joined by South Sudan in 2012.

ENTRO is responsible for driving the Water Resource Development function in ENSAP under two core thematic areas: Water Resources Development which includes cooperative investment preparation for irrigated agriculture, watershed management and hydropower

« ENTRO vision: To be a credible Eastern Nile institution fostering sustainable transboundary cooperative water resource management and development; and promoting regional integration »

generation and trade, and Water Resource Planning and Management studies, investment preparation, flood early warning, monitoring and capacity development through an internship program. In addition, ENTRO works on dam safety and coordinated cascade operation, including sediment management, and institutional strengthening. In 2019, ENTRO began implementation of a third five-year strategic plan and continues to run a successful ENTRO Young Professionals Internship program, having enrolled over 163 interns from across the Eastern Nile since 2011. The key projects under IDEN are as shown in Fig 8.

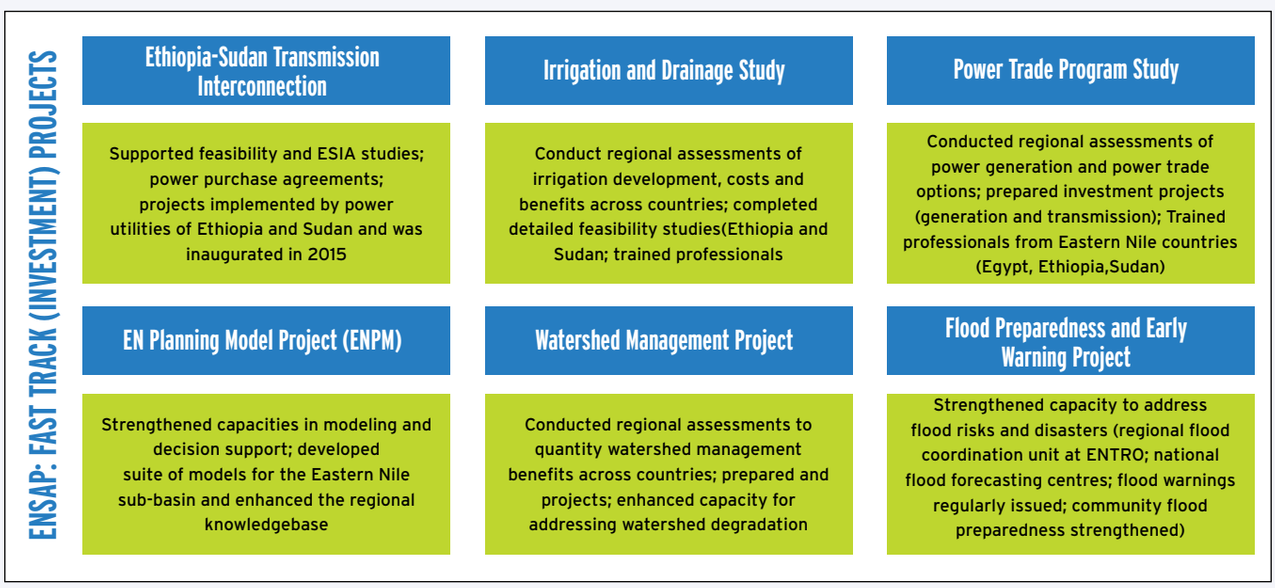
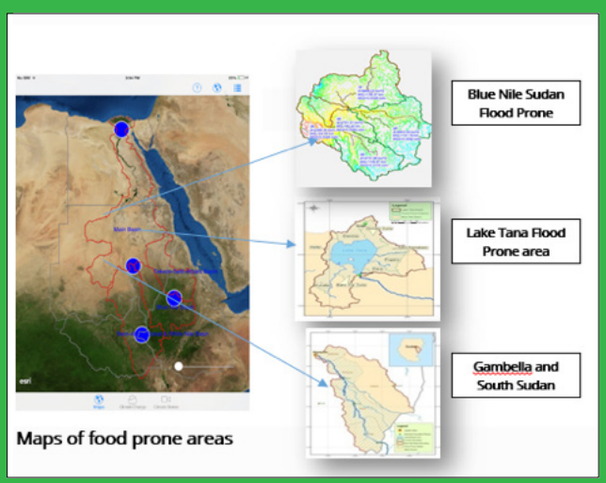


Fig. 8: Fast track projects under the ENSAP IDEN (more information in: http://entro.nilebasin.org/)

BOX 9: THE EN SEASONAL FLOOD FORECAST AND EARLY WARNING PROJECT

The Flood Forecast and Early Warning System (FFEWS) project started in 2010. Since the start FFEW has supported EN countries by producing flood bulletins with three day lead time; forecasted flood level and provided inundation maps for Lake Tana (Ethiopia), Blue Nile (Sudan), Gambella (Ethiopia) and South Sudan flood prone areas. Flood warnings and alerts are used by local communities, relief organisations and governments.



Maps of food prone areas

Results: *Enhanced regional coordination capacity;*

- National flood coordination units in the EN regularly share information and data that has contributed to a reduction in devastation from floods.
- *Strengthened institutional linkages*; National governments work closely with regional governments, relief agencies, and local communities, enhancing ownership of the system and processes.
- *Protected lives and property;* overall reduced the risk of flood devastation for about 2.2 million people in the Eastern Nile.

BOX 10: THE EASTERN NILE WATERSHED MANAGEMENT PROJECT (EN-WSM)

Jointly agreed upon by Egypt, Ethiopia and Sudan, the EN-WSM project became one of the earliest success stories of ENTRO. The project strove to establish a sustainable framework for the management of selected watersheds in Eastern Nile in order to address the root causes of catchment degradation, and reduce sediment transport and siltation of water bodies and infrastructure.

The project first undertook a collaborative study – the CRA (Cooperative Regional Assessment) – supervised by experts from Egypt, Ethiopia and Sudan. The CRA employed a range of no-borders, basin-wide analyses and quantified win-win benefits to be derived from regional cooperation. On that basis the project designed long term watershed management strategies along with 13 project profiles for fast-track implementation and piloting including in Ethiopia (Tana-Beles Watershed Project in Upper Blue Nile over 80,000 ha); in Sudan (Dinder and Lower Atbara Watersheds, 27,000 ha) and in Egypt Lake Nasser-Nubia (Lake Management Framework, sediment and water quality monitoring, bi-annual bathymetric survey). The project has designed a regional sediment and water quality monitoring framework along with Field Guides and Manuals. About 700 professionals from Egypt, Ethiopia, South Sudan and Sudan have been trained through workshops and exchange study visits in various fields, including: gully mapping and rehabilitation; soil and water conservation; rainwater harvesting; drainage control structures; GIS; nursery management and agro-forestry. Four bankable watershed projects covering nearly a million hectares and potentially benefiting a million people have also been prepared (2 in Sudan, 2 in Ethiopia) and are awaiting implementation.

The two 'multipurpose' activities under ENSAP were the Baro-Akobo-Sobat Multipurpose Development and the Joint Multipurpose Program. The **Baro-Akobo-Sobat Multipurpose Water Resources Study** looked at expanding irrigation and rain-fed agriculture, improving water conservation and developing hydropower and navigation. The data generated and analysed would form the basis for planning multipurpose projects in the sub-basin. In 2017 the project produced the first ever applied strategic study, in which was included a Strategic Social and Environmental Assessment. ENTRO prepared an integrated water resources development and management plan for the Baro-Akobo-Sobat sub-basin in 2017.

By contrast, the **Joint Multipurpose Project (JMP)** sought to coordinate investments and create an enabling institutional environment, the final goal of which was regional integration and transformations in socio-economic development and stability in the Eastern Nile. Led by multi-sectoral Regional Working Groups, the JMP carried out assessments and analyses of joint development opportunities and scenarios under a Scoping Study which took a 'no borders' approach as its organizing framework. A study commissioned by the decision-makers of the three riparian countries, commonly referred to as the 'Scoping Study' (2008), was conducted to inform discussions among the then three members of ENTRO, i.e. Egypt, Ethiopia and Sudan. However, no final consensus was reached on investment priorities and the project will have to be revived according to new political, economic and institutional realities.

2.2.2.2 Nile Equatorial Lakes Subsidiary Action Program (NELSAP) – Capturing opportunities, exploring options

Focused on the key riverine and lake resources in the upper portion of the White Nile/Albert Nile, the Nile Equatorial Lakes Subsidiary Action Program Coordination Unit (NELSAP-CU), headed by a Regional Coordinator, is the executive and technical arm of the Nile Equatorial Lakes Subsidiary Action Program (NELSAP). The CU is responsible for driving the Water Resource Development Program under NELSAP by assisting member states to identify and prepare investments in regional and transboundary water-related projects. NELSAP, which now comprises Burundi, DRC, Kenya, Rwanda, Tanzania, Uganda, Egypt, Ethiopia, South Sudan and Sudan promotes investments in a range of areas including power development and transmission interconnections, water resources management, lakes and fisheries management, and agricultural development. NELSAP's mission is to contribute to the eradication of poverty, promote economic growth and reduce environmental degradation.

Since NELSAP was first established in 1999 as an investment arm of the NBI for the Nile Equatorial Lakes sub-basins, it has become a catalyst for stimulating and accelerating regional power development and integration, taking account of the nexus between water and energy and therefore positioning itself as a strategic partner in strengthening the linkages between the Ministries in charge of Water Affairs and those in charge of Energy, where these are separate. NELSAP has built extensive experience, reputation and trust, as a result of implementing regional, high impact, bankable projects, with continued support from development partners.

The NELSAP-CU with the support of cooperating development partners and countries, works strategically and collaboratively with other regional institutions, to facilitate asset creation, preparation of in-country projects of regional significance and cross-border regional projects, resource mobilization, project implementation coordination and technical oversight on behalf of member countries.

NELSAP supports riparian countries to prepare and implement a number key regional investment projects in power development and trade, and water resources management and development. To date, it has mobilized cumulative finance for pre-investment programs of US$92 million and an additional US$980 million for investment projects. NELSAP has prepared pipeline projects which were approved for further development by the Nile Equatorial Lakes Council of Ministers (NELCOM) in October 2015. From a long list of 71 pipeline projects, 21 have been selected as priority projects for preparation at an estimated cost of US$72 million dollars; a further 16 investment bankable projects have also been prepared for implementation at a cost of US$1.9 million dollars during the short- to medium-term period, 2017-2022 (see Annex 4.2 for list of past and ongoing projects under the NELSAP).

BOX 11. THE REGIONAL RUSUMO FALLS HYDRO ELECTRIC POWER DEVELOPMENT PROJECT: AN NBI FLAGSHIP

The Rusumo Falls was identified as a potential area for hydropower generation as early as the 1970s to address the energy needs of Burundi, Rwanda and Tanzania. For several years, the three partner states discussed implementation of this important project without success. In 2006, the idea of developing the Regional Rusumo Falls Hydroelectric Project was revived by NELSAP-CU. NELSAP-CU coordinated preparation and the signing of several agreements, which includes the Joint Project Development Agreement, the Implementation Agreement and the Shareholding Agreement in 2013 by the three countries. **NELSAP-CU** further mobilized a **US$7.72 million** grant for the preparation of the project and **US$340 million** for the construction of the hydropower plan to generate cheaper electricity for the three countries. The three beneficiary countries formed the government-owned Rusumo Power Company Ltd (RPCL) that owns the plant and delegated the project implementation to NELSAP-CU. The RPCL will decide on the modalities for management and operation of the power plant.

Figure 11 Rusumo Fall main site, 2018 (Source: NBI)

Construction of the Regional Rusumo Falls Hydroelectric Project kicked off in March 2017 with implementation currently under the supervision of NELSAP-CU. The project's construction is expected to be completed by the end of 2020, at which point 80MW of electricity will be generated and shared by the three countries (each to receive 26.6MW on their national electric grids).

2.3. Evolving context: the pivotal period

In the history of the NBI, the period between 2010 and 2012 can be considered pivotal. Several internal and external factors contributed to very dynamic changes. This section does not deal with changes at national level that have influenced decisions over the future of the NBI, but rather focuses on two main developments – an internal one, with the signature of the CFA by six of the NBI member states, and an external one related to changes in the funding landscape.

On one hand, a new type of collective action emerged based on an upstream coalition deciding to go ahead with the signature of the CFA in May 2010, followed by strong reactions from downstream countries and some development partners. Downstream countries decided to opt out from the NBI (Sudan would only return at the end of 2012) and development partners strongly opposed any moves which would not include all the riparian states, as envisioned a decade before. Below is a brief account of main events that have provided the current shape of the NBI.

Following the signature of the CFA by six upstream riparian states in May 2010, Egypt and Sudan suspended their participation in NBI activities. They announced their decision during the Nile-COM meeting in Addis Ababa in June 2010. This particularly affected ENTRO, which was established by Egypt, Ethiopia and Sudan, and forced it to operate with only one member state remaining (South Sudan at the time was not an independent state and, hence, not a member of the NBI). Further, one of the scenarios (or assumptions) underlying the ISP project, namely that the CFA would be signed and ratified by a sufficient number of countries with eventual transitioning of the NBI into the Nile River Basin Commission, had not materialized.

The complex situation in the Eastern Nile Basin was addressed when Egypt, Ethiopia and Sudan met in Addis Ababa in November 2012 to find a way of resuming participation by Egypt and Sudan in ENTRO programs. It involved detailed negotiations between technical and political representatives on how to address the different positions of the countries, achieving an ambiguous solution that would allow the three to continue cooperation under ENTRO without necessarily compromising their positions regarding the CFA. Signed at a ministerial level on the 12th of November 2012[9] by the three countries, it was immediately endorsed by Sudan and Ethiopia but not by Egypt. It was this agreement that allowed Sudan's return to the NBI, while Egypt continued to suspend its participation.

With the impending closure of the NBTF in 2012[10] as per the original plan and with no prospect of a second NBTF being established, the future prospect of the NBI's financial sustainability and, by extension, its existence was called into question.

The period from 2010 to 2012 was therefore a critical period for the dialogue between development partners and also countries, with the former putting a lot of emphasis on countries increasing their financial contributions to the NBI in order to cover minimum levels of functionality. The countries have committed more financial resources – although payment by some has yet to be secured as expected.

The Nile-COM agreed in July 2012 to gradually increase member country annual cash contributions and fully finance the core operations of the NBI by 2017. The agreed annual contributions of member states duly grew from US$15,000 (agreed in Dar es Salaam in 1999) to over US$300,000 by 2017. Those countries that contributed to all three NBI centres would now contribute over US$400,000 per annum. This was a significant step towards ensuring the financial sustainability of the NBI's core operations in its three centres.

The closure of the SVP and ISP projects in 2012 meant a substantial shrinking of the NBI's activities and funding levels. All regional Project Management Units of the projects under the Shared Vision Program, which were located in various riparian countries, were closed and all national project staff left the NBI, significantly reducing the physical presence and, hence, the visibility

9 Full text available at: http://www.nilebasin.org/2016/entro/index.php/latest-news/131-outcome-of-theconsultations- among-the-eastern-nile-en-countries-on-encaenntre-challenges-sheraton-addis-ababa-november-5-6-2012

10 The NBTF was later extended by 2 years and closed on 31st December 2014.

of the NBI at national levels. However, if the national presence and the visibility of NBI has been reduced, the same cannot be said about the outcomes of the SVPs and ISP which were streamlined into the activities/projects of the 'new' NBI which had started under a new modus operandi from 2013.

At the beginning of 2013, the NBI started to adapt to new financing realities as differences between countries (regarding the CFA, and any kind of possible scenario of continuing technical cooperation in spite a deadlocked political track) could not be solved and continued to affect operations.

Having the above-mentioned political, institutional and financial pathways in mind, the NBI centres subsequently changed their working approaches. The second Strategic Action Program (2013 – 2017) was approved by Nile-COM in 2012 and provided the overarching program document for NBI activities. Mid-way into the implementation of the second Strategic Action Program, the scope of NBI programs changed substantially. The Nile-SEC moved from a project-based to a programmatic approach and ENTRO's work program was gradually geared towards knowledge generation, capacity development and analytic work to generate options for infrastructure management, including those for the coordinated operation of a cascade of dams and dam safety frameworks.

2.4 The NBI today

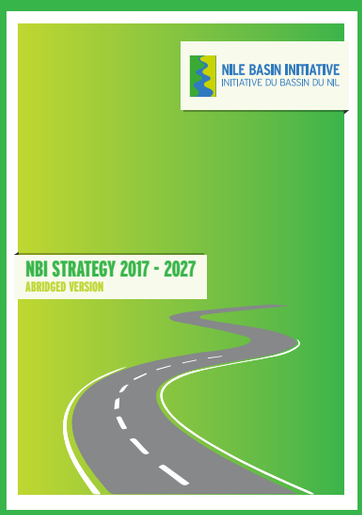
Starting around 2013, NBI programs changed substantially, adjusting not only to new realities of funding but also responding to the need to move away from a project-based towards a program-based approach in which the NBI increasingly assumes the role of a river basin organization.

By the conclusion of the second Strategic Action Program in 2017, both the NBI's institutions and programs had made noticeable changes. Important changes include:

- The Nile-SEC's water resources management unit, established at the end of the ISP, has grown into a core technical unit of the Nile-SEC, operating the Nile Basin DSS and providing user support and carrying out basin-wide water resources analyses to inform the dialogue on cooperative water resources management, formulating transboundary policies (e.g. the NBI Environment and Social Policy, the NBI Wetland Management Strategy, among others) and advancing the hydro-meteorological monitoring agenda that started under the SVP.
- ENTRO has adapted its program more towards knowledge generation, capacity development (with a strong young professionals program) and consolidated its flood forecasting and early warning activities;
- The NBI moved to a program-based approach (PBA) moving away from the project-based ones. The programs are stable work areas into which new activities are integrated, thereby providing stability and a more strategic focus to the work program of the NBI.
- For the first time in the NBI's history, all three NBI centres jointly developed a 10-Year Strategy (2017-2027). This is now being implemented through the strategic plans of ENTRO and NELSAP and the basin-wide program of Nile-SEC. The 10-Year Strategy was formulated based on intrinsic basin water resources management and development priorities to ensure the NBI's work programs remain relevant regardless of how the NBI evolves as an institution in the coming decade. The six pillars (priority areas) of the 10-Year Strategy are shown in Box 12.

BOX 12 NILE BASIN STRATEGY 2017-2027

1. Enhancing availability and sustainable management of the transboundary Nile water resources. Under this goal, the NBI strives to identify and prepare investment projects to increase storage capacity in the basin; support the improvement of water use efficiency in major water-use sectors; strengthen river basin monitoring and analysis of data from monitoring networks; promote conjunctive use of surface and ground water resources. and improve preparedness for flood and drought risks is Nile sub-basin.



2. Energy security. Under this goal, the NBI endeavours to enhance hydropower development and increase interconnectivity of electric grids and power trade in the basin. Under this goal, the NBI will identify and prepare investment projects for regionally significant hydropower generation options; and identify and prepare investment project for regional power interconnection and power trade.

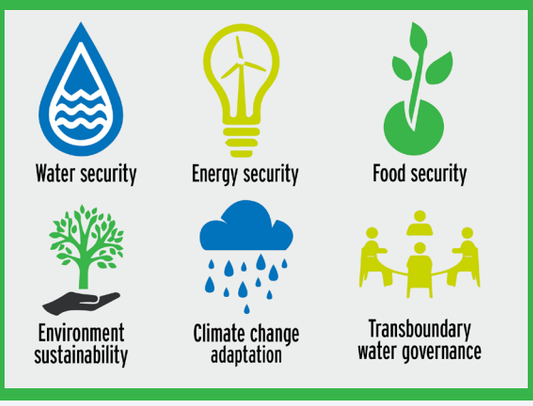
3. Food security. the NBI plants to induce and promote, through analytical work, an approach that examines and processes options for addressing the water-food nexus in the nile basin. The NBI will also identify and prepare investment projects for enhancing agricultural irrigation and promoting fisheries and aquaculture production

4. Environmental Sustainability. Under this priority area, the NBI will to promote the wise use and sustainable management of wetlands of transboundary significance; support enviromental flow assessments for critical river and lake ecosystems, support partner states in establishing and operating a strategic network of water quality monitoring stations,and identify and prepare projects for restoration of degraded watersheds and wetlands

5. Improve basin resilience to climate change impact. Here, the NBI plans to carry out climate vulnerability assessment for major water systems and water use sectors in the Nile Basin; generate scenarios of water availability under different climate change scenarios; prepare short-term to seasonal river flow forecasts to support operational water resources management; support harmonisation of climate change policies of the partner states; and build capacity of NBI centres and member states in areas of global climate finance.

6. Transboundary water governance. This focuses on building the capacity, and efficient operation, of the three NBI centres; facilitating meetings and other activities of NBI's governance bodies; raising funds for the Nile cooperation; building the capacity of transboundary water units of the members states; organising multi-stakeholder dialogue events to deliberate on issues of Nile cooperation and the management and knowledge products; and forge strategic partnership with other regional inter-governmental institutions such as IGAD and EACsee:

http//www.nilebasin.org/images/docs/NBI-Strategy-2017-2027-pdf)



- Further, institutional capacities of national transboundary issues have improved significantly enabling better integration of transboundary policies and practice in national processes. In the last 20 years most of the countries have stepped up their national transboundary offices to match the emerging needs from the NBI and other contemporary institutions. Commensurate budgets have also been provided to cater for the increased responsibility.

Notable new developments in the NBI's work program are highlighted in Box 13 with examples given in Boxes 14 – 18.

BOX 13: KEY HIGHLIGHTS OF NBI PROGRAMS

In Nile-Sec knowledge management and production moved to a new level of comprehensiveness with inclusion of social, economic and physical data and completion of the first State of the Basin Report in 2012 and the completion of the Nile Water Resources Atlas in 2016.

In Nile-Sec the NBI Strategic Water Resources Assessment (see Box 14) and 10-Year Strategy identified new specific goals to be followed and provided overall programmatic guidance to the whole process. A new 5-year program (2017-2022), referred to as 'Basin-wide Program', also established priorities for the Nile-Sec.

The NBI supported the development of transboundary policies (see Box 16) that address key water and environmental management issues.

In NELSAP the breaking of the ground on the Rusumo Falls Hydropower Project (see Box 11): For the first time in the Nile Basin, a jointly-owned infrastructure arrangement had been agreed between three states, facilitated by the NBI.

In ENSAP, new Dam Safety Guidelines produced by ENTRO represented a key step in performing a wider RBO-type role, illustrating both the gap and need for such capacity support and the role that the NBI centres can play in providing such support.

ENTRO's analytic work to develop options for the coordinated operation of the cascade of dams in multiple countries provides an opportunity for the three Eastern Nile countries to undertake deliberations on managing water storage dams.

The implementation of the first phase of the Nile Basin Regional Hydro-meteorological network has started.

Advancing the work that started under the SVP (NTEAP), the NBI has expanded its work program to address issues on sustainable management of wetlands of transboundary significance. The work program includes enhancing the knowledge base (an updated inventory and wetland atlas), conducting economic valuation of wetland ecosystem services and developing management plans.

Nile Basin Environmental Flows Strategy was developed by the NBI and approved by the Nile-COM. Currently, the strategy is being operationalized through a basin-wide assessment of environmental flows, which also feeds into the Strategic Water Resources Assessment.

The first Heads of State (HoS) Summit was conducted in June 2017 and focused on strategic regional development issues. The HoS agreed to meet in the future. The NBI developed the concept note for the second HoS Summit, which was approved by the Nile-COM in August 2018.

BOX 14. STRATEGIC WATER RESOURCES ASSESSMENT

The Strategic Water Resources Assessment was initiated following a directive of the Nile Council of Ministers in June 2015, to assess the current and projected future water demand in the Nile Basin and hence support the dialogue among the riparian states on how to address growing water demands in a sustainable manner. The first phase has been completed and established the status of water demand and water use in 2015. The analysis was accepted by the riparian states. Further, preliminary projections of water demand over the 2050 time horizon were made based on water resources plans of the riparian states (focusing on irrigation, hydropower and dam development). Likely water shortages were quantified under a range of climate change and natural climate scenarios. The results of Phase I were presented to the Nile-COM in 2016. Based on that, the scope of the second phase was approved by the Nile-COM. The second phase focuses on refining the water demand projections and generating strategic options for addressing likely imbalances in water supply and demand.

The work on dam cascade coordinated operation, one of the building blocks currently undertaken together with ENTRO, has also been reviewed under the Strategic Water Resources Assessment. The Experts agreed to extend the analytic work on dam cascade operation to the Nile Equatorial Lakes sub-basin (Lake Victoria to White Nile).

Debate at the Nile Economists' Forum in Entebbe, 2017, providing input into the wider strategic water resource analysis, phase II. (Photo: NBI)

Overall, the main components of the Strategic Water Resources Assessment are: collaborative water demand and water supply assessment; hydro-economic analysis of trade-offs between water uses and allocations and optimization of water allocation efficiency; as well as generation of strategic options for reducing any projected water shortfall. These options will cover infrastructure and water resources management measures that can be implemented individually by NBI Member States or through regional investment and basin management plans.

(Source: http://nilebasin.org/images/newsletters/Nile-News_March-2018.pdf)

An indicative timeline of the Strategic Water Resources Assessment is shown in Fig 9.

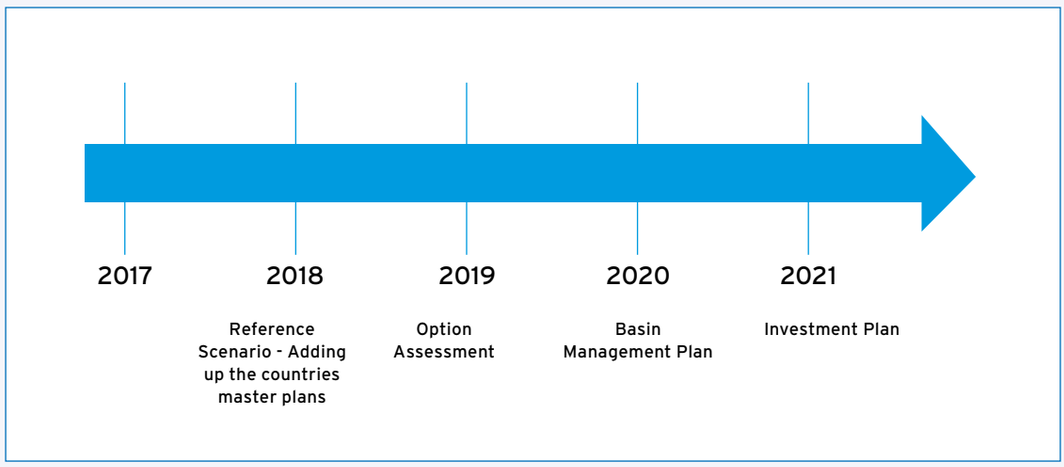


Fig 9: Indicative timeline for the Strategic Water Resources Assessment

BOX 15. LAKES EDWARD AND ALBERT INTEGRATED FISHERIES AND WATER RESOURCES MANAGEMENT PROJECT (LEAF II)

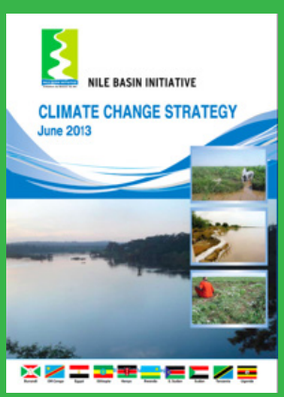
The LEAF II project, regionally coordinated by NELSAP-CU, is supporting the government and communities of the DRC and Uganda to sustainably utilize the fisheries and shared water resources of Lakes Edward and Albert Basins through a harmonized national legal framework and policies that reduce conflicts between the two countries over resources of the two lakes and their respective basins. The two governments accessed loan funding (Uganda) **5 million Unit of Account (UA)** and grants (DRC) of **6 million UA** both from AfDB whereby the regional coordination interventions are supported by a grant from GEF of **US$8.1 million.**

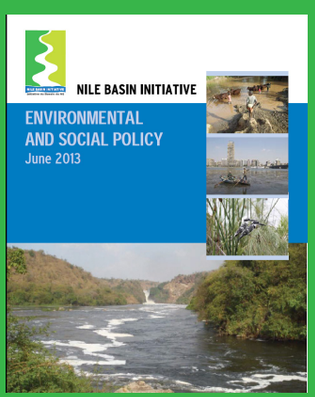
The two governments signed the Bilateral Agreement for Sustainable Management of Fisheries Resources and Aquaculture in Lake Edward and Lake Albert and their basins on October 20, 2018. A key outcome of this Bilateral Agreement is the establishment of a joint commission, the Lake Edward and Lake Albert Fisheries and Aquaculture Organization, which, once established, will be a permanent organization managing and coordinating activities for the two trans-boundary lakes with representation from both countries led by a Council of Ministers, a joint Executive Committee and a Secretariat. The Bilateral Agreement recognizes the right of each country to equitable access and utilization of the water and aquaculture resources in a sustainable manner. It forms mechanisms for the harmonization of fisheries policies and joint management and surveillance of activities of the lake.

BOX 16. TRANSBOUNDARY POLICIES

Nile riparian states endorsed a policy framework in 2012, the Nile Basin Sustainability Framework (NBSF), as an overarching policy document towards sustainability in the Nile Basin. The Nile Basin Sustainability Framework (NBSF) includes addressing Climate Change as one of its four pillars. Based on the NBSF, the NBI has developed a number of transboundary policies and strategies to guide transboundary water resources management and development.

Further information on the NBI's work in this area can be found here: http://nilebasin.org/index.php/transboundary-policies





BOX 17. INTERCONNECTION OF ELECTRICITY GRIDS OF THE NILE EQUATORIAL LAKES COUNTRIES PROJECT

The project is aimed at strengthening the power trade not only among the NEL region member countries, but also other regional countries' electric grids at a total cost of US$415 million. The on-going power interconnection lines constructed by the project are meant to bring power trade between the Eastern Africa Power Pool (EAPP) and the Southern Africa Power Pool (SAPP). The project's total transmission line length is 927km at 220kV and 400kV, with an associated 17 sub-stations involving five countries of the NEL region; Burundi, DRC, Kenya, Rwanda and Uganda on one side the Zambia – Tanzania – Kenya (ZTK) power interconnection line on the other part at 220kV. A feasibility study for the interconnection of the electric grids of the NEL region was conducted to upgrade the line to 400 kV that was completed in October 2012 at a cost of US$3.8 million under NBTF World Bank support. This study report was the basis of the on-going infrastructure development in the five countries mentioned above. The Rwanda – Uganda interconnection and Rwanda – DRC interconnection lines are complete while others have construction on-going.

Under the ZTK power transmission line, there is the Nairobi/Isinya-Arusha/Singida portion at 400kV running for 257km. The line is part of the EAPP System Master Plan 2005 recommended by the NELSAP Strategic/Sectoral, Social and Environmental Assessment (SSEA) 2017 studies of Power Development options in the Nile Equatorial Lakes Region. Under the coordination of NELSAP the feasibility study, detailed design and tender documents preparation, were conducted and completed in 2012. The interconnection was found bankable with Kenya and Tanzania having engaged contractors to construct the lines internally. On the other hand, the Tanzania – Zambia power interconnection feasibility studies, detailed design, and tender documents preparation, and ESIA/RAP were completed and handed to the two governments in December 2017 for financial closure. Tanzania has reached full financial closure while Zambia is mobilizing the required funds to implement the line. Once complete, the Zambia – Tanzania – Kenya power interconnection lines will fully interconnect EAPP and SAPP. This will improve the welfare of the population beyond the NEL region.

BOX 18. EASTERN NILE DAM SAFETY AND COORDINATED CASCADE MANAGEMENT

Initiated on the basis of the 2012 Strategic Social and Environmental Assessments (SSEA) of the Eastern Nile Joint Multipurpose Project (JMP-1), ENTRO's Dam Safety Program has become an ENSAP flagship. The program strives to standardize dam safety management in the Eastern Nile. So far, the program has trained more than 250 persons – including policy makers, regulatory ministry staff, water resources planners, dam owners, academia, related civil society and even parliamentarians of Eastern Nile countries. The program, in partnership with NORAD, has also extended assistance to the training of professionals from Liberia, Rwanda, Angola, Tanzania, Kenya, Mozambique, Zimbabwe, Nigeria, Malawi and Uganda. ENTRO's Dam Safety Program has also helped institution building by helping set up National Dam Safety Units and preparing training modules and dam safety guidelines for small and large dams.

ENTRO has now embarked on institutionalizing the coordinated operation of planned and existing transboundary cascade dams in the Eastern Nile. Toward this end a Road Map has been prepared. ENTRO's Reference Dam Safety Guideline is being reviewed by ICOLD (International Commission on Large Dams) for adoption world-wide. The recent appointment of ENTRO's Dam Safety Coordinator as Vice President of ICOLD is testament to the recognition of ENTRO's pioneering work in Dam Safety.

3. BRINGING THE BASIN TOGETHER: WHAT ARE THE LESSONS

Even though the NBI has faced many challenges in the past 20 years, it has never lost its relevance. The future of the NBI is probably no longer in question. Countries have committed to continuing the development of the NBI through country contributions. But the question is what kind of future? This section provides pointers on lessons that potentially can help in shaping future directions of the Initiative based on lessons learnt to date.

<< The NBI remains strongest when it is an idea, and that idea continues to have importance to most of the countries sharing this unique and fragile resource. >> (key informant)

What is now on-going under the NBI is embedding the regional processes it has established more firmly in national contexts, including planning and national development surrounding the SDGs. This is a key task and future direction and builds on an earlier lesson learnt that the NBI needs to remain grounded in national development processes while taking a one-system, basin-wide view. Basin-wide impacts of climate change, population pressures, the demand for employment and the safety of the environment remain paramount concerns at national levels.

From the reflections of those closely involved in the 20-year journey of the NBI, a number of lessons illustrate that although success has been achieved, future sustainability and impact should not be taken for granted.

<< The current level of cooperation is still fragile. The regional aspiration is to have a Nile River Basin Agreement that establishes a permanent Nile River Basin Commission acceptable to all the Nile Basin States. >> (key informant)

1. The vision of 'regionalism' in which the ideal of cooperation is embedded requires constant refreshing through new generations of practitioners being engaged in regional-level planning and analysis. The idea of cooperation can otherwise be easily lost, and the default position return to national-level planning and development only.
2. Difference in interests and positions among riparian countries are not unitque to the Nile Basin. Currently, among the NBI member states three of them have not signed the CFA, three of them have signed and ratified the CFA while the other three have signed but not ratified. However, they are working together and advancing the cooperation regardless of their differences over the CFA. Therefore, differences shouldn't be seen as disruptive rather as reasons for building more trust and stronger consensus among the countries.
3. The tension with 'regionalism' is that continued

<< Signing of the CFA should not be a pre-condition for the NBI cooperation nor should the non-progression of CFA be a constraint upon the NBI's performance of its own mandate. Fundamentally, regional cooperation entails some level of risk, e.g. to national sovereignty – and therefore requires developing and maintaining a level of trust – both within and among participating countries.>> (key informant)

<< Analyzing the Nile cooperation journey twenty years since its establishment, what were its objectives, what was/was not achieved, and why; and the benefits accrued to date from that cooperation >>

unilateral project development at national levels could detract from the wider NBI purpose. This is not necessarily the case if the NBI is seen as more than a basin-wide planning institution, but rather a curator of developments in the basin and one to which basin states regularly pose questions and seek answers. Whilst not everything that constitutes river basin development can be accommodated under one umbrella organization, the fact that major structural changes to the Nile system have occurred in the past 20 years outside the NBI but that the NBI has responded and remained relevant and useful, is evidence of its continued purpose and added value.

4. Benefit sharing as a concept has been central to the purpose of the NBI and to its design and implementation. Yet a more systematic approach to identifying and understanding benefit-sharing frameworks has not fully emerged. Under the strategic planning process this could continue to be constructed as a framework for continual identification of mutual benefits, and identifying how benefits can be gained through more cooperative planning as one system across 11 countries.
5. The nature of subsidiarity in the basin has proven an effective device to speed up decision-making and tailor projects to local circumstances. There is need to do more to ensure commonalities in approach across the sub-basins and to avoid overly projectized programming in future. Subsidiarity, in other words, needs to be accompanied by continued basin-wide stakeholder engagement and project development across the NBI that surpasses the simple binary division of NEL and EN.
6. Large projects that can leverage change at scale are critically important, even if the success of such projects has only been partial. Their capacity to effect change and be 'transformational' on multiple levels and at scale is necessary to create incentives for future cooperation and to ensure a move away from a profusion of smaller-scale projects.
7. More substantive engagement with regional development mechanisms such as the EAC, COMESA, IGAD, LVBC will enable the NBI to connect its planning and strategizing with regional economic development plans, strategies and targets.

<< Fragmented approaches are still the rule, not the exception >> (key informant)

In the last 10 years the NBI has regularly acknowledged challenges ahead. Among the lessons learnt has been the inherent slow pace of joint investment projects prepared by the NBI with participation of member states, and therefore delays in meeting the demands and development priorities of growing economies and populations. If perpetuated, this could precipitate an increasing number of major unilateral water resources investment projects planned and implemented at a national level.

At the start of the third decade of its existence, it is clear that the NBI will, more than ever before, need to continue developing as an initiative owned (and supported) by all countries. The inexorable logic of collective action in the face of mounting threats is expected to draw countries closer together. What is needed now from stakeholders both within and beyond the basin is a renewed sense of commitment to the core *idea* of cooperation – the NBI's greatest strength and its most enduring legacy.

4. ANNEXES

4.1 Documents

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4.2 List of completed and on-going NELSAP projects

Completed water resources projects

1. Lakes Edward and albert Fisheries Project (LEAF I), AfDB funded with US$2.3 million (2005-2008).
2. Regional Agricultural Trade and Productivity Project (RATP), financed by the World Bank up to a tune of US$7.0 million and implemented over a four (4) years period (2009 -2012).
3. NELSAP Trans-boundary River Basin Management Program, funded by Sweden and Norway to the tune of US$6.484 million and implemented over eight years (2006-2014)
4. Nile Equatorial Lakes Water Resources Development Project, funded by World Bank at a cost US$4.895 million and implemented over a two year period (2010-2012).
5. Climate Adaptation Mainstreaming Project: Funded by the Government of Germany through KFW to a tune of Euro 400,000 to develop criteria for mainstreaming climate adaptation into investment projects. The project was implemented over two (2) years period (2010-2012).
6. Integrated Management of Transboundary Water Resources of Lakes Cyohoha, Rweru and Akanyaru Marshland Project. Funded by African Development Bank through African Water Facility to a tune of Euro 770,000. The preparatory study was implemented over three (3) period (2010 – 2012).

On-going water resources projects

1. The Nile Cooperation for Results Project: US$14.7 million project funded through the Nile Basin Trust Fund and the Cooperation in International Waters in Africa (CIWA). It is part of the Nile Basin Climate Resilient Growth Program, (2013 to 2021).
2. NYIMUR/LIMUR Multipurpose Water Resources Project Studies: Funded by the African Development Bank through the African Water Facility of the (AWF/AfDB) to a tune of Euro 1.975 million.
3. Technical Assistance for Capacity Building for River Basin Planning Project: Funded by Agence Française de Développement (AFD) to a tune of Euro 1 million.
4. Multinational Lakes Edward & Albert Integrated Fisheries & Water Resources Management Project (LEAF II): Funded by African Development Bank (AfDB) through a Grant of 6 million UA (*US$8.785 million*) to the Democratic Republic of Congo, a Loan of 5 million UA (*US$7.321 million*) to Uganda, and Grant of US$8.1 million from the Global Environment Facility (GEF) through the AfDB to the NELSAP-CU. The project will be implemented over 5-year period (July 2016 – June 2021) with a total financing of US$ 23.75 million.

Completed power projects

1. The Regional Power Trade Project. Funded by the World Bank up to tune of US$10.35 million and implemented over a five (5) year period (2004-2009).
2. The Strategic/Sectoral, Social and Environmental Assessment SSEA) of Power Development Options in the Nile Equatorial Lakes Region Study Project. Funded by World Bank to a tune of US$3.0 Million and was implemented over three (3) years period (2005 -2007).
3. Feasibility study of the Interconnection of the Electric Grids (220 & 110 kV) for of the Nile Equatorial Lakes Countries Project. Funded by African Development Bank to a tune of UA 1.99 MUA (US$3.08 million), which implemented over 2 year period (2007-2008).
4. Feasibility study of 80MW Regional Rusumo Hydroelectric Power Plant & 220 kV Transmission Lines. Fund ed by the Word Bank-AITF to a tune of US$7.72 million and implemented over four (4) year period (2006-2010).

5. Feasibility study of Kenya-Tanzania 400 kV Interconnection Project: Kenya (Isinya) to Tanzania (Arusha to Singida) with a distance of 507 Km (93km in Kenya and 414km in Tanzania), funded by Norwegian Government to the tune of US$4.0 million (NOK 24 million) and implemented over four (4) period (2009-2012).
6. Feasibility study of Iringa-Mbeya 400 kV in Tanzania: Iringa to Mbeya (292Km) section inside Tanzania. Funded by Nile Basin Trust Fund (NBTF) to tune of US$1.88 million. The project was implemented over 2 year's period (2010-2013).
7. Feasibility study of Uganda-DRC 220 kV Power Interconnection. Funded by Norwegian Government to a tune of NOK 18.0 million (US$3 million) and implemented over a two (2) year period (2012-2013). The projects comprises power interconnection of 352 km between Uganda (Nkenda) - DR Congo (Beni-Bunia-Butembo) (72 km in Uganda and 280 km in DRC.
8. Feasibility study of Tanzania-Zambia 330/400 kV, Power Interconnection Project: Financed by Norwegian Government and the European Union, COMESA regional window, through KfW with a total of US$5.86 million (EU through KFW to the tune of euro 2.26 million and the Norwegian government in the tune of NOK 18.612 million). The project was implemented over four and half year's period (2013 to 2017). The Project comprises a power transmission interconnector between Tanzania (Mbeya) to Zambia (Kabwe) with a stretch of 1,322 km of new transmission lines (414 km is in Tanzania and 908 km in Zambia) as well as development of nine(9) associated substations.
9. Hydropower Expansion and Regional Integration for South Sudan Study. Funded under the Nile Cooperation for Results Projects (NCORE) instrument to a tune of US$0.985 million and implemented over one(1) period (2014-2015)
10. Supplementary Power Interconnection studies Project. Financed by the European Union through the African Development Bank to a tune of Euro 2.0 million. The studies were implemented over one and half year's period May 2015 to March 2017.

On-going power projects

1. Interconnection of Electric Grids of the Nile Equatorial Lakes Countries Project: The Power Interconnection project covers five (Kenya, Uganda, Rwanda, Burundi and DRC) countries with a total of 946km of 220kV/ 400kV transmission lines and 17 associated substations. The project was financed up to a tune US$490 million (US$443 million from Donors and US$47 million from countries).
2. Regional Rusumo Falls Hydroelectric and Multipurpose Project: Power Plant of 80 MW installed capacity, funded by World Bank Loans/ Grants at a cost of US$340 million the and (ii) the transmission lines to three countries, funded by African Development Bank (AfDB) at a cost of US$121 million. These include 220kV transmission lines double circuit running 161 km from the power plant to Gitega substation in Burundi, 119km double circuit line from the Power plant to Shango sub-station in Rwanda and 98.2 km double circuit line from the power plant to Nyakanazi sub-station in Tanzania. The transmission lines implemented through respective countries.
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DEVELOPMENT PARTNERS

The Nile Basin Initiative sincerely thanks its Development Partners and Friends of the Nile, for their continued support and commitment to the Nile Cooperation process since 1999.

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