



OneRiver OnePeople OneVision

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Ministers in charge of Water Affairs and Representatives of the Nile Basin countries during the 19th Nile Council of Ministers' meeting held in Nairobi, Kenya - July 2011

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HON. PROF. MARK J. MWANDOSYA **MINISTER OF WATER, TANZANIA** 

#### **ABOUT THE NILE BASIN INITIATIVE**



The Nile Basin Initiative (NBI) is an inter-governmental organization dedicated to equitable and sustainable management and development of the shared water resources of the Nile Basin. Member States include Burundi, Democratic Republic of Congo, Egypt, Ethiopia, Kenya, Rwanda, Sudan, Tanzania and Uganda. Eritrea and South Sudan participate as observers. The NBI was established on 22<sup>nd</sup> February, 1999 by Ministers responsible for Water Affairs in each Member State. These Ministers comprise the governing body known as the Nile Council of Ministers (Nile-COM) supported by the Nile Technical Advisory Committee (Nile-TAC). The latter is comprised of technical representatives from the Member States. The Nile-TAC offers technical support and advice to the Nile-COM on matters related to the management and development of the common Nile basin water resources and provides oversight for NBI programmatic activities. A Shared Vision and a Strategic Action Program to operationalise NBI were agreed upon to guide Nile cooperation.

#### SHARED VISION TO ACHIEVE SUSTAINABLE SOCIO-ECONOMIC DEVELOPMENT THROUGH THE EQUITABLE UTILIZATION OF, AND BENEFIT FROM, THE COMMON NILE BASIN WATER RESOURCES.

#### **NBI'S CORE FUNCTIONS**

#### **FACILITATING COOPERATION**

The NBI provides a platform upon which Member States can deliberate issues of trans-boundary water resources management and development.

#### WATER RESOURCE MANAGEMENT

The NBI provides analytic tools and a shared information system that enables Member States to monitor and sustainably manage the Nile Basin's water resources.

#### WATER RESOURCE DEVELOPMENT

The NBI assists Member States to identify development opportunities, prepare projects and seek investments. Development programs are focused on power trade and generation, agriculture and river basin management.

#### **NBI CENTERS**

#### NILE-SECRETARIAT

The Nile Secretariat (Nile-SEC) is the executive arm of NBI responsible for the overall corporate direction as delegated by the Nile Council of Ministers. It is also the lead centre for NBI's two core functions, namely 'Facilitating Cooperation' and 'Water Resource Management'. Nile-SEC is based in Entebbe, Uganda.

#### EASTERN NILE TECHNICAL REGIONAL OFFICE

The Eastern Nile Technical Regional Office (ENTRO) is the executive arm of the Eastern Nile Subsidiary Action Program taking the lead in Water Resource Development in the Eastern Nile sub-basin (Egypt, Ethiopia and Sudan). ENTRO is based in Addis Ababa, Ethiopia.

#### NILE EQUATORIAL LAKES SUBSIDIARY ACTION PROGRAM COORDINATION UNIT

The Nile Equatorial Lakes Subsidiary Action Program Coordination Unit (NELSAP-CU) is the executive arm of the Nile Equatorial Lakes Subsidiary Action Program (NELSAP) taking the lead in Water Resource Development in the Nile Equatorial Lakes sub-basin (Burundi, Democratic Republic of Congo, Egypt, Ethiopia, Kenya, Rwanda, Sudan, Tanzania and Uganda). NELSAP-CU is based in Kigali, Rwanda.



"NBI-NELSAP conducted the strategic/sectoral Social and Environment Study of the power development options in the Nile Equatorial Lakes region. Following this study, they mobilized funding on behalf of the participating countries: Burundi, Kenya, Rwanda and Uganda for a bankable feasibility study, undertook the study and conceptualized the project (Regional Transmission Interconnection Project). Rwanda together with those participating countries is poised to move forward, confident about the sustainability of the project."

Hon. Ambassador Stanislas Kamanzi, Minister of Water, Environment and Natural Resources



This profile provides a brief description of the Nile Basin Initiative, the cooperation with Rwanda and highlights benefits of the cooperation. The benefits are results of more than a decade of cooperative effort in water resource management and development in the Nile Basin.

R wanda has actively participated in NBI programs and projects since 1999 when the Initiative was formed in Dar es Salaam. The Ministry of Water, Environment and Natural Resources is the focal point government institution that coordinates NBI activities in Rwanda. The Minister of Water, Environment and Natural Resources represents Rwanda on the Nile-COM. Similarly, two senior government officials repre-

sent the country on the Nile-TAC. Steady progress is also being made in integrating NBI activities in the national plans.

Rwanda provides office premises for NELSAP-CU as well as Project Management Units based in Kigali. In addition, Rwanda makes both cash and in-kind contribution annually towards NBI's (Nile-Sec and NELSAP-CU) operational costs.





Cash contribution to Nile-Sec and NELSAP-CU is approximately USD 35,000 and USD 15,000 respectively.

Annual in-kind contribution is approximately USD 450,000. This contribution includes; supervision and technical guidance by members of the the Nile Equatorial Lakes Technical Advisory Committee (NEL-TAC) and the Nile-TAC, participation of Ministry officials in specialized meetings on NBI issues, hosting incoming NBI missions as well as telecommunication services. Furthermore, staff time through either secondment or direct hire of coordinators based on relevant sector institutions (Water, Power, Agriculture, Environment and Finance) is increasingly being devoted to NBI's different programs and projects.

Further in-kind contribution is in the form of hosting and financially contributing to regional events such as Nile-COM meetings, Nile Day (2007) which is celebrated annually on 22<sup>nd</sup> February and the Nile Basin Development Forum (2011) held every two years.

The Government of the Republic of Rwanda signed the Cooperative Framework Agreement (CFA) on 14<sup>th</sup> May 2010 in Uganda, to establish a permanent river basin organization that aims at ensuring the sustainable development and equitable utilisation of the common water resources of the Nile basin.

# Unlocking the Nile Basin's Development Potential Benefits of Cooperation: Rwanda



The benefits to Rwanda are results of more than a decade of cooperative effort in water resource management and development in the Nile Basin. Broadly and at a basin-wide level the results include: the establishment of a transitional regional institution; the preparation of investment projects worth more than USD 1 billion; and the creation of scientific tools (e.g. Nile Basin Decision Support System) as well as capacity building (institutional and technical) for joint planning and management of the shared waters of the Nile Basin.

Rwanda derives benefits from NBI's facilitation in the following core areas:

- Water Resource Development: The NBI assists Member States to identify development opportunities, prepare
  projects and seek investments.
- Water Resource Management: The NBI provides analytic tools and a shared information system that enables Member States to monitor and sustainably manage the Nile Basin's water resources.
- Facilitating Cooperation: The NBI provides a platform upon which Member States can deliberate issues of trans-boundary water resources management and development.

The benefits, some of which have already been realised while others are potential, are elaborated in the following pages.

Unlocking the Nile Basin's development potential

### Water Resource Development

The NBI through its Subsidiary Action Programs (SAPs) promotes investments in three critical areas of priority to all Member States namely Power, Agriculture and River Basin Management. The role of NBI is to **identify opportunities** and **prepare investment projects** which contribute to economic growth and poverty reduction. The NBI **assesses costs** and **benefits** of participation in proposed joint projects and **facilitates agreements on cost-benefit sharing** among Member States who are party to joint projects. The NBI also supports investment **resource mobilization, preparation of multi-country agreements** and provides technical assistance in project supervision and monitoring during project implementation, if and when requested.

#### POWER

Electrical power constitutes one of the areas where the Nile basin's infrastructure has fallen short of potential, but where cooperation is beginning to show tangible results. NBI has built regional capacities and provided a forum for dialogue for countries to promote power trade in the Nile Basin, by bringing together officials from national utilities and ministries in charge of electricity affairs in all Nile basin countries. Technical specialists and policy makers are working to build capacity to negotiate and manage power trade arrangements.

While possible transmission interconnections had been identified prior to the formation of the NBI, some even decades earlier, the Member States lacked the mechanisms to jointly prepare and advance the infrastructure and policy environment needed for power trade. Today, the NBI has filled this void by providing a platform for Member States to negotiate necessary agreements as well as conducting the detailed studies and preparation work necessary to advance the investment programs. As a result, Ethiopia and Sudan are now connected by transmission lines and multiple interconnections are underway in the Nile Equatorial Lakes region, with established protocols for sustained regional power trade. The enhanced infrastructure capacity and transmission in power interconnection will increase the countries' options and accessibility to cheap and reliable power.

#### AGRICULTURE

Agriculture plays a significant role in economic development of the Nile Basin countries and accounts for about one quarter of the Gross Domestic Product (GDP). The agricultural sector absorbs 30-92% of the labour force, reflecting the wide variation in the importance of agriculture in the region. The NBI has so far collected best practices in water harvesting, small scale and large scale irrigation and development of new schemes in the Nile basin, with the objective of improving water use efficiency and crosscountry learning.

#### **RIVER BASIN MANAGEMENT**

River basin management in the Nile Basin presents challenges that are national, regional and transboundary. Throughout the region, forests, woodlands and wetlands are continuously lost as the population seeks out new areas for grazing, farming or burning charcoal from trees. Joint action generates 'public goods' and reduces costs of extreme water events associated with climate variability and change such as floods and droughts. Joint river basin management enhances watershed management and conservation of the eco-systems thereby enhancing integrated water resources management and ensuring sustainable development.



### **POWER OPTIONS & TRANSMISSION LINES IN RWANDA**

Unlocking the Nile Basin's development potential



# Regional Rusumo Falls Hydroelectric Project



#### Total Planned Investment USD 430.0 million

#### Project Preparation Cost USD 11.9 million

Expected Commissioning Date 2017

**Participating Member States** 



Before

# The Regional Rusumo Falls Hydroelectric Project will have an Installed capacity of 80 MW (Run of River Scheme at 1320masl) to be shared among Burundi, Rwanda and Tanzania. The power generation infrastructure will be located at Rusumo Falls on the border between Tanzania and Rwanda. The transmission lines will extend from the power generation plant to Gitega in Burundi, Kigali in Rwanda, and Nyakanazi in Tanzania.

The Regional Rusumo Falls Hydroelectric Project is operated under NELSAP-CU and the Project Management Unit is located in Kigali, Rwanda.

#### **Project Objectives**

NBI Role

- Increase additional generating capacity of 80 MW for meeting the ever rising demand of electricity in Burundi, Rwanda and Tanzania.
- Interconnect the national grids of Burundi, Rwanda and Tanzania.
- Facilitate power trading in the region.

Conducting feasibility studies.

implementation activities such

as setting up a 'Special Purpose

Vehicle Company,' an institution

which will be responsible for

implementing the project. The

institution will be owned by the

three beneficiary governments.

Initializing dialogue between the

three governments on one hand

other for financing the project.

Supporting the establishment of environmental and social monitoring guidelines for the project during and after

implementation.

and Development Partners on the

Training personnel from the three

beneficiary Member States with practical 'on-the-job' emphasis during the construction phase.

Carrying out project pre-

No Regional Hydroelectric Project among Burundi, Rwanda and Tanzania. All the three countries are currently facing a shortage of power generation capacity to meet the current power demand.

#### Benefits/ Potential Benefits

- Reduction in the current power shortage by generating an additional 27 MW of electricity.
- Strengthened national power grids.
- Reliability and security of power supply.
- Enhanced power trading within the region allowing Member States to sell surplus power within the region and also import power when in deficit.
- Promotion of economic development in the region-Small Medium Enterprises (SMEs), water supply, health and sanitation.
- Rural electrification by national utilities as more capacity will be available in the grids.
- Reduction in GHG emissions from diesel and other generation sources leading to reduced pollution and improved environment.

An additional 27 mw of electricity per country out of the 80 mw generated by the project will contribute to reduction in the current power shortage.

POWER

# **Regional Transmission Interconnection Project**



Total on-going Investment USD 363.0 million

Rwanda Contribution USD 5.5 million

Project Preparation Cost USD 9.0 million (Phase 1) Estimated Total Project Cost USD 400.0 million Participating Member States Access to electricity is a priority for the Nile Equatorial Lakes (NEL) countries' economies because it is a prerequisite for poverty reduction and economic growth. The majority of NEL countries have very low access to electricity, with an average of 6%. Load shedding is common to all countries such that industrial and domestic consumers often experience erratic service. This is mostly due to demand surpassing supply as well as limited power trade in the region, which could arrest the situation.

Under the Regional Transmission Interconnection Project, over 769 km of 220 kV and 110 kV transmission lines and associated sub-stations are to be constructed to interconnect electric grids. This will improve access to electricity through increased cross-border sharing of energy and power. The Project is coordinated under NELSAP-CU and the Project Management Unit is located in Kigali, Rwanda. Overall, the project consists of three Components as follows:

- i. 220 KV Uganda (Bujagali) Kenya (Lessos) interconnection (256 km)
- ii. 220 KV Uganda (Mbarara) Rwanda (Kigali) interconnection (172 km)
- iii. Rwanda Burundi DRC (Eastern part) (R-B-C) Interconnections:
  - a) 220 KV Ruzizi Bujumbura (112 km) to Kiliba (19 km)
  - b) 220 KV Ruzizi Goma (150 km)
  - c) 220 KV Kibuye-Gisenyi-Goma-Kigali (about 200 km)
  - d) 110 KV Rwanda (Kigoma) Burundi (Rwegura) about 120km

#### **Project objective**

Improve access to electricity in NBI Member States through increased cross-border sharing of energy and power.

#### Before

Limited power trade between:

- Uganda and Kenya at 132 KV
- Rwanda-Burundi-DRC from a jointly developed Ruzizi 2 (45 MW) operated by a joint utility - SINELAC.
- Limited cross-border electrification between Uganda-Rwanda; Uganda-Tanzania; Kenya-Tanzania.

#### NBI Role

- Promoting the project.
- Undertaking feasibility studies.
- Mobilizing funding from African Development Bank (AfDB), JICA (Japan), KFW (Germany) and The Netherlands as well as the European investment Bank (EIB).
- Providing overall project coordination at regional level and technical assistance to the National Project Coordination Units.

#### Benefits/ Potential Benefits

Provision of transmission lines to relay power from generating plants: Bujagali and Karuma in Uganda, Lake Kivu Gas Methane in Rwanda and geothermal plants in Kenya. This will further give rise to the following benefits:

- Increased cross-border exchange and trade energy at 220 KV.
- Improved transient stability of the systems' safety.
- Affordability of supply as well as flexibility in the operation of the interconnected networks of the five beneficiary Member States.
- Accelerated decommissioning of expensive power generation options such as thermal and the use of generators.
- Reduced tariffs.
- Support to rural electrification programs.
- Load diversity savings.
- Evolution of a power market dedicated to:
- · Improved standards of living and economic development.
- Positive contribution to environmental management through reduced deforestation.
- Evolution of a power market dedicated to:
  - Cost effective electricity supply.
  - Cost reflective tariff.
  - Continuity of service of load demand to ensure secure, safe, and reliable operation of the system nationally and regionally.

Unlocking the Nile Basin's development potential

# AGRICULTURE

# **Regional Agricultural Trade and Productivity Project**





Pre-feasibility studies for five irrigation schemes have been prepared covering the following focal areas: Sake – 2073 hectares, Akagera NP – 6558 hectares, Kigali – 2694 hectares, Muyira/Butare – 8618 hectares, Nyabitekeri –12927 hectares

#### Project Preparation Cost USD 7.0 million (Phase 1 & 2)



The Regional Agricultural Trade and Productivity Project will conduct studies that will highlight potential agriculture and agricultural trade opportunities in the Nile basin countries and beyond. It will also increase knowledge of basin agriculture in NBI institutions and promote more efficient and sustainable use of water resources and economically viable investment in agriculture. The Project is coordinated under NELSAP-CU and the Project Management Unit is located in Bujumbura, Burundi.

#### **Project objectives**

- Define NBI future agricultural functions.
- Support productive water-use in basin agriculture.
- Incorporate agricultural trade into basin water resource planning.

#### Before

- Absence of decision support tools for Agricultural Investments.
- No consistent information on irrigation potential.
- Lack of user friendly training materials on best practices in water harvesting and small scale irrigation.
- Scattered information on trans-boundary agricultural trade lssues.
- Water footprint and comparative advantage not documented and used by countries.

#### NBI Role

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- Defining Nile Basin Member States' core agricultural functions.
- Extending the Nile Basin Decision Support System (Nile-DSS) to agricultural decision tools and integrating agricultural data and information into the Nile-DSS.
- Assessing irrigation potential in selected Nile Equatorial Lakes countries and preparing pre feasibility studies for at least four irrigation schemes per country.
- Preparing and disseminating training materials on best practices in rain water harvesting and small scale irrigation.
- Conducting analysis of selected cross border trade corridors and identifying potential investments in Agricultural cross border trade.
- Analyzing and documenting virtual water and water foot print for major commodities.

#### Benefits/ Potential Benefits

- Informed decision making in agricultural policies and investments.
- Pre-feasibility studies for four to five irrigation schemes prepared for each Member State for resource mobilization.
- Trained people and prepared materials on best practices in water harvesting and small scale irrigation.
- Policies and investment profiles available to beneficiary Member States to improve regional trade.
- Policy options on virtual water/ water footprint developed and used in investment decision making by Nile Basin countries.

# RIVER BASIN MANAGEMENT

### Kagera River Basin Management Project



#### Total Potential Investment USD 500.0 million

Project Preparation Cost USD 10.19 million (Phase 1 & 2)

Expected Start Date of Implementation Phase January 2013

**Participating Member States** 



The Kagera basin area has insufficient water for household use and for grazing despite the abundant water sources found in the area. Wetlands have been exploited and degraded, and there is cross border migrations of pastoralists which cause conflicts. Cooperative water resources management offers unique opportunities as catalysts for greater regional integration both social-economic and political with potential benefits exceeding those derived from the river itself. The Kagera River Basin Management Project aims at developing tools and permanent cooperative mechanisms for the joint management of the water resources in the Kagera River Basin and to protect the environment. The Project is coordinated under NELSAP-CU and the Project Management Unit is located in Kigali, Rwanda. In Rwanda, the project is operational in 25 districts of Rwamagana, Kayonza, Ngoma,Kirehe, Gatsibo,Nyagatare, Bugesera, Muhanga, Kamonyi, Ruhango, Nyanza, Huye, Gisagara, Nyamagabe, Nyaruguru, Gicumbi, Rulindo, Musanze, Gakenke, Burera, Karongi, Ngororero, Kicukiro,Gasabo and Nyarugenge.

#### **Project objectives**

- Establish a sustainable cooperative framework for joint management of the shared water resources of the Kagera River Basin.
- Develop an investment strategy and conclude pre-feasibility studies.
- Build capacity at all levels for sustainable management and development of the Kagera River Basin.
- Implement small scale investment projects that provide early tangible benefits to the population and promote confidence in the cooperation on the Nile.
- Facilitate Lake Victoria Environmental Management Project II (LVEMP II) preparatory activities for Rwanda and Burundi.

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**NBI Role** 

# RIVER BASIN MANAGEMENT

#### Before

- No legal and policy framework between the Kagera riparian countries (Burundi, Rwanda, Tanzania, and Uganda) for joint and trans-boundary development and implementation of shared water resources.
- No joint investment projects with trans-boundary aspects and benefit sharing.
- Inadequate capacity in water resources planning and development.
- Lack of confidence in what NBI/NELSAP can do to promote the socioeconomic welfare of riparian populations and protect the environment.
- Rwanda and Burundi were not part of the LVEMP II.
- Lack of preparedness for climate change adaptation in the Kagera basin.

- Preparing the following:
- Policy and legal framework for enhanced cooperation in the basin.
- The Kagera Basin Investment Strategy focusing on big dams.
- Monograph and Kagera Data Base.
- Feasibility studies for four small multipurpose projects, one in each riparian country.
- Pre-feasibility studies for eight large dams in the Kagera Basin.
- Regional hydrometric network equipment and installation of equipment in the Kagera basin.
- Small scale projects for rural water supply and afforestation as well as their implementation
- Projects for Integrated Water Resources Management (IWRM) in the Kagera Basin targeting environmental degradation reversal in the Kagera subcatchments and wetlands.
- Building capacity of Kagera basin water resources officers and decision makers in IWRM through training and study tours.
- Reviewing the Kagera River navigability studies and proposing terms of reference for feasibility study.
- Facilitating consultancies of studies that allowed Burundi to join LVEMP II.

#### Benefits/ Potential Benefits

- A framework where joint planning and management of the Kagera River water resources will take place for improved socio-economic development of the basin and reduced/minimized potential water related conflicts provided.
- Data and information for basin-wide planning and development provided.
- Provision of IWRM basin wide plan that will facilitate water resources planning for sustainable management of the Kagera Basin.
- Rehabilitation of hydrometric network that will allow better water resources monitoring and planning.
- Increased capacity in water resources planning and development in the Kagera region at the local, district and national levels.
- Feasibility studies for multipurpose dams prepared. These studies are expected to result in bankable investment projects in watershed management and multipurpose dam infrastructure. Their further development will provide water for food production through irrigated agriculture, livestock and domestic use in addition to electricity to rural towns thus reducing the consumption of wood and hence deforestation.
- Reduced soil erosion and loss of vegetation cover through community environmental projects.
- Increased climate change adaptation preparedness through appropriate adaptive mechanisms.
- Better environmental protection of the Lake Victoria Basin through LVEMP II that allowed joint planning and management of the basin.
- Safe drinking water supplied to communities in Nyagatare district.
- Afforestation carried out in the districts of Kirehe, Gicumbi and Nyamagabe.
  - A feasibility study for Taba Gakomeye dam has been prepared. Development of the dam will provide electricity to rural towns.
  - Safe drinking water supplied to communities in Nyagatare district.
  - Afforestation carried out in the districts of Kirehe, Gicumbi and Nyamagabe.

# RIVER BASIN MANAGEMENT

# **Bugesera Integrated Water Resources Management Project**



The project is focusing on promoting fishery development, irrigated agriculture and infrastructures associated with catchment restoration in the basin of the water resources shared between Rwanda and Burundi.

#### **Project objectives**

- Establish cooperation mechanisms for the joint management and development of the shared water resources.
- Develop investment projects aimed at improving the living conditions of the communities, while reversing environmental degradation.

#### Total Potential Investment USD 50.0 million Project Preparation Cost USD 1.0 million

Participating Member States

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#### Before

Bugesera region in Rwanda and Burundi used to be the food basket for the two countries. Decades of intensive deforestation, sporadic rainfalls and political crisis led to environmental degradation and weakened the population's capacity to adapt. Over fishing in Lakes Rweru and Cyohoha, associated with intensive siltation, has contributed to fish depletion and biodiversity erosion.

#### NBI Role

- Building capacity for Improved water resources monitoring.
- Supporting consultative planning for management and development of the shared water resources.
- Promoting environmental conservation and restoration measures.
- Promoting social organization for improved community livelihood and alternatives to reduce pressure on natural resources.

#### **Benefits/ Potential Benefits**

- Restoration of Lake shores and catchment as well as promotion of the sustainable management of the water resources (potentialities for Ramsar sites).
- Joint mechanisms for water resources monitoring and management established.
- Multisectoral investments including fishery development, irrigated agriculture, socio-economic infrastructures and livestock development.
- Community livelihood and organizational capacities improved.

Unlocking the Nile Basin's development potential

### Water Resources Management

To ensure equitable and sustainable use of the common water resources across the basin, the NBI has intensified its efforts to provide state-of-the-art water resource management tools and expertise. The NBI monitors and assesses the water related natural resources of the Nile basin so as to provide its Member States with a shared knowledge base and an interactive Information system that facilitates choices for planning options. It also **maintains** and operates analytical and scenario evaluation systems that support informed decisions on sustainable management of the basin's water resources.

## Investment in Water Resources Development

in the Nyabarongo Basin, Rwanda State of the Case Study with the Nile Basin Decision Support System er Nile Basin Repor

ntions

#### ackaround

ective

The first ever State of the Nile River Basin Report will present information on the general he policy makers and the general population within the basin, and raise awareness and improve understanding of biophysical, socio-cultural, and economic conditions. It will also seek to catalyse

#### **Basin-wide Benefits**

- The first ever State of the River Nile Basin Report. This strategic-level document presents a basin-wide picture of prevailing physical and socio-economic conditions, pressures and threats to the water and environmental resources of the basin. It also assesses the potential of the water and related natural resources of the basin to meet common development goals as well as opportunities for collaboration among Member States. The report further provides an invaluable summary of key indicators of the health of the Nile Basin that can be used to inform decisionmaking from a basin-wide vantage. The first edition presents a baseline for the basin while subsequent reports to be published every three years will present trends over time.
- Nile Basin Decision Support System (Nile Basin-DSS). This is a state-of-the-art tool providing Member States with a common analytic platform and knowledge base to support the cooperative development of the Nile Basin water resources. NBI in collaboration with Member States has piloted the tool to answer questions relating to the physical system of the Nile including river flow patterns, past and present trends in climatic variables versus stream flows, and the water balance in different parts of the system. More importantly, the Nile Basin-DSS is being used to answer questions about expected benefits and potential impacts of planned development interventions. Rwanda has so far used the tool to conduct a pilot case on 'Investment in Water Resources Development in the Nyabarongo Basin.
- Technical support in water policy. Technical support is provided to strengthen the national water policy framework with a key focus on strengthening the consideration of the trans-boundary dimension (so

far Kenya and Rwanda supported).

Support for Basin-wide information exchange. A mechanism for basin wide exchange of information and prior notification for water resources development following the adoption by the Nile-COM in July 2009 of the Nile Basin Data and Information Sharing and Exchange Interim Procedures.

of the Nile Basin, and provide a framework for pressure-state-response analysis. It will target

of the Nile Basin, and provide a framework for pressure-state-response analysis. It will target policy makers and the general population within the basin, and raise awareness and improve destanding of biophysical costs of the state of the

nderstanding of biophysical, socio-cultural, and economic conditions. It will also seek to catalyse and facilitate discussion, information sharing, knowledge-based decision making, and collective ассозноп, ипотпастот знатия, кложнейде-разеч иссылон making, action at basin-wide level. The report will be published early 2012.

- Investment in basin human resources. Increased human capacity including Post Graduate training in Integrated Water Resources Management.
- Nile Basin Sustainability Framework (NBSF). This is a suite of policies, strategies and guidelines used by NBI to ensure that its activities with regard to the Nile Basin water resources are in accordance with the principles of integrated water resources management.
- Nile-Information System (Nile-IS). This enables sharing of information across NBI centers and access to information by NBI governance, Member States' institutions, media practitioners, researchers and the general public. The system complements other NBI information and knowledge tools such as the online library, archives, website and the intranet.

The first ever State of the River Nile Basin Report as well as the State-of-the-art Nile Basin Decision Support System are some of the water resources management products/tools developed by NBI.

Unlocking the Nile Basin's development potential

### Facilitating Cooperation

Of the estimated total population of 424 million in the Nile basin countries, more than half i.e. 54% (232 million) live within the Nile Basin (United Nations Population Division, 2010). Despite the basin's natural and environmental endowments and opportunities for growth, its people face increasing water scarcity, deteriorating water quality, lack of access to electricity, climate change impacts (such as droughts, floods) as well as uneven levels of economic development.

Water resources related drivers of poverty and under development in the basin can be addressed only through cooperative management and development of the common Nile basin water resources. This fact was the impetus for the formation of the Nile Basin Initiative.

"Sharing of resources and in particular water resources is a complex issue that requires goodwill and commitment of all the riparian parties to trans-boundary waters. Ten years ago there was an atmosphere of mistrust, suspicion and doubts among Nile basin countries.....As such, countries were not willing to share data and information on their water resources for planning purposes." H.E. Dr. Ali Mohamed Shein, Vice President of the United Republic of Tanzania speaking as Guest of Honour during the opening ceremony of celebrations to mark the 10<sup>th</sup> anniversary of the Nile Basin Initiative held in Dar es Salaam - December, 2009.

The NBI is the unique platform for Member States to facilitate, support and nurture cooperation amongst the Nile Basin countries so as to promote timely and efficient joint actions required for securing benefits from the common Nile Basin water resources. This platform enables Member States to continue to benefit from opportunities of cooperative water resources management and development, building upon the more than USD1 billion in investment leveraged to date.

#### **Basin-wide benefits**

- A platform where NBI countries, through Nile-COM and Nile-TAC regularly deliberate on cooperative management and development of the shared water resources of the Nile Basin.
- A forum for technical exchange of ideas and experiences in river basin management, agriculture production and productivity as well as power generation and trade through various Project Steering Committees and Task Forces.
- Basin-wide power development and trade options identified to limit power shortfalls, increase access to electricity and reduce cost of power.

#### Potential benefits beyond water

- Increased economic growth due to increased and stable power supply, bigger regional markets and cross border trade.
- Overcoming associated impacts of climate change such as extreme events (floods and droughts) that lead to loss of life, serious water scarcity and food shortage.
- Enhanced regional peace, security and political stability, ensuing from regularised inter riparian collaboration.

Rwanda hosts the NELSAP-CU office which manages the Water Resources Development Program for the Nile Equatorial Lakes sub-basin. Hosting NELSAP-CU is with associated benefits such as visibility of the country at regional and international level; employment for its citizens working for the Coordination Unit Office.



### Nile Basin Initiative Secretariat

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