

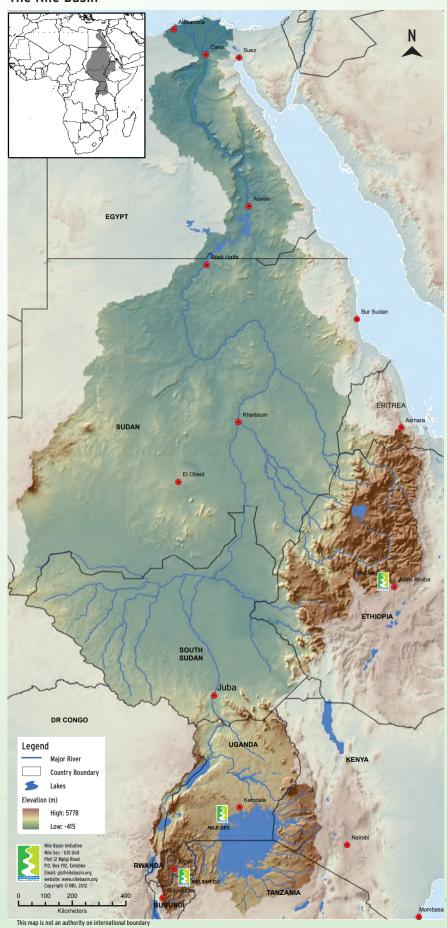


One River One People One Vision

2011 Edition: Please send your feedback to the NBI Secretariat

Disclaimer: While every care has been exercised in compiling and publishing the information and data contained in this document, the NBI may not guarantee full accuracy due to the changing nature of the projects.

The Nile Basin





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

MEMBERS OF THE NILE COUNCIL OF MINISTERS



HON. JEAN-MARIE NIBIRANTIJE

MINISTER OF WATER, ENVIRONMENT, LAND MANAGEMENT AND URBAN PLANNING, BURUNDI



HON. JOSE BONONGE ENDUNDO MINISTER OF ENVIRONMENT, NATURE CONSERVATION AND TOURISM, DR CONGO



HON. PROF. HESHAM KANDIL

MINISTER OF WATER RESOURCES AND IRRIGATION, EGYPT



HON. ALEMAYEHU TEGENU

MINISTER OF WATER AND ENERGY, ETHIOPIA



HON. CHARITY KALUKI NGILU, EGH MP

MINISTER OF WATER AND IRRIGATION, KENYA



HON. AMB. STANISLAS KAMANZI

MINISTER OF WATER, ENVIRONMENT AND NATURAL RESOURCES, RWANDA



PROF. DR. SEIFELDIN HAMAD ABDALLA

MINISTER OF WATER RESOURCES, SUDAN



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



HON. MARIA MUTAGAMBA

MINISTER OF WATER AND ENVIRONMENT **UGANDA**

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 22nd 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 FUNCTION

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.



"Nile Day celebration is basically a vibrant call to the unity of nine countries of the Nile Basin; a vibrant call which will help us move forward together towards a concerted cooperation of the management of water resources of the Nile."

Hon. Jose Endundo Bononge, Minister of Environment, Nature, Conservation and Tourism



This profile provides a brief description of the Nile Basin Initiative, its cooperation with the Democratic Republic of Congo 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.

he Democratic Republic of Congo has actively participated in NBI programs and projects since 1999 when the Initiative was established in Dar es Salaam. The Ministry of Environment, Nature Conservation and Tourism is the focal point government institution that coordinates NBI activities in the DR Congo. The Minister of Environment, Nature Conservation and Tourism represents DR Congo on the Nile-COM. Similarly,

two senior government officials from the Ministry represent the country on the Nile-TAC. Steady progress is also being made in integrating NBI activities in the national plans.

The country provides 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

2516.4 Country Area (1000 km²)* 21.8
Area in the
Nile Basin

(1000 km²)***

% of Country Area in Nile Basin***

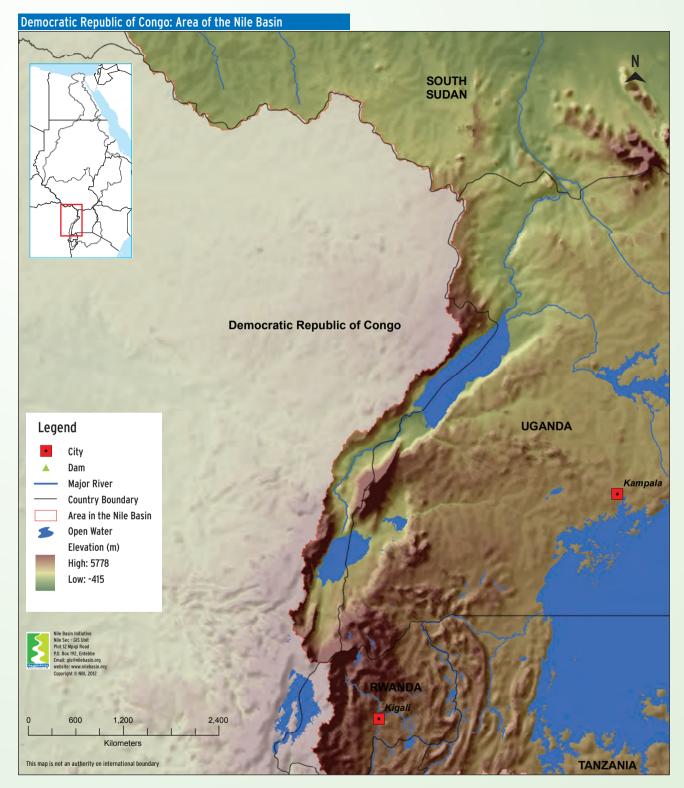
Total Population in 2010 (millions)**

2.5
Population Living in the Nile Basin

in 2010 (millions)***

% population living in the Nile Basin***

Benefits of Cooperation



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 providing 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.

In-kind contribution is also in the form of hosting and financially contributing to regional events such as Nile-COM meetings, Nile Day (2011) celebrated annually on 22nd February and the Nile Basin Development Forum held every two years. DR Congo has in the past (between 2005 and 2009) provided office space for the Project Management Unit of the Lake Edward and Albert Fisheries pilot project.

Unlocking the Nile Basin's Development Potential Benefits of Cooperation: DR Congo



The benefits to the Democratic Republic of Congo 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.

Democratic Republic of Congo 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.

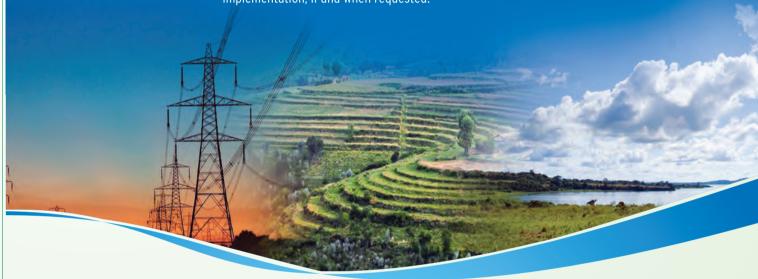
The benefits, some of which have already been realised while others are potential, are elaborated in the following pages.

BENEFITS OF COOPERATION

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.

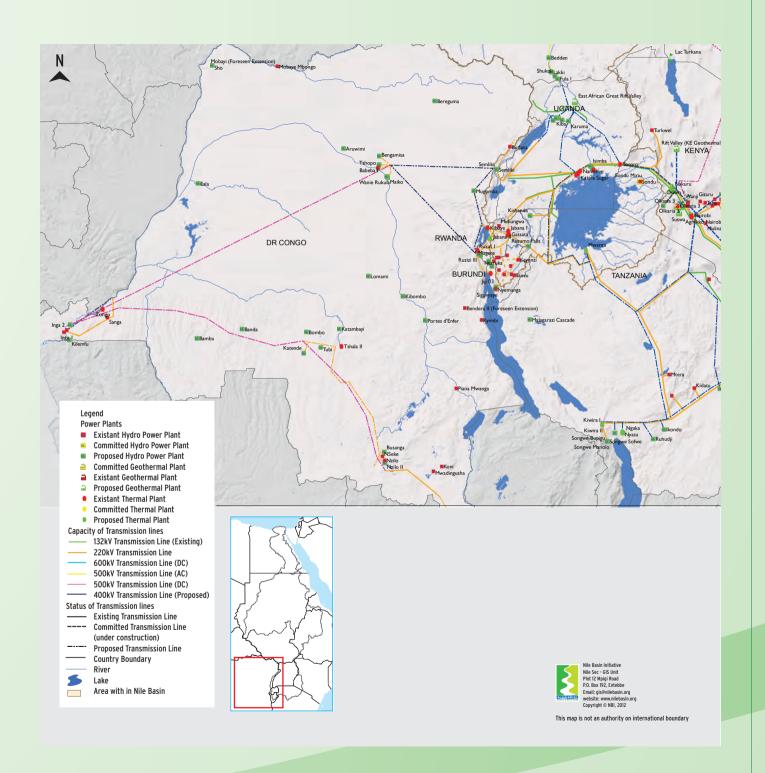
AGRICULTURE

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 cross-country 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 DR CONGO



Unlocking the Nile Basin's development potential



Regional Transmission Interconnection Project

Total on-going Investment USD 363.0 million **DR Congo Contribution** USD 80,000

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:

- 220 KV Uganda (Bujagali) Kenya (Lessos) interconnection (256 km) i.
- 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 the African Development Bank (AfDB). JICA (Japan), KFW (Germany), The Netherlands and 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

- 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 use of generators.
- Reduced tariffs.
- Support to rural electrification programs.
- Load diversity savings.
- Improved standards of living and economic development.
- Positive contribution to environmental management through reduced deforestation.
- Reduction in GHG emissions.
- 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.



Uganda - DR Congo Power Transmission Line Project

Estimated Total Project Cost USD 123.0 million

Project Preparation cost USD 3.0 million

Participating Member States





The proposed Uganda-DR Congo Power Transmission Line project consists of construction of a high-voltage transmission line and associated substations from Nkenda substation in Kasese, Western Uganda up to Bunia and Butembo via Beni in the North Eastern of the Democratic Republic of Congo. The estimated distance of the line is 396 km. The Project is coordinated under NELSAP-CU and the Project Management Unit is located in Kigali, Rwanda.

Project objectives

- Promote the living conditions of the people of North Eastern DR Congo as well as regional economic development through provision of ample power supply at reasonable prices.
- Increase regional power supply in the Nile Equatorial Lakes Region by improving export and import capabilities between the countries in the region.
- Improve reliability and security of power supply and the quality of power delivered through interconnecting the isolated networks in each country.
- Promote regional cooperation through sharing power generation resources.

Before



Towns located in North Eastern DR Congo are supplied by small generators. This is not only expensive but it also cannot satisfy the power demand of the region.

NBI Role



- Identifying as well as promoting the project.
- Mobilizing funds to carry out studies and supervising the project preparation phase.
- Assisting the countries to mobilize funds for project implementation.
- Creating awareness and cooperation surrounding implementation of the project among the communities residing in the project area.
- Providing a platform for reinforcing cooperation between Uganda and DR Congo.

Benefits/ Potential Benefits

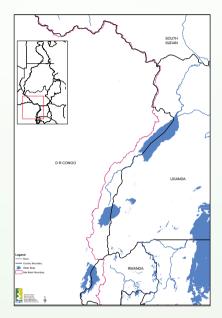
- Improved access to electricity in NBI Member States through increased cross-border power infrastructure between Uganda and DR Congo.
- Increased reliability and security of power energy supply as well improved livelihood of the population living in the North Eastern part of DR Congo.
- Agricultural sector related development promoted (irrigation pumps, poultry, animal husbandry, preservation of products).
- Small and medium scale industries promoted (flour mills, rural water supply installations, tanneries, mines and coffee processing plants).
- Reduced/slow deforestation and soil erosion as women stop collecting firewood and water.

An estimated 396 km high voltage and associated sub-stations will be constructed, starting from Nkenda in Kasese upto Bunia and Butembo in DR congo

Unlocking the Nile Basin's development potential



Lake Edward and Albert Fisheries Pilot Project



The project focused on promoting fishery development and sustainable management of water resources shared between DR Congo and Uganda.

Project objectives

- Establish cooperation mechanisms for the joint management and development of the fishery and water resources of Lake Edward and Lake Albert,
- Promote investment projects associated with the fishery development, towards improved living conditions of the communities.

Total Investment
USD 40.0 million
DR Congo Contribution
USD 5.0 million
Project Preparation Cost
USD 2.5 million
Total Investment Potential
USD 170.0
Participating Member States



Before



Increasing pollution, degradation of the environment and siltation of the two lakes as a result of deforestation, mining and inappropriate land use practices has affected the water quality and is in turn affecting fish stocks and the lake habitat thus threatening the sustainability of the resources of the two lakes. Fish stocks have also been affected by rampant overfishing and use of illegal fishing methods.

NRI Role



- Building capacity for Improved fish and water resources monitoring.
- Supporting consultative planning for management and development of the fish resources.
- Promoting fishermen organizations for sustainable management of the fish resources and improved livelihood.

Benefits/ Potential Benefits

- Lakes Fishery Policy Framework developed and a trans-boundary management institution established.
- Functional Fisheries Monitoring, Control, and Surveillance System.
- · A Fishery Information System developed.
- Fisheries infrastructure including landing sites developed.
- · Fish Safety and Quality Assurance improved.
- Invasive aquatic weeds combated.
- · Awareness on biodiversity raised.

AGRICULTURE

Regional Agricultural Trade and Productivity Project









Pre-feasibility studies for five irrigation schemes have been prepared covering the following focal areas: Abia Tungudu - 4358 hectares, Boga - 9361 hectares, Rutshuru Mutabo - 7291 hectares, Bilukwa - 1259 hectares, Kitoba Lubango - 5664 hectares

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

Participating Member States











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

functions.

- Define NBI future agricultural functions.
- Support productive water-use in basin agriculture.
- Incorporate agriculture 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 Issues.
- Water footprint and comparative advantage not documented and used by countries.

NBI Role



- 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

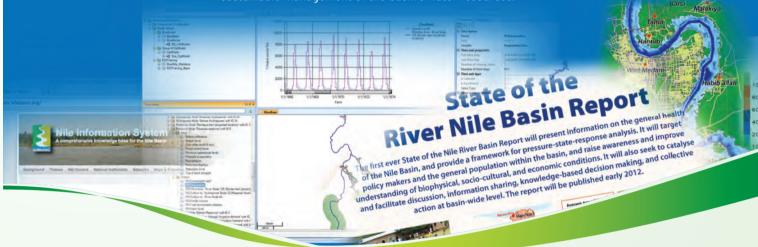
- Informed decision making in agricultural policies and investments.
- Pre-feasibility studies for four to five irrigation schemes prepared for each Member State for resource mobilization.
- Trained people and prepared materials on best practices in water harvesting and small scale irrigation.
- Policies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

BENEFITS OF COOPERATION

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.



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 decision-making 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.
- 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.
- 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 centres 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.

BENEFITS OF COOPERATION

Unlocking the Nile Basin's development potential



"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 10th 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.



Nile Basin Initiative Secretariat

Nile Equatorial Lakes Subsidiary Action Program – Coordination Unit Eastern Nile Technical Regional Office

P.O. Box 192 Entebbe - Uganda

Tel +256 414 321 424 +256 414 321 329 +256 417 705 000 Fax +256 414 320 971 Email nbisec@nilebasin.org Website http://www.nilebasin.org P.O. Box 6759 Kacyiru Kigali-Rwanda

Tel +250 788 307334
Fax +250 252 580100
Email nelcu@nilebasin.org
Website http://nelsap.nilebasin.org

P.O. Box 27173-1000 Addis Ababa - Ethiopia Tel +251 (0) 116461130

Fax +251 (0) 116459407 Email entro@nilebasin.org Website http://ensap.nilebasin.org



Ministre de l'Environnement, Conservation de la Nature et Tourisme

15, Avenue Papa lleo Kinshasa/Gombe République démocratique du Congo