

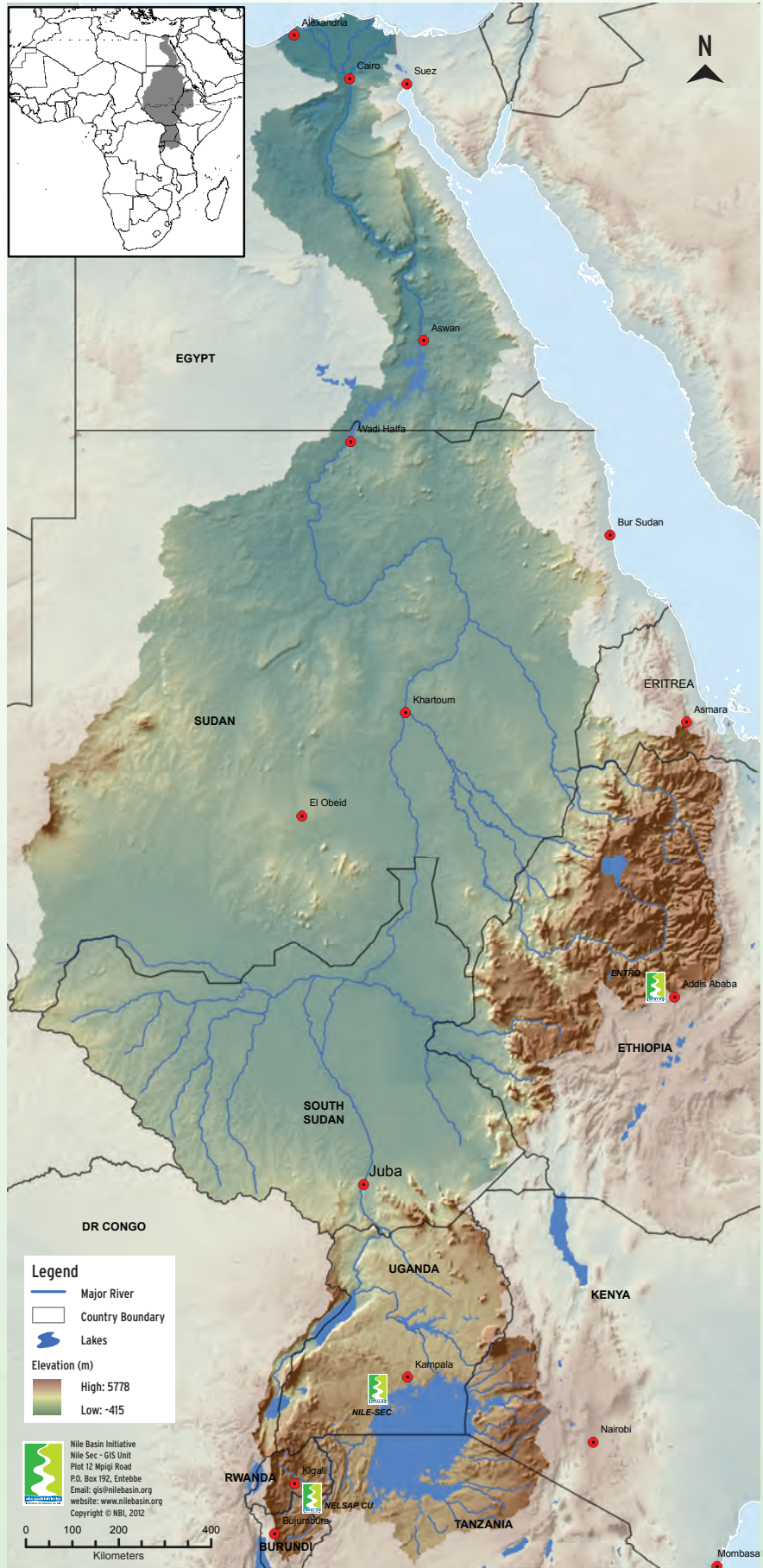


OneRiver OnePeople OneVision

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



This map is not an authority on international boundary



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



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



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MINISTER OF ENVIRONMENT, NATURE
CONSERVATION AND TOURISM, DR CONGO



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MINISTER OF WATER AND ENERGY, ETHIOPIA



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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 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.

Uganda the Nile Basin Initiative & Benefits of Cooperation



“The joint investment projects such as the Interconnection project between the Nile Equatorial Lakes countries, the Regional Rusumo Falls Hydroelectric Project and all the trans-boundary river basin management projects being implemented will go a long way in alleviating poverty amongst our countrymen.”

Hon. Maria Mutagamba, Minister of Water and Environment

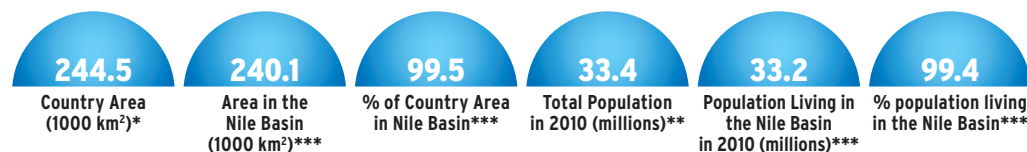


This profile provides a brief description of the Nile Basin Initiative, the cooperation with Uganda and highlights benefits of the cooperation. The benefits are results of more than a decade of cooperative effort in water resource management and development in the Nile Basin.

Uganda has actively participated in NBI programs and projects since 1999 when the Initiative was formed in Dar es Salaam. The Ministry of Water and Environment is the focal point government institution that coordinates NBI activities in Uganda. The Minister of Water and Environment represents Uganda on the Nile-COM. Similarly, two senior officials from the Ministry represent the country on the Nile-TAC. Steady progress is also being made in integrating

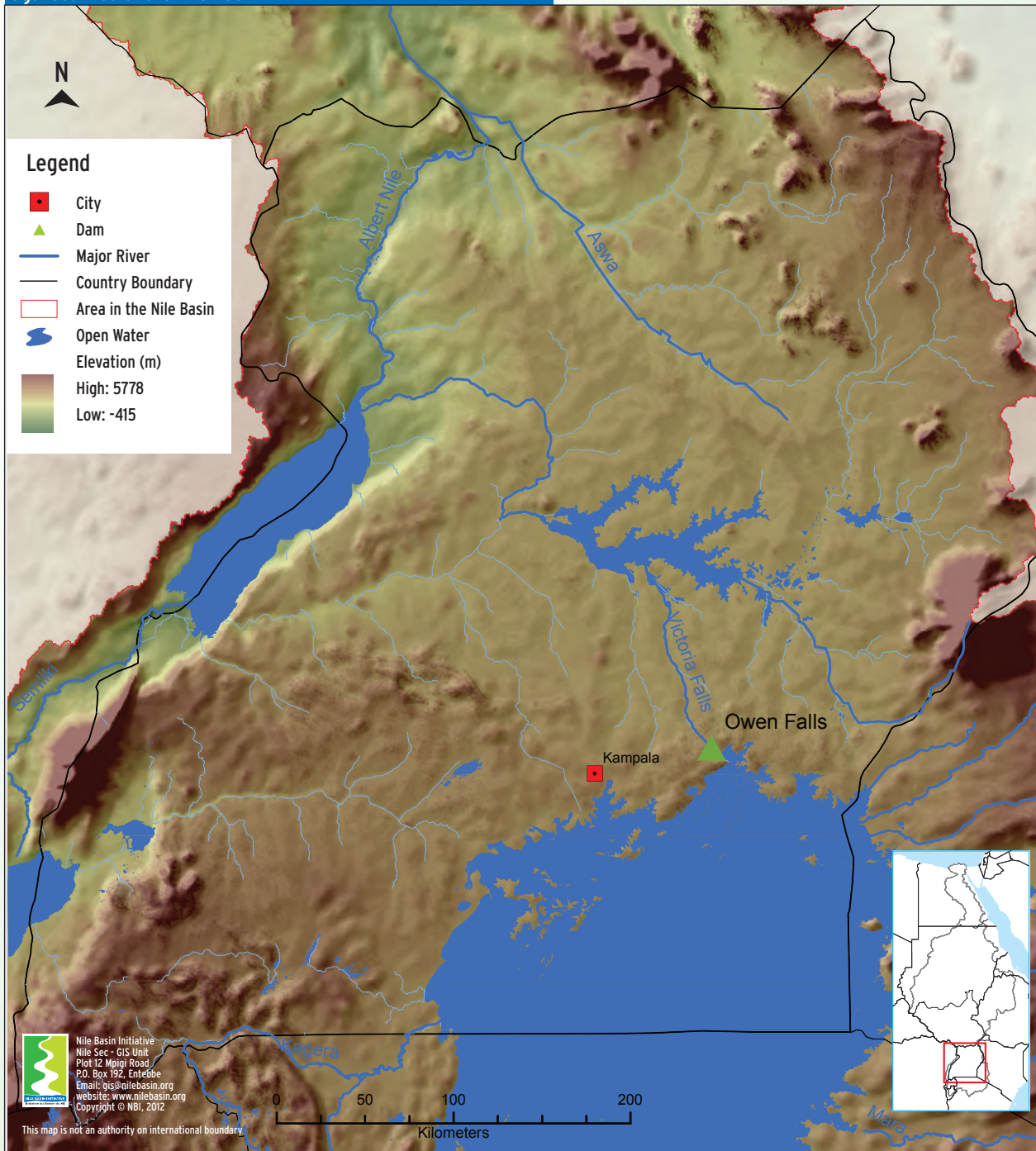
NBI activities in the national plans.

The country provides land and office buildings for the NBI Secretariat in Entebbe and has in the past provided office premises for Project Management Units of two of the NBI Shared Vision Projects namely, the Confidence Building and Stakeholder Involvement Project (between 2004 and 2009) and the Socio-economic Development and Benefit Sharing Project (between 2005 and 2009).



Source: *CIA The World Fact Book; **UN Population Division; World Population Prospects; ***NBI Nile-Sec

Uganda: Area of the Nile Basin



In addition, Uganda provides on an annual basis, both cash and in-kind contribution 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. It includes supervision and technical guidance by members of the Nile Equatorial Lakes Technical Advisory Committee (NEL-TAC) as well as 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

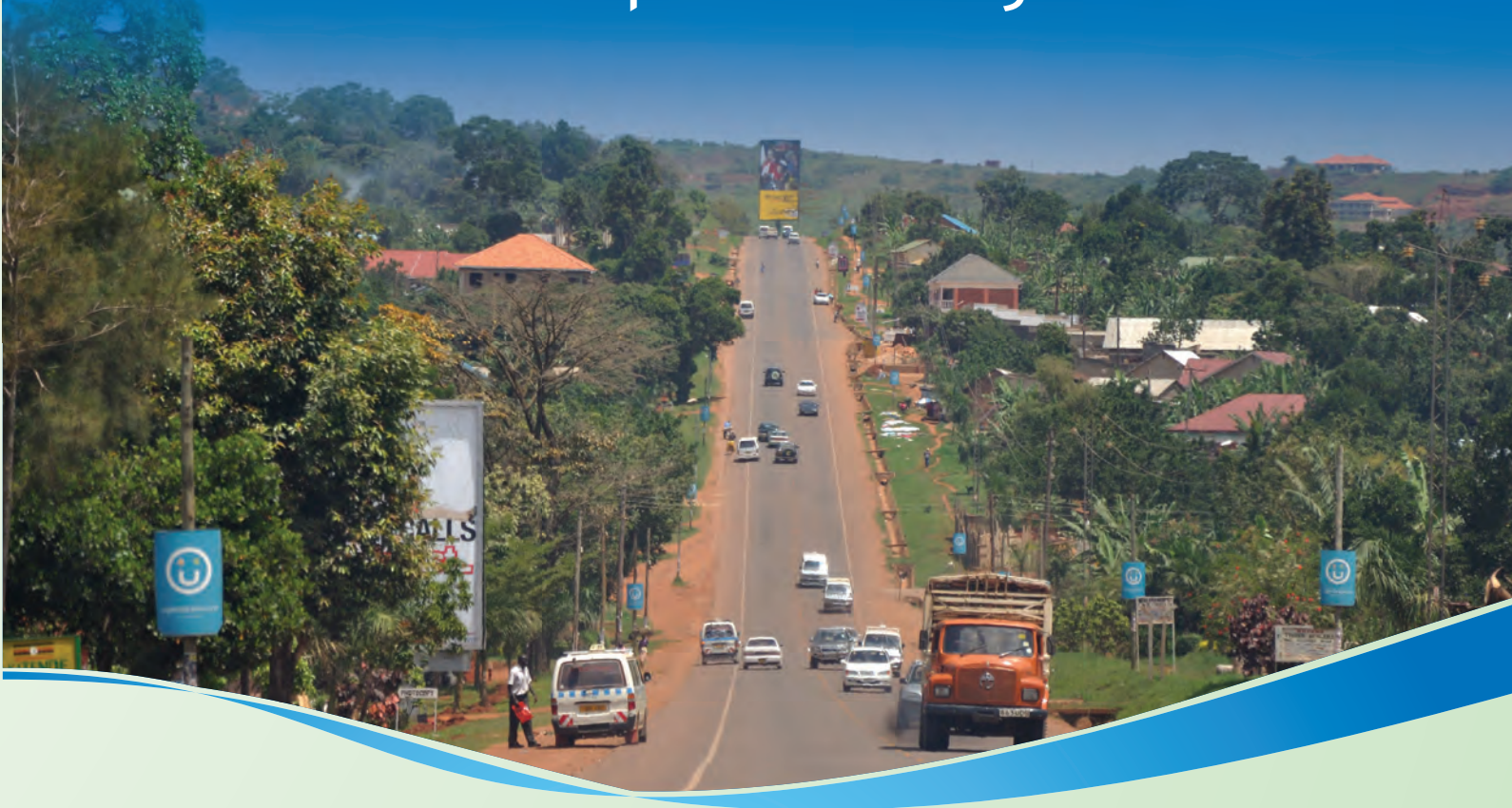
increasingly being devoted to NBI's different programs and projects.

In-kind contribution is also in the form of hosting and financially contributing to regional events such as Nile-COM meetings, Nile Day (2010 and 2012), which is celebrated annually on 22nd February and the Nile Basin Development Forum which is held every two years.

The Government of the Republic of Uganda hosted the signing of the Cooperative Framework Agreement (CFA) on 14th May 2010 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. Uganda, together with five other NBI Member States, signed the CFA.

Unlocking the Nile Basin's Development Potential

Benefits of Cooperation: Uganda



The benefits to Uganda 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.

Uganda 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 realized, 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.

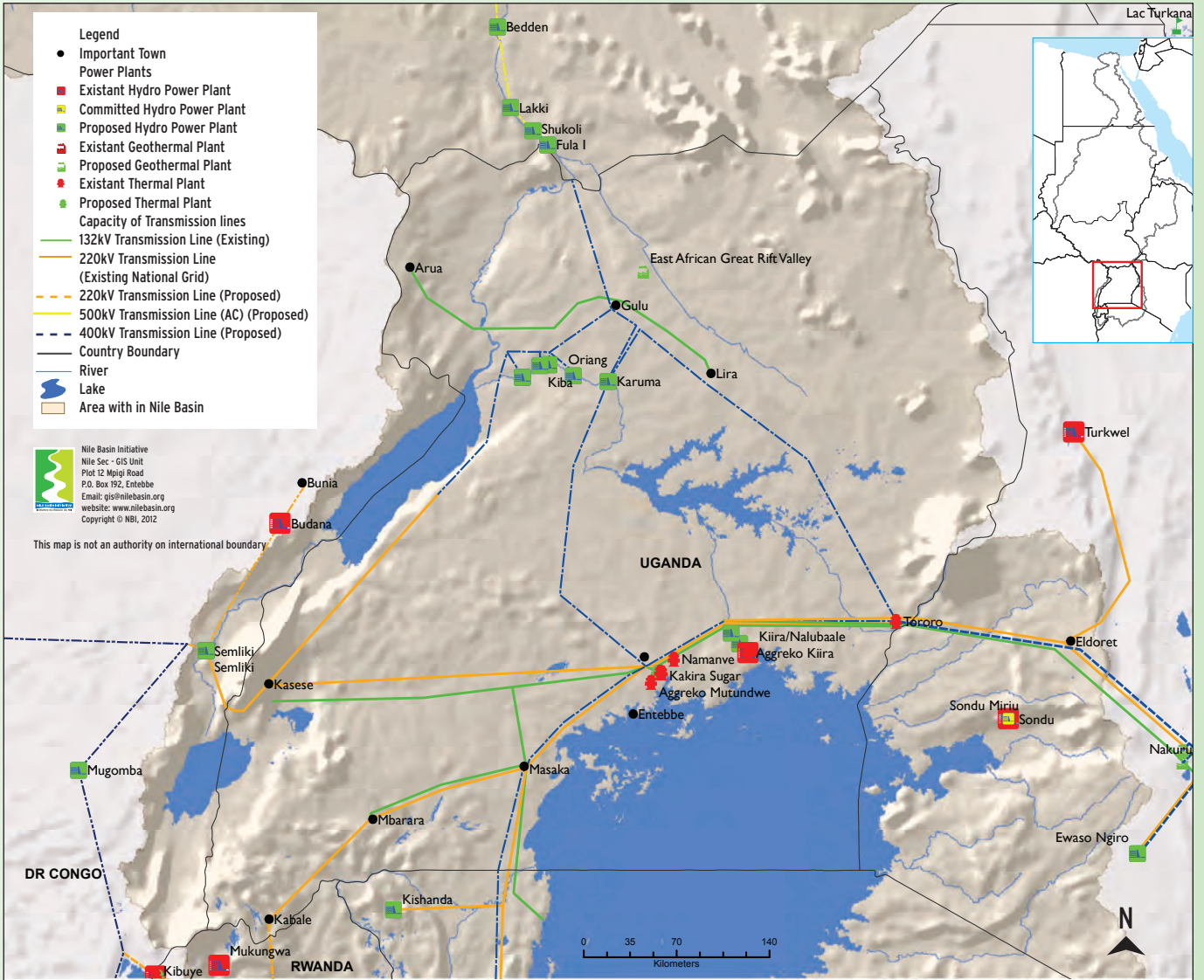
AGRICULTURE

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 UGANDA



BENEFITS OF COOPERATION

Unlocking the Nile Basin's development potential

POWER Portfolio

Regional Transmission Interconnection Project

Total on-going Investment

USD 363.0 million

Uganda Contribution

USD 24.9 million

Project Preparation Cost

USD 9.0 million (Phase I)

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.
- Mobilising 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 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

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 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 .
- 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.

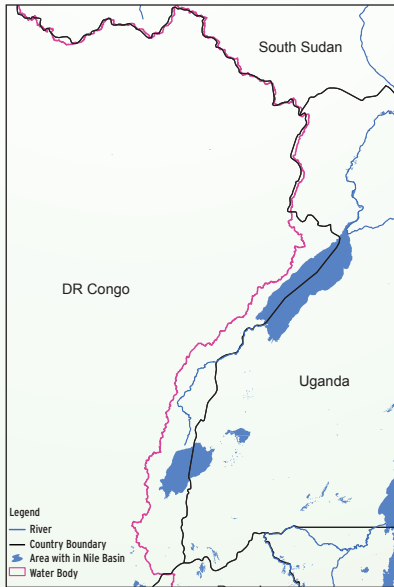
An estimated 396 km high voltage and associated sub -stations will be constructed, starting from Nkenda in Kasese upto Bunia and Butembo in DR congo

BENEFITS OF COOPERATION

Unlocking the Nile Basin's development potential

AGRICULTURE Portfolio

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 fishery development towards improved living conditions of the communities.

Total Investment
USD 40.0 million

Uganda 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.

NBI Role

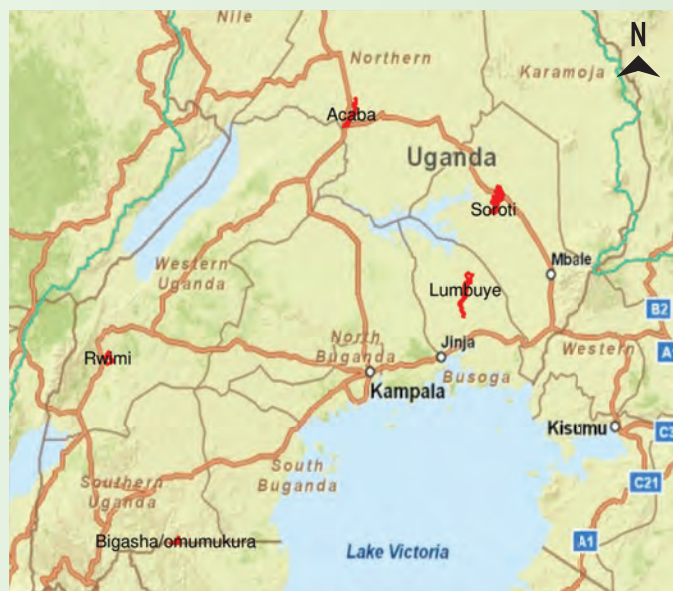


- Building capacity for Improved fish and water resources monitoring.
- Supporting consultative planning for management and development of the fish resources.
- Promoting fishermen organizations for sustainable management of the fish resources and improved livelihood.

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.

Regional Agricultural Trade and Productivity Project



Focal areas for Pre-feasibility studies for irrigation schemes



Pre-feasibility studies for five irrigation schemes have been prepared covering the following focal areas: Acaba - 4327 hectares, Soroti - 6619 hectares, Bigasha/omumukura - 1942 hectares, Rwimi - 4415 hectares and Lumbuye - 9812 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

- 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 Issues.
- Water footprint and comparative advantage not documented and used by countries.

NBI Role

- 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 footprint for major commodities.

Benefits/ Potential Benefits

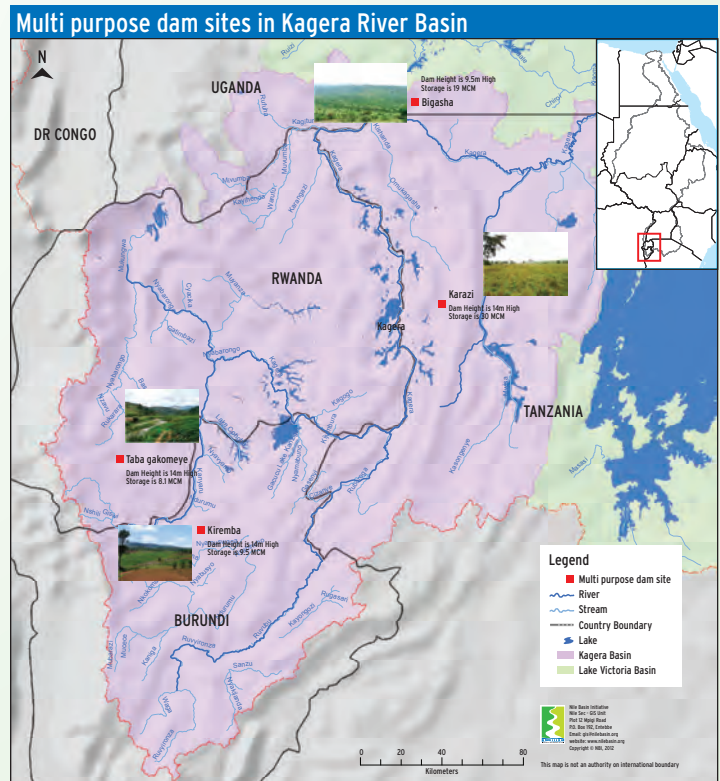
- Informed decision making in agricultural policies and investments.
- Pre-feasibility studies for four to five irrigation schemes prepared for each Member State for resource mobilization.
- Trained people and prepared materials on best practices in water harvesting and small scale irrigation.
- Policies 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.

BENEFITS OF COOPERATION

Unlocking the Nile Basin's development potential

RIVER BASIN MANAGEMENT Portfolio

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 Uganda, the project is operational in the districts of Kabale, Isingiro, Ntungamo and Rakai.**

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.

Before



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

NBI Role



- 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 sub-catchments 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

- Provision of 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.
- Data and information for basin-wide planning and development.
- Integrated Water Resources Management (IWRM) basin wide plan that will facilitate water resources planning for sustainable management of the Kagera Basin.
- Hydrometric network data that will allow better water resources 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.
- 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.
- Review of Kagera Navigability studies to provide riparian countries with updated information about Kagera River navigability and updated Terms of Reference.
- Clean safe running water supplied to 7,000 people in Katuna (Kabale district) under Phase 1 of the Katuna Water supply small scale project
- Afforestation carried out in the districts of Rakai and Ntungamo.

- A feasibility study for Bigasha dam has been prepared. Development of the dam will provide electricity to rural towns.
- Clean safe running water supplied to 7,000 people in Katuna (Kabale district) under Phase 1 of the Katuna Water supply small scale project
- Afforestation carried out in the districts of Rakai and Ntungamo.

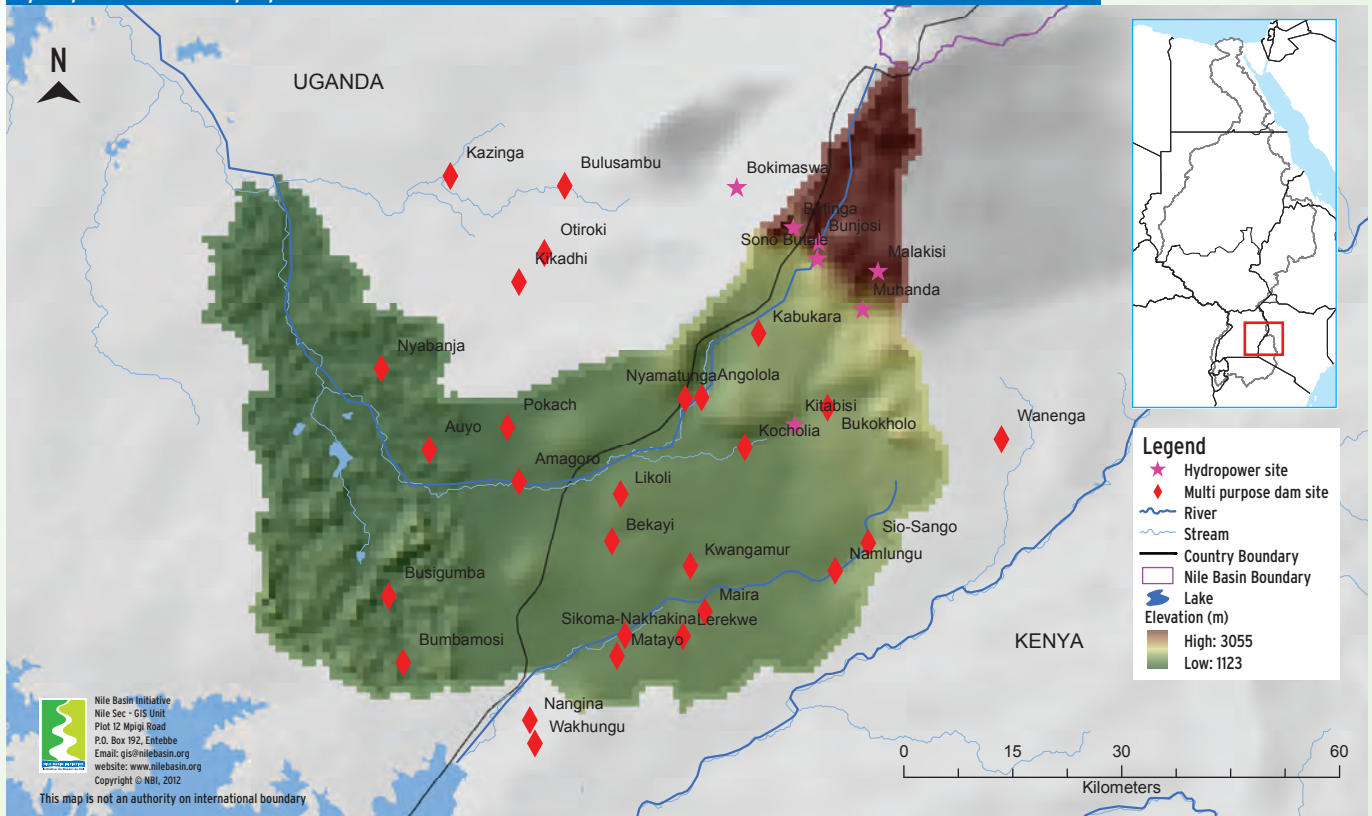
BENEFITS OF COOPERATION

Unlocking the Nile Basin's development potential

RIVER BASIN MANAGEMENT Portfolio

Sio-Malaba-Malakisi River Basin Management Project

Hydropower and Multi purpose dam sites in the Sio-Malaba-Malakisi River Basin



Total Potential Investment

USD 240.0 million

Project Preparation Cost

USD 7.51 million (Phase 1)

Participating Member States



The Sio-Malaba-Malakisi sub-basin is endowed with abundant natural resources that present tremendous potential for social economic development. Agriculture is the major socio-economic activity in the catchment. Poor agricultural practices exacerbated by inadequate extension services have resulted in extensive catchment and water quality degradation. The rivers do not only include complex problems related to upstream (Kenya) and downstream (Uganda) conditions but also several rivers forming the international border (e.g. the Lwakhakha and lower Sio Rivers). Joint action and investments are needed to improve the condition of these rivers.

The Sio-Malaba-Malakisi River Basin Management Project is coordinated under NELSAP-CU and the Project Management Unit is located in Kakamega, Kenya. In Uganda, the project is operational in nine districts of Bududa, Bugiri, Busia, Butaleja, Manafwa, Mbale, Namutumba, Pallisa and Tororo.

Project objectives

- Establish a sustainable cooperative framework for the joint management of the shared water resources of the Sio-Malaba-Malakisi River Basin.
- Develop an investment strategy and conduct pre-feasibility and feasibility studies for Integrated Watershed Management and Multipurpose Water Storage Reservoirs.
- Build capacity at all levels for sustainable management and development of Sio-Malaba-Malakisi River Basin.
- Implement small-scale investment projects to build early confidence among the Sio-Malaba-Malakisi River Basin communities.

Before



- No legal and policy framework between the Sio-Malaba-Malakisi riparian countries (Kenya and Uganda) for joint trans-boundary development and implementation of shared water resources.
- No joint investment projects with trans-boundary aspects and benefit sharing.
- Limited joint identification, preparation, development and management of regional water infrastructure projects.
- Limited sub basin-wide water resources planning and management.
- Limited operational Hydro-meteorological monitoring network.
- Limited knowledge about potential investment opportunities in water resources development in the sub basin.
- Limited capacity in water resources planning and development.
- Limited knowledge regarding climate change and adaptation mechanism.

NBI Role



- Identifying and preparing the multipurpose regional water infrastructure development project (Dams).
- Identifying and preparing Integrated Watershed Management Investment Projects.
- Preparing policy and legal framework for enhanced cooperation in the basin.
- Preparing the Sio-Malaba-Malakisi Basin Investment Strategy.
- Preparing monograph and Sio-Malaba-Malakisi Data Base.
- Mobilizing resources for project implementation.
- Coordinating and oversight supervision.

Benefits/ Potential Benefits

- Rehabilitated sub basin hydro meteorological network facilitating water resources planning (20 digital rain. gauges, 4 Automatic Weather Stations, 4 Automatic Water Level Recorders, Acoustic Doppler Current Profiler).
- Constructed Mella Piped Water Supply and Sanitation Project serving over 10,000 people in Mella Sub County, Tororo District resulting into improved health and lower cost of water through reduced water fetching distances or costs if earlier purchased from vendors.
- A total of 2,300 people in Busia district provided with community fish ponds/aquaculture development projects.
- Developed Malaba Storm water Drainage Master Plan.
- Identified 13 Multipurpose water Storage Reservoirs and four small hydropower development potential sites for improved irrigation development, domestic water supply and small scale hydro power production.
- Water Resources Database and Decision Support System for Improved Water Resources Planning at Sub basin Level.
- Staff Training in Integrated Water Resources Management and Development, Decision Support System and Network Maintenance.
- Community participation In Integrated Watershed Management.
- Sio-Siteko Wetland Management Plan as a guide for planning..
- Solid waste management plans for Lwakhakha, Malaba and Busia Urban Councils developed.
- Storm water Drainage Management Plans for Lwakhakha, Malaba and Busia Urban Councils developed.
- Integrated Watershed Management Plan and Investment Project.
- Joint framework for management and development of the shared water resources.
- Improved per capita water storage In the sub basin (Bulusambu Multipurpose Dam).
- At least 2000 ha In Lower Sio will be put under improved irrigation development
- At least 3000 ha of land at Doho Rice Scheme and out growers put under improved irrigation development.
- Pollution control of Sio and Malaba River Systems - Improved solid waste and storm water management in Lwakhakha, Busia and Malaba Urban Councils.
- Restoration of wetlands ecosystem functions.
- Improved community livelihoods.
- Improved watershed management functions.
- Flood control resulting in prevention of loss of human life as well as reduced losses of livestock, irrigation farms and other assets.
- Hydropower generation resulting in savings in energy costs, reduced deforestation and greenhouse gas emissions.
- Recreation.

- Constructed Mella Piped Water Supply and Sanitation Project serving over 10,000 people in Mella Sub County, Tororo District resulting into improved health and lower cost of water through reduced water fetching distances or costs if earlier purchased from vendors.
- A total of 2,300 people in Busia district provided with community fish ponds/aquaculture development projects.
- Identified 13 Multipurpose water Storage Reservoirs and four small hydropower development potential sites for improved irrigation development, domestic water supply and small scale hydro power production.

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.

Improved Water Resources Utilization in the Mobuku-Sebwe Catchments in Western Uganda Case Study with the Nile Basin Decision Support System

State of the River Nile Basin Report

The first ever State of the River Nile Basin Report will present information on the general health 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 understanding of biophysical, socio-cultural, and economic conditions. It will also seek to catalyse and facilitate discussion, information sharing, knowledge-based decision making, and collective action at basin-wide level. The report will be published early 2012.

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. **Uganda has so far used the tool to conduct two pilot cases. The first one on 'Improved water resources utilization in the Mobuku-Sebwe catchments in Western Uganda' and the second one on 'Water use in Kyoga Basin and its effects to proposed down stream hydro power development'.**
- **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

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 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.

Uganda hosts the NBI Secretariat, which manages both the Facilitating Cooperation Program and the Water Resources Management Program. Hosting the Secretariat is also with associated benefits such as visibility of the country at regional and international level; employment for its citizens working for the Secretariat.



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