D.R Congo Investment Benefits from the Nile Basin Cooperation

The DRC Minister for Fisheries, Hon. Byalosuka Wata receiving the keys to the mobile water quality laboratory during its unveiling at the Leaf II project offices in Bunia.

A surveillance station constructed through Leaf II project at Kasenyi (D.R Congo) on Lake Albert. A second one in the D.R Congo by Leaf II is at Vitshumbi on Lake Edward.

Colonel Ehuta Omedinga, the Military Administrator of Bени Territory (DRC) inspecting ice making machine and cold room, while handing over the modern integrated fish landing site of Kyavinyonge.

One of the two equipped patrol boats D.R Congo received through Nelsap for surveillance on Lakes Edward and Albert.

NELSAP-CU, JAN 2022
The Nile Equatorial Lakes Subsidiary Action Program Coordination Unit (NELSAP-CU) headquartered in Kigali, Rwanda, is one of the two investment programs of the Nile Basin Initiative (NBI), the other being the Eastern Nile Subsidiary Action Program (ENSAP) headquartered in Addis Ababa, Ethiopia known as Eastern Nile Technical Regional Office (ENTRO). NELSAP-CU was established in December 1999 by the Council of Ministers for Water Affairs in the Nile River Basin, with a mission to “contribute to the eradication of poverty, promote economic growth, and reverse environmental degradation in the Nile Equatorial Lakes (NEL) region, within the overall NBI’s shared Vision of sustainable socioeconomic development and the equitable use of and benefit from Nile Basin water resources”. NELSAP-CU is governed and reports to the Council of Water Ministers from 10 Nile Basin membership states of Burundi, DR Congo, Egypt, Ethiopia, Kenya, Rwanda, South Sudan, Sudan, Tanzania and Uganda.

NELSAP-CU within its mandate facilitates jointly agreed transformative in-country projects with regional impact/significance and trans-boundary cooperative investment projects related to the common use of the Nile Basin water resources. It also builds regional capacity of countries and provides a platform for implementation coordination of trans-boundary investment projects. NELSAP-CU renders support to national initiatives and focuses on two investment areas of: (i) power development and trade; and (ii) water resources management and development. NELSAP-CU has prepared a number of cooperative in country and regional trans-boundary projects, which are at various levels of preparation and implementation. NELSAP-CU has mobilized finances for pre-investment and investment projects cumulatively totaling to USD 1.050 billion (pre-investment USD 557.107 million and for investment projects USD 493.018 million). Since 2014, NELSAP-CU has gained regional experience, strengthened its capacity and emerged as a reliable regional institution for facilitating key in country and regional investment projects in the Nile Equatorial Lakes Region and beyond. Its key institutional strengths lies in project pre-investment feasibility studies, regional projects coordination support, regional strategic analysis, environmental aspects, social economic development, stakeholders’ engagement and development communication, financial and procurement management as well as results based monitoring and evaluation. NELSAP-CU, in delivering on its mandate, is supported bilaterally and multilaterally by different development partners including, but not limited to, the World Bank, the African Development Bank (AfDB) the Canadian International Development Agency (CIDA) the Governments of Norway (NORAD) Swedish International Development Cooperation Agency (SIDA), the Government of The Netherlands (GON) the Japan Bank for International Cooperation (JBC) Japan International Cooperation Agency (JICA) GIZ (Germany), French Development Agency (AFD) European Union(EU) and KfW (Germany). NELSAP-CU work has provided direct and indirect benefits to the Democratic Republic of Congo (DRC) since 2009 as elaborated in this publication.
**Introduction to NBI Investment in the D.R Congo**

**LAKES EDWARD AND ALBERT FISHERIES PILOT PROJECT (LEAF I)**
This phase was designed to generate replicable experiences in the management of fisheries resources in a trans-boundary context; to avail to DRC and Uganda a sustainable investment and management plan for the joint use of the water and fisheries resources of Lakes Edward and Albert Basin and identify the major socio-economic problems. LEAF I was funded by the African Development Bank (AfDB) to the tune of USD 2.3 million.

**LAKES EDWARD & ALBERT INTEGRATED FISHERIES AND WATER RESOURCES PROJECT (LEAF II)**
Through the coordination of the NELSAP-CU/NBI, the D.R Congo received a grant of USD 8.785 million from the African Development Bank (AfDB) to implement national-level activities, and is a key beneficiary to an additional grant of USD 8.1 million from the Global Environment Facility (GEF) for transboundary basin-level activities whose implementation is led by the NELSAP-CU/NBI. The purpose of this funding is to sustainably utilize the fisheries and allied natural resources of Lakes Edward and Albert Basin through harmonized legal framework and policies and strategic thematic investments to improve livelihoods and incomes of riparian communities. The LEAF II project is jointly implemented by the D.R Congo and Uganda and is coordinated regionally by NELSAP-CU. The project began in 2016 and has had great impact on the Lakes Edward and Albert river basin.

**INTERCONNECTION OF THE ELECTRIC GRIDS OF THE NEL COUNTRIES**
The interconnection of the electric grid of the NEL countries project covers Burundi, D. R. Congo, Kenya, Rwanda, and Uganda and it comprises installation of 931.5 km of Overhead Transmission Lines (OHTL) at 400/220/110kV and construction of 17 Substations in the Nile Equatorial Lakes (NEL) countries. It is funded by African Development Bank (AfDB) KfW, JICA, Government of the Netherlands, SIDA and EU. The goal of this project is to improve living conditions of the people through increased availability of affordable electric energy and increased cross-border sharing of energy and power. The project will result in cost effective exchange of energy, reliability and security of power supply and above all is a driver for regional integration.

**REGIONAL AGRICULTURAL TRADE AND PRODUCTIVITY PROJECT (RATP)**
Under the project, the following studies were completed: (i) Development of the Nile Basin agricultural model, (ii) Assessing the irrigation potential in 7 NEL Countries (Burundi, DRC, Rwanda, Kenya, Sudan, Uganda, Tanzania), (iii) Promotion of best practices on water harvesting and irrigation practices, (iv) Cross border agricultural trade studies focusing on trans-boundary grain/pulses trade, livestock trade in the Nile Basin region (v) Virtual water/water footprint analysis, documentation and awareness creation.
The LEAF II project of NELSAP-CU facilitated the D.R Congo and Uganda to sign the Bilateral Agreement for Sustainable Management of Fisheries Resources and Aquaculture in Lake Edward and Lake Albert and their Basins. The agreement was signed at Munyonyo Resort Uganda on the 20th October 2018 by his Excellency Paluku Kisaka Yere Yere, Minister of Fisheries and Livestock on behalf of the D.R.C and Hon. Kibanzanga M.T Christopher, Minister of State for Agriculture on behalf of the Republic of Uganda.

The Bilateral Agreement facilitates the two countries to develop joint projects on the Lakes Edward and Albert basins and reap the benefits of cooperation and equitable access to and utilization of the water and aquaculture resources of the two lakes in a sustainable manner. It forms mechanisms for harmonization of fisheries policies and joint management and joint surveillance of activities of the two lakes. Work on this Bilateral Agreement began when NELSAP-CU, through the LEAF II project, hired an international consultant and jurist to study the fisheries policies, laws and regulations existing in the two countries. LEAF II Project further organized national level dialogues in the two countries bringing together top legal experts, fisheries managers and policy makers, and other stakeholders from key ministries of the two countries. Joint meetings were then organized with participation of both countries.

D.R Congo and Uganda Sign Bilateral Fisheries Agreement

In order to facilitate better and coordinated management of the fish and water resources of trans-boundary lakes Edward and Albert, NELSAP-CU procured two high capacity patrol boats and trained 12 boat coxswains and operators from D.R Congo on their use and maintenance. The speed boats are fitted with among others night vision and recording of vision gadgets, water ejector system to avoid drowning, latest VHF radio frequency for communication with police and military, a radar detection system, fixed and mobile search lights, high speed and noise reduction systems. The boats were delivered to the D.R Congo sites of Kihongiro on Lake Edward and Kasenyi on Lake Albert, by 9th February 2019 and technical trainings were conducted between January 2019 and February 2019. The aim of this initiative is to support in lake surveillance to reduce the rampant illegal activities.

“This boat will help us to better manage our lakes and since we have been trained together the Ugandans, we will eventually do patrols together and forge a closer relationship,” says Caesar Mazimwe, a Marine Commandant and Ranger working for the Virunga National Park in the D.R Congo. “I had never seen such a boat before, but I am very grateful to the initiators of this project because now we have been...”
fully trained on how to operate the boat,” adds Caesar

This activity is within the framework of the Bilateral Fisheries Agreement for the Lakes Edward and Albert signed by D.R Congo and Uganda on 20th October 2018 in Kampala, Uganda.

NELSAP COMPLETES INTERCONNECTION OF ELECTRIC GRIDS OF THE DRC - RWANDA THROUGH GOMA-GISENYI OHTL

The D.R Congo (Goma) - Rwanda (Gisenyi) power interconnection is a 12 km 220kV Overhead Transmission Line (OHTL) that runs from Gisenyi in Rwanda to Goma in the Eastern D.R Congo. This line was successfully completed four years ago (2016) and has been energized at 110kV. Feasibility of this line was done by NELSAP and NELSAP supervised its implementation on behalf of the countries. The line connects the Eastern D.R Congo into the grids of the NEL countries. The line included construction of two substations at Gisenyi and at Goma.

The interconnection of D.R Congo – Rwanda electric grids was necessitated by the desire to address the high cost of power which arose from high electricity costs and from use of diesel generators, poor reliability and low electricity access rates in the region. The associated Goma substation once completed will contribute to increased power supply security in the region to the benefit of households, industry, and small and medium sized enterprises which will gain access to cheaper, more reliable and sustainable electricity. It will also contribute to the implementation of the regional power market.

This project falls under the Interconnection of the Electric Grids of the NEL Countries, which is implemented in five countries by NELSAP/NBI on behalf of the NEL Countries (Burundi, D.R. Congo, Kenya, Rwanda and Uganda). Interconnection of the Electric Grids of the NEL Countries project comprises installation of 931.5 kms of Overhead Transmission Lines (OHTL) at 400/220/110kV and construction of 17 substations. This project is funded by the African Development Bank (AfDB), German Development Bank (KfW), Japan International Cooperation Agency (JICA) and the Government of Netherlands (GON) SIDA and EU.

CONSTRUCTION OF 4 FISH LANDING SITES IN DRC COMPLETE, TO SERVE 12,828 FISHERS, PROCESS 3.5 TONS DAILY

LEAF II project has completed construction of four modern fish landing sites in D.R Congo on the trans-boundary lakes Edward and Albert. The four landing sites are serving 12,828 fishers daily and process 3.5 tons of fish per day. The completed sites are Mahagi landing site and Vitshimbi. The other completed are, Tchomia and Kyavinyonge landing sites. Each of these sites consists of a modern fish landing and processing facility, solar powered portable water supply system, hygienic sun drying facilities, modern fish smoking kilns, an administration block with fisheries officer’s offices, secure fencing and access road. The landing sites are expected to significantly reduce the high post-harvest losses of fish, which according to recent LEAF II research were up to 25% of all catches, improve fish prices through better fish handling and energy efficiency through modern kilns that are 50% more efficient. This initiative is supported through a grant to DRC from the AfDB and implemented in collaboration with the NELSAP-CU/NBI.

The Ministries in charge of Water and Fisheries in the D.R Congo through an inter-ministerial Technical Project Management Team were responsible for overseeing construction. The completed sites were handed over to Local Governments for a ‘test run’ period, which helped to evaluate the functionality of the landing facilities and rectified defects, before the political hand over of the sites were done. At the same landing sites, training was done for fisheries officers and selected fish landing site committees who will be responsible for operation and maintenance of the facilities.

DRC RECEIVES EQUIPPED MOBILE WATER QUALITY LABORATORY VAN, WATER QUALITY STATIONS AND FISHERIES RESEARCH STATION

The D.R Congo has received a fully equipped mobile water quality laboratory van, two water quality surveillance stations and a fisheries research station through the LEAF II project of NELSAP/ NBI. The water quality surveillance stations located at Vitshimbi on Lake Edward and Kasenyi on Lake Albert are nearing completion. The Fisheries research station at Kasenyi is also nearing completion while
the fully equipped mobile water quality laboratory van was delivered to the country early 2019 and is in operation. The mobile van can analyze up to 20 different descriptive characteristics of water out in the field and immediately generate results which would then enable the Ministry to make real time decisions. The van can be linked to a national water quality database through a mobile phone, and its results can be immediately transmitted to any location. The van has fridges that can store samples, which are then delivered to the water quality laboratory. The van can be deployed during flood emergencies to test the flood water, treat and supply the same to people affected by floods. During the 4th Regional Project Steering Committee (RPSC) meeting of the LEAF II project that was held on 3rd and 4th July 2019 in Kinshasa, the Minister for Fisheries and Livestock, Hon. Paluku Kisaka Yereyere expressed gratitude to the LEAF II project for supporting D.R Congo to construct the water quality monitoring stations, a fisheries research station and for the mobile water quality lab. The Minister delivered his message through Mr. Gaspard Nzita, Chief of Staff of the Ministry of Fisheries and Livestock at the RPSC meeting that was held at Kempinski Fleuve Congo in Kinshasa.

**DRC BENEFITS FROM KEY FISHERIES DATA COLLECTION**

LEAF II has supported D.R Congo and Uganda to collect key fisheries resources data on both lakes Edward and Albert (all landing sites statistics on fishing gears and number of fishers, fishing effort, fish catch and fish prices which will inform and guide proper and joint fisheries resources management. These various fisheries data collected are the first of their kind in this basin, and are strengthening the bilateral cooperation between both countries in sustainable management of the shared fisheries resources.

The collected fisheries data is being incorporated into a regional Fisheries Information Management System for Lakes Edward and Albert (LEAF FIMS) which will also be the first of its kind for the basin. Furthermore, all fish breeding areas and critical aquatic habitats were mapped and characterized, and suitable sites for cage aquaculture development identified and studied on both lakes.

**ONGOING PROJECTS AND INITIATIVES WITH DIRECT BENEFIT TO D.R CONGO**

1. **DR CONGO (BUHANDAHANDA – GOMA) - RWANDA (GISENYI – KIBUYE – SHANGO) POWER TRANSMISSION LINE**

The DR Congo (Buhandahanda – Goma) - Rwanda (Gisenyi – Kibuye - Shango) power transmission line is an extension of the original completed Goma-Gisenyi line. The transmission line is composed of the 95-km-long, 220 kV Goma–Bukavu line and Buhandahanda substation in the D.R Congo and the completed 12 km 220 kV Goma–Gisenyi line, ongoing construction of Goma substation, along with studies, project monitoring and supervision, and project administration and management. The project is co-funded by AfDB at USD 11 million and the Government of Netherlands (GON) at Euros 6.5 million. The grant will help improve access to electricity coverage within DRC as well as to neighboring Nile Equatorial Lakes (NEL) countries. The country’s North Kivu and South Kivu regions, areas in which the DRC project component is active, have combined unmet electricity demand of 115 MW, and experience rampant interruptions in supply. The completion of NELSAP’s DRC component will eventually bridge the energy gap in the provinces of North Kivu and South Kivu, promote energy trade between countries linked by the regional interconnected grid, and increase the electricity access rate in the project area from 4 to 7 per cent. In addition, residents and economic operators in the project area will save on the cost of fuel used to power diesel generators for private power production.
In March 2020, NELSAP-CU received funding from the African Development Bank (AfDB) to conduct updated feasibility studies of the 352.2 km (220 kV / 400kV) D.R Congo-Uganda power interconnection. The feasibility study covers engineering design, tender documents preparation, environmental and social impact assessment (ESIA) and resettlement action plan (RAP). This funding is for updating feasibility study of the OHTL to connect the Eastern part of DR Congo to the Uganda power grid.

The D.R Congo portion of the interconnector line will be 279.7 km while the Uganda portion will be 72.5 km and will include four substations (at Beni, Bunia and Butembo in D.R Congo and at Nkenda in Uganda) together with telecommunication systems and rural electrification in the D.R Congo sections. The funding is to the tune of USD 0.95 million. D.R Congo and Uganda will provide USD 0.065 million as counterpart contributions. The feasibility study will be conducted by NELSAP-CU in consultation with Société Nationale d’Electricité (SNEL) of the D.R Congo and Uganda Electricity Transmission Company Limited (UETCL) and the study is expected to run for 14 months.

As a precursor to this feasibility study, NELSAP facilitated signing of an M.O.U between the Ministers in charge of Energy affairs of D.R Congo and Uganda in August 2017 in Kinshasa for this transmission line and for future energy projects. The M.O.U signed by Hon. Ingele Ifoto, Minister of Energy D.R Congo and Hon. Eng. Irene Muloni, the Minister of Energy of Uganda established a framework of cooperation between D.R Congo and Uganda to enable joint development and implementation of energy projects, trade and exchange of electric power. Through the M.O.U the countries mandated NELSAP-CU to mobilize funds and coordinate physical implementation of the interconnection on behalf of the countries and facilitate other future cross-border investments in the energy sector.

The Goma-Buhandahanda power interconnection is a 95 km 220kV Overhead Transmission Line (OHTL) within the D.R Congo and interconnects with Ruzizi III (Kamanyola-Buhandahanda line). The Goma - Buhandahanda interconnection is financed by the African Development Bank (AfDB) and coordinated by NELSAP-CU on behalf of the D.R Congo. The project is ongoing and work done has reached 20%.

The Democratic Republic of Congo (Kamanyola) – Burundi (Bujumbura) power interconnection is a 78.8 km power transmission line whose construction is 20% completed. The line is funded by the European Union to the tune of 15 million Euros and implemented by the AfDB and supervised by NELSAP. It includes two sub stations, Kamanyola substation and Bujumbura substation.

Upon completion the project will integrate the electricity grids of the great lakes countries, EGL (Burundi, DRC and Rwanda) as well as the regional electricity grid for the five NEL countries. Some of the expected results of this project are; Increased access to electricity from a regional average of 9% in 2010 to 13% in 2015 and to 19% in 2020 and reduced electricity costs from a regional average of 20 cents USD/KWh in 2008 to 8 cents USD/KWh in 2020 by improving overall production and operational efficiencies of the integrated system. The project is also expected to promote regional cooperation and integration promoting power development planning from a regional perspective.

Partners involved in this project are the Burundi national power utility the Régie de Production et de Distribution d’Eau et d’Electricité (REGIDESCO) the Electricity of the Great Lakes (EGL) and NELSAP.
NELSAP has consolidated the advances made in independently prepared investment projects from Member Countries into a single, feasible Nile Equatorial Lakes Investment Program (NEL-IP). The NEL-IP provides a framework for shared water and other resources, and more importantly, a suite of well-structured, -designed, purposeful, integrated and bankable projects for development partners and investors to consider. Out of the total list of 17 projects D.R Congo got three projects, these are; 1. Uganda-D.R Congo Transmission Line (TL) 2. Semliki Hydropower (HP) project and 3. Kitoba-Lubango Water Resources Project (Irrigation).

FULL IMPLEMENTATION OF THE UGANDA -D.R. CONGO TRANSMISSION LINE (TL)
This proposed transmission line from Nkenda in Uganda to Beni-Butembo-Bunia (DR Congo) will allow the supply of power to the north east of the DR Congo, particularly the towns of Beni, Bunia and Butembo with electricity from Uganda through 352km of high voltage (220KV) line. Supply is projected to be 64MW, approximately equal to 532.68GWh in the scenario for year 2021, and 752.699 people are expected to benefit from the project. Feasibility studies, detailed design and preparation of tender documents were done in 2013 and currently NELSAP is conducting updated feasibility to refine the findings. This project is also part of the network analysis of NEL countries (2017). The next stage of this project is resource mobilization and implementation, for which funding is sought through the NEL-IP. A preliminary estimate for implementation of USD 165m will need to be reviewed prior to implementation.

72MW SEMLIKI HYDROPOWER PROJECT (HP)
Semliki will provide electricity to people mostly in and around the towns of Butembo and Beni would be main beneficiaries of Semliki’s hydropower plant. The Northern Kivu’s capital city is Goma, which is 400 km away from Butembo and Beni. Target power 72 MW, target energy 631.152 GWh Semliki is one of four (Mogomba, Muyama and Kiyimbi) proposed hydropower projects, packaged to have potential capacity of 150MW, generating annual energy production of 800 GWh. Dated studies suggested the project would cost USD 900m. Several areas that require particular attention have been noted in previous studies including: Improvement of hydrological data and modelling, economic modelling to determine viability, comprehensive ESIA to address potentially large environmental challenges, the actual geological conditions, layouts and designs. A budget of USD 6m has been included in this phase of the NEL-IP for the required studies to define the project better.

KITOBA-LUBANGO WATER RESOURCES PROJECT (IRRIGATION)
The Kitoba-Lubango focal area (5,664 ha) is situated in is located between the villages of Kitoba and Lubango, in the territory of Lubero, in the district of Goma, in the province of North Kivu, in eastern DR Congo. The Project is to develop 3,000 ha irrigation and watershed management and is part of the investment programs prioritized by DR Congo for preparation and implementation whose identification was undertaken in 2012. Benefits will accrue to 15,000 beneficiaries (including 4,286 farmers) either directly or indirectly through creation of employment opportunities, water for domestic consumption, agricultural production, and livestock production.

The outcomes of these benefits will be enhanced household incomes and livelihoods, environmental protection, watershed management, boosted agricultural production to match the ever increasing population and market demand at regional level thereby improving both national and regional food security, social economic development and ultimately poverty reduction.

The Project’s expected outputs include:
• Aweil irrigation infrastructure to enable 5,664 ha of land to be under irrigated agriculture
• Watershed management program for catchments upstream of the proposed irrigation infrastructure
• Environmental and Social Management Plan
• Improved market infrastructure and outlets; greater participation in rural economy by small-holder farmers
• Improved water resources monitoring along three tributaries through establishment of 2 new river gauging stations.

A pre-feasibility study has been done and it is expected that this national priority project will cost USD 21.1m. Feasibility, ESIA, and detailed design is required and has been allocated USD 3m in NEL-IP.