Tanzania Investment Benefits from the Nile Basin Cooperation

The Tanzania Prime Minister Hon. Dr. Kassim Majaliwa visits the 80MW Regional Rusumo Falls Hydropower Project that is shared between Burundi, Rwanda, and Tanzania, to inspect progress of construction work.

Energy Ministers of Burundi, Rwanda, and Tanzania visit the Regional Rusumo Falls Hydropower Project to inspect progress of construction work.

A family drawing water from a domestic water point supplied in Ngara by NELSAP-CU through support from the World Bank funded Local Area Development Projects (LADPs) in Tanzania.
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 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, Kenya, Rwanda, Tanzania, Uganda, Egypt, Ethiopia, South Sudan and Sudan. 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) natural 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 mobilized USD 557.107 million cumulative finance to-date for pre-investment programs of and additional USD 493.018 million for investment projects. Since 20014, 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 strength lies in project pre-investment feasibility studies, regional projects coordination support, regional strategic analysis, environmental and 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, the Japan Bank for International Cooperation (JBIC), 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 United Republic of Tanzania since 2004 as elaborated below.
CompleTested projeCts WiTh direCT BenefiTs To Tanzania

A. REGIONAL AGRICULTURAL TRADE AND PRODUCTIVITY PROJECT (RATP 2009–2012) USD7.0 MILLION

The project was implemented in collaboration with regional economic communities COMESA and EAC. Under the project, several studies were completed and made into technical publication; Assessment of the irrigation potential in 7 NEL Countries and Promotion of best practices on water harvesting and irrigation practices.

B. BORENGA MULTIPURPOSE WATER RESOURCES DEVELOPMENT PROJECT

Borenga is located in the Mara Region, downstream of the Mara River. NELSAP completed the Feasibility Study, Detailed designs, Environmental and Social Impact Assessment (ESIA) and Resettlement Action Plan (RAP) as well as preparation of Tender documents. NELSAP submitted these documents to the Government of Tanzania in March 2019 for mainstreaming into national plans. The feasibility was financed by the Swedish Government. The study reports are enabling the Government of Tanzania to attract investment financing for the bankable project. The Borenga 15.8MCM Dam Capacity with 22M of height, once completed will serve about 30 villages (13 villages with water for irrigation (8,340ha) and 17 villages in Butiama, Serengeti and Tarime Districts with water supply for domestic and livestock use) whereby 500,000 people will benefit from the dam. The designed infrastructure has the capacity to generate 2.85MW electricity. Other benefits include fish farming, drought control during dry seasons and flood control to community living in the lower Mara (Masurura/Mara wetlands). Estimated cost of implementation is USD 217 Million to be constructed over a period of 10 years.

C. CONSTRUCTION OF BISARWI SMALLHOLDER IRRIGATION SCHEME

NELSAP-CU in collaboration with the government of Tanzania constructed a 50,000m³ capacity storage earth dam in Bisarwi village, Tarime District, Mara river basin. The dam provides water for domestic and livestock uses for Bisarwi village and 500ha irrigation area downstream of the dam. The project was implemented through small-scale investment projects financed by Sida at USD200,000 cost whereby the government of Tanzania contributed TZS.70 Million.

D. NORERA DAM

Norera dam has been designed to the Feasibility stage, while the upstream large dam with regulating storage, the Amala (Nairotia Dam) and the water resources development scheme in the Amala Sub-basin is at the identification (pre-feasibility stage). Norera is the low intake dam near the water resources development scheme in the Amala Sub-basin. The dual dam (Amara and Norera) water resources development scheme when developed will support the full development of 5,000 ha of irrigation and support other productive uses such as livestock and aquaculture. Also, the scheme can support the development of a comprehensive potable water network covering rural areas, market centres and towns such as Longisa and Narok. Development of the dual dam scheme will improve the downstream low flow conditions in the National Parks downstream both in Kenya and Tanzania, given that with full development of the 5,000 ha net irrigated area will cease pumping from the baseflow of Amala that is now taking place downstream of the Amala Bridge gauging station. The financial and economic analysis from the feasibility studies has shown the scheme is highly advantageous. A first stage development of Norera Dam alone, prior to construction of Amala Dam has been shown feasible with the prerequisite that no transfer from Amala to Ewaso Ngiro South takes place. The Amala Transfer to Ewaso Ngiro South should not be implemented without construction of Amala Dam which will provide the benefit of regulating storage. If it is, then it will have a serious adverse impact on the potential for water resources development in the Amala valley and on the flow regime, primarily on the Amala River, and, secondarily, on the Mara River itself. The feasibility studies recommended that, it is very important to carry out fully feasibility studies of the entire scheme is before detailed design and tender documents are preparation. The studies should include both the potable water supply and water
for production elements. The feasibility study should be accompanied by a full EISA study, a Resettlement Action Plan and an Environmental and Social Management Plan incorporating the total scheme. The studies and plans prepared for Norera Dam will be incorporated. Following completion of the feasibility study, detailed design and tender documents should follow. The detailed design should be accompanied by a Dam.

E. PREFEASIBILITY STUDIES FOR THE KAGERA RIVER BASIN MANAGEMENT CATCHMENT

Completed pre-feasibility studies for the Kagera river basin catchment at a cost of USD251.5 million. The study revealed existence of 11,681 ha potential for irrigation that can benefit 20,000 people when exploited. This information is enabling the Government of Tanzania in planning and advancing irrigation projects for food production in the Kagera catchment area.

F. PRE-FEASIBILITY STUDY FOR THE MARA VALLEY IRRIGATION PROJECT

Completed a prefeasibility study in the River Mara Valley and identified 6,030 ha land for irrigation potential to benefit 10,000 people. The ongoing feasibility study has estimated the investment cost of USD229 Million, which will be in phases for the period of 12 year of implementation.

G. PRE-FEASIBILITY STUDY FOR BUGWEMA IRRIGATION PROJECT

Conducted a prefeasibility study for Bugwema irrigation project and identified 2,030 ha land for irrigation to benefit 4,530 people. The study estimated that if the irrigation site is to be implemented, USD14.8 million would be required as investment.

H. SUB-CATCHMENT MANAGEMENT PLANS IN MARA AND KAGERA RIVER BASINS

NELSAP-CU prepared the Sub–Catchments Management Plans for Tobora and Somoche in Tanzania under financing of the Swedish Government. The plan once implemented will benefit about 160,000 people in the two countries.

I. POWER INTERCONNECTION: IRINGA – MBeya TRANSMISSION LINE

NELSAP-CU identified the Iringa – Mbeya as a weak link in the Zambia – Tanzania - Kenya (ZTK) interconnection being at 220kV. A feasibility study was conducted for this reinforcement to 400 kV that was completed in October 2012 at a cost of USD3.8 Million under the NBTF World Bank. The study reports were shared with the Government of Tanzania and mobilisation of funding for implementation is underway.

I. POWER INTERCONNECTION: KENYA–TANZANIA TRANSMISSION, (Isinya/Nairobi-Singida)

The project was recommended by East Africa Power System Master Plan 2005 and by NELSAP-CU Strategic/ Sectorial, Social and Environmental Assessment (SSEA) 2017 of Power Development option in the Nile Equatorial Lakes Region. Following the SSEA, NELSAP-CU mobilised NOK24 Million from the Government of Norway and conducted the feasibility study, detailed design & tender documents preparation, which completed in 2012. The interconnection was found bankable as recommended by the feasibility report. Kenya and Tanzania secured funding for the project, which is now under physical implementation in both countries. Upon completion of the project, not only Tanzania will trade power with the rest of the SADC member countries but also the East African Power Pool (EAPP) will take advantage of the existing power interconnection to trade with the Southern Africa Power Pool (SAPP). This will improve the welfare of the population not only in Tanzania but also in the region.

J. INSTALLATION OF HYDRO-METEOROLOGICAL EQUIPMENT

NELSAP-CU undertook assessment and design of hydrometric network in the Mara Basin. A total amount of USD238,368 was spent to procure and install equipment in the entire basin. In Tanzania four (4) Automatic Weather Stations have been installed at Buhemba Agriculture Centre, Mugumu, Kuruya and Nyabusara Primary Schools. Evaporation Pans were also installed in the same stations. NELSAP-CU also installed four (4) Automatic Water Level Recorders in Mara river at Kirumi bridge, Mara mine, Nyansurura bridge and Kogatende. Five (5) standard rain gauge tipping bucket were also installed. Through Kagera and Mara RBM Projects, 24 hydromet stations were installed in Tanzania as follows: i) 12 Evaporation Pans and Automatic Weather Stations; ii) Six (6) Standard Rain Gauges; and iv) 6 Lake water level recorder stations, which enhance the water resources monitoring in the basin. The stations augment the existing network stations, which were installed by the Ministry of Water and Irrigation.
A. PREPARATION OF WATER RESOURCES MULTIPURPOSE PROJECT: MARA VALLEY AND NGONO PROJECT
NELSAP-CU completed the pre-feasibility studies for Mara and Ngono Multi-purpose projects. Now undertaking detailed feasibility, ESIA/RAP studies for Mara Valley & Ngono projects expected to be completed in April 2017. 20,000 people will benefit direct from the Ngono infrastructure while 10,000 people will benefit from the Mara Valley site, once developed (getting water supply for domestic and livestock use), and water for irrigation (6,340ha). The expected Borenga Dam, will supply water to the Mara Valley villagers: about 13 villages will be served with water for irrigation, 17 villages with water supply for domestic and livestock use. The Ngono project will command 13,630ha covering 21 villages.

B. POWER INTERCONNECTION: ZAMBIA-TANZANIA – KENYA 400KV TRANSMISSION LINE
Aimed at interconnecting the EAPP and SAPP, NELSAP-CU identified the transmission potential, whereby funds were mobilized to support the required study. The interconnector will have a transmission line running from Isinya in Kenya to Mbeya (Tanzania) to Kabwe (Zambia). NELSAP completed the project studies (feasibility, tender documents preparation, detailed design and ESIA/RAP) in December 2017 at a cost of NOK18.612 Million and EUR2.26 million from Norway Government and KfW respectively. The expected benefits from the interconnector is the power trade between East Asia Power Pool (EAPP) and the Southern Africa Power Pool (SAPP) whereby Citizens in Tanzania will also benefit from reliable electricity due to facilitated power trade.

C. REGIONAL RUSUMO FALLS HYDROELECTRIC PROJECT (RRFHP)
The Regional Rusumo Falls Hydroelectric Project, 99% complete by July 2023 has an installed capacity of 80 MW (Run of River Scheme at 1320masl) shared equally among Burundi, Rwanda and Tanzania. The power generation infrastructure are located at Rusumo Falls at the border of Tanzania and Rwanda. The now complete transmission lines extend from the power generation plant to Gitega in Burundi, Kigali in Rwanda, and Nyakanazi in Tanzania. The USD 340 million World Bank funded project is developing renewable hydropower as part of a broader program to support sustainable management of the Kagera River Basin and promote growth and poverty reduction. The project has three components: i) A hydropower generation plant at the Rusumo Falls of 80MW capacity to be shared among the three countries, ii) Transmission lines connect-
ing the hydropower generation plant at Rusumo Falls to the national grids of Burundi, Rwanda and Tanzania, and the related project area development and iii) A jointly owned utility/institutional mechanism for the co-management of the power generation plant and transmission lines to national utilities.

The project includes a US$128Million advanced to the countries by the African Development Bank for the implementation of the power transmission lines.

**LOCAL AREA DEVELOPMENT PLAN (LADP)**

As part of bringing quick benefits to the community around the project site, NELSAP supports the Local Area Development Plan (LADP) as a benefit-sharing program worth 15 Million US Dollars designed to enhance regional economic and social development in the Rusumo area as an extended program related to the construction of the project. LADP is expected to improve community livelihoods and promote socially sustainable outcomes of the riparian citizens of the affected districts.

The LADP project has so far supported construction or rehabilitation of tens of schools at all levels, constructed ladies dormitories, computer labs, science labs among others. The project has constructed water supply projects and also constructed three major health facilities and supported expansion of vocational training centres.
KAGERA BASIN-WIDE INTEGRATED WATERSHED PROGRAM (WM)
The overall objective of this watershed management project is to establish a sustainable cooperative framework for the joint management (Burundi, Rwanda, Uganda, Tanzania) of the water resources of the Kagera River Basin; in order to prepare for sustainable development-oriented investments that will improve the living conditions of the people while protecting the environment. The Kagera River Basin Project contributes to the improvement of living conditions of the basin communities through social economic development, poverty reduction and reversal of environmental degradation. Numerous notable achievements and outputs within the basin already, and the NEL-IP request is for USD 60m to further assist with implementation including substantial welfare benefits to Kagera Basin including Soil and Water Conservation on 300,000 ha, Irrigation on 65,000 ha, and building of rural roads up to 2,000 km.

MARA VALLEY IRRIGATION AND WM PROJECT (MPP)
The Mara River Basin Project contributes to improved living conditions of the basin communities by creating an enabling environment for sustainable development-oriented investments and building capacity of riparian staff and communities in integrated water resources management and development. The project is preparing several investment proposals in the fields of water infrastructure, watershed management and irrigation infrastructure for subsequent funding within a consistent basin development strategy. This primarily irrigation project includes the Borenga Dam, will benefit 47,500 people, irrigate 8,340 Ha in 13 villages of Serengeti and Butiama Districts, 2.85MW hydropower, water supply to 18 villages in Serengeti, Butiama and Tarime Districts in Tanzania. According to the feasibility study (unavailable) the project will cost USD 189.2m. The project needs detailed design and project implementation under this phase of NEL-IP.

NGONO MPP WATER RESOURCES DEVELOPMENT PROJECT (MPP)
The Ngono Valley project (located in the western shores of Lake Victoria and shared by the Districts of Bukoba Rural and Missenyi) will develop a multipurpose reservoir, net irrigated agriculture of approximately 5,825 ha, generation of hydropower, as well as contribute towards sustainable land management of endangered sub-catchments in the Ngono River Basin.

The proposed projects are part of the investment projects advanced by Tanzania to the NELSAP for projects preparation and which were prioritized through the NEL Multi-Sector Investment Opportunity Analysis.
## Other Projects in the Pipeline with Direct Benefits to Tanzania

<table>
<thead>
<tr>
<th>NAME AND LOCATION</th>
<th>STATUS</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ngono Multipurpose Water Resources Development Project (13,000 Ha) in Bukoba &amp; Missenyi District</td>
<td>Feasibility and ESIA studies ongoing next is detailed design and project implementation</td>
<td>Investment USD 80 million</td>
</tr>
<tr>
<td>Mara Valley Multipurpose Water Resources Development Project (9,000 Ha) in Muleba District</td>
<td>Feasibility and ESIA studies ongoing next is detailed design and project implementation</td>
<td>Investment USD 60 million</td>
</tr>
<tr>
<td>Mupazi Multipurpose Water Resources Development Project (3,000 Ha irrigation, 1.8 MW, water supply to 50,000 people) in Ngora District</td>
<td>Prefeasibility done next is Feasibility, ESIA &amp; RAP, Detailed design and project Implementation</td>
<td>Pre-investment USD 2.5 mln, investment USD 22 mln.</td>
</tr>
<tr>
<td>Buligi Valley (Ikaki) Irrigation &amp; Water Supply Deployment Project (5,000 Ha irrigation, water supply) in Muleba District</td>
<td>Identification done next is Pre-feasibility, ESIA &amp; RAP, and project Implementation</td>
<td>Pre-investment USD 1.0 mln, investment USD 5 mln.</td>
</tr>
<tr>
<td>Omwbale Multipurpose Water Supply Project (Water Supply to 5,000 people, livestock watering, and irrigation approx. 500 Ha) in Karagwe District</td>
<td>Identification done next is Feasibility, ESIA, and detailed design</td>
<td>Pre-investment USD 1.0 mln, investment USD 8.0 mln.</td>
</tr>
<tr>
<td>Nchango irrigation project (1,600 ha; water supply) in Muleba District</td>
<td>Identification done next is Feasibility, ESIA, and detailed design</td>
<td>Pre-investment USD 1.0 mln, investment USD 8.0 mln.</td>
</tr>
<tr>
<td>Muhongo valley irrigation project (1,500 ha; water supply) in Ngora District</td>
<td>Identification done next is Feasibility, ESIA, and detailed design</td>
<td>Pre-investment USD 1.0 mln, investment USD 8.0 mln.</td>
</tr>
<tr>
<td>Kafunzo irrigation project (1,500 ha; water supply) in Missenyi District</td>
<td>Identification done next is Feasibility, ESIA, and detailed design</td>
<td>Pre-investment USD 1.0 mln, investment USD 8.0 mln.</td>
</tr>
<tr>
<td>Implementation of Kagera Basin-wide Integrated Watershed Program in Burundi, Rwanda, Tanzania, and Uganda</td>
<td>Feasibility study level next is Design and implementation</td>
<td>Pre-investment USD 3.0 mln, investment USD 60.0 mln.</td>
</tr>
</tbody>
</table>

---

### Implementation of the Mara Basin-wide Integrated Watershed and Wetlands Program in the Mau Region
- Feasibility study level next is Design and implementation
- Pre-investment USD 1.5 mln, investment USD 40.0 mln.

### Kishojuro irrigation project (1,000 ha; water supply) in Karagwe District in Karagwe District
- Identification done next is Feasibility, ESIA, and detailed design
- Pre-investment USD 1.0 mln, investment USD 6.0 mln.

### Borenga Multipurpose Storage Reservoir Development Project (8,340 ha) in Mara River near North Mara Goldmines, Nyamongo
- Feasibility and ESIA completed next is Detailed design and project Implementation
- Pre-investment USD 0.5 mln, investment USD 36.0 mln.

### Nyakununguru Irrigation Development and Watershed Management Project (625 ha) in Lower Mara Sub basin on Nyangores river
- Identification done next is Prefeasibility, Feasibility ESIA, and detailed design
- Pre-investment USD 0.8 mln, investment USD 3.75 mln.

### Nyarwarian Irrigation Development and Watershed Management Project (625 ha) in Lower Mara Sub basin
- Identification done next is Prefeasibility, Feasibility ESIA, and detailed design
- Pre-investment USD 0.8 mln, investment USD 2.7 mln.

### Biswari Irrigation Development and Watershed Management Project (400 ha) in Lower Mara Sub basin
- Identification done next is Prefeasibility, Feasibility ESIA, and detailed design
- Pre-investment USD 0.8 mln, investment USD 2.4 mln.

### Muhono Community Water Supply & Sanitation Project in Mid Mara on Amala River
- Identification done next is Feasibility, FS, ESIA, and detailed design
- Pre-investment USD 0.75 mln, investment USD 2.5 mln.