

Unlocking the Nile Basin's energy potential through cooperation

REGIONAL RUSUMO FALLS HYDROELECTRIC PROJECT

Regional Rusumo Falls Project area as viewed from the Sub-station site.

Quick Facts

Beneficiary countries



Burundi Rwanda Tanzania

Electricity: 80MW (448 Giggawat hour/year)

No. of beneficiaries: 1,146,000 people

Dam Design: Run of River (RoR) Development Scheme at 1,320 metres above mean sea level

Start-End (Construction): 2015 - 2018

Cost: US\$470

Rusumo Falls

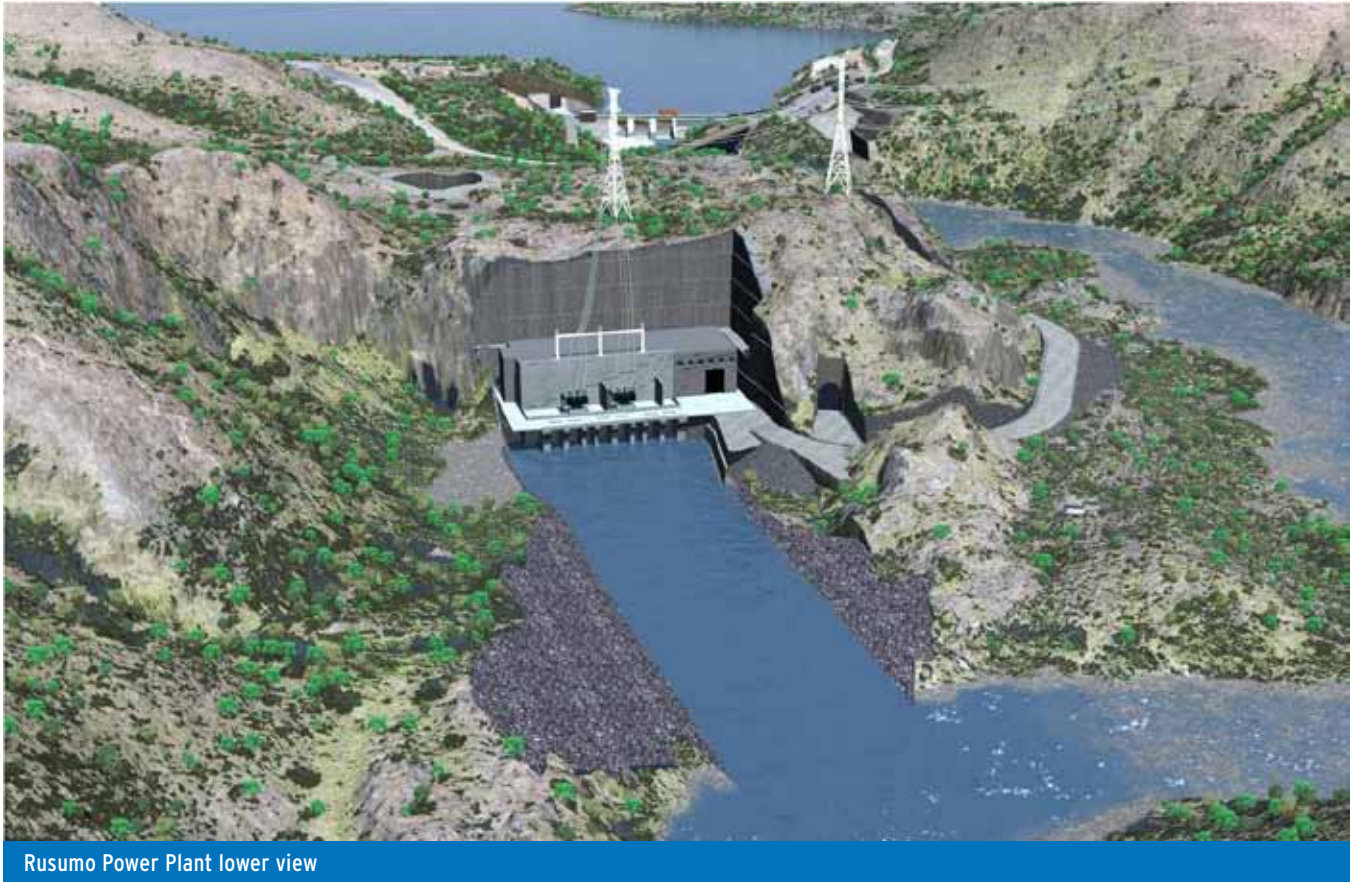
Rusumo Falls is located on the Kagera River on the border between Rwanda (Southeast) and Tanzania (Northwest). The Falls are approximately 15 meters high and 40 meters wide. A sequence of rapids comes after the falls and the stream drops an additional six meters over the next 800 meters. The catchment at the falls drains from the territories of Tanzania, Rwanda and Burundi.

Kagera River Basin is shared by Burundi, Rwanda, Tanzania and Uganda and is the most remote headstream of the River Nile, as well as the largest tributary to Lake Victoria, the world's second largest freshwater lake by surface area. Its Basin, which covers an area of about 60,000 square kilometers, is a sub-basin of the River Nile system.



Rusumo Falls

Regional Rusumo Falls Hydroelectric Project



Rusumo Power Plant lower view

The Rusumo Falls was identified as a potential area for hydro power generation as early as 1970s. Although the three partner states discussed over and over again, a series of feasibility studies conducted by different firms and negotiations with development partners ensured at all stages, implementation of the highly needed project was not forthcoming due to a number of reasons. These included lack of commitment from the partner states, lack of investment finance, civil conflict as

well as absence of a joint institution to coordinate the project.

After more than 20 years, construction of the Regional Rusumo Falls Hydroelectric Project (RRFP) power plant and its associated transmission lines is slated to start in the first quarter of 2015 with commissioning of the first power unit expected in December 2018. The US\$470 million project will be financed through a World Bank loan of US\$340 million for constructing the generation

“The project has been awaited for more than 20 years. I congratulate all those who have been working hard to ensure that studies are complete. We are beginning to see light at the end of the tunnel.”

Hon. Jean-Marie Nibirantije, former Burundi Minister of Water, Environment, Land Management and Urban Planning (July 2012).

After more than 20 years, construction of the US\$470 million Regional Rusumo Falls Hydroelectric Project (RRFP) power plant and its associated transmission lines is slated to start in the first quarter of 2015 with commissioning of the first power unit expected in December 2018.

facility and US\$130 million from the African Development Bank and other development partners for constructing the associated transmission lines.

The objective of the Regional Rusumo Falls Hydroelectric Project is to address the acute periodic shortage of electricity experienced in Burundi, Rwanda and Tanzania. Shortage of electricity in these countries and indeed the entire Nile Basin region has resulted into an underdeveloped manufacturing industrial sector hence limited options for business development

necessary to increase income and reduce poverty; and limited opportunities for modernizing and improving the quality of key infrastructure (water supply, health care, social utilities and livelihoods of the citizens).

Burundi, Rwanda and Tanzania have electricity access rates of 10%, 16% and 18% respectively, according to their utility agencies. Tanzania has the highest number of households without electricity at 7.2 million, Rwanda at 1.7 million and Burundi at 1.4 million (Source: The Lighting Africa Program-WB



One of the Project Affected Persons signing a self-validation form

Report 2013). Most households still rely on wood for their cooking and heating needs, leading to extensive deforestation and soil erosion.

The Project will also enhance regional cooperation and peace as well as support the sustainable management of the Kagera River Basin.

The Regional Rusumo Falls Hydroelectric Project design is a Run-of-River (RoR) Development Scheme with a normal operating water level of 1,320 meters above mean sea level. The RoR Development Scheme was selected by the beneficiary governments because it maintains the natural flow of the river and does not significantly modify the natural environment; it minimizes environmental and social impacts of the project and provides for the least cost implementation for environmental management and resettlement.

Under this Scheme, negative impacts will be reduced to two districts one in Rwanda and another in Tanzania compared to four districts, two in Rwanda, one in Tanzania and one in Burundi, under the Full Development Scheme (FDS) and Intermediate Development Scheme (IDS).

The project design includes construction of power lines connecting the plant to the electricity grids of Burundi, Rwanda and Tanzania. A 220 KV transmission line-single circuit running 161km from the power plant to the substation in Burundi (at Gitega), a 119km double circuit system with one circuit strung line to Rwanda (at Shango) and a 98.2km double circuit system with one circuit strung line to Tanzania (at Nyakanazi).

One of the flagship infrastructure projects planned under NBI, the Nile Equatorial Lakes Subsidiary Action Program Coordination Unit (NELSAP-CU) will be responsible for the overall implementation of the RRFPP during the construction phase of the power plant. During the operation, the Rusumo Power Company Ltd (RPCL) that owns the power plant will hire a private company to manage and operate the power plant while transmission lines will be constructed and operated by the three power utilities.



Artistic impression of infrastructure layout of RRFPP



Hon. Amb. Stanislas Kamanzi, Rwanda's Minister of Natural Resources (L) and Hon. Prof. Jumanne Maghembe, Tanzania's Minister of Water, are received by local government officials on arrival to the Rusumo project site in October, 2013.

Benefits of the project

The RRFP is recognised by the three energy-strapped beneficiary countries as a good buy that will share its socio-economic benefits.

Once operational, the project will bring 80 megawatts of renewable, clean, relatively low-cost power to the national grids of Burundi, Rwanda and Tanzania with each receiving an additional 26.6 megawatts. The additional power will benefit an estimated 1,146,000 people in the three countries and an estimated increase in electricity access rates

of; 5.4% (520,000) in Burundi, 4% (467,000) in Rwanda and 0.34% (159,000) in Tanzania.

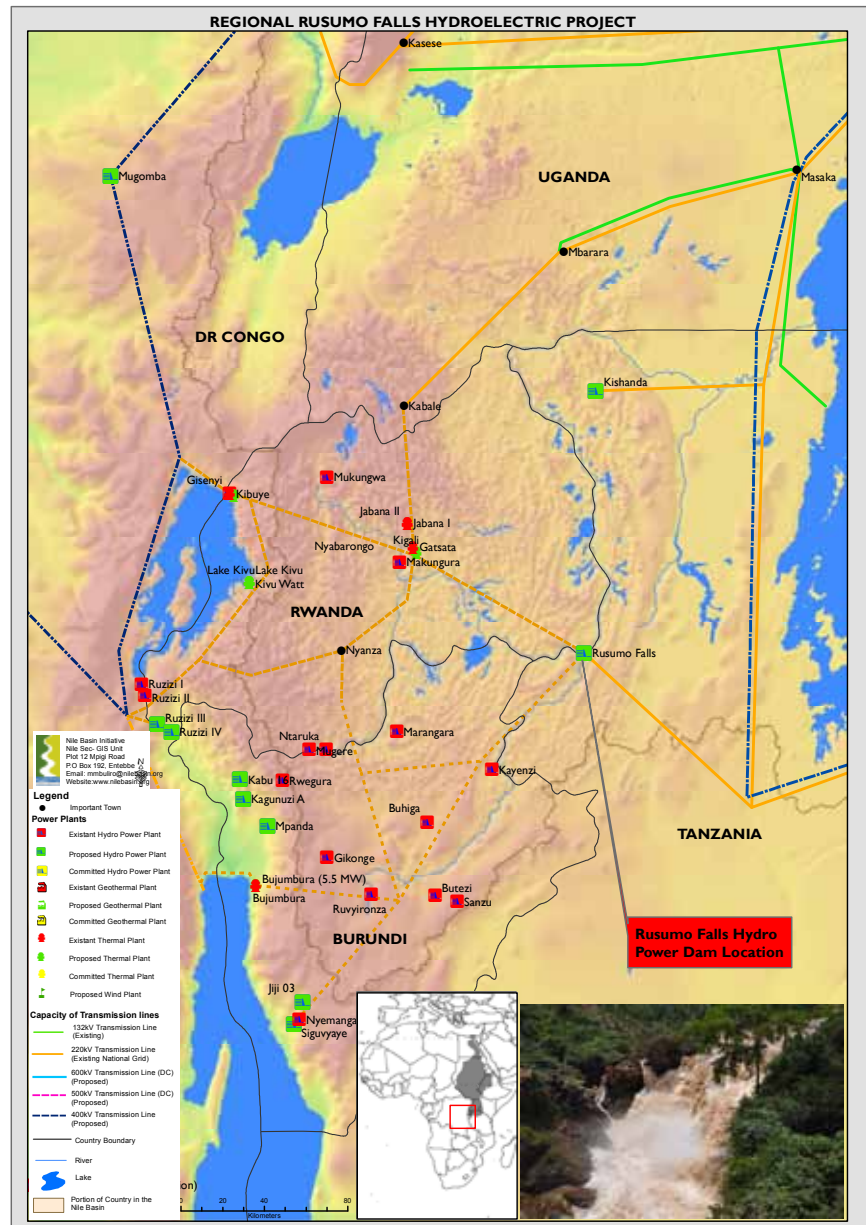
Improved access to renewable clean energy will lead to an increase in economic activity as well as private sector development in areas such as agriculture and related processing, water supply, health, education, commerce and tourism as well as substitute thermal generation. The alternative energy sources will save the biomass/deforestation.

Further more, the relatively inexpensive electricity will contribute to foreign exchange savings and improved balance of payments since the power generated will replace imported petroleum products.

Also envisaged is improved access roads - usually done during construction as well as job creation during and after construction - it is estimated that 1000 people will be employed by the project.

At the regional level, the transmission lines will form a 'backbone system' that will link the Great Lakes region allowing power exchange with Eastern DR Congo as well as other East African Community countries and later to the Southern Africa Power Pool, thus facilitating power trade among member countries and beyond and improving regional power supply reliability.

In addition, the project will support regional and political cooperation, enhance regional integration, facilitate trade, peace and stability among the Nile Equatorial Lakes countries through shared facilities and development of common energy and water policies.



"This project is very important to us in Rwanda and the region at large. We are in dire need of power. We should now combine our forces to ensure that the project translates into an asset that is beneficial to our populations."

Hon. Ambassador Stanislas Kamanzi, Rwanda's Minister of Natural Resources (July 2012).

Success factors



The Mayor of Kirehe district in Rwanda, His Lordship Protais Murayire welcomes Members of Parliament from the Nile Basin countries on a field visit to the Rusumo project site, in July 2012.

The Regional Rusumo Falls Hydroelectric Project is one of the largest investment projects south east of East Africa. Its success thus far is attributable to a number of factors including the following:

The role of the institution: The institution is critical to the success of a trans-boundary project of this nature. It will provide partners with a platform for regular dialogue and information exchange, create an atmosphere of trust and confidence, provide a coordination mechanism as well as facilitate resource mobilisation for implementation of the project. This is why NBI was able to reinvigorate discussions around the need to implement the RRF.

Project design: Carrying out comparative studies to inform project design is paramount. This will enable assessment of different scenarios and the selection of the best option. For the RRF, the RoR

Development Scheme which is environmentally friendly and socially acceptable was selected by the three governments as the best option.

Country commitment: Trans-boundary projects are implemented by national governments; it is critical that participating governments prioritise and secure funding for such projects. Because of their commitment, the three countries prioritised the RRF in their respective national development plans and secured funding for its implementation.

Optimisation: By cooperating and jointly developing hydropower infrastructure over shared water resources, partner countries pool resources, significantly lower costs of production and allow for a more efficient location and operation of hydropower infrastructure as well as demonstrate mutual benefits attainable.

NBI provided the institution, which is critical to the success of a trans-boundary project of this nature.



Ministers in charge of Energy Affairs (L-R): Hon. Côme Manirakiza of Burundi, Hon. Prof. Sospeter M. Muhongo of Tanzania and Hon. Prof. Silas Lwakabamba of Rwanda after signing Project Agreements in Bukoba (Tanzania) on 17th September, 2013.



The objective of the Regional Rusumo Falls Hydroelectric Project is to address the acute periodic shortage of electricity experienced in Burundi, Rwanda and Tanzania; enhance regional cooperation and peace as well as support the sustainable management of the Kagera River Basin.



Role of the Nile Basin Initiative

Trans-boundary in nature, the RRFP caught the attention of the Nile Basin Initiative (NBI), which is interested in investment projects of regional significance.

Through its Nile Equatorial Lakes Subsidiary Action Program Coordination Unit (NELSAP-CU), NBI provided a platform for regular dialogue and information exchange, creating an atmosphere of trust and confidence among the three governments and building an enabling environment for joint investments.

To enable the countries to dialogue, NELSAP-CU invested resources in building capacity in Burundi and Rwanda given that the two countries had not yet established their departments for water resources. Associated with this is capacity building of staff to support project preparation, which is key to comply with timelines and agreed deliverables while improving the quality of the outputs.

NELSAP-CU further coordinated the preparation and signing of several important agreements by the three beneficiary countries. Indeed in March 2005, Ministers in charge of Energy Affairs in Burundi, Rwanda and Tanzania signed a Communiqué declaring their commitment “to jointly develop the Regional Rusumo Falls Hydroelectric Project and accompanying activities such as water resources management, catchment management and environmental management”. A year later in 2006, the Ministers signed a Joint Project Development Agreement (JPDA) to carry out optimization and feasibility studies, a decision which was implemented by NBI.

Other key agreements include the Tripartite Agreement signed in February, 2012 in which the partner states reaffirmed and recorded their commitment to jointly develop, finance, own and operate the project in accordance with the principles of the Agreement. The Agreement also

paved way for NELSAP-CU to continue the pre-implementation arrangements for the project. This was followed by the signing of the most crucial documents namely the ‘Implementation Agreement’ and the ‘Shareholders Agreement’ in September, 2013.

In addition, NELSAP-CU mobilized grants for preparation of the project which was key to reaching financial closure and assisted the three partner states with detailed and thorough project preparation ensuring international best practice and in fulfillment of the various requirements by both the World Bank and the partner states; mobilized the much needed investment finance; harmonised policies of the three countries (which is relevant for the success of regional projects) by assisting Rwanda and Burundi to develop their national water policies and strategies with reflection on trans-boundary dimensions of development. It also centralized financial management, procurement, consultant coordination; improved country coordination; facilitated decision-making processes; as well as coordinated national and local consultations, all of which facilitated and strengthened the process.

The NBI approach that puts emphasis on integrated and coordinated planning created hitherto good relations among all the three countries’ relevant ministries of water, energy and agriculture, at the technical and political level as well as local government, civil society and the communities.

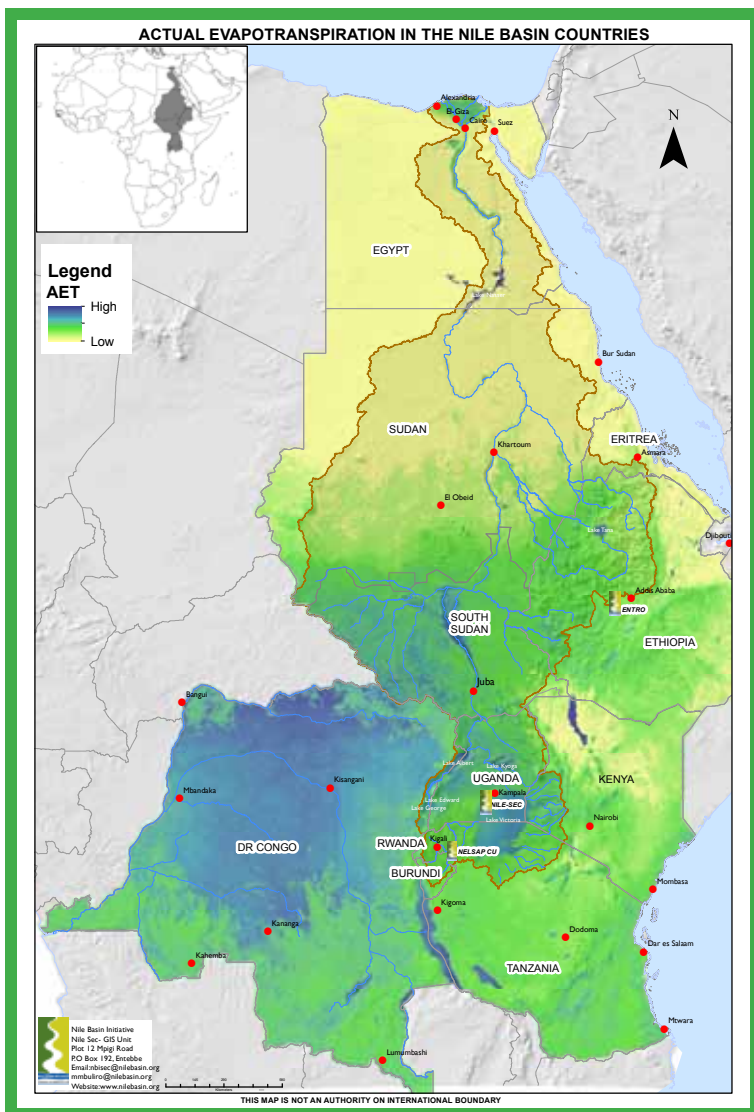
About Nile Basin Initiative

The Nile Basin Initiative (NBI) is a regional inter-governmental partnership of ten Nile riparian countries. Eritrea participates as an observer. **The Shared Vision Objective** is to achieve sustainable socio-economic development through equitable utilization of, and benefit from, the common Nile Basin water resources.

Launched on 22nd February 1999 by Ministers in charge of Water Affairs (Nile Council of Ministers), the NBI provides riparian countries with the only all-inclusive regional platform for multi stakeholder dialogue, information sharing, joint planning, management and development of the common Nile Basin water resources. It seeks to develop the river in a cooperative manner, share socio-economic benefits and promote regional peace and stability



The highest decision and policy-making body of NBI is the Nile Council of Ministers (Nile-COM). The latter is supported by the Technical Advisory Committee (Nile-TAC), comprised of 20 senior government officials, two from each Member State.



NBI Objectives

- To develop the Nile Basin water resources in a sustainable and equitable way to ensure prosperity, security, and peace for all its peoples.
- To ensure efficient water management and the optimal use of the resources.
- To ensure cooperation and joint action between the riparian countries, seeking win-win gains.
- To target poverty eradication and promote economic integration.
- To ensure that the program results in a move from planning to action.

Core Functions

FACILITATING COOPERATION

Under this Program, NBI actively provides and operates a unique platform for inter-country dialogue and negotiation by Nile Basin Ministers of Water Affairs and senior officials on issues of sustainable water management and development. NBI facilitates regional liaison among water-related interests and renders it more effective through the provision of strategic information.

WATER RESOURCE MANAGEMENT

The NBI monitors and assesses the water and related natural resources of the Nile Basin so as to provide Member States with a shared knowledge base and an interactive information system. The NBI maintains and operates analytical and scenario evaluation systems that support sustainable management of the basin's water resources.

WATER RESOURCE DEVELOPMENT

The NBI assists its Member States to achieve cooperative/joint water development projects and management programs through supporting the identification of development opportunities, preparation of projects and facilitation of investment which then enables Member States to implement the projects.

NBI Centers

The set up of NBI is informed by the principle of subsidiarity. Besides the Secretariat, there are two sub-basin organizations - leveraging unique sub-basin potentials and mitigating unique sub-basin risks.

The NBI Secretariat (Nile-SEC) based in Entebbe, Uganda is responsible for the overall corporate direction and is the lead center for two core programs - the Basin Cooperation and Water Resources Management.

The Eastern Nile Technical Regional Office (ENTRO) based in Addis Ababa, Ethiopia is responsible for driving the Water Resource Development Program in the Eastern Nile Subsidiary Action Program by assisting

Member States - Egypt, Ethiopia, South Sudan, and Sudan - to identify and prepare investments in regional/trans-boundary water-related projects.

The Nile Equatorial Lakes Subsidiary Action Program Coordination Unit (NELSAP-CU) based in Kigali, Rwanda is responsible for driving the Water Resource Development Program in the Nile Equatorial Lakes Subsidiary Action Program by assisting Member States - Burundi, DR Congo, Egypt, Ethiopia, Kenya, Rwanda, South Sudan, Sudan, Tanzania and Uganda - to identify and prepare investments in regional/trans-boundary water-related projects.

Find out more...



Nile Basin Initiative Secretariat
 P. O. Box 192 Entebbe - Uganda
 Tel: +256 414 321 424
 +256 414 321 329 /+256 417 705 000
 Fax: +256 414 320 971
 Email: nbisec@nilebasin.org
 Website: <http://www.nilebasin.org>

Nile Equatorial Lakes Subsidiary Action Program Coordination Unit
 Plot 6418, KCT Building
 Avenue du Commerce
 P. O. Box 6759,
 Kigali Rwanda
 Tel: +250 788 307 334
 Fax: +250 252 580 100
 Email: nelcu@nilebasin.org
 Website: <http://nelsap.nilebasin.org>

Regional Rusumo Falls Hydroelectric Project
 P. O. Box 6759
 Kigali-Rwanda
 Phone: +250 788307334
 Fax: +250 580100
 Email: rusumopmu@nilebasin.org
 Website: www.rusumoproject.org
 Tweet to @NELSAPRusumo



Find us on



#NileCooperation;
 #OneNile; #NileBasin