



NILE BASIN INITIATIVE
INITIATIVE DU BASSIN DU NIL

NBI Strategy 2017 - 2027

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Acronyms and Abbreviations

CFA	Cooperative Framework Agreement
DSS	Decision Support System
EAC	East African Community
EAPP	East African Power Pool
EN	Eastern Nile
ENCOM	Eastern Nile Council of Ministers
ENSAP	Eastern Nile Subsidiary Action Program
ENTRO	Eastern Nile Technical Regional Office
GIS	Geographic Information system
HYDROMET	Hydro metrological Survey of the Catchments of Lakes Victoria, Kyoga and Albert
IGAD	Intergovernmental Authority on Development
LVBC	Lake Victoria Basin Commission
M&E	Monitoring and Evaluation
NBI	Nile Basin Initiative
NEL	Nile Equatorial Lakes
NELCOM	Nile Equatorial Lakes Council of Ministers
NELSAP	Nile Equatorial Lakes Subsidiary Action Program
NELSAP-CU	Nile Equatorial Lakes Subsidiary Action Program Coordination Unit
NELTAC	Nile Equatorial Lakes Technical Advisory Committee
Nile-COM	Council of Ministers of Water Affairs of the Nile Basin States
Nile -SEC	Nile Basin Initiative Secretariat
Nile-TAC	Nile Basin Initiative Technical Advisory Committee
RBO	River Basin Organization
SAP	Subsidiary Action Program
SVP	Shared Vision Program

Executive Summary

This document presents the 10 Year Strategy of the Nile Basin Initiative (NBI) for the period 2017-2027. The Nile Basin Initiative is a partnership of 10 Nile riparian countries that seeks to promote cooperative management and development of the shared Nile water resources.

The 10 Year Strategy is inspired by, and provides a tool for implementing, the Shared Vision Objective of the Nile Basin Initiative, which is *“to achieve sustainable socio-economic development through equitable utilization of, and benefit from the shared Nile Basin water resources”*. The Strategy has also been shaped by other regional and global policy documents such as the Africa Water Vision 2025, the AU’s Agenda 2063, and the UN’s Sustainable Development Goals (SDGs).

In the consultation process for the preparation of the Strategy, six strategic priorities emerged on which to focus NBI’s activities over the coming 10 years. The strategic priorities are: water security, energy security, food security, environmental sustainability, climate change adaptation, and strengthening transboundary water governance. For each strategic priority, a goal and strategic directions have been articulated to help bring about more optimal and sustainable development of the basin. The scope of strategic interventions under the strategy is confined to NBI’s mandate. Underpinning all the strategic priorities is the increase in cooperation between member states and dialogue with NBI’s broader stakeholders and regional actors.

Enhancing availability and sustainable management of the transboundary Nile water resources is the first goal of the Strategy. Under this goal, the NBI will identify and prepare investment projects to increase storage capacity in the basin; support the improvement of water use efficiency in major water-use sectors; strengthen river basin monitoring and analysis of data from monitoring networks; promote conjunctive use of surface and ground water resources; and improve preparedness to flood and drought risks in Nile sub-basins.

The second goal addresses the issue of energy security and aims to enhance hydropower development and increase interconnectivity of electric grids and power trade in the basin. Under this goal, the NBI will identify and prepare investment projects for regionally significant hydropower generation options; and identify and prepare investment projects for regional power interconnection and power trade.

The third goal focuses on food security. Here, the NBI plans to introduce and promote, through analytical work, an approach that examines and proposes options for addressing the water-food nexus in the Nile Basin. The NBI will also identify and prepare investment projects for enhancing agricultural irrigation and promoting fisheries and aquaculture production.

In the area of environmental sustainability, which is the theme of the fourth goal, NBI will conduct diagnostic studies and prepare inventories to promote the wise use and sustainable management of wetlands of transboundary significance. NBI will also support environmental flow assessments for critical river and lake ecosystems, support Partner States in establishing and operating a strategic

network of water quality monitoring stations, and identify and prepare projects for restoration of degraded watersheds and wetlands.

Goal number five of the Strategy is to improve basin resilience to climate change impacts. Here, NBI plans to carry out climate vulnerability assessment for major water systems and water use sectors in the Nile Basin; generate scenarios of water availability under different climate change scenarios; prepare short-term to seasonal river flow forecasts to support operational water resources management; support harmonisation of climate change policies of the Partner States; and build capacity of NBI centres and Member States in areas of global climate finance.

The last goal of the Strategy addresses the issue of transboundary water governance. This focuses on building the capacity, and efficient operation, of the three NBI Centres; facilitating meetings and other activities of NBI's governance bodies; raising funds for Nile cooperation; building the capacity of the transboundary water units of the Member States; organising multi-stakeholder dialogue events to deliberate on issues of Nile cooperation and the management and development of the shared Nile water resources; preparing and disseminating NBI information and knowledge products; and forging strategic partnerships with other regional inter-governmental institutions such as IGAD and EAC/LVBC.

The 10 Year Strategy will be implemented through 5 Year Programs prepared by the three NBI Centres and funded by the Nile Riparian countries with support from Development Partners. The logic of the program follows the subsidiarity principle in that a NBI basin-wide Program is complemented by NBI Eastern Nile and NBI Nile Equatorial Lakes Programs. The programs of the NBI Centres are structured around the three core functions of NBI: facilitating basin cooperation, water resources management, water resources development

To take advantage of available opportunities for fulfilling NBI's mandate while preventing weaknesses and threats from impeding its progress, a number of strategic repositioning have been introduced. These measures have been integrated in the 10 Year Strategy and will inform the preparation of 5 Year Programs by the NBI Centres. They include greater efforts to be made by the NBI in deepening awareness across the basin on wide-ranging risks and challenges, and seeking to align national interests around common basin wide goals. Furthermore, the NBI will redouble efforts at establishing and strengthening strategic partnerships with regional inter-governmental organisations with a mandate in the basin such as NBD, EAC/LVBC, IGADD and EAPP.

Chapter 1: Introduction

Nile cooperation

A number of initiatives, going back to the early 1960s, were made by groups of Nile riparian countries to establish cooperation on the Nile. These efforts were largely unsuccessful until the Nile Basin Initiative (NBI) was created. Before the NBI, efforts at cooperation were not all-inclusive, and were narrowly focused on a few technical areas.

The Nile Basin Initiative (NBI) is an intergovernmental partnership of 10 Nile Basin countries, namely Burundi, DR Congo, Egypt, Ethiopia, Kenya, Rwanda, South Sudan, The Sudan, Tanzania and Uganda. It was established on 22nd February, 1999, by Ministers in charge of Water Affairs in the Nile basin countries to work towards a shared vision objective: *“To achieve sustainable socio-economic development through the equitable utilization of, and benefit from, the common Nile Basin water resources”*.

The 2017-2027 NBI Strategy

This document translates the shared vision objective into goals for NBI to work towards in the next 10 years, 2017-2027. The strategy addresses three main questions: What basin challenges the Nile riparians expect NBI to contribute to over the next 10 years, what contributions the NBI will make to address the basin challenges and how the NBI as an institution should be strengthened to effectively discharge its mandate.

The strategy takes a medium (10 yrs) term outlook of the basin, factors in basin dynamics and trends in water use and availability and on that basis defines strategic water resources development and management priorities within the ambit of NBI’s mandate.

The Strategy is a product of processes and consultations NBI has undertaken over the years. The issues therein were validated through a consultation process that involved the NBI Member States (excluding Egypt, which has frozen its participation), NBI governance, NBI staff, Development partners, regional actors in the basin and the wider NBI stakeholders including water practitioners. Consultations with NBI member countries, NBI governance and staff enabled joint identification and articulation of Nile Basin priorities. A joint analysis enabled identification of the institution’s strengths and weakness, along with the opportunities and threats the organization is likely to face during the planning period, and what mitigation actions need to be taken. Consultations helped to align the strategy to global and regional processes as well as commitments NBI member countries are parties to, including SDGs and the Africa Water Vision 2025.

Overview of NBI’s strategic planning process – and the guiding consultation questions

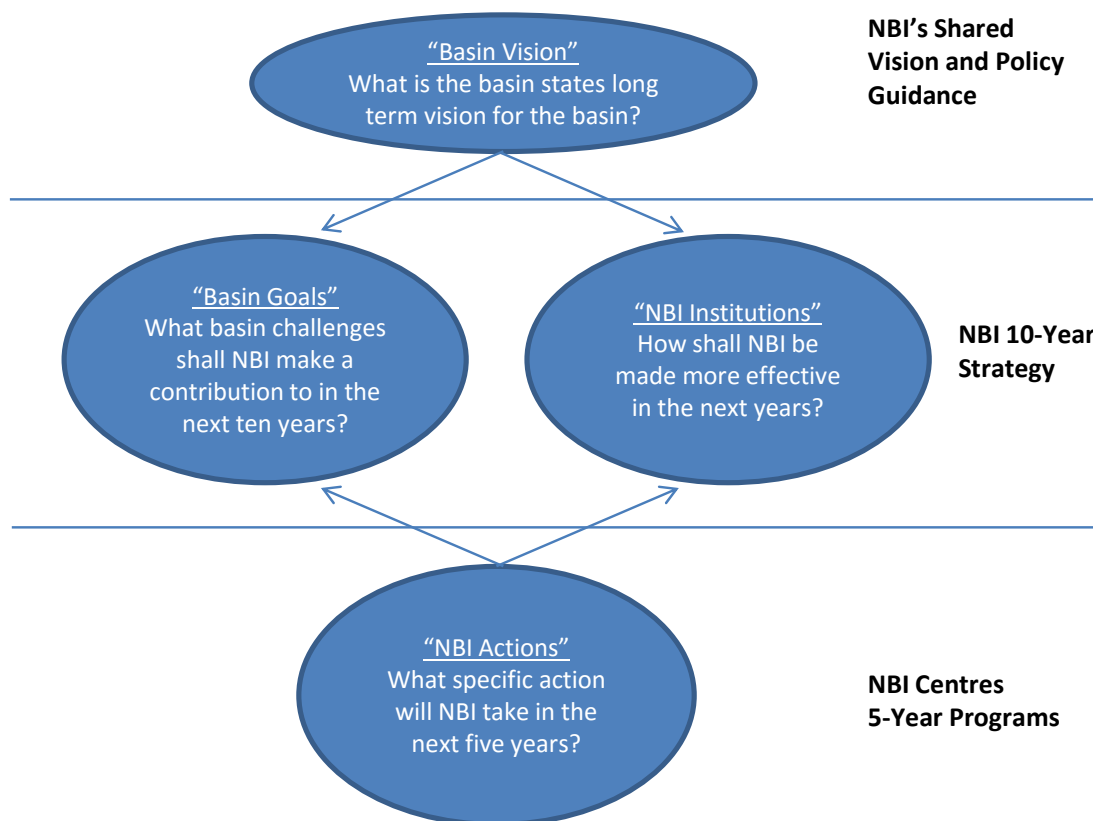


Figure 1: A simplified conceptual framework of the strategy preparation process

In addition to enabling program coherence and alignment among NBI centers, Member States, and other stakeholders, the strategy serves as NBI’s communication tool.

Relation to the Sustainable Development Goals

In September 2015, the UN Sustainable Development Summit held in New York, USA adopted a new agenda titled Transforming the World; the 2030 Agenda for Sustainable Development. This agenda is a set of 17 “Global Goals” with 169 targets between them that are meant to guide the post 2015 global development agenda.

The NBI 10 Year Strategy (2017-2027) will run in the period covered by the Sustainable Development Goals (SDGs) and makes a direct contribution to 8 of the 17 Goals, and 11 (2.4.1, 6.3.2,6.4.1, 6.4.2,6.5.1, 6.5.2,6.6.1,13.1.1, 13.3.2, 15.3.1, 15.4.1) of the 169 targets of the new global agenda. The Strategy will also make an indirect contribution to another 5 of the 17 goals. Thus, the NBI 10 Year Strategy is in alignment with, and provides an important means for attaining, the SDGs within the Nile Region. Annex

1 presents a matrix that highlights the areas of the SDGs towards which the NBI 10 Year Strategy is expected to make a contribution.

The NBI

The Nile Basin Initiative (NBI) is the only basin-wide institution mandated to facilitate the cooperative development and management of the common Nile resources on behalf of the 10-member riparian States.

Organizational Structure

The organizational set up of the NBI comprises of a number of organs at basin-wide to sub-basin levels. At the apex of the NBI institutional set up is the Nile Council of Ministers (Nile-COM), comprised of Ministers in charge of Water Affairs in the NBI member States. The Nile-COM is NBI's highest decision making body. The Council of Ministers is supported by the Nile Technical Advisory Committee (Nile-TAC), which comprises of 20 senior government officials, two from each member state. A secretariat for the Nile Basin Initiative (known as the Nile Secretariat – Nile-SEC) has been set up in Entebbe, Uganda. This Centre, besides providing secretariat services to Nile-TAC and Nile-COM serves as the executive arm of the NBI, routinely preparing and implementing basin wide programs and projects under the supervision of the governance bodies. The NBI is organized on the basis of the subsidiarity principle which encourages countries to form sub-basin organizations to enable leveraging distinctive development potentials and addressing constraints and challenges unique to geographic regions. Two subsidiary organisations have accordingly been established, one in the Eastern Nile region (which covers Ethiopia, South Sudan, Sudan and Egypt) and the other in the Nile Equatorial Lakes Region (which covers parts of Tanzania, Kenya, Uganda, Rwanda, Burundi, DR Congo and South Sudan). Each subsidiary organisation is serviced by a sub-basin council of ministers and committee of technical experts. The subsidiary organisation in the Eastern Nile region has its headquarters – known as ENTRO – located in Addis Ababa, Ethiopia while the subsidiary organisation in the NEL region has its headquarters – known as NELSAP-CU – located in Kigali Rwanda.

The NBI Secretariat (Nile-SEC) will provide overall leadership in planning, implementation and monitoring of the 10 year strategy and coordinate the inputs of the two subsidiary organisations in its implementation. The subsidiary organisations focus on preparation of investment (infrastructure) projects in their respective geographic scope and, thus, play an important role in steering intervention measures that are specific to their respective sub-basins. A more detailed description of the organisation set up of the NBI and relationship between the different bodies in relation to the Strategy is provided under Chapter 4.

NBI programs

The Nile cooperation process has been undertaken on two parallel but related tracks – the political and technical tracks. The political track is pursued by member countries outside the framework of the NBI and was undertaken by Country Negotiating Teams. This track aimed at concluding and ratifying a new Nile Basin Treaty, the Cooperative Framework Agreement (CFA), which would eventually pave way for transitioning NBI into a permanent River Basin Organization, the Nile Basin Commission. The negotiation

was concluded in 2010: six upstream countries signed the CFA in June 2010; and to date three have ratified. Egypt and Sudan, the two most downstream countries, disagreed with closing of the negotiations on the CFA and consequently froze participation in the NBI processes. However, Sudan resumed participation in NBI in 2012. Egypt, though taking part in selected NBI events, as of July 2017 still has officially suspended participation in NBI.

Core Functions

The Technical Track is pursued by countries with support of the three NBI centers concurrently under three core functions, namely:

- **Facilitating Basin cooperation.** This function is undertaken to provide a common platform for countries to engage, consult and deliberate with each other and other Nile stakeholders on a regular basis. It aims to build broad political and civic support for transboundary water cooperation in the basin.
- **Water Resources Planning and Management.** This function provides critical services in building basin wide technical competencies and capabilities and supporting science/knowledge based decision making to monitoring, protecting and sustaining the Nile water resources.
- **Water Resources Development.** This function mainly focuses on identification and preparation of cooperative water resources investments that demonstrate to the basin population the benefits accruing from cooperation.

The above core functions are derived from, and provided a mechanism for achievement of, NBI's Shared Vision Objective, which is *"to achieve sustainable socio-economic development through equitable utilization of, and benefit from the shared Nile Basin water resources"*.

Key Achievements and Challenges

The NBI has achieved significant results in many domains. First of all it has established a regular process of engagement of the riparians, for example, through regular governance meetings. This has greatly contributed to building trust and a common understanding amongst the responsible actors. The basin now boasts of NBI-produced state-of-the-art analytic tools (e.g. NB DSS) as well as jointly developed assessments (e.g. Nile Water Resources Atlas, State of Basin Report). A number of policies critical for guiding the cooperative and sustainable management of the Nile water resources (e.g. pertaining to environment; social development, wetlands, climate change) have been formulated and adopted. National capacities have been built so that these analyses are mainstreamed nationally. The countries have been supported to develop their transboundary offices to cater for NBI cooperation. More than ever before, Nile Basin riparian states have been engaging each other. The engagement has been expanded to include critical Nile Stakeholders – basin communities, scientists and academicians, civil society, media, parliamentarians, women and the international community. The basin population is more aware about Nile issues than before, though, a lot remains to be done.

On the investment front, NBI has facilitated the start-up of 11 investment projects under implementation by countries across the region, and 19 more are under preparation. The NBI has already

catalyzed investments of over US\$2.5 billion in these large-scale infrastructure projects, with over US\$6.5 billion prepared. These projects are resulting in sustainable, integrated economic development based on cooperative work and ownership by partner states. In the area of regional energy security, NBI studies have resulted in 5 major power projects under implementation and another 4 projects under preparation. The NBI energy projects will bring 170 MW generation capacity into the region's energy system and create approximately 1,040Km of additional transmission capacity helping to ensure that power can be moved more effectively from where it is generated to where it is needed within the Nile Region thereby improving the inter-linkage of regional power pools. NBI's major energy projects include the Regional Rusumo Falls Hydroelectric Project; the Ethiopian Tana-Beles Integrated Water Resources Project and the Nile Equatorial Lakes Regional Interconnection Project.

The foregoing achievements notwithstanding, the Nile Basin is beset with significant challenges and risks that pose threat to the health of the basin, the river and the people. Compared to the population size and the demands, the Nile Basin is a water scarce region. Nile Basin hosts some of the poorest nations. Population is growing. Urbanization is increasing. Economies are starting to grow. All this increases growing demand on the common water resources, resulting in declining per capita water availability. This is further complicated by the potential impacts of Climate Change. Egypt, as the most downstream country to be impacted by what happens upstream, still freezes its participation in NBI.

The above challenges notwithstanding, the NBI can make use of a number of opportunities to advance the cooperation agenda and make significant contribution towards the sustainable and equitable utilization of the water resources of the Nile Basin. These include the huge and still untapped potential for hydropower generation, food production, and opportunities for navigation and tourism development in the region; the recent establishment of new sources of finance for major infrastructure projects, such as global climate funds; the growing impact of global climate change on the region's water resources, which is increasing NBI Member States' appreciation of the need for cooperative efforts to combat this common threat, and NBI's importance as a mechanism for such collaboration; and continuing strong support from the international community for transboundary water management. The Strategy has been formulated to continue building on NBI's strengths while tapping on the available opportunities and while working to mitigate threats.

This Strategy, elaborated in the next pages, is one step in that direction. Chapter two describes the basin challenges and basin development goals that NBI can make meaningful contribution to, within its mandate, and prescribes the strategic directions for the next 10 years. Chapter 3 focuses on the NBI institution and how it repositions itself to more effectively deliver its mandate over the 10 year period. Chapter 4 describes the implementation arrangements for the strategy.

Chapter 2: Basin Challenges, Development Goals and Strategic Directions

2.1 NBI Strategic Priorities

Six basin challenges were identified as strategic priorities of the basin countries to which NBI can meaningfully contribute. **Strategic priorities in this case refers to what the NBI needs to focus on and pay attention to in order to achieve its shared vision objective as mandated by the countries.** Identification was informed by the on-going processes, the consultations NBI has undertaken over the years as well as the most recent consultations in each member state where the challenges were validated. Under each basin challenge, strategic directions, within the mandate, that will help bring about a more optimal and sustainable development of the basin were articulated. Underpinning all the strategic priorities is the increase in cooperation between member states and dialogue with NBI's broader stakeholders and well as regional actors in the basin. The section below describes the six basin challenges, the strategic directions as well as NBI's focus in addressing those challenges.

Goal 1: Enhance availability and sustainable utilization and management of transboundary water resources of the Nile Basin

The Challenge: The Nile basin is characterized by strong spatial and temporal variability of water resources availability. River flow is highly seasonal having strong year to year variability with extreme floods and droughts causing devastating damages. Substantial parts of the basin are water scarce. Further, due to poor water resources development, there is a huge deficit in fulfilling basic human needs. The economies of most basin states depend on traditional subsistence rain-fed agriculture which is highly vulnerable to climate variability and change. Nile Basin countries generally have the lowest per capita electricity consumption, lowest access to drinking water and sanitation. To compound it all, water demand is growing rapidly due to population and economic growth and yet the Nile water resources have to be shared among 11 riparian countries. The foregoing notwithstanding, the Nile Basin is endowed with considerable untapped water resources potential. However, taking the size of the basin and the population that depend on the Nile for its livelihoods, the Nile Basin still is a water scarce region.

Faced with the task of meeting the rising water demands for their rapidly growing economies and population, basin countries are resorting to increasingly bigger and bigger water resources development undertakings individually due to lack of a matured regional mechanism for coordinated water resources planning and management. This can lead to more conflict on water and sub-optimal utilization of the shared water resources as purely nationally bound water resources planning fails to address whole basin perspectives. Further, lack of sufficient water storage, poor water use efficiencies in agriculture, insufficient knowledge on the hydrology of the Nile system, and lack of working mechanisms for cooperative and mutually beneficial way of addressing the water demands of all basin countries remain critical impediments that the basin countries need to address to ensure reliable water supply. Therefore, given that the Nile is a shared river, the main challenge of the basin countries is how to

ensure the waters of the Nile are utilized and managed sustainably to meet the needs of all riparian states.

NBI’s response: Given the above challenge, NBI is mandated to facilitate member countries in cooperatively managing and developing their shared Nile water resources for win-win outcomes. Under Goal 1, the following strategic directions have been adopted to underpin the 10 year strategy.

Table 1: Goal 1 and strategic directions

Basin goal	Strategic Directions
<p>1. Enhance availability and sustainable utilization and management of transboundary water resources of the Nile Basin</p>	<p>1.1 Enhance water storage capacity for improved water supply reliability for multipurpose use</p> <p><i>This strategic direction focuses on identifying and implementing win-win measures for reliable water supply for various uses, including meeting water requirements of the environment integrating outputs from Goal 4 on environmental flows; studies and investment project preparation will be conducted on multi-purpose storage dams; strategic options will be generated, analyzed and prioritized integrating technical, social and economic criteria for addressing the growing water needs sustainably. The strategic direction will also focus on measures for enhancing basin water yield.</i></p>
	<p>1.2 Improve productivity and efficient water use across water-using sectors</p> <p><i>This strategic direction focuses on identifying and implementing measures for improving water use efficiencies including demand-side management and water reuse across all water use sectors; for example studies will be conducted for increasing irrigation and municipal/urban water use efficiencies. Investment measures to increase productivity and water reuse will be supported.</i></p>
	<p>1.3 Enhance coordinated management of water storage dams</p> <p><i>This strategic direction is about optimizing operation of water storage dams across NBI countries; strategies and options for coordinated operation of storage dams will be developed and promoted; technicians will be trained on coordinated operation of dams and its advantages; the strategic direction also covers measures for building capacity on dam safety regulations and technical solutions.</i></p>

Basin goal	Strategic Directions
	<p>1.4 Enhance conjunctive use of groundwater and surface water <i>Under this strategic direction, NBI shall support member countries in groundwater monitoring; improve the knowledgebase and capacity for sustainable management utilization and management of groundwater resources. Further, cross-border mechanisms for joint management and sustainable utilization of shared aquifers will be put in place and supported.</i></p>
	<p>1.5 Strengthen joint monitoring of Nile Basin for sustainable water resources development and management <i>Under this strategic direction, NBI will support member countries in establishing and maintaining basin data collection networks, data transmission and processing systems for monitoring water quantity, water quality water use/demand, watershed health and other river basin processes employing ground-based as well as other non-conventional means, such as remote sensing technology.</i></p>
	<p>1.6 Strengthen joint basin and sub-basin water resources management planning <i>This strategic direction is about developing a basin and sub-basin planning framework and multi-sector, multi-country basin and sub-basin plans that brings together member states, NBI and other intergovernmental mechanism around a common agenda for the basin. An agreed planning process will be developed as common framework for member states, regional actors and the NBI to address emerging water and related resources management needs; state of the basin reports and strategic analysis results will be used to feed into the basin planning process.</i></p>
	<p>1.7 Strengthen basin investment programs preparation and management <i>This strategic direction is about further developing NBI's investment programs into basin-wide, multi-country and multi-sector regionally significant investments together with member states, and other intergovernmental mechanisms in the basin; under this strategic direction, the strategic options generated through NBI's collaborative water supply and demand assessment and the sub-basin wide NBI investment programs will be pooled into a basin investment plan; various investment options will be analyzed to address the diverse needs of the riparian countries; a basin investment support function will be established to coordinate, promote and follow up the preparation and implementation of the investment program.</i></p>
	<p>1.8 Maintain and improve water quality <i>This strategic direction focuses on preparation and implementation of</i></p>

Basin goal	Strategic Directions
	<p><i>measures to reduce pollution, maintain water quality, and enhance the water quality standards of surface and groundwater bodies in the Nile Basin. Measures include preparation of investments for reducing pollution from effluent discharge into water bodies, improve cross-border collaboration in setting up and maintaining of water quality standards, reduce pollution from, among others, municipal, industrial and agricultural waste and reduce soil salinization.</i></p>
	<p>1.9 Enhance policy frameworks at regional and national levels for cooperative management and development of shared Nile Basin water resources</p> <p><i>This strategic direction focuses on the development and convergence of the national and regional (Transboundary) policies on water and related resources. Support will be provided to member states to enhance transboundary aspects of their relevant national policies and for increased coherence between those at transboundary levels and national ones.</i></p>
	<p>1.10 Strengthen shared knowledgebase and analytic tools</p> <p><i>This strategic direction is about developing, maintaining and promoting use of joint analytic tools and shared knowledge systems to support the transboundary water resources management process in the Nile Basin. Joint analytic tools (e.g. Nile Basin DSS) will be promoted, maintained and users supported; shared knowledgebase and knowledge access platforms will be developed to support data sharing among riparian countries; and provide access to NBI knowledge products.</i></p>

Goal 2: Enhance hydropower development in the basin and increase interconnectivity of electric grids and power trade.

The Challenge: Most countries in the Nile Basin are undergoing rapid economic growth as indicated in the recent growing GDP trends; which, in turn, has increased demand for water, energy, and food. Yet, with the exception of Egypt, energy supply in the Nile Basin countries remains inadequate, unreliable and expensive. Electricity consumption in the region is among the lowest in the world, with the bulk of the population in rural areas remaining dependent on biomass energy sources with associated negative impacts on the environment.

With its characteristic landscape, the Nile Basin offers huge potential for hydroelectric power generation exceeding 20 Gigawatts, which largely remains untapped; with existing facilities representing about 26% of potential capacity. The Nile Basin Initiative (NBI) led comprehensive study on Basin-Wide Power Development Options and Trade Opportunities in the Nile Basin (December 2011) indicated that the total energy demand in the Nile Basin countries is expected to increase from 183,711 Giggawatt-hour in 2010 to 1,170,328 Gigawatt-hour by the year 2035, representing an increase of 300% and higher over present demand. In addition, the Nile Basin remains the only region on the African continent without a

functional regional power grid with very insignificant volumes of power traded among the countries. This slow pace of hydropower development constrains economic growth in the riparian countries; especially those that are highly dependent on it such as Burundi, DR Congo, Ethiopia and Uganda that rely on it for 80% or more of their power.

Each Nile riparian country faces unique challenges, but all have ambitious national development plans to fuel economic growth and promote poverty alleviation efforts. Undoubtedly all the plans depend on energy availability. Hydro-power is their preferred source of energy for various reasons, key among which is the low production cost of electricity from hydropower options- that makes power affordable to the urban and rural poor. However if each Nile Riparian State was to pursue and implement its national hydropower infrastructure development plans on the River Nile without consideration of the larger river basin context, there is a risk that some of the national hydropower investments could be sub-optimal (seen regionally) and may foreclose future development opportunities.

Trans-boundary or basin-wide water cooperation in hydropower development and management would enable Nile riparian countries unlock and optimize the hydropower potential and allow for a more efficient location and operation of hydropower infrastructure. This would present opportunities for significant reduction in project financing risks and enhance regional cooperation and trust. It would further unlock the full productive potential of the Nile Basin for more prosperous national and regional sustainable growth. Through cooperation, riparian countries would exchange technical know-how and share related costs for very large hydropower infrastructure investments which are required to meet the region's power demand.

The region's power interconnection and transmission grids are limited in spatial coverage and require upgrade and expansion. In addition to meeting the yet untapped regional hydropower opportunities, regional interconnections and market structures can increase stability in the electricity system. Pooling energy resources through regional power trade promises to reduce power costs. Economic returns to investments in cross-border transmission are particularly high. Reducing the need for costly system redundancy could lead to a direct saving of nearly US\$ 22 million per annum in the Nile Basin. The benefit of increased quality of power through shared surplus has been assessed to be a basin-wide increase in GDP of nearly US\$ 21 billion per annum.

The interconnections will increase the availability and options for power in the region and beyond. Moreover the cost may reduce as the two sub basins can access power from each other. Also the climatic regimes of the two sub basins complement each other and this can be translated to power systems in the two main sub basins complementing each other. Water availability time zones differences can also be harnessed taking advantage of the different peaking loads.

NBI's Response: Realization of the full electricity trade potential will depend on infrastructure—both institutional and physical—being put in place. NBI took a lead in enabling regional power transmission interconnections. Its success has - to a certain degree - been built upon and now carried forward by the region's Power Pool(s). Nonetheless, while leadership on regional power interconnectedness may have shifted - to a substantive degree - to NBIs regional collaborative partners, there continues an inarguable case for the NBI to be engaged at a high-level in hydropower production and regional transmission.

NBI will promote power trade and benefit sharing in the basin through supporting member States to build the requisite physical infrastructure to facilitate power trade among riparian states. In addition, NBI will continue working with other regional players in regional systems planning and capacity development to enhance regional power trade.

Table 2: Goal 2 and Strategic Direction

Basin goal	Strategic Directions
2.Enhance hydropower development in the basin and increase interconnectivity of electric grids and trade	2.1 Increase hydropower production: <i>Focus is identification and preparation of bankable investment projects in power infrastructure. More efforts are invested in identifying and preparing such projects in coordination with other regional actors in the power sector. In special cases implementation support is extended to the countries.</i>
	2.2 Increase interconnection of hydro-power grids and trade <i>Focus is identification and preparation of bankable projects in power transmission, interconnection and trade. The effort will aim at increasing availability, accessibility and stability of power, minimizing losses and reducing costs. Capacity for systems management including operation guidelines will be instituted.</i>

Goal 3: Enhance efficient agricultural water use and promote a basin approach to address the linkages between water and food security

The Challenge: Food production in most of the Nile Basin states has not kept pace with the population increase over the past four decades. The Nile basin is one region where per capita food production is either in decline, or roughly constant at a level that is less than adequate. Irrigation is much less developed in the Nile Basin region. An estimated 5.4 Million hectares of land is under irrigation basin-wide. Most of the upstream countries depend on rain-fed agriculture which is vulnerable to climate variability; and as a result the countries are seeking to increase their productivity through investment in irrigated agriculture. Expansion in irrigated agriculture will inevitably increase water demand, thereby exerting more pressure on the already scarce water resources in the basin. Moreover, there may not be enough water for all member states to implement their irrigation plans, hence the need for a basin wide approach in order to avert the potential water risk. In addition, intra basin trade in agriculture is low despite the huge potential and opportunities for benefit sharing.

NBI’s response: NBI will work with member states to promote a basin wide approach to irrigated agriculture and support member states to ensure that their irrigation plans are regionally optimized and fit within the available water resources in the basin. NBI will undertake water analysis of the basin, taking into consideration member state irrigation plans and water demands; flag up potential imbalances and propose to countries strategic options for consideration. In the context of the

investment programs NBI will support countries to enhance both efficient irrigation development as well as the productivity of degraded watersheds.

Table 3: Goal 3 and Strategic Directions

Basin Goal	Strategic Directions
<p>3. Enhance efficient agricultural water use and promote a basin approach to address the linkages between water and food security</p>	<p>3.1 Support development and modernization of irrigated agriculture <i>The focus is to support member states in identifying and preparing projects to improve the existing irrigation infrastructure as well as further develop new areas for irrigation in order to increase agricultural productivity in the basin. Modernization of existing irrigation systems/schemes will be supported in order to maximize water productivity and water use efficiencies.</i></p>
	<p>3.2 Rehabilitation of watersheds and improvement of rain-fed agriculture. <i>The aim is to support member states in identifying and preparing bankable investment projects focusing on reversing the degradation of the watersheds and turning them around for productive agriculture. The strategic direction will support and promote livelihood focused integrated approaches (e.g. landscape restoration). The strategic direction also includes design, preparation and implementation of investments on soil water conservation measures to enhance effective use of rain-water for crop production and reduce vulnerability to drought shocks.</i></p>
	<p>3.3 Promote a basin approach to address the linkages between water and food security. <i>The focus is to undertake analysis on the food -water nexus using analytic tools, flag up any imbalances and generate strategic options for consideration and dialogue. The resultant actions will then be mainstreamed into national and regional trade, food, land and water policies.</i></p>
	<p>3.4 Improve fisheries and aquaculture production <i>Aim is to support the identification and preparation of bankable Investment projects aimed at increasing productivity of fisheries through improved management of the water bodies and their watersheds.</i></p>
	<p>3.5 Enhance navigability to boost regional agricultural trade and transport corridors <i>NBI will contribute to studying and preparing projects to improve the navigability of the Nile river system with a view to increasing interconnectivity of the regional transport corridors across the basin. Improved bulk transport options along the Nile corridor will be explored and investments prepared.</i></p>

Goal 4: Protect, restore and promote sustainable use of water related ecosystems across the basin

The Challenge: Rapid population and economic growth in the Nile Basin is leading to increased alteration of the hydrology of the river. Ecosystems are continuously degraded as more and more of them are converted for agriculture. Wetlands that are vital for maintaining the hydrology of many rivers are severely degraded. On the other hand, the continuous changes in flow patterns of many rivers are leading to serious degradation of wetlands that are fed by these rivers. As a result, ecosystem services on which the livelihoods of millions of basin inhabitants depend are rapidly declining. These changes unless abated on time can lead to irreversible damages to the Nile Basin environment – the very basis for livelihoods of millions of people. Further environmental concerns in the Nile Region are declining water quality, deforestation, land degradation, and loss of critical aquatic habitats and biodiversity; and high sediment load in the river system with impact on dams and reservoir operation. In a shared river basin such as the Nile, environmental issues are often not confined neatly within individual country's borders, and are therefore inter-linked with changes in the river system in other parts of the basin. Therefore, the main challenge for basin countries is how to ensure the ecosystems of the Nile Basin are preserved sustainably across the basin to guarantee ecosystem services for current and future generations. Furthermore, there is a major challenge of wise use of the water related ecosystems. The natural ecosystems are critically important in support a wide range of livelihoods and underpinning the economic development of the countries. But they are not been used by the riparian communities in a sustainable manner and a way that assures their availability to serve future generations.

NBI's response: NBI provides a transboundary mechanism for joint policy making, capacity strengthening and ensuring water resources investment in the basin follows the highest environmental standards. The strategic directions under Goal 4 reflect specific NBI contributions towards protection and restoration of water dependent ecosystems of the basin, and promotion of sustainable use of the natural ecosystems in the Nile watersheds.

Table 4: Goal 4 and strategic directions

Basin Goal	Strategic directions
4. Protect and restore of water related ecosystems across the basin	4.1 Promote sustainable management of wetlands of transboundary significance <i>This strategic direction focuses on transboundary policy formulation, monitoring and capacity strengthening of member countries for sustainable management of wetlands of transboundary relevance. Preparation and implementation of wetland management plans, promoting wise use of wetlands and investments for improved wetland management and sustainable utilization of their ecosystem services will be part of the investment program.</i>

	<p>4.2 Maintain lake and riverine ecosystems</p> <p><i>Under this strategic direction, NBI will continuously monitor the state of critical aquatic ecosystems and their ecosystem services; improve the understanding and linkage between catchment processes and morphological changes to rivers/streams; develop investment projects for restoration and/or maintenance of floodplains and other riverine/lake ecosystems; promote environmental flow standards and support practices; build regional knowledgebase on good practices of maintaining environmental flows.</i></p>
	<p>4.3 Promote protection and sustainable management of critical water source catchments</p> <p><i>Under this Strategic Direction the NBI will support the countries in protecting and sustainable management of critical terrestrial ecosystems, such as montane forests, that are important for sustaining the flow of important tributaries of the Nile. Measures to be promoted include promotion of reforestation in mountain ecosystems, and control of livestock densities in communal grazing lands.</i></p>

Goal 5: Improve basin resilience to climate change impacts

The challenge: In the midst of climate change is water which plays a central role. Water is the primary medium through which climate impacts are felt. Climate change manifests itself largely through its impact on water resources i.e. floods and droughts. Floods and droughts undermine farm yields and national harvests reducing household and national food availability, and agricultural income derived from crop sales.

Nile Basin countries are already experiencing the effects of climate change. There is evidence for increase in temporal variability of rainfall in recent years. Yet, there is a large degree of uncertainty in establishing concrete climate trends and impacts, particularly in the Nile Basin. Furthermore, upper and lower Nile are projected to experience quite different precipitation trends (increase e.g. in the upper Blue Nile, decrease further downstream). Blue Nile and White Nile have different flow regimes and different natural storage capacity, so that the impacts of increasing variability will be different.

Nile Basin riparian countries recognize the strong need for effective adaptation measures to climate change. However several factors compound the task of planning for and implementing effective adaptation. First, lack of long-term hydro-meteorological data in the basin, coupled with the region’s strong degree of natural variability in precipitation, makes reliable forecasting of river flow difficult thereby substantially affecting operational water resources planning and management to combat effects of climate change and whether extremes. Second, low discharge and high evaporation rates make the Nile highly sensitive to small climate effects, which can, in turn, radically alter river flows. This sensitivity makes climate predictions even more complicated. Third, there is low water-storage capacity for absorbing shocks of short to medium term climate extremes (droughts and floods). Addressing these and similar challenges is crucial for effective adaptation to climate change and enhance resilience of the

basin countries' economies. Moreover, the early warning systems are in their nascent stages of development.

NBI's response: NBI addresses these challenges identified above through support for increased mainstreaming of climate change adaptation measures, investment planning and management (at national and regional levels). NBI will formulate, operationalize and promote transboundary (joint) policies and strategies; strengthen capacities for improved adaptation planning; provision of climate change information services and advisory support to member countries. NBI will build on these initiatives to further strengthen basin-wide resilience to climate change and ensure climate compatible water resource management and development. NBI will provide a regional database on climate change projections; methodology and tools for joint/collaborative assessment of climate change impacts on water and related resources; strengthen member capacity for harmonization of methodologies and datasets on climate change and impacts in the water sector. NBI will help member countries in harmonization of policies and approaches to climate change impact assessment; provide the platform for experience and data exchange.

Opportunities provided by the Paris Agreement: On December 12, 2015 representatives of 196 parties of the United Nations Framework Convention on Climate Change (UNFCCC) adopted the Paris Climate Agreement, which provides a framework for global action to combat greenhouse gas emissions, support mitigation and adaptation to communities affected by impacts of global climate change, and mobilise resources required to finance the measures called for under the accord.

In the Paris Agreement, each country determines, plans and regularly reports on the contribution it will make in order to mitigate global warming. The 10 Year Strategy provides an opportunity to the NBI Member States to meet their Nationally Determined Contributions (NDCs) through the Strategy's emphasis on increasing hydropower production (clean energy production) and expanding sustainable ecosystem management, which includes expanding tree cover.

Conversely, the Paris Agreement provides important opportunities for the Nile riparian countries, most of whom are low-emission countries badly ravished by the impacts of global climate change, to access badly needed financing to undertake adaptation and sustainable development measures.

At the Paris Conference where the Agreement was negotiated, the developed countries reaffirmed their commitment to mobilize \$100 billion a year in climate finance by 2020, and mobilizing finance at the level of \$100 billion a year until 2025. This is the financing opportunity that will become available to the Nile riparian countries.

The Paris Agreement includes adaptation measures as an integral component of agreement, with adaptation being pursued side-by-side with mitigation. Adaptation measures under the agreement will be focused on enhancing adaptive capacity, increasing resilience, and limiting vulnerability. This is the focus of the climate change measures under the NBI 10 Year Strategy, all of which are eligible measures for financial support under the Paris Agreement.

Goal 5: Goal 5 and Strategic directions

Basin goal	Strategic Objective
<p>6. Improve basin resilience to climate change impacts”</p>	<p>5.1 Establish and maintain an NBI climate information service for climate resilient water resources planning and management</p> <p><i>Under this strategic direction, NBI shall strengthen its climate change information services and early warning systems for improving resilience of the basin to climate change. Improved regional climate change datasets (projections, impact datasets on water and related resources) will be generated and made available for improved adaptation planning.</i></p>
	<p>5.2 Support climate resilient planning and implementation addressing climate risks and uncertainty in the basin.</p> <p><i>This strategic direction focuses on strengthening climate proofing of investments and water resources plans through effective use of NBI’s climate information service, improved guidance and capacity. Guidance and training material will be prepared and users trained on their use for climate proofing of water investments and plans.</i></p>
	<p>5.3 Improve and promote regional policy and planning frameworks for effective climate change adaptation at regional and national levels</p> <p><i>This strategic direction focuses on formulation of planning framework documents and updated NBI strategy for climate change adaptation incorporating international good practice and informed by actual climate change information from the Nile Basin (use of the climate information services generated by NBI) approach followed shall also include policy roundtables, experience exchange among policy makers and other practitioners in the Nile Basin.</i></p>
	<p>5.4 Improve preparedness of basin countries to flood and drought risks</p> <p><i>Building on its previous achievements, NBI shall improve flood and drought information services and strengthen member country capacities for effective planning and implementation of flood and drought management measures. The strategic direction shall also include development and deployment of operational short term to seasonal river flow forecasting system.</i></p>
	<p>5.5 Strengthen basin-wide climate finance access and the capacity for development of feasible projects in the Nile Basin.</p> <p><i>NBI shall strengthen capacities of member countries and facilitation for accelerated access to climate financing for investments in water resources.</i></p>

Goal 6: Strengthen transboundary water governance in the Nile Basin

Challenge: Decisions on the development, management and use of water resources are essentially taken within the riparian-states as per the respective national systems of water governance in place. However there is a need for approaches that take a basin wide or regional perspective, require effective ways of coordination and decision making among the various entities with a mandate related to basin management and development. It also requires that a conducive legal and policy framework is in place at the national and regional level that allows for cooperation, e.g. by enabling the participation in cross-border coordination or the sharing of information on water use or planned measures.

In the Nile basin there is an evolving complex multi-level system of governance of transboundary water governance. Many countries have developed transboundary water policies that govern how countries approach basin cooperation. There is a clear trend in all Nile riparian countries to establish dedicated government units that coordinate all transboundary water cooperation efforts. Countries have entered into many cross-border arrangements between two or three countries, to address specific water management issues of shared sub - basins. These may be more formal, like the Permanent Joint Committee between Kenya and Tanzania on the Mara River or time-bound like the tripartite national committee on the GERD. The countries face the challenge of establishing and making these arrangements effective whilst ensuring that there is good coordination according to the principle of subsidiarity.

However, none of these arrangements take a basin-wide perspective. It is to this end that Nile riparians have founded the Nile Basin Initiative – with a view to establish a permanent platform and mechanism for cooperation based on an agreed set of policy principles. As a result of the transitional nature of NBI, countries have increasingly made use of other mechanisms to resolve key issues while at the same time the technical and convening capacities of NBI are not made best use of by countries by actively referring basin management issues to this platform. The disagreement around the CFA has also led to freezing of participation of Egypt in the NBI process. NBI also faces challenges with regards to the sustainability of the funding of its core costs by member states and the use. The transitional nature of NBI and the lack of conclusion of a permanent mechanism remains to date one of the key challenges to establishment of an effective basin-wide water governance mechanism.

Defining the interaction of the various national and regional governance mechanisms and enhancing synergies amongst these based on the principle of subsidiarity is proving to be increasingly important, as these develop. Water being a domain at the nexus of various sectors– notably water, hydropower, irrigation and environment – requires good inter-sectorial-coordination at all levels of governance – which is a challenge. National and regional development planning need to inform each other in a systematic way, especially when it comes to prioritizing regionally agreed and optimized investment projects forward.

Riparian states over the last decade have also mandated the regional economic communities – specifically the EAC/Lake Victoria Basin Commission and IGAD – to address transboundary water management in their respective mandate areas. Coordination is still weak leading to risks of duplication.

Finally, for countries to effectively cooperate, the responsible persons and institutions need to have the specific capacities required for transboundary cooperation – capacities that are still in short supply in many member states. Across the basin, different perceptions to Nile basin cooperation persist, with issues often framed in a national security and sovereignty perspective. However for countries to enter into closer cooperation, a conducive and supportive public opinion is essential, that also acknowledges the risks of non-cooperation in a transboundary basin.

NBI response: The NBI itself is at the center of the effort of countries to establish an effective and permanent transboundary water governance mechanism for the Nile Basin. NBI member states will take a dual approach of on the one side strengthening the transitional mechanism and platform that NBI has effectively developed over the last decades while in parallel making increased efforts to resolve the issues that have stood in the way of establishing a permanent arrangement. Member states will strive to make the existing NBI mechanism more effective by both broadening engagement across sectors (within focal ministries and beyond such as foreign affairs or finance) and elevating engagement of higher level decision makers in NBI process to ensure better connection to national decision making. Member States also commit to provide sufficient funding to sustain core functions.

NBI will support increased convergence of policy frameworks and effective inter-sectorial coordination of NB countries on trans-boundary issues. It supports the effective coordination of the various governance mechanisms in place in the basin, guided by the principle of subsidiarity. It provides support to countries to develop the capacities of the institutions and actors to engage in the transboundary cooperation process. NBI’s communicates on the benefits of basin cooperation targeted to a larger audience with a view to create a conducive public opinion and momentum for intensified cooperation.

Table 6: Goal and Strategic Directions

Basin goal	Strategic Direction
6. Strengthen transboundary water governance in the Nile Basin	<p>6.1 Enhance effective governance arrangements for cooperation and coordination of transboundary water resources at, sub-basin and basin-wide level. <i>This strategic direction is about making the various mechanisms for cooperation in the basin more effective – be they more informal coordination platforms or more formalized institutional arrangements. At the center of this strategic direction is the NBI governance, but beyond that there is also support to various cross-border arrangements of the countries at sub-basin levels.</i></p>
	<p>6.2 Establish a permanent and legal institutional framework for cooperation on the Nile <i>This strategic direction targets at the conclusion of the transition of NBI from a transitional institution to a permanent institution with an agreed legal basis.</i></p>

	<p>6.3 Strengthen the NBI Centers to effectively and sustainably deliver on their mandate <i>This strategic direction targets strengthening the existing NBI platform through sustainable core funding, development of professional capacities, provision of corporate services and the increasing utilization by member states of the platform and services provided by the NBI Centers.</i></p>
	<p>6.4. Enhance capacities of national actors for effective transboundary cooperation <i>The Strategic Direction aims to increase national level appreciation of the need and importance for transboundary water management in the Nile countries. It is cross cutting with capacity building being a pre-requisite for progress on all goals of the strategy.</i></p>
	<p>6.5. Strengthen the national transboundary water units and inter-sectoral coordination <i>This strategic direction focuses on strengthening national governance mechanisms for transboundary cooperation so as to make them more effective in playing their role in the regional cooperation process.</i></p>
	<p>6.6. Strengthen the coordination of regional inter-governmental mechanisms with a mandate related to basin management <i>This strategic direction aims at enhancing the coordination and complementarity of the various regional intergovernmental bodies with partially overlapping mandates related to the basin, based on the principles of subsidiarity and comparative advantage.</i></p>
	<p>6.7 Build consensus among the countries public and stakeholders for cooperative basin development and management <i>This strategic direction focuses on enhancing awareness amongst both the public and the key stakeholders on the cooperation process.</i></p>

2.2 High level result targets

The high level results targeted in the period covered by the strategy are provided in Annex 1. The basis of the results targeted is the Driver – Pressure – State – Impact - Response (DPSIR) approach. Most NBI’s interventions targeted in the strategy are those within its mandate and do not cover full implementation of the measures. Therefore, the target result framework focuses on collective responses of Member States , such as policy and investment action, through their joint institution, the NBI. The actual change on the ground, i.e. the ‘State’, is monitored through NBI’s ‘State of Basin’ reporting processes. Therefore, the indicators in the results framework are therefore essentially policy- response indicators.

2.3 From strategic directions to concrete measures

This 10 year strategy for NBI is implemented through specific strategic plans of NELSAP-CU, strategic plan of ENTRO and the basin-wide program of the Nile-Sec. In this regard, the measures that contribute to the achievement of the 10 year strategy will be implemented by the three NBI centers in a coordinated manner. A summary of these measures (actions) for Goal 1 of the strategy is given in Table 7. The complete set of measures is given in Annex 2.

2.4 Estimated budget

The total budget required to implement the measures presented in Table 7 and Annex 2 have been worked out by NBI centers. The budgets for the first five years, i.e. 2017 – 2022, have been estimated as part of the preparation of the five year strategic plan of NELSAP-CU and the Basin-Wide Program of Nile-Sec and projections based on the planned measures. In the case of ENTRO, which is in the middle of implementing its current strategic plan, budget estimates beyond 2019 are projections based on experiences in the implementation of the current five year plan. The total estimated cost for the measures/actions is USD 434 Million, which is comprised of USD 68 Million core institutional cost, USD 140 Million program costs and USD 226 Mill are investment preparation costs.

Table 7: Summary Budget for the Strategy

Goal	Cost (US\$ Millions)	
	Nile-SEC	SAPs
NBI Goal 1 – Water Security	34.42	95.90
NBI Goal 2 – Energy Security	0.00	82.50
NBI Goal 3 – Food Security	2.83	64.60
NBI Goal 4 – Environmental Sustainability	5.88	25.50
NBI Goal 5 – Climate Change Adaptation	2.49	18.60
NBI Goal 6 – Transboundary Water Governance	6.83	26.20
Core costs	20.00	48.00
	Subtotal	72.45
	Total NBI	433.65

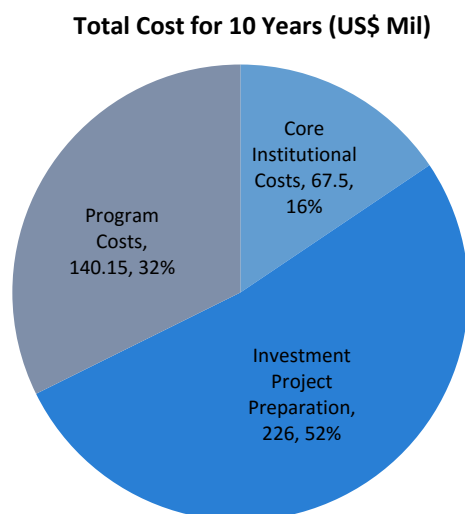


Figure 3: Total cost for 10 years by category (all NBI Centres)

Chapter 3: NBI Strategic Repositioning in its approaches

Development of river basin organizations is an integral part of successful transboundary water cooperation. River basin organizations such as NBI have a fundamental role in providing a conducive framework for regional cooperation and integration. . Over the years NBI has grown into a strong institution with highly capable staff and solid capacities. Through the NBI platform, cooperation between countries has been built. Today, countries do cooperate. It's not yet perfect, but basically, cooperation is a reality at various levels. There is a strong foundation in terms of common knowledge, tools and cooperation mechanisms as well as a demonstration of tangible benefits of cooperation through the investment programs of the NBI Subsidiary Action Programs.

However the role of NBI in facilitating transboundary water cooperation in the Nile basin has been hampered by a number of challenges. The key challenges facing NBI institutions and how NBI intends to reposition itself to address them over the ten year period is discussed in the sections below. These new approaches for dealing with the challenges have been incorporated in the 10-Year Strategy

3.1 Maintaining participation of all NBI Member States

The Challenge: Having completed the foundational work and when it was about to transition into a permanent organization, NBI started facing formidable challenges emanating from the following:

- Following the disagreements upon signing of the CFA by five upstream countries in 2010, Egypt and Sudan froze participation in NBI. Sudan resumed participation in NBI since 2012. However, Egypt's continued absence created unfavorable environment, including impediments toward NBI sustaining its financial support base among member countries and the development partner community.
- NBI member countries, continue to pursue national water resources developments. However the significant potential transboundary impacts of the water resources developments has created an urgency for engaging Egypt. Faced with this urgency, and Egypt's continuing abstention from NBI activities, Member States have been compelled to find alternative ways of engaging one another outside the NBI platform which, unfortunately, has the potential to weaken Nile cooperation under the NBI
- NBI does not have a systematic mechanism to deal with conflict situations of Member states freezing, withdrawing or engaging in counterproductive activities against the institution.

The continued freeze by Egypt and the actions thereof is posing serious challenge for NBI and will ultimately impede it to pursue its mandate of promoting cooperative Nile water resources management and development.

Therefore, the NBI 10 year strategy proposes a strategic shift in NBI's approach for doing business. The key approaches to be followed are:

1. **Continue to focus on and emphasize basin-wide risks** that threaten all Nile riparian countries to enable cooperation in priority action areas; and
2. **Continue to provide platform and dialogue opportunities** where member countries and non-governmental organizations feel free to engage each other and achieve results that address common concerns.

3.2 Addressing challenges stemming from NBI's transitional nature

The Challenge: The NBI is a transitional, preparatory/foundational phase arrangement. This phase was not intended to remain open-ended and indefinite. It was rather designed to meet the necessary and enabling conditions for NBI to transition into a permanent institution. The preparatory work by and large has been accomplished. Nevertheless, the need for a stable and predictable order that enables crafting long-term policies and plans and speedy implementation of programs and productive engagement of Nile stakeholders at international, regional and national levels still calls for bringing to an end the transitional period and put in place a permanent institution .

As a transitional institution, NBI is unable, despite crafting pertinent policies and strategies, to get them enforced uniformly across the basin in more legally binding forms such as protocols. The continued indeterminate existence is making the NBI's transitional nature open-ended and in the long-run risking its credibility. The continuation of this transitional nature is also undermining confidence in NBI so much so that countries are starting to bypass the platform and services it offers and the capability it has built. The situation has demonstrated that effective governance of the shared Nile water resources without transitioning NBI into a permanent RBO is untenable.

The strategic shift in NBI's approach over the next 10 years will include

1. High profile and diversified engagement at the political level; NBI will besides the parent Ministries of Water Resources, engage relevant Ministries that play a stronger role in influencing regional cooperation at national level (Ministries of Foreign Affairs, Security, Finance and Planning, Regional Cooperation, etc.).
2. Expedite the process of transforming NBI into a permanent institution; while NBI will work to expedite the transition into a permanent institution, it will continue on improving its structures and performance adding on new relevant programs that will strengthen the future RBO, uncertainty of transitioning notwithstanding.

3.3 Moving NBI facilitated and regionally agreed investment projects to implementation.

The Challenge: NBI, through the sub-basin programs, has been given a mandate to help countries identify and prepare investment projects in water resources development that have been jointly assessed and agreed by countries sharing a cross-border or larger basin. While the investment projects are in general regionally coordinated and agreed, they are owned and implemented by the respective countries. This approach was taken to ensure that the proposed developments are not only beneficial from a national but also a basin perspective and take positive and negative transboundary effects into consideration through the regional planning framework provided by the NBI mechanism. While NBI has

enabled implementation of a series of regionally agreed investments – notably in the domain of interconnection of the regional hydropower grids, multipurpose storage and watershed management - it also has a large pipeline of projects that are ready for implementation or for detailed project preparation. According to a generally held perception amongst countries – the pipeline is not moving fast enough to implementation to deliver tangible benefits.

There are a complex set of reasons for this. In many cases projects were identified through more “supply” driven regional identification processes that are not always well anchored and informed by national planning processes and priorities. This leads to the challenge that when it comes to funding, projects are not prioritized in the national budgets and funding windows – where they compete with all other nationally identified projects. NBI has good experiences – for example the power interconnections and irrigation projects that have been included into national priorities – but also frustrating experiences, where this has not happened or only after very long time. This contributes to the potential mismatch between the expectations on what NBI can deliver and what it actually delivers. Whilst countries expect NBI to quickly deliver additional funding and investment projects, the substantial investments required in the basins development can effectively only be leveraged if the countries include projects in national development plans and funding windows.

On the other side there are many insufficiently tapped opportunities for complementing national funding with regional funding – be it in the way of development loans or global commons (climate/biodiversity) funding opportunities. NBI has success stories for this kind of funding model under the Rusumo Falls or Lake Albert and Edward Projects. There is also an increasing need to not only anchor NBI investment agenda at the national level but also to mainstream it with the various other regional development agendas the countries have subscribed to –be it the pan-African infrastructure agenda under the AU’s PIDA program, or the regional economic communities such as the EAC/LVBC or the EAPP.

NBI, as a regional mechanism, has the potential to help countries tap into the available funds around a shared agenda – however it needs to more systematically develop its specific niche in two key dimensions. On the one hand it needs to improve on the anchoring of the NBI investment agenda in the national planning and funding priorities though improved inter-sectoral coordination at the national and between the national and regional level. On the other side NBI needs to develop more systematically a regional planning framework. Such a basin-wide regional framework is the added value NBIs provides and needs to capitalize on. This framework assures countries and investment fund providers (a) that the identified projects contribute to the shared objectives of the Nile riparians coordinated basin development and management agenda, (b) have been consulted and agreed by the involved countries, thereby reducing the transactional risks associated with regional investments and (c) are aligned to the key regional and global agendas such as PIDA, Africa Water Agenda, SDG, and Global Commons Agendas.

Therefore, the NBI 10 year strategy has identified strategic shift in NBI’s approach for doing business. These key approaches to be followed are:

1. NBI will review and establish a more effective and institutionalized inter-sectorial coordination process within countries for improved aligning of the regional investment agenda in the national investment priorities and funding windows.
2. Strengthen the service function of NBI for investment pipeline coordination and preparation – focusing on leveraging the comparative advantage of NBI’s ability to provide the basin context to national projects, providing a jointly agreed approach to key transboundary challenges and enabling the required agreement of riparians on projects with transboundary impacts.
3. At the regional level, NBI will move towards a basin-wide “Nile Investment Program” and coordination mechanism that provides a high-level endorsed and visible framework for prioritizing and mobilizing resources for investments aligned to the basin development goals, bringing together and leveraging the NBI Agenda into the continental and regional and investment agendas, that Nile Basin countries have subscribed to.
4. Scale-up the experiences for joint investments in water resources, building on the Rusumo experience, to foster closer cooperation in infrastructure development.

3.4 Improving utilization of NBI resources

The Challenge: NBI is the only platform serving all member countries. However, the NBI platform hasn’t been fully used for resolving core water resources management issues. There are four key reasons for this: first, NBI’s governance mostly focus on institutional management issues and there is a need to strengthen deliberations on core water resources issues at strategic level. Second, though NBI has developed strong institutional capacity and tools for informing water resources planning and management at national level as well, the use of these capacities and tools so far has been largely driven by NBI’s programs and used very little to support national water resources planning and management. This has also contributed to NBI’s low visibility at national level. Third, there have been trends in the Nile Basin where member countries from to time to time resort to mechanisms outside the NBI framework (e.g. bilaterally, trilaterally) for addressing water resources issues that could profitably be addressed through NBI using the tools, knowledge and capacities NBI has accumulated and processes it has put in place. With increasing proliferation of such bilateral or trilateral arrangements, there is increased risk of creating unnecessary redundancies’ with little synergy. Fourth and lastly is the transitional nature of the NBI and its lack of a legal mandate to tackle serious water resources management issues. This weakens NBI’s hand in helping to tackle core water resources management issues.

The above threats, unless addressed through joint action between NBI institutions and member states, could eventually make NBI irrelevant. Therefore, the NBI will make strategic shifts in its approach over the 10 year period as follows:

1. **Create more avenues for the Nile Governance to deal with core water resources issues and strategic Nile cooperation issues.** This approach focuses on increasing use of innovative ways for strategic level deliberations by governance on core water management issues. The governance will be engaged in core substantive water resources questions. Regular policy briefs, white papers and other periodic write ups will be used to bring strategic issues on the table for deliberations by NBI governance and eventual identification of policy options.

2. **NBI will strengthen** the involvement of broader range of government officials and experts from riparian countries through establishment of permanent and ad-hoc expert working groups as a mechanism to support NBI governance and ensure that their deliberations are well informed by technical content on specific technical issues NBI will be working on. This will also broaden the stakeholders involved in deliberation of core water resources issues. Expert groups, while still kept at specific theme/project level, will be more formalized and will inform the governance on specific water resources questions in a more structured manner.
3. **Encourage and support member countries to increase demand for NBI services:** Enhance NBI's attractiveness and service packages to member countries; Member states will be encouraged and supported to bring core (substantive) water resources issues to NBI platform and thereby use NBI's convening power, capacity and tools to address these issues and also request services to support national water resources planning and management; allocate resources (such as a facility) for supporting member countries on specific transboundary water issues.

3.5 Coordination with Regional Actors

The Challenge: NBI exists within a larger and complex matrix of regional entities operating in the Nile Basin; some focusing on water, others on economic development and others on specific agendas that cut across water and development. NBI member states are, in various compositions and are also members of RECs that share parts of the Nile basin including EAC, COMESA and IGAD; all which act as vehicles for accelerated regional integration albeit with different specific mandates. Member states, have over the last decade also mandated the regional economic communities particularly the EAC/Lake Victoria Basin Commission and IGAD – to address transboundary water management in their respective mandate areas. Consequently, there is overlap in membership, geographical coverage and sometimes objectives, programs and activities with NBI. This is further compounded by the limited coordination between NBI and the institutions resulting in duplication, competition for resources and inefficiencies in delivery of development benefits to the region.

NBI recognizes the need to rationalize relationships and improve coordination, building on mandates and comparative advantages of each institution in order to enhance synergy, reduce duplication and effectively promote a joint development agenda in the Nile basin. NBI, with its basin wide mandate and convening power for all Basin states, will aim to establish and strengthen collaboration with the key regional players, lead constructive engagement with them in order to establish a coordination platform for dialogue, learning and joint planning for management and development of the basin water and related resources and effective governance of the institutions.

The strategic shifts NBI will make in its approach over the 10 year period will include:

1. **Enhancing collaboration with the key regional players:** NBI and the selected player (s) will jointly undertake detailed reviews of their institutional mandates and programs, agree on collaboration plans and the most appropriate administrative tools (e.g. MoUs) to enable smooth implementation of the collaboration plans. To give them political endorsement, the plans and tools will be endorsed by the highest level of governance in both institutions.

2. **Promote a joint agenda for water resources management and development with other actors in the region.** NBI will establish a coordination platform as a starting point to identify synergies, area of collaboration, agree to a coordination mechanism and tools for coordination. The platform will also provide an opportunity to identify synergies and jointly agree on a multi-stakeholder approach to basin planning and development.

3.6 Broadening engagement across water related sectors

Challenge: The level of awareness and visibility of NBI beyond the water sector has remained too low to make a strong business case for prioritization and integration of NBI agenda in national development plans. NBI interventions at national levels involve water and water related sectors, such as energy, agriculture and environment, as well as facilitative ministries such as Finance, Foreign affairs, and Justice. However, many times, NBI related issues are discussed within sectoral boundaries, with very minimal inter-sectoral dialogue, collaboration or coordination. The weak coordination mechanisms render the participation of other sectors in NBI ad-hoc and ineffective, implying that co-benefits and trade-offs are not carefully considered during planning. The higher echelons in the decision making structures in some countries are not well informed about the NBI to the detriment of desirable strategic support to NBI. Consequently NBI visibility has remained low, jeopardizing the cooperative efforts and impeding moral and funding support for both the institutional core functions and program work.

To address this challenge, the NBI 10 year strategy has identified strategic shift in NBI's approach for doing business. These key approaches to be followed are:

1. More engagement at higher levels in the government structures will leverage timely and informed decision making regarding NBI business. More outreach targeting policy/decision makers is envisaged to create a favorable environment for NBI programs to be prioritized, and integrated in the national processes.
2. Strengthening Inter- sectoral coordination mechanisms at national level. The participation need to be elevated to higher caliber of officials in the government hierarchy to enable effective commitment and decision making.
3. Strengthen the transboundary units in the Ministries of water to execute the coordination function effectively. The office should be supported for sustainability of its services.

3.7 Sustainable funding of the organization and program

Challenge: NBI core costs, program activities costs and investment projects costs for the past 16 years have been met through support from Member Country Contributions (membership fees), Development Partners (DPs) contribution (Grants) as well as a combination of Country Contributions and DPs contributions (Grants and Loans).

Member States committed to fully covering the institutional core costs that would enable NBI to operate its basic programs and sustain the most important capacities, systems and knowledge that have been developed since the establishment of the NBI. Over the years, there has been a steady increase in country contributions. While this commitment provides a solid footing for the institution Country

Contributions remain inadequate; and this is further compounded by non-payment and late remittances by some member states. As a result, each of the NBI institutions is running a budget deficit.

NBI continues to engage Development Partners to raise funds for program implementation. This is challenging given the increasing focus on inclusive growth and infrastructure development by both the traditional and new Development Partners and less on enabling environment for the cooperation; which remains an integral part of the NBI program particularly the Nile SEC. Development Partners' support to NBI has significantly dropped over the years; which also poses a threat to continuity of the NBI programs.

Furthermore, in the basin there has been no clear arrangement for the basin-wide regional investment program to facilitate mobilization of resources to implement infrastructure development and other transformational projects. To date there has only been a very narrow funding opportunity for projects' identification and preparation.

NBI is committed to ensuring financial sustainability now, in the next 10 years and beyond. The 10 Year Strategy, through the Member States, will seek to deepen commitment to raise the country contributions portfolio to a level that allows the retirement of areas, and ensures timely remittance of annual country contributions. It is expected also that during the next 10 years, NBI will put more efforts in resources mobilization and development communication to raise the visibility of NBI activities inside and outside the Basin.

To address this challenge, the NBI 10 year strategy has identified strategic shift in NBI's approach for doing business. These key approaches to be followed are:

1. Focus on maintaining close relations with NBI's traditional development partners, while exploring new funders. NBI will follow a Program Based Approach (PBA) around which to coordinate development partners, with a vision to develop this further into an NBI managed basket funding mechanism.
2. Member states will revisit the NBI institutional core costs and agree on the appropriate formula for country contributions, including in-kind contributions. Member states commit to covering the core costs.
3. Member states will establish a mechanism for channeling back some percentage of the investment cost prepared by NBI to the operational budget of NBI, e.g. establishing an NBI revolving project preparation fund.
4. NBI will seek to establish regional mechanisms for basin development funding – by making better cooperative use of opportunities combining national and regional IDA or climate funding windows. Such mechanism should also be developed around the proposed coherent Nile Investment Program to be developed.

Chapter 4: Implementation Arrangements

4.1 The role of NBI' centers

4.1.1 *The institutional framework of the NBI*

The strategy will be implemented by the three NBI centers and the NBI partner states. This section sets out the governance structure as well as the visions, missions and varying roles of the NBI centers with respect to implementing the strategy.

The NBI governance structure comprises Nile-COM and its Technical Advisory Committee (Nile-TAC). Reporting to the governance structure is the Nile Basin Initiative Secretariat (Nile- SEC), based in Entebbe, with responsibilities for basin-wide cooperation, planning, monitoring, knowledge and information management.

The subsidiarity principle is one of the normative rules of cooperation in the NBI. Under the subsidiary principle, two sub-basin organisations have set up in the Nile Basin: one in the Eastern Nile sub-basin and the other in the Nile Equatorial Lakes region.

The Easter Nile sub-basin covers the areas drained by the Blue Nile (Abay) Dinder, Rahad, Atbara and Main Nile Rivers while the Nile Equatorial Lakes sub-basin covers the drainage area of Lake Victoria and the other equatorial lakes, as well as the areas drained by the Bahr El Jebel, Bahr El Ghazal and Sobat Rivers. Each of the sub-basins has a parallel system of sub-basin Council of Ministers (i.e. Eastern Nile Council of Ministers (EN-COM) and Nile Equatorial Lakes Council of Ministers (NEL-COM)), Technical Advisory Committee (Eastern Nile Subsidiary Action Program Team(ENSAPT) and Nile Equatorial Lakes Technical Advisory Committee (NEL-TAC)) and secretariats (Eastern Nile Technical Regional Office (ENTRO) based in Addis Ababa, Ethiopia; and Nile Equatorial Lakes Subsidiary Action Program Coordination Unit (NELSAP-CU) based in Kigali, Rwanda). The sub-basin governance structures are well integrated with the basin-wide governance structure.

4.1.2 *Mission of Nile-SEC*

The Nile-SEC vision is the same as the overall NBI vision. In order to realise the vision, Nile-SEC strives to be a coordination centre fostering cooperation, and an institution with technical capacity that facilitates prudent management and development of the Nile Basin resources. By so doing it endeavors to be a credible institution that provides a base for the permanent river basin organization and therefore a centre of excellence for river basin management services.

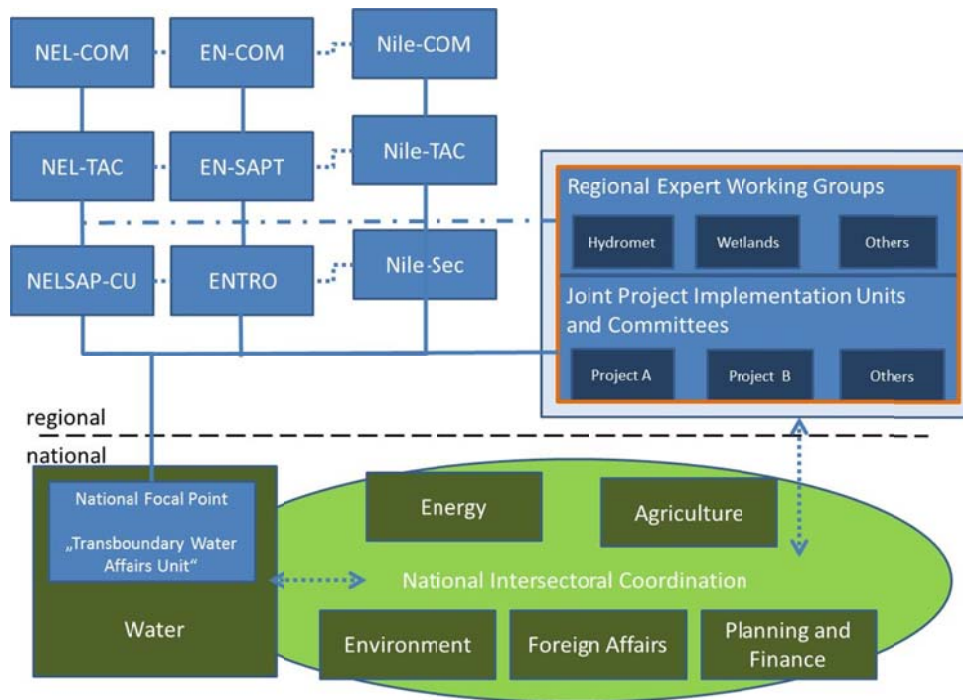


Figure 4: Setup of the Nile Basin Initiative Governance

The mission of Nile-SEC is: ‘To facilitate basin wide dialogue and provide knowledge for informed and collective decision making on management and development of the shared Nile basin water resources.’. In order to execute its mission, Nile-SEC will put in place systems so that it is a professionally and sustainably managed secretariat serving the NBI countries to achieve the Shared Vision.

Traditionally, Nile-SEC has been responsible for ensuring basin wide cooperation, planning, monitoring and knowledge and information management between NBI Member States. With regard to the Strategy, Nile-SEC will have the overall responsibility for strategy delivery on behalf of the Nile Member States. This will involve taking a lead role with respect to interventions of a basin wide nature under the Strategy, and facilitating and coordinating the inputs of the SAPs related to investment activities within the sub-basins. Nile-SEC will also have overall responsibility for monitoring and evaluation of strategy implementation, and reporting on the progress of its implementation to the Member States through Nile-TAC and Nile-COM. Nile-SEC shall act jointly with the sub-basin secretariats in mobilising the resources required for implementation of the Strategy under guidance and with approval of Nile-TAC and Nile-SEC.

4.1.3 Mission of NELSAP-CU

The NELSAP-CU based in Kigali, Rwanda is the secretariat for the NELSAP Program. The NELSAP-CU vision is the same as the overall NBI vision. NELSAP’s mandate or mission is to *‘facilitate, support and strengthen the identification, preparation and implementation supervision processes for NELSAP projects for the benefit of all riparian countries.’*

The NELSAP CU will facilitate and coordinate the identification, preparation, implementation, monitoring, and evaluation and feedback processes of investment projects in the NEL region. NELSAP-CU would also undertake sub-regional capacity building to ensure continued identification, preparation and implementation of the program of transboundary investments.

Under the Strategy NELSAP-CU will be responsible for implementing water resources management measures in the NEL watersheds, and identifying, preparing, mobilising resources for, and supporting NEL countries in the implementation of investment projects envisioned under the Strategy.

4.1.4 Mission of ENTRO

ENTRO based in Addis Ababa serves as the secretariat of the ENSAPT Program. The ENTRO vision is the same as the overall NBI vision. ENTRO's Mission is *"We work for the shared benefits of cooperation"*

ENTRO promotes transboundary cooperation in the participatory sustainable development and management of the common Eastern Nile water resources. As a regional organization under the umbrella of the NBI, it has a distinct role and profile by: (i) Providing technical expertise and adopting best practices for the coordinated identification of regional development projects and programs; (ii) preparation and possible implementation of the regional development programs and projects in the Eastern Nile; (iii) Enhancing capacities of ENSAP institutions; (iv) Building and strengthening networks among the stakeholders; and (v) Enabling people from the Eastern Nile to work together. ENTRO will continue to play this role under the 10 Year Strategy and will be responsible for implementing water resources management measures in the Eastern Nile watersheds, and identifying, preparing, mobilising resources for, and supporting Eastern Nile countries in the implementation of investment projects envisioned under the Strategy.

4.2 Implementation mechanism for the strategy: the NBI Programs

The 10 Year Strategy will be implemented through 5 Year Programs which break down the strategic directions into specific actions to be implemented over 5-year periods. The logic of the NBI programs follows the subsidiarity principle, which encourages development challenges to be addressed and solved at their lowest appropriate level. An NBI basin-wide Program is therefore complemented by a NBI Eastern Nile and an NBI Nile Equatorial Lakes Program. The three programs are structured around the three core functions of NBI: facilitating basin cooperation, water resources management, water resources development.

The NBI Secretariat will lead the implementation of the NBI basin-wide program and have overall responsibility for coordinating planning, implementation and monitoring of Strategy , including reporting on progress made in Strategy implementation to the countries through Nile-TAC and Nile-COM. ENTRO will lead the implementation of the NBI Eastern Nile Program and NELSAP –CU will lead implementation of NBI Nile Equatorial Lakes program.

The figure below illustrates how the strategy and the three programs relate.

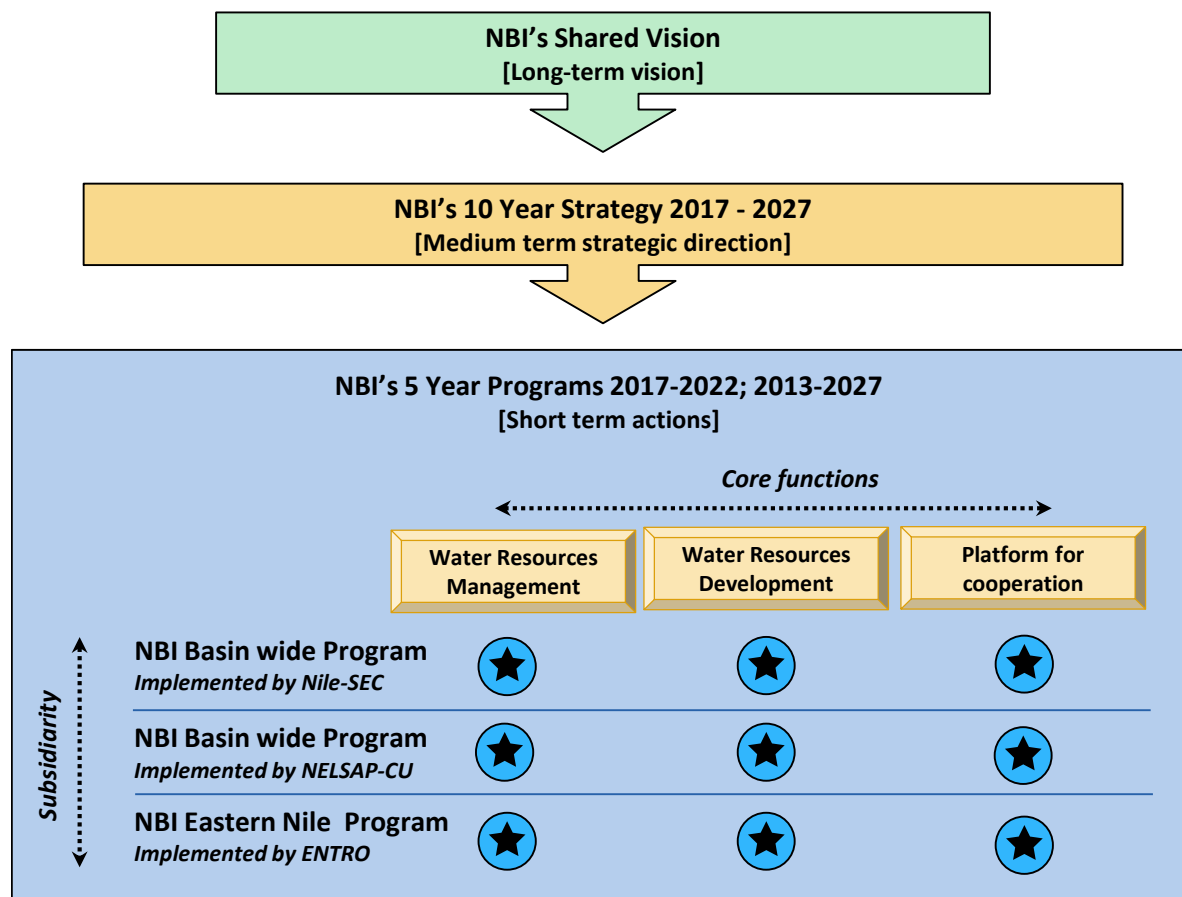


Figure 5: NBI programs' coverage of core functions

Countries engage in the implementation process through improved inter-sectoral planning and coordination at national and regional level, strong transboundary water management units in their respective Ministries responsible for Water, and Regional Expert Working Groups on the key areas of cooperation. Investment projects are largely implemented by countries, with NBI centers having a key role in the identification and preparation phase.

While each of the centres will lead its respective program, joint planning, implementation and monitoring will be done to ensure that the activities of the three centers produce coherent and meaningful results in an efficient manner.

4.3 Role of Member States in implementing the strategy

NBI centers work for and under the leadership and guidance of the riparian states. In this respect, NBI centers will work with relevant offices and institutions in Member states to implement the strategy and center-specific programs.

Member States, through the Nile TAC and Nile COM will provide technical and political oversight towards implementation of this strategy. Nile TAC will provide strategic and technical guidance in rolling out the strategy and Nile COM the much needed political support for the program to thrive.

Countries engage in the implementation process through mainstreaming regional interventions into national development plans and sector priorities, improved inter-sectoral planning and coordination at national and regional level, strong transboundary water management units in their respective Ministries responsible for Water, and Regional Expert Working Groups on the key areas of cooperation. Investment projects are largely implemented by countries, with NBI centers having a key role in the identification and preparation phase.

Member States will be responsible to nominate candidate projects into the regional investment portfolio and mainstream regionally agreed plans into national level development plans, allocate budget and ensure their implementation.

Countries will use the NBI platform to jointly develop water resources plans that address their priorities and mutuality thereby strengthening their collective efforts to find solutions to their common water resources development and management challenges.

The countries will share information and jointly assess the state of the Nile Basin to guide their collective actions using the tools, processes and structures of the NBI.

The NBI member states will provide resources for their joint institution (financial, in-kind, human resources capacity, diplomatic engagement, etc).

Countries will coordinate mandates they give to various relevant regional mechanisms with those of NBI to minimize overlaps and enhance synergy.

4.4 Regional Expert Working Groups

As part of the overall transboundary governance, NBI member countries are represented at technical level through Regional Expert Working Groups and Project Steering Committees. Expert Working Groups and Steering Committees represent their respective countries, review and clear technical content and provide first level approval of work and recommendations for decision at higher level.

Expert Working Groups are formed and support specific activities, such as implementation of the Nile Basin Regional Hydromet system, to support the Nile-TAC with specific technical tasks related to NBI's mandate. In addition, Working Groups comprising of country nominated experts, external experts and NBI staff, shall be created to support the implementation of the Program.

At subsidiary level, Project Steering Committees (PSC) are formed to support, provide guidance and oversight in investment project preparation and execution of related studies. The PSC represent their countries and their decisions are critical for moving the investment preparation process forward.

4.5 Funding the Strategy

To date NBI's programs have been primarily funded by development partners and contributions for both core and program funding. Progressively the Member States have stepped up their contributions to cover NBI core costs of the centers and ensure the financial sustainability of the organization. This will enable the institutions to provide the core services. In addition to country contributions, Member States provide in kind-contributions to NBI programs in form of office space, tax exemptions, experts staff time, costs of NBI governance etcetera.

NBI follows a program based approach (PBA), whereby it coordinates its member states and development partners around its programs. The program is complemented by a financing strategy, which lays out the principle mechanisms of funding the NBIs core costs and program.

NBI member states and development partners regularly reflect together on the progress of the strategy during the annual Strategic Dialogue.

4.6 Monitoring the Strategy

NBI has adopted a Results Based System, which is in line with management for development results approach, and has a monitoring and evaluation system in place that is used to collect and manage data for the regular and periodic assessment of the relevance, effectiveness, efficiency, sustainability and impact of NBIs Programs.

A high level results framework and agreed upon indicators are the basis for results monitoring and evaluation of the NBI strategy. The indicators have been carefully selected and well aligned to global and regional indicators (such as SDG, Africa Water Vision 2025); so that NBI's contribution to the global and regional development agendas will also be captured.

The Nile-SEC, ENTRO and NELSAP-CU will use this high-level results framework to monitor their specific programs and their contribution to the higher level results.

In addition, the impact of the strategy will be monitored by the State of the Basin Report, which will be compiled every five years at the end of the planning cycle. These will assess overall progress towards the achievement of the basin development goals and ultimately to the NBI vision.

Beyond the importance of monitoring and evaluation for accountability, the results based management approach provides learning opportunities – in helping countries to act on the basis of understanding what really works and what does not, and take corrective action. Therefore strategy review is inbuilt as part of monitoring.

NBI will report on progress on the strategy and programs to its governance, donors and the broader stakeholders through the annual progress reports and the corporate report.

4.7 Risks and risk management

4.7.1 Key risks

From review of the external environment during the preparation of the 10 Year Strategy 2017-2027, the following were identified as the key risks for the Strategy:

1. Low country contributions
2. Decrease funding from Development Partners
3. Abandonment of the NBI by the countries
4. Failure to form partnerships with regional institutions
5. Continued non-participation by Egypt
6. Political instability in the countries
7. Countries promote national plans with huge increases in water demand
8. Countries seek to maximise benefits to themselves from the Nile waters with regard for others

These risks, their likelihood of occurrence, and potential impacts are analysed below.

4.7.2 Risk analysis

The key risks associated with Strategy are shown below.

Table 9: Analysis of risks

Risk	Analysis	Risk Mitigation Strategy
1. The level of country contributions to the NBI is low relative to the requirement for smooth operation of the NBI	<p>Overall rating: Medium Likelihood: Medium Impact: High</p> <p>Country cash contributions are used to finance the basic operations of the Nile Secretariat. The low level of country contributions relative to the requirements of the institution, and frequent delays in remittance of dues affects the smooth running of the NBI.</p> <p>In recent years, countries have agreed to raise their annual contributions in a step-wise manner to a level where it is sufficient to cover the basic operations of the Secretariat. This significantly reduces the level of this risk.</p>	<ul style="list-style-type: none"> • The Executive Director supported by a small technical team, could travel to the NBI Member States, meet with officials of the Ministries of Water, Foreign Affairs and Finance and explain to them the importance of the country contributions to ownership and sustainability of the NBI. • In the face of resource scarcity, the Nile Secretariat should re-prioritize activities and maintain only the most essential operations.
2. NBI fails to attract adequate funding from Development Partners	<p>Overall rating: Medium Likelihood: Medium Impact: High</p> <p>Between 2001 and 2014 when the Nile Basin Trust Fund closed, the international community provided funds to the NBI to the tune of US\$ 200 million. These resources provided a solid foundation for the NBI, enabling it to grow and mature into a transboundary water institution with world repute.</p> <p>The NBI has been less successful at mobilising financing in recent years, partially due to the global economic crisis, and partially to political disagreements over the new Nile treaty. While not able to match the rate of inflow of financial endowments of the founding years, the NBI continues to attract a steady stream of funding from the</p>	<ul style="list-style-type: none"> • Focus NBI's interventions on priority challenges of the basin countries for increasing impact on the ground; • Work towards increasing use of NBI products and services at national and sub-regional level; • Continue to pursue efforts to re-introduce all-inclusive cooperation on the Nile. • Increase efficiency in use of available manpower, financial and material resources • Strengthen the capacity of the Nile Secretariat in project preparation and resource mobilisation

Risk	Analysis	Risk Mitigation Strategy
	<p>international community. The international community is cognizant of the importance of Nile cooperation to the security and stability of the Nile region and the middle east and, so far, has provided steadfast support to the NBI in various forms.</p>	
<p>3. Countries form a new arrangement for cooperation and abandon the NBI</p>	<p>Overall rating: Low Likelihood: Low Impact: High</p> <p>At the launch of the NBI there was high enthusiasm and goodwill about the NBI amongst the Member States stemming from an expectation that the new Nile treaty would quickly finalised and ratified, and the Nile River Basin Commission established thereby paving the way for equitable re-allocation of the shared Nile water resources. Close to 20 years later on, the new Nile treaty is not anywhere near to entering into force and the transitory institutional arrangement – the Nile Basin Initiative – has become more permanent. This slowdown in the progress towards a new legal framework on the Nile River has frustrated many of the Nile Riparian countries, and some have started to look elsewhere for alternative arrangements for transboundary water cooperation. The alternative frameworks being considered are those of EAC and IGAD.</p> <p>Considering that the NBI offers the only all-inclusive platform for cooperation on the Nile River Basin, bearing in mind the amount of time, finances and emotions the countries have invested in the Nile project, and given the considerable benefits that have already accrued to Member States from Nile Cooperation, it looks unlikely that the countries will suddenly abandon the NBI for an alternative arrangement.</p>	<ul style="list-style-type: none"> • Enhance the relevance, quality and timeliness of NBI services to member countries by aligning NBI's work program to the needs of the member states and effectively addressing emerging challenges they face in transboundary water issues; • Work with member countries to enhance impact of NBI's work at national and sub-regional levels; • Work with broad spectrum of stakeholders to respond to their needs and enhance NBI's visibility; • Continue the dissemination of information and knowledge products that highlight the unique role of the NBI in Nile Cooperation and document the scope of benefits to the NBI Member States from Nile Cooperation
<p>4. Regional level institutions are not willing to partner or cooperate with the NBI</p>	<p>Overall rating: Medium Likelihood: Medium Impact: Medium</p> <p>The regional institutions with whom the NBI could partner – the EAC and IGAD – both have high political profiles and power, and greater ability to mobilise resources. As these organisations perceive that they have little to gain by cooperating with the NBI, they have little interest in a partnership with the NBI. However, by demonstrating the unique qualities that the NBI could bring into a partnership, such as its extensive experience and expertise in preparation of regionally conceived investment projects, development and operation of advanced decision support systems, and facilitating energy sector projects, the NBI could get the two regional institutions to see the benefits of a partnership with the NBI.</p>	<ul style="list-style-type: none"> • Arrange exchange visits for officials of the two regional organisations to help them deepen their appreciation of the important work the NBI is doing and tangible benefits they would derive in a partnership with the NBI.
<p>5. Egypt declines to unfreeze its</p>	<p>Overall rating: Medium Likelihood: Medium</p>	<ul style="list-style-type: none"> • Continue efforts to reach out to

Risk	Analysis	Risk Mitigation Strategy
<p>cooperation thereby affecting the effectiveness of Nile cooperation</p>	<p>Impact: Medium</p> <p>Egypt, the most downstream riparian country, and the country with the largest consumptive use of the Nile waters, has frozen its participation in the NBI. Among other things, this has contributed to the stalling of the process of establishment of the Nile Basin River Commission. But in the long term it would serve Egypt's interests well if it could engage with the countries directly as this would enable it to influence decisions regarding the management and development of the shared Nile water resources. This fact is expected to motivate Egypt to unfreeze its cooperation at some point in time. Recently, the Egyptian president travelled to several Nile riparian countries and held discussions with Heads of State. This dialogue is expected to resolve the impasse over the CFA.</p>	<p>Egypt and bring them back in the NBI fold.</p>
<p>6. There is continuing political instability in some countries, which affects their ability to participate effectively in Nile cooperation.</p>	<p>Overall rating: Medium Likelihood: High Impact: Medium</p> <p>Nearly all member countries have suffered, or continue to suffer, from insecurity in different parts of their territory. These internal conflicts tie up national resources and hamper the effective participation of the countries in transboundary cooperation. However, past experience has shown that the countries attach a lot of importance to the NBI and strive to continue cooperating even in the midst of internal strife.</p>	<ul style="list-style-type: none"> •
<p>7. Countries are not willing to consider recommendations to keep their future water demands within available amount resources in the Nile Basin.</p>	<p>Overall rating: Medium Likelihood: High Impact: Medium</p> <p>The baseline assessment of water availability and current and future water use that was carried out by the NBI showed that all Nile countries have big plans for water resources development and water use. The estimate of total water requirement from existing national plans in the basin exceeds the available water resources by many times. It will take a lot of explanations and persuasion on the part of the NBI to get the countries to climb down from their high water demand positions.</p>	<ul style="list-style-type: none"> • Using existing knowledgebase and analytical tools provide information and data to the countries on water resources availability and the level of water development that is possible. • Provide alternative scenarios of how countries could derive desired benefits from the river system in a sustainable manner through coordinated development, and win-win benefit and cost sharing. • Promote regional power interconnection and power trade, and intra-basin trade in agricultural products.
<p>8. Countries push for win-lose outcomes with respect to sharing of benefits</p>	<p>Overall rating: Medium Likelihood: High Impact: Medium</p> <p>There is a desire of each country to maximise benefits to itself from use of the shared Nile water resources with no consideration for the needs and right of other riparians to an equitable share of the same resources. While this tendency lingers on, the many years of dialogue and awareness raising on transboundary water governance facilitated by the NBI have improved appreciation of the</p>	<ul style="list-style-type: none"> • Increase water diplomacy training for senior officials from water related sectors in the countries. • Organise country exchange visits for senior officials from water related sectors in the countries.

Risk	Analysis	Risk Mitigation Strategy
	shared nature of the Nile water resources across the basin and produced empathy towards other countries situations.	

4.7.3 Assumptions

The risks reviewed above are major risks that have a potential to completely derail the Strategy. Also present are a number of minor risks that, although not able to derail the Strategy, have the potential to seriously affect the delivery of one or more outputs. These lower level risks are listed below, and positively phrased as assumptions. The key assumptions are the following:

1. Member States will address identified weaknesses in their policy, legal and institutional frameworks and enhance greater commitment is in place for transboundary water governance;
2. Member States will continue with their commitment to cover the core institutional costs from their cash and in-kind contributions;
3. Member States remain enthusiastic about Nile Cooperation and continue to use NBI as the platform to dialogue on water related conflicts in the basin.
4. The current differences between member countries with respect to the CFA will be resolved timely;
5. The priorities covered by the 10 year strategy will remain relevant even in the event a permanent institutional setup is established for the Nile cooperation before the expiry of the period of the strategy;

As in the case of the main risks, NBI will take adequate mitigation measures to ensure that the above assumptions hold throughout program implementation.

Annexes

Annex 1: Results Framework

Note: The NBI high-level results-framework is part of the overall basin-monitoring framework of NBI, which is based on the Driver- Pressure-State-Response - impact (DPSRI) Approach. Whilst the change of State is monitored in the “State of Basin” reporting process, the high- level results framework measures member states collective Response (i.e. policy and investment action) under the NBI framework for cooperation and basin management. The below indicators are therefore essentially policy-response and not state-of-basin indicators.

For ENTRO, numbers indicate only those which fall within its mandate – that is preparation only and NOT implementation. Hence the numbers pertain to investment preparation phase (S1 and S2) and their potential implications in terms of delivering (e.g. Storage capacity; power generation, transmission interconnection, flood protected area coverage; flood protected people, etc.).

Strategic Direction	Key High Level Result Indicator	Metric	Baseline (2016)	Target
Overarching impact				
Disagreements/ Conflicts over the <i>utilization of the common Nile Basin water resources</i> averted/constructively resolved	I-0.1: Operational arrangements for transboundary water co- operation in the Nile basin; (aligned to SDG 6.5.2 definition)	Number of basins (basin-wide, sub- basin, cross-border) covered by agreements Proportion of the transboundary basin area (basin-wide, sub-basin, cross-border) covered by bi/multilateral agreements <i>For an arrangement to be defined as “operational” it is required that (a) regular meeting of parties to discuss water resources management (b) regular exchange of information. Documentation methodology to be developed jointly.</i>	<ul style="list-style-type: none"> • Nile Basin Initiative (10 members) • Permanent Joint Technical Committee Mara River Basin (Kenya, Tanzania) • NELSAP-RBM frameworks for Sio-Malaba-Malakisi; Mara, Kagera; • Lake Victoria Basin Commission (LVBC) (UG, KE, TZ, RW, BUR); • Joint Technical Water Resources Organ (Sudan / Egypt); • Declaration of principles on GERD (Egypt, Ethiopia, Sudan); • CFA signed by 6 countries (ETH, RW, TZ, KE, UG, BUR),ratified by three (ETH, RW, TZ) 	By 2027 a permanent Basin-wide and sub-basin wide arrangement for cooperation agreed by all member states and are operational.
Socio-economic development from the	I-0.2: Regionally agreed investments under	No / Value of portfolio of investment projects agreed upon by	Lakes Edward & Albert Fisheries (s1) Rusumo HEP (S4), Power	By 2022, the NBI portfolio projects each have moved at least one stage

Strategic Direction	Key High Level Result Indicator	Metric	Baseline (2016)	Target
sustainable and equitable utilization of the Nile Basin water resources.	implementation (aggregate (a) by financial volume, (b) number of projects)	member countries in on the scale of implementation from identification (S1), feasibility (S2), project structuring and financing (S3) and implementation and operation (S4).	Interconnections (S4) , , ?? xx Projects/USD \$\$	upward on the scale of implementation from identification (S1), feasibility (S2), project structuring and financing (S3);
Goal 1: Enhance availability, sustainable utilization, and management of transboundary water resources of the Nile Basin				
1.1: Enhance multi-purpose water storage capacity	I-1.1: Water storage volume	(a) Capacity in M ³ , (b) preparation stage (S1, S2, S3, S4)	a. S2 a. = 77.55 BMC	a. By 2027, S2 b. = 69.75BMC [preparation – feasibility level;
1.2: Improved productivity and efficiency of water use across sectors;			<ul style="list-style-type: none"> Current farm level irrigation efficiencies range between 30 to 40 percent in most countries; Higher irrigation efficiencies in selected schemes Re-sue of agricultural drainage water in some countries leading to higher overall system – wide efficiency; 	<ul style="list-style-type: none"> By 2022, member states agree on minimum standard for irrigation efficiencies of new projects; By 2022, NBI prepared and facilitated investment projects target at least 25 percent increase in water use efficiency and productivity of water in agriculture covering at least 30 percent of new irrigation development in the Nile Basin; Agricultural productivity and improved water use efficiency improved.
	I-1.2: Measures Enhance mobilization of alternative sources of water (re-use, desalinization, demand management and water use efficiency gains	Volume of mobilized water and number of projects by type for enhancing alternative sources of water (re-use, desalinization, demand management and water use efficiency gains through NBI prepared and facilitated investment projects No Volume of water: Type: tbd		<ul style="list-style-type: none"> By 2022, member states agree on minimum standard for irrigation efficiencies of new projects; By 2022, NBI prepared and facilitated investment projects target at least 25 percent increase in water use efficiency and productivity of water in agriculture covering at least 30 percent of new irrigation development in the Nile Basin; Agricultural productivity and

Strategic Direction	Key High Level Result Indicator	Metric	Baseline (2016)	Target
		Stage: S1, S2, S3, S4		improved water use efficiency improved. •
1.3: Enhance coordinated management of water storage dams.	I-1.3: Joint/coordinated dam operation procedures developed and endorsed by relevant countries	<ul style="list-style-type: none"> • Number of dams for which commonly agreed dam safety monitoring standards have been implemented • Number of expert with basic training in Dam operations • Number of river reaches with cascade of dams for which coordinated operation rules developed • Number of river reaches with dam cascades for which coordinated operation is implemented (at least dam operation information exchange) • Number of trained experts on water allocation and economic modelling • Number of countries using Dam operations policies/guidelines/manual 	<ul style="list-style-type: none"> • Dam safety GUIDELINE in place • Roadmap for coordinated dam operation in the Eastern Nile in place; • No coordination of dam operation • 77 experts received water allocation and economic modeling training in the NEL region • 36 Experts trained in Dam Safety related issues in the NEL region; • Dam safety Training Manual in place developed in the NEL context 	<ul style="list-style-type: none"> • By 2022, member state endorsed coordinated dam operation rules in place for at least 2 river reaches with cascade of dams; • By 2027, member states coordinate cascade dam operation for at least 2 river reaches; • By 2027, Dam Safety Management Institutionalized in the EN (with commonly agreed upon structures, legal and policy framework) • Countries are able to practice water allocation and economic modeling tools by 2022 • More water allocation and economic modeling training conducted by 2022 • NEL countries fully using the existing Dam Safety Training Manual by 2022
1.4: Enhance conjunctive use of ground & surface water	I-1.41: Shared knowledgebase for shared aquifers;	<ul style="list-style-type: none"> • Number, area (km²) and proportion of transboundary aquifers with shared knowledgebase in use by member countries 	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • By 2022, at least 50 percent of transboundary aquifers in the Nile Basin have shared knowledgebase; • By 2027, all transboundary aquifers have shared knowledgebase

Strategic Direction	Key High Level Result Indicator	Metric	Baseline (2016)	Target
	<p>I-1.42: Operational arrangements in place for cooperative management and sustainable utilization of shared groundwater water aquifers;</p> <p><i>Operational arrangement includes: regular meeting of stakeholders from countries sharing aquifers; regular exchange of information; common strategies;</i></p>	Number, area (km ²) and proportion of transboundary aquifers in the Nile Basin with operational arrangement for cooperative management and sustainable utilization	None	<p>By 2022, at least 2 transboundary aquifers have operational arrangements for cooperative management and sustainable use</p> <ul style="list-style-type: none"> •
1.5: Strengthen joint monitoring of the Nile Basin Water resources for sustainable WRMD	<p>I-1.51: Cooperatively operated regional basin monitoring system in place regularly collecting and relaying data on water quantity and water quality;</p> <p><i>Cooperative management includes: common standards and QC/QA procedures and data shared among countries;</i></p>	Number of well-functioning and cooperatively operated monitoring stations in the Nile Basin;	No cooperatively operated monitoring stations	<ul style="list-style-type: none"> • By 2022, at least 50 cooperatively operated monitoring stations are well functioning whose data are shared regularly among the riparian countries; • By 2027, at least 75 basin monitoring stations are cooperatively operated by member states and data are shared; • By 2022, member states agree on system of monitoring networks for monitoring effluent discharges into transboundary water bodies;
	<p>I-1.52: Basin monitoring information shared among riparian countries through their joint institution.</p> <p><i>Basin monitoring information include: climatic and hydrological bulletins; water use estimates; state of basin report</i></p>	Number of distinct information products that are shared regularly by type: bulletin, report by frequency; monthly, annual, > annual	<p>No regular sharing of basin monitoring information;</p> <p>First State of Basin Report and Water resources Atlas has been agreed</p>	<ul style="list-style-type: none"> • By 2022, Nile Basin countries regularly share through their joint institution information on climatic and hydrological outlook of the basin and basin water balance; • By 2022, Nile Basin countries share real-time hydrological data for disaster preparedness and water resources management;

Strategic Direction	Key High Level Result Indicator	Metric	Baseline (2016)	Target
				<ul style="list-style-type: none"> By 2022, the Nile Basin countries have established the SOB as a five year monitoring reporting mechanism to assess state of basin and guide required action at the end of each program planning period.
1.6: Strengthen joint basin and sub-basin WR management plan	I-1.61: A Nile Basin water resources management action plan jointly formulated by member states and informing national water resources management planning process;	<ul style="list-style-type: none"> Member country endorsed water resources management action plan 	<ul style="list-style-type: none"> No basin-wide WR management action plan in place 	<ul style="list-style-type: none"> By 2022, a basin wide WR management plan is in place, endorsed by member countries and being used to inform water resources management at regional and national levels; By 2027, the basin water resources management action plan is mainstreamed into national water resources management processes;
1.7: Strengthen basin-wide investment program preparation and management	I-1.71: Member countries endorsed transformational investment program with basin-wide mutual benefits to member states;	<ul style="list-style-type: none"> Member country endorsed basin wide investment program for implementation of the key strategic recommendations of the WRM plan with basin-wide mutual benefits to member states is in place (with substantial transformational investments in all areas of water savings and efficiency gains, water supply enhancement, water quality improvement, maintenance of water source areas, increases in water storage, irrigated food production, installed hydropower capacity, improved navigational routes and power trade) 	<ul style="list-style-type: none"> Sub-basin level multi-sector investment projects in place (through the NBI-SAPs), investment plans of other REC entities such as LVBC, IGAD, EAPP, etc. 	<ul style="list-style-type: none"> By 2020, member states agreed basin-wide investment action plan adopting a basin perspective and taking the linkages between water-energy and food security into account is in place guiding preparation of the basin-wide investment program; By 2022, member states (at HoS level) endorse and launched investment program By 2027, member states have mobilized resources and begun implementation of basin-wide investment program;

Strategic Direction	Key High Level Result Indicator	Metric	Baseline (2016)	Target
1.8: Maintain and improve water quality	I-1.81: Volume of municipal and industrial effluent discharges and irrigation water with measures for quality improvement through NBI prepared and facilitated projects;	Number: Volume: (m ³) Type of intervention: effluent and irrigation discharges targeted by NBI prepared and facilitated investment projects;	None	<ul style="list-style-type: none"> By 2026, NBI has prepared and facilitated implementation of investment projects targeting 20 percent reduction of effluent discharges into rivers, lakes and aquifers of the Nile Basin from industries;
	I-1.82: Volume of sediment reduction in major rivers originating in highly degraded catchments;	<ul style="list-style-type: none"> Percent reduction in average annual sediment yield (t/y) 		<ul style="list-style-type: none"> By 2027, 30 percent reduction in average annual sediment yield from major rivers ;
1.9: Develop enabling policy frameworks for joint planning, management and development of shared water resources at national & regional level	I-1.91: Jointly agreed basin/sub-basin-wide policies and guidelines for water and related natural resources management;	<ul style="list-style-type: none"> Number of jointly agreed policies and guidance documents for for sustainable management of water and related resources; 	<ul style="list-style-type: none"> The Nile Basin Sustainability Framework (NBSF) approved by Nile-COM and guiding policy formulation; Transboundary Environmental and Social Policy in place Wetlands management, environmental flow and climate change strategies in place Interim Information sharing and project information disclosure policies in place 	<ul style="list-style-type: none"> By 2020, member countries adopt a common water resources sustainability criteria ; By 2022, Member countries adopt common water quality standard for major cross-border rivers and lakes in the Nile Basin; By 2022, member countries agreed standards on environmental flow standards adopted at national and regional level for at least major cross-border tributaries of the Nile Basin; By 2025, all member countries mainstream agreed transboundary policies in national policies; By 2025, member countries adopt common policy on water use efficiency in agriculture, municipal and industrial water uses;
1.10: Strengthen shared knowledge base and analytic	I-1.101: Regional Nile Basin knowledgebase serving as source of data and information for all	<ul style="list-style-type: none"> Percentage of stakeholder sample (to be defined, annual survey) from Nile Basin riparian 	<ul style="list-style-type: none"> NBI center specific knowledge portals in place and operational 	<ul style="list-style-type: none"> By 2022, at least 50 percent of the users of the regional knowledgebase state that the

Strategic Direction	Key High Level Result Indicator	Metric	Baseline (2016)	Target
tools	member countries and other Nile Basin stakeholders	states that state that their transboundary water resources management relevant data and information needs are covered by the regional knowledgebase;	<ul style="list-style-type: none"> No integrated/unified knowledge portal serving needs of the member countries; 	Nile Basin regional knowledgebase meet their data and information needs of Nile Basin countries for transboundary water resources management; <i>by 2027 – at least 75 percent;</i>
	I-1.102: Increased adoption/use of jointly developed analytic tools by member countries;	<ul style="list-style-type: none"> Number of persons trained at national level for effective use of analytic tools (by proficiency level); Number of national water resources studies using NBI analytic tools; 	<ul style="list-style-type: none"> Analytic tools and toolkits developed by NBI: NB DSS; ENTRO toolkits, NELSAP Water Resources planning model; Limited use of NBI analytic tools at national level; 	<ul style="list-style-type: none"> By 2022, NBI has built capacity in all NBI member countries for effective use of jointly developed analytic tools; By 2022, member countries use NBI developed analytic tools for at least 50 percent of national water resources studies;
GOAL 2: Enhance hydropower development in the basin and increase interconnectivity of electric grids and trade				
2.1: Increase hydropower production	I-2.1: Hydropower capacity	Installed capacity: MW of projects at various stages of preparation: Stage; S1, S2, S3, S4	S2-a. = 3,541 MW [preparation- prefeasibility level ;	<ul style="list-style-type: none"> By 2027, S2-b. = 4000 [preparation – feasibility level] : 80MW added in the NEL/EN power interconnection line after the Regional Rusumo Falls Hydroelectric Dam is completed by 2022
2.2: Increase interconnection of power grids & trade	I-2.21: Cross border power transmission interconnection	<ul style="list-style-type: none"> Length and capacity of interconnection lines in various stages of project preparation (Length: km; Capacity: kV) Power traded by interconnected NEL/EN countries (within the framework of SSPP and EAPP) 	<ul style="list-style-type: none"> S2b = Ethiopia-Sudan-Egypt Power Interconnection Feasibility Study (AC= 500KV, 544km; DC= 600KV, 1665km) DRC-Rwanda power interconnected ready; Feasibility study for Tanzania – Zambia completed 	<ul style="list-style-type: none"> S2-b updated feasibility level: Ethiopia-Sudan-Egypt Power Interconnection (AC= 500KV, 544km; DC= 600KV, 1665km) NEL Electric Grids of interconnection (Burundi, DRC, Kenya, Rwanda and Uganda) completed by 2022 The Zambia-Tanzania- Kenya interconnection lines completed by 2027 The Uganda (Olwiyo) – South Sudan (Juba) power interconnection feasibility study completed by 2022 and

Strategic Direction	Key High Level Result Indicator	Metric	Baseline (2016)	Target
				infrastructure developed by 2027 <ul style="list-style-type: none"> The DRC (Buni) – Uganda power interconnection completed by 2022
GOAL 3: Enhance efficient agricultural water use and promote a basin approach to address the linkages between water and food security				
3.1: Support development and modernization of irrigated agriculture through agreed projects	I-3.11: Irrigation area a) newly established, b) rehabilitated I-3.12	Area (Ha) if irrigation projects prepared to various stages: Stage: S1, S2, S3, S4, Type of intervention: rehabilitated, new)	S1: Identification level: = 1.4 Mill. ha (Egypt, Ethiopia, Sudan) S2b (feasibility) level: 53, 000 ha <ul style="list-style-type: none"> Kocholia (Kenya), Akanyaru (Shared between Burundi and Rwanda), and Angololo (shared between Kenya and Uganda) irrigation potential identified Sio-Sango (Kenya) and Mvumba (Rwanda) irrigation Projects feasibility study complete 	By 2027, <ul style="list-style-type: none"> S2-b: 400,000 ha S1 (for rehabilitation): 400, 000 ha S2-b (rehabilitation): 100,000 ha S1 (irrigation efficiency improvement) = 400,000 ha S2-b: (Irrigation efficiency improvement) = 200,000ha Kocholia, Akanyaru, Angololo feasibility studies completed by 2027 Feasibility studies for Ngono & Mara Valley; Kabuyanda completed by 2022 and irrigation infrastructure completed by 2027 Sio Sango and Mvumba irrigation infrastructure commenced by 2022 and completed by 2027 Ruvyironza irrigation potential has its feasibility study completed by 2022
3.2: Restore degraded watersheds and improve rain-fed agriculture	I-3.21: Land in watersheds under improved soil and land-use management practices	Total watershed area covered by NBI prepared and facilitated projects for rehabilitation of degraded watersheds; by Area (ha) Type of intervention: Stage: S1, S2, S3, S4,	<ul style="list-style-type: none"> S1= 13 Eastern Nile Watershed hotspot areas in Sudan, Egypt, Ethiopia and South Sudan identified for rehabilitation S2 = Of these four (4) hotspot areas [915, 213ha 	By 2027, <ul style="list-style-type: none"> All 13 CRA-identified hotspot projects will be brought to feasibility level S2 5, 000, 000 ha degraded watershed area will be influenced i.e. brought under

Strategic Direction	Key High Level Result Indicator	Metric	Baseline (2016)	Target
			investment/implementation ready (prepared) covering <ul style="list-style-type: none"> 1,800,000 ha degraded WS areas influenced as a result of the above four projects and ENTRO training of EN WSM national Staff 	integrated watershed management (directly by the 13 projects and ENTRO training of national staff)
3.3: Develop a basin-approach to address water-food security nexus	I-3.31: Common policy for aligning food and water security in the basin through coordinated management of agricultural water demand, enhanced trade and investments	<ul style="list-style-type: none"> Common policy for aligning food and water security in the basin through coordinated management of agricultural water demand, enhanced trade and investments in place; 	<ul style="list-style-type: none"> Baseline studies on irrigated agriculture in the Nile Basin Virtual water trade studies by the Regional Agricultural Trade and Productivity project Strategic water resources analysis results indicating projected growth in agricultural water demand and likely water shortfall on approximately 40 percent of average water available; 	<ul style="list-style-type: none"> By 2021, Nile Basin states endorse NBI facilitated common policy for enhancing food security through coordinated management of agricultural water demand By 2021, Nile Basin riparian states adopt NBI prepared basin-wide infrastructure and management options for meeting planned targets for agricultural production from irrigated areas with at least 20% water saving projected for 2050 ; By 2022, Nile Basin riparian states endorse basin-wide investment program integrating adopted infrastructure and management options for improved food security;
3.4: Improve fisheries and aquaculture production in lakes & rivers	I-3.41: Area of waterbodies under fishery improvement measures	<ul style="list-style-type: none"> Tools: fisheries policies, guidelines, fisheries vessels, fisheries value adding infrastructures <p>Area: Type of intervention: tbd Stage: S1,S2, S3; S4</p>	LEAF II Project for improvement of fisheries on-going	<ul style="list-style-type: none"> LEAF Project improvement increased fisheries productivity by 2022 Fisheries policies and best practices operational by 2022
3.5: Enhance navigability to enhance regional	I-3.42: Length of navigable lake/river waters	Length: Km, Target navigation class: Stage: S1, S2, S3, S4	tbd	<ul style="list-style-type: none"> Navigable route on the Nile agreed upon and under implementation

Strategic Direction	Key High Level Result Indicator	Metric	Baseline (2016)	Target
trade, especially also in food commodities				
GOAL 4: Protect and restore water related ecosystems across the basin				
4.1: Enhance sustainable management of wetlands with transboundary significance	I-4.11: Transboundary and wetlands of transboundary significance with improved management;	<ul style="list-style-type: none"> transboundary wetlands covered by NBI prepared and facilitated projects;; Number: Area: Type of intervention: (1) cross-border sustainable management plans in place (II) cross-border operational arrangements in place (III) implementation of management plan measures ; 	<ul style="list-style-type: none"> Nile Basin Wetlands Strategy in place; 	<ul style="list-style-type: none"> By 2027, all transboundary wetlands have sustainable management plans adopted by member states sharing the wetlands; By 2027, NBI prepared investment projects for rehabilitation of transboundary wetlands implemented by member countries for 3 transboundary wetlands;
4.2: Maintain lake and river related ecosystems	<ul style="list-style-type: none"> I-4.21: Tributaries with an agreed environmental flow requirement 	<ul style="list-style-type: none"> Number and length of major tributaries of the Nile for which minimums requirement for environmental flow are agreed upon by member states; 	<ul style="list-style-type: none"> Nile Basin Environmental Flow Management Strategy in place; 	<ul style="list-style-type: none"> By 2027, at least 50 percent of major tributaries of the Nile are covered by the commonly adopted environmental flow standards for the Nile Basin;
4.3: Enhance protection and sustainable management of critical water source areas	I-4.31: Critical water source areas and catchments (water towers, catchment forests) under sustainable management	<p>Critical water source catchments under protection and sustainable management covered by NBI prepared and facilitated projects;</p> <ul style="list-style-type: none"> Number: Area: ha Stage: S1, S2, S3, S4 	<i>Baseline to be added</i>	<ul style="list-style-type: none"> By 2027, NBI has prepared investment projects to protect and sustainably manage Xx ha of critical water sources areas;
Goal 5: Improve basin resilience to Climate Change impacts				
5.1: Strengthen knowledgebase to enhance understanding of climate risks & impacts	I-5.11: Shared knowledgebase and data repository on climate change projections and impacts on the basins water resources;	<ul style="list-style-type: none"> Number of national professionals dealing with climate change issues using the regional climate change regional knowledgebase in their work; 	<ul style="list-style-type: none"> No regional knowledgebase 	<ul style="list-style-type: none"> By 2027, at least 50 percent;
5.2: Support climate resilient planning & implementation	I-5.21: Countries with basin considerations in climate change integrated in their national adaptation plans.	<ul style="list-style-type: none"> Number of countries 	<i>Baseline to be added</i>	<ul style="list-style-type: none"> By 2025, Nile Basin riparian states adopt regional/transboundary considerations on climate

Strategic Direction	Key High Level Result Indicator	Metric	Baseline (2016)	Target
				<p>change into national adaptation plans and implemented in all member states.</p> <ul style="list-style-type: none"> By 2022, resilience to climate change mainstreamed into the basin-wide investment program;
5.3: Improve and promote regional policy and planning frameworks for effective climate change adaptation	I-5.31: Guidance documents on climate change adaptation in water resources and infrastructure planning	<ul style="list-style-type: none"> No. of guidance doc. 	<ul style="list-style-type: none"> Climate change strategy (1) 	<ul style="list-style-type: none"> By 2022, agreed guidance on climate proofing hydraulic infrastructure and water resources plans in the basin
5.4: Improve preparedness of basin countries to flood and drought risks	I-5.41: Operational river flow forecasting and flood early warning system in use;	<ul style="list-style-type: none"> Flood prone areas benefiting from NBI intervention 	<ul style="list-style-type: none"> Flood Forecasting and Early Warning System in use in 4 flood prone areas (Lake Tana-Ethiopia; Blue Nile Sudan; Gambella –Ethiopia; Sobat-South Sudan) 	<ul style="list-style-type: none"> By 2027, all flood-prone areas in the Eastern Nile are covered by ENTRO’s flood early warning system and regularly receiving flood early warnings;
	I-5.42: No. of people benefiting from flood risk preparedness measures;	<ul style="list-style-type: none"> Population (number) exposed to flood risks potentially benefiting from flood early warning system 	<ul style="list-style-type: none"> 2 million persons 	<ul style="list-style-type: none"> 5 million persons
5.5: Increase capacity to access climate finance for basin management	I-5.51: Transboundary investment projects financed from climate adaptation funds	No., Value: USD Stage: S1, S2, S3, S4	None	<ul style="list-style-type: none"> By 2022, at least 3 transboundary investment projects; 7 by 2027;
GOAL 6: Strengthen trans boundary water governance in the Nile Basin				
6.1: Enhance effective governance arrangements for cooperation and coordination of transboundary water resources at cross-border, sub-basin and basin-wide level.	I-6.11: Number of formal meetings of countries in the context of the governance arrangements)	<ul style="list-style-type: none"> No. of meetings by types (COM, TAC, Expert Group, Joint Project Steering Committee) 	<ul style="list-style-type: none"> Regular meetings of Nile COM, Nile Tac. Ad-hoc formats for engaging with national experts. 	<ul style="list-style-type: none"> By 2022, the cooperation process among member states on management and development of Nile Water resources is broadened by establishing additional formats such as Head of State Summit, Regional Expert Working Groups within the NBI governance setup.

Strategic Direction	Key High Level Result Indicator	Metric	Baseline (2016)	Target
6.2: Establish a permanent and legal institutional framework for cooperation on the Nile	I-6.21: A permanent legal and institutional framework is in place	A permanent legal and institutional framework agreed by member states	CFA is signed by 6 countries and ratified by 3. Egypt not fully participating in NBI, no full consensus on CFA.	By 2022, a permanent institutional set up in place in which all riparian countries are active members.
6.3: Strengthen the NBI Centers to effectively and sustainably deliver on their mandate	I-6.31: Country contributions suffice to cover the core costs of operating the institution I-6.32: Funding mobilized for implementation of NBI Program	Member states regularly adjust and cover the growing core costs of NBI institutions; Center: Target: USD Actual contribution: Volume: USD	<ul style="list-style-type: none"> Country contributions (targeted at 1,8 Mio USD in 2017) not sufficient to cover core costs, contributions not paid timely. 	<ul style="list-style-type: none"> By 2020, core costs of the NBI institutions are covered by member country cash contributions; By 2022 and 2027, NBI mobilizes sufficient funding to implement its respective five year programs.
6.4: Enhance capacities of national actors for effective transboundary cooperation	I-6.41: National actors trained in required skills for effective transboundary cooperation	<ul style="list-style-type: none"> No. of people trained 	<ul style="list-style-type: none"> Up to 2017, NBI has trained XXX (<i>to be updated</i>) persons 	<ul style="list-style-type: none"> By 2022, and additional XX persons from the member states have been trained in required skills for effective transboundary cooperation.
6.5: Strengthen TWM units & national coordination	I-6.5 Operational units at country level to handle transboundary water affairs	<ul style="list-style-type: none"> Number of countries with operational transboundary water affairs units 		<ul style="list-style-type: none"> By 2022, all member states have mainstreamed the NBI focal points into operational TWM units that effectively coordinate other related sectors.
6.6: Strengthen the coordination of regional inter-governmental mechanisms with a mandate related to basin management	I-6.61: Coordination with other regional inter-governmental mechanisms is operational	<ul style="list-style-type: none"> Annual joint action plans: No of action plans agreed Degree of implementation 	<ul style="list-style-type: none"> EAC; Power Africa1; EAPP1 	<ul style="list-style-type: none"> By 2022, NBI has developed an effective cooperation practice based on joint verifiable annual action plans with other RECs mandated by countries in the Nile Basin region.
6.7: Build consensus among the countries public and stakeholders for	I-6.71: Number of decision makers and citizens of the riparian states have been reached with key themes of	<ul style="list-style-type: none"> Estimated number of persons reached and type of media channel: Category: media, website, 		

Strategic Direction	Key High Level Result Indicator	Metric	Baseline (2016)	Target
cooperative basin development and management	<p>transboundary cooperation through the media</p> <p>I-6.71: Number of decision makers and other stakeholders from the riparian states have been reached with key themes of transboundary cooperation through the various NBI stakeholder engagement formats (consultations, workshops, dialogues, etc).</p>	<p>facebook</p> <ul style="list-style-type: none"> • Number of stakeholders participating in NBI engagement format: • Number • Category of stakeholder: tbd • Type of event: consultation, workshop, dialogue 		

Annex 2: Summary of key actions

a) Key actions for strategic directions: 1.1 to 1.5

Strategic Direction	Nile-Sec	SAPs
Goal 1: Enhance availability and sustainable utilization and management of transboundary water resources of the Nile Basin.		
1.1 Enhance water storage capacity for improved water supply reliability for multi purpose use.	Regularly refine water availability, water demand and water use and future projections for Nile Basin countries	Asses key issues and interventions for enhancing water storage capacity and water saving from reservoirs so as to enhance ability to ensure access to water for vital needs.
	Conduct specialized analysis to explore development pathways for sustainable management and development of the Nile Basin water resources	Increase available reliable yield of identified existing dams/reservoirs/aquifers in support of multipurpose use
	Develop strategic options of water resources infrastructure and management scenarios for sustainably addressing the existing and emerging water demands in the Nile Basin.	Increase available reliable yield of identified planned dams/reservoirs/aquifers in support of multipurpose use
	Conduct stakeholder consultation forums and exchange	Enhance environmental flows for identified reaches
	Maintain up to date baseline data and information on water demands, water use and plans	Assess options and develop strategies for bridging the gap between water supply and demand in the Eastern Nile
	Promote and support policy dialogue in the Nile Basin on options for sustainably addressing water demands in the Nile Basin.	Increase catchment yields for selected catchments
1.2 Improve productivity and efficient water use across water-using sectors	Carry out hydro-economic analysis to explore efficient water resources utilization across key water use sectors	Enhance Improved water use efficiency and productivity across different sectors
	Support member countries in adopting and promoting more efficient water resources utilization across water use sectors	Implement the strategy for increased water use efficiency at irrigation schemes
		Introduce and operationalize water demand management systems for selected urban centres

Strategic Direction	Nile-Sec	SAPs
		Enhance Improved water use efficiency and productivity across different sectors
1.3 Enhance coordinated management of water storage dams	Develop basin-wide coordination of water resources infrastructure integrating sub-basin level coordination strategies	Develop framework for coordinated operation of transboundary cascade reservoirs in Eastern Nile
		Set up standard dam safety management at planning, design, construction and operational stage at sub-basin level
1.4 Enhance conjunctive use of groundwater and surface water	Establish a regional knowledgebase for transboundary groundwater aquifers in the Nile Basin.	Develop EN sub-basin wide groundwater database and data exchange. Assess the current national groundwater monitoring system in the basin and formulate a standardize monitoring system at sub-basin level
	Prepare plans and implement measures to enhance groundwater sustainable use and management	Assess and prioritize potential areas for conjunctive use of surface water and groundwater in Eastern Nile
	Establish and support cross-border mechanisms for management and sustainable utilization of shared groundwater resources	Develop strategy and guidelines for conjunctive use of surface and ground water
1.5 Strengthen joint monitoring of Nile Basin for sustainable water resources development and management	Implement the Nile Basin Regional Hydromet System for joint monitoring of water quality, quantity, water use in the Nile Basin	Support countries in establishing the Regional Hydromet in the Eastern Nile
	Establish and operationalize remote sensing based monitoring of land use/land cover, lake and river ecosystems and other river basin processes	Develop standard and guideline for data acquisition and dissemination
	Strengthen capacity of NBI member states for operation and maintenance of the regional hydromet system	Develop and strengthen innovative monitoring approach and collaborate with regional and international institutions to benefit real-time water monitoring products in mitigation of flood and drought

Strategic Direction	Nile-Sec	SAPs
	Promote and support data and information exchange among NBI member states for cooperative management and development of the Nile Basin	

b) Key actions for strategic directions 1.6 to 1.10

Strategic Direction:	Nile-Sec	SAPs
1.6 Strengthen joint basin and sub basin water resources management planning	Develop agreed planning framework to support coordination water resources planning and management in the Nile Basin	Develop sub basin planning tool; a regional water investment strategy and action plan
	Prepare state of the basin reports as member-state validated monitoring tool	Soundly manage to ensure relevancy, viability and attractiveness of investment program
	Develop a basin-wide water resources action plan	Develop Eastern Nile state of sub-basin report
1.7 Strengthen basin investment programs preparation and management	Put in a place a basin-wide investment program support function at the Nile-Sec	Preparation of Eastern Nile win-win transboundary investment projects for phased implementation by countries
	Develop, promote and initiate implementation of a basin-wide investment program building on NBI's sub-basin level multi-sector investment programs.	High quality, relevant , and implementable water resources management plans in place for joint basins and sub-basins.
1.8 Maintain and improve water quality	Prepare baseline for major transboundary river and water bodies in the Nile Basin	Rehabilitate and maintain critical water sources areas
	Develop water quality management strategy and agreed water quality standard for the Nile Basin	
	Support member countries in complying with agreed water quality standards (capacity development, investment preparation)	
1.9 Enhance policy frameworks at regional and national levels for	Support NBI member countries in joint review and improving coherence among their national policies on transboundary elements/dimensions.	Formulate and enhance policies, strategies, guidelines and frameworks for cooperative development and management of the EN water resources

Strategic Direction:	Nile-Sec	SAPs
cooperative management and development of shared Nile Basin Water Resources	Operationalize NBI developed policies and strategies, and strengthen the implementation of the Nile Basin Sustainability Framework (NBSF)	Collaborate with NBI centers on NBI-wide knowledge system development to provides one-stop access to all NBI knowledge resources for broad spectrum of stakeholders
1.10 Strengthen shared knowledgebase and analytic tools	Establish and maintain an NBI-wide knowledge system that provides one-stop access to all NBI knowledge resources for broad spectrum of stakeholders.	Enhance regional knowledge base and analytical tools for planning and management of water resources
	Support NBI member countries in applying common analytic tools for water resources planning and management at national and regional levels	Develop and enhance access to knowledge portal and capacity building

c) Key actions for strategic directions 2.1 to 3.4

Strategic Direction	Nile-Sec	SAPs
Goal 2: Enhance hydropower development in the basin and increase interconnectivity of electric grids and trade		
2.1 Increase hydropower production		Prepare and update Transboundary Hydropower development projects for ready implementation
		Identify and prepare new hydropower development projects.
		Identify and prepare projects in power transmission, interconnection and trade.
2.2 Increase interconnection of hydro power grids and trade		Strengthen capacity for systems management and operation
Goal 3: Enhance efficient agricultural water use efficiency and promote a basin approach to address the linkages between water and food security		
3.1 Support development and modernization of irrigated agriculture through agreed projects		Preparation of irrigation projects and conduct studies for modernization of existing irrigation schemes
		Improve and modernize existing irrigation infrastructure.

Strategic Direction	Nile-Sec	SAPs
		Identify and prepare new irrigation areas.
3.2 Rehabilitation of watersheds and improvement of rain fed agriculture		Preparation of watershed management project for implementation by countries
		Implement integrated watershed management approaches.
		Implement land and water conservation practices for improved efficiency and increased rain-fed food productions.
		Increase livestock production through measures on sustainable use of land and water.
		Promote tourism development projects.
3.3 Promote a basin approach to address the linkages between water and food security	Develop and analyze growth in food demand and food production scenarios and generating options for regional (upstream - downstream) cooperation in land and water investments factoring food - water nexus.	Assess the contribution of water to food security in the Eastern Nile Basin and develop a water management strategy
	Carry out virtual water trade analysis, identify and promote cross-border cooperation on virtual water trade.	Assess the comparative advantage of Eastern Nile Countries with respect to water, food and energy security and develop strategy to capture the opportunity therein
	Organize food - water nexus dialogues to promote the basin-wide options/approaches for addressing growing food demand.	Develop and rehabilitate existing waterways and waterways sustainably.
	Support NBI member states in use of modern analytic tools for agricultural development scenario analysis and planning using the food -water - energy nexus approach;	Develop integrated fisheries management plans.
		Increase fish farming production
3.4 Improve fisheries and aquaculture production		Promote the integration of fisheries into water resources planning and management
		Strengthen capacities for fisheries and aquaculture management and development.

d) Key actions for strategic directions 4.1 to 5.5

Strategic Direction	Nile-Sec	SAPs
Goal 4: Protection and restoration of water related ecosystems across the basin		
4.1 Ensure sustainable management of wetlands of transboundary significance	Develop and maintain inventory and regional knowledgebase of wetlands for monitoring state of transboundary wetlands and wetlands of transboundary significance.	Situational assessment of Eastern Nile Wetlands for sustainable management
		Transboundary policy formulation ; Monitoring and capacity building
	Establish economic value of ecosystem services of transboundary wetlands and wetlands of transboundary significance;	Develop framework for integrating wetlands into basin planning, management and development projects
	Develop and support framework plan for integrating sustainable management of wetlands in river basin planning processes.	Develop knowledgebase and monitoring system for wetlands of transboundary significance
	Support NBI member states in operationalizing NBI's wetland strategy and policy provisions in the sustainable management of transboundary wetlands and wetlands of transboundary significance ;	
4.2 Maintain lake and riverine ecosystems	Operationalize the Nile Basin Environmental Flow Strategy.	Environmental flow assessment for well-being of ecosystem services
		Monitor critical aquatic systems and services ; Promotion of environmental flow standards ; Regional knowledge base
	Support member NBI countries in enhancing their respective national policies to maintain water related ecosystems.	Develop strategy for incorporating environmental flow into the planning and design of water infrastructures
4.3 Promote protection and sustainable management of critical water source catchments	Monitor changes in land use/land cover of critical water source catchments (water towers) and their impacts on water resources;	Update and prioritize hotspot watershed degraded areas and develop strategy for joint actions to combat their impact
		Continuous joint monitoring ; Promote standards for control and improving quality
		Enhance and implement watershed and sediment monitoring system

Strategic Direction	Nile-Sec	SAPs
		Develop framework for management of transboundary parks to rehabilitate important water ecosystem
Goal 5: Improve resilience to climate change impacts		
5.1 Establish and maintain an NBI climate information service for climate resilient water resources planning and management	Establish and continuously maintain climate information services to support NBI member countries in climate change adaptation	Develop knowledgebase on climate change and its implication in the Eastern Nile
		Enhance climate change information services ; Improve regional climate change datasets generation and availability
	Strengthen capacity of NBI member countries in effective use of NBI generated climate change information in their national climate change adaptation efforts.	Establish and maintain climate information services and develop climate risk assessment systems for integrating climate change into the design and operation water infrastructures in the Eastern Nile
5.2 Support climate resilient planning and implementation addressing climate risks and uncertainty in the basin	Support NBI member countries in climate risk assessment for enhancing water infrastructure resilience to climate change	Conduct comprehensive assessment of vulnerability of EN water resources to climate change and variability
		Strengthen climate proofing of investments ; Improve guidance and capacity
5.3 Improve and promote regional policy and planning frameworks for effective climate change adaptation at regional and national levels	Support development and operationalization of Nile Basin Climate Change Adaptation Planning Framework for enhancing adaptation planning at regional level.	Assess climate change adaptation capabilities in the Eastern Nile and develop mechanism for their enhancement
		Identification and preparation of bankable projects in power transmission, interconnection and trade ; Update NBI Strategy for climate change formulation
5.4 Improve preparedness of basin countries to flood and drought risks	Develop and operationalize short-term to seasonal river flow forecasting system for the Nile Basin	Enhance flood forecast and early warning system and mitigation mechanisms at national and regional level in the Eastern Nile
	Regularly issue river forecasts to support adaptive water resources management	Improve flood and drought information services ; Strengthen member country capacities for planning and management ; Development and deployment of operational river flow forecasting system

Strategic Direction	Nile-Sec	SAPs
	Support NBI member countries in the effective use of river flow forecast for improved adaptive water resources management.	Support Eastern Nile countries for flood and drought management with seasonal forecast and optimal operation of infrastructures
		Setup Eastern Nile climate prediction and forecasting system
5.5 Strengthen basin wide climate finance access and capacity for development of feasible projects in the Nile Basin.	Improve capacity for climate finance readiness and access to climate finance for river basin cooperation projects.	Enhance capacity for readiness and access to climate finance for water resources development projects
		Accelerated access to climate financing
		Develop regional capacity to adapt to climate change and make use of the development opportunities associated with global climate change mitigation

e) Key actions for strategic directions 6.1 to 6.7

Strategic Direction	Nile-Sec	ENTRO
Goal 6: Strengthen transboundary water governance in the Nile Basin		
6.1 Enhance effective governance arrangements for cooperation and coordination of transboundary water resources at cross-border, sub-basin and basin-wide level.	Facilitate effective governance of NBI	Enhance Governance capacity to strengthen regional cooperation
		Enhance effectiveness of cooperation mechanisms ; Country cross-border arrangements at sub-basin level
		Develop strategy for strengthening and sustaining cooperation in the Eastern Nile
6.2 Establish a permanent and legal institutional framework for cooperation on the Nile	facilitate transition from of NBI to a permanent institution	Advocacy and support for permanent legal and institutional framework in the Nile
		Promote for permanent legal framework for NBI

Strategic Direction	Nile-Sec	ENTRO
6.3 Strengthen the NBI Centers to effectively and sustainably deliver on their mandate	Maintain secretariat function to governance	Strengthen coordinated planning and joint actions with other NBI centers
	Mobilize resources for program and core funding;	Ensure NELSAP-CU become one of leading experts in hydrological and water resources modeling in the region
	Strengthen program management and monitoring	Develop water resources baseline taking into account existing and planned demand and climate change projections
		Adopt water conservation and water demand management practices widely across all water user sectors
		Ensure planning and implementation of multipurpose supporting food-energy-water nexus becomes default development options
		Livelihood-based watershed and wetland management projects for all hotspot areas and basin wide plan for scaling-up implemented
		Develop and maintain close effective working relationships between NELSAP-CU and key officials in member states
		Inter-sectoral collaboration in member countries fully operational leading to inclusion of national and sectorally aligned water resources development interventions
		Mobilize resources for feasible NELSAP projects to move rapidly through to implementation
		develop and sustain High level of cooperation and complementarity between activities of NELSAP-CU and LVBC
		Develop and sustain High level of cooperation and complementarity between activities of NELSAP-CU and EAPP
		Promote NELSAP-CU as a leading participant in RBO within AMCOW
		Progress towards greater self-sufficiency in NELSAP-CU core budget by 2022
	Develop and maintain good working relationships with key development partners	

Strategic Direction	Nile-Sec	ENTRO
		Sources of funding for project preparation and implementation diversified
		Ensure sustainable project financing structures which maximise the prospect of obtaining suitable funding are in place s
		Promote for basin stakeholders engagement
		Communications in place to fully support all objectives of the Strategic Plan
		External and internal relations strengthened though corporate communication
		NELSAP-CU is the knowledge hub for water resources management and development in the region
		Increased communications capacity and resources for effectiveness
		Strengthen regional capacity of planning and implementation in the Eastern Nile
6.4. Enhance capacities of national actors for effective transboundary cooperation	Facilitate capacity development	Strengthen national capacities in water resource planning, implementation and management in a transboundary context
		Enhancement of capacity of national actors
6.5. Strengthen the national transboundary water units and inter-sectoral coordination	Training including experiential learning tours; blended learning for relevant actors in in requisite skills for transboundary WR Management;	Strengthen national transboundary units in the development and use of analytic tools, inter-sectoral coordination, implementation of policy and strategy and awareness creation for broad stakeholders
	Support transboundary units to improve coordination; facilitate inter-sectoral meetings	Strengthen national governance mechanisms for inter-sectoral cooperation
6.6. Strengthen the coordination of regional inter-governmental mechanisms with a mandate related to basin management	Develop coordination tools; develop mechanisms for monitoring implementation of agreed actions; take part in collaborative activities.	Establish strong linkage and working relation with regional actors involved in basin management
		Enhance coordination and complementarity of regional

Strategic Direction	Nile-Sec	ENTRO
		organizations
6.7 Build consensus among the countries public and stakeholders for cooperative basin development and management	Develop the NBI communication and stakeholder strategy and appropriate communication products to disseminate NBI results;	Develop communication and stakeholder consultation strategies , prepare and disseminate appropriate communication products
	Strengthen media engagement; undertake events press work	Raise awareness of need for transboundary water management ; Strengthen national enabling environments for transboundary cooperation (policies, legal frameworks etc
	Improve reach out to NBI stakeholders, make NBI knowledge products available to NBI stakeholders in key languages in the Nile Basin	
	Convene science policy platform; organize awareness events;	Enhance media engagement in Eastern Nile water governance
	Convene regional senior decision makers/officials meetings;	
	Strengthen media engagement; undertake events press work;	Improve stakeholder awareness on the transboundary cooperation process
	Organize events for young water professionals	Organize awareness creation events
		Develop strategy for building consensus among Eastern Nile countries
		Undertake continuous hydro diplomacy engagement in the Eastern Nile

Annex 3: Estimated budget cost for 2017 - 2027

		Cost US \$ Mil'		
		Nile-SEC	ENTRO	NELSAP
Total 10 Years Cost by Centre		65.62	111.20	234.75
NBI Goal 1 – Water Security		34.42	44.30	51.55
SD 1.1	Enhance water storage capacity for improved water supply reliability for multipurpose use	2.11	4.20	28.60
SD 1.2	Improve productivity, reuse and demand management across water using sectors	0.00	2.50	17.75
SD 1.3	Enhance coordinated management of water storage dams	0.00	6.00	0.00
SD 1.4	Enhance conjunctive use of groundwater and surface water	7.15	7.50	0.00
SD 1.5	Strengthen joint monitoring of Nile Basin for sustainable water resources development and management.	15.59	2.90	0.00
SD 1.6	Strengthen joint basin and sub-basin water resources management planning.	0.87	10.00	1.00
SD 1.7	Strengthen basin investment programs preparation and management.	2.12	3.20	0.00
SD 1.8	Maintain and improve water quality	3.53	0.00	2.20
SD 1.9	Enhanced policy frameworks for cooperative management and development of shared Nile Basin water resources.	1.48	4.00	0.00
SD 1.10	Strengthen shared knowledgebase and analytic tools.	1.57	4.00	0.00
NBI Goal 2 – Energy Security		0.00	3.50	79.00
SD 2.1	Increase hydropower production	0.00	3.50	27.00
SD 2.2	Increase interconnection of hydro-power grids and trade	0.00	0.00	52.00
NBI Goal 3 – Food Security		2.83	12.40	52.20
SD 3.1	Support development and modernization of irrigated agriculture	0.00	4.00	37.70
SD 3.2	Rehabilitation of watersheds and improvement of rain-fed agriculture	0.00	3.00	6.50
SD 3.3	Promote a basin approach to address the linkages between water and food security	2.83	4.40	0.00
SD 3.4	Improve fisheries and aquaculture production	0.00	1.00	8.00
SD 3.5	Enhance navigability to boost regional agricultural trade and transport corridors	0.00	0.00	0.00
NBI Goal 4 – Environmental Sustainability		5.88	14.50	11.00
SD 4.1	Promote sustainable management of wetlands of transboundary significance	3.84	5.50	0.00
SD 4.2	Maintain lake and riverine ecosystems	2.04	2.50	11.00
SD 4.3	Promote protection and sustainable management of critical water source catchments	0.00	6.50	0.00
NBI Goal 5 – Climate Change Adaptation		2.49	16.60	2.00
SD 5.1	Establish and maintain an NBI climate information service for climate resilient water resources planning and management	0.75	2.50	0.00
SD 5.2	Support climate resilient planning and implementation addressing climate risks and uncertainty in the basin.	0.40	1.00	0.00
SD 5.3	Improve and promote regional policy and planning frameworks for effective climate change adaptation at regional and national levels	0.24	1.50	0.00
SD 5.4	Improve preparedness of basin countries to flood and drought risks	0.59	7.60	1.00
SD 5.5	Strengthen basin-wide climate finance access and the capacity for development of feasible projects in the Nile Basin.	0.51	4.00	1.00
NBI Goal 6 – Water Governance		20.00	19.90	39.00
SD 6.1	Enhance effective governance arrangements for cooperation and coordination of transboundary water resources at, sub-basin and basin-wide level.	0.00	2.00	0.00
SD 6.2	Establish a permanent and legal institutional framework for cooperation on the Nile	0.00	0.50	0.00
SD 6.3	Strengthen the NBI Centers to effectively and sustainably deliver on their mandate	20.00	4.00	39.00
SD 6.4	Enhance capacities of national actors for effective transboundary cooperation	0.00	4.00	0.00
SD 6.5	Strengthen the national transboundary water units and inter-sectoral coordination	0.00	2.00	0.00
SD 6.6	Strengthen the coordination of regional inter-governmental mechanisms with a mandate related to basin management	0.00	0.20	0.00
SD 6.7	Build consensus among the countries public and stakeholders for cooperative basin development and management	0.00	7.20	0.00

Annex 4: The SDGs to which the NBI 10 Year Strategy makes a contribution

SDG Goal and Targets	SDG Indicators to which the NBI 10 Year Strategy will make a direct contribution	NBIs contribution to the indicator
Goal 1. End poverty in all its forms everywhere		
1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day	1.1.1 Proportion of population below the international poverty line, by sex, age, employment status and geographical location (urban/rural)	
1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	1.2.1 Proportion of population living below the national poverty line, by sex and age 1.2.2 Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	
1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance	1.4.1 Proportion of population living in households with access to basic services	
1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters	1.5.1 Number of deaths, missing persons and persons affected by disaster per 100,000 people 1.5.2 Direct disaster economic loss in relation to global gross domestic product (GDP) 1.5.3 Number of countries with national and local disaster risk reduction strategies	
Goal 2. End hunger, achieve food security and improved nutrition, and promote sustainable agriculture		
2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round	2.1.1 Proportion of population below minimum level of dietary energy consumption 2.1.2 Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES)	
2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons	2.2.1 Prevalence of stunting and wasting in children under 5 years of age	
2.3 By 2030, double the agricultural productivity	2.3.1 Volume of production per labour unit	

SDG Goal and Targets	SDG Indicators to which the NBI 10 Year Strategy will make a direct contribution	NBIs contribution to the indicator
and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment	by classes of farming/pastoral/forestry enterprise size 2.3.2 Average income of small-scale food producers, by sex and indigenous status	
2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality	2.4.1 Proportion of agricultural area under productive and sustainable agriculture	
Goal 5. Achieve gender equality and empower all women and girls		
5.1 End all forms of discrimination against all women and girls everywhere.	5.1.1 Whether or not legal frameworks are in place to promote, enforce and monitor equality and non-discrimination on the basis of sex	
5.5 Ensure women’s full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life	5.5.2 Proportion of women in managerial positions	
Goal 6. Ensure availability and sustainable management of water and sanitation for all		
6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all	6.1.1 Percentage of population using safely managed water services, by urban/rural	
6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations	6.2.1 Percentage of population using safely managed sanitation services, including a hand-washing facility with soap and water by urban/rural	
6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	6.3.1 Proportion of wastewater safely treated 6.3.2 Proportion of bodies of water with good ambient water quality	By 2016, NBI will have prepared and facilitated implementation of investment projects targeting 20% reduction of effluent discharges into rivers, lakes and aquifers of the basin from industries
6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure	6.4.1 Change in water-use efficiency over time	

SDG Goal and Targets	SDG Indicators to which the NBI 10 Year Strategy will make a direct contribution	NBIs contribution to the indicator
sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	6.4.2 Level of water stress: freshwater withdrawal as a proportion of available freshwater resources	
6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate	6.5.1 Degree of integrated water resources management implementation (0-100) 6.5.2 Proportion of transboundary basin area with an operational arrangement for water cooperation	By 2027, a basin wide and sub basin arrangements agreed by all member states and operational Area 3.8M sq.km.
6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	6.6.1 Change in the extent of water-related ecosystems over time	By 2027, at least 50% of major tributaries of the Nile are covered by commonly adopted environmental flow standards for the Nile Basin
Goal 7. Ensure access to affordable, reliable, sustainable, and modern energy for all		
7.1 By 2030, ensure universal access to affordable, reliable and modern energy services	7.1.1 Proportion of population with access to Electricity 7.1.2 Proportion of population with primary reliance on clean fuels and technology	Preparation of 1,665km of power interconnection (AC 500KV) and DC 600KV
7.2 By 2030, increase substantially the share of renewable energy in the global energy mix	7.2.1 Renewable energy share in the total final energy consumption	
Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all		
8.1 Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries	8.1.1 Annual growth rate of real GDP per capita	
8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value	8.5.2 Unemployment rate, by sex, age and persons with disabilities	
Goal 13. Take urgent action to combat climate change and its impacts		
13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	13.1.1 Number of countries with national and local disaster risk reduction strategies 13.1.2 Number of deaths, missing persons and persons affected by disaster per 100,000 people	By 2015, NBI member states (10) adopt regional and transboundary considerations on climate change into national adaptation plans and implemented by states
13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction	13.3.2 Number of countries that have communicated the strengthening of institutional, systemic and individual	By 2017, a shared knowledge base and data repository on climate change projections and impacts on the basin water

SDG Goal and Targets	SDG Indicators to which the NBI 10 Year Strategy will make a direct contribution	NBIs contribution to the indicator
and early warning	capacity-building to implement adaptation, mitigation and technology transfer, and development actions	resources in place
Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss		
15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	15.1.1 Forest area as a proportion of total land area 15.1.2 Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type	
15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally	15.2.1 Progress towards sustainable forest management	5,000,000ha of degraded watershed area will be brought under integrated watershed management projects
15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world	15.3.1 Proportion of land that is degraded over total land area	By 2027 all trans boundary wetlands have sustainable management adopted by member states sharing wetlands
15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development	15.4.1 Coverage by protected areas of important sites for mountain biodiversity 15.4.2 Mountain Green Cover Index	By 2027, NBI has prepared investment projects to protect and sustainably manage (tbd) ha of critical water source areas
15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts	15.9.1 Progress towards national targets established in accordance with Aichi Biodiversity Target 2 of the Strategic Plan for Biodiversity 2011-2020	
15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems	15.a.1 Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems	



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