



SANGO BAY – MINZIRO TRANSBOUNDARY WETLAND CONSERVATION INVESTMENT PLAN



FEBRUARY 2021



CONSERVATION INVESTMENT PLAN FOR THE SANGO BAY – MINZIRO TRANSBOUNDARY WETLAND BETWEEN THE REPUBLIC OF UGANDA AND THE UNITED REPUBLIC OF TANZANIA

On behalf of:



of the Federal Republic of Germany



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Preface

The Sango Bay - Minziro wetland landscape is a transboundary wetland system located west of Lake Victoria and lies at the boundary between Uganda and Tanzania. Within Uganda, the wetland landscape is concentrated in the Kyotera and Kakuuto counties in Kyotera District. It is an Important Bird Area providing habitat and breeding ground for diverse bird populations and is part of the Sango Bay - Musambwa Island - Kagera Wetland System (SAMUKA) Ramsar site established in Uganda in 2006. In Tanzania, the bulk of the area lies within Missenyi District, with smaller portions in Bukoba Rural and Bukoba Urban Districts. Here, the south-western boundary encompasses the Minziro Forest Reserve. This nature reserve is rare in the region as it represents an 'outlier' of a forest habitat type otherwise found in central and western African, and as such it holds quite a unique combination of species for Tanzania.

These rich natural resources with varied ecosystems are inhabited by communities whose livelihoods depend on its ecosystem services which are estimated to be worth about USD 236 million a year. Conservation of this ecosystem his not only of local importance, but has also been shown to contribute to UN Sustainable Development Goals (SDGs), and other national, regional and international environmental targets and commitments such as Ramsar Convention, Convention on Biological Diversity Aichi targets and United Nations Framework Convention on Climate Change. This high value provides a good indication of significant environmental, economic and development returns spread across various sectors that can be gained from investing in this transboundary wetland.

Given the foregoing, this Conservation Investment Plan (CIP) has been prepared to support conservation measures of this biologically rich landscape through delivery of the implementation framework as translated in the Transboundary Wetland Management Plan for the Sango Bay – Minziro wetland (2020 – 2030). It represents an important pillar in support of the two countries' vital interest in strengthening their transboundary cooperation for environmental sustainability while contributing to their citizens' well-being and livelihoods. The financing needs outlined in the CIP are intended to supplement existing institutional funding. As such, the CIP has been designed to harmonise, integrate and align with existing interventions in the wetland landscape, thus providing a comprehensive and coherent framework aimed at guiding strategic investments and programmes. It is targeted at development partners, private and public investors as well as government agencies with an interest in conserving the Sango Bay – Minziro wetland landscape and the ecosystem services it provides. These financial blueprints will further be synthesised into a wider Nile Equatorial Lakes Wetlands Investment Plan (NEL-WIP), a comprehensive regional wetlands Investment programme, which is a precursor to the Multisectoral Nile Equatorial Lakes Investment Plan (NEL-IP).

The plan was developed in a participatory manner and was facilitated by the Nile Basin Initiative (NBI) through its programme on '*Support to Transboundary Water Cooperation in the Nile River Basin*'. The programme is funded by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMUB) under its International Climate Initiative (IKI) and implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

Acknowledgements

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As this process was highly consultative, valuable contributions were made by key stakeholders of the Sango Bay – Minziro wetland landscape including Jackson Twinomujuni, Commissioner, International Transboundary & Water Affairs Department (Uganda), Lucy Iyango, Assistant Commissioner, Wetlands (Uganda), Vincent Barugahare, Senior Wetlands Officer (Uganda), Wycliffe Tumwebaze, Principal Water Officer (Uganda), George Wamunga, Senior Wetlands Officer (Uganda), Sylvano Afai, Ministry of Water and Environment (Uganda), Jamil Kiyingi, District Natural Resources Officer, Kyotera District (Uganda), Tumaini Mwamyalla, Ministry of Water (Tanzania), Dr Deogratius Paul Nyangu, Vice President's Office, Department of Environment (Tanzania), Bernard Mwigulu, Tanzania Forest Service (Tanzania) and Haji Kiselu, Regional Natural Resources Officer, Kagera (Tanzania).

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Table of Contents

Preface.....	iii
Acknowledgements.....	iv
Table of Contents.....	v
List of Figures.....	vi
List of Tables	vi
List of Acronyms.....	7
SUMMARY OF THE SANGO BAY – MINZIRO CONSERVATION INVESTMENT PLAN.....	8
PART 1: BACKGROUND AND RATIONALE.....	9
1.1 Sango Bay - Minziro Conservation Context	10
1.2 Threats, Challenges and Opportunities	12
1.3 The Business Case for Ecosystem Conservation and Wise Use	13
1.4 What The CIP Seeks to Fund.....	14
1.5 How The CIP Is intended to be Used	15
PART 2: INVESTMENT STRATEGY.....	16
3.1 Goals and Intended Outcomes.....	17
3.2 Guiding Principles and Crosscutting Issues.....	18
3.3 Coordination and Delivery Mechanisms.....	19
PART 3: INVESTMENT PACKAGES	20
3.1 Overview	21
3.2 Prioritisation	22
3.3 Investment Package 1	23
3.3.1 Ecosystem Restoration and Protection	23
3.4 Investment Package 2	28
3.4.1 Livelihood Interventions.....	28
3.5 Investment Package 3	35
3.5.1 Institutional support and development.....	35
REFERENCES	40

List of Figures

Figure 1: Location and administrative boundaries of the Sango Bay-Minziro Wetland landscape (NBI, 2020a)	10
Figure 2: Categories and examples of ecosystem services in the Sango Bay - Minziro wetland landscape (NBI, 2020b)	13
Figure 3: Ranking and Prioritization of the Investment projects based stakeholder perception and determination	22
Figure 4: Investment Package 1 consisting of 3 investment areas and 8 projects	23

List of Tables

Table 1: Overview of identified bankable project plans valued at USD 71,000,000 over a period of 10 years	21
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List of Acronyms

BMUB	German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
CBD	Convention on Biological Diversity
CIP	Conservation Investment Plan
GIZ	German Development Cooperation
IBA	Important Bird Area
IKI	International Climate Initiative
ITWAD	International and Transboundary Water Affairs Department
MAAIF	Ministry of Agriculture Animal Industry and Fisheries
MNRT	Ministry of Natural Resources and Tourism
MWE	Ministry of Water and Environment
NBI	Nile Basin Initiative
NEL-IP	Nile Equatorial Lakes Investment Plan
NEL-WIP	Nile Equatorial Lakes Wetlands Investment Plan
NELSAP	Nile Equatorial Lakes Subsidiary Action Program
NEMA	National Environment Management Authority
NEMC	National Environmental Management Council
NFA	National Forestry Authority
NFR	Nature Forest Reserve
NGO	Non-Governmental Organisation
RAMCEA	Ramsar Centre for Eastern Africa
SAMUKA	Sango Bay-Musambwa Island-Kagera Wetland System
SDGs	Sustainable Development Goals
TFS	Tanzania Forest Service
USD	United States Dollar
UWA	Uganda Wildlife Authority
WMD	Wetland Management Department

SUMMARY OF THE SANGO BAY – MINZIRO CONSERVATION INVESTMENT PLAN

The main purpose of the CIP is to provide justifications for funding of steps to address the identified unmet needs of the ecosystem. This entails recognition and inclusion of key interests of local communities and key resource user groups since their levels of influence are key to the conservation of this wetland, while, if not managed well, their actions can potentially also have adverse impacts on the ecosystem health. Importantly, their levels of influence too are key to the conservation of this wetland. The investments projects identified or designed for this wetland, shall not only contribute to safeguarding its biodiversity and ecosystem values but will at the same time contribute to the development of livelihood opportunities for the riparian associated communities.

It has been derived from and guided by the overall Sango Bay – Minziro Transboundary Wetland Management Plan, and is aligned to the overall objective '**to restore the wetland and ensure retention of ecosystem services for the benefit of people.**'

The development of this strategy was complemented by the previous studies and plans developed for the wetland landscape including '*Economic Valuation of Sango Bay – Minziro ecosystem, Conservation Investment Plan for Sango Bay Swamp Forest and Minziro Nature Forest Reserve*'. It also tapped from national, regional and international development processes, conventions and agreements.

The Plan document is composed of four main sections. Section One introduces an overview of the Sango Bay – Minziro Wetland landscape highlighting its conservation significance, social and economic conditions. Section Two contains the situational analysis. It gives a brief overview of the main drivers, pressures and the state of the wetland landscape. It goes on to provide an insight into some of the opportunities presented by the ecosystem services.

Section Three details the investment strategy. Comprised of 8 bankable projects, the strategy is classified into three main investment areas and plans. The total investment values of the plans are USD 71,000,000 over a period of 10 years. These will be implemented through:

- Promoting ecosystem protection and restoration;
- Strengthening of sustainable livelihoods and
- Enhancing transboundary governance mechanisms.

The operationalisation of the Plan will be guided by a number of principles including: inclusiveness, responsiveness to existing plans, strategies and relevant multilateral environmental agreements and treaties and recognition of the interlinkages between ecosystem services and uses in the wetland landscape.

Section Four of the Plan deals with its coordination and delivery mechanisms. It includes institutional collaboration, potential sources for financing the implementation of the plan. The section also provides for the need for a monitoring and evaluation system to track outputs and to measure performance, impacts, and process and financial sustainability.

PART 1: BACKGROUND AND RATIONALE

1.1 Sango Bay - Minziro Conservation Context

The Sango Bay - Minziro wetland (Figure 1) is a large, biologically rich, transboundary wetland system located west of Lake Victoria and lies between latitude 0.51 - 1.30 °S and longitude 31.38 - 31.88 °E with an area of approximately 300,000 hectares (124,400 hectares in Tanzania and 174,600 hectares in Uganda). Within Uganda, the wetland landscape is concentrated in the Kyotera and Kakuuto counties in Kyotera District and is part of the Sango Bay - Musambwa Island - Kagera Wetland System (SAMUKA) Ramsar site established in Uganda in 2006. In Tanzania, the bulk of the area lies within Missenyi District, with smaller portions in Bukoba Rural and Bukoba Urban Districts. Here, the south-western boundary encompasses the Minziro Forest Reserve (NBI, 2020a).



Figure 1: Location and administrative boundaries of the Sango Bay-Minziro Wetland landscape (NBI, 2020a)

The Ramsar site SAMUKA is a mosaic of wetland types including the biggest tract of swamp forest in Uganda, papyrus swamps, herbaceous swamps interspersed with palms and seasonally flooded grasslands, sandy, rocky and forest shores. The Minziro Nature Reserve is a ground water forest with extensive areas of grasslands, swamps and marshes and is the largest forested area in north-west Tanzania, part of the Guinea-Congo lowland forests. This wetland landscape is home to rare and endemic species. In terms of flora this includes *Pseudagrostistachys ugandensis*, a grass not found elsewhere in Uganda, and the African yellow-wood. Wild coffee is considered rare but found in several locations in Minziro. In terms of fauna, globally threatened mammal species found in the area are the African Golden Cat, Angola colobus, African elephant, cyclops leaf-nosed bat, leopard, tree pangolin, hippopotamus, the rare sitatunga, and the northern swamp musk shrew. The black and white colobus monkey and the restricted-range blue monkey can also be found in this transboundary landscape.

The total species checklist of the birds of Sango Bay-Minziro is five hundred and seventy-two (572), including fourteen (14) globally threatened species and one (1) introduced species, the Papyrus Yellow-Warbler. The system forms a key wintering site for the globally threatened Blue swallow and supports huge congregations of waterbirds such as the Grey-headed gulls, Little egrets, White-winged tern, Common squacco heron and Long-tailed cormorants (Nalwanga 2019). Great-white pelicans have been known to roost at the mouth of the River Kagera (NBI, 2020b). The wetland is also of major importance for fish populations, both in the wetland itself and as a nursery function for Lake Victoria. Fish is one of the major sources of income for Kyotera and Missenyi districts. Commercial fishing is mainly done in Lake Victoria and the fish species mostly found are Nile Perch, Nile Tilapia and the *Dagaa/Omena/Mukene*.

Hydrologically, the wetland landscape includes permanent and seasonal swamp-forests, papyrus swamps and herbaceous swamps interspersed with palms and seasonally flooded grasslands which are influenced by the Kagera River floodplain (NBI, 2020a). The wetland system stretches along several rivers, including the Kagera, Bukora, Kibale, Kisoma and others, that flow into their flood plains and the shores of Lake Victoria. It is thus an important ecological component of the floodplain ecosystem, regulating the flow of water through the Kagera River system. During the dry season, the wetland system maintains a steady discharge of water and supplements the water supply to the lake and surrounding areas. It also serves to trap sediments carried from the surrounding catchments in times of heavy rainfall and hence reduces the silt carried into Lake Victoria.

In terms of capacity for carbon sequestration, part of the wetland landscape in the Kagera basin is estimated to contain more than 50% of all peatlands in the Nile Equatorial Lakes region, with possibly containing more than 70% of its total carbon stock (1.8-4.2 billion tonnes of organic carbon) (Elsehawi et al., 2019).

Agriculture is the backbone of the Missenyi and Kyotera Districts economy and most of its 498,000 residents depend on it as their main source of livelihood (NBI, 2020a). The wetland supports subsistence and commercial agriculture, capture fisheries, grazing land and pasture, timber and non-timber products as well as traditional medicine. During the dry seasons, the wetland serves as a watering area for livestock herds from drier districts such as Lyantonde and Lwengo in Uganda. The local communities also use palm leaves, sedges and grasses from the wetland for handicrafts (Wetlands International 2019).

The sustainable management of these wetland resources is not limited to the physical management, but also incorporates the institutional framework of legislation, policies, economic tools and the institutions and stakeholders involved in wetland management, regulation and utilisation. There are a host of line agencies that support the Missenyi (Tanzania) and Kyotera (Uganda) district local governments to manage and oversee conservation activities in the wetland landscape. Key partners in Uganda include the Ministry of Water and Environment (International and Transboundary Water Affairs Department and the Wetland Management Department and the Victoria Management Zone), the National Environment Management Authority (NEMA), the National Forest Authority (NFA), the Uganda Wildlife Authority (UWA) and the Ministry of Agriculture, Animal Industry, and Fisheries (MAAIF). In Tanzania, the Ministry of Water (MoW), the Lake Victoria Basin Water Board, the Ministry of Natural Resources and Tourism (Wildlife Division) and the Tanzania Forest Service (TFS) provide management support. Together with regional bodies such as the Ramsar Centre for Eastern Africa (RAMCEA), Nile Council of Ministers, Nile Technical Advisory Committee and the Nile Basin Initiative Secretariat, the East African Community and the Lake Victoria Basin Commission, non-state actors including private sector institutions and non-government organisations also play a key role in collaborating for wise use of the wetland resources. The role of local community based organisations and resource user groups (Catchment Management Committees, Beach Management Units and fisher associations) cannot be understated.

1.2 Threats, Challenges and Opportunities

Despite its economic, social and ecological importance, the Sango Bay – Minziro wetland landscape faces numerous threats and challenges causing changes in its functioning and productivity (NBI, 2020a). The wetland changes have been identified as a consequence of rapid urbanisation, poor land-use planning, inadequate understanding of the value of wetlands, unsustainable resource use practices, overexploitation of natural resources and weak institutional and enforcement capacity.

Rapid urbanisation and expansion of Missenyi and Kyotera towns has, and continues to bring threats to the wetland landscape. Pressure from the population increase, coupled with **poor land-use planning** causes an increase in solid and liquid waste accumulation, in faecal contamination which affects the quality and quantity of potable water.

Wetland products such as papyrus, wood and fish are being **overexploited**. Also, unregulated and indiscriminate harvesting of logging, timber, and charcoal is rampant in the area. The endemic forest hardwood tree species *Podocarpus* has been virtually wiped out, and several trees with medicinal value, such as *Phoenix reclinata*, *Prunus Africana*, *Rytigynia beniensis*, “*Omunyabuliko*” and “*Olikwatango*”, are declining (NBI, 2020a).

Some of the **unsustainable resource management practices** taking place within the catchment of River Kagera and ultimately affecting the status of Sango Bay - Minziro wetland are: Poor agricultural practices, unsustainable land use management and river bank degradation resulting in increased erosion, destabilisation of the river banks and siltation of the river mouth where River Kagera flows into Lake Victoria. Over time and because of poor farming practices, soils are gradually losing their vitality. Good

agricultural practices, such as mulching, soil and water conservation, crop rotation and application of fertilisers are insufficiently applied. Due to the degraded soils, farmers continue looking for new farmlands leading to **encroachment** into the wetland.

With the recognition that the underlying threats and challenges of ecosystem degradation are socio-economic in nature, there exists an opportunity in addressing their drivers and pressures. This includes strengthening institutional and technical capacity of local, national and transboundary stakeholders and their institutions; developing and implementing sustainable income and livelihood sources; and implementation of management actions developed towards wetland and river basin management planning, which includes the *Sango Bay – Minziro Transboundary Wetland Management Plan* (2020 – 2030). Successful Implementation of the plan will not only lead to the effective management of the ecosystem and improved livelihoods of the wetland adjacent communities, but also contribute to the two countries' national, regional and international obligations on protection and conservation of fragile ecosystems. As described in section 1.3, this CIP is designed to support and strengthen implementation of the management plan.

1.3 The Business Case for Ecosystem Conservation and Wise Use

Categorised under provisioning, regulating, supporting and cultural services, the Sango Bay – Minziro wetland ecosystem provides important ecological and socio-economic services to 498,000 people living in the Kyotera District of Uganda and Kagera Region of Tanzania (Figure 2).

CATEGORIES OF ECOSYSTEM SERVICES IN THE SANGO BAY – MINZIRO WETLAND LANDSCAPE



Figure 2: Categories and examples of ecosystem services in the Sango Bay - Minziro wetland landscape (NBI, 2020b)

A recent study on the value of the ecosystem services provided by the Sango Bay – Minziro wetland found its worth to be about USD 236 million a year. This value includes its capacity to provide a source of subsistence and income such as capture fishery and water for crop and livestock production which forms the basis of local livelihoods, ecosystem regulating services such as carbon capture, water storage and recharge, flood control, and nature based tourism and cultural values. These contribute not only to human well-being but also to a functioning economy.

Conservation of this ecosystem is not only of local importance, but has also been shown to contribute to UN Sustainable Development Goals (SDGs), and other national, regional and international environmental targets and commitments such as Ramsar Convention, Convention on Biological Diversity Aichi targets, the United Nations Framework Convention on Climate Change and the 2017 Memorandum of Understanding between Tanzania and Uganda which also provides an agreement on collaboration to strengthen cross-border collaboration.

This high value provides an indication of significant environmental, economic and development returns spread across various sectors that can be gained from investing in this transboundary wetland. Additionally, articulation of the economic value for Sango Bay – Minziro ecosystem serves as a clear justification for financing the management and conservation of the wetland landscape through interventions identified in the CIP. However, its productivity depends on the health of the system. This requires management and planning and comes with costs (direct costs or opportunity costs) and investments. These are needed to be able to derive the economic benefits. Business cases capture the reasoning for initiating an undertaking - even if it appears costly or difficult - on the basis of its expected commercial benefit or return. It is from this basis that this CIP has been developed.

1.4 What The CIP Seeks to Fund

The Sango Bay – Minziro Transboundary Wetland Management Plan (TWMP) identified a wide range of stakeholders implementing interventions linked to the sustainable conservation and management of the wetland. As such, the CIP has harmonised, integrated and aligned with existing interventions in the wetland landscape, thus providing a comprehensive and coherent framework aimed at guiding strategic investments and programmes.

The CIP targets to leverage resources to support delivery of the implementation framework and management actions in the Sango Bay – Minziro TWMP (2020 – 2030).

The overall objective of the Sango Bay - Minziro TWMP is '**to restore the wetland and ensure retention of ecosystem services for the benefit of people.**'

It is guided by three management actions and objectives which aim at:

- Promoting the **conservation** of the wetland ecosystem and its catchment;
- Promoting and supporting sustainable sources of **livelihoods** for the communities' dependent on the wetland; and

- Supporting the establishment and strengthening of **governance** structures for the management of the wetland.

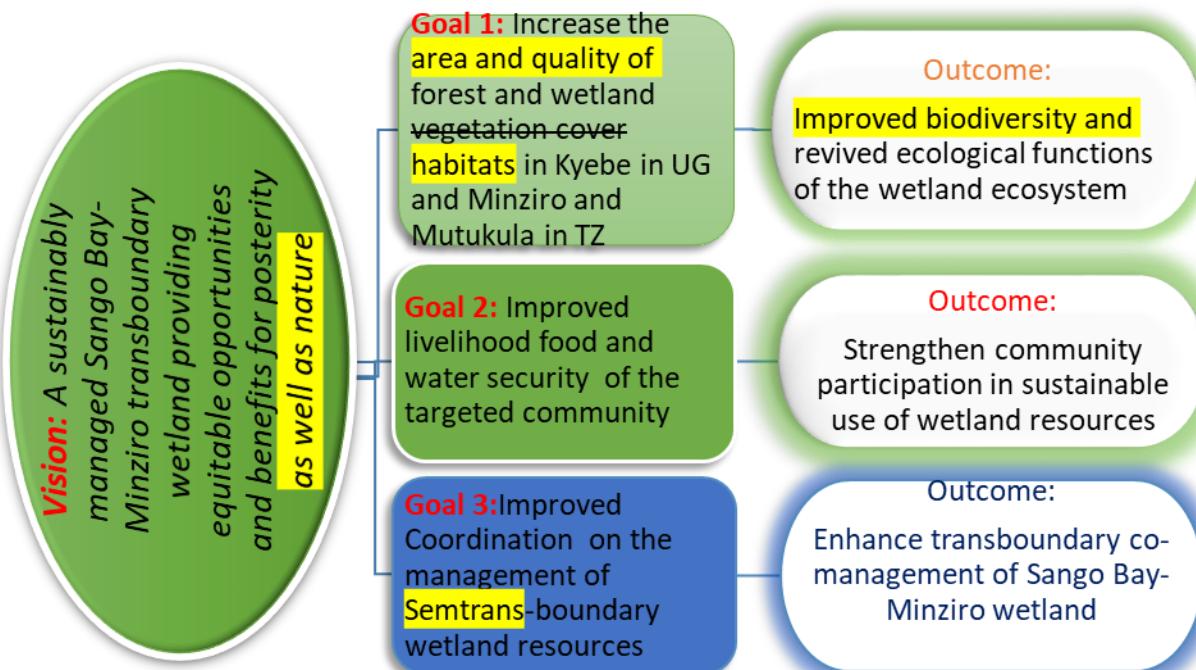
1.5 How The CIP Is intended to be Used

The main purpose of the IPP is to provide justifications for funding of steps to address the identified unmet needs of the ecosystem. This entails recognition- and inclusion of key interests of local communities and key resource user groups since their levels of influence are key to the conservation of this wetland, while, if not managed well, their actions can potentially also have adverse impacts on the ecosystem health. Importantly, their levels of influence too are key to the conservation of this wetland. The investments projects identified or designed for this wetland, shall not only contribute to safeguarding its biodiversity and ecosystem values but will at the same time contribute to the development of livelihood opportunities for the riparian associated communities.

PART 2: INVESTMENT STRATEGY

3.1 Goals and Intended Outcomes

The CIP contributes towards the overall vision of the Transboundary Wetland Management Plan, which is '*A sustainably managed Sango Bay – Minziro transboundary wetland providing equitable opportunities for the benefit of people and nature.*'



The **first goal** focuses on revitalising the biodiversity and ecological functioning of the wetland system through restoration of the degraded areas. The proposed investment projects are targeted at restoring and rehabilitating degraded forest and wetland area. For this to be achieved, local communities must be placed at the centre of each activity. They must also be enlightened on the impacts of their various actions on the wetland.

The **second goal** is concerned with improving the livelihood and incomes through sustainable nature based enterprises. Due to the fact that majority of the wetland communities depend on the wetland, climate smart and nature friendly farming practices must be adopted in their operations and the quality of their produce enhanced through value addition. With proper organisation into farmer groups, they should be provided with expertise and support for the implementation of such new techniques and linked to the better markets, not only locally, but even regionally and internationally.

The *third goal*, looks into strengthening the enabling environment for achieving the above-mentioned goals, with specific attention for the cross-border engagements from all prospects since the wetland is a transboundary resource. Conserving the wetland on one side and neglecting or ignoring the other side is meaningless. This goal will involve interventions targeted at capacity strengthening and facilitating cross-border dialogue for enhanced transboundary collaboration and cooperation.

3.2 Guiding Principles and Crosscutting Issues

An effective and actionable Investment Project Plan must have specific principles guiding its development. In the Sango Bay-Minziro, the focus has been on ensuring wise use of the natural resources. Due to the transboundary nature of the ecosystem, and several key players including governments having central roles to play, inclusion and recognition of contributions must be placed in the forefront.

In developing this CIP, the first guiding principle was collating the most practical and recent information. This includes the 2020-2030 Sango Bay-Minziro Transboundary Wetland Management Plan; The Sango Bay – Minziro Transboundary Wetland Monograph; the 2016 report on the Economic Valuation of Sango-Bay Minziro Ecosystem and the USAID-PREPARED Sango Bay CIP.

The Second guiding principle was the development of the CIP in line with the existing governments programs, strategies, policies and laws in order to achieve buy-in from government planners and integration of the proposed packages into the government budgets.

Thirdly, because many of the wetland resources are related to multiple uses, and there are many interlinkages between the different types of services, this CIP has taken these interlinkages into account. For example, grass is used for livestock grazing, but also for roofing and bedding, and mulches for agriculture.

Finally, the CIP also acknowledges that achieving conservation, wise use, and sustainable development will occur only by working across interest groups, sectors, and levels of scale. Community participation, private sector involvement, cross-sectoral coordination, gender equity, and social inclusion are recurrent themes, and are incorporated into the design and delivery of project activities.

3.3 Coordination and Delivery Mechanisms

In line with Ramsar wise use principle and participatory stakeholder engagement approach, the government institutions, civil society organizations, disability groups and resource user groups, have been actively and effectively involved in the development of this CIP. Unlike traditional models, which were based largely on protecting the environment by excluding human uses and users, these new approaches recognise that people are an integral part of the natural environment and that conservation should be designed and implemented within the context of equitable and sustainable development.

Each project plan has designated a relevant lead entity or agency. This fosters a more responsible management system as opposed to earlier approaches. The plan clearly outlines the roles and responsibilities of other implementing entities, each stakeholder, and further spells out the potential donors for each proposed investment plan. This therefore provides a clear guidance for users of this document on specific entry points for each plan.

PART 3: INVESTMENT PACKAGES

3.1 Overview

The Investment Project Plan is comprised of 8 bankable projects, classified into three main investment areas and plans (table 4). The total investment values of the plans are USD 71,000,000 over a period of 10 years.

Further details about these projects and their required investments are given in section 3.3.

Table 1: Overview of identified bankable project plans valued at USD 71,000,000 over a period of 10 years

Investment Project Area (IPA)	IPA1#1a	Promoting the development and adoption of energy saving technology for the reduction of fuel wood consumption in Kyebe in Uganda Minziro and Mutukula in TZ	USD 4,000,000
<i>IPA1</i> <i>Ecosystem Protection and restoration</i>	IPA1#1b	Enhancing the regeneration of the degraded ecosystems through restoration of wetlands, forests, riverbanks and hill tops in Mutukula, Kasambya and Burembe TZ and Kyebe and Kabira UG	USD 5,000,000
	IPA1#1c	Reducing Human-Wildlife conflicts through buffering hot pepper lines in Kyebe, Minziro and Kakindo	USD 10,000,000
<i>IPA2</i> <i>Livelihood Interventions</i>	IPA2#1a	Promoting sustainable livelihoods of adjacent communities through nature-based enterprises e.g. apiculture, fish farming and Eco-tourism in Kabira, Kakuuto and Kyebe in Uganda and Minziro, Kasambya and Bwanjai Wards in Tanzania	USD 20,000,000
	IPA2#1b	Promoting and supporting value addition of Nile Perch and Silver Fish for improving community livelihood at Kasensero (UG) and Kabindi and Kaishebo (TZ) to enhance house hold income, job creation and wetland conservation	USD 15,000,000
	IPA2#1c	Promoting and supporting sustainable land management practice through farmer field schools and community conserved areas in Kyebe Katongero hills in Uganda Minziro in TZ	USD 10,000,000
<i>IPA3</i> <i>Institutional support and Development</i>	IPA3#1a	Strengthening community based institutions for improved management of Sango Bay – Minziro trans boundary Ecosystem resources	USD 5,000,000
	IPA3#1a	Promoting research, studies and monitoring to enable better informed conservation decision making	USD 2,000,000

3.2 Prioritisation

Various projects were prioritised either as important, very important or necessary based on their perceived importance and urgency for addressing immediate problems affecting both the ecosystem and community resilience.

Very Important

- **IPA1#1a:** Promoting the development and adoption of energy saving technology for the reduction of fuel wood consumption in Kyebe in Uganda Minziro and Mutukula in TZ.
- **IPA1#1b:** Enhancing the regeneration of the degraded ecosystems through restoration of wetlands, forests, riverbanks and hill tops in Mutukula, Kasambya and Burembe TZ and Kyebe and Kabira UG
- **IPA3#1a:** Strengthening community based institutions for improved management of Sango Bay – Minziro trans boundary Ecosystem resources.
- **IPA3#1a:** Promotion of research, studies and monitoring to enable better informed conservation decision making

Important

- **IPA1#1c:** Reducing Human-Wildlife conflicts through buffering hot pepper lines in Kyebe, Minziro and Kakindo
- **IPA2#1a:** Promoting and supporting alternatives livelihoods of adjacent communities through environmental based enterprises e.g. apiculture, fish farming and Eco-tourism in Kabira, Kakuuto and Kyebe in Ug and Minziro, Kasambya and Bwanjai Wards in TZ

Necessary

- **IPA2#1b:** Promoting and supporting value addition of Nile Perch and Silver Fish for improving community livelihood at Kasensero (UG) and Kabindi and Kaishebo (TZ) to enhance house hold income, job creation and wetland conservation.
- **IPA2#1c:** Promoting and supporting sustainable land management practice through farmer field schools and community conserved areas in Kyebe Katongero hills in Uganda Minziro in TZ

Figure 3: Ranking and Prioritization of the Investment projects based stakeholder perception and determination

3.3 Investment Package 1

3.3.1 Ecosystem Restoration and Protection

Implementation of the Transboundary Wetland Management Plan will rationalise the use and management of the wetland, which will go a long way in securing habitats for migratory birds and fish that survive on this wetland while ensuring sustainable delivery of ecosystem goods and services. However, the management plan cannot be implemented without an investment plan. The CIP is aimed at operationalising the management plan through a number of bankable projects. The Sango-Bay Minziro Investment Plan is comprised of 3 investment areas and 8 projects. See figure 4. The individual plans are presented below:

Ecosystem Protection and restoration	
	<i>IPA1#1a</i> <i>Promoting the development and adoption of energy saving technology for the reduction of fuel wood consumption in Kyebe in Uganda Minziro and Mutukula in TZ</i>
	<i>IPA1#1b</i> Enhancing the regeneration of the degraded ecosystems through restoration of wetlands, forests, riverbanks and hill tops in Mutukula, Kasambya and Burembe TZ and Kyebe and Kabira UG
	<i>IPA1#1c</i> Reducing Human-Wildlife conflicts through buffering hot pepper lines in Kyebe, Minziro and Kakindo
<i>Key Action; Critical ecosystem resources are conserved for both the current and future generations</i>	

Figure 4: Investment Package 1 consisting of 3 investment areas and 8 projects

IPA1#1a: Promoting the development and adoption of energy saving technology for the reduction of fuel wood consumption in Kyebe in Uganda Minziro and Mutukula in Tanzania

Required investment	USD 4 million for over a period of 5 years
Priority	Very important
Justification	<p>The Sango Bay-Minziro wetland landscape is of socio-economic importance to the people living in the surrounding areas. Most of the communities in the surrounding area depend on wood fuel for cooking resulting into increase deforestation. The main reason for this dependence on fuel wood is the lack of alternative sources of energy for their domestic use.</p> <p>The expected investment needed is 4 Million USD over 5 years</p> <p>The returns expected from this investment are restored forest ecosystem functioning and reduced reliance on wood fuel.</p> <p>The estimated value of these returns based on the ecosystem valuation conducted on the wetland landscape is xxxx</p>
Scope	The project will cover Kyebe in Uganda Minziro and Mutukula in Tanzania
Indicative actions	<ul style="list-style-type: none"> • Capacity building and awareness on use and benefits of alternative energy-saving technologies • Restoring and rehabilitating degraded landscapes according to 'ecological restoration' principles • Mainstreaming Ecosystem based Adaptation measures targeted at forest adjacent communities
Results and beneficiaries	The primary beneficiaries will be the local communities and other stakeholders that derive their livelihood from the Sango-bay Minziro ecosystem
Lead implementing agencies	Uganda: Ministry of Energy and Mineral Development Tanzania: Ministry of Natural Resources and Tourism
Implementing partners	Local government, World vision TZ, TATEDO TZ, District Natural Resources Office (Kyotera), NFA, UWA, Wetlands International
Potential Donors	UNDP, GIZ, UNEP

IPA1#1b: Enhancing the regeneration of the degraded ecosystems through restoration of wetlands, forests, riverbanks and hill tops in Mutukula, Kasambya and Burembe Tanzania and Kyebe and Kabira Uganda.

Required investment	USD 5 million for over a period of 10 years
Priority	Important
Justification	<p>This CIP will contribute to reduction in the rampant degradation wetlands, forests, riverbanks and hill tops in Mutukula, Kasambya and Burembe TZ and Kyebe and Kabira UG through conserving forests and wetlands and restoring degraded forest and wetlands according to ecological restoration principles, where necessary including planting trees and other vegetation, e.g. on bare hills.</p> <p>The expected investment needed is USD 5 million for over a period of 10 years.</p> <p>The returns expected from this investment are</p> <p>The estimated value (monetised) of these returns is</p>
Scope	This project will cover a total of 5 forest reserves, 10 degraded wetlands areas and 5 hill tops
Indicative actions	<ul style="list-style-type: none"> • Ecological restoration of degraded areas, where needed including through planting with identified indigenous tree species • Monitoring and evaluation, using biodiversity indicators, carbon indicators, health indicators, income indicators. • Quantification of the results in terms of values and monetisation of these values and assessment of the business case
Results and beneficiaries	This initiative is expected to benefit communities living near or adjacent to these critical ecosystems. The major benefits will include increased and reliable rainfall, materials for crafts and water availability for irrigation.
Lead implementing agencies	Uganda: Ministry of water and environment. Tanzania: Ministry of natural resources and Tourism
Implementing partners	Local government, World vision TZ, TATEDO TZ, District Natural Resources Office (Kyotera), NFA, UWA, Wetlands International
Potential Donors	UNDP, GIZ, UNEP, USAID

IPA1#1c: Reducing Human-Wildlife conflicts through buffering hot pepper lines in Kyebe, Minziro and Kakindo

Required investment	USD 10 million for over a period of 10 years
Priority	Important
Justification	<p>Human-wildlife conflicts are increasing in intensity over the past few years. Communities are mainly concerned about destruction of their crops which can result in food insecurity and reduced income. Local communities indicated that there was need to harmonise co-existence between Humans and wildlife. This CIP will therefore put in place mechanisms that will result in the reduction of the current conflicts.</p> <p>The expected investment needed is USD 10 million for over a period of 10 years.</p> <p>The returns expected from this investment are:</p> <p>The estimated value (monetised) of these returns is</p>
Scope	This project will cover Kyebe, Minziro and Kakindo
Indicative actions	<ul style="list-style-type: none"> • Develop and approval of land use management plans by authorities, including agricultural areas and wildlife areas, corridors and passage ways. • Development of legislations guiding compliance and enforcement • Monitoring and evaluation, using biodiversity indicators, carbon indicators, health indicators, income indicators. • Quantification of the results in terms of values and monetisation of these values and assessment of the business case
Results and beneficiaries	This initiative is expected to benefit communities living near or to these corridors.
Lead implementing agencies	Uganda: Uganda Wildlife Authority Tanzania: Tanzania Forest Service
Implementing partners	NFA, NEMA, Petroleum Authority, LVEMP, LVFO, FFI, Nature Uganda, selected CBOs, Kagera Regional Secretariat, TAWA, VPO, TANAPA

Potential Donors	GIZ, USAID, UKAID, World Vision, NSTP, EU, WWF, IUCN, UNEP, NBI, UNDP, GEF, World Bank, AFDB, JICA, McArthur Foundation, Rockefeller Foundation.
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3.4 Investment Package 2

3.4.1 Livelihood Interventions

Sango Bay – Minziro residents rely on a very narrow and insecure livelihood base. Most are able to do little more than meet their basic day-to-day needs, and many face regular food and income shortages. It is difficult for people to add value to production, or to access new markets and business opportunities. At the same time, the intense demands of a rapidly growing population, combined with often unsustainable levels and types of use, mean that environmental pressures are high, and key resource stocks are becoming depleted and degraded – further undermining local livelihoods.

By enhancing sustainable livelihood opportunities, investment package 2 aims to improve people's economic conditions and strengthen local development prospects. There is a particular emphasis on social and economic inclusion, involving explicit efforts to engage and benefit the poorest and most vulnerable local groups

Livelihood Interventions	IPA2#1a	Promoting and supporting alternative livelihoods of adjacent communities through natural resource based enterprises e.g. apiculture, fish farming and Eco-tourism in Kabira, Kakuuto and Kyebe in Uganda and Minziro, Kasambya and Bwanjai Wards in Tanzania
	IPA2#1b	Promoting and supporting value addition of Nile Perch and Silver Fish for improving community livelihood at Kasensero (Uganda) and Kabindi and Kaishebo (Tanzania) to enhance house hold income, job creation and wetland conservation
	IPA2#1c	Promoting and supporting sustainable land management practice through farmer field schools and community conserved areas in Kyebe Katongero hills in Uganda Minziro in Tanzania

IPA2#1a: Promoting and supporting alternative livelihoods of adjacent communities through natural resource based enterprises e.g. apiculture, fish farming and Eco-tourism in Kabira, Kakuuto and Kyebe in Uganda and Minziro, Kasambya and Bwanjai Wards in Tanzania.

Required investment	USD 20 million for over a period of 10 years
Priority	Important
Justification	<p>Promoting and supporting alternative livelihoods opportunities will result in improving local community economic conditions and strengthening local development opportunities. Globally, there is a particular emphasis on moving towards social and economic inclusion, involving explicit efforts to involve and benefit the poorest and most vulnerable local groups. This project will address three key result areas which form the most important enabling conditions for more sustainable, equitable and effective economic growth, but which are currently chronically under-funded: livelihood diversity and resilience, alternatives to environmentally-damaging sources of production and consumption, and access to new sources of value-added markets and business opportunities. This providing of livelihood alternatives is expected to result into reduced pressure on the wetland landscape and consequently reduced degradation of ecosystem. Through so called 'biorights approach' which involves microcredits with associated conservation and restoration services livelihood benefits and environmental restoration can be integrated.</p> <p>The expected investment needed is USD 20 million for over a period of 10 years.</p> <p>The returns expected from this investment are:</p> <p>The estimated value (monetised) of these returns is</p>
Scope	The project will support key areas identified in the management plan including apiculture, fish farming and Eco-tourism in Kabira, Kakuuto and Kyebe in Uganda Minziro, Kasambya and Bwanjai Wards in Tanzania
Indicative actions	<ul style="list-style-type: none"> • Awareness creations and stakeholder mobilisation on apiculture, fish cage farming and ecotourism, linked to the Biorights approach, which requires services to the environment (conservation, restoration) in return for turning a micro credit loan into a grant. • Mapping of beneficiary households for the various prioritised

	<p>nature based enterprises</p> <ul style="list-style-type: none"> • Support marketing and establishment of tourist related enterprises (marketing strategies) • Monitoring and evaluation, using biodiversity indicators, carbon indicators, health indicators, income indicators. • Quantification of the results in terms of values and monetisation of these values and assessment of the business case
Results and beneficiaries	Support will be provided to farmers who are currently depending on Sango-Bay Minziro ecosystem for their livelihoods. This expected to improve their livelihoods through increased income subsequently resulting into food security because communities will be able to purchase food
Lead agencies	Uganda: Ministry of Water and Environment. Tanzania: Ministry of Natural Resources and Tourism
Implementing partners	MAAIF, LGs, MoF, MoW, Wetlands International (Biorights approach)
Potential Donors	GIZ, USAID, GF/UNDP, World bank, AfDB

IPA2#1b: Promoting and supporting value addition of Nile Perch and Silver Fish for improving community livelihood at Kasensero (Uganda) and Kabindi and Kaishebo (Tanzania) to enhance house hold income, job creation and wetland conservation.

Required investment	USD 15 million for over a period of 5 years
Priority	Necessary
Justification	<p>It has been estimated that the yearly amount of discard by-catch is about 20 million dollars. Factors discouraging the processing of some parts of Nile perch are due to low market value. This project intends to add value to key Nile perch and silver fish through processing and expanding its market. This will be achieved through construction of small scale factories at the landing sites. Once achieved, it will create jobs for the youth and also reduce pressure on other fish species.</p> <p>The expected investment needed is USD 15 million for over a period of 5 years.</p> <p>The returns expected from this investment are:</p> <p>The estimated value (monetised) of these returns is</p>
Scope	This initiative will cover at Kasensero in Uganda and Kabindi and Kaishebo in Tanzania respectively
Indicative actions	<ul style="list-style-type: none"> • Construction of fish handling and processing infrastructure • Training on fish packaging and branding • Construction of piped potable water to sanitary and fish handling facilities • Monitoring and evaluation, using biodiversity indicators, carbon indicators, health indicators, income indicators. • Quantification of the results in terms of values and monetisation of these values and assessment of the business case
Results and beneficiaries	Support will be provided to fishermen and women engaged in Nile perch production, value addition and marketing of their products and services, 100 fishing groups will be supported at different levels of the vale chain. In addition, other fishermen will receive training in the production value addition and marketing of Nile perch

Lead agencies	Uganda: Ministry of Agriculture, Animal Industry and Fisheries Tanzania: Tanzania Forest Service
Implementing partners	Kagera Regional Secretariat, Ministry of Livestock and Fisheries, Lake Victoria Basin Commission, NEMA, LVEMP, LVFO, FFI, NAFIRI, NARO, FOSSIRI, NAADS/OWC, NFA
Potential Donors	GIZ, EU, USAID, WORLD BANK, FAO, WHO

IPA2#1c: Promoting and supporting sustainable land management practice through farmer field schools and community conserved areas in Kyebe Katongero hills in Uganda Minziro in Tanzania.

Required investment	USD 10 million for over a period of 5 years
Priority	Necessary
Justification	<p>The Sango Bay landscape is becoming seriously deforested. This has resulted both from the felling of trees for timber, poles and wood fuel and due to the gradual clearing and conversion of forest land for farmland and settlement. Not only does this affect important biodiversity and wildlife habitat, but it is also resulting in soil loss and erosion, affecting both the quality and flow of downstream water courses. Dry season water availability is becoming less reliable, while wet season flooding events are increasing. Local households are also finding it progressively more difficult, time-consuming and expensive to access the forest products that play such a critical role in their livelihoods.</p> <p>There is clearly a need to take action to increase tree cover, and to make available alternative, accessible and affordable sources of wood and non-wood products to local households.</p> <p>The expected investment needed is USD 10 million for over a period of 5 years.</p> <p>The returns expected from this investment are:</p> <p>The estimated value (monetised) of these returns is</p>
Scope	This project will support on-farm tree planting and community woodlots. Complementing project 1a (which deals with forest restoration and rehabilitation on public lands and in communal areas), the focus is on afforestation and reforestation on village lands and in privately-held areas, including on-farm agroforestry. A special focus will be given to the selection of tree species which can be easily and cheaply cultivated, which will yield products suitable for use as fuel, building materials, fodder, foods and income generation.
Indicative activities	<ul style="list-style-type: none"> • Design indicators of values created through the investments with ways to quantify and monetise them

	<ul style="list-style-type: none"> • Development and approval of land use plan by authorities • Develop land use by-laws and regulations • Conduct hands-on training on-farm tree planting and woodlots establishments • Monitoring and evaluation, using biodiversity indicators, carbon indicators, health indicators, income indicators. • Quantification of the results in terms of values and monetisation of these values and assessment of the business case
Results and beneficiaries	Support will be provided to 100 farmer groups. In addition, other youths and women groups will receive training on on-farm tree planting and woodlots establishments
Lead agencies	Uganda: Ministry of Agriculture, Animal Industry and Fisheries Tanzania: Ministry of Agriculture, Livestock and Fisheries
Implementing partners	TAWA, TANAPA, NFA, UWA, NEMA, Wetlands International
Potential Donors	GIZ, USAID, GF/UNDP, World bank, AfDB

3.5 Investment Package 3

3.5.1 Institutional support and development

Different policies, laws and agencies in Uganda and Tanzania touch in some way on transboundary resources including Sango Bay-Minziro wetlands and associated landscape. Key activities that are emphasized include; those which govern environment, social safeguards, trade and commerce, construction, infrastructure, travel and transport, water, energy, communications, employment, contracts, banking and finance, land use and urban planning. As Sango Bay-Minziro wetland is located on the Western border between Uganda and Tanzania, both Uganda and Tanzania have laws that take care of Natural resource management. However, there is currently minimal coordination between these two countries as far as the management of transboundary wetland resources is concerned. This therefore implies that there is a clear need to strengthen existing institutions and to also identify where additional guidelines, regulations or mechanisms are needed for the effective, equitable and sustainable functioning of the Sango Bay-Minziro ecosystem.

<i>Institutional support and Development</i>	IPA3#1a Strengthening community based institutions for improved management of Sango Bay – Minziro trans boundary Ecosystem resources
	IPA3#1a Promotion of research, studies and monitoring to enable better informed conservation decision making

IPA3#1a: Strengthening community based institutions for improved management of Sango Bay – Minziro transboundary Ecosystem resources

Required investment	USD 3 million for over a period of 3 years
Priority	Very Important
Justification	<p>In the East African region, most transboundary ecosystems including Sango-Bay Minziro lack mechanisms for institutional cooperation. This has greatly contributed to the degradation of the resource making it unable to provide ecosystem services. It should however be noted that collaborative management and protection of shared natural resources is a way to go if Sango-Bay Minziro wetlands resources and associated catchments are to be sustainably utilized. It is also important to note moving forward with the socio-economic development of the local communities from the two countries will require a combined effort. This project will therefore make an initiative to support the two countries in putting up mechanisms and strategies that will ensure sustainable use of the environment resources within the Semliki delta wetlands and the associated catchments.</p> <p>The expected investment needed is USD 3 million for over a period of 3 years.</p> <p>The returns expected from this investment are:</p> <p>The estimated value (monetised) of these returns is</p>
Scope	Will initially support initiatives at local community level and NGOs and later scale up to district, county and national level
Indicative actions	<ul style="list-style-type: none"> • Enhance the scope of environmental committees to include wildlife management • Formulation of appropriate by-laws by the committee • Establishment of a legally recognized transboundary wetland user association with operating by-laws • Targeted training of community leaders and institutions • Enhancement of by-law provisions • Conduct two transboundary exchange and learning visits • Conduct quarterly and joint review meetings • Monitoring and evaluation, using biodiversity indicators, carbon indicators, health indicators, income indicators. • Quantification of the results in terms of values and monetisation of these values and assessment of the business case
Results and	The work on benefits of transboundary natural resources cooperation aims at

beneficiaries	improving coordination between Uganda and Tanzania on Sango-Bay Minziro wetland resources by exploring the existing opportunities to strengthen the management practices of the Sango-Bay Minziro resources. This initiative will improve the management of Sango-Bay Minziro trans-boundary resources.
Lead agencies	Uganda: Ministry of Water and Environment Tanzania: Tanzania Forest Service
Implementing partners	Kagera Regional Secretariat, MoWE-DEA, NEMA, Missenyi District Council.
Potential Donors	GIZ, USAID, GF/UNDP, AfDB, World Bank, UNEP, JICA, UKAID.

IPA3#1a: Promotion of research, studies and monitoring to enable better informed conservation decision making

Required investment	USD 2 million for over a period of 5 years
Priority	Very Important
Justification	<p>A detailed, practical and policy-relevant information base is key to sound decision-making – in both conservation and development sectors, and for individuals, communities, government agencies and businesses. It is also required if such decisions are to be effective, equitable and sustainable. Yet, at the moment, there is a dearth of knowledge about either Sango Bay's wetland biodiversity and ecosystems, or the socio economic impacts and dependencies associated with them. Many of the decisions that are made about the “best” land and resource uses, development choices and investment options are therefore based on information which is incomplete or misleading. As a result, not only are economic opportunities being missed, but in some cases substantial costs and losses are being incurred.</p> <p>By facilitating research, studies and monitoring, investment package 3 seeks to enable better- informed decision-making. It goes beyond merely producing data, and also deals with improving the focus and form in which information is presented to decision-makers. Investment package 3 covers three key result areas that are strategically targeted towards overcoming the knowledge gaps that currently hinder different groups from making effective, equitable and sustainable decisions about conservation and development in the Sango Bay landscape: the generation of new information, enhanced data access and availability, and improved planning and decision-making.</p> <p>The expected investment needed is USD 2 million for over a period of 5 years.</p> <p>The returns expected from this investment are:</p> <p>The estimated value (monetised) of these returns is</p>
Scope	<p>This project will assess what information is available on different areas of Sango Bay Minziro natural resources identify the gaps that exist relative to what is required for more effective decision-making, and establish a clearing house mechanism for ensuring that key data and information are retained and made available to users.</p>
Indicative actions	<ul style="list-style-type: none"> ● Design indicators of values created through the investments with ways to quantify and monetise them ● Identify data gaps within the knowledge about the Sango-bay Minziro

	<p>system</p> <ul style="list-style-type: none"> ● Set up monitoring of key biodiversity (e.g. birds, butterflies, dragonflies, mammals, herpetofauna, flora) ● Develop sustainable approaches to surveillance, monitoring and control of threats facing the ecosystem ● Monitoring and evaluation, using biodiversity indicators, carbon indicators, health indicators, income indicators. ● Quantification of the results in terms of values and monetisation of these values and assessment of the business case
Results and beneficiaries	The work on benefits of transboundary natural resources cooperation aims at improving coordination between Uganda and Tanzania on Sango-Bay Minziro wetland resources by exploring the existing opportunities to strengthen the management practices of the Sango-Bay Minziro resources. This initiative will improve the management of Sango-Bay Minziro trans-boundary resources
Lead agencies	Uganda: Ministry of Water and Environment Tanzania: Tanzania Forest Service
Implementing partners	Kyotera DLG-line departments, NARO, NFA, NEMA, National Bureau of Statistics, Ministry of Finance, National Bureau of Statistics, MART-MARUKU, Wetlands International
Potential Donors	GIZ, UNDP, USAID, World Bank, AFDB, ICRAF, IGAAD, NORAD, Lutheran World Federation, WWF, McArthur, Rockefeller Foundation, Monsanto, JICA, UNEP, DGF.

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