Lake Naivasha Basin Ecosystem Based Management

Part I: Project Information

GEF ID
10589

Project Type
MSP

Type of Trust Fund
GET

CBIT/NGI
CBIT **No**
NGI **No**

Project Title
Lake Naivasha Basin Ecosystem Based Management

Countries
Kenya

Agency(ies)
WWF-US

Other Executing Partner(s)
NETFUND, Imarisha Lake Naivasha, Horticultural Crops Directorate

Executing Partner Type
Others

GEF Focal Area
Multi Focal Area

Taxonomy
Integrated and Cross-sectoral approach, Sustainable Land Management, Land Degradation, Focal Areas, Forest, Forest and Landscape Restoration, Women groups, Gender Mainstreaming, Gender Equality, Biodiversity, Biomes, Rivers, Lakes, Mainstreaming, Agriculture and agrobiodiversity, Ecosystem Approach, Improved Soil and Water Management Techniques, Restoration and Rehabilitation of Degraded Lands, Community-Based Natural Resource Management, Sustainable Livelihoods, Sustainable Agriculture, Income Generating Activities, Influencing models, Convene multi-stakeholder alliances, Strengthen institutional

capacity and decision-making, Stakeholders, Communications, Behavior change, Awareness Raising, Beneficiaries, Type of Engagement, Participation, Partnership, Consultation, Information Dissemination, Private Sector, SMEs, Financial intermediaries and market facilitators, Civil Society, Non-Governmental Organization, Community Based Organization, Local Communities, Gender results areas, Knowledge Generation and Exchange, Capacity Development, Participation and leadership, Sex-disaggregated indicators, Gender-sensitive indicators, Capacity, Knowledge and Research, Learning, Adaptive management, Knowledge Generation, Training

Sector

Rio Markers

Climate Change Mitigation

Climate Change Mitigation 0

Climate Change Adaptation

Climate Change Adaptation 0

Duration

36 In Months

Agency Fee($)

160,688.00

Submission Date

4/27/2022

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount($)	Co-Fin Amount($)
BD-1-1	GET	520,861.00	5,000,000.00
LD-1-1	GET	1,264,561.00	5,020,000.00
	Total Project Cost ($)	**1,785,422.00**	**10,020,000.00**

B. Indicative Project description summary

Project Objective

To restore forest ecosystems and reduce land degradation in the LNB catchment for increased protection of Lake Naivasha?s water resources, biodiversity, and associated ecosystem services to support the local and national economy.

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
1. Strengthening the enabling conditions for integrated natural resources management in Lake Naivasha Basin (LNB)	Technical Assistance	1.1. Harmonized inter-sectoral and multi-stakeholder planning and management across LNB and county plans for integrated, effective and sustainable land management in LNB	1.1.1 Participatory review and update of the Lake Naivasha Basin Integrated Management Plan (LNBIMP) 2023-2033 1.1.2 Existing county level development plans updated to align with the LNBIMP to support integrated natural resources management 1.1.3 By-laws to support the implementation of the LNBIMP in the targeted counties/wards developed and/or updated (as needed) 1.1.4 Annual LNB Stakeholder Forums coordinated by Imarisha for implementation of the LNBIMP and knowledge and best practice exchange	GET	313,412.00	1,000,000.00

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
2. Market and financial mechanisms for implementation of the LNBIMP	Technical Assistance	2.1. Improved access to finance for implementation of restoration and improved land management activities in LNB 2.2. Improved access to markets for sustainable agricultural produce	2.1.1. Sustainable finance and resource mobilization strategy for the LNBIMP 2.1.2. Restructured and operational PES 2.2.1. Naivasha Green Shop operationalized with increased linkages to local buyers of sustainable produce	GET	267,322.00	1,020,000.00

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
3. Improved land management in upper Lake Naivasha Basin	Investment	3.1. Improved capacity of LNB smallholder farmers for the transition towards sustainable and biodiversity-friendly agricultural practices 3.2. Priority forest and land management interventions implemented in Lake Naivasha riparian lands for enhanced water and biodiversity protection	3.1.1. Agricultural training manual and curriculum targeting smallholder farmers developed with key state agencies and stakeholders 3.1.2. Roll out of curriculum training to 3,600 LNB smallholder farmers through ward agricultural officers (group facilitators) and field days with demonstrations for technical backstopping 3.1.3. Tools and materials for implementation of sustainable, biodiversity-friendly agricultural practices (e.g. certified seeds, compost/mulching tools, etc.) 3.1.4. Linkages to micro-finance institutions and other financial service providers, including the existing PES scheme 3.2.1. Participatory development of lake riparian area Code of Conduct for LNB	GET	867,322.00	6,500,000.00

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
4. Knowledge Management and Monitoring and Evaluation	Technical Assistance	4.1. Knowledge Management communications and dissemination 4.2. Informed and adaptive project management	4.1.1. Basin-wide communication strategy developed and implemented to support sustainable land management and biodiversity-friendly agricultural practices in LNB 4.1.2. Project knowledge products developed and disseminated with LNB, other GEF projects and relevant Government Institutions, as well as other stakeholders 4.2.1. Project M&E plan implemented and project progress reports completed 4.2.2. Annual reflection workshops to track progress against workplan and results framework indicator targets for effective project management	GET	175,055.00	500,000.00

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
				Sub Total ($)	**1,623,111.00**	**9,020,000.00**
Project Management Cost (PMC)						
				GET	162,311.00	1,000,000.00
				Sub Total($)	**162,311.00**	**1,000,000.00**
				Total Project Cost($)	**1,785,422.00**	**10,020,000.00**

Please provide justification

C. Indicative sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Civil Society Organization	WWF Kenya	In-kind	Recurrent expenditures	1,270,000.00
Civil Society Organization	WWF Kenya	Grant	Investment mobilized	1,000,000.00
Recipient Country Government	Water Resources Authority	In-kind	Recurrent expenditures	50,000.00
Recipient Country Government	Imarisha Lake Naivasha	In-kind	Recurrent expenditures	1,000,000.00
Recipient Country Government	NETFUND	Grant	Investment mobilized	6,500,000.00
GEF Agency	WWF-US	In-kind	Recurrent expenditures	200,000.00
			Total Project Cost($)	**10,020,000.00**

Describe how any "Investment Mobilized" was identified

Investment mobilized includes an estimated $6,500,000 of AfDB funding that will be invested in the same geography through a partner organization (NETFUND) as part of the Green Zones Development Support Project Phase II, and $1,000,000 of grant funds through related WWF Kenya led projects in the project area (see baseline).

D. Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
WWF-US	GET	Kenya	Biodiversity	BD STAR Allocation	520,861	46,878	567,739.00
WWF-US	GET	Kenya	Land Degradation	LD STAR Allocation	1,264,561	113,810	1,378,371.00
				Total GEF Resources($)	**1,785,422.00**	**160,688.00**	**1,946,110.00**

E. Project Preparation Grant (PPG)

PPG Required **true**

PPG Amount ($)

50,000

PPG Agency Fee ($)

4,500

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
WWF-US	GET	Kenya	Biodiversity	BD STAR Allocation	14,587	1,313	**15,900.00**
WWF-US	GET	Kenya	Land Degradation	LD STAR Allocation	35,413	3,187	**38,600.00**
				Total Project Costs($)	**50,000.00**	**4,500.00**	**54,500.00**

Core Indicators

Indicator 3 Area of land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
1600.00	0.00	0.00	0.00

Indicator 3.1 Area of degraded agricultural land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 3.2 Area of Forest and Forest Land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
1,600.00			

Indicator 3.3 Area of natural grass and shrublands restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 3.4 Area of wetlands (incl. estuaries, mangroves) restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
37682.00	0.00	0.00	0.00

Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
35,682.00			

Indicator 4.2 Area of landscapes that meets national or international third party certification that incorporates biodiversity considerations (hectares)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Type/Name of Third Party Certification

Indicator 4.3 Area of landscapes under sustainable land management in production systems

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
2,000.00			

Indicator 4.4 Area of High Conservation Value Forest (HCVF) loss avoided

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Documents (Please upload document(s) that justifies the HCVF)

Title	Submitted

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)	1413610	0	0	0
Expected metric tons of CO?e (indirect)	0	0	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)	1,413,610			

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (indirect)				
Anticipated start year of accounting	2024			
Duration of accounting	3			

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)				
Expected metric tons of CO?e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)				

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)

Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	1,230			
Male	2,870			
Total	4100	0	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

Core Indicator 3: Area of land restored ? 1,600 ha. Under Component 3, the proposed project will contribute to the restoration of 1,600ha of forest land through supporting priority restoration activities. In this regard, the project will reinforce efforts under the Green Zones Development Project, through the development of Participatory Forest Management Plans, as well as a code of conduct, sensitization of communities, as well as help build capacity for community management and surveillance, and through the sharing of lessons learnt from the BMZ-funded Forest Landscape Restoration project and the Lake Naivasha Basin Reforestation Project. Core Indicator 4: Area of landscapes under improved management ? 37,682 ha. Under component 1, the project will contribute to a holistic management framework for the entire LNB basin through the participatory review and update of the LNBIMP and integrating this into related County Development Plans and institutional arrangements through By-laws. In practice, the proposed project will contribute to the improved management and protection of 35,682 ha of forest land, through updating the existing Participatory Forest Management Plans for three target Forest Stations (South and North Kinangop and Geta), as well as through providing resources and training to CFAs and WRUAs to mark and peg riparian land for enhanced protection and natural regeneration, where necessary temporarily fencing off vulnerable areas, as well as to improve surveillance and management. In addition, the project will bring 2,000 ha of productive land under improved practices (sub-indicator 4.3: area of land under sustainable land management in production systems), through a combination of training, financial and market incentives, as well as direct support to farmer groups. Core indicator 6: Greenhouse gas emissions mitigated - 1,413,610 t FAO's EX-Ante Carbon balance Tool (ExAct) was used to estimate mitigated carbon emissions from the proposed project interventions. The Ex-Act tool is a land-based carbon accounting tool designed to estimate carbon stock changes, including Green House Gas (GHG) emissions and emission reductions for project interventions during the capitalization and implementation of a project. For this project, the EX-ACT tool was used to calculate the emissions emitted and mitigated for a 20-year period, assuming the project will be implemented for 3 years and capitalization of the project results will last 17 years. Within the Lake Naivasha Basin, the project will restore 1,600 hectares of forested land, improve the management of 35,682 ha hectares of land (which includes an actual forest cover of 7,660 ha) for biodiversity and establish sustainable land use practices for 2,000 hectares of production systems. Restoring the 1,600 hectares of tropical montane forest will mitigate an estimated net amount of 555,232 tCO2-e. Management improvements such as eliminating forest degradation and uncontrolled fires will mitigate approximately 685,554 metric tons of carbon emissions. The third category of project interventions that will alter carbon stocks in the project area is the change in management and land use of approximately 2,000 hectares of production systems. A planned transition from traditional cropland to alley-cropping on 900 hectares will mitigate 50,170 metric tons of carbon

emissions and establishing silvoarable plantations on 400 degraded hectares will mitigate 49,027 metric tons of carbon emissions. Lastly, improving practices on 700 hectares of traditional cropland such as reducing tillage, utilizing higher carbon input without organic amendments, and utilizing manure will results in a total of 73,628 metric tons of carbon emissions mitigated. Given a 20-year project implementation and capitalization period, this project could result in 1,413,610 tons of carbon emissions mitigated. Core Indicator 11: Number of direct beneficiaries disaggregated by gender as co-benefit of the GEF investment ? 4,100 The proposed project will directly benefit approximately 3,600 smallholder farmers in the middle and upper catchments of the LNB. The project will also benefit approximately 320 representatives of LNB stakeholder organizations and communities involved in the planning processes under component 1. Finally, an estimated 180 individuals will benefit from support to the implementation of land management and restoration measures under component 3. It is expected that around ~30% of beneficiaries will be women. Women are currently poorly represented in farmer support work, so 30% is an increase compared to the current situation. Women are used as laborers and not included in the business side. Women and youth will be engaged to contribute to identifying sustainable agricultural practices that will support them in safeguarding natural resources and promoting their economic development and livelihoods.

Part II. Project Justification

1a. Project Description

1a. Project Description.

a. Global environmental problems, root causes and barriers

Lake Naivasha Environment

The Lake Naivasha Basin (LNB) is located in the eastern Rift Valley in Kenya and encompasses about 3,400 km2, including the upper water catchment area in the mountains, the middle water catchment area, and the lower catchment area which feeds into the lake (see Figure 1 below). The Rift Valley Catchment Zone, of which LNB is part, has been identified as a sub-national priority hotspot for land degradation in Kenya based on data and assessments of the three indicators of Land Degradation Neutrality (LDN)[1][1],[2][2]: land cover, land productivity, and soil organic carbon.[3][3]Hotspots, areas severely affected by land degradation according to baseline datasets, were identified by a Working Group to guide intervention efforts in the implementation of transformative projects[4][4]. This means LNB, and the Rift Valley Catchment Zone at large, are high-value priority areas in Kenya for achieving LDN, to ?achieve a balance between anticipated land degradation (losses) and planned positive actions (gains), in order to achieve, at least, a position of no net loss of healthy and productive land by 2030?[5][5]. Kenya?s LDN Target Setting Report highlights agroforestry, rehabilitation through sustainable land management practices, among others as corrective measures to not only achieve LDN but also improve livelihoods, biodiversity conservation and resilience to climate change[6][6].

Proposed project interventions will take place in both the upper catchment in Nyandarua county under the jurisdiction of the Wanjohi and Kianjogu Water Resources Users Associations (WRUAs), and around Lake Naivasha itself, in Nakuru county, under the jurisdiction of the Naivasha WRUA. River Kianjogu (in Kianjogu WRUA) and River Wanjohi (in Wanjohi WRUA) are the main tributaries of River Malewa; the main source of water influx into Lake Naivasha (80% of the water that feeds Lake Naivasha comes from River Malewa). The majority of the targeted area falls in the Upper zone of the catchment (>2500 m above sea level) while a small percentage falls in the middle zone of the catchment (2000 m-2500 m above sea level). The proposed project area is highly prone to erosion due

to steep gradients compounded by poor land use practices and therefore is a key area for reducing land degradation. As land restoration and sustainable land management efforts are potential solutions to improve degraded land, this project stands to contribute to the country?s sub-national LDN goal of achieving LDN in the Rift Valley Catchment Zone by 2030 compared to 2015 levels and an additional 9% of the zone has improved (net gain)[7][7]. Kenya is one of over 120 countries to date that have engaged with the United Nations Convention to Combat Desertification?s (UNCCD) LDN Target Setting Programme which includes setting national baselines, targets and measures to achieve LDN to contribute to Sustainable Development Goal (SDG) 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?[8][8]. Land degradation threatens sustainable development, food security and the country?s ability to meet growing demand for environmental services[9][9]. Because land is the natural resource upon which most of Kenya?s economic activities depend, LDN has been highlighted as the ?cornerstone of achieving all Sustainable Development Goals in Kenya? and also as a ?catalyst to Green Economy as it promotes restoration of degraded lands and other sustainable land management practices?[10][10].

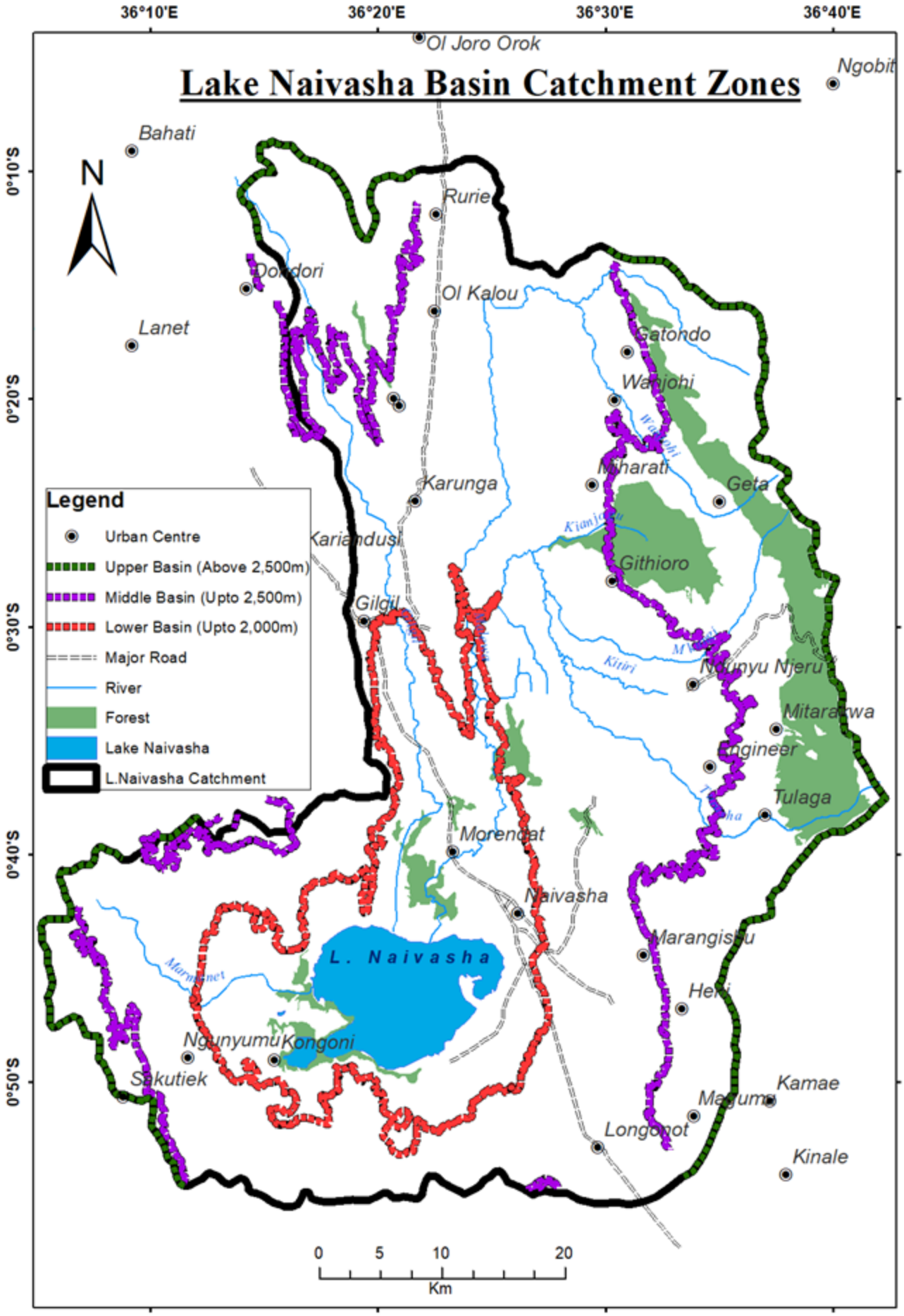
Lake Naivasha Basin Catchment Zones
36°10'E
36°20'E
36°30'E
36°40'E
0°10'S
0°20'S
0°30'S
0°40'S
0°50'S
N
Ol Joro Orok
Ngobit
Bahati
Rurie
Dokdori
Ol Kalou
Lanet
Gatondo
Wanjohi
Miharati
Geta
Karunga
Kariandusi
Githioro
Gilgil
Kitiri
Ndunyu Njeru
Mitaraiwa
Engineer
Tulaga
Morendat
Naivasha
Marangishu
L. Naivasha
Hell
Ngunyumu
Kongoni
Sakutiek
Kamae
Magumu
Longonot
Kinale
Legend
Urban Centre
Upper Basin (Above 2,500m)
Middle Basin (Upto 2,500m)
Lower Basin (Upto 2,000m)
Major Road
River
Forest
Lake Naivasha
L.Naivasha Catchment
0
5
10
20
Km

Figure 1. Lake Naivasha Basin Catchment Zones

Lake Naivasha is one of the two freshwater lakes in the Kenyan part of the Rift. The key values provided by LNB are globally significant biodiversity, and provision of water and fertile soil. In 1990, the LNB was designated as a wetland of international importance (See Figure 2)[11][11]. The freshwater supports a rich ecosystem with hundreds of bird species, papyrus fringes filled with hippos, riparian lands (1,892m abmsl. contour) where waterbuck, giraffe, zebra and various antelopes graze, dense patches of acacia forest with buffalos, bushbuck and swampy areas where waterfowl breed and feed. The lake ecosystem supports about 400 bird species, and hence is an Important Bird Area[12][12]. In addition to its importance as home to exceptional biodiversity, riparian land in the lake ecosystem provides myriad benefits, including ecological functions and services such as carbon storage and climate change mitigation, water purification (filtration of sediments and buffer to pollutants), flood control and mitigation. However, the riparian land is under immense pressure due to anthropogenic activities within the Naivasha headwaters. Uncontrolled agricultural activities by local farmers have degraded the land and destroyed the integrity of the lake ecosystem, reducing its biodiversity levels. Proliferation and invasion by exotic species, exacerbated by pollution from farming upstream, have resulted in a decline in biodiversity of Lake Naivasha.

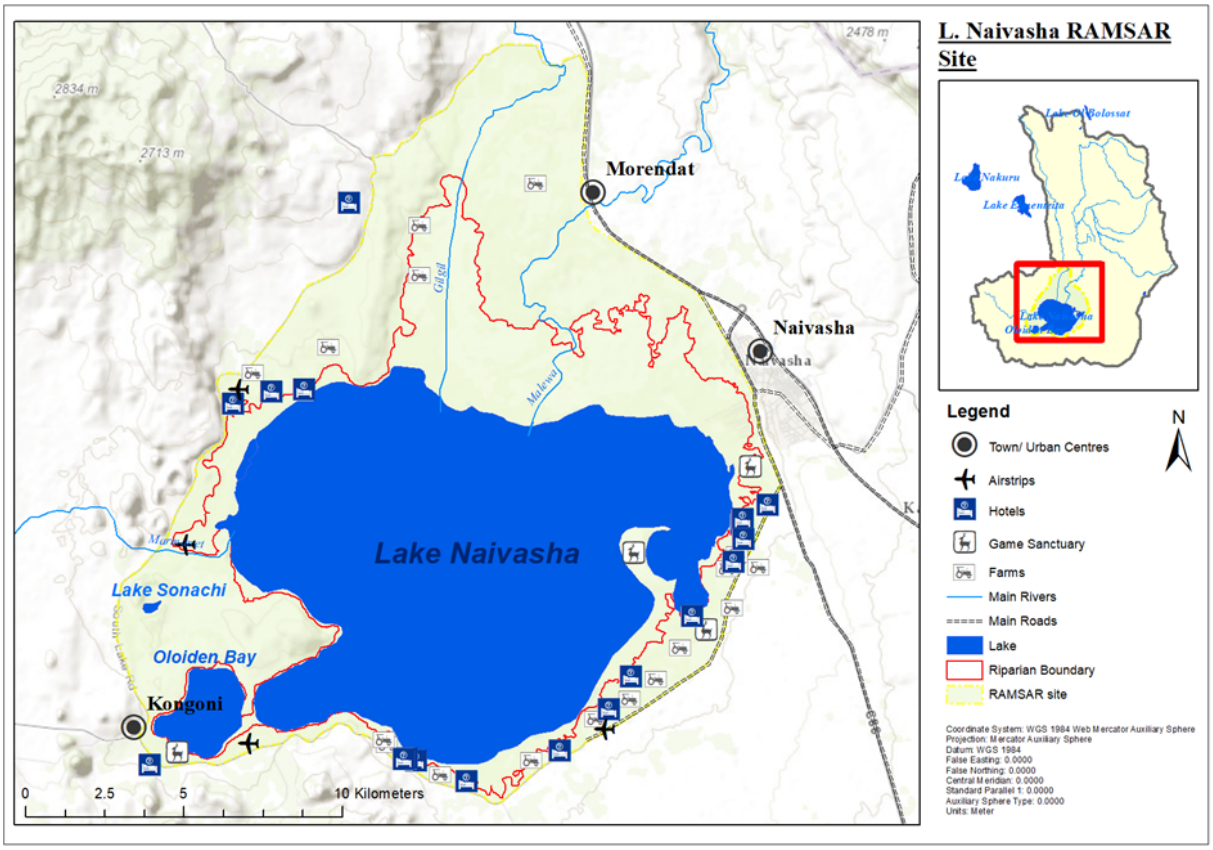

Figure 2. Lake Naivasha Ramsar Site

Seventy percent (70%) of the rivers that feed LNB originate from the Aberdares Forest. The Aberdares is a tropical forest with over 7,788 plant species, globally significant wildlife such as elephants, black rhino, and mountain bongo, and over 250 species of both endemic and migratory bird species[13][13]. The forest covers over 250,000 ha. and one of the main water towers in Kenya. It forms part of the upper catchments of Tana River, Kenya?s largest river as well as Athi, Ewaso Nyiro (North) and Malewa rivers. The forest serves as a catchment for the Sasumua and Ndakaini dams which provide most of the water and energy resources for Kenya?s capital, Nairobi (Lambrechts, Woodley, Church, & Gachanja, 2003).

The basin is characterized by fertile soils and freshwater that supports livelihood activities for the communities living in the area. The fertile soils and availability of water support growing of food crops, horticulture farming and floriculture. The lower basin supports one of the most expansive horticultural industries in this part of the world which employs more than 250,000 people[14][14]. The horticulture industry is among the fastest growing industries in Kenya. In 2016, the flower sector

contributed Sh70.8 billion accounting for 70 percent of earnings from the horticultural sector[15][15]. LNB accounts for more than 50% of the country?s cut flower exports. The lake plays a critical role in the groundwater system[16][16] which supports irrigation around the lake basin. Additionally, the Naivasha area is steadily rising as a conference tourism destination in the country[17][17].The availability of many hotels, homestays and campsites at all budgetary levels, as well as the proximity to Nairobi and natural sceneries such as Hells Gate, Mount Longonot, the Aberdares Game Reserve, Lake Nakuru Game Park, and Menengai crater, attract many local and foreign visitors.

Environmental Problem and Causes

Loss and degradation of soil, water and habitat in the LNB causes land degradation, loss of biodiversity and reduces provision of ecosystem services. This is caused by a number of key threats:

Poor agricultural practices by small scale farmers in the upper catchment is a major threat to the lake. Poor farming practices have led to siltation of streams and rivers in the headwaters and the lake. In addition to poor agricultural practices, overgrazing and illegal logging have caused land degradation and deforestation in the lower, middle and upper catchments, particularly riparian zones around streams in the headwaters and around the Lake itself. Illegal logging, mostly by external sawmillers with support from locals, has been driven by the high demand for timber, charcoal and fuelwood, and particularly targets indigenous trees. Clearing of the indigenous bush to pave way for farmlands and the encroachment of forests and riparian land also contribute to loss of land cover. Population growth and shrinking of land sizes have led people to encroach on riparian land by cultivating in the steep slopes especially in the middle and upper catchments. Pollution of water bodies from farmlands, settlements and industries within the catchment is causing significant problems for the health of Lake Naivasha and the livelihoods of people who depend on resources from the lake. In addition, the quality of potable water is also poor due to large amounts of fluoride.

Over-abstraction of water resources to support development activities is posing a threat to the lake. Some of the proposed infrastructure development such as an international industrial park and a new dry port will require vast amounts of water which will be drawn from the lake. There is a sharp decline of water flow levels in the main rivers (Gilgil and Malewa) that drain into the lake. The increasing demand for water driven by economic development, a growing population and inadequate monitoring and enforcement of the policy framework that safeguards the ecological system of the lake continue to cause a decline in the capacity of the lake to provide its critical ecosystem services.

Development and land use change exacerbated by inadequate consideration of biodiversity and soil conservation mitigation measures in County Integrated Development Plans is a threat. For instance, geothermal energy development in Hells Gate National Park has driven some species out of the ecosystem. The park hitherto was Kenya's only nationally protected nesting colony of the

Endangered Ruppell's Vultures. Wildlife migratory corridors have been blocked between Aberdares and Eburu Forests due to increasing urbanization. National and county governments have development plans in place, particularly large infrastructure projects including plans to develop Hells Gate National Park into an Industrial park, the proposed construction of Malewa Dam, and the construction of an inland port and Standard Gauge Railway (SGR) in the area, that without adequate mitigation measures, threaten the biophysical environment.

Impacts of climate change continue to threaten the ecological systems of the lake basin since fluctuation in rainfall patterns affects farming and production cycles. There is also natural loss of vegetation due to prolonged drought hence loss of biodiversity. The occurrence of El Nino and flash floods lead to heavy siltation of watercourses and the lake have resulted in disturbance and loss of soil and biodiversity.

Barriers that Need to be Addressed

Key barriers to conservation and management of the LNB include:

1. Inadequate coordination and lack of collective accountability across sectors of water use upstream and downstream and lack of basin-wide coordination hampers conservation and creates competition for resources. Land use changes and degradation, particularly from inefficient and unsustainable agricultural practices upstream are the main source of water stress, affecting both the availability and quality of water downstream, which leads to conflict over a declining, finite water resource. This factor is specifically relevant in the context of the existing PES scheme, which is hampered by an absence of more systematic accountability between downstream ?buyers? and upstream ?sellers?.

2. Inadequate institutional coordination: Efforts to protect, conserve and sustainably manage natural resources in LNB have not been effective due to inadequate and, in many cases, lack of appropriate coordination among stakeholders, both among government entities and among county/national development plans. Conflicts arise due to duplicated mandates over resource protection and management in various agencies, as is the case with regulations on riparian lands and water quality between the National Environment Management Authority (NEMA) and Water Resources Authority (WRA). At the field level, there is a lack of or weak coordination of operations, including in conservation initiatives (carried out by CSOs) and incoherent/unfocused planning between land planning and management authorities. There are various development projects taking place in the LNB, and data and information sharing has been highly inadequate. Despite the efforts by Imarisha Lake Naivasha, there is a limited capacity of the organization to coordinate different actors within the basin effectively and efficiently to achieve maximum impact.

3. Financial and market opportunities are limited for smallholder farmers. The absence of premium prices for or other forms of financial incentives (e.g. reduced costs of production, transport, marketing etc.) for conservation-friendly farming limits the uptake of sustainable agricultural practices. Also, access to finance for inputs, supplies (seeds, materials, labour) is an important inhibitor preventing this

uptake. Unless there is a clear benefit in terms of either net financial returns or increased marketability, farmers may not be inclined to change their methods. Financial incentives are also lacking for some of the upstream conservation and restoration measures. The existing PES scheme has established a mechanism for allowing downstream users to contribute to upstream management and restoration. However, the scheme has its limitations in terms of the amounts of funding that it is able to generate, as well as the specific incentive mechanisms for action by upstream farmers and community groups. A further description of the PES scheme and its challenges is presented in the baseline section.

4. Capacity for sustainable agriculture is lacking at the community level. Smallholder farmers in the upper basin lack knowledge of sustainable agricultural practices that improve livelihoods and conserve the natural resources upon which they depend. Farmers lack access to, or adoption of, appropriate technologies for sustainable agriculture, such as soil conservation, water harvesting, post-harvest handling and storage technologies. Farmers use seeds from previous harvests and uncertified farm inputs and lack resources and know-how. The quality of the produce ? owing to poor farming practices and post-harvest handling ? prohibits access to reliable and competitive markets such as hotels, chain stores, institutions or export.

5. Related to the previous barrier, the limited capacity of extension services to support farmers in the shift from their current unsustainable agricultural practices to sustainable agri-business production, including appropriate land use practices, is major impediment, posing not only threats to the environment and its resources but also to food security, nutrition needs and overall poverty levels in the region (Nyandarua County is leading nationally in the percentage of population who are stunted).

6. Capacity for implementing the Water User Associations (WRUAs) and Community Forest Associations (CFAs) participatory Sub-Catchment Management Plans (SCMPs) and Participatory Forest Management Plans (PFMPs) respectively is limited. The associations established have necessary governance structures in place and enabling environment but are less effective in implementing their mandates due to (i) the absence of clearly defined mitigation protocols and methods for the management and restoration of lands; and (ii) inadequate and/or lack of funds for the implementation of such measures.

b. Baseline scenario and associated baseline projects

A number of initiatives generate a baseline for this proposed GEF project.

<u>LNB stakeholder engagement and coordination</u>

Imarisha Lake Naivasha is coordinating the implementation of the LNB Integrated Management Plan 2012 ? 2022 (LNBIMP), which proposes several interventions to promote environmental conservation, sustainable development and enhance livelihoods of stakeholders within the basin. The LNBIMP is an official Government-validated plan which brings together various institutions and local and regional stakeholders, whereas Imarisha is a formal Government Institution operating under the Ministry of Environment and Forestry. Currently, Imarisha is implementing projects that are mainly funded by the

Government of Kenya (GoK) on rainwater harvesting as well as the planting of tree seedlings in schools mainly in Ndabibi and Eburu forest. The proposed GEF project will seek to build on the current investments by Imarisha Lake Naivasha Board to support the establishment of information and data sharing platforms for purposes of decision making and learning.

WWF-Kenya, through the Government of Sweden funded Leading the Change programme, supports inclusive and participatory management of natural resources, communities control decisions and exercise their responsibility for ensuring that key ecosystems and habitats are sustainably managed. The project seeks to amplify community voices and action in conservation in both LNB and Mara basins. The project has a budget of USD 2,244,783 and is being implemented as from 2018-2022. Specific objectives of the project are to i) empower civil society organizations in influencing planning, decision making and good governance of natural resources, and ii) support communities in influencing policy and decision-making processes for improved rights to natural resource management. Currently, the focus of the project has been on empowering and building the capacity of Civil Society Organizations. The proposed project will build on these efforts to also enhance the capacity of the Imarisha Lake Naivasha Board to coordinate various actors in the basin as well as create platforms for knowledge and experience sharing within the basin.

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Forest Landscape Restoration (FLR)

The WWF ?Forest Landscape Restoration (FLR) in East Africa? project is a five-year project (2020-2024) funded by BMZ Germany. It is anchored on the AFRI100 initiative supporting Kenya?s Commitments in the Bonn declaration of restoring 5.1M Ha. It aims at reducing land degradation through afforestation in farms, gazetted forests and Riverine restoration, through three major components; supporting Policy processes that will enhance restoration, on ground restoration and improving livelihoods for forest adjacent communities. The project builds on Green Horticulture at Lake Naivasha Project (2018-2021) with the following outcomes and outputs:

? Outcome 1: FLR implementation in Kenya is supported by effective policies, strategies, legislations and guidelines and enhancing the development and implication of the target groups.

? A national civil society FLR Alliance is in place and informing policy making processes.

? A Forest Landscape Restoration strategy for Nyandarua county is in place.

? Outcome 2: Income from forestry and agriculture value chains is increased by 20% for at least 400 community members in Nyandarua County.

? Target communities have reliable access to markets and value-addition facilities for forestry and agricultural products.

? 500 ha Bamboo and mixed forest and 100 ha of degraded farmland are restored and sustainably managed by the communities through i.e., an effective business model for bamboo benefiting communities.

WWF-Kenya is implementing the Lake Naivasha Basin Reforestation Project 2017-2024, that aims to establish 1,000 hectares of new forest area by 2020. This project is registered under the Gold Standard funded as an insetting project by Coop Switzerland. Leveraging on a multi-stakeholder approach the project engages commercial flower growers and smallholder farmers to not only promote tree growing but also rehabilitate natural vegetation and improve water resource management. Currently, the project has recruited 705 farmers and 183 farmers have already been trained on forest management systems and the requirements of the Gold Standards. The project has so far supported the restoration of 960 ha of land in the basin.

Finally, NETFUND through financing from the Africa Development Bank is supporting the implementation of the Green Zones Development Support Project Phase II. This 50M US$ AfDB-funded project officially started in 2018 and will run until 2025 (although the project has been facing delays in implementation, with only 6M US$ disbursed so far). The project covers 15 counties across the country, and includes specific work related to the rehabilitation of forest landscapes and sustainable agriculture in the Nyandarua and Nakuru counties. Specifically, in terms of forest landscape restoration in the LNB, the project aims to restore a total of 1,600 ha of forests through active rehabilitation, and bring an additional 10,000 ha of forest land in the LNB (South Kinangop Forest Station) under improved management and protection for natural regeneration. The restoration activities will be accompanied by the establishment of farmer forestry field schools, the establishment of community timber associations, as well as learning activities (exchange visits).

The above-mentioned projects and initiatives will form an important basis for the forest landscape protection and restoration activities planned under Component 3 of the proposed project.

Sustainable agriculture

The project Green Horticulture at Lake Naivasha (GOALAN) presents an integrated approach for a shift towards sustainable production by Micro Small and Medium Enterprises (MSMEs) in the horticulture sector with a focus on youth in agriculture and a shift towards sustainable consumption by consumers, public institutions, retailers and hotels. The project has two main objectives:

? By 2021, at least 140 MSMEs in the horticulture sector have adopted sustainable consumption and production practices along the supply chain; have improved access to finance and untapped market opportunities demonstrating the business case for larger uptake within Kenya.

? By 2021, sustainable consumption of certified horticultural products in the LNB (Nakuru, Nyandarua and Narok Counties in Kenya) has increased by 10%.

The project has so far trained 190 MSMEs on sustainable production and consumption practices, out of which 184 have evidenced uptake of the practices and 69% have accessed credit facilities for sustainable production. Certification of 140 MSME for the KS1758 standard is currently ongoing. The project has also supported the establishment of a ?Green Shop? for sustainably farmed produce, in association with the Lake Naivasha Basin Sustainable Horticulture Farmers group. The Green Shop

functions as a cooperative structure for marketing produce from participating farmers to local and regional buyers (including hoteliers, tourist operators, flower farms etc. present in the region), therewith cutting the cost of intermediate trading agents.

The proposed GEF project will build on the foundations established by the GOALAN project, in particular

? Capacity building for farmers on sustainable production practices

? Facilitating market dialogues with potential buyers (hoteliers, supermarket, processing company, Government institutions)

? Facilitating access by farmers to micro-finance institutions and other financial service providers, including the existing PES scheme

? Further operationalizing the ?green shop? to serve as a local trading platform (for details of what the project will support, see description of component 2), enabling farmers to sell their sustainably produced horticulture products directly to consumers

As part of the before-mentioned Green Zones Development Support Project, NETFUND is supporting specific work related to the development of sustainable agriculture practices in the Nyandarua and Nakuru counties. Specifically, in terms of activities in the LNB, the project aims to promote sustainable horticulture production (mainly potatoes, maize and beans) through agroforestry systems, covering a total of 900 ha of land in the Nyandarua County, in addition to 400 ha of plantation forests. The Green Zones project provides the main baseline project associated with the proposed project and a principle source of co-financing for the on-the ground work under component 3 of the project.

In addition, the Njabini Agricultural Training Centre (ATC), whose main role is to facilitate the transfer of technologies through centralized training, demonstrations and carrying out trials, is implementing several initiatives to support farmers within the basin. Currently, the center is undertaking the following activities within the basin: training farmers on livestock, crop and fish farming, access to facilities for stakeholders in the agricultural field, extension services as well as collaborating with local universities on research. The proposed project will build on the activities conducted by the center to support training farmers on sustainable agriculture practices including training modules and demonstration farms.

The County Government of Nakuru, through the Department of Agriculture Livestock and Fisheries, is implementing several initiatives within LNB, including extension services to horticultural farms on the safe use of pesticides as well as soil sampling and testing to inform areas for specific crop production. The county is implementing the National Agriculture Rural Inclusive Growth Programme (NARIGP) funded by World Bank from 2017-2022. The project supports micro-projects which are grants supporting households to enable them to support livestock production e.g. fodder, zero-grazing units, sustainable land management to conserve degraded land areas e.g. planting trees. The project has supported 8 Community Driven Development Committees (CDDCs) to strengthen the ability of

community-based institutions to improve their agricultural productivity, food security, nutrition status, and market linkage.

Payment for Ecosystem Services

A Payment for Environmental Services (PES) system has been in place in LNB since 2007, when it was originally introduced by WWF and CARE in Kenya. Under this scheme, downstream water users (the ?buyers?) provide financial incentives to upper-catchment land-managers (the ?sellers?) for adoption of sustainable land-management systems (contour terraces reinforced with tree seedlings and riparian buffer strips) designed to improve the quality and flow of water in the catchment by (i) reducing erosion, and (ii) increasing on-farm water infiltration to slow the flow of water from farms to waterways. The PES scheme has scaled from 1,200 farmers in 2008 to 3,700 farmers today. Management responsibility has meanwhile been handed over to the local water resource users associations (WRUAs) which collect money (approximately 11,500 USD annually) from the buyers and distribute those funds to upper-catchment farmers. Incentives are provided in-kind, in the form of conservation materials and training, alongside a small financial incentive paid by way of voucher for agri-inputs with a face value of KSH 2,500 (appr. 22.5 USD) per farmer. The buyers of the ecosystem service include: horticulture farms, hoteliers, geothermal and land development groups/large land owners; and Water Service Providers, all represented by Lake Naivasha's Water Resource Users? Association (LANAWRUA). Contributions into the scheme are voluntary.

Monitoring and evaluation conducted by the upstream Water Resource Users? Associations has demonstrated the system's success in providing improved land productivity for farmers. However, in part due to the COVID crisis, buyers have become less forthcoming into paying into the PES scheme in recent time. A recent assessment of the PES scheme[18][18] highlighted a number of constraints, in particular, the Willingness-to-Pay study conducted as part of the assessment estimated the maximum opportunity for local payments into the scheme to top at USD 30-50,000 annually. In its current form, and even with increased payments, the Naivasha PES project would therefore fall far short of meeting demand from the estimated the 180,000 smallholders active in the Lake Naivasha basin.

A key recommendation resulting from the assessment is, therefore, that the PES mechanism needs to be adjusted and alternative funding arrangements (for example revolving credit facilities) established if the mechanism is to cope with demand from upper-catchment smallholders for incentives for improved land-management. Direct payments have proven an expensive and unstable form of incentive. A background check with ?sellers? (small-holder farmers) confirmed interest into such revised PES system.

Under component 2, the proposed project will support the review and design of such revised PES scheme as a basis for sustainable financing for land and water conservation in the LNB.

Water resources management

There are 12 WRUAs and 3 CFAs in Naivasha basin actively participating and taking responsibility with regard to sustainable basin management. In that regard, the WRUAs and CFAs, in close collaboration with the Water Resources Authority (WRA) and Kenya Forest Service (KFS), have developed respective Sub-Catchment Management Plans (SCMPs) and Participatory Forest Management Plans (PFMPs) for management of areas within their jurisdictions. However, these have not been effectively implemented due to inadequate funding.

The Water Resources Authority (WRA) through the Water Resource Users Associations (WRUA) is implementing several initiatives within the basin. For example, the Mkungi Kitiri WRUA, with support from WWF and Water Sector Trust Fund (WSTF), is engaged in the rehabilitation of riparian land. The Mkungi Kitiri WRUA has also engaged 35 farmers in phase two of the Afforestation Project which focuses on planting 42,000 tree seedlings as well as the establishment of tree nurseries with 300,000 seedlings. The group is currently in the process of starting other income-generating activities such as trout fish farming.

The proposed project will build on the current interventions undertaken by Wanjohi and Kianjogu WRUAs, as well as related CFAs within the basin to support them in the implementation of priority areas in their sub-catchment plans, as part of the overall LNBIMP.

NETFUND is developing the project Securing water resources for vulnerable communities in Nakuru, Narok, Kajiado and Bomet Counties through integrated river basin management approach. The project is intended to be funded jointly by the African Development Bank and Green Climate Fund and is estimated at USD 55,000,000 for 7 priority river basins in South Ewaso Ngiro, Mara, Mau and Lake Naivasha ecosystems. The project will support innovative river basin management solutions in the targeted basins, including:

1. Restoration and rehabilitation of degraded riparian lands, springs, wetlands and forests within the targeted river basins

2. Promotion of innovative water harvesting, storage, efficient use technologies for farmers and institutions within the basins

3. Development of management plans for prioritised river basins lands and wetlands developed and implemented through multi-stakeholder engagement

4. Promoting sustainable production and consumption practices by small holder farmers within the basins

5. Awareness creation and sensitization on the integrated river basin management and conservation practices

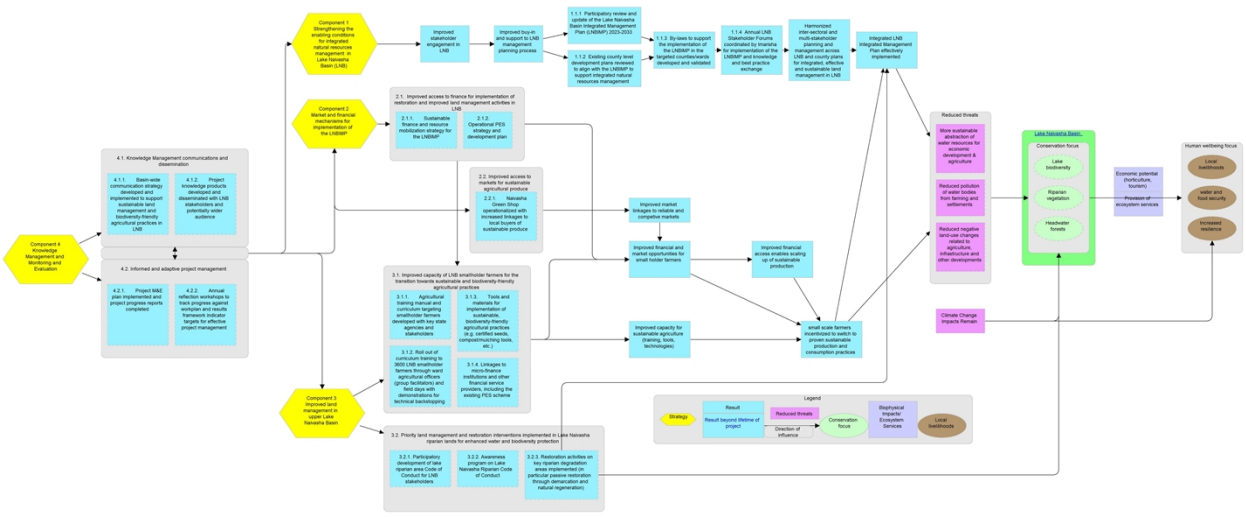
6. Establishing an awards scheme to recognise and reward best practices and innovations in soil and water conservation

In addition, the project aims to enhance information and knowledge management systems for river basin management, as well strengthening the institutional capacities for integrated river basin management. The proposed project for GEF funding will lay the basis for the larger investment by supporting the review of the Lake Naivasha Basin Integrated Management Plan, and related County Development Plans, as a basis for setting priorities and engaging stakeholders, by establishing key financial and market incentives for farmers and community groups to engage in restoration and improved management approaches, as well as by establishing the necessary methods and arrangements for effective implementation.

Note: As the design of this project is in early stages of development it has as yet not been included in the co-financing estimates. If funding gets confirmed during the project design process, this may be revised.

c. Proposed alternative scenario

Proposed Project Theory of Change



The high-level theory of change of the proposed project is that if the LNB community, sectors, and counties can be brought together to agree and take joint responsibility for the management of the basin through participatory planning, by-laws and multi-stakeholder engagement forums, and if the impacts from smallholder agriculture in the upper catchment on the lake can be reduced through the introduction of improved farmer techniques, accompanied by improved access to finance and markets for sustainable production, and the institutionalization and implementation of landscape restoration and management measures by riparian land users, then the overall threats to the LNB and its associated ecosystem services will be reduced.

The project objective is to restore forest ecosystems and reduce land degradation in the LNB catchment for increased protection of Lake Naivasha?s water resources, biodiversity, and associated ecosystem services to support the local and national economy.

Component 1: Strengthening the enabling conditions for integrated natural resources management in Lake Naivasha Basin

Under Component 1, the project will address the barriers related to (i) inadequate coordination and lack of collective accountability across upstream and downstream sectors of water use; and (ii) the poor coordination between institutions responsible for various aspects of conservation and sustainable management of natural resources in the LNB. In this regard, the project will firstly conduct a participatory review and update of the LNBIMP using a multi-sectorial and gender sensitive approach, which will be institutionalized through integration into the County Development Plans. Secondly, capacity for implementation of the Plan, including the functioning of LNB multi-stakeholder coordinating entity Imarisha Lake Naivasha, will be strengthened through the organization of annual LNB stakeholder forums for enhanced coordination between stakeholders in relation to the implementation of the LNBIMP, including increased knowledge and best practices exchange. The LNBIMP and other outputs under Component 1 will be the basis for targeted interventions under Component 3, which are geared towards facilitating the implementation of priority activities defined under the LNBIMP.

The anticipated outcomes and outputs under this component include:

Outcome 1.1: Harmonized inter-sectoral and multi-stakeholder planning and management across LNB and county plans for integrated, effective and sustainable land management in LNB

The project will support the review of the integrated framework for environmental management and development within LNB entailed in the LNBIMP, the current version of which is set to expire in 2022. This process will be led by Imarisha Lake Naivasha. Part of this review process includes taking stock of progress and lessons learnt in the implementation of the Plan, as well as an analysis of current trends and planned developments in the basin. To support this, the project will facilitate collection, inputting and management of data and information on LNB in an online repository database to be hosted by Imarisha Lake Naivasha. Imarisha Lake Naivasha will lead a participatory process with LNB stakeholders to review, update and eventually socialize the LNBIMP, including its related Lake Naivasha Riparian Management Plan. Key stakeholders to be engaged in this process include CFAs, WRUAs, small-scale farmer groups, private sector (commercial flower and horticulture growers, tourism operators, and innovators), pastoralist groups, self-help groups, and riparian land owners associations, besides the national and county government agencies in the basin: the Kenya Wildlife Service, Kenya Forest Service, Water Resources Authority, National Environment Authority, Kenya Generation (geothermal power generating company), and Kenya Plant Health Inspectorate (KEPHIS). Implementation of the Plan will be ensured through the development and validation of relevant by-laws (as needed) in the targeted counties/wards, as well as through alignment of the existing county development plans with the LNBIMP.

Output 1.1.1: Participatory review and update of the Lake Naivasha Riparian Management Plan.

? Consultations with key stakeholders to build support for the Plan and alignment with County Plans and priorities.

? Collection of data on key socio-economic trends and developments in the basin (e.g. land-use changes, infrastructure developments, agricultural development, urban and rural development) and their potential threats to the environment (e.g. status of various biota, water resources, forest cover).

? Inputting and management of data and information on LNB in an online repository database hosted by Imarisha Lake Naivasha.

? Update the LNBIMP (including its Riparian Plan).

? Socialize the Plan with key Basin stakeholders.

Output 1.1.2: Existing county level development plans updated to align with the LNBIMP to support integrated natural resources management.

? Participatory review of existing county development plans in terms of alignment with the LNBIMP.

? Integrating key policy and action areas in county development plans to ensure alignment with the LNBIMP.

? Validation of updated county development plans through relevant political processes.

Output 1.1.3: By-laws to support the implementation of the LNBIMP in the targeted counties/wards developed and/or updated (as needed).

? Review and where needed development/updating of relevant by-laws to support the implementation of the LNBIMP at county and ward level, in particular to regulate the mandate and functioning of local natural resource management bodies such as the WRUA, CFA, farmers? groups, and the Lake Naivasha Riparian Associations (LNRA).

? Participatory monitoring the implementation of the by-laws.

Output 1.1.4: Annual LNB Stakeholder Forums coordinated by Imarisha for coordination implementation of the LNBIMP and knowledge and best practice exchange.

? Facilitate Annual LNB stakeholder?s forum including WRUAs, CFAs, farmers? groups, Lake Naivasha Basin Umbrella WRUA, LNRAs, Lake Naivasha Basin Landscape Association (LANABLA), Imarisha Lake Naivasha, WWF, NETFUND, private sector, etc.

? Dissemination/sharing of information on key environmental issues (such as emerging infrastructure developments and potential threats, status of various biota, peer-reviewed articles on Lake Naivasha, lessons on NRM best practices) to key stakeholders including the private sector, academia, communities, development partners, CSOs, media and the governments.

Component 2: Market and financial mechanisms for implementation of the LNBIMP

Under component 2, the project will address challenges related to the absence of adequate financial incentives and market opportunities for smallholder farmers in the LNB to change to more sustainable farming methods, as well as the absence of adequate finance for implementation of concrete restoration and management actions as defined in the LNBIMP. In particular, the project will support the development of a sustainable finance and resource mobilization strategy for the LNBIMP. Secondly, the project will support a review of the existing PES scheme, based on the recommendations from the recently concluded review. Finally, the project will support the development and strengthening of market opportunities for sustainable agricultural products, among others through the Naivasha Basin Sustainable Horticulture Farmers group and related Green Shop.

The anticipated outcomes and outputs under this component include:

Outcome 2.1: Improved access to finance for implementation of restoration and improved land management activities in LNB

The project will firstly support the development of a sustainable finance and resource mobilization strategy for the LNBIMP. The development and implementation of this plan will be led by Imarisha Naivasha, with the support of NETFUND. As a critical part of this strategy, the project will support the restructuring and operationalization of the existing PES scheme, based on the recommendations of the PES review study18. This review will be undertaken by the Lake Naivasha Water Resource Users Association, with close oversight provided by NETFUND, and is expected to consider and explore a number of options, as outlined below:

#	Name	Description	Implementing Partner/s
1	Traditional PES	Contracts which reward land managers for either (i) supply of ecosystem services to an agreed level, or (ii) adopting land-use practices which improve supply of ecosystem services. Status quo. Deployment focused on community/public-owned land.	LANAWRUA/Upper-catchment WRUAs
2	Climate-smart lending	Commercial credit agreements between agri-lenders and farmers, where credit access is conditional on implementation of on-farm sustainable land-management practices.	Financial institutions

3	Sustainable produce-offtake agreements	Outgrower off-takers include requirements for sustainable land management practices in the terms of their off-take agreements. Please note this is different to the current scheme where certain hotels buy sustainable catchment produce.	Naivasha-based outgrower producers
4	Eco-credit	Community groups manage a community-owned revolving credit facility and are able to access loans conditional on participation in local ecosystem restoration and protection activities.	Eco Finance, WRUAs and VSLA equivalents

Other modalities may also be considered as part of the review[19][19]. The revised PES scheme will be developed in close collaboration with private sector actors operating in the basin (principally horticulture producers, hoteliers and conference facilities) as well as financial institutions. To operationalize the scheme, the project will support the development of new products (e.g. climate-smart lending facility, sustainable produce offtake agreements and eco-credits) through the implementation of a communication and marketing plan to secure private sector participation and investment into the facility. The project will also investigate the options and modalities for establishment of a basin investment fund to facilitate the deployment of PES transactions. The project will benefit, in this regard, from the capacity and experience resting with NETFUND.

Output 2.1.1: Sustainable finance and resource mobilization strategy for the LNBIMP

? Commission a study into potential mechanisms for ensuring sustainable finance and resource mobilization for implementation of the LNBIMP, including Imarisha.

? Organize a virtual donor and investor conference to attract financial investments into various aspects of the LNBIMP.

Output 2.1.2: Restructured and operational PES

? Participatory development and restructuring of the revised PES operational strategy, including development of new products (i.e. climate smart lending, offtake agreements and eco-credits)

? Development and roll-out of PES communications strategy and marketing products to attract participation and investments downstream ?buyers? and other investors

? Opportunity/viability analysis and design for the establishment of a central basin investment fund, under the custodianship of NETFUND, to facilitate the deployment of PES and PES-like approaches in the LNB

Outcome 2.2: Improved access to markets for sustainable agricultural produce

To create market incentives for farmers to change to more sustainable production, the project will provide in-kind support for the continued operationalization of the Green Shop for sustainably farmed produce (established through the GOALAN project, now phasing out), in association with the Lake Naivasha Basin Sustainable Horticulture Farmers group; the Green Shop will provide incentives to farmers to transition to more sustainable farming practices by providing secure access to buyers of their produce. In this regard, the project will build on the market access activities conducted through the GOALAN project, and provide support through facilitating market studies, including a markets survey, developing marketing/promotional products, training on contracting and negotiation skills for small-holder farmers, facilitating meetings and dialogues undertaken with potential buyers, as well as the ongoing KS1750 (Kenya Standards) certification process aimed at increasing the marketability of produce through assurance to buyers of its quality, hygiene and environmental standards.

Output 2.2.1: Naivasha Green Shop operationalized with increased linkages to local buyers of sustainable produce.

? Mapping potential markets for selected products within the LNB and surrounding towns (building on the market survey conducted under the GOALAN project).

? Developing marketing products and supporting marketing events.

? Training and capacity building for Green Shop operators (e.g. on financial administration, contract negotiation, marketing and customer relations, aspects of trading and management).

? Facilitate meetings between the Green Shop and potential suppliers (farmers) and buyers (e.g. conference tourism facilities, processors, retail enterprises) geared towards securing reliable markets.

? Supporting the KS1750 (Kenya Standards) certification process aimed at increasing the marketability of produce through assurance to buyers of its quality, hygiene and environmental standards.

Component 3: Improved land management in upper LNB

In Component 3, the project will address two key barriers: (i) the lack of capacity of farmers in the upstream areas of the basin (Nyandarua County) to apply more sustainable agricultural practices and technologies, and the related weaknesses in extension services for supporting farmers to make the transition toward sustainable agricultural; and (ii) the lack of capacity for implementation of adequate land and ecosystem conservation and restoration efforts.

The anticipated outcomes and outputs under this component include:

Outcome 3.1: Improved capacity of LNB smallholder farmers for the transition towards sustainable and biodiversity-friendly agricultural practices

This project will support smallholder farmers through training and facilitation to adopt best farming practices that enhance soil and water conservation to increase farm production. The project will promote locally affordable, adoptable and replicable technologies that reduce post-harvest losses, based on the principles of conservation agriculture, including:

? Minimal soil disturbance (through reduced or no-tillage) in order to preserve soil structure, soil fauna and organic matter;

? Permanent soil cover (cover crops, residues and mulches) to protect the soil and contribute to the suppression of weeds;

? Diversified crop rotations and crop combinations, which promote soil micro-organisms and disrupt plant pests, weeds and diseases.

In this regard, the project will apply a Train-the-Trainers approach, which includes firstly the development of a training manual and curriculum (output 2.1.1), which will involve key institutions (HCD, KEPHIS, Financial institutions, Country Agriculture Department) in the training of 15 Ward Agricultural Officers (output 2.1.2) - 1 officer per ward in the LNB - as Trainers/group facilitators, and subsequently the roll out the training program to 3,600 smallholder farmers by the Ward Agricultural Officers (WAO). Each WAO would train 3 groups of 20 farmers, two seasonal trainings, during two years of the project (4 training cycles in total). In addition, in every ward there would be a model farm, and field days would be carried out in each ward for technical backstopping for smallholders.

To provide incentives for farmers to switch to sustainable production practices, selected smallholders will be provided with basic tools and materials to implement sustainable land management and biodiversity-friendly agricultural practices (e.g. certified seeds, compost/mulching tools) on their land. In addition, through Component 2, the project will facilitate increased access to finance and markets, through linking smallholder farmers to Micro-Finance Institutions (MFI) and other agribusiness financial services, as well as the existing PES scheme and as by establishing market linkages with local markets through the Lake Naivasha Green Shop.

Through these strategic initiatives, the project will complement and enhance the efforts under the Green Zones Development Support Project (see baseline section), which aims to promote sustainable horticulture production (mainly potatoes, maize and beans). The Green Zones project provides the main baseline project associated with the proposed project and a principle source of co-financing for the on-the ground work under Outcome 3.1 of the project.

Output 3.1.1: Agricultural training manual and curriculum targeting smallholder farmers developed with key state agencies and stakeholders

? Training needs assessment

? Development of training modules (e.g. financial management, sustainable, agro-ecological production, market requirements and product standards)

? Training of LNB ward agricultural officers to act as ToT for the training program as well as related extension services

Output 3.1.2: Roll out of curriculum training to 3,600 LNB smallholder farmers through ward agricultural officers (group facilitators) and field days with demonstrations for technical backstopping

? Delivery of training program (3 groups of 20 farmers per ward)

? Field days with demonstration of practices

? Establish model farms with selected farmers for peer learning

Output 3.1.3: Tools and materials for implementation of sustainable, biodiversity-friendly agricultural practices (e.g. certified seeds, compost/mulching tools, etc.)

? Support selected farmers with materials for conservation agriculture practices, including provision of soil testing, certified seeds, compost/mulching tools

Output 3.1.4 Linkages to micro-finance institutions and other financial service providers, including the existing PES scheme

? Linking smallholder farmers to Micro-Financial Institutions (MFI) to access agribusiness financial services

? Linking smallholder farmers to existing voluntary PES scheme coordinated by LANAWRUA with downstream floriculture sector and hoteliers

? Linking smallholder farmers to the Lake Naivasha Green Shop by encouraging membership of the Lake Naivasha Basin Sustainable Horticulture Farmers group

Outcome 3.2: Priority forest and land management interventions implemented in Lake Naivasha riparian lands for enhanced water and biodiversity protection

Under outcome 3.2, the project will first support the development of a Code of Conduct for LNB stakeholders. The Code of Conduct will delineate the roles and obligations for each stakeholder, including government (through the Water Resources Authority), other stakeholders (Imarisha Lake Naivasha, etc.) and communities in ensuring ecologically, socially and economically acceptable protection and conservation measures to minimize, stop and reverse land degradation and loss of habitat in the LNB riparian lands. The Code of Conduct will serve as a guidance tool for stakeholders with regard to the provisions of the Riparian Management Plan (part of the LNBIMP) the County Development Plans, as well as applicable laws and regulations (including riparian by-laws). The Code will be socialized through an awareness program coordinated by Imarisha and enforced by ongoing co-

financed government efforts. The Code will furthermore serve as a tool for monitoring and enforcement of these plans and regulations by the responsible authorities.

At practical level, the project will support targeted management measures in degraded areas of the riparian zone of the Lake to benefit biodiversity protection. In this regard, the project will enhance and expand the efforts under the Green Zones Development Support Project (see baseline section), which aims to improve protection of 10,000 ha of forest land in South Kinangop Forest Station, in addition to active regeneration work on 1,600 ha of forest land. GEF funding will allow expansion of the area under improved management in Geta (18,870 ha) and North Kinangop (6,812 ha) Forest Stations, which are critical to the conservation of the wider LNB. Specific project activities will include the development of participatory forest management plans; mapping, fencing vulnerable areas (temporary and in cases solar electric fence to keep away wildlife) and training community scouts to undertake monitoring, surveillance (e.g. to prevent livestock from intruding).

Output 3.2.1: Participatory development of lake riparian area Code of Conduct for LNB stakeholders

? Consultations with LNB stakeholders regarding roles and responsibilities in relation to ecologically, socially and economically acceptable protection and conservation measures to minimize, stop and reverse land degradation and loss of habitat in the LNB riparian lands

? Based on these consultations, develop a clear Code of Conduct for LNB stakeholders

? Validation of the Code of Conduct with LNB stakeholders

Output 3.2.2: Awareness program on Lake Naivasha Riparian Code of Conduct

? Socialization of the LNB Code of Conduct through an awareness raising program

Output 3.2.3: Protection and restoration activities on key riparian degradation areas implemented (in particular passive restoration through demarcation and natural regeneration)

? Updating the existing Participatory Forest Management Plans for three target Forest Stations (South and North Kinangop and Geta).

? Provide resources and training to CFAs and WRUAs to mark and peg riparian land for enhanced protection and natural regeneration, where necessary temporarily fencing off vulnerable areas, as well as to improve surveillance and management.

? Restoration of degraded forest areas through collaboration with Kenya Forest Service (KFS).

Component 4. Knowledge Management and Monitoring and Evaluation

This component will establish a strategy for knowledge management and sharing of project lessons in LNB as well as from similar experiences elsewhere in Kenya. In particular, the project will focus on

sharing experiences and lessons on integrated planning processes, such as the County Development Plans developed in other parts of Kenya, from sustainable farming approaches as well as forest landscape restoration. Stakeholder engagement will be carried out to identify appropriate project knowledge products to be developed (such as brochures, pamphlets) and distributed to LNB users at catchment and local community levels, and potentially a wider audience. The project will also deliver specific knowledge management products on the linkage to farmer support as a model for mobilizing finances to farmers through voluntary payments from downstream users. Beyond LNB stakeholders, these knowledge products will also be geared towards informing interventions under the NETFUND Green Zones Development Project in other target geographies, as well as other GEF projects and Government policies. In this regard, Government, through the Ministry of Environment, is putting place a platform for the exchange of lessons and experiences between GEF projects as well as towards relevant Government Institutions. The M&E plan will contribute lessons learned and best practices to inform adaptive management of the project. By making knowledge available to all LNB stakeholders, the project will contribute to the scaling-up and replication of the ecosystem-based management approach and community engagement in sustainable land management and biodiversity, across the key land degradation hotspot catchment zones across Kenya. In particular, through NETFUNDs Green Zones Development Support Project, the lessons learnt from the project will be widely spread to other key geographies in Kenya.

Outcome 4.1: Knowledge Management and M&E to inform effective adaptive project management and long-term support for Lake Naivasha Basin

Output 4.1.1: Project M&E Plan implemented and reports ? including annual reflection workshops, project progress reports, results framework, and terminal evaluation ? completed

Output 4.1.2: Project knowledge products (e.g., lessons learned and project stories via brochures, pamphlets) developed and disseminated with LNB stakeholders, other GEF projects and relevant Government Institutions, as well as other stakeholders.

d. Alignment with GEF focal area and/or Impact Program strategies

The proposed project is aligned with the GEF Focal Areas of Land Degradation and Biodiversity.

Objective LD-1-1: Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods through Sustainable Land Management (SLM)

The project is aligned with the Land Degradation focal area focus on maintaining and improving the flow of agro-ecosystem services through sustainable land management. Project activities promoting sustainable land management and production in Component 3 will help to reduce land degradation in the LNB and thereby contribute to achieving the country?s sub-national LDN target for the Rift Valley catchment zone, identified as a land degradation hotspot in the country. In particular, the project will work with local farmers to promote sustainable agricultural practices to reduce the current impacts of fertilizers and run off on the lake, riparian areas, and downstream environment. It will also improve

agricultural production practices and post-harvest handling techniques to sustain food production and livelihoods, as well as implement priority actions to strengthen conservation and management of riparian land and associated ecosystem services. Under outcome 3.1, the project aims to bring approximately 27,500 ha of agricultural lands brought under improved management.

Objective BD-1-1: Mainstream biodiversity across sectors as well as landscapes and seascapes through biodiversity mainstreaming in priority sectors.

Aligned with the GEF 7 Biodiversity priorities, the project will support the mainstreaming of biodiversity into relevant regional development planning, firstly the Lake Naivasha Basin Integrated Management Program and the County Development Plan (Component 1), and secondly into the sectoral plans and approaches around agricultural practices and forest landscape management and restoration (Component 3). In terms of mainstreaming biodiversity, the project will contribute to improved mainstreaming of biodiversity at different levels throughout the 343,245 ha LNB.

e. Incremental cost reasoning and expected contributions

The project will adopt an ecosystem-based management approach to holistically address the drivers of land degradation and biodiversity loss in the LNB.

Baseline	**Proposed Alternative**	**Environmental Benefits**
Coordinated approach towards sustainable land, water and natural resource management in LNB		
? Imarisha Lake Naivasha is coordinating the implementation of the LNBIMP 2012 ? 2022 ? Lack of integration of ecosystem management measures in County Development Plans and priorities, as well as By-laws ? Numerous stakeholder representation groups operate in the LNB, including CFAs, WRUAs, flower firms, hoteliers, development partners, NGOS, and the national and county governments within the basin: Nakuru, Nyandarua, and Narok but are currently not actively coordinating in a systematic way	? Annual LNB Stakeholders? Forum ? Develop and socialize an updated LNBIMP ? Institutionalization of the LNBIMP through alignment with County Development Plans and priorities, as well as the development of By-laws ? Improved implementation capacity through development of a sustainable finance and resource mobilization strategy	Harmonized inter-sectoral and multi-stakeholder planning and management across LNB and county plans for integrated, effective and sustainable land management in LNB leading to improved conservation of the LNB and sustainable flow of the ecosystem services it provides.

Baseline	Proposed Alternative	Environmental Benefits
Sustainable Agriculture		
? The Green Horticulture at Lake Naivasha (GOALAN) project is working with Micro, Small and Medium Enterprises (MSMEs) on sustainable consumption and production practices, and income improvement through provision of green jobs in the LNB upper and middle catchments. ? The Agricultural Training Centre (ATC) is supporting basin farmers through training and extension services ? Nakuru County Government (Department of Agriculture, Livestock and Fisheries) implementing extension services to horticultural farms on safe pesticide use and testing for specific crop productions ? National Agricultural Rural Inclusive Growth Programme gives grants to households to support livestock production ? Basic market access activities conducted through the GOALAN project, including a markets survey, training on contracting and negotiation skills for small-holder farmers, dialogues undertaken with potential buyers, establishment of a Green Shop as well as the ongoing KS1750 (Kenya Standards) certification process aimed at increasing the marketability of produce through assurance to buyers of its quality, hygiene and environmental standards	? Expanded number of smallholder farmers trained on sustainable agricultural practices ? Enhanced market linkages and outlets for farmers, including an operational Green Shop, for their sustainably produced products ? Linkages to financial service providers and schemes to provide financial incentives, including through the existing PES scheme ? Support farmers towards the transition to sustainable horticulture production	In addition to enhancing smallholder farmers? skills in sustainable production and improving livelihoods through value addition, the project will establish market opportunities and financial incentives for the move towards sustainable production, as well as expand the area of land under sustainable agricultural practices in the LNB, enhancing soil and water conservation and contributing to the sub-national LDN goal for the Rift Valley Catchment zone and sustainable maintenance of environmental services of the LNB. The project will complement, in this way, the NETFUND Green Zones project by both structurally addressing capacity building needs, and by expanding the area covered for targeted promotion of sustainable agricultural practices and agroforestry from 1,300 ha as targeted under the Green Zones to project, with an additional 700 ha of agricultural land.
Natural Resources Management in LNB		

Baseline	Proposed Alternative	Environmental Benefits
? Leading the Change: Civil Society, Rights and Environment project: participatory community NRM, sustainable management of key ecosystems and habitats, and support in influencing policy and decision-making processes ? Lake Naivasha Basin Reforestation Project aims to establish 1,150 ha of new forest area by 2025, of which 760 ha. have so far been achieved ? The Water Resources Authority, through the WRUA, is engaged in riparian land rehabilitation, reforestation and income-generating activities	? Code of Conduct for LNB stakeholders established, delineating roles for each stakeholder, including government (through the Water Resources Authority), other stakeholders (Imarisha Lake Naivasha, etc.) and communities, in ensuring ecologically, socially and economically acceptable protection and conservation measures ? Participatory Forest Management Plans updated and priority restoration and conservation activities undertaken in the LNB riparian zones	By working with communities, authorities and CSOs to adopt environmental protection and conservation measures, as well as by supporting the protection and rehabilitation of forests lands, the project will improve riparian lands and forests in the middle and upper catchment in LNB, crucial for globally significant biodiversity and ecosystem services. In this regard, GEF funding will complement planned work under the NETFUND Green Zones project, which aims to improve protection of 10,000 ha of forest land in South Kinangop Forest Station, in addition to active regeneration work on 1,600 ha of forest land. GEF funding will allow expansion of the area under improved management in Geta (18,870 ha) and North Kinangop (6,812 ha) Forest Stations, which are critical to the conservation of the LNB. Moreover, the GEF funds will contribute to a range of strategic interventions that will provide sustainability to this work, by providing a management framework (the LNBIMP and related County Development Plans), a clear Code of Conduct for stakeholders, Participatory Forest Management Plans and by establishing financing and market mechanisms for longer-term sustainability of results.

f. Global environmental benefits

Overall, the project will contribute to:

? Reduced land degradation in the LNB which contributes to Kenya?s goal of achieving Land Degradation Neutrality in the Rift Valley Catchment Zone by 2030 compared to 2015.

? Increased protection of riparian land that supports globally significant biodiversity (including aquatic and bird species and relict wildlife species: buffalo, hippo, giraffe, zebra and several small ruminants).

? Maintenance of ecosystem services and ecosystem health (particularly through reducing pollution to the Lake in the form of pesticide and fertilizer) within and from LNB, to preserve health and status of RAMSAR wetland of International Importance and Important Bird Area.

? Conservation and restoration of forests in the middle and upper catchment, the lungs of the Basin which provide sources of water that support diverse habitats, species, livelihoods and economic sectors.

The proposed project will contribute to three GEF Core Indicators: i) area of land restored; ii) area of landscapes under improved practices; (iii) greenhouse gas emissions mitigated; and iv) number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment.

Core Indicator 3: Area of land restored ? 1,600 ha.

Under Component 3, the proposed project will contribute to the restoration of 1,600ha of forest land through supporting priority restoration activities. In this regard, the project will reinforce efforts under the Green Zones Development Project, through the development of Participatory Forest Management Plans, as well as a code of conduct, sensitization of communities, as well as help build capacity for community management and surveillance, and through the sharing of lessons learnt from the BMZ-funded Forest Landscape Restoration project and the Lake Naivasha Basin Reforestation Project.

Core Indicator 4: Area of landscapes under improved management ? 37,682 ha.

Under component 1, the project will contribute to a holistic management framework for the entire LNB basin through the participatory review and update of the LNBIMP and integrating this into related County Development Plans and institutional arrangements through By-laws. In practice, the proposed project will contribute to the improved management and protection of 35,682 ha of forest land, through updating the existing Participatory Forest Management Plans for three target Forest Stations (South and North Kinangop and Geta), as well as through

providing resources and training to CFAs and WRUAs to mark and peg riparian land for enhanced protection and natural regeneration, where necessary temporarily fencing off vulnerable areas, as well as to improve surveillance and management. In addition, the project will bring 2,000 ha of productive land under improved practices (sub-indicator 4.3: area of land under sustainable land management in production systems), through a combination of training, financial and market incentives, as well as direct support to farmer groups.

Core indicator 6: Greenhouse gas emissions mitigated - 1,413,610 t

FAO's EX-Ante Carbon balance Tool (ExAct) was used to estimate mitigated carbon emissions from the proposed project interventions. The Ex-Act tool is a land-based carbon accounting tool designed to estimate carbon stock changes, including Green House Gas (GHG) emissions and emission reductions for project interventions during the capitalization and implementation of a project. For this project, the EX-ACT tool was used to calculate the emissions emitted and mitigated for a 20-year period, assuming the project will be implemented for 3 years and capitalization of the project results will last 17 years.

Within the Lake Naivasha Basin, the project will restore 1,600 hectares of forested land, improve the management of 35,682 ha hectares of land (which includes an actual forest cover of 7,660 ha) for biodiversity and establish sustainable land use practices for 2,000 hectares of production systems. Restoring the 1,600 hectares of tropical montane forest will mitigate an estimated net amount of 555,232 tCO2-e. Management improvements such as eliminating forest degradation and uncontrolled fires will mitigate approximately 685,554 metric tons of carbon emissions. The third category of project interventions that will alter carbon stocks in the project area is the change in management and land use of approximately 2,000 hectares of production systems. A planned transition from traditional cropland to alley-cropping on 900 hectares will mitigate 50,170 metric tons of carbon emissions and establishing silvoarable plantations on 400 degraded hectares will mitigate 49,027 metric tons of carbon emissions. Lastly, improving practices on 700 hectares of traditional cropland such as reducing tillage, utilizing higher carbon input without organic amendments, and utilizing manure will results in a total of 73,628 metric tons of carbon emissions mitigated. Given a 20-year project implementation and capitalization period, this project could result in 1,413,610 tons of carbon emissions mitigated.

Core Indicator 11: Number of direct beneficiaries disaggregated by gender as co-benefit of the GEF investment ? 4,100

The proposed project will directly benefit approximately 3,600 smallholder farmers in the middle and upper catchments of the LNB. The project will also benefit approximately 320 representatives of LNB stakeholder organizations and communities involved in the planning processes under component 1. Finally, an estimated 180 individuals will benefit from support to the implementation of land management and restoration measures under component 3. It is expected that around ~30% of beneficiaries will be women. Women are currently poorly represented in farmer support work, so 30% is an increase compared to the current situation. Women are used as laborers and not included in the business side. Women and youth will be engaged to contribute to identifying sustainable agricultural practices that will support them in safeguarding natural resources and promoting their economic development and livelihoods.

g. Innovation, sustainability and potential for scaling up

Innovation

The project will provide a model for protection and sustainable management of LNB; home to exceptional biodiversity and an economic backbone of the Kenyan economy, which supports one of the most expansive horticultural industries in this part of the world and employs more than 250,000 people. The project will promote market linkages to give communities around LNB the opportunity to sell their sustainable produce to downstream enterprises in LNB, through the establishment of a ?Green Shop?, which will be managed through a cooperative arrangement by the Naivasha Basin Sustainable Horticulture Farmers group. The Green Shop will serve as a central point for access to markets for sustainable produce, therewith facilitating and increasing market access and reducing the costs of commercial supply-chain agents. This results in a win-win model for conservation agriculture and markets for small farmers that can be replicated elsewhere across the country. In addition, the project will support the restricting and expansion of the existing PES system, in close collaboration with private sector actors operating in the basin (principally horticulture producers, hoteliers and conference facilities) as well as financial institutions. In addition to the current PES system, which rewards land managers for providing ecosystem management and restoration services, a range of innovative options will be investigated and where possible tested, including climate-smart lending (Commercial credit agreements between agri-lenders and farmers, where credit access is conditional on implementation of on-farm sustainable land-management practices),sustainable produce offtake agreements (Outgrower off-takers include requirements for sustainable land management practices in the terms of their off-take agreements) and eco-credits (Community groups manage a community-owned revolving credit facility and are able to access loans conditional on participation in local ecosystem restoration and protection activities).

Sustainability

By building on the existing capacity and previous investments in LNB, including a strong baseline of existing Public Private Partnerships i.e. Imarisha Lake Naivasha and Payment of Ecosystem Services (PES), and by involving relevant stakeholders (including County Government, communities and private sector) in project development and implementation, the project?s long-term sustainability will be inbuilt. In this regard, the project will address the following key parameters of sustainability:

Institutional Sustainability

Through the participatory design process followed in the preparation of this project, including the involvement of all key Government agencies, the NETFUND, Imarisha Lake Naivasha ? the basin coordination entity ? and Nakuru and Nyandarua Counties? relevant departments, ownership has been secured. The executing organization?s mandate stretches beyond the period of the project, ensuring continuity. The project will have a strong focus on building capacity of government staff at the County level, including at the Ward level. This will ensure that experiences, lessons learned, and best practices generated by the project are maintained within the County government structures. Furthermore, the interventions through the project form part of a larger national effort led under the NETFUND Green

Zones project. The approaches, tools and lessons learnt from the project will therefore inform broader interventions across the country.

Financial Sustainability

Firstly, the project builds strongly on the existing programs and initiatives supported from Government budget, at both national and County level. This support will continue beyond the scope of the project. Secondly, one of the areas of focus of component 2 of the project is to demonstrate and prove viable models for providing markets and financial incentives for sustainable agricultural production that would form the basis of a sustainable catchment economy, with the key objective of ensuring that investments proposed under the project will become self-sustainable. A key mechanism in this regard, will be the restructured PES system.

Social sustainability:

The engagement of non-governmental stakeholders, County Government, including communities and the private sector, is a key factor in assuring the long-term sustainability of GEF investments in the sector. In this regard, a considerable part of the project is dedicated to enhancing community participation in sustainable land management.

Scaling up:

By linking field-level interventions with institutionalizing approaches through planning (LNBIMP and County Development Plans for Nakuru and Nyandarua Counties) and establishing related regulatory mechanisms (By-laws and Code of Conduct), while building skills and capacities through a train-the-trainers approach that builds capacity within extension services, developing a sustainable finance and resource mobilization strategy for long-term sustainability, generating knowledge and sharing data across LNB stakeholders, the project is also set to lay the foundation for up-scaling sustainable and biodiversity-friendly agricultural practices and sustainable land and natural resources management in other basins in Kenya and beyond. In this regard, the project is envisaged to lay a strong basis for expansion in the basin and other regions. More specifically, as part of its knowledge management strategy (component 4), the project will deliver specific knowledge management products targeting not only LNB stakeholders, but which will also be used to inform interventions in other target geographies under the NETFUND Green Zones Project, as well as other GEF projects and Government policies. In this regard, Government, through the Ministry of Environment, is putting place a platform for the exchange of lessons and experiences between GEF projects as well as towards relevant Government Institutions.

[1] The concept of Land Degradation Neutrality (LDN) was introduced by the Parties to the United Nations Convention to Combat Desertification (UNCCD) at its 12th Conference of the Parties in 2015. Republic of Kenya, Land Degradation Neutrality Target Setting Final Report, 2020. https://knowledge.unccd.int/sites/default/files/ldn_targets/2020-09/Kenya%20LDN%20TSP%20Final%20Report%20%28English%29.pdf

[2] LDN was defined by the Parties to the UNCCD as ?A state whereby the amount and quality of land resources, necessary to support ecosystem functions and services and enhance food security, remains stable or increases within a specified temporal and spatial scales and ecosystems.? https://www.unccd.int/actions/achieving-land-degradation-neutrality

[3] Republic of Kenya, Land Degradation Neutrality Target Setting Final Report, 2020. https://knowledge.unccd.int/sites/default/files/ldn_targets/2020-09/Kenya%20LDN%20TSP%20Final%20Report%20%28English%29.pdf

[4] Ibid, pg. 33.

[5] Ibid, pg. 10.

[6] Ibid, pg. 13, 30.

[7] Republic of Kenya, Land Degradation Neutrality Target Setting Final Report, 2020. https://knowledge.unccd.int/sites/default/files/ldn_targets/2020-09/Kenya%20LDN%20TSP%20Final%20Report%20%28English%29.pdf, pg. 29.

[8] LDN Target Setting Programme, https://www.unccd.int/actions/ldn-target-setting-programme

[9] Categorization of the proneness to erosion based on slope gradient classified according to the FAO relief classes (Flat 0-2%, Undulating 2-8%, Rolling 8-16%, Hilly 16-30%, Mountainous >30%).

[10] Republic of Kenya, Land Degradation Neutrality Target Setting Final Report, 2020, pg. 12. https://knowledge.unccd.int/sites/default/files/ldn_targets/2020-09/Kenya%20LDN%20TSP%20Final%20Report%20%28English%29.pdf

[11] MEMR 2012: Kenya?s Wetlands Atlas

[12] Birdlife International: Kenya?s Important Bird Areas - Status and Trends, 2007

[13] KWS Abardares National Park: http://www.kws.go.ke/content/aberdare-national-park

[14] Githenji. G.J (2011). Africa in the Context of Investment in Research, Education, Training and Innovation: Challenges and Wayforward. Journal of Education and Social Sciences, Volume (1), pp. Pages.

[15] Business Daily, 2017: Kenya?s horticulture exports https://www.businessdailyafrica.com/datahub/Kenya-s-horticulture-exports/3815418-4121118-o4ygd4/index.html

[16] Ojiambo, Bwire & Poreda, Robert & Lyons, William. (2001). Ground Water/Surface Water Interactions in Lake Naivasha, Kenya, Using ?18O, ?D, and 3H/3He Age-Dating. Ground water. 39. 526-33. 10.1111/j.1745-6584.2001.tb02341.x.

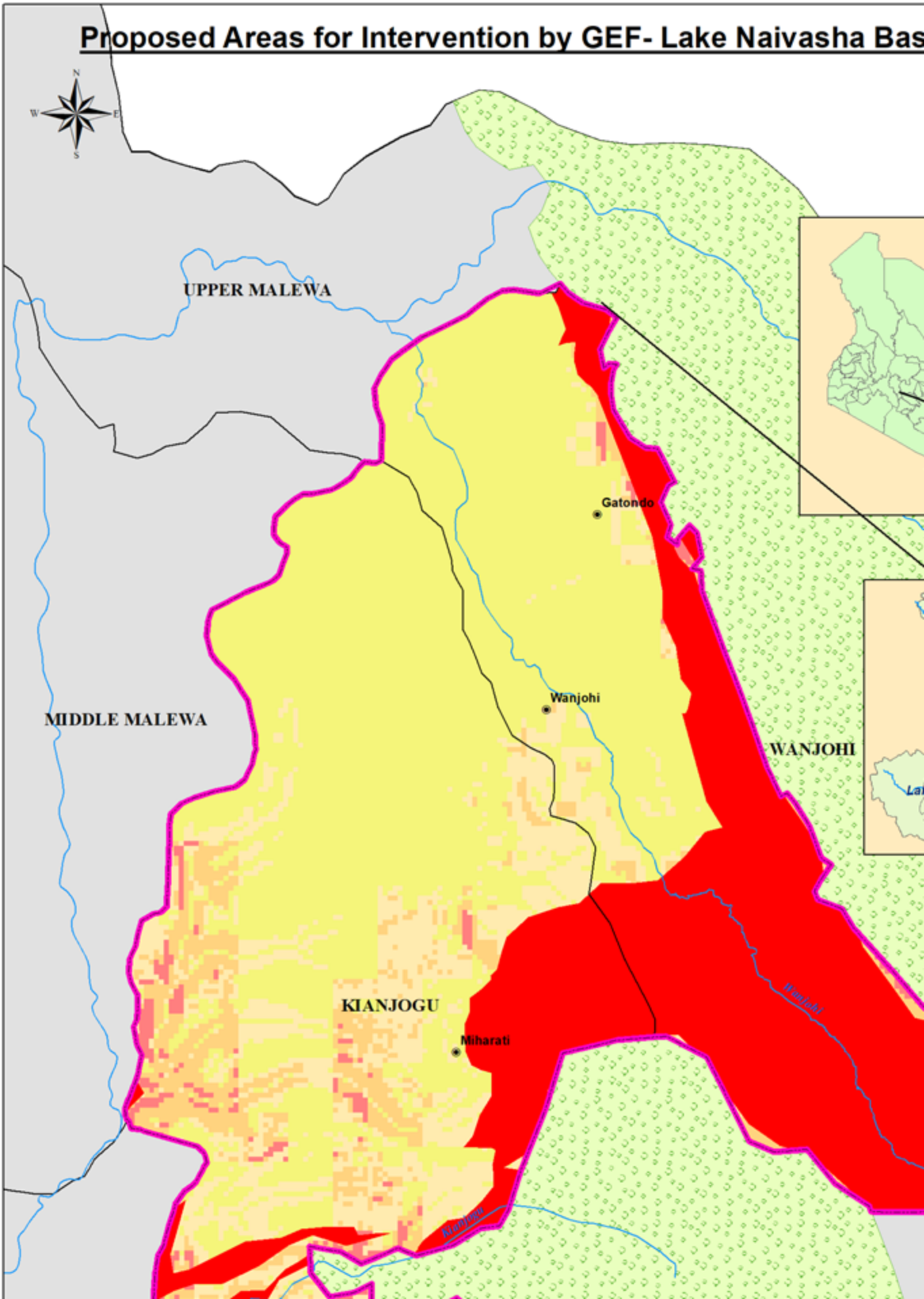
[17] https://www.nation.co.ke/lifestyle/dn2/Naivasha--the-new-conference-hub/957860-3157942-t0oj50z/index.html

[18] Greenfi (2021). Feasibility Assessment for Scale-Up of the Payments For Environmental Services (PES) Project at Lake Naivasha, report prepared for WWF-Kenya/FSD Africa.

[19] e.g. certain horticultural producers have suggested purchase of offsets produced within the catchment as a means to offset emissions associated with export of produce to Europe. There are nascent plans in place to develop such a scheme and which would return 100% of carbon revenue to catchment management without the need for a carbon broker. Voluntary emissions reductions (VERs) purchased by participating exporters could contribute to the above financing need.

1b. Project Map and Coordinates

Please provide geo-referenced information and map where the project interventions will take place.


Proposed Areas for Intervention by GEF- Lake Naivasha Bas
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MIDDLE MALEWA
Gatondo
Wanjohi
WANJOHI
KIANJOGU
Miharati

2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Indigenous Peoples and Local Communities Yes

Civil Society Organizations Yes

Private Sector Entities Yes

If none of the above, please explain why:

NA

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement

The project team conducted an initial scoping of stakeholders that included among others National Government Institutions and partners (i.e., NETFUND, Imarisha Lake Naivasha, Ministry of Environment and Forestry, Ministry of Agriculture, Water Towers Authority, Kenya Forest Service, Kenya Wildlife Service), research institutions (KMFRI, National Museums of Kenya), local government institutions (Nakuru and Nyandarua county government representatives), local community and civil society organizations (i.e., CFAs, WRUAs, Lake Naivasha Basin Landscape Association, etc.), and private sector (Lake Naivasha Growers Group, Cher, OSERIAN, Kenya Association of Hotel Keepers and Caterers). An indicative list of these stakeholders, and their possible contributions and/or involvement in the project is provided in Table 1 below.

Further, field consultations were conducted in LNB in August 2019 for collaborative development of the project?s technical design, and follow-up stakeholder consultations were carried out in September-October 2019 to consult the project strategy. Key stakeholders included the National Environment Trust Fund, Imarisha Lake Naivasha, Kenya Plant Health Inspection Service, representatives from Nakuru, Nyandarua and Narok Counties, private sector (e.g. Gitei Fresh Growers, Oserian Flower Farm) as well as local communities and organizations (e.g., Lake Naivasha Basin Landscape Association, CFAs, WRUAs, Lake Naivasha Basin Umbrella Water Resource Users Association). The technical design workshop and ensuing consultations resulted in common agreement among stakeholders on the values of LNB (provision of water and fertile soil for irrigation and source of livelihoods (floriculture, horticulture, livestock) and global biodiversity (critical ecosystems, migratory bird routes and wildlife corridors, RAMSAR site and IBA), and the principal environmental problem in LNB which is the loss and degradation of water, soil and habitat, which reduce provision of ecosystem services which the proposed project seeks to address. Additional outcomes of the workshop were the project focus on Lake Naivasha Basin (as opposed to the lake itself), a project objective (to reduce threats to land and water to increase protection of globally significant biodiversity and ecosystem services that support the local and national economy), and a theory of change, which contributed to the currently proposed project objective and theory of change.

During the project development phase, the project team will continue to use a participatory and gender-responsive approach to continue conducting stakeholder consultations and will develop a comprehensive Stakeholder Engagement Plan to be implemented during project execution.

Table 1. List of potential key stakeholders and their possible contributions and roles in the proposed project.

Stakeholder Type	Stakeholder list	Interest in the Project	Influence on project and role in project development
Partner National and Government Institutions	- Imarisha Lake Naivasha - Ministry of Environment and Forestry (MoE&F) - National Environment Trust Fund (NETFUND) - Nakuru and Nyandarua Counties ? ministries responsible for Agriculture, Environment and Water	Alignment and contribution to national and county government priorities and plans. These include; the medium-term plan (2018-2022) III, County Integrated Development Plans, national strategies such as the 10% tree cover, Kenya Climate-Smart Agriculture Strategy 2017-2026, Agricultural sector Transformation and Growth Strategy, Lake Naivasha Basin Integrated Management Plan 2012-2022.	Co-designing and approval of the project. The national and county institutions are the main leaders for implementation of the respective national and county policies, plans and strategies.

Stakeholder Type	Stakeholder list	Interest in the Project	Influence on project and role in project development
Enforcement Agencies	- Water Resoruces Authority (WRA) - National Environment Management Authority (NEMA) - Kenya Forest Service (KFS) - Kenya Plant Health and Inspectorate Service (KEPHIS) - Kenya Wildlife Service (KWS) - Horticultural Crop Directorate (HCD) - Ministry of Agriculture, Livestock and Fishers (MoAL&F)	Design and implementation of the project as well as alignment to the organisation's mandate and roles.	As enforcement agencies are key collaborators with Imarisha Lake Naivasha for wildlife conservation at the landscape level, their input to project design will be actively sought. Close coordination with these agencies is critical for enforcement of policies, to ensure successful project implementation.
Local Communities and Organizations and Civil Society Organizations	- Beach Management Unit (BMUs) - Community Forest Associations (CFAs) - Water Resource Users Association (WRUAs) - Lake Naivasha Basin Umbrella Water Resource Users Association (LANABWRUA) - Lake Naivasha Basin Landscape Association (LANABLA) - Lake Naivasha Basin Riparian Association - WWF Kenya	Implementation of conservation actions in the basin	The project aims to work with local communities in key areas to implement activities. As the key beneficiaries of the project, a sample of their representatives will be consulted to inform the design of the project. These stakeholders are crucial to ensuring local communities and organizations? contributions and support during project design and implementation of project activities. Technical support in project preparation

Stakeholder Type	Stakeholder list	Interest in the Project	Influence on project and role in project development
Private Sector	- Lake Naivasha Growers Group (LNGG) - Banking Institutions (Equity, KCB, Barclays) - Hotels and Lodges - Chamber of Commerce	These institutions are estbalished within the basin and are involved in provision of financial services as well as accommodation and conference facilities	Key private sector partners will be engaged during project preparation

3. Gender Equality and Women's Empowerment

Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).

The Kenya Government has placed gender equality and women?s empowerment at the center of Kenya's development strategies and plans by establishing the State Department for Gender Affairs (SDGA)[1] as part of the Ministry of Public Service, Youth and Gender in 2015, updating the National Gender and Development Policy (NGAD) in 2017, implementing the National Equality Policy, and introducing the Policy on the Eradication of Female Genital Mutilation. Despite these efforts to promote gender equality and women's empowerment, including the constitution of 2010, which is quite unambiguous on gender inclusivity, Kenya still reflects varied gender-based inequalities exacerbated by gender-based violence, including sexual abuse, rape, physical violence, and sexual harassment ostensibly due to lack of awareness and or inadequate budget allocations for equality and inclusion, implementation and mainstreaming of pertinent policies. In particular, women's empowerment is hindered by i) the patriarchal social order supported by statutory laws, ii) religious and customary laws and practices, and iii) the administrative and procedural mechanisms for accessing the rights[2], especially rights on socio-economic benefits or access to livelihood securities for women. In terms of literacy and employment, a slightly larger proportion of females never attend school relative to males. Although there are as many females as males, the female share of total wage employment was about 37 percent of the total wage employment in both 2013 and 2014 (status of equality and inclusion in Kenya, NGEC, Kenya 2016). Women are also disproportionately affected by HIV/AIDS, with 6.9 of women aged 15 to 64 affected, compared to 4.4% for men of the same age groups[3].

LNB is mainly inhabited by communities who depend on small-scale rain-fed agriculture on the upper side and pastoralism in the lower areas. A desktop gender analysis for the LNB was carried out for the elaboration of this PIF based on a literature review and stakeholder consultations, the main findings of which are identified and summarized in the table below. The gender analysis of this area reveals complex gender dynamics correlated to gender roles and responsibilities, patterns of power and household decision making, access to and control over assets and resources, and meaningful participation in public decision-making. A clear example of the division of labor can be found in harvest management, where women and men perform different tasks. Using machines and marketing is a task carried out by men while women put more of their labor in winnowing, especially if this is done manually; drying grain; storage and; preparation of grain for consumption[4].

The proposed project will promote gender equality and the empowerment of women in several ways. Activities will be designed to take into account the context of this country and to address critical gender imbalances that relate to the project: i) understanding the gendered division of labor ii) lack of participation in the decision making for the management of resources, iii) understanding of differential use, control over and benefits from natural and other resources, and iv) lack of access financing and credits for women. Component 1: Strengthening Stakeholder Group Engagement in LNB Conservation will develop activities that ensure adequate involvement of women in the decision-making process and leadership by building capacity of women through women?s groups, associations and women-led farmers? groups and CSOs to increase their agency and improve access to and benefits from active participation in the decision-making processes on natural resources management fora and through other governance entities. Component 2: Market and financial mechanisms for implementation of LNBIMP will identify socio-economic interests for women and youth, ensure equitable access to financing and market opportunities for women, men, and youth, providing the necessary training, among other methods, to facilitate this access, including training for women on the use of new technologies. Under Component 3: Improved land management in upper LNB, the project will work to ensure equal access to women and men small-holder farmers to capacity building opportunities and technical support to apply sustainable agricultural and restoration techniques to contribute to the improved management of land and natural resources of the LNB. Knowledge products generated in Component 4: Knowledge Management and Monitoring and Evaluation will highlight the role of women in conservation agriculture practices and activities and ensure information is shared with LNB women and youth.

Gender-responsive stakeholder consultations will be conducted during the project development phase to refine information gathered during PIF design on gender issues that may be at play in the project area. A Gender Action Plan (GAP) will be developed to

outline how the project aims to promote gender mainstreaming and women?s empowerment in project design and execution. The GAP will identify gender entry points in the project to ensure activities are gender-responsive and provide recommendations for including gender in the overall project design, including gender-sensitive indicators and outputs where sex-disaggregated data should be collected. Gender-responsive stakeholder consultations will also be conducted throughout the project lifetime. The project will follow the WWF GEF Gender Policy, which is aligned with the GEF Policy on Gender Equality throughout the development and implementation of the proposed project.

Identification of gender issues described in the gender analysis below involved several approaches including stakeholder consultations during the August 2019 workshop, interviews with households and key respondents, and document reviews.

Table 2: Lake Naivasha Basin Gender Analysis

Gender Dimension	**Emerging Issues**
Gender Roles and Responsibilities.	? Culture defines gender roles in the homestead, especially in rural areas. ? Women mostly concentrate on domestic chores. ? More women are participating in farming. ? Some women don't believe in themselves that they can be breadwinners. ? Domestic chores take a lot of time from women; hence they do not have time to attend public meetings and events. ? Youth often employed in informal work.

Gender Dimension	Emerging Issues
Patterns of Power and Household Decision Making.	? Household power dynamics are rooted in cultural and religious beliefs and practices. ? Men are generally household heads hence make significant decisions. ? The input of women in the decision-making process lacks even if they participate. ? Women are only head of households if they are widowed or unmarried.
Access to and Control Over Assets and Resources.	? Most of the land is owned by men while women do the farming. ? Men handle the money from the farm production. ? Most youths do not own land, impeding the possibility of deriving their livelihood from farm production
Meaningful Participation in Public Decision-Making.	? Young women are not involved in environmental conservation. ? Women do not attend decision-making meetings. ? Residential training makes it difficult for women to participate. ? The pastoralist communities do not involve women in decision making regarding the community. ? Women do not have time to attend the meetings due to domestic chores. ? Women are represented in the CFA and WRUAs, but the numbers are low. ? Cultural behavior of women to remain at home. Women take care of the home, while decisions affecting the community are left for men.

[1] Ministry of Public Service, Youth, and Gender. 2017. Available online at https://gender.go.ke/background/

[2] Republic of Kenya. 2019. National Policy on Gender and Development. Available online at http://psyg.go.ke/wp-content/uploads/2019/12/NATIONAL-POLICY-ON-GENDER-AND-DEVELOPMENT.pdf

[3] UN Women. Kenya. Available online at https://africa.unwomen.org/en/where-we-are/eastern-and-southern-africa/kenya

[4] Swiss Agency for Development and Cooperation SDC. Gender Analysis of Maize Post-Harvest Management in Kenya. 2015. Available online at https://www.shareweb.ch/site/Agriculture-and-Food-Security/focusareas/Documents/phm_sdc_egsp_gender_analysis_kenya.pdf

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes

closing gender gaps in access to and control over natural resources;

improving women's participation and decision-making; and/or Yes

generating socio-economic benefits or services for women. Yes

Will the project?s results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Will there be private sector engagement in the project?

Yes

Please briefly explain the rationale behind your answer.

The project has as one of its specific targets to promote the engagement of private sector in expanding market linkages for smallholder farmers under Component 2. This includes both linking smallholder farmers to micro-financial institutions (MFIs) to access agribusiness financial services, but also securing market access for horticultural produce from sustainable and biodiversity-friendly agricultural practices promoted through the project. In this regard, a close connection will be established with hotels, chain stores and institutions in LNB. As part of the training activities under Component 2,

smallholders will be trained on contract management, market requirements and production standards, and meetings will be facilitated between farmers? groups and potential buyers.

In addition, the upgraded PES scheme to be developed as part of Component 2 will involve the engagement of private sector stakeholders, including horticulture companies, tourism operators and hoteliers, geothermal and land development operators, large land owners, Water Service Providers, as well as finance institutions and service providers, in the exploration and design of the various modules. In this regard, prior engagement with private sector stakeholders has already been undertaken as part of the PES review[1].

[1] Greenfi (2021). Feasibility Assessment for Scale-Up of the Payments For Environmental Services (PES) Project at Lake Naivasha, report prepared for WWF-Kenya/FSD Africa.

5. Risks to Achieving Project Objectives

Indicate risks, including climate change, potential social and environmental risks that might prevent the Project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the Project design (table format acceptable)

An analysis of the project risks, risk rating and preventive measures for the proposed project is presented in the table below.

Table 3. Risk Analysis

Risk Description	Ranking	Preventive Measures
1. Limited uptake of sustainable land management practices by stakeholders	L	Stakeholders will be actively engaged in the development phase of the project through consultations (in person if COVID19 restrictions permit) to ensure project activities are appropriate, secure their buy-in and validation of project activities. Local communities to be engaged have long-standing relationships and on-the-ground experience with executing partners and LNB stakeholders on SLM practices and risk of limited involvement is considered low.

Risk Description	Ranking	Preventive Measures
2. Strong climate variability during project lifetime can negatively affect farmers? productivity	H	Current climatic variability (as identified in the climate change risk screen below and supporting document) will be taken into account during design and implementation of project interventions. Climate-resilient variants of crops and plants, where possible, will be used in active planting interventions.
3. Economic developments, such as large infrastructure projects may compete with the implementation of project	M	? The project will disseminate biophysical information of LNB environment among and actively engage with stakeholders including government, private sector, academia, communities, development partners, CSOs, and media to promote adequate incorporation of mitigation measures to safeguard the environment in policy frameworks and their enforcement in development plans and implementation.
4. Capacity constraints of local and national institutions to undertake project interventions	M	In addition to conducting due diligence/capacity assessment on executing partners, the project will seek to build institutional and technical capacities of government staff and the LNB coordinating entity for overall improved coordination across LNB.
5. Lack of engagement from horticulture sector and hoteliers	L	The proposed project will build on a strong baseline of public-private-partnerships and investments in LNB, and create linkages with the existing efforts under the GOALAN project (market linkages with hoteliers) and the voluntary PES scheme (horticulture sector). The project will also work with the Horticultural Crops Directorate to bring in potential buyers for farmers? SCP products.
6. Limited opportunities for developing viable markets for sustainable farm produce	L	Current baseline work on sustainable consumption and production activities with smallholder farmers in Lake Naivasha link to markets around the Basin (retailers, hotels, etc.). Proposed project activities will build on and scale-up these linkages.

COVID-19 Risk Analysis

Risk category	Potential Risk	Mitigations and Plans

i) Availability of technical expertise and capacity, and changes in timelines	Continued or renewed efforts in COVID-19 containment measures (such as travel and meeting restrictions) are likely over the course of project development and into the earlier stages of implementation. This may hinder outreach in person to LNB stakeholders and farmers.	The project partners will be based in different offices and will be equipped (and trained if needed) for using virtual communication. They have all been in contact virtually during the project preparation stage. It is envisioned that the PSC will meet virtually, not in person. Outreach to LNB stakeholders and farmers will be done in person while strictly observing the Ministry of Health COVID 19 guidelines and where possible, engage through phone conversations or through online meetings.
	Capacity and experience for remote work and online interactions as well as limited remote data and information access and processing capacities that projects will need to strengthen.	For interaction with LNB stakeholders and farmers, provision of data/internet access where devices are available, and provision of devices if needed.
	Changes in project implementation timelines.	No changes in project implementation timelines are anticipated as they have already been designed to take into account the effects of the COVID-19 pandemic.
	Changes in baseline and potential co-financing sources identified may change due to changed government/project partner priorities for existing funding, reduced funding availability, or due to delays until implementation.	The pandemic situation and responses evolve daily, meaning that some baseline and co-finance may need to be adjusted during project implementation.
ii) Stakeholder Engagement Process	Reduced mobility and stakeholder engagement.	Local level outreach to LNB stakeholders and farmers via WWF Kenya and Imarisha Lake Naivasha during project implementation will only be undertaken if it complies to national and local government guidelines and follows COVID-19 safety protocols (including provision of PPE where needed). Outreach to LNB stakeholders and farmers will be done in person where possible, over the phone, and as a last resort over the internet.

iii) Enabling Environment	Reduced government focus on the environment during the COVID-19 crisis.	Sensitization on Sustainable Natural Resource Management is ongoing through current projects. This is done through different forums attended by the Government representatives where importance of the environment and its relation to agriculture, community livelihoods, COVID 19, food safety and security are discussed. Through the projects, the LNB Civil Society Organizations (CSOs) have been empowered and are engaging the Government in environmental related policy development and implementation, ensuring the communities have improved access to the natural resources and are deriving maximum benefits.
iv) Financing	Reduced co-financing availability (co-financing from the private sector and governments, loan-based projects with MDBs).	Regular meetings with the key stakeholders involved in co-financing will be held to provide updates and replacements done where necessary.
v) Private sector engagement	There may be reduced appetite from in particular the horticulture and tourism sector, both of which have been hit by the COVID crisis, to pay for the transaction costs associated with upstream restoration, as well as pay for the additional costs associated with sourcing sustainable produced products.	The project will undertake close dialogue with the private sector to establish trust in the approach, including the potential benefits for the horticulture and tourism sector from engagement. For the upstream landscape management and restoration aspects, the project will support the restructuring of the existing PES scheme. In this process, private sector stakeholders will be closely consulted and engaged. On the market side, the project will strengthen the Green Shop as a point of engagement with potential buyers, circumventing the often costly chain of agents involved and therewith keeping the price of sustainable products to a minimum.
vi) Future risks of similar crises	There is minimal risk that this project will contribute to future crises of this nature.	It is not anticipated that this project will have adverse impacts that might contribute to future pandemics. The project is designed to support local livelihoods which depend on the water resources and ecosystem services of Lake Naivasha. Project outcomes will contribute to famers? and ecosystem resilience in the face of future crises.

COVID19 Opportunity Analysis

Opportunity Category	Potential	Project Plans
i) Can the project do more to protect and restore natural systems and their ecological functionality?	The goal of the project is to increase protection of Lake Naivasha water resources, headwater forests and riparian vegetation and associated ecosystems to support the local and national economy.	By strengthening LNB stakeholder engagement in LNB conservation and improving land, water, and biodiversity management in the LNB through promotion of sustainable and biodiversity-friendly agricultural practices and improved riparian and forest management, the project will contribute to building longer term resilience to future shocks, improve livelihood benefits and reduce deforestation and ecosystem degradation.

Opportunity Category	Potential	Project Plans
ii) Can GEF projects include a focus on production landscapes and land use practices within them to decrease the risk of human/nature conflicts?	The project activities under Components 2 focus on sustainable and biodiversity-friendly agricultural practices in production landscapes.	Through project activities, smallholder farmers will be trained in the adoption of best farming practices including integrated soil fertility approach, e.g., Maximum use of well decomposed organic manures, crop rotation and 'informed' inorganic fertilizers application; efficient water use practices and soil and water conservation, thereby enhancing agricultural productivity while promoting efficient nutrient and water use and reducing demand for land conversion. This will ensure production is achieved with less resources and thereby reduce competition with other living organisms. The promotion and adoption of sustainable production practices will build a resilient agricultural system which supports the growing human population in the wake of climate change, and thereby reduce conflict risks. The project will also work to increase production per unit area using good agricultural practices, e.g., Use of certified seeds, reducing the demand for new areas for production. The project will also promote the adoption of an Integrated Pest Management (IPM) approach which will reduce pesticide use and enhance soil and water quality thus promoting well-balanced ecosystems. Linking farmers to markets will reduce post-harvest losses which, if not abated, will contribute to diminishing the scarce production resources leading to increased competition and conflicts.

Environmental and Social Safeguards Risks

The project has preliminarily been screened by WWF as category B (medium risk) by the pre-screen. The safeguards risk categorization is based on current available information on the project design and the project location. More detailed safeguards screening and updated categorization will be undertaken during project development once activities have been explicitly defined and specific locations determined. The safeguards categorization memo will be issued based on the screening, detailing any

required management plans. Any safeguards management plans or measures to address the identified risks will be developed during the project development phase.

Climate Change Risks Summary[1]

According to the UNFCCC IPCC 1.5 Degrees Report, risk is defined as:

?The potential for adverse consequences where something of value is at stake and where the occurrence and degree of an outcome is uncertain. In the context of the assessment of climate impacts, the term risk is often used to refer to the potential for adverse consequences of a climate-related hazard, or of adaptation or mitigation responses to such a hazard, on lives, livelihoods, health and well-being, ecosystems and species, economic, social and cultural assets, services (including ecosystem services), and infrastructure. Risk results from the interaction of vulnerability (of the affected system), its exposure over time (to the hazard), as well as the (climate-related) hazard and the likelihood of its occurrence.?

Climate Risks present in the LNB Ecosystem:

As Climate Change continues to exacerbate extreme weather events on a global scale, it is critical to examine the impacts of climate change on a smaller scale to better understand the project barriers and aid in achieving a lasting impact. The below table focuses on the two counties that this project will be implemented in, Nyandarua county and Nakuru county, the climatic threats they face at present (fluctuating temperatures, increased rainfall/floods, and more intense dry spells/droughts) and in the future, and the impacts these threats have. Current models predict that by 2030, climate change related losses will account for approximately 2.6% of Kenya?s GDP.[2] Current climatic variability will be taken into account in project design (e.g. integrated into the agricultural training manual and curriculum, selection of model farm sites) and considered during implementation of interventions.

Climate hazards	Climate Risk	Mitigation measure

Climate hazards	Climate Risk	Mitigation measure
Temperature Fluctuation Today the mean annual temperature in Kenya is 24.29?C. The temperature in Kenya has been increasing over the past several decades at a rate of .21?C per decade. By 2050, the mean annual temperature will have risen by 1.68?C[3], demonstrating a faster rate of warming than in previous decades. A report completed by USAID also predicts that heat waves will last longer, increasing between 9 and 30 days.[4]	Increased temperatures can exacerbate drought events as well as create heat stress for livestock and humans. There are temperature thresholds for agricultural crops at which point the crops become less productive. Higher temperatures will also increase the likelihood of vector- and water-borne diseases spreading, Malaria in particular.[5] Agriculture is highly temperature dependent, with crop yields in lower elevations predicted to decrease by 20%. Increasing temperatures will also exacerbate the rate of glacial melt, affecting water runoff from Mt. Kenya, located near Lake Naivasha. [6]	The project will provide tools and materials and provide training to selected farmers on sustainable agricultural practices, including soil fertility approach, crop rotation, efficient water use practices, certified seeds (including drought-resilient variants of crops and other plants), compost and mulching tools as a form of ecosystem-based adaptation and management. The promotion and adoption of sustainable production practices will increase production per unit of area as well as resilience of the agricultural system to withstand the effects of fluctuating temperatures and drought events
Frequency and Intensity of Heavy Rainfall Current mean annual precipitation amounts in Kenya are 668mm. Future scenarios predict that rainfall will increase in Kenya, the average total increase could reach an additional 49mm per month. At the current rate of global climate change and emissions, the annual maximum 5-day rainfall is expected to increase 12.22mm by the year 2060. [7] Inter-seasonal rainfall variability will increase over the next 50 years.	Extreme flood events have already led to displacement of local people in the LNB, which has been linked to food insecurity. Flood events and fluctuating rainfall patterns also lead to degradation of soil, destruction of crops, pollution of water supply, increased frequency of landslides and an increased risk of waterborne diseases. Crop types and growing seasons will also change in relation to water availability and seasonal and temporal changes.	The project will strengthen enabling conditions for the integrated natural resources management in the LNB. Smallholder farmers will be supported to adopt sustainable and climate-smart agricultural practices to improve soil and water management conditions. In addition, priority management measures and restoration activities in degraded areas of the riparian will include measures that could potentially mitigate against flooding.

Climate hazards	Climate Risk	Mitigation measure
Dry Spells/ Drought In Kenya, dry spells are not expected to increase in length, but instead are projected to increase in severity, by an average of 25% by 2050. Severe and long-lasting dry spells lead to increased evaporation and decreased water availability. Since the 1970s, central Kenya has seen a decrease in long-lasting rain events.	Drought and water availability will continue to detrimentally affect crops and agricultural yields, breaking down food systems causing food insecurity and hunger. The drought event in Kenya from years 2008- 2011 caused approximately $12.1 billion in damage and crop/agricultural losses. [8]	This project will support smallholder farmers through training and facilitation to adopt best farming practices that enhance land, soil and water conservation to increase farm production. Project activities contribute to the overall objective of reducing land degradation in the upper catchment for increased protection of the Basin?s water resources, biodiversity and its associated ecosystem services.

[1] For more information, please refer to the Climate Change Risk Screen supporting document.

[2] USAID, 2018: Climate Risk in Kenya: Country Risk Profile.

[3] Harris et al., 2014: Updated high-resolution grids of monthly climatic observations ? CRU TS3.10: The Climatic Research Unit (CRU) Time Series (TS) Version 3.10 Dataset, Int. J. Climatology, 34(3), 623-642, doi: 10.1002/joc3711; updated from previous version of CRU TS3.xx (most recent use in CCKP: TS3.24).

[4] USAID, 2018: Climate Risk in Kenya: Country Risk Profile.

=[5] WHO. 2015a. Climate and health country profile, Kenya.

[6] USAID, 2018: Climate Risk in Kenya: Country Risk Profile.

[7] Harris et al., 2014: Updated high-resolution grids of monthly climatic observations ? CRU TS3.10: The Climatic Research Unit (CRU) Time Series (TS) Version 3.10 Dataset, Int. J. Climatology, 34(3), 623-642, doi: 10.1002/joc3711; updated from previous version of CRU TS3.xx (most recent use in CCKP: TS3.24).

[8] USAID, 2018: Climate Risk in Kenya: Country Risk Profile.

6. Coordination

Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.

The National Environment Trust Fund (NETFUND) will act as the Lead Executing Agency for the project. Established by the Environmental Management and Coordination Act of 1999 as a State Corporation, NETFUND?s mission is ?to mobilize, manage and avail resources for: environmental awards, capacity building, research and publications, scholarships and grants in Kenya?[1]. With experience in designing, delivering, and scaling up high-impact projects, and given its robust internal financial and governance systems, NETFUND will take overall fiduciary responsibility of the project as well as forming and leading the Project Steering Committee. Imarisha Lake Naivasha, a management board with on-the-ground presence set up by the Government of Kenya, as the mandated coordinating entity of the LNB will likely host the Project Management Unit (PMU) to carry out day-to-day management of the project. The main function of the PMU will be to coordinate efforts between the various partners in the project, and to which staff will be seconded to the project as appropriate. The PMU will also be responsible for the overall reporting, monitoring and evaluation functions. Imarisha Lake Naivasha will be operating under sub-contract to NETFUND, as the Lead Executing Agency.

The Ministry of Environment and Forestry/FP will appoint a Project Director who will be responsible of overall administration and supervision of the PMU. Project oversight and strategic guidance will be provided by a national Project Steering Committee (PSC), which will include at the minimum the key Government Agencies to be responsible for the delivery of the project, and other key partners as appropriate.

Other key stakeholders to be involved in the execution of project activities are the Horticultural Crops Directorate (HCD), agricultural training centers, local government extension officers, Imarisha Lake Naivasha and farming cooperatives.

Coordination with other GEF-projects and other initiatives

There are several GEF and non-GEF projects currently being implemented in Kenya that focus on biodiversity, natural resource use, and land and water management. The proposed project will coordinate with and build on several ongoing projects and initiatives to: i) benefit from lessons learned on sustainable land and water management and practices; and ii) ensure little to no overlap between proposed project activities and those from ongoing initiatives to maximize efficiency and effectiveness. Relevant ongoing GEF-funded projects and initiatives are described below:

1. **IFAD/GEF (GEF ID 9139):** Establishment of the Upper Tana-Nairobi Water Fund (UTNWF). The project is implemented as part of the GEF 6 Integrated Approach Pilot ?Fostering Sustainability and Resilience for Food Security in Sub-Saharan Africa.? The project objective is ?A well-conserved Upper Tana River basin with improved water quality and quantity for downstream users (public and private); maintaining regular flows of water throughout the year; enhancing ecosystem services,

specifically food security, freshwater and terrestrial biodiversity; and improving human well-being and quality of life for upstream local communities?.

2. **FAO/GEF (GEF ID 9556):** Restoration of arid and semi?arid lands (ASAL) of Kenya through bio?enterprise development and other incentives under The Restoration Initiative. The GEF-6 project under implementation adopts an integrated approach to address deforestation, land degradation and biodiversity loss, targeting policy and institutional capacity while supporting community?led forest and landscape restoration (FLR) and the development of alternative livelihoods.

3. **UNEP/GEF (GEF ID 9626):** Enhancing Integrated Natural Resource Management to Arrest and Reverse Current Trends in Biodiversity Loss and Land Degradation for Increased Ecosystem Services in the Tana Delta, Kenya. This GEF-6 project is currently under implementation (executed by Nature Kenya) and its objective is to strengthen integrated natural resource management and restoration of degraded landscapes in the Tana Delta, and systemically scale up best practices and lessons learned to other priority landscapes in Kenya.

4. **UNEP/GEF (GEF ID 5272):** Scaling Up Sustainable Land Management and Biodiversity Conservation to Reduce Environmental Degradation in Small Scale Agriculture in Western Kenya. This GEF-5 project is currently under implementation and seeks to promote the adoption and adaption of sustainable land and forest ecosystem management (SLEM) practices across the productive landscape of Kakamega-Nandi ecosystem in western Kenya.

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[1] NETFUND, https://www.netfund.go.ke/who-we-are/

7. Consistency with National Priorities

Is the Project consistent with the National Strategies and plans or reports and assesments under relevant conventions?

Yes

If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc

The proposed project is aligned with the strategies and plans described in the table below.

Table 4. Project Alignment with National Strategies and Plans

National Strategies/Plans	Alignment

Kenya Land Degradation Neutrality Targets	Kenya seeks to reach LDN for the entire country by 2030 compared to 2015 levels, with an additional 9% of the national territory improved (net gain).[1] Subnational targets have also been set, with watershed boundaries used to delineate hotspots for land degradation in the country and which are considered to be high-value priorities for achieving the country?s LDN goals. Lake Naivasha forms part of the Rift Valley catchment zone (along with Lake Turkana and Natron) for which there is a sub-national target of LDN achieved by 2030 as compared to 2015 with an additional 9% of the zone improved (net gain). The proposed project?s focus on the LNB and the work on restoring riparian land in the Upper LNB will contribute to the country?s subnational target for the Rift Valley catchment zone hotspot in achieving LDN by 2030.
National Biodiversity Strategy and Action Plan (NBSAP)	Through its work on forest landscape restoration and work with farmers groups on sustainable agricultural practices (components 2 and 3), the project will contribute in particular two goal no2 of the NBSAP, which is to ensure ?informed and empowered communities fully involved in sustainable utilization and conservation of biodiversity?. In addition, through mainstreaming biodiversity into the LNBIMP and County Development Plans (component 1) the project will contribute to goal n11, which is to create ?an enabling policy, legislative and constitutional environment for the conservation and sustainable use of biodiversity?. More specifically, the project is in alignment with various strategies as defined in the NBSAP, in particular related to the rehabilitation of degraded ecosystems, and the promotion of farming practices that conserve the ecosystem.
Sustainable Development Goals (SDGs)	Sustainable Development Goal (SDG) 15 focuses specifically on managing forests sustainably, halting and reversing land and natural habitat degradation, successfully combating desertification and stopping biodiversity loss. On the other hand, SDG 6 recognizes that social development and economic prosperity depend on the sustainable management and sharing of freshwater resources and ecosystems. The proposed project is quite relevant in driving these SDGs as it intends to promote reducing land degradation and habitat loss within LNB and thus contributing to the conservation of Lake Naivasha which is an important freshwater lake.
Aichi Biodiversity Targets	Kenya is a party to the Convention on Biological Diversity (CBD) and thus is expected to deliver on the Aichi Biodiversity Targets. The components of the proposed project will contribute to the following strategic goals of the Aichi targets: Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity.

Vision 2030	Catchment Management initiative is one of the flagship projects under the Vision 2030 which is the country's long term development blueprint and more specifically, the rehabilitation of the Aberdares range is one of the priority water towers. The proposed project intends to contribute to the rehabilitation of this water tower by supporting the conservation of the Naivasha basin which falls within the Aberdares. Also, the project will contribute towards enhancing the adaptation capacity of communities to global climate change which one of the aspirations of the Vision 2013.
Medium Term Development Plan 2018-2022 (MTP3)	The MTP3 which covers the period from 2018 to 2022 targets to improve conservation of forest resources, water towers and wildlife. The project will contribute towards the realization of these objectives by supporting the conservation of LNB and reforestation of the Aberdares.
The Big 4 Agenda	One of the Big Four Agenda as pushed by the President of Kenya is to achieve food security and proper nutrition for all Kenyans. This requires increased and sustainable food production. One of the objectives of the proposed project is to promote sustainable agricultural production practices within the LNB that will ensure increased production, productivity and food safety.
National Climate Change Action Plan	Restoration of degraded land has important climate benefits, including the sequestration of carbon dioxide and improved climate resilience by recovering lost ecosystems. This project will, therefore, contribute to the realization of adaptation targets by promoting ecosystems based adaptation.
Lake Naivasha Integrated Management Plan 2012-2022	The proposed project intends to support the implementation of the strategies stipulated within the plan especially those relating to coordination framework, sustainable agriculture and forest conservation.
Green Economy Strategy and Implementation Plan	The Green Economy Strategy and Implementation Plan aspires to place the country towards a low carbon and sustainable development pathway. One of the key strategies stipulated in the adoption of sustainable production and consumption practices. This is one aspect that the project will promote in farming systems within the LNB.
National Tree Planting Strategy	Kenya has set an ambitious target to achieve a 10% national tree cover by 2022. Among the strategies to realize this is to rehabilitate gazetted forests and promote farm forestry. The proposed project will contribute to this agenda by supporting Community Forest Associations in forest landscape restoration activities.

County Integrated Development Plans (CIDPs) within the target counties	The CIDPs of the counties within the basin (Nyandarua, Nakuru and Narok) all aspire to increase county forest cover and promote sustainable agricultural activities. This project will, therefore, play a critical role in the realization of the goals and objectives set out in these CIDPs.

[1] Republic of Kenya, Land Degradation Neutrality Target Setting Final Report, 2020. https://knowledge.unccd.int/sites/default/files/ldn_targets/2020-09/Kenya%20LDN%20TSP%20Final%20Report%20%28English%29.pdf

8. Knowledge Management

Outline the knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

Knowledge management will be an important consideration under all components of the proposed project, but will be specifically addressed through Component 4. Lessons learned during project implementation, in addition to those from past and current aligned initiatives (with and beyond the LNB area), and project-related stories will be collated and disseminated to Lake Naivasha stakeholders and potentially a wider audience (e.g. priority land degradation hotspot catchment zones in Kenya). In particular, the project will focus on sharing experiences and lessons on integrated planning processes, such as the County Development Plans developed in other parts of Kenya, from sustainable farming approaches as well as forest landscape restoration. The collection and dissemination of knowledge, best practices and lessons learned relevant to the implementation of sustainable land and water management through this proposed project in Lake Naivasha will be captured in brochures, pamphlets and other media. Findings, information and lessons learned from the project will be contributed to a knowledge management platform, hosted by Imarisha Lake Naivasha and will be accessible to stakeholders, extension service providers and decision-makers to facilitate replication and upscaling across Kenya, as well as other sub-Saharan countries. Furthermore, the interventions through the project form part of a larger national effort led under the NETFUND Green Zones project. The approaches, tools and lessons learnt from the project will therefore inform broader interventions across the country.

Further details of the project?s approach to knowledge management will be determined during the project development phase in consultation with the relevant stakeholders.

9. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
Medium/Moderate			

Measures to address identified risks and impacts

Provide preliminary information on the types and levels of risk classifications/ratings of any identified environmental and social risks and potential impacts associated with the project (considering the GEF ESS Minimum Standards) and describe measures to address these risks during the project design.

The project has preliminarily been screened by WWF as category B (medium risk) by the pre-screen. The safeguards risk categorization is based on current available information on the project design and the project location. A more detailed safeguards screening and updated categorization will be undertaken during project development once activities have been explicitly defined and specific locations determined. The safeguards categorization memo will be issued based on the screening, detailing any required management plans. Any safeguards management plans or measures to address the identified risks will be developed during the project development phase.

Supporting Documents

Upload available ESS supporting documents.

Title	Submitted
10589_WWF GEF Kenya LNB EBM_PIF ESSF pre-screen_4April22	
10589_WWF GEF Kenya LNB EBM_PIF ESSF pre-screen_17Dec21	

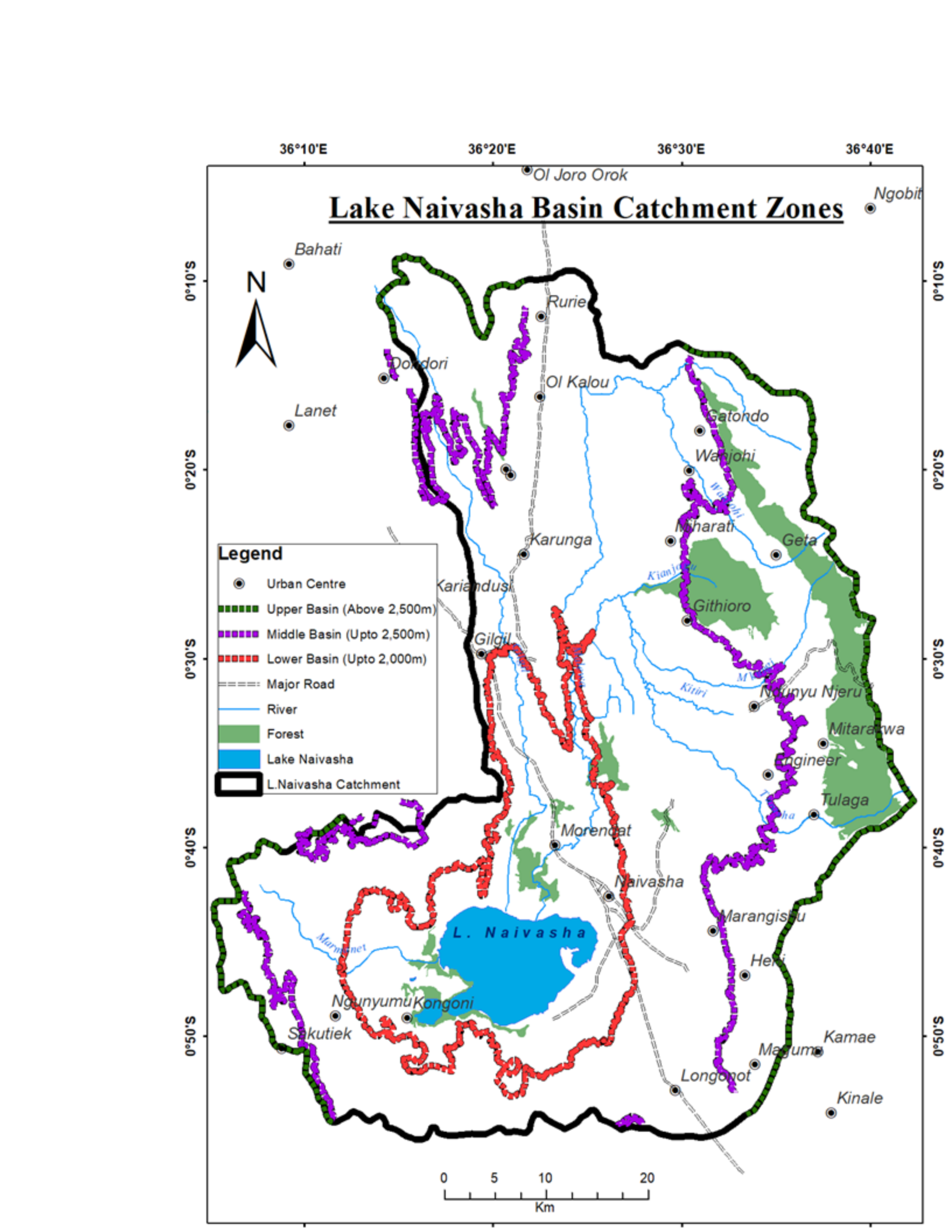
Part III: Approval/Endorsement By GEF Operational Focal Point(S) And GEF Agency(ies)

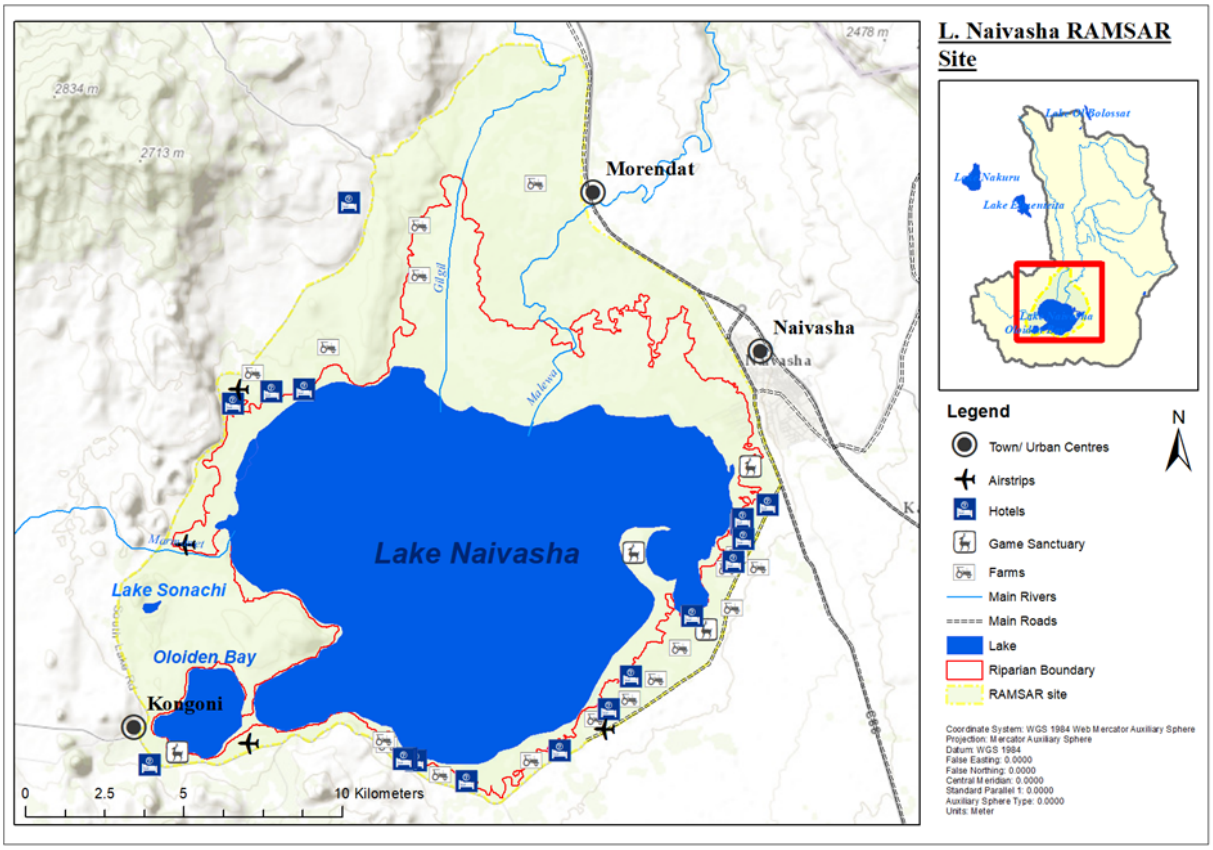
A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).

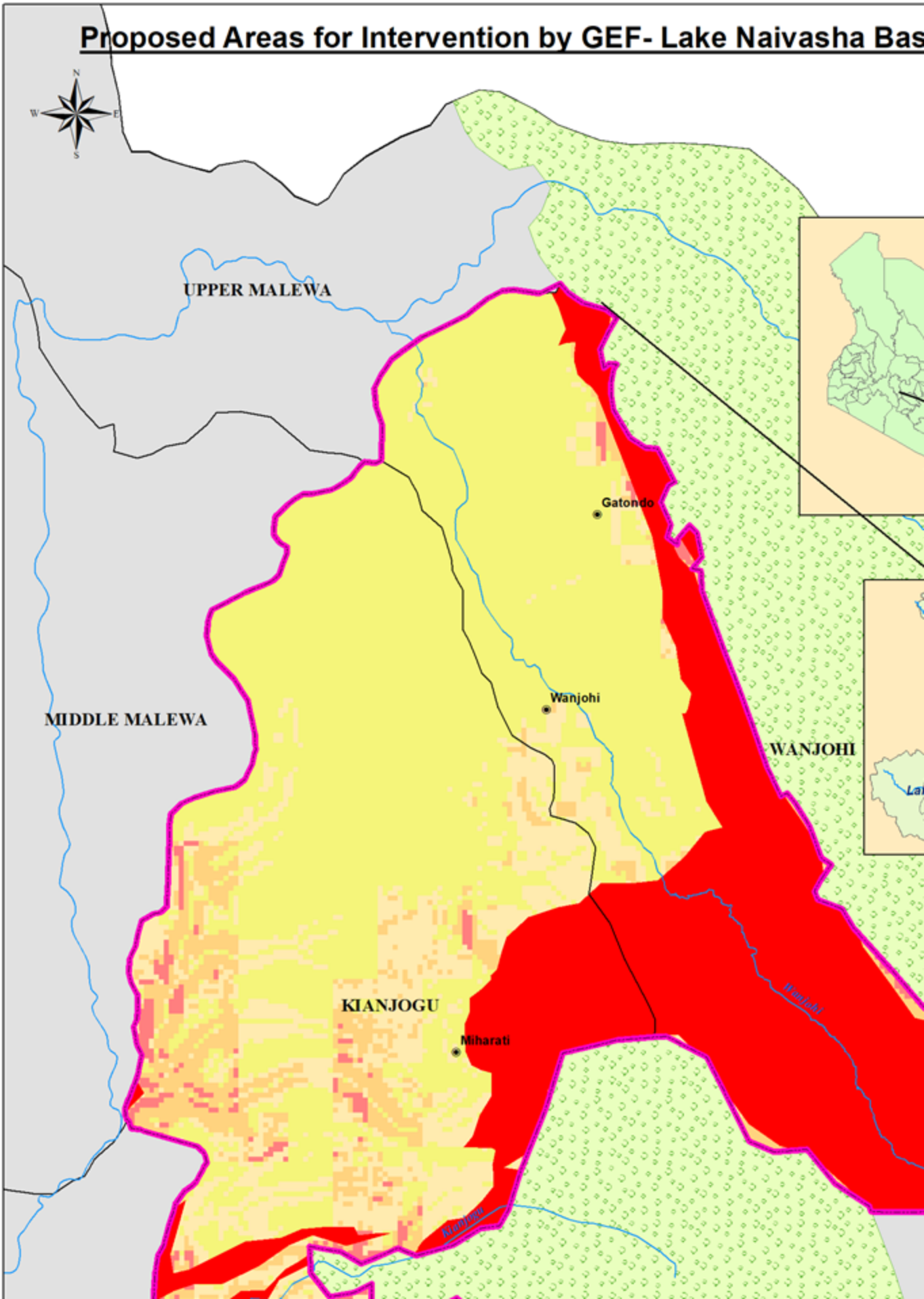
Name	Position	Ministry	Date
Dr. Chris Kiptoo	GEF Operational Focal Point	Ministry of Environment and Forestry	10/19/2020

ANNEX A: Project Map and Geographic Coordinates

Please provide geo-referenced information and map where the project intervention takes place


Lake Naivasha Basin Catchment Zones
36°10'E
36°20'E
36°30'E
36°40'E
0°10'S
0°20'S
0°30'S
0°40'S
0°50'S
N
Ol Joro Orok
Ngobit
Bahati
Rurie
Dondori
Ol Kalou
Lanet
Gatondo
Wanjohi
Miharati
Geta
Karunga
Kariandusi
Githioro
Gilgil
Ndunyu Njeru
Mitaraxwa
Engineer
Tulaga
Morendat
Naivasha
Marangishu
L. Naivasha
Heki
Ngunyumu Kongoni
Sakutiek
Kamae
Magumo
Longonot
Kinale
Legend
Urban Centre
Upper Basin (Above 2,500m)
Middle Basin (Upto 2,500m)
Lower Basin (Upto 2,000m)
Major Road
River
Forest
Lake Naivasha
L.Naivasha Catchment
0
5
10
20
Km


L. Naivasha RAMSAR Site
Morendat
Naivasha
Lake Naivasha
Lake Sonachi
Oloiden Bay
Kongoni
2834 m
2713 m
2478 m
Gilgil
Malewa
0
2.5
5
10 Kilometers
Legend
N
Town/ Urban Centres
Airstrips
Hotels
Game Sanctuary
Farms
Main Rivers
Main Roads
Lake
Riparian Boundary
RAMSAR site
Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
Projection: Mercator Auxiliary Sphere
Datum: WGS 1984
False Easting: 0.0000
False Northing: 0.0000
Central Meridian: 0.0000
Standard Parallel 1: 0.0000
Auxiliary Sphere Type: 0.0000
Units: Meter


Proposed Areas for Intervention by GEF- Lake Naivasha Bas
N
W
E
S
UPPER MALEWA
MIDDLE MALEWA
Gatondo
Wanjohi
WANJOHI
KIANJOGU
Miharati