CIF CLIMATE INVESTMENT FUNDS

Meeting of the SCF Trust Fund Committee

Washington, D.C (Hybrid)

Thursday, February 27 and Friday, February 28, 2025

KENYA (NPC) INVESTMENT PLAN

CLIMATE INVESTMENT FUNDS
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SCF/TFC.19/03
January 30, 2025

PROPOSED DECISION

The SCF Trust Fund Committee, having reviewed the document *Kenya (NPC) Program Investment Plan* (*SCF/TFC.19/03*):

i. thanked the Government of Kenya for the work it has done in preparing the Investment Plan.

ii. endorsed the investment plan as a basis for the further development of the projects foreseen in the plan and took note of the total requested grant funding of USD 35.66 million (inclusive of MBD project preparation and supervision services- MPIS- and project preparation grants) to support the following projects:

1. USD 12.5 million (World Bank- IBRD) for the **Nature Capital project: Restoration and protection of natural ecosystem functioning and biodiversity in forests, rivers, wetlands and rangelands**.
2. USD 8.5 million (IFC) for the **Nature Ventures project aimed at stimulating private sector investments in NbS through eco-tourism, reforestation and sustainable agribusiness.**
3. USD 13 million (AfDB) for the **Nature People project Promoting nature-positive, climate-resilient development to ensure food security, improve livelihoods & ecosystem services**

iii. took note of the request for USD 1.66 million for MDB project preparation and supervision services (MPIS) from the MPIS allocations set aside, to be allocated as follows:

a. USD 630,000 for the IBRD for the Project: *Nature Capital project: Restoration and protection of natural ecosystem functioning and biodiversity in forests, rivers, wetlands and rangelands,* and approves USD 180,000 as first tranche of funding for such services;
b. USD 400,000 for the IFC for the Project: *Nature Ventures project aimed at stimulating private sector investments in NbS through eco-tourism and reforestation,* and approves USD 200,000 as first tranche of funding for such services;
c. USD 630,000 for the AfDB for the Project: *Nature People project Promoting nature-positive, climate-resilient development to ensure food security, improve livelihoods & ecosystem services,* and approves USD 315,000 as first tranche of funding for such services;

iv. took note of the request for USD 1.3 million for Project Preparation Grants, to be allocated as follows: AfDB: USD 0.5 million, IFC: USD 0.5 million and IBRD: USD 0.3 million;

v. took note of the Dedicated Grant Mechanism (DGM) allocation of USD 4 million, which comes through a financing window that is separate from the Investment Plan allocation;

vi. requested the Government of Kenya, in the further development of the proposed projects, to take into account comments made at the meeting and any additional written comments submitted by members.

REPUBLIC OF KENYA

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When replying, please quote:

Ref. No. MEF/EMC/1/5

9th January 2025

Tariye Gbadegesin
Chief Executive Officer
Climate Investment Funds Secretariat
c/o The World Bank Group 1818 H Street NW
Washington, D.C. 20433, USA

Dear Tariye,

RE: SUBMISSION OF KENYA'S INVESTMENT PLAN FOR CLIMATE INVESTMENTS FUNDS' NATURE, PEOPLE AND CLIMATE (NPC) INVESTMENT PROGRAMME

I wish to refer you to the subject above.

As you may recall, Kenya's Expression of Interest (EoI) to participate in the NPC Investment Programme was approved by the Climate Investment Funds (CIF) in November 2022. Following this approval, and with the allocation of an Investment Plan Preparation Grant (IPPG), Kenya commenced the development of the NPC Investment Plan. Over the course of this process, three (3) missions with Multilateral Development Banks (MDBs) were held in 2023 and 2024.

The Kenya NPC Investment Plan has now been finalized with financial and technical support from your office, alongside input from MDBs, including the World Bank as the lead institution, the African Development Bank, and the International Finance Corporation (IFC).

The preparation process also involved broad consultations at both national and county levels, engaging civil society organizations, the private sector, development partners, government entities, and local communities.

In view of the above, I wish to submit Kenya's NPC Investment Plan herewith attached.

Yours Sincerely,

Dr. Eng. Festus K. Ng'eno, MIEK, CBS
PRINCIPAL SECRETARY

Copy to: **Dr. Chris K. Kiptoo, CBS**
Principal Secretary
The National Treasury
NAIROBI

KENYA INVESTMENT PLAN

CLIMATE INVESTMENT FUNDS
NATURE, PEOPLE AND CLIMATE PROGRAM

JANUARY 2025

NETFUND
Leading the way to a greener future

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ACRONYMS AND ABBREVIATIONS

ACC-LVB	Adapting to Climate Change in Lake Victoria Basin
ACAW	ADF Climate Action Window
ADF	African Development Fund
AE	Accredited entity
AFD	French Development Agency
AfDB	African Development Bank
AFOLU	Agriculture, forestry and other land uses
AFR100	African Forest Landscape Restoration Initiative
AGRA	Alliance for Green Revolution in Africa
ASALs	Arid and semi-arid lands
ASTGS	Agricultural Sector Transformation and Growth Strategy
BREFOL	Building Climate Resilience for Food and Livelihoods in the Horn of Africa
BREFONS	Build Resilience for Food and Nutrition Security in the Horn of Africa
CBD	Convention on Biological Diversity
CBO	Community based organisation
CCCF	County Climate Change Funds
CFA	Community Forest Associations
CGA	Cereal Growers Association
CIDP	County Integrated Development Plan
CIF	Climate Investment Funds
CoG	Council of Governors
CSA	Climate Smart Agriculture
CSO	Civil society organisation
DGM	Dedicated Grant Mechanism
EEZ	Exclusive economic zone
EMCA	Environmental Management and Coordination Act
FAO	Food and Agriculture Organization
FLLoCA	Financing Locally Led Climate Action Program
FMO	Dutch entrepreneurial development bank
GBFF	Global Biodiversity Framework Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
GESIP	Green Economy Strategy and Implementation Plan
GHG	Greenhouse gas
GIZ	Gesellschaft für Internationale Zusammenarbeit
GoK	Government of Kenya
GZDSP	Green Zones Development Support Project
Ha	Hectare (100 m x 100 m)
HWC	Human wildlife conflict
IAP	Invasive alien plant
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IFMIS	Integrated Financial Management Information System
IUCN	International Union for the Conservation of Nature
KCB	Kenya Commercial Bank
KEFRI	Kenya Forestry Research Institute
KEWASIP	Kenya Watersheds Improvement Programme
KFS	Kenya Forest Service
KNBS	Kenya National Bureau of Statistics
KSh	Kenya Shilling
KWCA	Kenya Wildlife Conservancies Association
KWS	Kenya Wildlife Service
LVB	Lake Victoria Basin
LVBC	Lake Victoria Basin Commission
MDB	Multilateral Development Bank

MENR	Ministry of Environment and Natural Resources
MoECCF	Ministry of Environment Climate Change and Forestry
MPIS	MDB project implementation and services
$MtCO_2eq$	Million tonnes of carbon dioxide equivalent.
NAP	National Adaptation Plan
NTAC	National Technical Advisory Committee
NbS	Nature-based solutions
NBSAP	National Biodiversity Strategy and Action Plan
NCCAP	National Climate Change Action Plan
NCCRS	National Climate Change Response Strategy
NDCs	Nationally Determined Contributions
NEAP	National Environment Action Plan
NEMA	National Environment Management Agency
NETFUND	National Environment Trust Fund
NGO	Non-governmental organisation
NLERS	National Landscape and Ecosystem Restoration Strategy
NPC	Nature, People and Climate
NPSC	National Project Steering Committee
NWMP	National Water Master Plan
OECMs	Other effective conservation measures
PPG	Project preparation grant
REALMS	Regenerative Agricultural practices for improved Livelihoods and Markets
REDD+	Reduced Emissions from Degradation and Deforestation
RLACC	Rural Livelihoods' Adaptation to Climate Change
STRAK	Strengthening Regenerative Agriculture in Kenya
TCLP	Transformational Change Learning Partnership
UNFCCC	United Nations Framework Convention on Climate Change
UTNWF	Upper Tana Nairobi Water Fund
US$	United States Dollar
WB	World Bank
WCCPC	Ward Climate Change Planning Committee
WRA	Water Resources Authority
WSTF	Water Sector Trust Fund
WTTC	World Trade and Tourism Council

1. KENYA NPC INVESTMENT PLAN SUMMARY

1.1 OVERVIEW

In Kenya, ecosystem degradation is extensive, is a major contributor to GHG emissions, and constitutes a major threat to livelihoods and the economy, a situation that is being greatly exacerbated by climate change. The degradation of forests, rangelands and cultivated lands and of natural and semi-natural ecosystems has been extensive, with negative impacts on agricultural productivity, food and water security, and on the economy as a whole. Land degradation, coupled with increasing temperatures, more erratic rainfall and increased frequency of extreme weather events under climate change, is already driving both rural and urban households further into poverty. Without intervention, this will have potentially disastrous consequences both for local livelihoods and downstream sectors, leading to food insecurity, water scarcity, and increased disease risk. To address these challenges, the Government of Kenya (GoK) has developed this Nature People and Climate (NPC) Investment Plan as a strategic document which is strongly aligned with the country's National Landscape and Ecosystem Restoration Strategy (NLERS) for 2023 – 2032 as well as its National Climate Change Action Plan (NCCAP).

The NPC Investment Plan focuses on nature-based solutions (NbS) that are not only strongly aligned with climate adaptation and mitigation, but also nature-oriented with positive biodiversity outcomes. In this way, the Investment Plan will address a key gap, in that funding for the restoration of natural and semi-natural ecosystems is well below that required. It will take action in both natural and cultivated areas. The IP includes three project concepts, two to be carried out by the public sector and a third to stimulate private sector investment to strengthen the first two:

- Securing key biodiversity and ecosystem services for climate-smart landscapes **("Nature Capital")**;
- Promoting nature-positive, climate-smart livelihoods in agricultural landscapes **("Nature People")**; and
- Stimulating private sector investment in nature-based solutions **("Nature Ventures")**.

The investment plan activities are concentrated in the upper parts of the Lake Victoria South and the Ewaso Ng'iro North Basins. These encompass areas of particularly high priority for restoration activities in terms of the potential returns from gains in ecosystem services, and the potential numbers of vulnerable households, also taking into account the existence of complementary and potentially synergistic efforts in the landscape.

The NPC Investment Plan aims to support Kenya's transition to a low-carbon and climate-resilient development pathway for inclusive and gender-responsive growth. It is designed to contribute to the reduction of GHG emissions from deforestation, forest and other natural ecosystem degradation, and the poor management of cultivated lands, and will result in improved carbon sequestration and storage across the landscape. It is also designed to improve water and food security in rural landscapes through improved farming practices, diversified opportunities and improved landscape capacity for ecosystem services that underpin economic activity. The investment plan emphasises the important roles of women and youth, incorporating gender sensitive design and ensuring inclusivity.

The NPC Investment Plan is informed by the country's landscape and socio-ecological contexts. Kenya's environmental landscape is diverse, with mountains, forests, grasslands, wetlands, and coastal areas. This land provides the foundation for key sectors in Kenya, e.g. agriculture and tourism. Its climate varies considerably across the country and climate change is already bringing higher temperatures, increased but more erratic rainfall, and more frequent extreme weather events. Land degradation, exacerbated by climate change, is reducing agricultural productivity, increasing vulnerability and reducing adaptive capacity. This is a major challenge for the country, whose economy and people are heavily dependent on its natural wealth which provides ecosystem goods and services and offers opportunities for sustainable human, social and economic development. The potential for further growth,

job creation and poverty reduction in Kenya is high given the level of human capital and entrepreneurship. Despite positive socio-economic developments over the past few years, it remains an unequal society by income, gender, and geographical location. Levels of poverty are highest in the arid and semi-arid areas which cover most of the country. Rapid population growth and high unemployment rates remain a serious challenge.

The NPC Investment Plan follows an integrated landscape approach promoting sustainable land, ecosystem and resource management activities and recognising and capitalising on ecosystem and wildlife values for improved climate resilience and mitigation in rural communities. This will bring about a more holistic approach in which nature-based solutions are harnessed to address climate change mitigation and adaptation by focusing on approaches that address context-specific barriers and policy and capacity gaps to achieve and instil sustainable land and resource use and management in identified priority catchments and landscapes.

The NPC Investment Plan is owned by the GoK and was developed in coordination with the participating Multilateral Development Banks (MDBs) - the World Bank (WB), the African Development Bank (AfDB) and the International Finance Corporation (IFC). The Investment Plan will be coordinated by the State Department of Environment and Climate Change, assisted by the National Environment Trust Fund (NETFUND). The Investment Plan identifies investment opportunities and seeks to mobilize resources from public and private sector entities and development partners using CIF funding.

The Investment Plan aligns well with Kenya's policy and legislative response to environmental and climate challenges and its commitment to international and regional environmental agreements. It will contribute to Kenya's Nationally Determined Contributions (NDC), the National Landscape and Ecosystem Restoration Strategy (NLERS), the National Climate Change Response Strategy (NCCRS), the National Climate Change Action Plan (NCCAP), the National Adaptation Plan (NAP), the National Environment Action Plan (NEAP), and the National Water Master Plan (NWMP).

1.2 OBJECTIVES AND EXPECTED OUTCOMES

The overarching strategic objectives of Kenya's NPC Investment Plan are:

- To **reduce GHG emissions** and contribute to climate change **mitigation** in the AFOLU sector by restoring and securing soil and biomass carbon in natural, semi-natural and cultivated systems;
- To **improve adaptive capacity and resilience to climate change** of rural communities by securing ecosystem services and generating alternative income opportunities for vulnerable and burdened sectors of rural society through an inclusive and gender-sensitive approach;
- To improve outcomes for **biodiversity** by securing the health, connectivity and overall integrity of wildlife habitats;
- To **build capacity and strengthen policies and institutions** focused on landscape restoration, water management and sustainable land use in response to climate change.

1.3 PROPOSED PROJECT CONCEPTS

Kenya's NPC Investment Plan focuses on a coordinated and integrated landscape approach to bring about the restoration and sustainable management of land and natural resources for resilient and healthy ecosystems and improved livelihoods. Supporting the implementation of the NCCAP and NLERS, the NPC Investment Plan identifies and addresses priority areas and activities that are also aligned with the objectives and activities of the partner MDBs. These activities will catalyse further investment in NbS that will address the substantial overall investment required.

The Investment Plan addresses critical issues such as ecosystem degradation, loss of biodiversity and ecosystem services, declining crop and livestock productivity, human-wildlife conflict, gender inequality, and increasing vulnerability to climate change. Key barriers include insufficient data on water flows and use, limited funding for projects, limited government

capacity, lack of technical capacity, and poor access to markets.

The Nature Capital project (WB) focuses on restoring and sustainably managing ecological infrastructure, including forests, wetlands, and rangelands, which provide essential ecosystem services. Outputs include gazetted environmental flows, gazetted management plans, and restoration projects in forests, wetlands and rangelands leading to improved water governance and healthier landscapes.

The Nature People project (AfDB) promotes regenerative agriculture, sustainable livestock management and alternative livelihoods. It includes establishing riparian and wetland buffers, agroforestry, and water harvesting infrastructure to improve food security, and reduce climate vulnerability and environmental degradation. Additionally, it will encourage businesses like indigenous tree nurseries and beekeeping to support restoration efforts.

The Nature Venture project (IFC) will seek to mobilize private sector investment in NbS. It will fund agro-enterprises, tourism partnerships, and large-scale restoration projects through carbon and biodiversity credit schemes. This collaboration between public and private sectors will support conservation and sustainable land use. It will support more diversified and resilient livelihoods and strengthen ecotourism.

Through Nature Capital, Nature People and Nature Ventures, the NPC Kenya Investment Plan aims to support healthier landscapes which provide critical ecosystem services. The plan strengthens food and water security as well as livelihoods and reduces climate vulnerabilities. GHG emissions will be reduced, and carbon retention will be increased in the landscape.

1.4 BUDGET

The CIF NPC Kenya Investment Plan has been prepared to mobilise around US$ 155 million in funding (US$ 34.00 million from CIF and an additional estimated US$ 121.20 million in co-finance from the MDBs and other potential development partners including the GoK, and the private sector) to implement the various NbS activities prioritised under three project concepts (Table 1.1). Note that the co-financing resources are indicative at this stage, based on information received from the MDBs on existing opportunities for co-financing in the short and longer-term. Using these resources, the Kenya Investment Plan aims to reduce GHG emissions and contribute to climate change mitigation in the AFOLU sector and to improve adaptive capacity and resilience to climate change of rural communities. This will be achieved through carbon retention and avoided emissions of some 5.5 million tCO_2 equivalent over the lifespan of the programme. The NPC Kenya Investment Plan also aims to improve outcomes for biodiversity and to build capacity and strengthen policies and institutions.

The three project concepts are aligned with the pillars of the NPC investment program, with national environmental and climate policy commitments, and with existing MDB NbS programmes in Kenya. For example, the Nature Capital project will be implemented within the same landscape as the World Bank Kenya Watershed Improvement Programme (KEWASIP) and the GEF-GBFF Sustainable Management and Restoration of Threatened Ecological Corridors in Kenya Project. The AfDB has committed to mobilising new financing through an application to the AfDB ADF and the ADF Climate Action Window (ACAW) and their projects – the Green Zones Development Support Project (GZDSP II) and Building Climate Resilience for Food and Livelihoods in the Horn of Africa (BREFOL) are well aligned with both the Nature People and Nature Capital project concepts. The IFC Nature Ventures project will catalyse private sector investment in NbS and seek to complement the Nature Capital and Nature People projects.

The project activities of the NPC Kenya Investment Plan will contribute towards achieving the implementation of the National Landscape and Ecosystem Restoration Strategy (NLERS) for 2025-2032, which is a commitment to restoring or rehabilitating over 10.6 million ha of land. To achieve this target, significant further funding is needed. To this end, the NPC Kenya Investment Plan seeks to mobilize further resources from public and private sector entities and development partners. Note that US$ 395 million has already been committed to financing similar activities in Kenya under World Bank and AfDB programmes outside of the focal areas for these projects. This parallel financing also contributes towards achieving the overall national restoration targets

Table 1.1. Indicative NPC Investment Plan budget (US$ million) showing the CIF funding amount and the estimated co-finance associated with each project concept.

Project concept	MDB	Estimated co-finance	CIF Funding Amount (US$ million)				
			PPG	Grant	Loan	Total	MPIS
1. Nature Capital	World Bank	55.50	0.30	12.20	-	12.50	0.63
2. Nature People	AfDB	33.70	0.50	12.50	-	13.00	0.63
3. Nature Ventures	IFC	32.00	0.50	8.00	-	8.50	0.40
TOTAL		**121.20**	**1.30**	**32.70**	**-**	**34.00**	**1.66**

2. COUNTRY CONTEXT

2.1 IMPORTANCE OF ECOSYSTEM INTEGRITY TO KENYA'S PEOPLE AND ECONOMY

Kenya's economy and the livelihoods of its people are heavily dependent on its natural wealth. Its ecosystems provide essential ecosystem goods and services and offer opportunities for sustainable human, social and economic development. Provisioning ecosystem services support agricultural production, livestock fodder and renewable natural resource harvesting that form the basis of most rural and coastal livelihoods, and provide the regulating services such as water regulation, pollination services and fish nursery areas that further support these. Indeed, approximately 35% of Kenya's total wealth is derived from renewable natural capital, such as cropland and pastureland (World Bank, 2019). Ecosystems

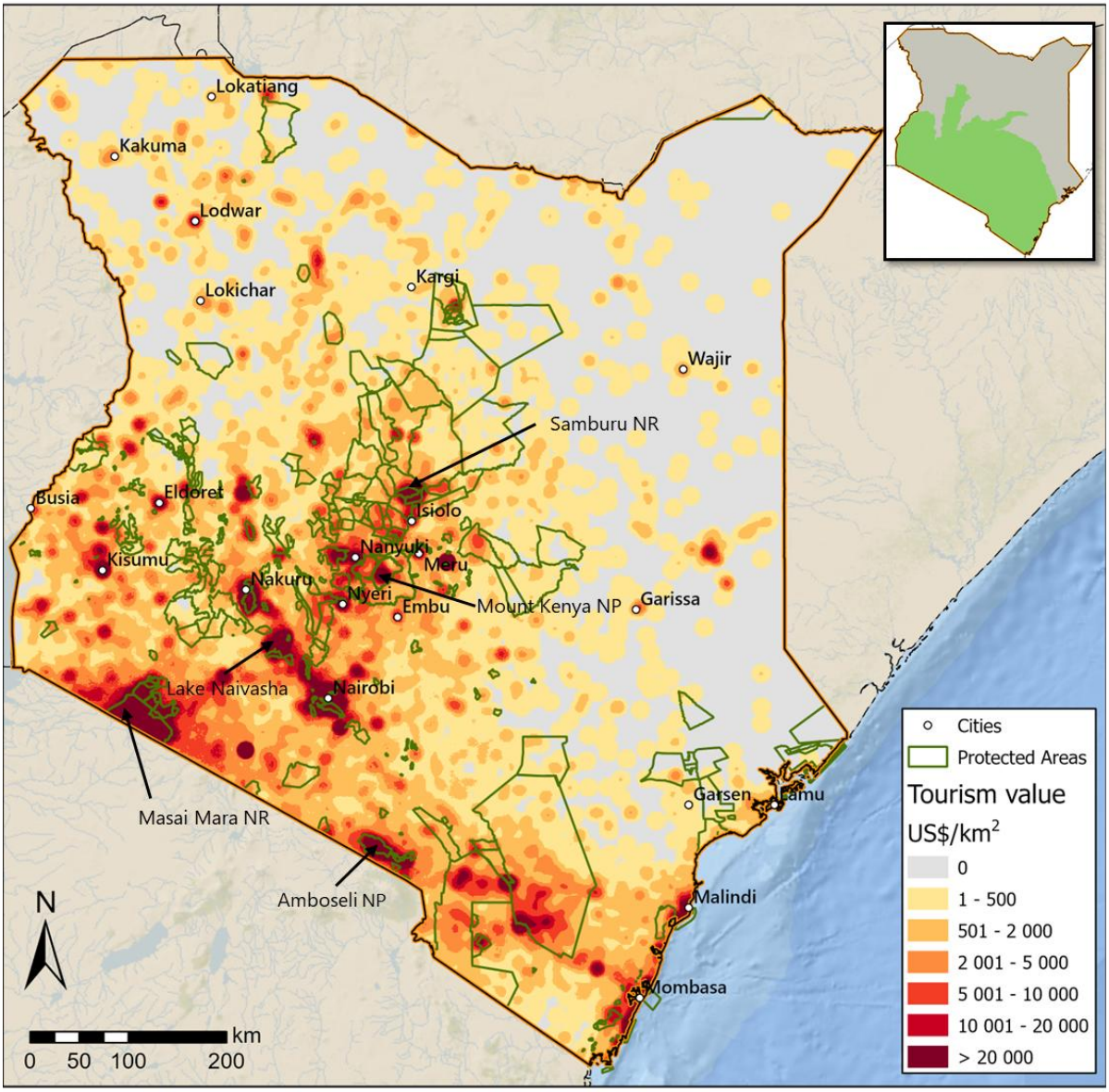

Figure 2.1. Distribution of attraction-based tourism value in Kenya. The river basins coloured in green in the inset map account for 96% of the nature-based tourism value (Turpie et al. 2023).

and their biodiversity also provide the basis for Kenya's significant wildlife-based tourism sector.

Provisioning services supplied by natural ecosystems such as forests, grasslands and wetlands, play a significant role in rural household livelihoods. Millions of rural Kenyans supplement their farming livelihoods through the harvesting of natural resources for fuel, raw materials such as for building poles, thatching and mats, wild foods and wild medicines that are freely available in nature. They also support livestock, a key component of most household livelihoods. These resources become particularly important during periods of climatic or economic shocks, providing a critical buffering effect. Their replacement cost to households would be immense, and their availability reduces the need for welfare assistance from government.

Hydrological regulating services supplied by natural ecosystems underpin important segments of the economy. Vegetated ecosystems and wetlands regulate hydrological flows by facilitating the infiltration of rainfall, reducing quickflow and flooding, replenishing groundwater aquifers and maintaining dry season flows. This improves the availability of water when it is needed and reduces the cost of built infrastructure needed to supply it. At the same time, the erosivity of rainfall events is dampened, avoiding erosion and downstream sedimentation that would otherwise find its way into reservoirs, compromising water supply and hydropower outputs. By slowing down surface flows, ecosystems also trap sediments and assimilate nutrients, helping to protect downstream water quality and saving on water treatment costs. These services are seldom appreciated, until ecosystem degradation occurs. Because forested mountain or hilltop areas receive relatively more rainfall than their surrounding landscapes, the role of these "water towers" in the hydrological cycle is particularly important.

Small-scale farmers benefit from the pollination services provided by surrounding natural forests and woodlands. In Kenya, pollinator-dependent crops include vegetables, fruits, coffee, beans and groundnuts. Based on the empirical analysis of Tibesigwa et al., (2019), Turpie et al., (2021) estimated the value of wild pollination services supplied by natural vegetation within 1000 m of cultivated lands in southwestern Kenya to be US$ 131/ha on average. Kasina et al., (2009) estimated the crop pollination value of natural habitats in the Kakamega region of western Kenya to be worth US$ 32–2430/ha. Thus, healthy natural vegetation near farming areas contributes significantly to crop production.

Nature-based tourism brings important benefits to rural areas. Tourism is estimated to account for 8.2% of Kenya's total economy (WTTC, 2020) and is a leading sector in terms of foreign exchange earnings. Of this, a significant portion is from nature-based tourism. Safari tourism in Kenya has been found to generate greater economic growth than the other forms of tourism (business, beach, and other), addressing poverty and creating rural economic opportunities (Sanghi *et al.*, 2017). Nature-based tourism is estimated to be worth over $1000 million per annum, with the highest per ha values coming from formal protected areas (Table 2.1). Conservancies also bring significant tourism value, even though not all conservancies have tourism operations. The country's transboundary wildlife landscapes, particularly

Table 2.1. Total and average per hectare values for nature-based tourism in 2018 across broad protected area categories (Source: Turpie et al. 2023). Average values are irrespective of the presence of tourism facilities.

Protected area type	Total nature-based tourism value (US$ m)	Per hectare nature-based tourism value (US$/ha)
National Parks, Reserves	659.7	148.59
Conservancies	46.0	13.62
Forest Reserves	12.5	10.29
Not protected	350.7	7.16
TOTAL	**1068.9**	

the landscapes linked to the Serengeti-Mara ecosystem, bring staggering value to the region, amounting to some $508 million in 2018 (Turpie *et al.*, 2021).

Estuaries, mangroves and marine habitats such as seagrass and corals not only have major tourism value in Kenya but also support most of its fishery value. Kenya's marine heritage amounts to some 165 000 km^2 within its exclusive economic zone (EEZ). Within this, its shallower inshore habitats, which cover less than 1% of this, are particularly productive (Turpie & Dominy 2023). These include about 55 000 ha of mangroves, which play a particularly important role in providing nursery habitat for wild capture fisheries, and 6 500 ha of coral reefs, which are important inshore fishing grounds. The artisanal fishery derives most of its catches from within 10 km of the coast, amounting to some 35 600 tonnes in 2022 (Turpie & Dominy 2023). However, the largest fish catches come from Lake Victoria.

2.2 ENVIRONMENTAL DEGRADATION

In Kenya, ecosystem degradation is extensive and constitutes a major threat to livelihoods and the economy. While transformation of natural ecosystems to man-made ecosystems is somewhat limited by rainfall and water availability (Figure 2.2), the degradation of existing agricultural lands and of natural and semi-natural landscapes has become so extensive as to have disastrous consequences both for local livelihoods and downstream sectors, particularly in the face of climate change.

Arable land areas are almost fully cultivated, mostly using poor farming methods, leading to encroachment into sensitive and important ecosystems, and extensive soil loss which impacts on other ecosystems. Arable land in areas of sufficiently high rainfall makes up about 15-17% of the country, and most of this is already being farmed (see pink area in Figure 2.2). Most of this agriculture involves traditional, subsistence or small-scale production on fields of under two hectares. Population growth and family subdivisions of inherited land has resulted in both farms and farming incomes per household getting smaller. The densification of arable areas tends to plateau at extremely high levels of 500-600 persons/km^2 (Wahome et al., 2024). Thus, cultivated lands extend into key ecosystem areas such as forest edges, riparian areas, wetland and protected areas. The result is excessive soil loss, and sedimentation and nutrification of waterways and lakes, impacting on water security, fisheries, flooding and human health

Some 89% of Kenya's terrestrial landscape is classified as arid and semi-arid lands (ASALs), and while much of this remains untransformed as rangeland area, there is widespread degradation. The ASALs are mostly unsuitable for agriculture and used as rangelands by semi-nomadic pastoralists. This means that large tracts of the northern and eastern parts of Kenya and some areas of the southwest have remained untransformed. While these areas support a rich cultural heritage in which the management of livestock and pastureland is deeply embedded, increasing human and livestock populations have had a negative impact on rangeland condition, which has precipitated major invasions of alien plants such as *Prosopis* trees, *Opuntia* cactus and *Cassia* shrubs that further reduce livestock (and wildlife) carrying capacity.

Rangelands in some areas have started being transformed to agriculture as a result of land policies and the sedentarisation of nomadic cultures. In the south of Kenya, the majority of the population is semi-nomadic Maasai, who rely on livestock production as their main source of income. However, an increasing shift to cultivation is occurring, with agriculture often viewed as more profitable than pastoralism (Okello, 2005). This is despite the fact that crops in this region are mostly cultivated on a small scale and generally produce low yields (FEWS NET, 2010a). This has put increased strain on land and water resources in the region. For example, cultivation and irrigation have caused substantial losses of swamps in the Amboseli/Chyulu Hills area, compromising these important habitats for wildlife and people (Okello & Kioko, 2011).

Urban demand for charcoal, coupled with increasing unemployment, is leading to the degradation and deforestation of woodland, riparian and forest areas. Urban households are heavily reliant on charcoal as an energy source, with some 86% of households in Nairobi using charcoal for cooking. Nationally, some 1.4 million (out of 12 million) households depend on

charcoal. It is a convenient energy source in urban areas that have little access to electricity, as it is far easier and cheaper to transport than firewood or gas. This demand, coupled with free access to woody plants in the landscape, has fuelled a trade that employs an estimated 700 000 people, with an estimated annual market value of over US$ 427 million, making it one of the country's biggest sources of income.[1] The industry has had major impacts on vegetation cover, threatening the survival of some tree species and impacting on the hydrology of water catchment areas. The production of charcoal persists despite a series of regulations which ban production on public lands and bans trade, albeit with only minor fines for transgression. These have resulted in increased prices of charcoal but have not stopped a thriving black-market trade which includes exports to Tanzania, Uganda and South Sudan (Enact Africa, op. cit.).

The rate of forest loss and land degradation in Kenya is alarming, with over 40% of the country affected. Global Forest Watch data shows that in the two decades from 2000, Kenya has lost some 17 000 ha of forest per year on average, although the rate of loss was reduced after a

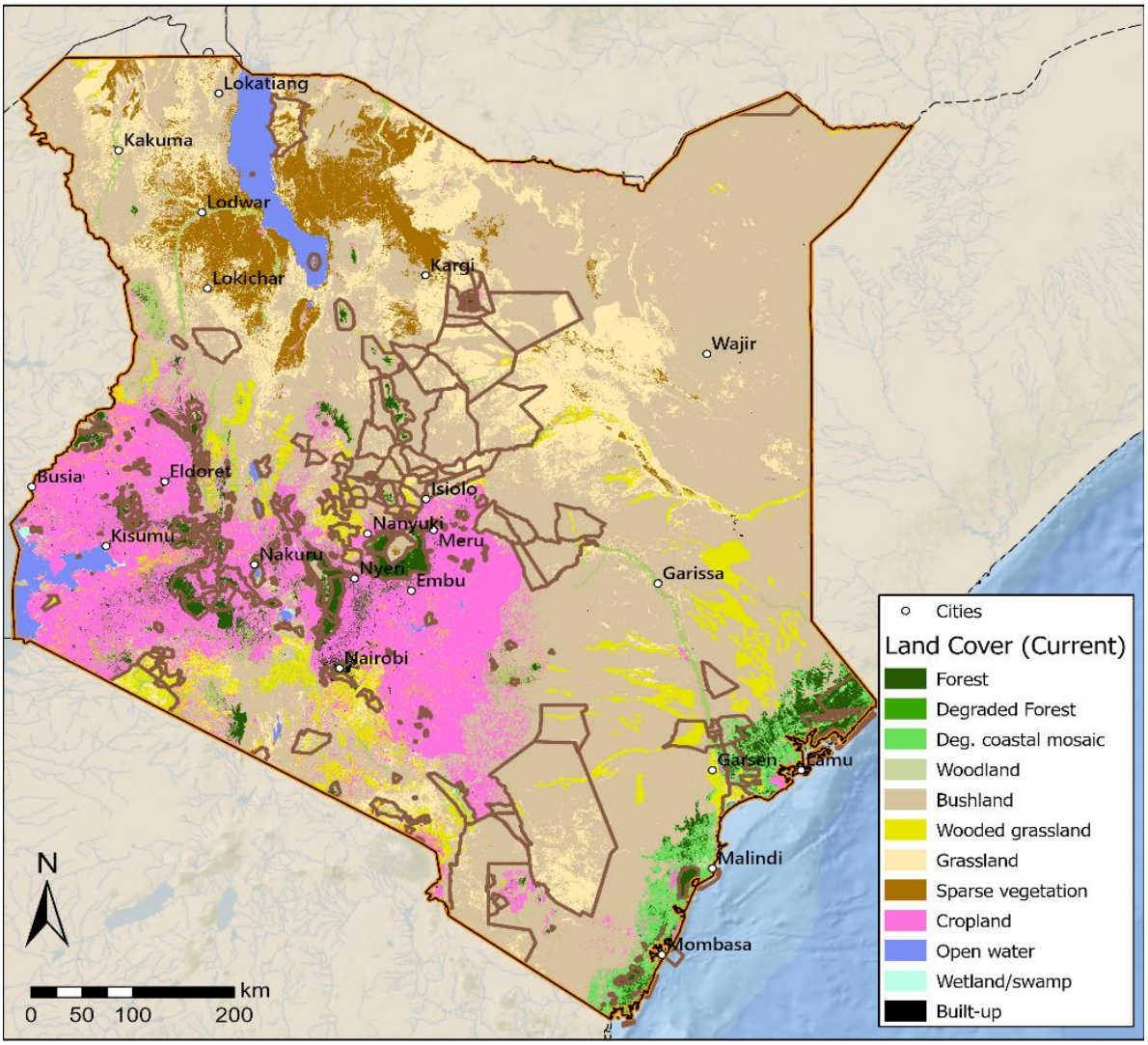

Figure 2.2. Land cover 2018, including protected area boundaries. Source: Copernicus Global Land Service.

[1] Going deeper underground: why Kenya's charcoal bans don't work | ENACT Africa

logging ban in 2018 and lifting of import duties on wood in 2020 (SPACES 2023). Some 42% of this degradation has been concentrated in seven hotspots: Mau, Dakatcha, Dodori, Nyekweri, Mpeketoni, Lamu and Karawa. The rate of degradation and loss of non-forest systems has been far greater, at some 287 000 ha per year, with the most severe degradation in Makueni and Machakos counties (SPACES, 2023). An estimated 24.3 million ha are currently degraded, amounting to some 41% of the land area (SPACES, 2023, based on Walker *et al.*, 2022).

Encroachment of livestock, agriculture and resource harvesting into protected areas is undermining their integrity and driving massive loss of wildlife. Protected areas are losing habitat at a rate of 0.2% per year, with about one million hectares having been cleared for human uses. This has reduced protected area coverage (including OECMs)[2] from 27% to 25.5% (SPACES, 2023). The degradation, loss and fragmentation of habitats, increasing competition from livestock, invasion of alien species, and illegal hunting has led to dramatic declines in wildlife populations in recent decades (Western, Russell & Cuthil, 2009; Ogutu et al., 2016; Damania et al., 2019). Outside of agriculture areas, landscape connectivity has also been undermined to some degree by increases in roads, settlements and fencing (Ogutu et al., 2011, 2014, 2016; Damania et al., 2019). As a result, wildlife has disappeared across extensive areas in the north of the country. Wildlife populations during 2011-2016 were just 31.9% of what they were during 1977-1980, and were estimated to have declined to by 27.3% by 2018. Without action, this trend would leave Kenya with less than 10% of their 1970s wildlife populations by 2050 (Turpie, Wilson & Letley, 2023). Currently, only the national parks (managed by Kenya Wildlife Services - KWS) and the Maasai Mara National Reserve (managed by the Narok County Government) are managed exclusively for wildlife. Community- and privately owned conservancies provide some habitat for wildlife (Oduor, 2020), often generating revenues from wildlife-tourism, and can play an important role in providing migratory corridors and buffer areas around state protected areas (Damania et al., 2019). However these areas are often shared with livestock, particularly during the dry season (Oduor, 2020).

Unsustainable mining practices are driving land degradation in many areas. Sand is harvested mainly for commercial purposes and is a major source of income and livelihood. Sand harvesting is considered detrimental when operated without environmental considerations. Sand harvesting may not be conducted on river banks due to the significant soil erosion risks, and catchment degradation risks associated, although small scale mines have not been adhering to this legislation. Small scale mining has adverse environmental impacts due to the limited rehabilitation and planning conducted. Quarrying involves the destruction of vegetation and fauna habitats, soil erosion, dust and noise impacts. Many quarry sites are uncontrolled and have been located haphazardly without proper planning. When quarry sites are located near a river, they may lead to water pollution through oil or petroleum spills, sedimentation and other waste products.

Land and ecosystem degradation is reaching tipping points and having measurable impacts on socio-economic systems. Despite its natural wealth, Kenya faces significant environmental challenges that threaten its ecosystems' ability to sustain its population of 52 million – projected to reach 96 million by 2050. Key issues include land degradation driven by poor land-use practices, loss of biodiversity resulting from habitat destruction and overexploitation of resources, deforestation often linked to unsustainable charcoal production, and overfishing of marine ecosystems. Rapid urbanisation has led to the growth of informal settlements, where many residents lack access to basic services such as sanitation. Pollution poses a significant threat to Kenya's ecosystems and is driven by municipal and industrial discharges, surface runoff, and the improper disposal of solid waste. Nutrient enrichment from sewage discharge and agricultural runoff further deteriorates water bodies, leading to harmful algal blooms that deplete oxygen levels and create dead zones, where aquatic life cannot survive. This pollution impacts not only the health of the ecosystems but also the

[2] Other effective conservation measures, such as community conservancies.

livelihoods of communities that depend on these water resources for fishing and agriculture. As the population grows, livelihood strategies shift and competition for land and natural resources intensifies, it can be expected that without intervention, the degradation and loss of natural and semi-natural habitats will continue into the future to the great detriment of Kenya's people and society as a whole.

While costly, the restoration of degraded lands would have a strongly positive return on investment. It has been estimated that the costs of ecosystem loss and degradation in Kenya amounted to some $1.3 billion per year during 2001-2009. In addition, "soil nutrient mining" has reduced the yields of wheat, maize and rice by some $270 million per year. It has been estimated that the benefits of rehabilitating lands would be four times the costs (Mulinge *et al.*, 2015).

2.3 CLIMATE CHANGE EXACERBATING SECTORAL AND LIVELIHOOD CHALLENGES

Kenya's climate varies considerably across the country, with some areas being far more benign for human livelihoods than others. Rainfall is highest in the central highlands and the Lake Victoria basin area and decreases from the relatively mesic southern areas to the arid northern areas (Figure 2.3). Temperatures follow a similar pattern, with the coolest areas being the central highlands and hottest areas being in the north. These variations, coupled with geographic variation in the seasonality of rainfall, lead to a diversity of climatic zones across the country.

As such, Kenyans have a long history of dealing with climate challenges, which have been a powerful determinant of livelihood strategies. Livelihood options are defined by the considerable variation across the country in the daily, monthly and interannual ranges, variation and extremes in temperatures and rainfall. As a result, Kenya's arable area is relatively confined to about a third of the landscape centred in the mesic southern and coastal areas. Elsewhere, households have more limited options which have historically centred on livestock.

Climate change is already bringing higher temperatures, increased but more erratic rainfall, and more frequent extreme weather events. While temperatures vary across Kenya, a distinct warming trend has occurred since the 1960s and is predicted to continue under most climate emission scenarios. While some areas may experience increased rainfall, overall water availability remains uncertain. There is a potential for extreme weather events, including both droughts and flooding.

Climate change will increase the vulnerability of populations whose livelihoods have already been compromised by diminishing land per capita and land degradation. The agriculture sector often suffers from low productivity and vulnerability to climate shocks, which can severely impact food security and livelihoods. These problems will only be worsened by climate change. Rising temperatures will have direct impacts on water demands and food production and could severely impact food security and livelihoods.

Rising temperatures will cause the more arid areas to become increasingly inhospitable, driving human migration to the south. Rising temperatures are likely to increase the periods of aridity in the ASALs that cover around 85% of Kenya. Communities in these areas are largely pastoral and closely tied to the natural resource base. Changing weather patterns are driving human migration, disrupting traditional livelihoods and leading to conflicts over resources. As droughts become more prolonged, water storage capacities will likely also be reduced, driving water insecurity in both rural and urban areas.

More intense rainfall events will result in greater damages, especially in already degraded areas where soils are less protected, and in urban and informal settlement areas. Intense rainfall and flooding may increase the likelihood of mudslides and landslides, particularly in mountainous areas in Kenya. The risk of extreme rainfall will be coupled with additional soil erosion that will likely reduce crops yields and have profound impacts on biodiversity. This may result in significant economic losses from,

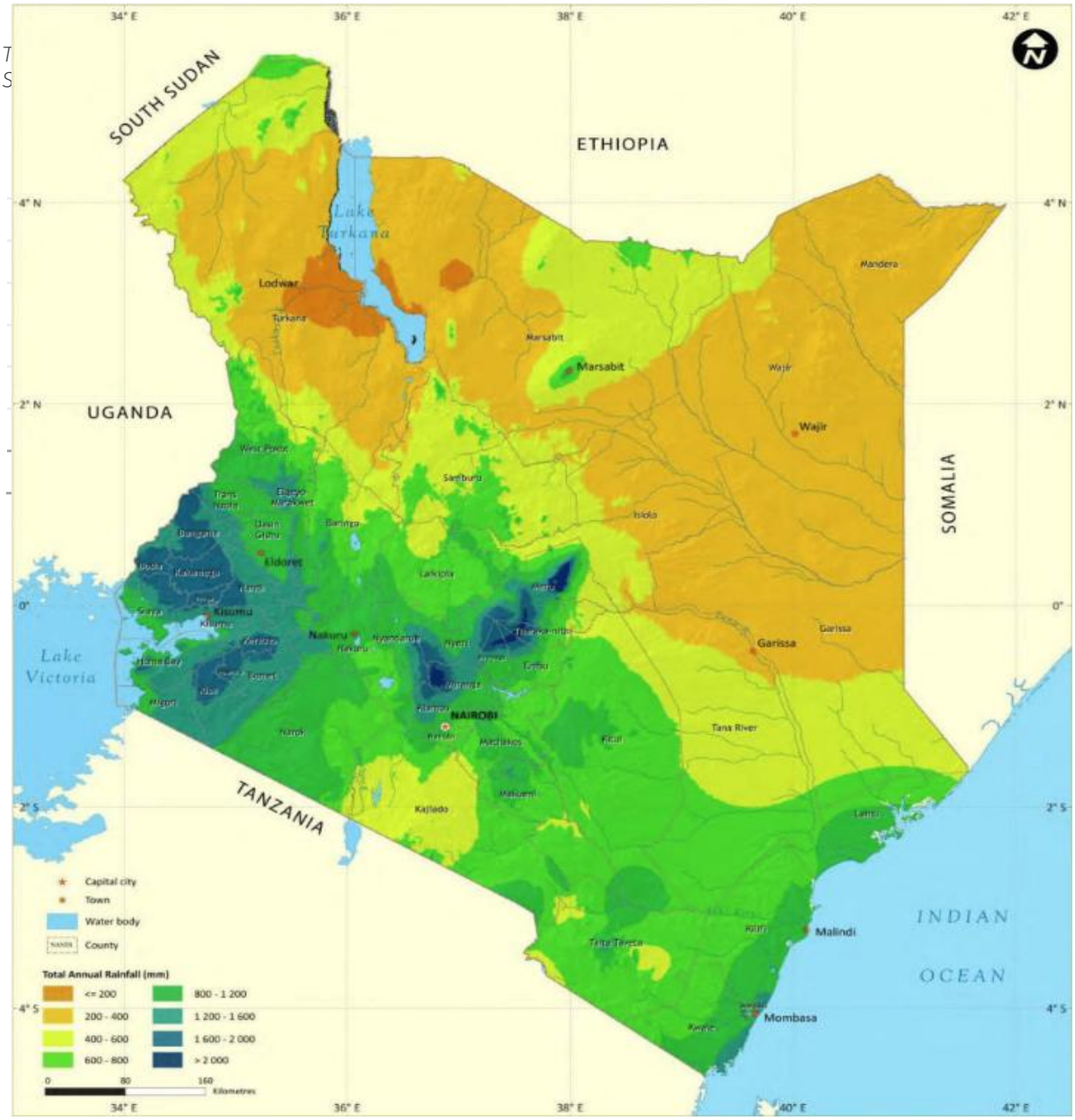

Figure 2.3. Rainfall distribution in Kenya (Source: Biodiversity Atlas of Kenya)

damage to agricultural lands and infrastructure as well as human casualties.

More intense coastal storms and high sea levels will greatly increase risks to coastal populations. Sea level rise also presents a risk to the five coastal counties in Kenya and their populations. Sea level rise in combination with extreme weather events is likely to intensify flooding in the low-lying areas of the coastland, especially where protection from mangroves, coral reefs and other coastal habitats has been compromised.

Climate change threatens water and energy security across the country. Although rainfall is projected to increase, the increased seasonality of rainfall will make water less available in the dry season, impacting on both surface and groundwater supplies (Figure 2.4). This will More extreme events will bring greater flooding and landslide risks. The effects of an extended dry season will be exacerbated by increased evaporation due to higher temperatures. Reduced groundwater recharge coupled with higher evaporation will impact on large parts of the country that are dependent on groundwater resources.

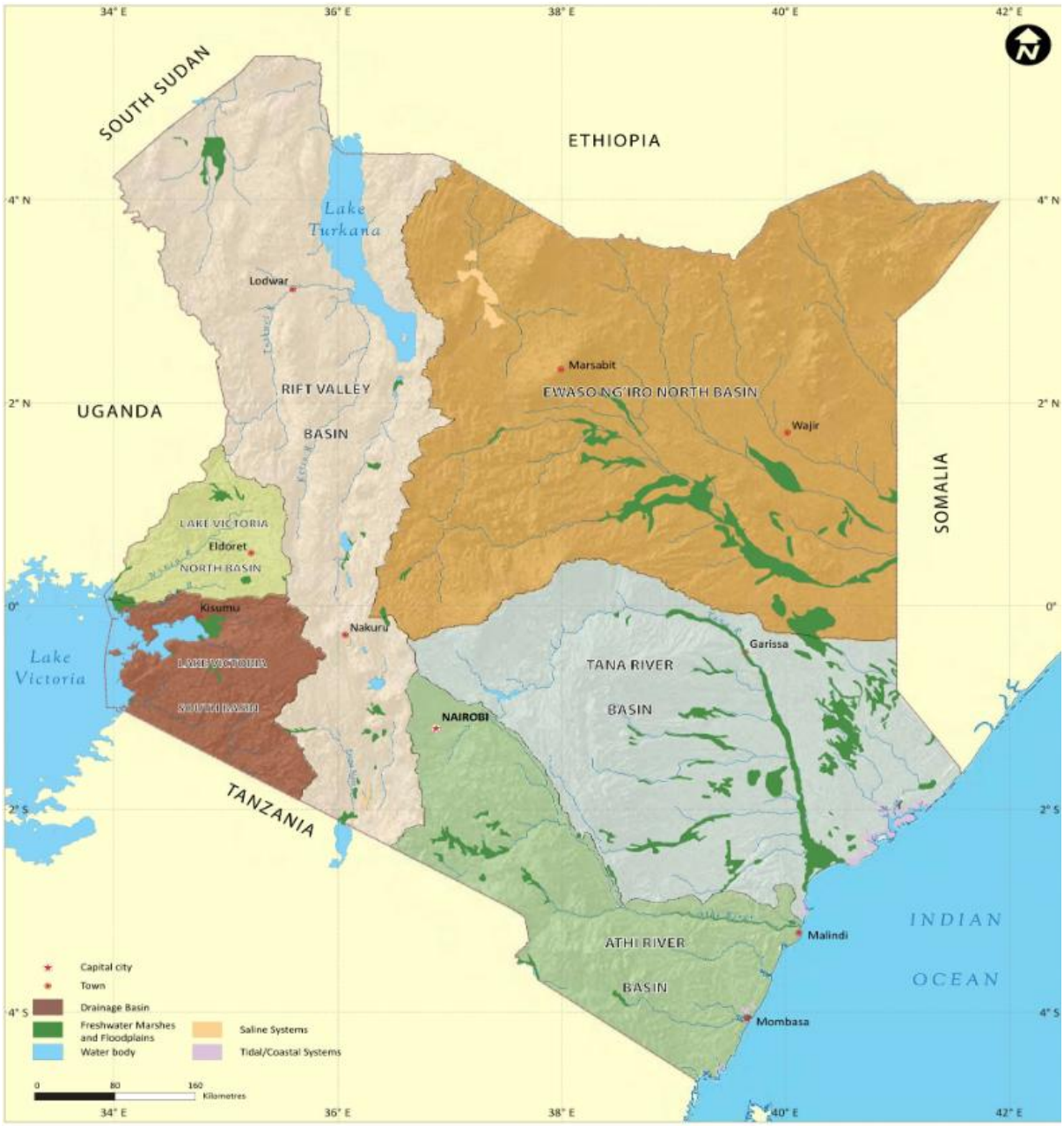

Figure 2.4. Kenya's river basins (Source: Biodiversity Atlas of Kenya).

Around 98% of Kenya's agriculture is rainfed and is therefore highly vulnerable to varying rainfall and temperature patterns (Kalele, et al., 2021). To enhance the resilience of this sector against climate change, the Kenyan government plans to increase the area under irrigation from 203,808 hectares to 650,580 hectares by 2040 (Aurecon, 2020). Achieving this goal will require substantial investments in infrastructure and the development of additional water sources. The proposed expansion includes the construction of nearly 50 large dams, alongside numerous smaller dams and boreholes, to meet the water needs of towns and local domestic and livestock demands. This strategy aims to ensure a reliable water supply for both small-scale and private irrigation initiatives. Many of the planned hydropower installations will be integrated into multi-purpose dam projects.

Water requirements will likely more than double by the mid-century, putting increasing pressure on the water resources on basin level. Basins such as Athi (where Nairobi is located) already have high water requirements and relatively low annual rainfall. If the planned developments are all implemented in the Athi Basin, the water availability balance will reduce

from 50% to 28% by 2040. Increasing importance must therefore be placed on proper water conservation and demand management interventions. The Athi basin already receives 80% of its water from the Tana Basin, and inter-basin transfers could further help alleviate the extreme geographical differences in water availability in the country.

Groundwater is increasingly being considered as a water resource that is more resilient to the impacts of climate change. As such, groundwater over abstraction has become a serious threat in parts of the country. Critically stressed aquifers include the Nairobi aquifer suite which is an important water source for the city. Furthermore, in coastal areas that are heavily reliant on groundwater to meet domestic and agricultural needs (such as Mombasa and Wajir), groundwater over-groundwater coupled with rising sea levels may drive increasing saltwater intrusion of these coastal aquifers. Groundwater aquifers are not only impacted over over-abstraction, but also by pollution. Infiltration from agricultural runoff and poor sanitation have led to high concentrations of nitrate and pathogenic contaminants in shallow aquifers.

Without intervention, climate change will exacerbate ecological degradation through the combination of its direct and indirect effects, leading to exponentially increasing impacts on socio-ecological systems. Ecosystems will suffer direct impacts of climate change through water and heat stress on biota, as well as the indirect effects due to adaptive behaviour by people, which if unmanaged, could greatly increase the pressure on land and resources. These impacts will, in turn, increase the vulnerability of both people and ecosystems to future pressures and climate change. Overall, it is suggested that by 2030 the impacts of climate change will cost the equivalent of 2.6% of Kenya's annual GDP (Parry, et al., 2012).

2.4 ADAPTATION EXPERIENCE IN LAND-BASED SECTORS

Adaptation methods have been practiced for decades by Kenya's pastoralists, but options have changed, and there has been a shift in the strategies employed. Pastoralists are particularly vulnerable to climate change, since they occupy less productive lands, tend to be marginalised, and are faced with severe environmental degradation (Cuni-Sanchez *et al.*, 2019). Historically, pastoralists have adapted to climate variation through transhumance practices; reducing livestock numbers, rapid destocking, varying the mix of species and breeds kept, including diversifying to include camels or small stock. However, some of these strategies have weakened over the years (Opiyo *et al.*, 2016; Ngigi, Mueller & Birner, 2017; Cuni-Sanchez *et al.*, 2019). For example, in some areas there is reduced ability to move livestock due to subdivision of land. Thus, in the last 10-20 years, pastoralists have moved from responding in terms of how they manage their livestock to newer strategies of diversifying their livelihood base from purely livestock keeping, to include crop production, wage labour and remittances, ecotourism and beekeeping. In areas near forests, harvesting resources or making charcoal is often the main alternative livelihood strategy (Cuni-Sanchez *et al.*, 2019). In some areas, such as the isolated montane areas in the ASALs, newer strategies such as crop production have themselves become threatened by a dramatic reduction in precipitation. Another more recent development has been to turn to using trees and tubers as alternative sources of livestock fodder. Many herders have resorted to lopping branches off trees to feed to their livestock, including going into forested areas to do so.

Climate change adaptation strategies are also widespread among crop farmers, and have led to increased food security effects in Kenya. Crop farmers have adapted by changing crop varieties, increasing land under production, increasing the area under irrigation, adopting water and soil conservation practices such as soil amendment, crop rotation and use of cover crops, and taking up agroforestry practices. Farmers tend to undertake multiple strategies, with some practices being complementary and others being substitutable. A study of farming households from six counties across Kenya examined the use of drought-tolerant crop varieties, growing diversified crops, use of early maturing varieties and income diversification. Farmers who adopted one of these measures had a 7-10% better food security status, those who had adopted two had 11-14% better food security, and those who adopted all four had 14-18% better food security (Gebre *et al.*, 2023). Another study has shown that Kenyan farmers who switched to drought tolerant species for use

in "push-pull" systems designed for pest control (updating a technology promoted in Kenya since 2011) enjoyed up to three-fold increases in production (Bari *et al.*, 2024).

Agroforestry has been one of the major means with which farmers have been encouraged to address the decline in agricultural productivity, but the rate of adoption varies due to a number of factors. Agroforestry is an old practice involving growing perennial trees and shrubs with crops, in order to diversify and sustain production. It can be used to generate additional outputs such as fruit crops, fodder for livestock, or fuel wood. It has benefits for the farmers such as providing shade, controlling soil erosion, providing wind breaks, as well as the global benefit of carbon sequestration. However, the adoption of this technology has been slower than one might expect. A study from West Pokot showed that farmers' were more likely to adopt agroforestry if they were female, had access to training and extension services, they were located on steeper slopes, had good access to markets and if they had slightly larger plots (Pello *et al.*, 2021).

Appetite for and types of adaptation approaches vary by gender. The gender differences in adaptation strategies relate to the gendered roles that are themselves linked to their differences in physical abilities and compatibility with other roles such as reproduction and childrearing. For example, one study found that women are more likely to do soil management, and men are more likely to adopt agroforestry (Ngigi *et al.*, 2017). Another found the opposite, and a third noted that agroforestry tended to be taken up by women if there were appropriate women's groups for mutual support. It is important to formulate gender-sensitive policies and programs in adaptation and mitigation frameworks. Strategies will only be effective if they take women's needs and perspectives into account, so that there are suitable strategies for both genders to employ in the various activities that they do. In the study on adoption of updated species for push-pull systems, women were found to be more motivated to try out the new innovations to address the insect problems that affected them more directly than men, who tended to adopt later after they saw the increases in cereal yield.

Financial factors are particularly important determinants of adoption rates, which are generally positively related to income, assets (such as livestock), access to markets and access to credit. Adopters tend to have higher income from off-farm activities than non-adopters (Pello *et al.*, 2021). Farmers tend to be very credit constrained. For example, while the government has invested in the development and dissemination of improved sorghum varieties which are drought tolerant and high yielding, farmers wanting to expand their use of these varieties often have to rely on using saved seeds or those saved by neighbours (Mwangi, Macharia & Bett, 2021). People are more likely to employ adaptation strategies if they have access to extension services and credit, and men are more likely to have access to both of these. Education is also positively correlated with adoption rates (Gebre *et al.*, 2023).

Choices of adaptation approaches are positively influenced by extension services and membership of community groups, but preferences about information sharing differ by gender. Most people prefer accessing agriculture and climate information from group-based approaches like neighbours and meetings with local leaders. However, men tend to rely on extension officers, and local leaders and the print media, while women rely on the radio and women's groups (Ngigi *et al.*, 2017). Social capital is created by group-based undertakings that include networks, norms and trust that help people work together. Women are more likely to belong to social groups and microfinance groups, whereas men are more likely to belong to community-based organisations and farmer associations. Membership of women's groups makes women more likely to expand their range of adaptation activities, such as setting up agroforestry systems (Ngigi *et al.*, 2017). Gender differences are also attribute to the fact that men and women have different preferences in terms of how they receive information and advice about climate and adaptation methods.

Awareness of climate change is widespread, but women are often more perceptive of climate change and more inclined to be early adopters of adaptation strategies. Generally, rural households in the more arid regions of Kenya (which make up 89% of the country) have been aware of climate change, especially trends in the amount of rainfall and in stream flows. Many people have also linked this to environmental degradation, especially deforestation, but many blame God, and the

awareness of global climate change as being a global phenomenon was still relatively rare in 2019 (Cuni-Sanchez *et al.*, 2019). It is often women who have a higher level of perception, noticing details such as the timing of the first rains. Accordingly, women have also been found to be early adopters of strategies in the areas of farming in which they are most involved (cropping rather than livestock or agroforestry) (Ngigi *et al.*, 2017; Gebre *et al.*, 2023). In contrast, only about 20% of farmers were found to be conscious of climate change in Busia County (in the south west), and adaptation interventions such as planting of early maturing, drought resistant crops and crop irrigation were rare. Farmers generally did not heed climate forecasts in spite of evidence from an experimental farm that showed potential for enhancing production by using these forecasts (Wandera *et al.*, 2024).

Social learning plays an important role in technology diffusion, but it is not always effective, depending on the variability of potential outcomes. Rather than simply copying farmers who obtain good results from technology adoption, farmers consider probabilities and risks. For example, an experiment conducted by Crane-Droesch (2018) in a densely populated small scale maize and sugarcane producing area in western Kenya involved the use of biochar demonstration plots to improve crop yields. Half a ton of biochar was applied per ha, which had been made from the dried maize stalks and sugarcane leaves. These plots performed substantially better, but not enough to make it profitable in the absence of subsidies. The results of an analysis of uptake patterns showed that farmers who had observed a better average response in their networks were more likely to adopt. Those who observed a variable response were less likely to adopt. The effect of seeing that there was a risk of failure was strong.

2.5 POLICY RESPONSE TO ENVIRONMENTAL AND CLIMATE CHALLENGES

The need for sustainable management of the environment is well established in Kenya and is an integral part of its climate change response. The Preamble to the Constitution of Kenya (2010), underlines the country's respect for the environment as a national heritage, and its commitment to sustain it for the benefit of the present and future generations. Chapter V deals with Land and Environment and commits both the State and citizenry to promote sustainable development through deliberate planning and management of the complex natural and anthropogenic processes and activities. In addition, all of the climate-related strategies and plans emphasise the need to address environmental degradation.

Kenya is a party to various multilateral and regional environmental agreements aimed at protecting and safeguarding the environment and natural resources (Box 2.1). Kenya ratified these Agreements under section 9(1) of the Treaty Making and Ratification Act, and in accordance with Articles 2(6) and 94(5) of the Constitution, these Agreements are part of the laws of Kenya. Therefore, the country is under obligation to pass relevant laws, regulations and policies to effectively implement these

Box 2.1. Multilateral and regional environmental agreements that Kenya is party to

- **Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat (1971);**
- **World Heritage Convention (1972);**
- **Convention for the Protection of the World Cultural and Natural Heritage (1972);**
- **Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973);**
- **Convention on the Conservation of Migratory Species of Wild Animals (1979);**
- **Convention on Biological Diversity (1992);**
- **United Nations Framework Convention on Climate Change (1994);**
- **Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (1999);**
- **Nairobi Convention for the Western Indian Ocean Region (1995);**
- **United Nations Convention to Combat Desertification in Countries Experiencing Serious Droughts and/or Desertification Particularly in Africa (1996);**
- **East Africa Protocol on Environment and Natural Resources Management (1999).**
- **African Union, 'Declaration on Land Issues and Challenges in Africa' (2009);**
- **The East African Community Climate Change Policy (2011) and Climate Change Masterplan (2011-2031);**
- **African Union, 'Agenda 2063: The Africa We Want' (2013);**
- **Nagoya Protocol on Access to Genetic Resources and Fair and Equitable Sharing of Benefits Arising from their Utilisation to their Convention on Biological Diversity (2014);**
- **United Nations General Assembly, 'Transforming our world: the 2030 Agenda for Sustainable Development' (2015);**
- **Paris Agreement to the United Nations Framework Convention on Climate Change (2015)**

Agreements. The National Biodiversity Strategy and Action Plan (NBSAP) and the Nationally Determined Contributions (NDCs) are central to these efforts, guiding national actions to protect and sustain Kenya's natural heritage, and combat climate change.

The Constitution of Kenya (2010) supports the use of sustainable and cost-effective solutions to environmental and societal challenges. Article 10 of the Constitution recognizes sustainable development as one of the key national values and principles of governance that is binding in all aspects of public policy. It reinforces sustainability with its provisions on the right to a clean and healthy environment as well as social and economic rights. Article 42 guarantees the right to a clean and healthy environment, through sustainable management of the environment. This lays a strong overarching foundation upon which nature-based investments can be co-developed and implemented. Chapter 5 which is dedicated to land and environment commits both the State and citizenry to promote sustainable development and management of the complex natural and anthropogenic systems and processes. Specifically, Article 60 on principles of land policy; 66 on regulation of land use; and 69 on enforcement provisions with respect to the environment, provide the mandate to ensure sustainable exploitation, utilization, management and conservation of the environment and natural resources, laying a strong basis for nature-based investments.

The Environmental Management and Coordination Act (EMCA), revised in 2015, is the principal framework for environmental management and conservation in Kenya. Among other things, EMCA provides a legal and institutional framework for the protection and management of wetlands, hilly and mountainous areas, forests, rivers, lakes and other environmentally significant landscapes. Under Section 42 of EMCA, the National Environment Management Agency (NEMA) is mandated to ensure protection and sustainable management of the environment. Moreover, the Cabinet Secretary responsible for environmental affairs is required to impose any necessary measures to protect environmentally significant areas, including issuing regulations and standards. In undertaking its responsibilities in the management of the environment, NEMA is required to consult and collaborate closely with relevant lead agencies such as Kenya Forest Service (KFS), Kenya Wildlife Service (KWS) and the Water Resources Authority (WRA). Such collaboration is required in the development of guidelines, and enforcement of appropriate measures relating to sustainable farming methods and land management practices. This presents a good entry point for anchoring nature-based solutions within the existing legal framework.

The EMCA provides for incentive and financing mechanisms to promote environmental conservation. This includes charging user fees for the utilisation of environmental resources, and conservation easements. By supporting the possibility of environmental resource users paying for environmental protection and conservation, the EMCA provides a basis to develop a mechanism for establishing payment for ecosystem services schemes. The EMCA provides for environmental easements that may be imposed in perpetuity or for a fixed period, restricting individual's right to burdened land subject to a just compensation. This provision is critical in shaping Kenya's approach to environmental conservation. Relevant environmental management and conservation laws include the Forest Conservation and Management Act (2016), Water Act (2016), Wildlife Conservation and Management Act (2013), Climate Change Act (2016) (Revised 2023), Community Land Act (2016), Agriculture and Food Authority Act (2013), and Land Act (2012):

Kenya's policies strongly support sustainable management and use of the environment and natural resources. The National Environment Policy (2009) commits to a range of measures including appropriate forestry-based investment programmes, integrated freshwater and wetland resources management strategies and action plans, payment for environmental services schemes to support catchment protection and conservation, river basin management plans and harmonizing and coordination of management of freshwater and wetland ecosystems. It prescribes a range of measures for sustainable land management including reforestation of hilltops and management and reclamation of degraded lands.

Table 2.3. Strategies and plans addressing environmental degradation and climate change.

Strategy/plan	Description
Nationally Determined Contributions (NDC) 2020	In its revised NDC submitted to the UNFCCC in December 2020, Kenya pledges to abate its GHG emissions by 32% by 2030 relative to the business as usual (BAU) scenario of 143 MtCO2eq. This will be largely attained through transformation in the forestry and energy sector.
National Climate Change Response Strategy (NCCRS)	The Strategy presents implementable mitigation interventions in key sectors, including forestry and agriculture, as well as adaptation efforts in water, fisheries, rangelands, health, and socio-physical infrastructure.
National Climate Change Action Plan (NCCAP) 2023-27	The updated NCCAP (2023-2027) is the operational plan for the implementation of Kenya's NDC. The NCCAP specifically targets the forestry sector with the objective of increasing forest cover to 10% of the total land area
National Adaptation Plan (NAP) 2015-2030	This recognises the importance of adaptation and resilience building actions in development; and enhancing synergies between adaptation and mitigation actions. It prioritises sector-based adaptation interventions including tree growing initiatives.
National Environment Action Plan (NEAP) 2018-2024	NEAP serves to attain environmental stewardship, environmental sustainability and maintain a transformational and participatory approach to natural resource use and environmental management by 2024. The proposed strategic actions to achieve environmental stewardship include: (i) upscaling forest conservation measures to restore degraded ecosystems; and developing and strengthening the concept and application of 'natural infrastructure' and landscape planning and management.
Agricultural Sector Transformation and Growth Strategy (ASTGS)	The strategy puts emphasis on monitoring food system risks, such as soil degradation and highlight a strong connection between agricultural productivity and environmental protection. In managing the food risks, ASTGS pays specific attention to climate change and prioritizes sustainable land management practices.
National Wildlife Strategy 2030	This identifies a set of five-year priority goals and strategies around four key pillars, namely: resilient ecosystems and species, stakeholder engagement, evidence-based decision making, sustainability and governance.
National Water Master Plan (NWMP) 2030	This provides development plans related to water supply, sanitation, irrigation, hydropower, water resources and catchment management, hydrometeorological monitoring, floods, droughts and environmental management for each of the country's six river basins. The plan notes the urgency for protection and conservation of water catchment areas in view of the country's diminishing renewable water resources per capita.
National REDD+ Strategy	Among the proposed strategic actions for Reduced Emissions from Degradation and Deforestation (REDD+) implementation include scaling up afforestation, reforestation and landscape restoration programmes; increasing the productivity of public plantation forests; and mobilizing finance for REDD+ implementation.
National Agroforestry Strategy 2021-2030	The agroforestry strategy strives to restore productive capacity and build resilience of the agricultural resource base while contributing to climate change adaptation and mitigation through enhanced agroforestry practices. The strategic actions include incentivizing investment in agroforestry through strengthening of agroforestry-based value chains and creating an enabling environment for enhanced participation of women, youth and marginalized groups in agroforestry-based value chains.
Green Economy Strategy and Implementation Plan (GESIP) 2016 – 2030	This sets a framework for action towards a low carbon, resource efficient, equitable and inclusive socio-economic transformation. Broadly, it identifies a development path that promotes resource efficiency and sustainable management of natural resources, social inclusion, resilience, sustainable infrastructure development; and a framework for achieving a low carbon, resource efficient, equitable and inclusive socio-economic transformation. Specifically, reforestation and securing forest ecosystem services for sustainable agriculture, water and energy are acknowledged as central elements for sustainable economic and social development.

Strategy/plan	Description
Kenya Forest Service Strategic Plan 2023-2027	The strategic plan seeks to sustainably manage all forests and build resilient forest ecosystems. This is to be pursued through forest and tree cover expansion for climate mitigation and adaptation; conservation and protection of forests for climate resilience; and economic development and livelihood improvements, including strengthening nature-based enterprises for improvement of livelihoods and climate change resilience.
National Landscape and Ecosystem Restoration Strategy (NLERS) 2023-2032	Building on a national restoration opportunities assessment (MENR, 2016), the strategy describes eleven restoration intervention areas that cut across seven ecosystems with specific targets to guide various stakeholders to implement in efforts to raise Kenya's tree cover to 30% by 2032 for enhanced climate resilient, improved livelihoods, national economic growth and development. The strategy gives effect to the 15 Billion Trees campaign.
County Integrated Development Plans (CIDPs)	These are five-year plans that set out each county's financial and economic priorities. The plan touches on all sectors devolved to county governments. Agriculture, climate change, forestry, physical planning, and soil and water conservation are devolved functions.

The National Land Use Policy (2016) prescribes a portfolio of specific measures for optimal and sustainable utilization of land, such as restoration of degraded lands and soil erosion control, stakeholder participation in environmental management, provision of appropriate incentives and application of sustainable agricultural practices. Other relevant policies on environmental conservation and management include the Agriculture Policy (2021), the National Water Policy (2021), the National Wildlife Policy (2020), the National Climate Change Framework Policy (2016), and the National Forest Policy (2014).

Kenya has developed a number of strategies and plans to guide national and subnational governments' priority actions on environmental conservation and management and climate change. The large number of strategies and plans to respond to environmental and climate change issues have a high level of congruence in recognising the important role of and the need to address the sustainable management of water resources, forests, freshwater and marine ecosystems, rangelands and cultivated lands (Table 2.3).

The National Climate Change Action Plan (NCCAP) 2023-2027 provides Kenya's comprehensive framework for addressing climate change. The plan focuses on enhancing resilience to climate risks, reducing greenhouse gas emissions, and promoting a transition to a low-carbon economy. It integrates adaptation and mitigation efforts to protect vulnerable communities, particularly in agriculture, water management, and infrastructure, ensuring sustainable livelihoods. Key priorities include disaster risk management; improving food and nutrition security; developing water resources, fisheries and the blue economy; improving outcomes for forests, wildlife and tourism; improving human health and sanitation; improving efficiency and reducing emissions in the manufacturing, energy and transport sectors; and involving children and the youth. Financing mechanisms, such as grants under the Financing Locally-led Climate Action Programme (FLLoCA), enable counties to fund their climate priorities. The plan is supported by the Kenya Climate Change Act, 2023, which establishes legal and institutional frameworks for effective implementation. The NCCAP aligns with Kenya's commitments under the Paris Agreement and global climate goals, setting sector-specific targets to decarbonise energy, transport, and agriculture.

The NCCAP recognises the importance of and includes significant action on addressing climate change adaptation and mitigation through interventions in the agriculture, forestry and land use sector, and includes a range of actions that are aligned with the proposed NPC Investment Plan. Under its thematic area on food and nutrition, the NCCAP promotes the uptake of climate-smart agriculture (CSA) technologies and sustainable land management (SLM) practices, including conservation agriculture, increasing the area of agricultural land under farm trees, improving farm water harvesting and storage, and implementing rangeland restoration including reseeding and

removal of invasive alien plants, management plans and sustainable grazing management. Under the thematic area on water, fisheries and blue economy, it promotes improved water storage and efficiency, fisheries development and the restoration and protection of mangroves and coral reefs. Under the forest, wildlife and tourism thematic area, it promotes forest restoration and rehabilitation, tree planting more broadly, and the development of tree nurseries to support this.There is thus a strong synergy between the CCAP and the environmental and agricultural plans listed in Table 2.3.

2.6 GENDER EQUALITY AND SOCIAL INCLUSION

Gender inequality and social exclusion are stark realities of serious concern in Kenya's development agenda. Notwithstanding the national and global policy frameworks, the patriarchal social order buttressed by statutory, religious and customary norms have undermined efforts to achieve gender equality and women's empowerment.[3] The society imposes on women a more supportive and reproductive role centred on the home and local community rather than the public sphere. This makes them shoulder heavier burdens associated with global environmental change. These existing societal and cultural norms affect how women engage in climate and nature actions.

Women have limited access to and ownership and control of land and natural resources, limited access to capital, and face gender-based violence. Although women are the primary users of land for productive purposes, they have limited rights to land and other natural resources. Along with having less access to extension services and to credit than men, women and youth traditionally lack the ability to influence land and natural resource governance decisions. For example, poor representation of women in decision making around land and forest policy, limits women's access to and control over natural resources, with direct, negative implications for income and livelihoods (Gibbs *et al.*, 2021). This is further exacerbated when natural resources such as water become scarce as a result of climate change. Moreover, women often face higher barriers and restrictions in setting up and running enterprises due to limited access to credit and startup capital (Gibbs *et al.*, 2021). Gender-based violence and harassment are pervasive issues that hinder women advancement and participation in all spheres.

The discriminatory norms and power imbalances pose significant barriers to women active participation in social, political and economic spheres (Mamuli & Bunyasi, 2023). These norms intersect with other factors including geography, poverty, income, age, marital status, ethnicity, religious identity, sexual orientation, and disability to deny women's opportunities through explicit discrimination or implicitly due to the prevailing domestic responsibilities and care burdens that are often considered the primary responsibility of women (CIF, 2023). Electoral violence takes the form of threats, intimidation, and physical harm. In Kenya, electoral violence disproportionately affects women candidates, discouraging them from participating in campaigns and elections.

In spite of its mainstreaming of gender into policy and law, Kenya has not delivered gender equality and inclusion in practice. The Constitution emphasises the importance of gender equality and social inclusion in the country's development agenda. It puts an obligation on the State to establish legislative and other measures to redress gender inequality, including the use of affirmative action programmes. Currently, the State is required to ensure that no more than two-thirds of the members of any elective or appointive body are of the same gender. Article 43 guarantees socioeconomic rights (e.g., housing, water, sanitation, health, education, food and welfare) which are essential for human dignity. Further, the Constitution provides for the right of every

[3] Sessional Paper No. 02 of 2019 on National Policy on Gender and Development

person (irrespective of gender) to acquire and own property in any part of the country. In addition, the Land Act (2016), the Land Registration Act (2012), and the Community Land Act (2016) have provisions that seek to entrench equality and empower women to access, own and control property rights. The National Policy on Gender and Development aims to achieve gender equality by creating a just society where all genders have equal access to opportunities in all spheres of development.[4] Kenya has also made specific commitments under global and regional frameworks to address gender inequality and exclusion.[5] However, the existing policies have failed to deliver gender equality and inclusion in practice raising the need to refocus frameworks with a gender lens to advance women's leadership in decision-making spaces.

Kenya has developed policies and laws that promote the participation of women in climate and nature actions. It has made many attempts to mainstream gender into policies and laws including the Climate Change Act (2016), NCCAP (2023-2027) and NDC. The country is in the process of developing a National Gender and Climate Change Action Plan (2023-2027) to facilitate the implementation of the NCCAP in a more gender responsive manner. The key principles of the Climate Change Act (2016) include "ensuring equity and social inclusion in allocation of effort and costs and benefits to cater for special needs, vulnerabilities, capabilities, disparities and responsibilities of vulnerable populations including women". The Act provides for public participation in climate change affairs and creates a forum for women and the marginalized to participate in climate change planning and budgeting. However, it envisions women as a vulnerable group rather than as agents of change, portraying women as people in need of "special support" rather than active participants in the quest for sustainable climate and nature actions (Kameri-Mbote & Kabira, 2023). Women possess unique perspectives, knowledge and skills on climate change adaptation and mitigation and nature conservation. There is no provision in the Climate Fund (the financing mechanism for priority climate and nature actions) to cater for gender-specific needs in climate and nature actions.

Some priority interventions will be of particular benefit to the poor and vulnerable, including women. Climate change interventions prioritized in the NCCAP and NDCs include improvement in water supply, adoption of climate-smart agriculture, adoption of clean energy cooking solutions, and enhanced public awareness and climate communication.

The Climate Smart Agriculture (CSA) Strategy also has the potential to empower women. The CSA strategy which seeks to sustainably improve agricultural productivity and enhance food security, increase farmers' resilience and adaptation to climate change, and reduce and/or remove greenhouse gas emissions (GoK, 2017). Amongst the core objectives of the CSA Strategy is to promote productivity and commercialization of agricultural-related value chains with nutrition and gender considerations. The implementation of CSA Strategy has led to notable examples of the women empowerment, including engagement in the East Africa Dairy Development – a CSA programme designed to boost the milk yields and incomes of small-scale farmers. Other notable success includes poultry and fodder production, and remarkable increase in the number of women investors and shareholders in cooperatives.

The implementation of sustainable climate action is hampered by the discrepancies between formal and informal legal contexts and norms, which potentially affects women's involvement. Existing national and county regulatory framework on climate change limits climate and nature actions to formal law, ignoring the context where people interact with

[4] Sessional Paper No. 02 of 2019 on National Policy on Gender and Development.

[5] Kenya is party to international initiatives which have gender equality imperatives. The initiatives include: International Covenant on Civil and Political Rights; International Covenant on Economic, Social and Cultural Rights; International Convention on the Elimination of All Forms of Racial Discrimination; Convention on the Elimination of All Forms of Discrimination against Women; Convention against Torture and Other Cruel Inhuman or Degrading Treatment or Punishment; Convention on the Rights of the Child; Vienna Declaration on Human Rights; Beijing Platform for Action; International Conference on Population and Development; Millennium Declaration and Millennium Development Goals; and the Sustainable Development Goals (SDGs).

nature in intimate ways governed by informal customary law and norms (Kameri-Mbote & Kabira, 2023). This is an area where women can be actively involved in climate and nature actions.

The path towards a more gender-equal society is constrained by limited resources, knowledge and support. These include limited sex disaggregated data in different sectors, inadequate resources to undertake capacity building in mainstreaming gender in climate change policies, under representation of women in climate change decision-making processes, and limited knowledge on sources of climate finance for gender responsive climate action..[6] Thus, there is an immediate need to support women, youth and other vulnerable groups to implement gender responsive climate actions at the grassroot level; enhance the production and use of gender data and information in climate action across sectors to assist planning, implementation, monitoring, and evaluation; and identify and build the capacity of gender champions.

Active measures are required to ensure transformative change that is inclusive and equitable. Gender-disaggregated data showing the number of women and men involved in conservation and natural resource management is required to demonstrate impacts of gender inclusion, how women are involved, and what power and agency they have over conservation and resource management. Moreover, gender champions are required to inspire and empower others, challenge traditional gender roles, and drive transformative change toward a more sustainable and just future. Women's property rights are key to their livelihoods and entrepreneurship opportunities. In this respect, efforts to address women's property rights should focus on dislodging entrenched cultural norms and practices through the capacity building of institutions responsible for land administration and the legal empowerment of women at the grassroots level.

Purposeful engagement of women and youth can increase the impact of development outcomes. Women and youth possess unique perspectives, knowledge and skills that are essential for effective climate and nature actions. However, customary laws remain fairly skewed against their property rights. This not only makes it difficult for them to gain access to credit and extension services but also reduces their incentives to engage in environmentally sustainable and socially inclusive practices. Moreover, it undermines their ability to make long-term investments in sustainable projects. For a country where women constitute more than half of the population and around one-third lives below the poverty line (KNBS, 2019), how to deal with gender inequality and exclusion is of paramount importance in Kenya's socio-economic development agenda.

[6] Kenya's submission on progress, challenges, gaps and priorities in implementing the gender action plan to inform the review of the implementation of the enhanced lima work programme on gender and its gender action plan. April 2024.

3. NATURE-BASED SOLUTIONS CONTEXT

3.1 WHAT ARE NATURE-BASED SOLUTIONS?

Nature-based Solutions (NbS) involve working with nature to address sectoral and/or climate change challenges. They are actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems, which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services and resilience and biodiversity benefits (UNEA 2022). NbS are aligned with natural ecosystem processes, locally appropriate and often multifunctional (Reise *et al.*, 2022). They address the combined challenges of climate change, environmental degradation and biodiversity loss on social-ecological vulnerability to environmental hazards such as floods, storm surges, heatwaves, droughts and wildfires, by working with nature rather than against it (Seddon *et al.*, 2021; IPCC, 2022a; Sowińska-Świerkosz & García, 2022; Enu *et al.*, 2023). While NbS may be designed to focus on

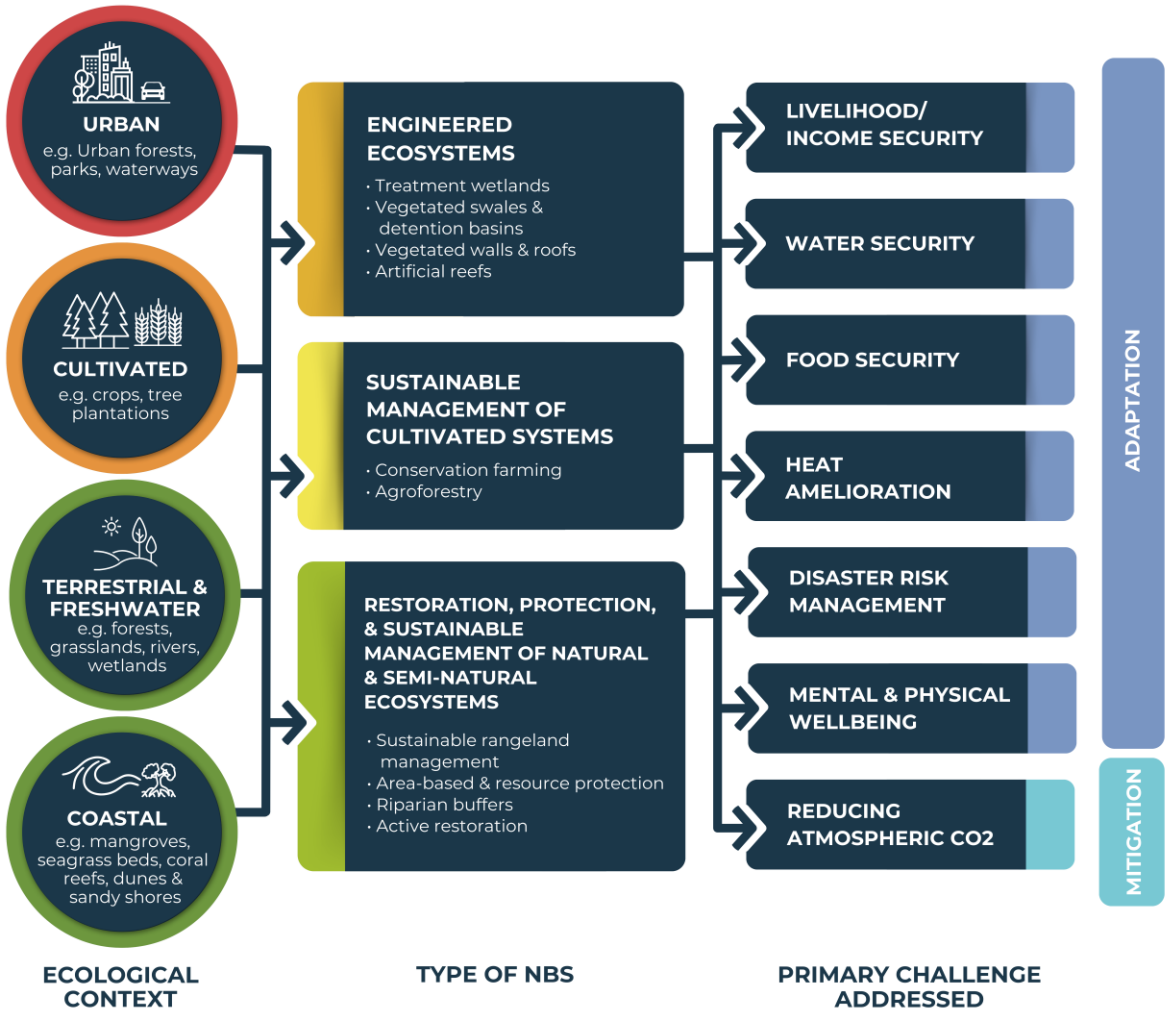

Figure 3.1. Elements of a three-way typology of NbS, with four broad categories of ecological context, three broad categories of NbS actions, and seven broad categories of the primary or sectoral challenges that they address. Examples are not exhaustive. Source: Turpie et al. (2023).

sectoral or climate challenges, they tend to simultaneously address both of these. Moreover, because they improve the status of ecosystems, they also simultaneously address both climate change adaptation and mitigation.

NbS can be implemented in a variety of contexts. In urban areas, they can involve the use of purpose-build ecosystems to reduce impacts of the built environment on drainage systems and the environment. In landscapes, they involve three primary actions: active restoration and protection of natural ecosystems, and the improved management of modified ecosystems (Turpie et al. 2023; Figure 3.1). These actions may have a primary or sectoral challenge as their main goal, or adaptation or mitigation. Interventions aimed at adaptation are usually designed to address specific sectoral challenges that most affect vulnerability (Turpie et al. 2023; Figure 3.1).

Table 3.1. Examples of how problems are typically addressed using conventional and nature-based measures, and the complementary or substitution relationship between these two broad types of approaches which forms the basis of understanding of their potential cost-effectiveness.

Primary objective	Conventional measures	Nature-based measures	Relationship
Water supply (quantity)	Reservoirs, boreholes	Maintain rainfall infiltration and stream flows by maintaining natural vegetation cover in catchment areas	Complementary, more storage required in absence of nature-based measures
Water quality	Water treatment plants	Maintain water quality amelioration services provided by healthy natural catchment vegetation and wetlands	Complementary, more chemicals are used in absence of nature-based measures
Food security	Industrial monocultures and technologies	Conservation farming methods to improve soil and water retention and improve small scale crop yields	Substitutes, NbS allow more affordable food security with lower environmental impact
Reducing flood risk	Concrete levees, canals and other conveyance infrastructure	Reduce stormflow runoff by maintaining infiltration through catchment vegetation cover; reduce coastal storm damage by maintaining mangrove and dune ecosystems; retard urban storm flows through using vegetated swales and basins.	Complementary, more conveyance infrastructure required in absence of nature-based (or green engineering) measures
Reducing wildfire risk	Fire suppression and fire exclusion policies.	Reduce wildfire risk by restoring degraded habitats, removing IAPs	Substitutes, implementation of NbS improves fuel management and reduces wildfire risk.
Mitigating heat stress	Reduce exposure, appropriate clothing, air conditioning.	Shade, deflecting radiation, releasing moisture into atmosphere through urban greening (urban green space, street trees, green roofs and walls).	Complementary, more conventional measures used in absence of nature-based measures
Improving mental and physical wellbeing	Gyms, mental health services	Provision of natural amenities especially in urban areas	Complementary, more conventional measures required in the absence of natural amenities such as green open space.

The use of NbS is a deviation from the historical approach of addressing societal challenges primarily with engineering solutions. For example, to deal with increasing water scarcity, sedimentation and pollution, conventional solutions include building dams, upgrading water treatment works and building check dams (see Table 3.1). But protection and conservation of catchment systems can reduce the need for that infrastructure and can be more cost-effective. Often NbS is used to complement and support built infrastructure. Importantly, the landscape actions that constitute NbS all contribute simultaneously to adaptation and mitigation, as they reduce emissions in the land sector.

3.2 NATURE-BASED ADAPTATION AND MITIGATION OPPORTUNITIES AND COMMITMENTS

The fact that a significant proportion of Kenya's population, as well as the economy as a whole, is dependent on land-based resources and activities, presents enormous opportunity for ecosystem-based adaptation measures. The high level of dependence on ecosystems means that Kenyans have a very high degree of exposure to risks associated with climate change, as outlined above. Since nature-related risks give rise to nature-related opportunities, there is therefore substantial opportunity to ameliorate climate change vulnerability through actions in the agriculture, forestry and other land uses (AFOLU) sector. These mostly pertain to restoring the health and connectivity of natural and semi-natural ecosystems to secure landscape capacity to deliver key ecosystem services, as well as improving the health and productivity of cultivated lands and reducing their impacts on downstream systems. This is key to maintaining water, food and income security in both rural and urban areas.

There is also substantial mitigation potential within the AFOLU sector. The AFOLU sector accounts for some 21% of global anthropogenic greenhouse gas (GHG) emissions (IPCC, 2022b). Improved management and restoration of ecosystems accounts for 55% of total mitigation potential, followed by agriculture interventions, which could contribute 29% of the mitigation potential (IPCC, 2022b). The latter potential is associated with biochar application, soil carbon management in grasslands, agroforestry, and soil carbon management in croplands. Demand-side measures (e.g. reducing the demand for charcoal) contribute 16% of mitigation potential.

In Kenya, mitigation potential is highest in the mesic areas, but rangeland areas could make a substantial contribution if measures were practiced at scale. Kenya's soils hold some 2.4 Gt C in the top 0.3 metres. Higher values are found in the more mesic central highlands and western region, especially in forest areas. Wetlands are also important for carbon storage. The potential for increasing soil organic carbon is likely to be highest wherever these areas are degraded (Minasny *et al.*, 2017). In general, ASALs have relatively low carbon stores per unit area. However, the vast area of rangelands means that improved management could play a significant role (Minasny *et al.*, 2017).

Kenya has made international commitments to undertake large-scale landscape and ecosystem restoration. Commitments include those under the UNFCCD for zero gain in the area of degraded land from 2015 to 2030 (land degradation neutrality), and those under the UNCBD to bring 30% of degraded area under restoration by 2030 and have 30% of its area under protected areas or other effective conservation measures (OECMs) by 2030. They also include forest and ecosystem restoration targets, climate smart agriculture and sustainable rangeland management under AFR100 and the African Resilient Landscapes Initiative (ARLI). Kenya is also party to the East African Community's (EAC) Climate Change Policy and Strategy (2018- 2023); Lake Victoria Basin Commission's Climate Change Adaptation Strategy and Action Plan; the Protocol for Sustainable Development of Lake Victoria Basin; and the Protocol on Environment and Natural Resources for the EAC.

Accordingly, a number of Kenya's plans involve undertaking NbS-type measures in the AFOLU sector that are expected to have climate change adaptation and mitigation outcomes. Under its National Climate Change Action Plan (NCCAP), Kenya has set targets for increasing the area under climate-smart agriculture (CSA) and sustainable land management (SLM), including conservation agriculture, increasing the area of agricultural land under farm trees, improving farm water harvesting and storage, and

implementing rangeland restoration (including reseeding and removal of invasive alien plants, management plans and sustainable grazing management). NbS interventions are also supported under the National Adaptation Plan (NAP), National Water Master Plan (NWMP), Green Economy Strategy and Implementation Plan (GESIP), Kenya Forest Service Strategic Plan and Climate-Smart Agriculture (CSA) Strategy. Many of these are addressed in the National Landscape and Ecosystem Restoration Strategy (NLERS) (see Table 2.3).

Kenya has a strong commitment to contribute to climate change mitigation through restoration of tree cover. The country is currently rolling out ambitious land restoration initiatives to achieve a constitutional threshold of 10% national forest cover. Among other initiatives, Kenya has committed to plant 15 billion trees by 2032 under the National Tree Growing and Restoration Campaign and restore 5.1 million ha of degraded land under the African Forest Landscape Restoration Initiative (AFR100). As a signatory to the Paris Agreement of the UNFCCC, the country has committed to a greenhouse gas (GHG) emissions abatement target of 32% by 2030 relative to the Business as Usual (BAU) scenario of 143 $MtCO_2e$ (GoK, 2020). In the current NCCAP (2023-2027), the forestry sector is identified as the major source of abatement with a target of 37.3 $MtCO_2e$ in GHG emissions reductions by 2027 through forest restoration, afforestation, reforestation and reduction of deforestation (GoK, 2023), with a technical maximum abatement potential of 40.2 $MtCO_2e$ per year by 2030 (Government of Kenya, 2020).

Kenya has also committed to implementing NbS for climate change adaptation and mitigation through management of agricultural landscapes encompassing cultivated areas, rangelands, freshwater and marine ecosystems. The Kenya Climate-Smart Agriculture Strategy (2017- 2026) is a tool to implement Kenya's NDC contribution for the agriculture sector. It seeks to build resilience (capacity to adapt) of the agriculture (crops, livestock, and fisheries) systems through sustainable management of land, soil, water and other natural resources (Chandra et al., 2018). Kenya Climate-Smart Agriculture Implementation Framework Programme (2018–2027) provides guidelines for the implementation of the CSA strategy. While the national government is leading on policy development and capacity development, county governments are leading the implementation of the CSA strategy.

3.3 PRIORITY AREAS FOR NBS

Kenya has identified 38.8 million ha of degraded agricultural lands, rangelands, forests and coastal and marine ecosystems where there is opportunity for active restoration measures and/or improved management or protection that could qualify as NbS for climate change. This includes 32.7 million ha of natural or semi-natural areas where there is potential for addressing landscape and ecosystem degradation through active restoration or through improved land management, and 6.1 million ha of cultivated areas where there is potential for implementation of improved farming practices including agroforestry (MENR, 2016). Opportunities that are mapped out include:

- Restoration of deforested natural forest areas with original tree species[7];
- Rehabilitation of degraded natural forests[8];
- Agroforestry in cropland;
- Commercial forestry on marginal cropland and un-stocked forest plantation forests;
- Bamboo growing on marginal cropland and un-stocked forest plantation forests;
- Tree-based buffer zones along water bodies, wetlands, roads;
- Restoration of degraded rangelands; and
- Restoration of degraded coastal and marine ecosystems.

7 This is separated in the report into afforestation and reforestation, with afforestation distinguished from reforestation based on its implementation in areas that have been deforested for a long period, versus recently. This is easily confused with the more common interpretation of afforestation as being planting of trees (usually exotic species) in areas that were not originally forests.

8 Rehabilitation does not necessarily involve native species, and can be achieved using commercially valuable exotic tree species as a possibility here. However the latter is not biodiversity positive.

These interventions vary in terms of the extent they could qualify as NbS, which requires that they are biodiversity positive. Three of the interventions involve the restoration of degraded or lost ecosystems (forests, rangelands and coastal/marine) towards their original natural condition, and are strongly biodiversity positive. Buffer zones can be biodiversity positive where they resemble their original ecosystem type (which does not necessarily include trees). Rehabilitation and agroforestry interventions often involves non-native species. These restore some natural ecosystem functions, such as soil and carbon retention, and can be moderately biodiversity-positive, depending on how they are managed. For example, rehabilitation of degraded forest could be reframed as restoration with native species, and agroforestry could involve habitat-appropriate native or water wise species and the use of organic pest control practices). Note that restoration involves returning an ecosystem towards its natural state, whereas rehabilitation only involves restoring some key attributes or even new ones. Restoration delivers more ecosystem services and is more biodiversity positive but also tends to be more difficult to achieve. Restoration is almost always more costly than protection to prevent degradation and loss in the first place.

Implementing the full potential for restoration interventions across Kenya would be desirable but prohibitively costly. Based on the areas mapped in MENR (2016), Turpie et al., 2024 estimated the total cost and benefit of restoration of forests, rangelands, riparian and wetland areas, and the implementation of climate-smart agriculture and agroforestry across Kenya. This does not include coastal and marine ecosystems. The potential benefits were estimated in terms of the expected improvements in a range of key ecosystem services that support rural livelihoods and the economy. At full-scale implementation, these benefits could amount to some US$71 billion and could outweigh the costs by a factor of at least 1.35. Carbon benefits, albeit valued conservatively at US$8/tCO2e, make the greatest contribution to the overall value, with hydrological services (baseflow, groundwater recharge, flood attenuation and sediment retention) and contributions to crop and

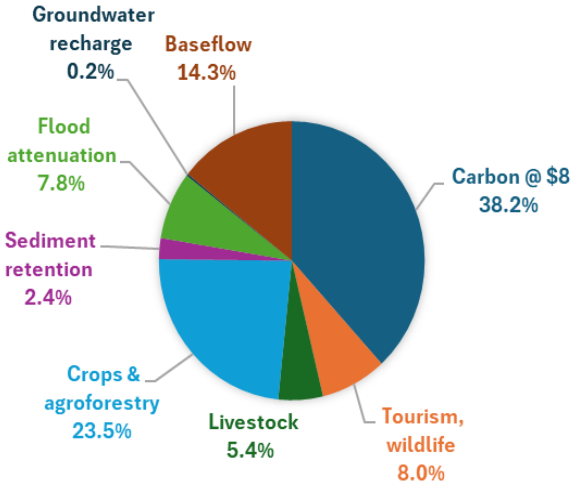

Figure 3.2. Share of different ecosystem service benefits of the total value gains from a full intervention scenario (Source: Turpie et al. 2024).

Table 3.2. Summary of the costs of inland interventions if implemented at full scale, in US$ (Turpie et al., 2024). Overall costs over 25 years are expressed as the discounted present value (PV), which is the total cost in today's money. Note that this does not include coastal and marine ecosystems.

Intervention	Initial cost $/ha	Operating cost $ha/y	Total $/ha PV 25y	Total for entire mapped area $ million
Riparian buffers	1597	190	3 769	3 285
Reforestation of deforested areas	1495	87	2 489	1 642
Rehabilitation of degraded forests	1000	150	2 715	1 891
Rangeland restoration	510	125	1 939	43 473
Conservation Agric + Agroforestry	226	14	385	2 363
TOTAL				**52 654**

livestock production each having similarly large shares. Increases in tourism value also make up a significant share (Figure 3.2). If implemented fully using the approaches typically carried out at smaller scales, the indicative cost of these interventions would be prohibitively high, amounting to some US$52.6 billion across the country, excluding marine ecosystems. Because the scale of rangeland degradation is so vast, restoring all degraded rangelands would amount to over US$43 billion. Restoring other degraded ecosystems would amount to over US$7 billion, and the interventions in cultivated areas would amount to over $2 billion (Table 3.2). Thus it is clear that interventions need to be prioritised.

While there is a good economic case to undertake NbS action at very large scales, mobilising the level of resources required would be extremely challenging. Thus it will be necessary to prioritise interventions, to find means to achieve conservation outcomes at lower cost through smarter approaches and economies of scale, through capacitating and motivating landowners to undertake NbS interventions that would be in their own self-interest and through incentivising private sector companies and NGOs to invest in NbS.

Under its National Landscape and Ecosystem Restoration Strategy (NLERS) for 2023 – 2032, Kenya has committed to restoring or rehabilitating over a quarter of the area identified by MENR (2016), amounting to 10.6 million ha. In the process, the strategy also intends to contribute to the government's ambitious tree planting targets. The strategy has indicated a budget requirement of some US$10 billion. This high level of commitment to improving landscape and ecosystem functionality presents an opportunity to implement nature-based solutions to a range of sectoral challenges that are essential in addressing climate resilience, while simultaneously contributing to ecosystem-based mitigation targets. While overall targets are given, there is no guidance on which areas should be selected to meet the 10.6 million ha target. The NLERS identified the CIF as one of the potential sources of funding for its implementation.

Expanding on the above analysis of costs and benefits, priority sub-catchment areas for NbS interventions have been identified using a multicriteria analysis. This was carried out at the scale of 198 tertiary sub-catchments[9] across the country (Turpie et al., 2024). The analysis was based on the estimated costs and benefits of the restoration of forests, rangelands, riparian and wetland areas, and the implementation of climate-smart agriculture and agroforestry in the potential areas mapped by MENR (2016). The criteria used in the analysis were chosen in conjunction with government stakeholders, and included:

- economic and livelihood benefits from improved ecosystem services for each dollar spent on restoration (also called the "return on investment" or "benefit:cost ratio");
- the sub-catchment population size;
- the extent of poverty in the population; and
- the level of climate change vulnerability in each of the sub-catchment areas; and
- benefits to biodiversity.

The cost and benefit estimates were generated on the basis of existing cost estimates and modelling of ecosystem services. The population and poverty data were from national statistics. The climate change vulnerability scores were taken from agnesafrica.org. Biodiversity benefits was a high-level index based on the level of overlap with priority wildlife areas and corridors.

Implemented at sub-catchment scale, NbS interventions could leverage over $10 per $1 spent in some areas, but this return on investment would vary across the country due to the varying climatic, ecological and socio-economic context. With limited financial resources, the highest benefit would be realised by tackling those catchments where the benefits obtained per dollar spent are highest. The benefits from a dollar spent would be generally highest in the more mesic and higher lying arable zones of the country as well as in some

9 Kenya's six river basins are subdivided into secondary sub-catchments, which are further subdivided into tertiary sub-catchments. Tertiary sub-catchments are a convenient scale for NbS planning.

coastal areas (Table 3.3). This is where human activities are concentrated and most intensive, where forests occur, and where soil erosion potential is high due to higher rainfall and steeper slopes. At the primary basin level, the overall benefit to cost ratio of NbS interventions would be highest for the Lake Victoria Basin, followed by the Athi Basin (Table 3.3).

The multicriteria analysis took both economic values (livelihood benefits, water supply cost savings, avoided flood damages etc.) and non-monetary criteria into account. The multi-criteria analysis was based on the benefits per dollar spent in each sub-catchment along with important non-monetary criteria on the relative need for investment based on population, poverty and climate change vulnerability, and the benefits for biodiversity. This results in a different pattern than that based on economic values alone, since the last two criteria tend to be more prominent outside of the core agricultural zone of Kenya. Climate change vulnerability is highest in the ASALs, and wildlife benefits are highest in contiguous, untransformed natural areas such as river and wetland systems and rangelands. Based on even weightings of the five criteria, the relative importance of subcatchment areas for NbS investment are shown in Figure 3.4.

The priority catchments provide guidance for the selection of locations of the investment in NbS in Kenya, the choice of which could take other factors into account. This has provided input into the selection of areas to be included in this NPC Investment Plan. The analysis suggests that the national target for restoring 10.6 million ha could be achieved in the top 156 tertiary sub-catchments, at a cost of some US$12.5 billion, similar to the budget of US$10 billion specified in the NELRS.

Table 3.3 Summary of costs and benefits per Level 1 basin. The benefits are presented as the total value of the benefits over 25 years, expressed as equivalent money in the bank today. Basins are in order of overall return on investment (ROI) or benefit:cost ratio.

Basin	Total cost $ m	Present value of benefits ($ m)				ROI ($ gained per $ spent)
		Carbon $ m	Hydrological $ m	Crop & agroforestry $ m	Livestock & wildlife $ m	
Lake Victoria	1 573.9	3 252.7	6 045.8	6 100.1	304.8	9.98
Athi	4 634.2	3 814.2	2 743.1	3 433.9	1 350.4	2.45
Tana	11 183.2	7 475.3	5 933.3	4 777.6	3 359.2	1.93
Rift Valley	7 668.7	3 454.8	1 526.9	1 711.6	1 691.6	1.09
Ewaso Ng'iro	27 587.4	9 105.8	1 359.4	682.5	2 820.8	0.51
OVERALL	**52 653.7**	**27 109.9**	**17 610.6**	**16 705.7**	**9 526.8**	**1.35**

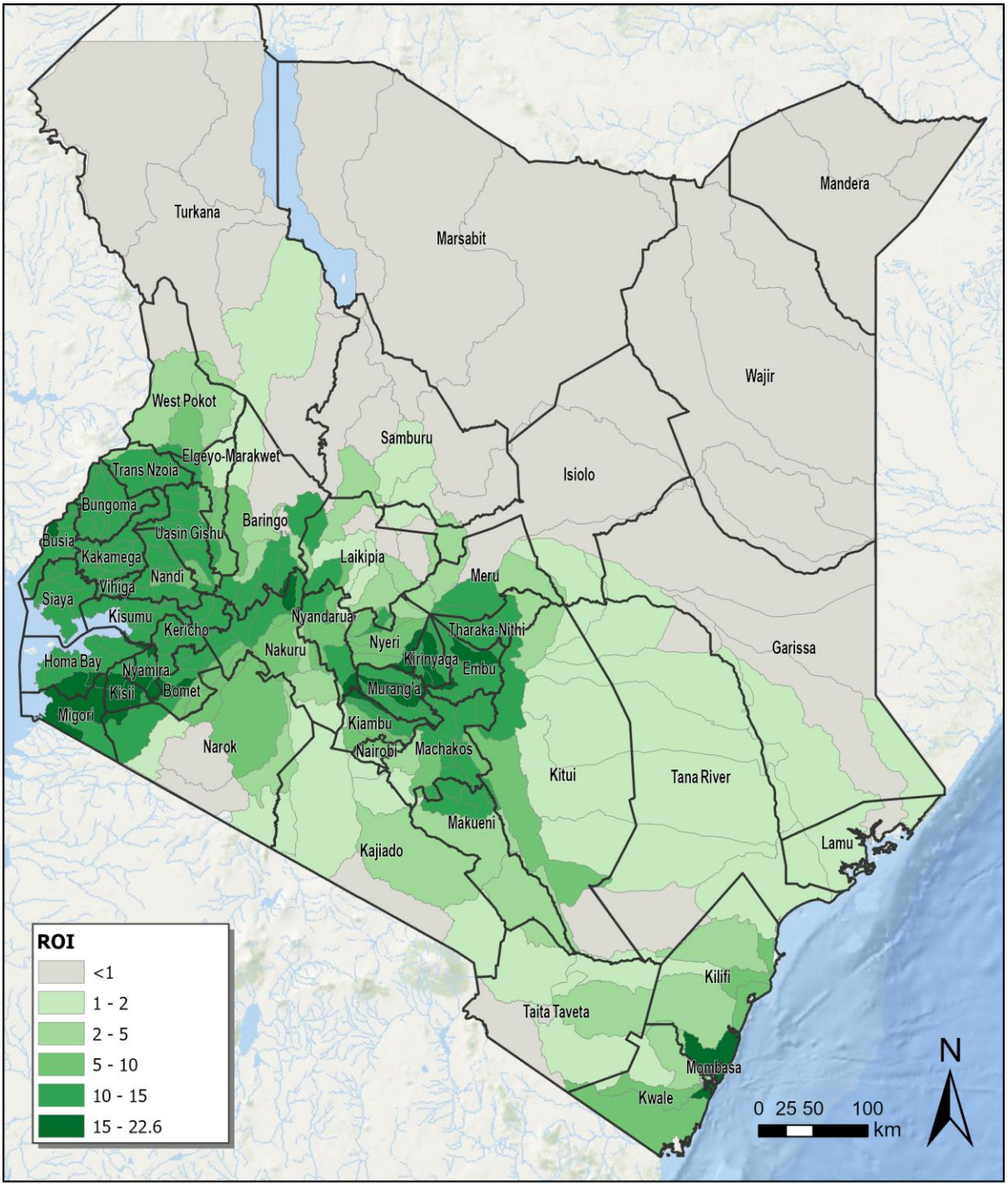

Figure 3.3. Estimated return on investment (ROI) at sub-basin level with implementation of all proposed NbS interventions.

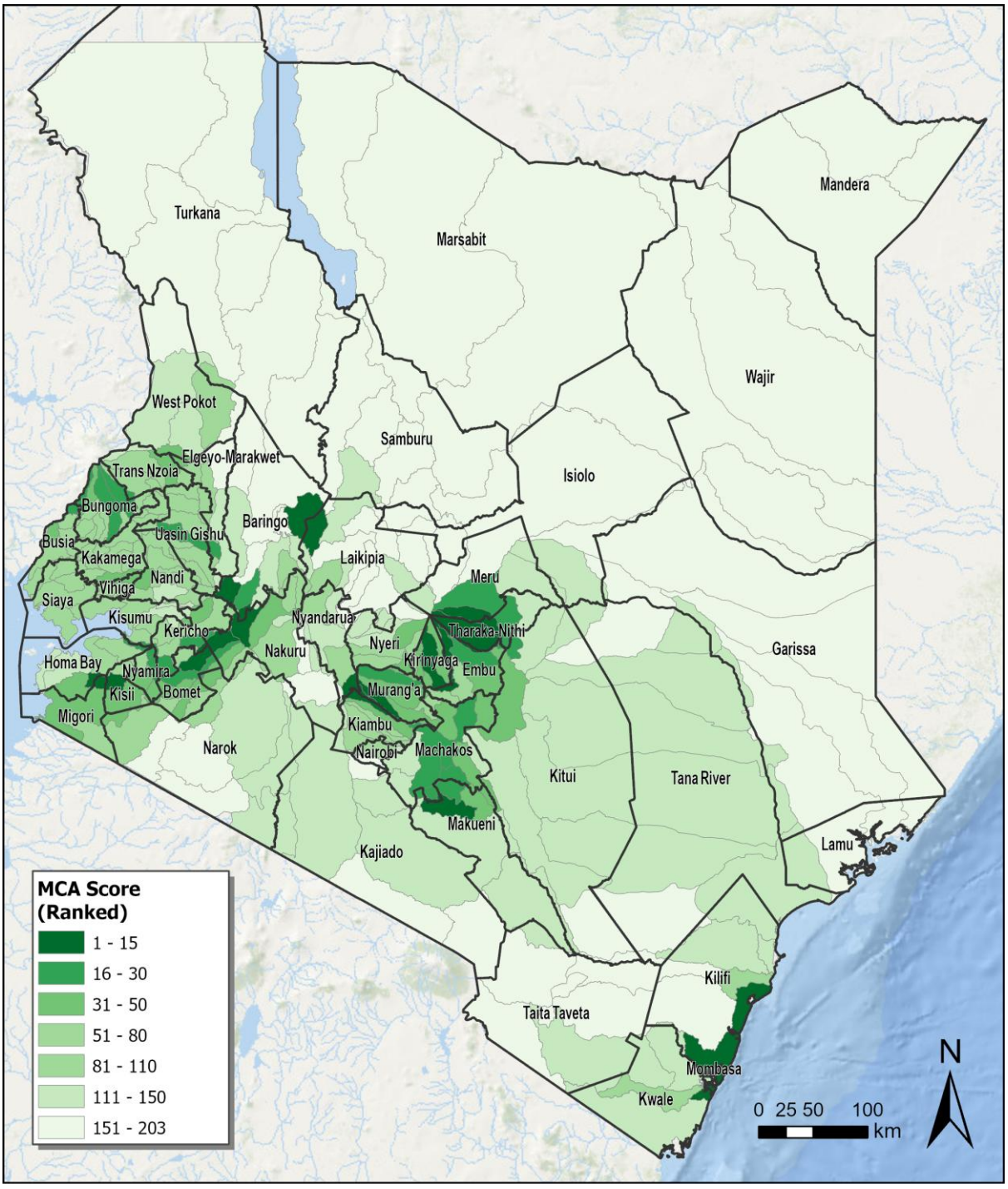

Figure 3.4. Priority sub-basin areas for implementation of NbS interventions based on a multi-criteria analysis, using a weighting of 40% for ROI and equal weightings of 20% each for density of people living in poverty, climate change vulnerability and biodiversity.

3.4 OVERVIEW OF THE COUNTRY'S EFFORT TO ENGAGE IN NBS

Kenya has already invested considerable effort into undertaking Nature-based Solutions (NbS) projects to address sectoral and climate change issues. Nature-based solutions are embedded in landscape-level planning and management to (i) avoid GHG emissions stemming from the changing use of land and erosion of natural resources and systems; (ii) build the climate resilience of lands and communities; while also (iii) supporting livelihoods of rural communities and indigenous peoples, empowerment of women, and the management of biodiversity.

Various NbS-type interventions have been implemented across a range of ecosystems in Kenya, most notably within forests, coastal and inland wetlands, rangelands and croplands (see Appendix 2). Many of these initiatives have focused on restoring and protecting Kenya's remaining forests, both coastal forests which have been mostly lost already, and mountain forest areas which are the source areas for Kenya's main rivers. Restoration of these "water towers" is now a national priority. Natural rangelands and croplands in Kenya have also become degraded due to unsustainable land practices, climate change, pests and disease. High population growth means that land which is an essential resource is becoming increasingly scarce in Kenya. Restoration of degraded rangelands and croplands is thus also a national priority with cropland-based agroforestry and regenerative/climate-smart agriculture being implemented at large scales (Appendix 2).

Initiatives range in scale, scope and focus – from active restoration initiatives in mangrove forests to largescale catchment restoration activities for water security to agricultural and livelihood interventions to improve land management. Some notable initiatives include (i) Mikoko Pamoja, the first community-led mangrove payment for ecosystem services (PES) project in the world which conserves mangroves through the sale of carbon credits; (ii) Twiga Foods, a Kenya-based eCommerce platform connecting producers of fresh fruit and vegetables with local markets to improve the livelihoods of farmers and improve responsible consumption and production; (iii) Komaza, a growing smallholder forestry company that restores underutilised farmland by planting trees for wood to reduce the wood deficit which cannot be met by plantation forests; (iv) Farm to Market Alliance, a public private sector consortium of eight agri-focused organisations that make markets work better for farmers through value chain interventions; and (v) Water Funds, a governance and funding mechanism that enables water users to provide financial and technical support collectively in catchment restoration (Vogl *et al.*, 2017).

Water Funds have become a key feature for water resources management and the facilitation for implementing nature-based solutions through multi-stakeholder partnerships. The Upper Tana Nairobi Water Fund (UTNWF) benefits a wide range of stakeholders in the Upper Tana Basin and helps to meet water demands in Nairobi (TNC, 2015). It is a registered Charitable Trust governed by an independent Board of Trustees through a public-private partnership with broad institutional representation from the private sector, public sector and nongovernmental organizations. The UTNWF implements restoration activities to reduce sediment concentrations in rivers and reservoirs, increase revenues for hydropower generators, decrease water treatment costs, increase water yields, reduce water-borne diseases, and increase agricultural yields for smallholder farmers. While the main ecosystem services targeted through the Fund are water quality and water supply, co-benefits include increased agricultural output due to better soil management, increased incomes for farmers, employment opportunities, greater supply of fodder for livestock, new habitat for pollinator species, and carbon storage. Other Water Funds in Kenya that are facilitating the adoption and implementation of nature-based solutions are the Eldoret-Iten Water Fund and the proposed Mombasa Water Fund. These funds provide a platform for civil society and private sector to participate in nature-based investments through the provision of financial resources and specialized knowledge. They also leverage cooperation with international organizations to benefit from their experience, innovation and resource mobilization for nature-based investments.

While most of the NbS projects in Kenya are financed by public and philanthropic funds, the role of the private sector in investment and innovation in NbS is slowly growing. Much of the private sector investment in the NbS space to date has been agri-focused to build a more food- and nutrition-secure economy through

improved cropland management practices, improved access to markets and value chain development. For example, TNC with its partners (e.g., Micro Enterprises Support Programme Trust, MESPT) is using a foodscape-scale approach to engage local producers and communities, the private sector and policymakers to accelerate regenerative practices in the agricultural lands around Mt Kenya to strengthen food systems with benefits for both people and nature. The Central Highlands Ecoregion Foodscape (CHEF)[10] focuses on bettering food production practices to improve soil health and water supplies while also supporting biodiversity conservation and smallholder livelihoods. Private sector involvement in this regard has included the development of community outgrower associations (e.g., Laikipia Avocado Outgrowers Community-Based Organization) and investment in skills development, technical support, business advisory services, financial and market linkages. This has demonstrated that the private sector is key for ensuring financial sustainability.

There has also been some private sector investment in mangrove restoration initiatives in the form of REDD+ projects and development of alternative livelihood activities such as seaweed farming and apiculture. Additionally, tree planting initiatives have encouraged the establishment of private nurseries. Private investors pay the lease fees to the community landowners and develop appropriate tourism infrastructure, spearheading the investment and marketing that is needed to ensure long-term viability. A recent example is the establishment of the Kitenden Conservancy and Kitenden Conservancy Trust and the agreement with Conservation Equity, a private investor who will now lease the land from the Trust and invest in tourism infrastructure in the conservancy. Other notable nature-based initiatives with involvement of the private sector include the Chyulu Hills REDD+ Project and the Kasigau Corridor REDD+ Project.

However, private investors often perceive nature-based interventions as high risk. This is also the case for Kenya where political, regulatory and currency risks can be elevated and where major challenges are faced in terms of access to markets, strength of local markets and capacity to effectively implement NbS (FOLU 2022). This is a major barrier to private investment. Furthermore, the financial viability of NbS has not been well proven at scale and across different ecosystem types to fully attract private sector investment and involvement in NbS initiatives, with private investors often lacking the information and knowledge on the topic that is needed to both adequately assess the opportunities provided by such initiatives and the risks associated with them. Therefore, projects need to be designed to be bankable (i.e., be able to attract commercial investment) so that they meet the specific needs of private investors from the outset.

While there have been many NbS-type initiatives implemented in Kenya, the level of success of these projects has been variable. In most cases where there have been weak outcomes, this has largely been due to limited resources, limited capacity and poor coordination to effectively implement. To ensure success of a project, considerable effort needs to be put into understanding the local context of the study area and ensuring the project is well designed to this context. A thorough situation and needs assessment should be undertaken, including anthropological, social, ecological, cultural, and institutional research, which requires time and fostering trust with the local communities and authorities within the project area. Such an assessment which invests in baseline ecological and social studies during the initial stages and uses this information to develop a strong project design, both in terms of governance structures and community engagement, will likely be more successful in the long term. If the project has an incentive-based approach or some form of results-based payment structure, then transparency and honesty can form an important part of the initial assessments and is important for managing expectations, building trust and ensuring effective design in terms of benefit sharing mechanisms (e.g., REDD+ projects or PES-types schemes such as Water Funds). Not only is the

[10] https://www.nature.org/en-us/about-us/where-we-work/africa/stories-in-africa/central-highlands-ecoregion-foodscape/

baseline assessment important from a social perspective but also in terms of understanding system functioning and ecological condition for ensuring well-designed, effective NbS interventions. These initial assessments are very important for then developing adaptive and effective monitoring and evaluation plans.

There is significant opportunity to scale up NbS initiatives in Kenya. This requires investment in capacity building on NbS, ensuring safeguards when implementing NbS to mitigate potential risks creating an enabling environment to overcome key barriers to private sector investment, by aggregating NbS initiatives, establishing strong partnerships with local communities and authorities, and attracting the private sector to support technical training, infrastructure development, and financial access through projects that are bankable.

3.5 INSTITUTIONAL FRAMEWORK AND SUPPORT CAPACITY FOR NBS

Kenya has an elaborate array of institutions with various roles and responsibilities for environmental conservation and climate action (Table 3.4). Each of these actors have different capacities for action governed by the statutory mandates. The key government institutions apart from the National Treasury and the State Departments and associated agencies or institutions responsible for the management of environment, wildlife, forests, marine and coastal ecosystems, water, climate services and agriculture at national, county and community level. While national departments provide overarching policy and legal frameworks, county governments have a high degree of autonomy and are responsible for sectoral actions at the county level. For example, the State Department of Forestry has the Kenya Forest Service (KFS) as its primary enforcement agency for forest-related matters in the country, which is also actively involved in the forest protection, conservation and restoration planning, and collaboration with many stakeholders (e.g., Community Forest Associations). Kenya Forest research institute (KEMRI), on the other hand, carries out research in forestry, agroforestry and natural resources management. It also promotes sustainable practices in forestry and natural resource management, including regarding community engagement through open days and field days, training and capacity development.

Table 3.4. The main institutions of potential relevance to implementation of Nature-based Solutions in Kenya.

Ministry	State Departments	Agencies/ Institutions/ CBOs	Role
Environment, Climate Change and Forestry	Environment and Climate Change	National Environmental Management Authority (NEMA)	NEMA is the principal organ of the government in the implementation of all policies relating to the environment. Under Section 17 of the Climate Change Act (2016), it monitors, investigates and enforces compliance of climate change interventions. In addition to overall co-ordination of environmental matters, NEMA is mandated with the protection and restoration of wetlands in accordance with the Environmental Management and Coordination (Wetlands, River Banks, Lake Shores and Sea Shore Management) Regulations (2009) and management of pollution by effluent discharge in accordance with the Water Quality Regulations (2006).
		National Environment Trust Fund (NETFUND)	NETFUND is a state corporation under the MECCF that was established by the Environmental Management and Coordination Act (1999) to mobilise and allocate resources for environmental management in Kenya. It supports climate actions which are aligned with Kenya's NDC and NCCAP.
		National climate change council (NCCC)	The NCCC provides an overarching national climate change coordination mechanism; and administer climate fund
		Climate Change Directorate (CCD)	The CCD is a coordinating agency for climate change actions and strategies and provides need-based technical assistance on climate change actions and responses to county governments. It is also responsible for managing the overall implementation of NCCAPs, including regarding coordination of climate actions and related monitoring, reporting and verification (MRV). It is the lead agency of the government on national climate change plans and actions. It also serves as the secretariat of NCCC.
		Kenya Meteorological Department (KMD)	Provides meteorological and climatological services to agriculture, forestry, water resources management, civil aviation and the private sector
	Forestry	Kenya Forest Service (KFS)	KFS is responsible for conservation, protection and management of forest resources. Other key functions include establishing and implementing benefit sharing arrangements and managing water catchment areas in relation to soil and water conservation, carbon sequestration and other environmental services.
		Kenya Forestry Research Institute (KEFRI)	Undertakes research pertinent to the Forestry State Department mandate.
		Community Forest Associations (CFAs)	CFAs plays a vital role in protecting and conserving forests. Their mandate includes raising seedlings, resource mobilization, sensitization, managing income-generating activities, and conserving forests.

Ministry	State Departments	Agencies/ Institutions/ CBOs	Role
Tourism, Wildlife and Heritage	Wildlife	Kenya Wildlife Service (KWS)	Primarily tasked with managing and conserving wildlife resources within national parks, wildlife conservation areas, sanctuaries and outside protected areas. It is responsible for protecting forests within its jurisdiction and supporting the conservation, rehabilitation and protection of forests and water catchments and other significant wildlife habitats. It works in close collaboration with WRA, NEMA, KFS, county governments and other organized groups to monitor and enforce actions against degradation and loss of wildlife habitats. County governments are involved in the management of wildlife through management of National Reserves (e.g. Maasai Mara) and the County Wildlife Conservation and Compensation Committees. These committees are required to establish wildlife user rights, oversee implementation of management plans on community and private lands, oversee equitable benefit sharing of wildlife resources and review compensation claims.
		Wildlife Conservation Trust Fund (WCTF)	Established 2023 to raise resources for wildlife conservation, this fund will be sourced from levies for PES and biodiversity offset schemes, investments, grants, donations and bequests, as well as debt-for-nature transactions.
	Tourism	Kenya Tourism Board (KTB)	This is a state corporation whose mandate is to develop, implement and co-ordinate the country's tourism marketing strategy.
		Tourism Fund	This fund collects the 2% tourism levy on behalf of the tourism government, to fund tourism services
Water, Sanitation and Irrigation	Water and Sanitation	Water Resources Authority (WRA)	The WRA is responsible for the protection, conservation, control and regulation of water resources. It works with other partners and regulatory bodies, such as KWS, KFS, NEMA and county governments. The WRA uses a basin-based approach in the management of water resources and has developed Catchment Management Strategies (CMS) for each of the country's six drainage basins.
		Water Services Regulatory Board (WSREB)	The WASREB is a regulatory state corporation that sets standards and enforces regulations.
		Water Sector Trust Fund (WSTF)	The WSTF finances water services in marginalized or underserved areas, including (community level initiatives for the sustainable management of water resources.
		Water Resource Users Associations (WRUAs)	WRUAs are community-based voluntary organisations which operate at the sub-basin level to promote cooperative governance of water resources and address water-related conflicts.
	Irrigation	National Water Harvesting and Storage Authority (NWHSA)	NWHSA has the mandate for the development of national public water works for water resources storage and flood control.

Ministry	State Departments	Agencies/ Institutions/ CBOs	Role
Agriculture and Livestock Development	Livestock	Kenya Agriculture & Livestock Research Organisation (KALRO)	The ministry coordinates climate related issues across the agriculture sector. It also implements various climate change programmes and projects.
	Agriculture		KALRO provides research support to the ministry.
	Fisheries and Blue Economy	Kenya Marine and Fisheries Research Institute (KMFRI)	KMFRI is a research and policy advisory organization that conducts research, provides training, and advises on the management of coastal and marine areas and resources, including nature-based solutions.
National Treasury and Economic Planning	National Treasury	-	The Treasury is the national designated authority (focal point) to Green Climate Fund (GCF). The Climate Change Fund is vested in the National Treasury. It provides and manages funds for climate actions.
	Economic Planning	Micro Enterprise Support Programme Trust (MESPT)	The Micro Enterprise Support Programme Trust (MESPT) promotes sustainable economic growth in Kenya by supporting small and medium-sized enterprises (SMEs) and value chains. It provides financial services, capacity-building, and market access to empower entrepreneurs and improve livelihoods. MESPT focuses on agriculture, renewable energy, and environmental conservation, contributing to poverty reduction and inclusive development.
County governments			County governments play a crucial role in implementing NbS as they integrate them into local climate action plans and development projects. They oversee resource management at the community level, coordinate restoration of ecosystems such as forests and wetlands, and promote sustainable agriculture and water conservation. County governments also facilitate community participation, enforce regulations, and ensure that local needs for climate resilience and biodiversity conservation are met.

3.6 SOCIAL AND DEVELOPMENTAL CHALLENGES RELATING TO NBS

NbS interventions usually need to include both direct actions on the biophysical environment and supporting actions to help bring those about and ensure the necessary follow up measures are sustained. NbS interventions usually involve some combination of protection, restoration and sustainable management interventions in natural or cultivated lands. Their objectives are to halt and or reverse degradation making people and nature better off than they would have been without the interventions, either directly through addressing sectoral challenges and socio-ecological system resilience, or indirectly through climate change mitigation, but usually in both of these ways. The interventions should include a combination of direct actions on the biophysical environment (such as tree planting or a change of grazing practice) and supporting actions that enable these direct actions (such as capacity building, access to micro-loans and income generating activities). In other words, they have to simultaneously reduce or reverse damages and address the human behavioural drivers of those damages.

Understanding of the technical aspects of protection, restoration and sustainable management interventions in natural or cultivated lands is relatively well advanced. Practitioners have tended to focus on amassing the scientific evidence to support the direct actions on the biophysical environment, including specific design and methods of various interventions. For example, a considerable amount is known about the best way to prepare and plant tree seedlings, and the design of measures to reduce soil erosion from cultivated lands in different soil, rainfall and slope contexts. Not all areas are well covered in this regard, however. For example, there have been repeated calls for better understanding how to address mangrove restoration, which involves consideration of hydrological elements as well as tree planting techniques.

However, the implementation of NbS projects is often challenging due to a range of social and developmental factors, with many projects having disappointing outcomes as a result. Such challenges include population growth; poverty; gender inequality; low levels of education, literacy and capacity; poor access to water and sanitation; limited marketability and/or poor market access; and poor access to inputs, services, and technical knowledge. Many rural communities live in poverty and are highly dependent on natural resources, with women being particularly vulnerable in this regard. This limits their ability to afford the investments that are often required in the NbS activities that are being proposed. Another prevalent issue in Kenya is informal land tenure which creates a lack of incentive to implement NbS. Weak land tenure also influences access to markets and credit.

Gender dynamics play a crucial role in both the environmental and social contexts of Kenya. While women are catered for in the constitution, policies and law, gender equality is not seen in practice. Kenya has a patriarchal society in which domestic, livelihood and workplace roles are strongly gendered, to accommodate the reproductive role of women. Men tend to have more access to resources, take more leadership roles, and have more power and voice in decision-making than women, and women also must deal with greater risks to their security. Women, whose work is often closely linked to natural resources, face significant barriers in accessing land, credit, and education, limiting their economic opportunities and contributions to sustainable development. Women play an important role in the AFOLU sector and in adaptation to climate change at the household level and there is significant potential for NbS activities such as climate smart agriculture to help to empower women. Indeed, women's empowerment is needed for the long-term sustainability of the whole system, so that they have more control over their fertility rates and their economic options. This will alleviate pressure on the environment.

Furthermore, inclusivity is not always well catered for in the implementation of policies and projects. This suggests that considering gender, racial and cultural differences in interests and in the means with which information and knowledge are transmitted is critically important to the success of NbS. For example, Kenya grapples with the social challenge of hosting refugees, primarily in fragile semi-arid environments. The harvesting of trees and shrubs for wood fuel and construction significantly drives environmental degradation and the spread of invasive species

which thrive in these degraded areas. This can create complex social and cultural divides which are challenging to overcome. Being cognisant of specific problems and challenges is vital for communities to function properly, which is in turn vital for sustainable living.

3.7 COMPLEMENTARY ACTIVITIES

The provision of development support and livelihood improvements is needed to offset any sacrifices. To effectively implement NbS, it is crucial to address and meet various essential developmental needs that communities may have. Ensuring access to key resources and services, promotes overall well-being and garners support for the implementation of NbS interventions. Ensuring that communities have access to the necessary basic resources and services, means that they are better positioned to take advantage of available opportunities. It also creates goodwill and cooperation which is important for successful project implementation and ongoing adoption and support. Communities will be more likely to support the proposed conservation or restoration initiatives when their basic needs are met and when they see tangible improvements in their day-to-day lives. Bettering people's lives and pulling them out of poverty ensures the support that is needed over the long-term as well as likely success of the project.

It is important that programmes include either developmental support in the form of education or health services or in the form of diversified responsible economic opportunities, such as through providing access to credit or providing support and training on productive operations (Ambrosino et al., 2021). For example, reforestation projects often seek to improve agricultural incomes as a means to garner support for the overall project and at the same time reduce the need for clearing forests or harvesting forest resources as supplementary income. Mangrove restoration projects in Kenya also have a strong focus on providing livelihood support which seek to improve household incomes and overall quality of life for the forest adjacent communities that they work with. In doing so, productivity is improved, social benefits increase and general quality of life improves through poverty reduction, income and employment generation, economic growth, environmental performance, and gender equity (Ambrosino *et al.*, 2021). For example, the 'Sustainable Use of Marine Ecosystems in Kwale County project' (COSME project) introduced seaweed farming in conjunction with their mangrove restoration work and also focused strongly on awareness raising and education, particularly for women and girls (Ambrosino *et al.*, 2021). Wetlands International and EarthLungs Reforestation Fund who work with coastal communities to restore mangroves have supported the implementation of apiculture activities in forest adjacent communities.

Strengthening national, county and local governance structures to foster transparency, accountability, and inclusiveness, can lead to more community cohesion and better development outcomes. Capacity building and strengthening of both national and county institutions is important to ensure well-coordinated and effective implementation of NbS. Strengthening and guiding local governance and management structures is also considered an important supporting intervention as it can help to address a number of key challenges. This should involve providing support and capacity building around roles and responsibilities and best practices (e.g., for local community members who are part of a grazing committee or on the board of the trust for a conservancy). This can play a significant role in strengthening local governance structures by ensuring accountability, improving transparency and addressing issues of corruption. It should involve supporting the development of adaptive plans and systems for the monitoring and evaluation of activities and should focus on providing technical assistance for registration of zoning and land use plans with government.

Supporting the establishment of community conservancies and CFAs and/or land use and management plans is an important step for leveraging sustainable management. This is a collaborative process that requires ongoing engagement and support. It involves working with communities, providing funds, experts, and training to support the establishment and/or registration of conservancies, and the training of County Environment Committees (CECs), CFAs and CBOs to develop adaptive land use and management plans, communication plans, grievance redress mechanisms, applications to government, and management staffing.

Establishing conservancies and/or supporting the development of land use and management plans in communal rangelands is an important step in trying to secure wildlife conservation and protect rangelands where land tenure is complex. The aim is to, through appropriate institutional arrangements, guarantee tenure security for individual property (where land has been subdivided into freehold plots) but at the same time sustain collective management of rangelands (Odhiambo & Sankale, 2021). This is usually done by establishing a trust (for example the Chyulu Hills Conservation Trust for the Chyulu Hills REDD+ project) in which the common land for grazing and conservation is held, and which is then registered and managed as a conservancy (Odhiambo & Sankale, 2021). This is an important step in securing private sector investment through partnerships with community conservancy trusts for the development of wildlife tourism.

Piloting, demonstration and training on introduced NbS activities is an important step for ensuring successful outcomes. Piloting, demonstration, and training are essential components of a strategic and progressive programme for introducing new measures to

communities. Providing evidence (proof of concept) that the planned interventions will work, followed by participatory training and capacity building, through well-tested, participatory approaches can be highly effective at empowering communities and increasing incomes. It is important that the content of the participatory approaches be adapted to the needs and interests of the community.

Ongoing engagement, quality monitoring and evaluation are important for ensuring project success. Robust environmental monitoring and data collection activities should be adequately planned for and undertaken from the onset of a project. M&E should also include appropriate engagement, capacity development and knowledge sharing to improve information transparency and decision-making at community and local level. Technological advances have strengthened M&E processes and outputs, but these may require communication and capacity building in parallel for increased usage.

Generating community benefits or incomes linked to wildlife is important for offsetting the costs of HWC. Supporting interventions are needed to ensure communities benefit from conservation activities to offset the impacts associated with human wildlife conflict. Royalties generated from ecotourism need to be invested back into the community in the form of community benefits (e.g., schools, clinics, jobs etc.) or in the form of direct payments to households. Benefits need to be sufficient to not only compensate for losses incurred but significantly improve household incomes and everyday quality of life.

Improving value addition, strengthening value chains and supporting the establishment of cooperatives creates business interest in assisting local communities to succeed. Developing and/or strengthening value chains can increase rural incomes and strengthen food security and at the same time provide opportunities to farmers to invest in their businesses and boost productivity. Women's inclusion in the development of value chains promotes empowerment and can lead to household-level risk diversification, improvement in children's well-being, and a shift to more sustainable livelihoods. To ensure success, it is recommended that a detailed and contextualised value chain analysis during the initial preparation phase of the project, including engagement and co-participation with the community, be undertaken. Supporting the establishment of farmer cooperatives can improve market participation and increase farmer incomes. Cooperatives facilitate collective action and are organised to improve economies of scale, access to input and output markets, bargaining power and information sharing, and to reduce costs. Private sector investment would be important here.

3.8 GAPS AND NEEDS ASSESSMENT

Policy and regulatory frameworks are fundamental for guiding the direction and pace of sustainability transition. The gaps and challenges identified from the above analysis include definitions of what qualifies as nature-based investments, limited awareness on nature-based solutions, weak coordinating capacities between government departments and agencies, weak participatory decision-making processes, insecure land tenure rights, inadequate technical capacities on nature-base solutions, inadequate funding mechanism for nature-based investments, and limited private sector engagement.

There is limited understanding and awareness of nature-based solutions among both policy makers and communities. Clarity is required on the definition of nature-based investments. Natural resource management and climate policies and laws make implicit reference to nature-based solutions in different forms to help achieve environmental, climate and biodiversity goals and targets. However, they do not provide clear definition of what qualifies as nature-based investments. Clear definition is required to support better data collection on nature-based solutions, their impact, costs and need. This in turn, will enable evidence-based business cases for investors and for governments to put in place enabling frameworks. There is also limited awareness on nature-based solutions among local communities. Natural resource policies should make provisions for awareness and extension programmes on sustainable climate-smart and nature interventions. Targeted awareness and extension support services can create interest, responsibility and new norms for sustainable practices. While there is a variety of dissemination pathways, natural resource

management strategies should support interpersonal communication strategies, such as farmer educational meetings and local engagement forums, and establish partnership with traditional media to enhance awareness and understanding of nature-based investments.

Coordinating capacities between national government, government agencies and county governments are weak. Nature-based investments are disjointed and scattered across sectors such as agriculture, wildlife, environment, forestry, land use and energy. This can potentially undermine the implementation of proposed nature-based solutions, particularly if regulatory, enforcement and coordinating responsibilities are not clearly delineated across sectors and levels of government. Thus, there is need for effective coordination between the national government, its agencies and county governments in the implementation of sustainable climate and nature actions.

Decision-making processes are not sufficiently participatory. Natural resources management and climate change policies and laws provide for bottom-up institutions such as WRUAs and CFAs to give effect to community-based participatory planning and management of natural resources. However, natural resource management laws (e.g., Water Act (2016) and Forest Conservation and Management Act (2016)) are faulted for perpetuating a centralized governance framework at the national government level while devolving water and forest and management to communities. Adequate measures have not been put in place to strengthen financial and technical capacity of local governance institutions. While the roles and responsibilities of CFAs and WRUAs have been expanded in forest and water resources management, such are not matched with resource allocation. Further, water and forest laws do not specify how WRUAs and CFAs should share their mandates with the county governments.

Land tenure and resource rights are often insecure and uncertain. There are increased conflicts and disputes over land tenure rights. This can undermine the uptake of sustainable land use practices, including in nature-based investments.

Lack of access to capital is a major obstacle to investment in nature-based solutions. Nature-based solutions to climate change and other environmental challenges face a well-documented shortfall in financing and resource allocation. Natural resource management policies (e.g., land policy and land use policy) provide a portfolio of specific measures for optimal and sustainable utilization of land. However, they do not sufficiently address how resources will be mobilized to enable the uptake of proposed interventions. The current finance landscape for nature-based solutions is fragmented, it involves a wide array of public and private finance actors. Governments can provide catalytic capital to conservation funds and projects. This includes support for result-based financing schemes such as green or conservation bonds, the expansion of the resilience bonds market, credit facilities for habitat restoration and water quality improvement, blended finance mechanisms and credit guarantees. A variety of public-sector institutions including national and international development finance institutions with a mandate to support green investments can supply these instruments. National and subnational climate funds have already been set up in Kenya to enable more efficient disbursement of finance for climate related activities, including nature-based investments. County climate change funds have also funded smaller scale projects responding to and addressing local adaptation and resilience, which accounts for the preservation, rehabilitation and restoration of nature to address the adverse effects of climate change.

4. PROGRAMME DESCRIPTION

4.1 OVERVIEW

Kenya's NPC Investment Plan aims to invest in NbS interventions that will simultaneously address climate change adaptation and mitigation while also contributing to development and biodiversity targets. The plan will enable the implementation of interventions that have already been mapped out at national scale and that will contribute to a number of restoration, adaptation and mitigation targets as well as several development and biodiversity targets.

The Investment Plan will take a catchment landscape approach to maximise its impacts. Landscape connectivity tends to be highest within a catchment, where processes are connected through drainage systems. Addressing degradation thoroughly within a single landscape is likely to have the best results. Landscape interventions are also typically best applied from the highest to the lowest altitudes. Therefore, the Investment plan will focus in the upper sub-catchments of two river basins, namely the Ewaso Ng'iro North Basin and the Lake Victoria South Basin.

The overarching strategic objectives of Kenya's NPC Investment Plan are:

- To **reduce GHG emissions** and contribute to climate change **mitigation** in the AFOLU sector by restoring and securing soil and biomass carbon in natural, semi-natural and cultivated systems;
- To **improve adaptive capacity** and resilience of rural communities by securing ecosystem services and generating alternative income opportunities for vulnerable and burdened sectors of rural society through an inclusive and gender-sensitive approach;
- To improve outcomes for **biodiversity** by securing the health, connectivity and overall integrity of wildlife habitats;
- To **build capacity and strengthen policies and institutions** focused on landscape restoration, water management and sustainable land use in response to climate change.

The Investment Plan will be implemented through three projects, each designed to contribute to the overarching goals of the plan while leveraging the specific expertise of the CIF-partner MDBs. The Nature Capital project, led by WB, will focus on securing ecosystem services for adaptation and mitigation through the restoration, protection and sustainable management of natural forest, river, wetland and rangeland ecosystems. The Nature People project, led by AfDB, will focus on developing climate-smart, conservation agriculture practices and agroforestry in existing cultivated areas to improve adaptive capacity within and beyond these areas, as well as improve carbon retention. The Nature Ventures project, led by the IFC, will stimulate private sector investment to support NbS interventions in both natural ecosystems and cultivated lands and improve their longevity and scalability.

The Investment Plan includes a range of supporting activities. The effectiveness of the primary activities of the three MDBs will be strengthened by thorough preparation, including baseline studies and stakeholder engagements, as well as through efforts to build capacity and strengthen relevant policies and institutions.

4.2 TARGETED LANDSCAPES

The investment plan activities are concentrated in the upper parts of the Lake Victoria South and the Ewaso Ng'iro North Basins (Figure 4.1). These encompass areas of particularly high priority for restoration activities in terms of the potential returns from gains in ecosystem services, and the potential numbers of vulnerable households, also taking into account the existence of complementary and potentially synergistic efforts in the landscape. The Lake Victoria South landscape encompasses some of the highest priority areas for implementing NbS, which is due to the intensive use and value of the area, and its importance for food and water

security and which is therefore strategically important to address as part of a climate change adaptation strategy. The Ewaso Ng'iro North landscape constitutes the headwater area for a large part of Kenya that faces major climate change challenges. Within the upper basin itself, water supply is threatened by forests, riparian, wetland and rangeland degradation, and access to water is increasingly contested between water users and between livestock and wildlife. These problems are deepening levels of vulnerability to climate change. Both landscapes contain substantial potential for climate change mitigation through forest, riparian and rangeland restoration as well as conservation practices on cultivated lands.

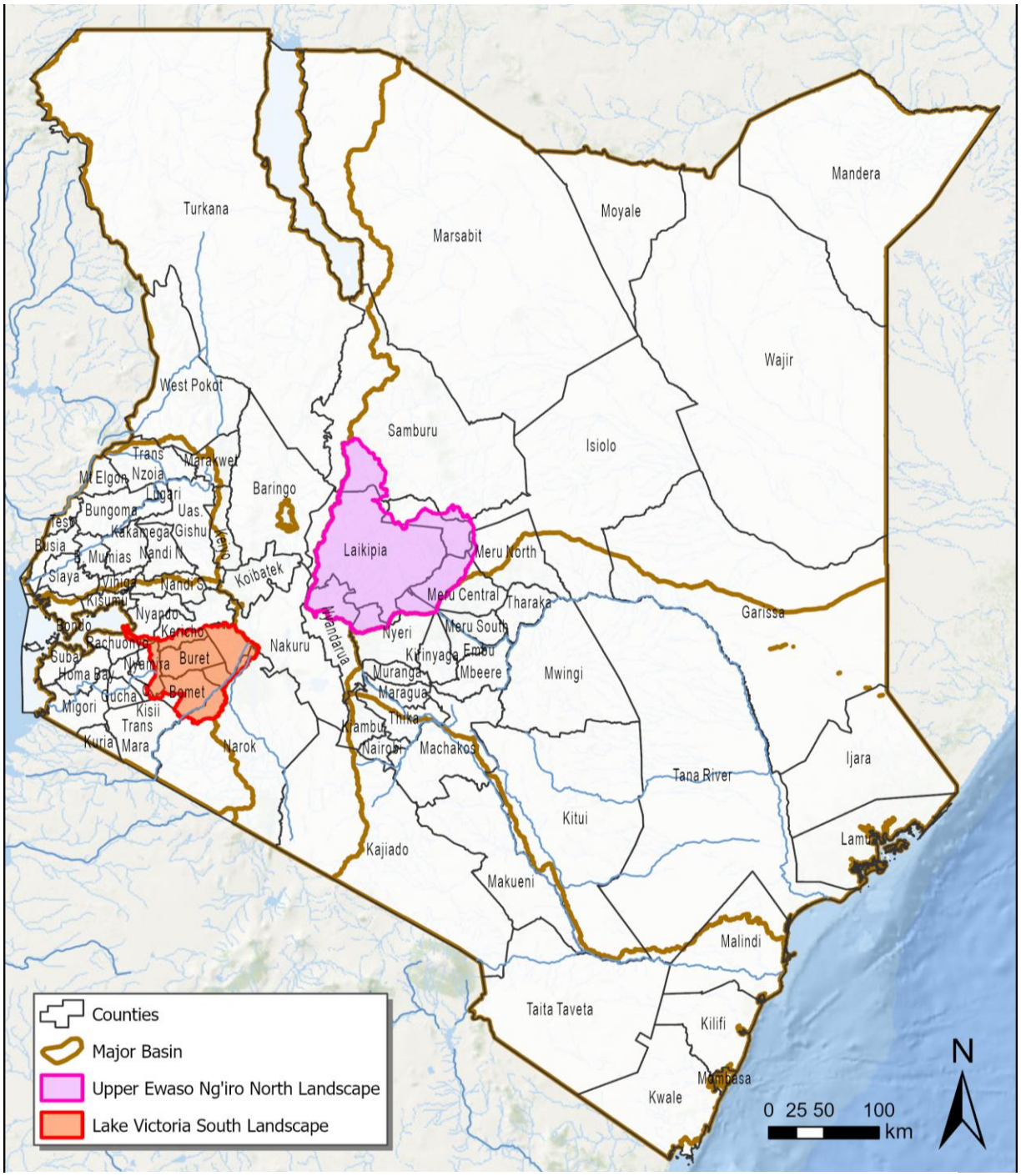

Figure 4.1. The two focal landscapes for the NPC Investment Plan, shown in relation to the counties and major river basins.

4.2.1 LAKE VICTORIA SOUTH LANDSCAPE

The Lake Victoria South landscape is focused on two secondary catchments in the upper part of the basin, in the vicinity of the Mau Forest complex. This is a cool and mesic landscape, but one in which pressures on agricultural land have led to extensive problems of soil erosion, declining soil fertility and agricultural output of smallholder farms. Apart from a large tract of forest area, the landscape is almost completely transformed to cultivation (Figure 4.4). Dense and growing populations put increasing pressure on these lands and are encroaching into forest and riparian areas that provide important ecosystem services. The areas collectively drain into extremely important river systems that serve the Greater Maasai Mara ecosystem incorporating important wildlife and rangeland areas, and those draining into Lake Victoria. Unsustainable agricultural practices leading to freshwater starvation, sedimentation and pollution of these downstream areas poses significant threats to a range of sectors including livestock production, fisheries and wildlife tourism.

The Lake Victoria South Basin and its inhabitants are highly vulnerable to the effects of climate variability and change (Gabrielsson, Brogaard & Jerneck, 2013; Hammond & Xie, 2020; Mwangi *et al.*, 2020). This is due to low levels of adaptive capacity and low social capital (Mwangi *et al.*, 2020). Although some of these climate projections are uncertain, research shows that ongoing weather variability and shifts in average conditions will likely lead to more prolonged and irregular climatic events and changes to the timing of the rainy seasons in the LVB (Mwangi *et al.*, 2020; Ogoma, Akwany & Adhiambo, 2023). Climate threats related to such changes include more frequent and persistent droughts, delayed or late onset rainfall, dry spells, early rainfall withdrawal, increased incidences of flash flooding and increasing temperatures (Hammond & Xie, 2020; Mwangi *et al.*, 2020).

Climate models have consistently projected an increase in temperature and evapotranspiration across the LVB (Ongoma *et al.*, 2018; Hammond & Xie, 2020; Gebrechorkos *et al.*, 2023). Between 1920 and 2013 temperatures increased between 0.1°C and 2.5°C and it is projected that annual mean temperatures could increase by 0.5 to 3°C by 2050 (Hammond & Xie, 2020). This aligns with the findings of Mwangi *et al.* (2020) who showed that the region of the Mau Forest Complex, which is the source area of several rivers in the project landscape, will experience a warming trend. Their models predicted that by 2050, annual temperatures could be 1.5˚C to 2.0˚C higher under the low-emission (mitigation) scenario (RCP2.6); 2.5˚C to 3.0˚C higher under the medium-level emission scenario (RCP4.5); and 3.0˚C to 3.5˚C higher under a high emission (business as usual) scenario (RCP8.5; Figure 4.2). By 2090, under the most pessimistic scenario these increases could be as high as 5°C (Mwangi *et al.*, 2020).

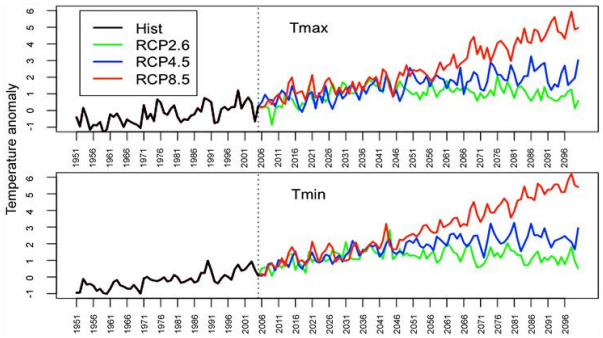

Figure 4.2. Time series of annual surface maximum (top) and minimum (bottom) temperature anomalies (˚C) over the Mau Forest Complex from 1950 to 2100 relative to 1970-2000. Source: (Mwangi et al., 2020).

Projected changes to overall annual rainfall are expected to be less severe than projected changes to seasonal rainfall across the Mau Forest Complex and surrounding areas (Mwangi *et al.*, 2020). The short rains which occur over October to December have been projected to increase under all three climate (low, medium, high emission) scenarios whereas the long rains over the main rainy season from March to May have been projected to decrease. Hydrological extremes (floods and droughts) are also projected to increase across the project landscape (Ongoma *et al.*, 2018; Hammond & Xie, 2020; Mwangi *et al.*, 2020). More frequent and intense rainfall will exacerbate extreme flooding and landslides in areas that are already prone to such events (Hammond & Xie, 2020) and droughts are forecast to become more frequent and persistent (Mwangi *et al.*, 2020).

Given that rain-fed agriculture is the main livelihood activity in the project landscape, any change to rainfall and temperature patterns can influence food production and overall vulnerability (Gabrielsson *et al.*, 2013; Mwangi *et al.*, 2020). This will lead to heightened food

insecurity. Not only will such changes affect agricultural production but also communities' dependence on natural resources, potentially accelerating further encroachment into wetlands, riparian lands and forests through climate-change induced migration (Hammond & Xie, 2020). Higher incidences of extreme rainfall could also increase soil erosion rates with impacts on water quality and water supply infrastructure (Mwangi *et al.*, 2020).

Climate vulnerability is expected to increase across the project landscape under both the medium- and high-emission scenarios. A Climate Vulnerability Index (CVI) estimated for the region shows that compared to the baseline year of 2015, the area under low vulnerability shrinks significantly becoming almost non-existent in the far-future scenarios (Figure 4.3; Mwangi *et al.*, 2020). The area under high vulnerability shows a significant increase (up to 93%) in 2070 under the high-emissions scenario.

Without intervention, farming in this area will become increasingly marginal, especially under climate change, and already vulnerable socio-ecological systems in downstream areas will be further compromised. Intervention opportunities in this landscape are predominantly related to implementing more sustainable, climate-smart cultivation practices, including significant opportunity for agroforestry. In addition, there is extensive opportunity for riparian forest restoration and the restoration of remnant forest patches in the landscape (Figure 4.4, Figure 4.5).

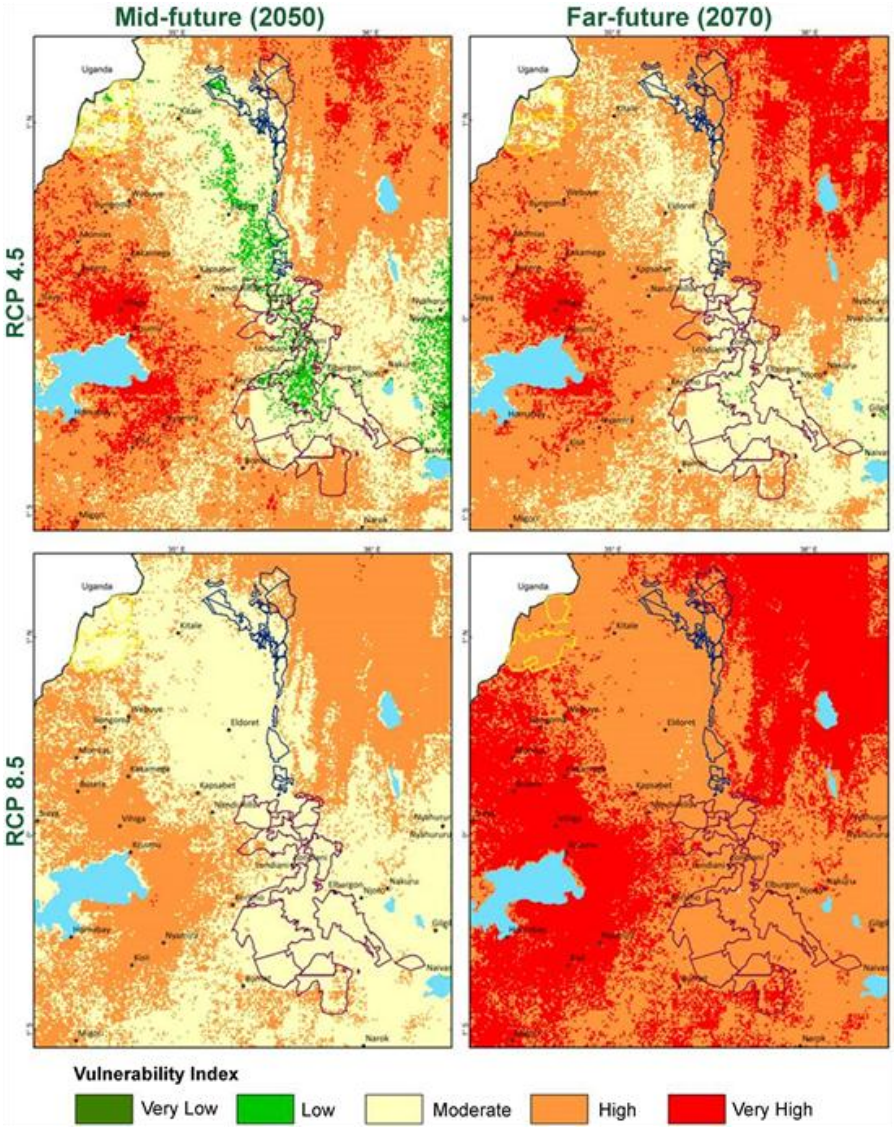

Figure 4.3. Climate change vulnerability in future periods under different climate pathways (RCP) 4.5 (medium) and 8.5 (high). Source: Mwangi et al., (2020). The outlines within the map correspond to water towers focused on in that study.

4.2.2 UPPER EWASO NG'IRO NORTH LANDSCAPE

The upper Ewaso Ng'iro North landscape contains a high diversity of ecosystem types and land uses (Figure 4.4). These include important forested water source areas, below which the more mesic parts of the landscape are used for both industrial and small-scale farming. Below that, small scale farms give way to rangelands, some of which are productively managed wildlife conservancies, and others are degraded and unproductive. The area contains several important wildlife corridors that are becoming squeezed by human activities, leading to increased human-wildlife conflict. Land degradation is also reducing the area's carrying capacity for both livestock and wildlife.

Water scarcity is a major challenge in the basin. The upper catchment areas are the primary water catchment for the extensive remaining part of the basin which stretches to Kenya's northern boundaries. There is competition and conflict over water resources within and between communities and between communities living in the highlands and those in the lowlands of the basin (Kimwatu, Mundia & Makokha, 2021a). Major wetlands such as the Ewaso Ng'iro Wetland are severely water-starved, encroached and degraded and no longer providing ecosystem services such as water quality amelioration and wildlife habitat. Some wetlands have been planted with trees where trees should not occur. Potential interventions that have been mapped in this landscape include large areas under cultivation, substantial areas for potential restoration or rehabilitation of forests, restoration of riparian buffers and wetlands, and the restoration of degraded rangelands (Figure 4.5).

The upper Ewaso Ng'iro North Basin is characterized by high climate variability and an uneven spatial-temporal distribution of water which heightens the severity of climatic shocks (Koech, Makokha & Mundia, 2020; Kimwatu, Mundia & Makokha, 2021b; Kimwatu *et al.*, 2021a). Research has shown that much of the population is highly vulnerable to and inadequately prepared for climate change impacts (Koech *et al.*, 2020; GWP, 2022). This is especially the case for the drier, more remote areas of Laikipia, Isiolo and Samburu counties (see Koech *et al.*, 2020).

Climate models predict increasing temperatures and rainfall in the Ewaso Ng'iro North Basin but with high levels of seasonal variability. While mean annual precipitation across the basin is predicted to increase from 377 mm to 418 mm by 2050, it is likely that there will be changes to the seasonal pattern of this rainfall and precited higher intensity rainfall events, leading to increased incidences of flash flooding (Omwoyo *et al.*, 2017; GWP, 2022). Temperatures are expected to increase by between 1.0-2.6 °C by 2050, depending on the emission mitigation scenario considered (RCP 8.5: 1.1-2.60°C, RCP 4.5: 1.0-1.70°C; Omwoyo *et al.*, 2017; GWP, 2022).

There has been an alarming increase in the severity and frequency of drought events in the Ewaso Ng'iro North Basin (Omwoyo *et al.*, 2017; Kimwatu *et al.*, 2021b; Gebrechorkos *et al.*, 2023; Kimaiyo *et al.*, 2023) with the average incidence of serious droughts increasing significantly since 1999 (Kimaiyo et al., 2023; Mati, Karithi & Kimaiyo, 2023). Compared to other basins in Kenya the Ewaso Ngiro North Basin is projected to face longer droughts throughout the 21st century (Gebrechorkos *et al.*, 2023). Such trends are expected to jeopardise pastoralist and tourist activities, in particular (Kimwatu *et al.*, 2021b). Extreme droughts impact negatively on water security, fodder availability, agricultural production, food security, nutrition and safety (Kimaiyo *et al.*, 2023). Conflicts over water and pasture escalate during droughts, with women and children usually the most vulnerable (Mati *et al.*, 2023). With climate vulnerability expected to increase into the future, the proposed interventions in the Investment Plan seek to significantly improve the levels of sensitivity and adaptive capacity across the Ewaso Ng'iro North landscape.

The activities in the NPC Investment Plan are concentrated into these two initial landscapes in order to achieve demonstrable results that can help to catalyse their scale up to other areas. The activities in these two landscape areas address the types of intertwined problems of environmental degradation and climate change that occur across the entire terrestrial landscape. These efforts will ideally help to catalyse further funding that can scale these up to other important landscapes, as well as to extend efforts into coastal and marine areas and Lake Victora.

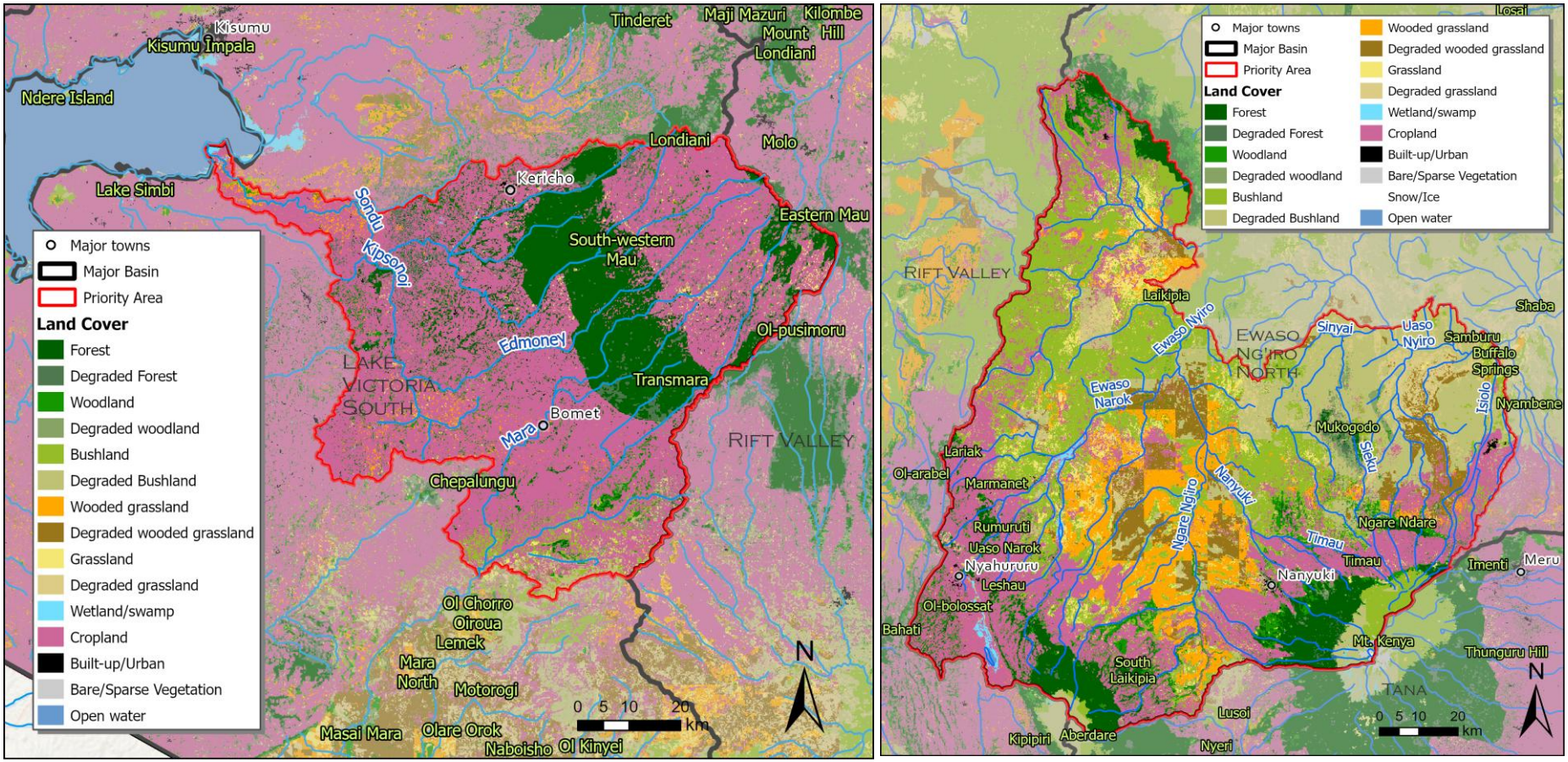

Figure 4.4. Land cover within the two targeted landscapes: Lake Victoria South Basin (left) and Ewaso Ng'iro North Basin (right)

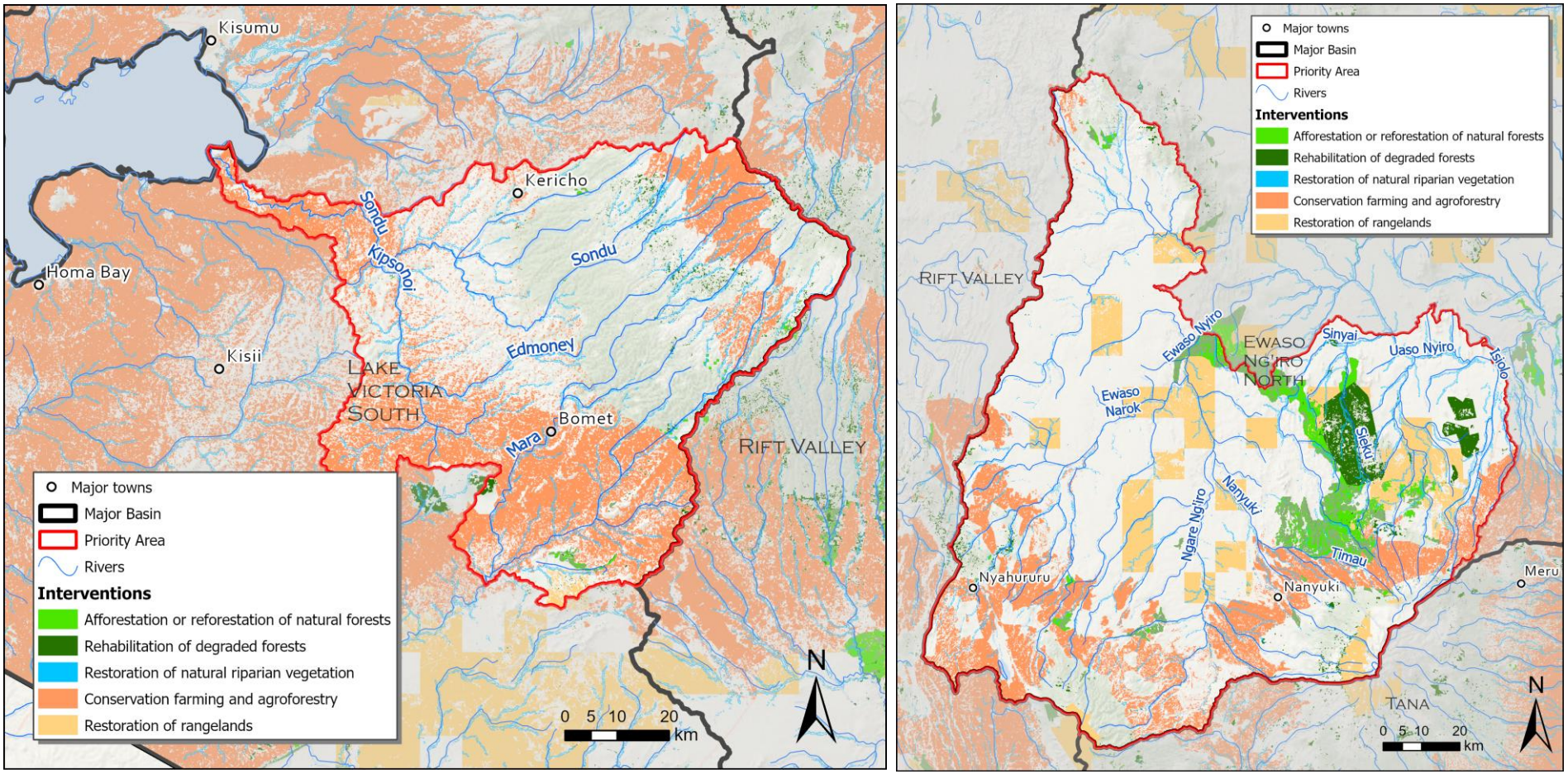

Figure 4.5. Potential intervention areas within the two targeted landscapes, based on MENR 2016: Lake Victoria South Basin (left) and Ewaso Ng'iro North Basin (right). These would need to be mapped out in more detail during the project planning phase.

4.3 PROPOSED INTERVENTIONS

This NbS Investment Plan will implement restoration and sustainable, climate-smart management interventions in priority cultivated and natural/semi-natural areas where they are expected to have the greatest impacts in terms of addressing climate change adaptation and mitigation. The NPC Investment Plan will include a strong focus on the elements of NbS that are not only aligned with climate adaptation and mitigation, but also strongly nature-oriented with positive biodiversity outcomes. In this way, the programme will address a key gap, in that funding for the restoration of natural and semi-natural ecosystems is far less than funding for interventions in cultivated areas. It will also include interventions aimed at improving soil, water and carbon retention as well as improving productivity and climate-resilience in existing cultivated lands. These will be supported through the necessary institutional and capacity support and made more sustainable through stimulating business investment in agro-enterprises and ecotourism.

The NPC Investment Plan includes three project concepts: "Nature Capital", "Nature People" and "Nature Ventures":

- Securing key biodiversity and ecosystem services for climate-smart landscapes **("Nature Capital")**;
- Promoting nature-positive, climate-smart livelihoods in agricultural landscapes **("Nature People")**; and
- Stimulating private sector investment in nature-based solutions **("Nature Ventures")**.

These are outlined below, summarised in Figure 4.4and described in more detail in Appendix 1.

The proposed Nature Capital project, led by the World Bank, focuses on the restoration, sustainable management and protection of key "ecological infrastructure". Ecological infrastructure comprises natural and semi-natural ecosystems that complement or replace the need for built infrastructure through the supply of ecosystem services such as those relating to water supply and includes rangeland and wildlife assets that support rural livelihoods and the tourism sector. This project focuses on the restoration and management of forest water source areas, rangelands and the aquatic ecosystems that connect them. Four components are envisaged: (i) restoring and protecting forests in water source areas ("Functioning forests") (ii) assessing and allocating water use rights, including environmental flows ("Running rivers"); (iii) restoring and protecting riparian and wetland areas ("Working wetlands"), and (iv) helping community conservancies to restore and manage their rangelands for livestock and wildlife to ensure more diversified and resilient livelihoods ("Resilient rangelands"). These components are mutually supporting and will involve the novel implementation of market-based incentive measures to ensure their sustainability. While tradeable resource rights are unheard of in Kenya, and may face initial resistance from all quarters, this programme will pilot what could be a game changer for sustainable water and rangeland resources management. The Nature Capital project activities will focus on the Upper Ewaso Ng'iro North catchment, falling largely within Laikipia, Nyandarua, Isiolo, and Samburu.

The Nature People project, led by AfDB, will promote regenerative agriculture and sustainable rangeland management and provide alternative livelihood support for NbS. The project has four components: "regenerative agriculture", "sustainable livestock production", "alternative livelihoods" and "supporting value chains". The first focuses on establishing regenerative agriculture at sub-catchment scales to address food security while also improving soil and water retention, reducing negative environmental impacts from agriculture on downstream environments and people, and reducing climate vulnerability. Similarly, the sustainable livestock production component will assist farmers with the necessary extension support to improve grass cover and livestock productivity through appropriate management of livestock numbers and grazing regimes. The alternative livelihoods component will seek to facilitate the establishment of riparian and wetland buffers through establishment of agroforestry and water harvesting infrastructure outside of these buffer areas as part of introducing the need to maintain these buffers. It will also seek to help communities take advantage of business opportunities that also incentivise respect for forest conservation measures, such as the establishment of indigenous tree nurseries and beekeeping.

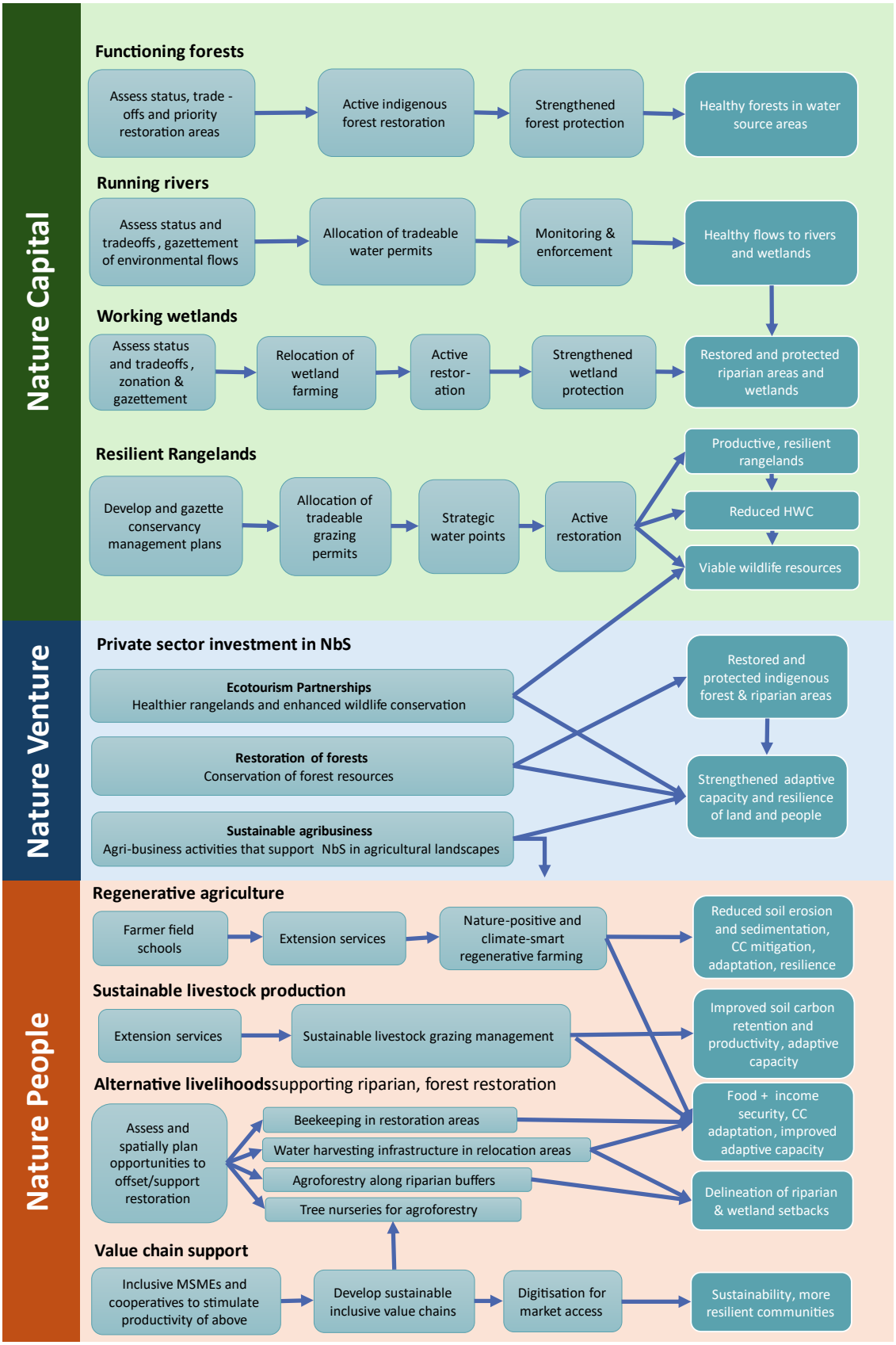

Figure 4.6 Core activities and outcomes of components of Kenya's NPC Investment Plan

These measures will help to pave the way for active restoration of forests, riparian areas and wetlands. The fourth component seeks to stimulate value chain activities that specifically support the above interventions. The establishment of tree nurseries is proposed to be a "hub-and-spokes" type business arrangement where private actors will take charge of the production of tree seedlings in conjunction with a network of outgrowers. The latter will provide opportunities for women and other marginalised groups. The Nature People project activities will take place in both of the target landscapes.

The Nature Ventures project, led by IFC, will incentivise private sector investment in activities that constitute or strongly support the implementation of NbS. The scale of restoration required to fully realise the value of natural and agricultural land assets in alleviating sectoral challenges, climate change adaptation and mitigation will not be possible without leveraging private sector investment. Actors that have "skin in the game" can be instrumental in mobilising behavioural changes in ecosystem managers. This is the case across multiple sectors. For example:

- Joint venture ecotourism partnerships with communal conservancies constitute an opportunity for income diversification for those communities, and incentivise the preparation and practice of sustainable land use and resource management plans that result in healthier rangelands and accommodate and support wildlife;
- Public-private partnerships can be stimulated to undertake reforestation and generate benefit from carbon credits;
- Entrepreneurs who are stimulated to invest in specific types of agribusiness development will themselves help to invest in, organise and motivate the production of products of forest conservation (e.g. honey production), agroforestry (e.g. avocado production) and conservation farming (e.g. maize production), and improve uptake of sustainable practices.

The Nature Ventures project activities will take place in both of the target landscapes.

However, these sorts of investments are often low due to limited technical capacity, limited access to finance and/or high perceived risks. It is proposed that the project financing envelope is designed to support any activities that clearly constitute NbS or strongly support the implementation thereof.

The NPC Investment Plan is designed in a way to maximise the reach of the initial investment, both in terms of the coverage of interventions and the long-term sustainability of their impacts. To extend the coverage of interventions, the programme will include measures to increase efficiency with which funds are spent, and measures to leverage investment by private sector actors ranging from local landowners to corporates, as well as actively accommodating co-finance by NGOs and bilateral development partners. The Investment Plan will plan for sustainability by:

- Stimulating **private sector investment** at all levels that will ensure continued vested interest in maintaining and even extending the improved system;
- Incorporating appropriate **development support** to ensure net positive livelihood outcomes, including alternative livelihood support, access to credit, value chain support, and employment in undertaking restoration; and
- Developing and enforcing **regulations** as well as providing **incentives** to sustain changes, such as clear property rights, performance-based payments and stewardship programmes.

The proposed programme will be made as effective as possible through the inclusion of thorough preparation measures that will also benefit future interventions. These preparation measures will include:

- Thorough social and ecological baseline assessments of the focal sub-catchment areas;
- Mapping of carbon and biodiversity indicators to international standards to enable leveraging of finance through payments for ecosystem services (e.g. carbon credits);
- Detailed spatial planning of interventions based on sound scientific principles;
- Detailed planning of intervention modalities based on sound social, economic and financial principles;
- Thorough, regular and long-term stakeholder engagement; and
- Preparation of guidelines and tools for ecosystem restoration and management

that follow recognised international principles and that provide locally relevant detail.

To achieve maximum impact, a catchment landscape approach will be taken. This means that intervention efforts will be implemented to their full potential extent at the sub-catchment scale, and within an intervention area (one or a group of sub-catchments), they will be implemented from the top down (i.e. starting at the highest elevations). Catchments are better units than administrative units, since ecological processes are strongly interconnected by the flows of water within a catchment (= river basin) area. Interventions to address degradation across multiple natural and cultivated systems will be mutually supporting because of this interconnectedness as well as their proximity. For example, forest restoration will provide pollination benefits to farmers establishing agroforestry, the agroforestry interventions will reduce human pressure on forest resources, and these interventions will both reduce sediment loads to the benefit of water users downstream. Thus, it is important to take a landscape-level approach in carrying out NbS interventions as fully as possible within individual catchment areas in order to take advantage of their synergies and achieve maximal, measurable impact. If they cannot be done simultaneously across the whole catchment, work will begin in the highest altitude areas first, since this will immediately generate benefits such as flood attenuation and reduced sedimentation in the areas downhill.

There is potential complementarity between the three proposed projects. Restoring natural ecosystems at landscape scales will have measurable effects on ecosystem services reducing the costs to downstream households and strengthening water and livelihood security. Cultivated systems are dependent on natural systems, and the health of natural systems depends on the sustainable management of cultivated systems. Thus, attending to both elements at catchment scales has synergistic positive effects. The speed, extent and quality of restoration will be measurably improved by private sector involvement, particularly investment in sizeable forestry carbon projects and in ecotourism ventures. While the market is not yet very active, there is looming potential for deriving benefits from the biodiversity credit market.

4.4 SUSTAINABILITY AND NOVEL FEATURES

The overall design of the investment programme will be focused on extending the reach of the initial investment both in terms of the coverage of interventions and the long-term sustainability of impacts. To extend the coverage of interventions, the programme will include measures to increase efficiency with which funds are spent, and measures to leverage investment by private sector actors ranging from local landowners to corporates, as well as actively accommodating co-finance by NGOs and bilateral development partners.

The NPC Kenya Investment Plan will aim to maximise private sector investment at all levels that will ensure continued vested interest in maintaining and even extending the improved system. For example, joint venture tourism investors will motivate community conservancy members to comply with rangeland management standards and protocols in order to secure a long-term agreement. Another example will be the leveraging of considerable finance for forest, riparian forest and possibly wetland and rangeland restoration by increasing potential returns to increase private sector appetite to earn income from carbon credits.

The establishment of public-private sector partnerships to enable carbon projects on public lands will be a novel development. The design is exciting in that private sector co-management of public forests and riparian zones will bring an element of efficiency due to increased resources and technologies as well as motivation and will be able to achieve effective planting and protection of growing trees as well as protection of surrounding forests. Furthermore, the model would potentially generate significant benefits for adjacent communities, who could be partners in the project, through agroforestry investments. It is anticipated that the model, if successful, could be the start of scaling up to tens of similar opportunities in Kenya.

The issuing of sub-catchment-level tradeable water rights will be another ambitious and highly novel intervention in Kenya, and in fact in Africa. While the model has been successfully

implemented in other countries, the longstanding cultural aversion to paying for water coupled with weak institutions has prevented any proper water resource management. However, Kenya now faces alarming water shortages in many areas, and this is exacerbated by poor allocation and management, a situation that could lead to dire consequences under climate change. Allocation of water rights is a challenging notion, but to allocate tradeable rights, especially in upland areas where commercial users predominate, could lead to significant efficiency gains. Moreover, once right are allocated, the system would tend towards one of self-policing, which is extremely helpful in a situation of weak institutions.

In a similar vein, the programme intends to tackle the thorny issue of livestock stocking rates on communal conservancies using an untested approach. While most programmes promote grazing practices that, if executed well, can enhance grazing carrying capacity, those capacities will still be reached, and then exceeded, if nothing is done to cap livestock grazing pressure, rather than "letting nature take its course". The programme will investigate potential means of reducing livestock holders to sustainable levels, including a system-wide cap and trade scheme. This could be encouraged with contractual obligations under an attractive carbon credit, biodiversity credit and/or ecotourism scheme.

The programme design includes strategic development support, since the co-operation and support of local communities is critical to overall success. This development support will be overtly linked to the projects and will be designed to ensure net positive livelihood outcomes, especially where people have to make way for interventions. The support will include alternative livelihoods such as beekeeping, access to credit, value chain support, and employment in undertaking restoration. The IP will strengthen local capacities to implement NbS for ecosystem protection, restoration and sustainable management, making use of research and lessons learned, and replicating and scaling successes through landscape approaches. It will also work with local communities to pilot some of the NbS initiatives and develop partnerships with governments and the private sector to scale up these initiatives. A comprehensive list of potential institutional partners as well as civil society organisations and donor agencies is given in Appendix 2.

4.5 POTENTIAL FOR TRANSFORMATIONAL CHANGE

Transformational change for climate action requires attending to five context-specific dimensions (Relevance, Systemic Change, Speed, Scale, and Adaptive Sustainability). For climate action to be considered transformational, all five dimensions need to be represented to some extent through the interventions included in the proposed programme, which has been designed with close alignment to the NPC Investment Criteria. Ensuring that the dimensions of transformational change are adequately considered will promote just transitions, strengthen resilience, and support gender equity and inclusion, and sustainable development within the targeted landscapes and more broadly at the country level. This section provides a summary on how the proposed programme has been designed with these elements in mind in order to achieve transformational change for climate action.

Relevance: The programme is strongly aligned with national environmental and climate policy commitments to strengthen community resilience to climate change, reduce greenhouse gas emissions, reduce unsustainable land management practices, promote biodiversity conservation, support community adaptation efforts and improve the livelihoods of rural communities. The programme has been designed to address the key challenges identified in the target landscapes through the restoration and protection of critical natural ecosystems and promoting nature positive, climate resilient development actions to ensure food security and improve livelihoods and ecosystem services in agricultural landscapes, while at the same time stimulating private sector investment in NbS to address the key challenges related to scalability and long-term sustainability in ecosystem restoration. By leveraging third-party capital to de-risk NbS investments, the programme can attract resources necessary to scale restoration efforts, enabling the realisation of the economic, social, and environmental value of natural and agricultural land assets. This is critical for the densely populated, highly

vulnerable rural communities in the Lake Victoria South Basin and the Ewaso Ng'iro North Basin who are burdened by high levels of poverty and who are heavily reliant on rainfed agriculture and natural resources as their main source of livelihood. Climate-related threats such as soil erosion, flooding and landslides are prevalent in the target landscapes, and threaten livelihoods, health and wellbeing. Through inclusive, innovative and ambitious activities, the programme seeks to achieve transformational change.

Systemic change: The programme has been designed to provide enabling conditions for environmental and climatic change in economic, social and governance systems by strengthening elements of equity and inclusivity, changing mindsets, removing entrenched barriers and providing opportunities for knowledge sharing and skills development. The programme outlines a set of innovative activities that aim to improve water security, promote biodiversity conservation by protecting, restoring and connecting critical habitats, strengthen ecotourism opportunities, improve agricultural productivity, and support the livelihoods of local communities through sustainable income-generating activities. This will be achieved using novel approaches (e.g., piloting of a water resources classification study, new wetland planning tools and systems, exploring stewardship programmes and tradeable grazing permit systems, and implementing payments for ecosystem services schemes) that provide opportunities for learning, testing and applying international best practice and development of new skills, which could inform the direction of future national policy and action, enhancing the environmental and socio-economic resilience of natural and agricultural ecosystems at the landscape and country level. The implementation of these activities will also lead to valuable environmental and social co-benefits.

Speed: Targeted landscape restoration activities have the potential to offer immediate benefits through the enhancement of key ecosystem services, However, passive restoration activities in rangelands as well as agroforestry systems in agricultural lands will likely take more time for benefits to be realised. These activities will build local adaptive capacity in the longer term which is key for sustainability. While the outcomes of Classification and wetland planning will also not be realised immediately, these activities offer significant positive long-term benefits in the form of improved water security (both in terms of quantity and quality) which is vital for building community resilience. Other components, such as capacity building and leveraging private sector investment, can run in parallel. This includes strengthening market linkages through value chain development, which can provide farmers with access to sustainable markets. Strengthening these market chains will enhance their livelihoods and create new income opportunities. Leveraging coordination and institutional mechanisms developed under existing World Bank and AfDB projects operational in the target landscapes, as well as cofinancing, will help to ensure that activities can be implemented efficiently and in a timeous manner. Well-designed community engagement and capacity building activities, which focus on women, youth and marginalised groups, can increase the speed at which project activities are adopted through community buy-in and local community ownership.

Scale: Scalability is influenced by socioeconomic and political factors such as population density, levels of poverty and knowledge of NbS, land tenure, levels of infrastructure and market accessibility. In areas with complex land tenure arrangements or poor access to markets, more time and resources may be needed to achieve scalability. Effectively integrating the principles of gender equality and social inclusion into decision making processes will strengthen implementation and scalability. Using a participatory and inclusive approach fosters a shared understanding and support for such practices and can strengthen buy-in and increase interest in shifting towards sustainable approaches. Furthermore, the integration of NbS into policy and institutional frameworks supports local and national-level adoption and resource allocation, embedding sustainable practices in the longer term.

Adaptive sustainability: The programme enhances resilience and builds adaptive capacity (and reduces vulnerability to climate threats) through focused and inclusive community/farmer training, skills development and capacity building of local government and local community institutions, and awareness raising of NbS. This will lead to adaptive and responsive land use and land management practices with changing local conditions. to strengthen sustainability, the programme will follow adaptive management principles to stop

or shift activities in tandem with evolving circumstances, unintended consequences, or the emergence of new breakthroughs.

4.6 SUPPORTING JUST TRANSITIONS

The successful implementation of the programme requires that the proposed activities align with principles of just transitions, draw on inputs from diverse stakeholders, mitigate potential negative socio-economic impacts, and ensure wide access to opportunities.

The proposed project concepts have been shaped through comprehensive stakeholder engagement, informed by the categorisation of different actors based on their relevance and influence. Stakeholder mapping was done to identify the various parties affected by and influencing the programme, including local communities, government agencies, private sector and NGOs. Throughout the project design and implementation phases regular meetings will ensure continuous dialogue and adaptation to any emerging needs. Channels for stakeholder feedback will need to be established to be able to address concerns promptly. Strategies will be updated based on feedback Particularly stakeholders with high interest and influence have been strongly involved in identifying priorities. Input from local communities and grassroots organisations has been integrated. Stakeholders most affected by the proposed transitions, such as smallholder farmers, pastoralists, and communities near forests and wetlands, have shared their perspectives on the challenges and opportunities that these proposed projects present. Throughout the programme implementation, stakeholder perspectives will be continuously considered. For example, for the design of agroforestry interventions in the target landscapes, the knowledge and traditional practices of local communities will ensure cultural appropriateness as well as ecological sustainability of proposed interventions.

Stakeholder engagement will continue and be more detailed during project preparation. A strong and regular engagement will be planned together with a core project engagement group, representing national and county government agents directly involved in the particular ecosystem, as well as relevant community associations such as Water Resource User Associations, Community Forest Associations or Conservancy Committee members during project implementation.

Once stakeholders are engaged, further detailed analysis will take place with their assistance. This will include developing more detailed understanding of interconnected environmental, social and cultural issues as well as more detailed investigation of degradation and intervention options, taking local indigenous knowledge and cultural factors into account. There will be detailed spatial planning of interventions, based on scientific assessment and consultation with stakeholders. Continuous engagements throughout the design and implementation phases will ensure that socio-economic concerns are addressed.

Potential adverse impacts, such as displacement from riparian and wetland areas, will need to be addressed through the provision of community relocation support, and new livelihood or employment opportunities. Investments will be made in rainwater harvesting infrastructure and agricultural opportunities in relocation areas for communities which are encouraged to move away from sensitive ecological zones. In other areas, demonstration plots, farmer field schools and lead farmer programmes will offer training to equip communities with skills for nature positive agriculture, creating new opportunities for income. Where communities experience unavoidable economic losses, direct payment mechanisms could be established. For example, communities protecting or restoring ecosystems could receive financial rewards through carbon or biodiversity credits, or through stewardship programmes. Such interventions would be designed sensitively to suit the local context. Any payment schemes would be well-researched and well-designed to ensure equitable sharing amongst all stakeholder groups

Measures will be put in place to ensure that various groups, including women, youth, and the marginalised benefit equitably from the programme activities. Flexible training schedules and accessible locations will

accommodate women. Quotas for female participation in farmer cooperatives and leadership training will promote their empowerment through the implementation process. Internship and apprenticeship programmes linking younger people to farmers and agribusinesses will increase youth participation. Interactive technologies could cater for their interests and improve learning outcomes.

The NPC Investment Plan also focuses on creating sustainable and diverse income opportunities to offset potential losses. The promotion of agroforestry along riparian zones and forest edges will generate income from products such as fruits, nuts, honey and timber while at the same time improving ecological health and climate change adaptation. Partnerships with private agribusinesses will improve market access for farmers and indigenous tree nurseries will provide opportunities for communities to benefit from reforestation activities.

Where communities experience unavoidable economic losses, direct compensation mechanisms will be established. For example, communities protecting or restoring ecosystems will receive financial rewards through carbon or biodiversity credits, incentivising conservation. Continuous engagement with Water Resource User Associations throughout the programme design and implementation phase as well as with community conservancies will ensure that socio-economic concerns are addressed.

4.7 GENDER EQUALITY AND SOCIAL INCLUSION

Women face barriers to resources and decision-making, confining them to subsistence roles and increasing their vulnerability to shocks. Many women, especially in rural communities, face significant barriers to accessing resources, information, and financial support. These barriers confine them to domestic roles and limit their participation in economic activities. This leaves women particularly vulnerable during external shocks like droughts, floods, or economic crises. The lack of access to financial services and land rights further exacerbates these vulnerabilities, preventing women from achieving economic independence or adapting to environmental challenges. Men commonly dominate income-generating activities such as charcoal production, while women depend on ecosystems for food, firewood, and materials for handcrafts, which are critical for household subsistence but generate little income. Women's limited representation in management and decision-making processes further marginalises their contributions to conservation efforts.

Rural youth in Kenya face limited education and job opportunities, driving migration or leaving them without viable paths to success. Additionally, the youth, particularly in rural areas, faces limited opportunities for quality education and employment. Many young people are therefore forced to migrate to urban areas in search of work, often encountering exploitative conditions or unemployment. Those who remain behind frequently lack viable options for building a fulfilling future. Access to vocational training and mentorship programmes could help the youth contribute to local development. The youth can play a key role in the implementation of the Investment Plan. They can actively participate in initiatives such as tree planting, agroforestry, and soil conservation. Training programmes can equip them with the skills to implement sustainable land use practices and manage degraded ecosystems effectively. For example, youth groups can lead reforestation drives and rangeland restoration projects, which would not only enhance carbon sequestration but also create job opportunities and promote environmental stewardship. To stimulate private sector investment in nature-based solutions (NbS), the youth can be encouraged to develop eco-friendly businesses. Opportunities include ventures in sustainable farming, beekeeping, or tree growing. Access to microfinance and mentorship programmes can support these efforts. Engaging the youth in policy dialogue and capacity-building programmes can ensure their voices are integrated into local decision-making.

The NPC Investment Plan projects will address gender equality and social inclusion during both preparation and action stages and throughout the stakeholder engagement process. During the preparation phase, special attention will be given to understanding the gendered roles of women in the local communities, their perceptions of issues, their needs, their social networks and the means with

which they prefer to be engaged, build their capacity and receive information. To address gender gaps, it needs to be ensured that capacity building activities are accessible to both men and women. When aiming to strengthen conservancy governance structures, gender balance could be promoted to ensure that decision-making roles within the conservancies are more gender sensitive. A portion of the blended financing could be reserved to support women-led initiatives and to provide incentives for partnerships which particularly support gender equality. If women face barriers, support programmes could be developed which improve market access for women and skills development. The monitoring and evaluation plan already requires indicators to be aggregated by gender. It needs to be ensured that benefits from the initiatives track to what extent they are promoting equal opportunities.

5. FINANCING PLAN AND INSTRUMENTS

This section of the NPC Investment Plan sets out the indicative financing plan for implementing the proposed activities outlined in detail in the three project concepts (see Appendix 1).

5.1 COSTS AND SOURCES OF FUNDING

The NPC Investment Plan covers three projects focused on NbS-related investments which will be financed through a combination of CIF NPC finance (US$ 34 million, including Project Preparation Grant) and estimated co-finance (US$ 121.2 million) which is to be leveraged and secured through the GoK, MDBs, development partners and the private sector (Table 5.1). Detailed costings (including any additional cofinancing and specific contributions) will be specified during the preparation phase.

*Table 5.1. Indicative financing plan (US$ millions). *US$ 50 million from KEWASIP is not strictly joint co-financing but represents investment into activities within the same sub-catchments in the targeted area.*

Concepts	CIF NPC contribution	Estimated co-financing	Parallel financing
Concept 1: Nature Capital	**12.5**	**55.5**	**150.0**
Functioning forests	3.7	1.7 (GoK)	150.0 (KEWASIP; GEF 8 CI)
Running rivers	4.5	50.0* (KEWASIP)	
Working wetlands	2.7		
Resilient rangelands		2.4 (GBFF)	
Supporting interventions	1.6	1.4 (GBFF)	
Concept 2: Nature People	**13.0**	**33.7**	**65.40**
Nature-positive, climate-smart regenerative farming	4.5	1.7 (GoK)	45.30 (Green Zone)
Sustainable rangeland management	1.0		
Alternative livelihoods to support riparian and forest restoration in farming areas	3.5	32.0 (ADF)	20.10 (BREFOL)
Small scale targeted value chain development	3.0		
Supporting interventions	1.0		
Concept 3: Nature Ventures	**8.5**	**32.0**	**-**
Ecotourism partnerships	8.5	8.0 (IFC)	
Restoration of forests		24.0 (Private)	
Sustainable agribusiness			
TOTAL US$ million	**34.0**	**121.2**	**215.4**

5.2 ESTIMATED CO-FINANCING

Co-financing represents funding from difference sources for the same project, i.e., represents NPC allocated funding processed as part of those projects to be used for the NPC project directly. There are a few potential sources of co-financing for the proposed activities outlined in the project concepts of this Investment Plan:

- The GEF-GBFF Sustainable Management and Restoration of Threatened Ecological Corridors in Kenya Project with a total budget of US$ 3.9 million is being executed by NETFUND and implemented by The World Bank and will provide a valuable source of cofinancing for the activities that are described in Concept 1, particularly those related to rangelands and eco-tourism. The project aims to restore critical ecological corridors in Kenya, initially targeting the northern wildlife migratory corridor in Laikipia County with the interventions expected to significantly strengthen the management, governance and coordination of targeted ecosystems. These targeted landscapes extend across part of the Ewaso Ng'iro North Basin, presenting opportunities for coordination and scaling up within the project areas.
- Kenya Watershed Improvement Programme (KEWASIP) is a US$ 200 million programme to secure watershed services to enhance the health and resilience of ecosystems by addressing environmental challenges like water scarcity, climate change, and land degradation. Activities are focused on a sub-catchment level, within water towers, forest ecosystems, rangelands, and smallholder agricultural areas. KEWASIP has prioritised six broad groups of sub-basins of which one group is situated in the upper Ewaso Ng'iro North Basin. Approximately US$ 50 million will be for activities implemented within the target landscape. While this is not strictly joint co-finance in that it will not be reported against KEWASIP, it will be investment into activities that are directly supportive of those outlined under the Nature Capital project concept of this NPC Investment Plan.

The IFC is committed to promoting private sector investment in emerging markets. It provides both financing and advisory services to help businesses in these sectors grow and create jobs, while also promoting sustainable and inclusive economic growth.

The AfDB has committed to mobilising new financing through an application to the AfDB ADF and the ADF Climate Action Window (ACAW), in the order of US$ 32 million, with the exact amounts still to be confirmed during project preparation phase.

5.3 DEDICATED GRANT MECHANISM (DGM)

The Dedicated Grant Mechanism (DGM) for Indigenous Peoples and Local Communities (IPLC) is a pathway for direct funding access for local communities. It is a funding modality which is separate from the government-led Investment Plan. The NPC DGM focuses on empowering IPLCs by providing grants to fund activities that support their involvement in NbS projects.

It is essential for the DGM to align with the activities outlined in the NPC Investment Plan. Active participation and support of IPLCs are fundamental to the success and sustainability of initiatives included in the IP. The DGM will ensure that IPLCs are equipped with the knowledge and skills necessary to make informed decisions regarding project implementation on issues such as land and natural resource management.

The National DGM project will be led by the World Bank with a US$4 million budget. Local stakeholders are aware that the NPC will provide them with direct access to the DGM funds through a separate project and that the GoK will participate as an observer. As per NPC policies, the process of engagement with local communities to start the preparation of the DGM project will start as soon as the NPC Investment Plan has been approved.

6. ADDITIONAL DEVELOPMENT ACTIVITIES

Parallel activities funded by development partners, including the private sector, NGOs, and intergovernmental organisations, play a critical role in enhancing the impact and sustainability of the IP. These existing initiatives can bring additional expertise, resources, and perspectives, creating valuable synergies that strengthen the outcomes of the proposed interventions. By coordinating and aligning these complementary activities, the IP can avoid duplication, increase resource efficiency, and achieve broader, long-lasting benefits for climate resilience, economic development, and community well-being.

6.1 COMPLEMENTARY NBS ACTIVITIES

Two of the MDB partners have active projects of particular relevance to the NbS Investment Plan because of their aligned activities. The World Bank and AfDB aligned projects are described in detail below.

Furthermore, there are a number of additional projects that are aligned with this IP. Appendix 4 offers an overview of current initiatives focused on nature-based solutions aimed at climate mitigation and strengthening the resilience of ecosystems and communities. This includes activities led by development partners. The activities listed in the Appendix align with the initiatives outlined in this Implementation Plan. Some of these activities are either completed or ongoing, and insights from them will play an important role in shaping the approach for this IP. Engaging those responsible for these projects during the detailed design phase is critical to avoid overlaps and increase synergies. Additionally, several emerging activities in the region share similar goals with this project. Key projects with significant overlaps are outlined below.

6.1.1 EXISTING PROJECTS RELATED TO CONCEPT 1: NATURE CAPITAL

Kenya Watershed Improvement Programme (KEWASIP) – US$ 200 million: The World Bank is investing $200 million in this 3-year programme to secure watershed services to enhance the health and resilience of ecosystems by addressing environmental challenges like water scarcity, climate change, and land degradation. Activities are focused on a sub-catchment level, within water towers, forest ecosystems, rangelands, and smallholder agricultural areas. KEWASIP has prioritised six groups of sub-basins, with on group being in the upper Ewaso Ng'iro North Basin.

Coastal Region Water Security and Climate Resilience Project – US$ 200 million by World Bank and US$ 140 million co-financing from Kenyan government: This project focuses on watershed management and wetland conservation across Kenya's coastal areas. By restoring critical water catchments and enhancing climate resilience, it complements Concept 1's aim to improve water resources and biodiversity through riparian and wetland stewardship and environmental flow management. Collaborating with this project could help develop a comprehensive water management strategy that ensures sufficient environmental flows, supports sustainable water use, and mitigates flood and drought risks. The project is primarily funded by the World Bank through an International Development Association credit. The total funding for the project is estimated to be US$ 200 million, with the Kenyan government contributing approximately $139.56 million as co-financing (World Bank, 2019).

Upper Tana-Nairobi Water Fund – US$ 20 million: The Water Fund's work in riparian zone restoration and soil conservation directly aligns with Concept 1's goals of restoring and managing riparian and wetland areas. This fund also secures water supplies for downstream users, reinforcing Concept 1's water management and conservation efforts across key watersheds. The Upper Tana-Nairobi Water Fund has been funded through a mix of public and private contributions, including support

from international organisations, corporations, and local stakeholders. It initially received seed funding from the Global Environment Facility (GEF) and the International Fund for Agricultural Development (IFAD). This was supplemented by co-financing from county governments, civil society organizations, community-based groups, farmers, and the private sector, with companies like Coca-Cola and East African Breweries contributing. The fund has mobilised over US$ 20 million in cash and in-kind support (Resilient Food Systems, 2021).

Rangeland Rehabilitation and Conservation in Northern Kenya – US$ 32 million: With its focus on sustainable rangeland management and wildlife conservation, this project supports Concept 1's rangeland restoration activities by sharing best practices for improving rangeland health and resilience. The project's experience with livestock and wildlife management, including rotational grazing, could inform the establishment of livestock and wildlife watering points and rangeland management plans under Concept 1. The programme, which is implemented by the Northern Rangelands Trust, receives funding from USAID with a total contribution of US$ 32 million. This funding supports community conservancies across northern and coastal Kenya, focusing on rangeland management, biodiversity conservation, and promoting economic and climate resilience (USAID, 2022).

Lake Naivasha Basin Ecosystem-Based Management – US$ 1.78 million and US$ 10.53 million co-financing: The focus on water conservation and wetland restoration would support Concept 1's aquatic ecosystem restoration and stewardship programmes. The project's experiences could support the riparian stewardship programme and conservancy management plans, providing valuable insights for performance-based conservation strategies. The project aims to enhance ecosystem health and biodiversity while supporting local and national economies. Funded by the Global Environment Facility (GEF), it received a grant of approximately US$ 1.78 million. Additionally, the project benefits from significant co-financing amounting to US$ 10.53 million. The WWF-US is the implementing agency, while NETFUND serves as the executing agency (WWF, 2022).

Financing Locally-Led Climate Action (FLLoCA): This programme supports community-driven initiatives to address climate challenges. The programme incorporates performance-based grants for counties, incentivising local innovation and ownership (World Bank, 2021). The programme enables communities to implement restoration practices by funding grassroots projects and building local capacity, for example regarding the rehabilitation of degraded lands using agroforestry and nature-based solutions and improving water management.

The GEF has several ongoing projects, such as the Integrated Landscape Management for conservation and restoration of the Mt. Elgon Ecosystem in Western Kenya and Sustainable Management and Restoration of Threatened Ecological Corridors in Kenya. The latter aims to enhance holistic management and restoration of ecological corridors to ensure ecosystem integrity, connectivity, resilience and human well-being in Kenya and is executed by NETFUND. This project will be linked to the Concept 1 envisioned projects.

6.1.2 EXISTING PROJECTS RELATED TO CONCEPT 2: NATURE PEOPLE

Green Zones Development Support Project (GZDSP II) – US$ 45.3 million: The AfDB is supporting Phase II of the Green Zones project which is being implemented in 15 counties in Kenya. This has a focus on forest conservation and sustainable livelihoods with a strong component on agroforestry and inclusive value chain development for various horticultural crops. It aims to increase the country's forest cover through rehabilitation of degraded forest areas and also expand areas planted with trees in community farmlands. The project will also improve household incomes and food security through production of selected crop value chains and food through agroforestry systems. The project is mainly focused in the Rift Valley South Basin and Lake Victoria Basin. The project is funded by the AfDB, ADF, and Kenyan government and has a total funding allocation of US$ 37.5 million, aimed at enhancing forest conservation and livelihoods across 15 counties (AfDB, 2018). This includes forest rehabilitation, community capacity building, and promotion of bamboo production as a sustainable economic activity.

'Building Climate Resilience for Food and Livelihoods in the Horn of Africa (BREFOL)' is a newly approved GCF-AFDB project with the key objective being to reduce vulnerability and

increase resilience of agro-pastoral and pastoral communities to climate-induced food insecurity and to reduce greenhouse gas (GHG) emissions in the region. The implementing agency is the Government of Kenya, acting through the National Treasury and Economic Planning (NTEP) and the Ministry of Agriculture, Water, Fisheries, Livestock and Cooperatives (MoAWFLC). BREFOL has a total budget of US$ 335.30 million, with US$ 151.00 million from a GCF loan and grant, and US$ 184.30 million from the African Development Fund (ADF). US$ 20.10 million is considered as parallel financing.

Build Resilience for Food and Nutrition Security in the Horn of Africa (BREFONS) – US$ 42.72 million (AfDB, 2021): The AfDB is also supporting regional projects that focus on the ASALs. The BREFONS project, which is being implemented in seven counties in Kenya, has the specific objective to build resilience to food insecurity and climate change by increasing agropastoral productivity and production systems; making agropastoral value chains more competitive, thereby boosting trade and incomes; and enhancing adaptive capacity so that communities can better prepare for and manage climate change, climate risks, and climate variations. The key project outcomes are increased crop and livestock productivity, increased carbon sequestration, and increased incomes from agro-pastoral value chains.

Integrated Natural Resources Management Project (INReMP) by IFAD: This project focuses on greening and commercialization of nature-based value chains and the promotion of regenerative agriculture and climate-smart solutions that build the adaptive and mitigation capacities of farmers and value chain players in the Lake Victoria Basin. Total project cost US$ 262 million contributed as follows US$ 126.8 million by IFAD and US$ 47 million from GCF and GEF and national government co-financing of US$ 41 million.

Integrated Landscape Management for conservation and restoration of Mt. Elgon Ecosystem in Western Kenya by FAO: This project aims to mainstream biodiversity across sectors, improve the flow of agro-ecosystem services to sustain food production and livelihoods through Sustainable Land Management, and reduce deforestation and land degradation from commodity supply chains. US$ 5.3 million from GEF and co-financing of US$ 46 million.

Adapting to Climate Change in Lake Victoria Basin (ACC-LVB) by the Lake Victoria Basin Commission (LVBC): This project aims to reduce the impact of climate change on local communities and water-dependent sectors in the region, especially by building the capacity of the five governments to establish a regional framework to guide adaptation actions. In Busia and Siaya counties. US$ 10 million from the Adaptation Fund.

Lake Victoria Basin Climate Resilient Ecosystem Stabilization and Socioeconomic Development (LVB-ClimRESe) Programme by the World Bank: The main aim of the project is to enhance ecosystem health, climate resilience and socio-economic productivity of Lake Victoria Basin covering Kenya, Uganda, Tanzania and Burundi. In initial phase with budget still to be confirmed.

Green Belt Movement – Watershed Protection: This project's work in restoring forests and promoting sustainable land use directly complements the regenerative practices in Concept 3. Its community engagement approach, particularly involving women in tree planting, could be a model for how to ensure inclusivity and engage community members in restoration activities.

Forest Restoration in the Rift Valley: Eden Reforestation Projects' large-scale reforestation efforts focus on agroforestry and employment generation, which supports Concept 3's goal of fostering smallholder investment in sustainable agriculture. Their approach in engaging marginalised communities as tree planters aligns with the concept of establishing lead farmers and community volunteers to drive regenerative practices. This project's achievements in improving soil and water retention through forest restoration would also support efforts to enhance water security and soil fertility in farming areas.

Integrated Programme to Build Resilience to Climate Change and Adaptive Capacity: This programme's emphasis on climate-resilient water management and sustainable agricultural practices could align well with Concept 3's activities on providing training in regenerative agriculture. This program's work with vulnerable communities to increase food security through climate-smart agriculture could inform the mobilisation of farmer groups and the creation of service hubs for smallholder farmers,

providing critical infrastructure to support regenerative practices

6.1.3 EXISTING PROJECTS RELATED TO CONCEPT 3: NATURE VENTURES:

Sustainable Management and Restoration of Threatened Ecological Corridors in Kenya – US$ 3.9 million: The World Bank is implementing this 4-year $3.9 million project, funded by the Global Biodiversity Framework Fund (GBFF) via NETFUND. This aim to restore critical ecological corridors in Kenya, and will focus on the northern wildlife migratory corridor in Laikipia County (in the upper Ewaso Ng'iro North Basin) with the interventions expected to significantly strengthen the management, governance and coordination of targeted ecosystems.

Rangeland Rehabilitation and Conservation in Northern Kenya – US$ 32 million (see above): This project's efforts in wildlife conservation and sustainable rangeland management align with Concept 3's wildlife tourism partnerships. Throughout the project, wildlife populations have increased, and community conservancies have generated income from eco-tourism. The experience in working with community conservancies and eco-tourism can support capacity-building and the establishment of tourism concessions.

Chyulu Hills REDD+ Project: With objectives focused on forest conservation and providing alternative income for Maasai communities, this project supports Concept 3's goals of building wildlife tourism partnerships in communal conservancies. The lessons learned from the Chyulu Hills project could support the establishment of wildlife tourism facilities in communal areas under Concept 3, especially by providing technical assistance in legal, administrative, and funding arrangements for joint venture tourism initiatives. The initial funding for the project came from various organisations involved in the consortium, including the African Wildlife Foundation (AWF), which led the project's development starting in 2013. Revenue from the sale of carbon credits is a primary source of funding, with these funds being reinvested into local conservation and community projects.

Kenya Agricultural Carbon Project (KACP) – US$ 600 000: The KACP promotes sustainable agricultural practices, such as agroforestry and soil management amongst smallholder farmers, which align with Concept 2's focus on regenerative agriculture. Its success in training farmers could be useful for supporting farmer training and field schools as well as the establishment of demonstration plots. The project was initially funded by the World Bank's BioCarbon Fund with an investment of US$ 600 000, which was allocated by 2017. The project's goal is to support sustainable agricultural practices, helping farmers adapt to climate change and improve yields while reducing greenhouse gas emissions (Business Daily, 2020).

6.2 OTHER COMPLEMENTARY ACTIVITIES

During the development of the NPC Kenya Investment Plan, several complementary activities outside of NbS were identified as crucial for supporting the success of the projects. Although these activities technically fall outside the funding scope of this IP, they serve as important enablers, providing foundational support that enhances the overall programme's impacts. The following activities have been identified as critical supporting interventions:

- **Reform/creation of enabling policies:** Supportive policies and government champions enhance project sustainability and scale up. For Concept 1, policy reform supporting environmental water allocations and riparian conservation could increase local and national support. In Concept 3, policies that facilitate tourism concession agreements and protect community rights are important for successful wildlife tourism partnerships. Concept 2 could benefit from policies that incentivise regenerative farming, such as subsidies or tax breaks.
- **Infrastructure improvement:** Having access to better infrastructure, such as roads, water storage, electricity, and irrigation systems could support sustainable land use and reduce the pressures currently imposed on ecosystems.
- **Environmental education and awareness programmes:** Building a better understanding of the importance of sustainable practices in water, biodiversity, and land management is essential for long-

term success of the IP. Education programs can cover topics like ecosystem services, climate change, and conservation. Environmental awareness training could encourage community involvement in wildlife conservation which is essential for eco-tourism. It could also spark their interest in the adoption of regenerative agriculture.

- **Small business training**: Offering training in how to successfully run a small business could enable communities to better manage the income generated from the project activities, e.g. from tourism activities.

7. IMPLEMENTATION POTENTIAL WITH RISK ASSESSMENT

7.1 ABSORPTIVE CAPACITY

7.1.1 OVERVIEW

Kenya has demonstrated a good absorptive capacity for financing and implementing climate-resilient green investments. This is reflected by the country's macro-economic fundamentals, robust policy and institutional architecture, and sufficient track record in managing green projects. However, Kenya has a debt-to-GDP ratio of 72.97 percent against the IMF approved debt anchor of 55 percent (O'Neill, 2024). The national debt-to-GDP ratio is forecast to decrease progressively between 2024 and 2029 by in total 11.3 percentage points. Despite such positive forecast, the country's risk of debt distress is high. Moody – a global credit rating organization – recently downgraded its rating of Kenya's credit from B3 to Caa1 (Moody, 2024). This negative outlook is informed by the heavy costs of debt servicing, and the recent withdrawal of the Finance Bill 2024 which signals the country's diminished capacity to implement revenue-based fiscal consolidation that would improve debt affordability and place public debt on a downward trend (Business Daily Africa, 2024) This situation is leading to an increasing dependency on new public debt issuances, requiring the urgent intervention of capital markets to bridge this gap. The already-weak position concerning the balance of payments is likely to be further impacted by fluctuating oil prices which could lead to pressure on the national currency in the medium-to-long run. Despite the negative outlook, Kenya's macroeconomic fundamentals remain among the strongest in Africa, averaging about 5% GDP growth since 2015 (excluding 2020 due to the negative effects of the COVID-19 pandemic) due to improving infrastructure, and strong consumer demand from a growing middle class (US Department of State, 2024).

Additionally, Kenya is a regional leader in clean energy development with more than 90% of its electricity coming from renewable sources (US Department of State, 2024). Through its second NDC submitted to UNFCCC in 2020, the country has prioritised low-carbon resilient investments to abate its already low greenhouse gas emissions a further 32% by 2030 (GoK, 2020). Moreover, Kenya has put in place an enabling policy and regulatory environment to spearhead green investments, enabling its first private-sector-issued green bond in 2019 to finance the construction of sustainable housing projects. Furthermore, Kenya's 2018 National Climate Finance Policy supports a Green Climate Fund and the tracking of climate related activities in the Integrated Financial Management Information System (IFMIS) through budget coding and tagging.

However, the country still has large room for improvement to becoming more ready for climate change financing on a global scale. The University of Notre Dame's Global Adaptation Initiative releases a country index showing a country's current vulnerability to climate disruptions as well as readiness to leverage investments and convert them to adaptation actions. In 2024, Kenya was rated 0.494 on the vulnerability index (number 135 out of 187 ranked countries) and was given a readiness score of 0.310, making it the 146th (out of 192) most ready country for utilising climate finance (University of Notre Dame, 2024). Compared to the rest of the world, Kenya's readiness to leverage private and public sector investment and convert them to mitigation and adaptation actions is comparatively low, however, it has been improving since 2012 (when the readiness score was only 0.24).

While Kenya has made significant strides towards enhancing its capacity to absorb climate and other green funds, several challenges still abound. Such challenges include weak prioritisation of climate change funding and other green funds in the budget, limited alignment of government and development partner fiscal policies and procedures, and technical capacity constraints (GCF, 2023).

These barriers affect the flow of funds from development partners to the Treasury and implementing agencies (e.g. ministries and NGOs), and subsequently the effectiveness and implementation of climate-resilient green projects. Prioritisation of climate funding and other green funds within the budget, harmonisation of government funding requirements with the development partners fiscal policies and enhancing the capacity of government "green" trust funds are therefore recommended.

7.1.2 MACROECONOMIC CONTEXT

Kenya has demonstrated remarkable resilience to global and climate shocks, including COVID-19 pandemic, extreme weather events (i.e., droughts and floods) and geopolitical conflicts, such as Russia's invasion of Ukraine. Despite these setbacks, the country is on a solid path to economic recovery. In 2023, the economy experienced a cyclical rebound and grew by 5.6% compared to 4.9% in 2022 (World Bank, 2024). This growth was driven by the recovery of the agriculture sector and positive performance of the tourism and financial services sectors. The Kenyan economy is highly dependent on agriculture which contributes approximately 33% to the nation's GDP..11 The agricultural and tourism sectors are both vulnerable to the impact of climate change. The GDP growth rate is anticipated to be 5.2% on average over the period from 2024 to 2026. This will largely be influenced by favourable weather conditions, fiscal consolidation, and the implementation of the government's structural reform agenda..12 However, the recent deadly protests organized largely by the youth have increased the risks of the country defaulting on its debt obligations..[13]

Kenya's economic growth is strongly influenced by climate change. Recent estimates suggest that the country lost between 3-5% of its total GDP annually between 2010 and 2020 due to adverse climate change-related events (GoK, 2020). Similarly, the costs of floods and droughts create a long-term fiscal liability equivalent to 2-2.8% of GDP annually (GoK, 2018). Furthermore, the estimated costs of floods are 5.5% of GDP every seven years, and droughts 8% every five years (GoK, 2018). Besides the economic impacts of extreme weather events, droughts and floods also have adverse effects on a population's health and well-being. In Kenya, infectious disease outbreaks such as waterborne and vector-borne diseases have been associated with floods and droughts (Okaka & Odhiambo, 2018).

Although Kenya has put in place various strategies and plans to implement effective and adequate flow of climate finance, it has largely struggled to translate ambitious national policy commitments into local practical actions. This is largely due to limited technical capacity and inadequate financial resources. Kenya requires approximately US$ 40 billion in climate finance – a mix of domestic funds and international support for development aid, investment, technology transfer and capacity building. In 2018, the country invested about US$ 2.4 billion of public and private capital in climate-related investments (Odhengo *et al.*, 2021). This is approximately one third of the financing that Kenya needs annually to meet the targets set in its 2020 NDC. Overall, the majority (59%) of the investments were publicly funded through domestic and international sources, with the rest of the funds (41%) coming from the private sector (Odhengo *et al.*, 2021). Public climate finance alone is unlikely to provide the predictable and reliable funding flows needed for effective climate action that is well-planned, sustainable, and transformative. Without such consistent funding, scaling up efforts to achieve national climate targets, as outlined in the NDCs, will not be feasible.

Even though green investments are still below the target, it is steadily gaining traction. The country has accessed climate funding from international sources including the Green Climate Fund (GCF). In 2020, Kenya Commercial Bank (KCB) gained accreditation from the GCF as the first lender in the East African region to support climate change mitigation and

11 http://www.fao.org/kenya/fao-in-kenya/kenya-at-a-glance/en/

12 https://www.worldbank.org/en/country/kenya/overview Accessed on 5 September 2024

13 https://www.businessdailyafrica.com/bd/economy/analysts-warn-of-economic-shocks-from-gen-z-protests-4722340#google_vignette, Accessed on 5 September 2024.

adaptation through green financing. Subsequently, KCB has already approved green loans worth Ksh21.4 billion representing 15.5% of its total loan portfolio in 2023..14[14] These loans were directed towards green investments in energy efficiency, renewable energy, climate-smart agriculture, water resource management, e-mobility and circular economy..15 Similarly, Equity Bank, Kenya's largest bank by total assets, has a green financing programme for climate-smart investments backed by funding from International Finance Corporation (IFC) and other development institutions to support small and medium enterprise (SME) lending..[16]

7.1.3 COMMITMENT TO CLIMATE ACTION / ENABLING POLICY AND REGULATORY ENVIRONMENT

Kenya achieved key climate change governance milestones in 2016 when it adopted both the Climate Change Act (2016) and the National Climate Change Framework Policy (2016). A further milestone was reached about a year later, with the promulgation of the National Policy on Climate Finance (Sessional Paper No. 3 of 2017). These three legal and policy instruments provide the most important basis for pursuing effective climate governance and finance in Kenya, including strengthening the country's absorptive capacity for financing and implementation of climate-resilient green investments.

The Climate Change Act (2016) institutionalises mechanisms for climate action including climate financing. Importantly, the act mandates the national and county governments to mobilise and manage public funds and other financial resources transparently for climate change responses. It also establishes the National Climate Fund as a finance mechanism for supporting priority climate actions and interventions approved by the National Climate Change Council. The fund is vested and managed under the National Treasury, administered by the council and managed by the Principal Secretary, responsible for climate change affairs and climate-resilient development.

The Climate Change Act (2016) gives county governments the mandate to develop their climate action plans and integrate climate change into their development planning and budgeting. As a result, county governments have established County Climate Change Funds (CCCF) that finance climate projects developed by local communities. The CCCF is a key component in a comprehensive planning and financing framework that strengthens capacity and channels funds from domestic and international sources to community-driven climate action priorities. Key to the success and sustainability of the CCCF is local ownership and a guaranteed annual budget drawn from counties own-funds. The CCCF consists of four interrelated components: (i) the fund which is anchored in county legislation and managed by county government; (ii) the planning committees at county and ward levels to oversee the fund and engage communities in identifying priority action areas; (iii) the climate information services and participatory planning tools for integration of climate information and community views into planning and implementation; and (iv) a monitoring and evaluation component to track progress and guide future investments.

7.1.4 STRENGTHENED COORDINATION, PLANNING AND IMPLEMENTATION CAPACITY

Kenya has made significant progress towards strengthening its capacity to coordinate, plan and implement climate actions. The National Treasury is instrumental in mobilising, tracking and reporting of climate finance flows in the country. It issues regulations which set out procedures to identify sources of climate finance, monitor their use, and develop incentives to promote climate change initiatives.

The National Treasury, in collaboration with the World Bank, has launched the "Financing Locally Led Climate Action Program" (FLLoCA). FLLoCA is a hybrid programme to finance

[14] https://kcbgroup.com/wp-content/uploads/2024/08/2023-sustainability-report-launch-press-release.pdf

[15] Ibid

[16] https://pressroom.ifc.org/all/pages/PressDetail.aspx?ID=17624

projects with the aim to translate the country's ambitious climate agenda into scaled up action on the ground. The programme seeks to deliver locally led climate resilience actions and strengthen county and national governments' capacity to manage climate risks. Specifically, FLLoCA focuses on capitalising the National and County Climate Change Funds; building county level capacity for planning, budgeting, monitoring, reporting and implementation of local climate actions in partnership with communities; and strengthening of national and county levels institutional

In addition, Kenya has received technical assistance on climate governance and financing through the Gesellschaft für Internationale Zusammenarbeit (GIZ), Global NDC Implementation Partners, the United Nations Development Programme, the United Nations Environment Programme, and the World Resources Institute.

On average, Kenya has received more GCF financing than many other African countries (GCF, 2023) and has a large active portfolio and pipeline of proposals. For instance, between 2015 and 2019, the National Treasury, NEMA, Price Waterhouse Coopers, and the FAO were awarded a cumulative amount of US$ 4.5 million towards readiness support (GCF, 2023). Over the same period, GCF approved 14 projects for Kenya, for a cumulative total of US$ 209.3 million in financing, of which two are national projects and 12 are multi-country projects. The accredited entities involved in these projects are: NEMA, Acumen Fund, GIZ, International Union for the Conservation of Nature (IUCN), International Bank for Reconstruction and Development and International Development Association, African Development Bank (AfDB), Pegasus Capital Advisors, Dutch entrepreneurial development bank (FMO), and French Development Agency (AFD). The GCF and other green investments have laid a good foundation for monitoring, evaluation and learning and replicating and scaling up best practices at local level.

7.2 RISK ASSESSMENT

Risk management is key to the success and sustainability of the NPC Investment Plan. In the context of this study, risks encapsulate potential barriers that can hinder the implementation of NbS. Such risks are assessed in terms of institutional risks, technological risks, environmental risks, social risks, and financial risks.

Table 7.1 provides a summary of the identified risks and proposed mitigation measures for the Investment Plan.

Table 7.1. Risk assessment with risk reduction measures

RISK TYPE	RISK REDUCTION MEASURES
	INSTITUTIONAL AND GOVERNANCE
Insufficient organizational capacity	The IP aims to strengthen capacities of institutions involved in the implementation of NbS, including strengthening their governance systems, financial management systems, absorptive capacity, and programmes.
Knowledge gaps	The IP aims to strengthen the evidence base between NbS and climate change mitigation and adaptation, biodiversity conservation and improved livelihoods. NbS implementing entities will be trained to acquire appropriate knowledge and skills in integrated natural resources management, climate adaptation strategies, sustainable agricultural practices, and gender, equality and social inclusion.
Weak inter-agency coordination	The IP aims to encourage and promote effective coordination between the national government, its agencies and county governments; and NGOs and development partners in the implementation of sustainable climate and nature actions
Weak participatory processes	The IP has a strong focus on stakeholder participation. A key component of the stakeholder engagement strategy is the stakeholder mapping which helps identify and categorize stakeholders according to their interests and influence over the implementation of nature and climate actions. In particular, the IP will pay great attention to "deep engagement" stakeholders. The IP will strengthen capacities of local governance institutions such as CFAs and WRUAs to engage meaningfully and effectively in decision-making processes through comprehensive dissemination of relevant information. The IP will also create safe spaces for women and youth engagement in decision-making processes.
Corruption	There is need for prudent utilization of resources for NbS to ensure they do not get diverted to other uses or become a source of corruption. Consequently, the IP aims to ensure transparent and accountable governance systems, develop and enforce a clear code of ethics for all project stakeholders, and establish mechanism for community involvement to track progress with the implementation of NbS and report irregularities.
Lack of political will	The government of Kenya has demonstrated an increasing support for NbS through formulation of conservation and climate policies. However, the policy implementation is still lagging. The IP aims to co-create and co-explore needs with key stakeholders including policy makers and local communities to develop a common understanding on key issues and secure buy-in. This understanding will be deepened through multi-stakeholder dialogues. The IPs seeks to synergize its interventions and facilitate the exchange of information and data to better understand NbS.

Insecure tenure rights	The IP will ensure effective community engagement to build understanding of land and resource tenure systems and rights. Such engagements will be carried out at the inception of the project to identify potential land tenure issues as early as possible.
	TECHNOLOGICAL
Uncertainty and risks associated with the use of new technology	The IP will support research to identify and prioritize risks associated with the use of new technology in nature actions, suggest mitigation strategies, and evaluate and monitor such risks.
Limited scientific knowledge	The IP aims to improve scientific knowledge about NbS among local communities. This will ensure that all NbS are compatible with the environment they are placed in.
Competing technologies	The IP aims to promote appropriate context-specific technologies to promote the adoption of NbS.
	ENVIRONMENTAL
Invasive species	The IP aims to support measures to clear alien invasive species and rehabilitate degraded lands.
Pollution	Reducing land degradation will reduce soil erosion and water pollution.
Climate change	The implementation and scaling up of NbS is an effective climate action fits well with the concept of adapting land use to improve resilience to climate change.
	SOCIAL
Poor coordination among actors within and across sectors and governance levels	The implementation of nature of NbS demands cross-sectoral collaboration and coordination to optimize adoption and scaling up of appropriate interventions. Stronger collaboration and coordination can improve the impact of planned restoration interventions and improve programmatic synergies. The IP aims to encourage coordination between the actors within and across sectors and governance levels in the implementation of NbS; and engage a network of multi-level actors and stakeholders to promote uptake and stimulate demand for NbS.
Limited public knowledge and awareness on NbS	Some communities or individuals who could implement NbS do not understand or have incorrect beliefs about them. Moreover, some individuals do not value the environment high enough to implement NbS. Others resist change out of fear, habit or past choices. The IP aims to enhance awareness and support extension programmes on sustainable climate-smart and nature interventions. A variety of dissemination pathways, such as farmer educational meetings, local engagement forums (*i.e., chief's baraza*), and partnership with traditional media will be promoted to enhance awareness and build local capacities on NbS implementation
Space constraints for nature-based investments	The IP aims to engage communities and encourage them through appropriate incentives to map land use, and set aside spaces for NbS in their private farms
Under-representation of women and youth in nature actions	The role of women in the successful implementation of NbS is prioritized in the IP. The participation of women in the project will be ensured through engaging the involvement of women's grassroot organisations (e.g., self-help groups) and the development of alternative nature-based investments. The IP will also prioritize education and access to markets for the products from sustainable economic activities. The IP seeks to support women, youth and other vulnerable groups to implement gender responsive NbS; enhance the production and use of gender data and information in climate action across sectors to assist planning, implementation, and monitoring and evaluation; and identify and build the capacity of gender champions. The IP will also support measures to address women's property rights including efforts to dislodge entrenched cultural norms and practices through

	strengthening capacities of institutions responsible for land administration and the legal empowerment of women at the local level.
Resource based conflict	Introducing grazable grazing permits and restoring rangelands can reduce resource-based conflicts by providing equitable access to grazing areas while promoting sustainable land use. Permits create clear rules, reducing disputes over grazing rights and preventing overgrazing. Restoration efforts enhance rangeland productivity, increasing the availability of fodder for livestock, and fostering cooperation among pastoralists.
	FINANCIAL
Fiduciary risk	The IP will put in place measures for appraising and evaluating project investment decisions (ex-ante and ex post) to ensure that investments (including procurement of goods and services) are efficient, effective and deliver value for money The IP will put in place effective and transparent mechanisms for tracking expenditures
Higher costs of implementing NbS	Lack of adequate, predictable and sustained financial resources is limiting factor to the adoption and scaling up of NbS. This is negatively impacting key interventions, including research, awareness, education, and monitoring. Successful implementation of NbS would require greater mobilization of resources both from public and private sources. While there is a mixture of financial sources and mechanisms through multilateral financing mechanisms, dedicated public funds and market-based approaches, NbS can tap into global climate funds. The IP aims to tap into global climate fund and other climate and conservation funds, and develop opportunities for sustainable finance, including improving value chains for agriculture and forestry.
Limited private finance	The Nature Ventures project has at its heart a strong focus on developing the financial model for NbS. The IP aims to promote private finance investments in NbS.
Insufficient time to prove benefits from NbS interventions	NbS takes more time to prove their benefits, and more time commitments for ecological monitoring. To address this, all projects will focus on low-regret options with short-term benefits.

7.3 IMPLEMENTATION ARRANGEMENTS

7.3.1 INSTITUTIONAL PARTNERS AND THEIR ROLES

The implementation of the NPC-IP will be a collaborative effort drawing upon the perspectives and contributions of a wide array of institutional partners and stakeholders. Nature-based investments cuts across sectors such as agriculture, wildlife, environment, forestry, land use and energy. In view of the diverse viewpoints from a wide range of actors, an institutional mechanism is necessary for effective and coordinated planning and implementation of proposed projects and activities. The various state institutions, NGOs, CBOs/CSOs, and development partners whose involvement will be key for the successful implementation of the Investment Plan are outlined below in Table 7.2 and the text that follows.

The coordinating institution for the NPC Investment Plan is the State Department of Environment and Climate Change. The overall supervision of the NPC Investment Plan will reside with NETFUND who will ensure consistency with national priorities, monitor overall progress, facilitate cross-cutting evaluations, reviews and learning events with ongoing collaboration and support from the MDBs. NETFUND will report on the country-level and Investment Plan level indicators to the CIF and MDBs will report on project level indicators.

The activities contained in the project concepts will be implemented by various implementing agencies and state departments.

Table 7.2 A summary of government institutions that will be involved in the implementation of the Investment Plan

Institution	Description
	NATIONAL GOVERNMENT
National Climate Change Council (NCCC)	Established under Section 7 of the Climate Change Act, 2016, the NCCC is responsible for overall coordination and advisory functions, including approving and implementing National Climate Change Action Plans (NCCAPs). It is chaired by the President of the Republic of Kenya and has as one its functions the responsibility of ensuring the mainstreaming of climate change functions by the national and county governments.
The National Treasury	The National Treasury is responsible for developing a strategy and issuing regulations setting out procedures and powers to identify sources of climate finance, monitor use, and work with the Cabinet Secretary responsible for climate change affairs to develop incentives to promote climate change initiatives, including NbS. The Climate Change Fund is vested in the National Treasury.
Ministry of Environment, Climate Change and Forestry	The Ministry of Environment, Climate Change and Forestry is charged with formulating and conducting periodic reviews of climate change policy, strategy and NCCAPs. The Cabinet Secretary (CS) of the ministry is also the Secretary of the NCCC. The ministry provides technical assistance on climate change actions and responses to county governments, based on mutual agreement and needs identified by those governments through the Climate Change Directorate. The CS reports biennially to Parliament on the status of implementation of international and national climate change obligations. The Ministry is involved in the rehabilitation, restoration and management of the environment. It is also supporting various land restoration initiatives, and engaging with donors to mobilise resources for land restoration interventions
National Environment Trust Fund (NETFUND)	National Environment Trust Fund was established by the Environment Management and Coordination Act (1999) to facilitate research intended to further the requirements of environmental management. NETFUND principal activity is to mobilise resources for sustainable environmental management in Kenya. The Act provides for various sources of funds which includes donations, endowments, grants and gifts and sums of money or other assets as may be specifically designated to the Trust Fund. NETFUND supports climate actions which are aligned with Kenya's Nationally Determined Contribution (NDCs), NCCAP, the Kenya Green Economy Strategy and Implementation Plan, and SDG 13 on Climate Action. Among such actions include restoration and protection of degraded ecosystems such as forests, river lines, lake basins, marine, wetlands and rangelands.
State Department for Crop Development and Agricultural Research	The State Department of for Crop Development and Agricultural Research is mandated to promote agricultural research and facilitate the transformation in the agriculture sector. It is supporting crop research and development and implementing programmes and technologies on climate smart agriculture.
State Department for Livestock	The Department promotes, regulate and facilitate livestock production for socio-economic development. Specific mandate includes pasture conservation, and range development and management.
State Department for the ASALs and Regional Development	The Department is responsible for developing, implementing and coordinating exploitation of the potential that lies in the basins and ASALs resources through an integrated approach in designing and programming

	of projects and programmes with a purpose to improve and transform lives and livelihoods for vulnerable communities towards achieving equitable, inclusive, and sustainable socio-economic development.
Council of Governors (CoG)	The Council of Governors (CoG) in Kenya represents county governments to ensure effective devolution. It provides a platform for consultation, coordination, and advocacy on matters affecting counties, including governance, resource allocation, and policy implementation. The CoG supports capacity-building for counties and fosters intergovernmental relations to enhance service delivery and equitable development across Kenya.
Kenya Forest Service (KFS)	KFS is tasked with the conservation and sustainable use of forest resources to increase tree cover. It also provides technical assistance to county governments with forest development on private and community lands. KFS has been providing expertise and seedlings in support of reforestation efforts. Other key functions include establishing and implementing benefit sharing arrangements and managing water catchment areas in relation to soil and water conservation, carbon sequestration and other environmental services.
Kenya Forest Research Institute (KEFRI)	Undertakes research pertinent to the Forestry State Department mandate.
Kenya Wildlife Services	Established under the Wildlife (Conservation and Management) Act (2013), KWS is mandated to formulate and implement policies for the conservation, management and utilization of wildlife resources, national parks and reserves. KWS is charged with the responsibility to manage the water environment and ecosystems falling within their jurisdiction. KWS works in close collaboration with WRA, NEMA, KFS, county governments and other organized groups including private sector and local communities to monitor and enforce actions against degradation and loss of wildlife habitats.
National Environment Management Authority (NEMA)	NEMA is the principal organ of the government in the implementation of all policies relating to the environment. Under Climate Change Act (2016) monitors, investigates and enforces compliance of climate change interventions.
Water resources Authority (WRA)	Water Resources Authority (WRA) is tasked with the implementation of policies and strategies relating to management of water resources. In executing its work, the WRA is guided by the Constitution of Kenya 2010, Water Act 2016, other National policies, plans and strategies including NCCAP, National Adaptation Plan (NAP) 2015-2030 and NDCs. The WRA works in close collaboration with other partners and regulatory bodies, such as Kenya Wildlife Services (KWS), Kenya Forest Service (KFS), National Environment Management Authority (NEMA) and county governments. The WRA is supporting locally-led climate action through various initiatives. This includes afforestation and reforestation programmes for restoration and protection of water catchment areas and other fragile water ecosystems, involving catchment areas.
Water Sector Trust Fund (WSTF)	The Water Sector Trust Fund (WSTF) is established under the Water Act (2016). The Fund is financing institution tasked with providing conditional and unconditional grants to counties, in addition to the Equalisation Fund and to assist in financing the development and management of water services in marginalized or any underserved areas, including (a) community level initiatives for the sustainable management of water resources; (b) development of water services in rural areas considered not to be commercially viable for provision of water services by water service providers; (c) development of water services in the under-served poor urban areas; and (d) research activities in the area of water resources management and water services, sewerage and sanitation.

Kenya Agricultural Research and Livestock Organization (KALRO)	The Kenya Agricultural and Livestock Research Organization (KALRO) focuses on agricultural innovation to improve productivity and sustainability in Kenya. It conducts research in areas like crop production, livestock management, and natural resource conservation, providing solutions tailored to local needs. KALRO collaborates with stakeholders to develop technologies, disseminate information, and support policies aimed at enhancing food security and economic growth.
Kenya Marine and Fisheries Research Institute (KMFRI)	The Kenya Marine and Fisheries Research Institute (KMFRI) is a research and policy advisory organization. KMFRI conducts research to generate data for NbS initiatives, offers training sessions, and collaborates with stakeholders, including local associations and communities.
Kenya Meteorological Department (KMD)	Provide meteorological and climatological services to to agriculture, forestry, water resources management, civil aviation and the private sector. KMD supports counties to develop Climate Information Service plans which are critical for planning nature-based investments.
	COUNTY GOVERNMENTS
County Governments	County governments have primary role in formulating sectoral development plans in agriculture, physical planning and water services; and implementing specific national government policies on natural resources and environmental conservation, including soil and water conservation and forestry. These devolved functions provide critical entry points for fostering appropriate nature-based responses.

Many non-government organisations (NGOs) and civil society organisations (CSOs) in Kenya are involved in climate change and nature actions. Paragraph 1(i) Article 4 of the UNFCCC acknowledges the role of civil society in the areas of education, training and public awareness. Civil society is recognised as a powerful agent of change through creating public awareness, policy research and analysis and conducting advocacy on key environmental and socio-economic issues, including climate change and nature actions. Some of the CSOs that could potentially be engaged include:

- **Water Resource Users Associations:** WRUAs are associations of water users, riparian landowners, or other stakeholders who have formally and voluntarily associated for the purposes of cooperatively sharing, managing and conserving a common water resource. The formation of WRUAs is driven by the realisation that local communities are the primary stakeholders in the sub-basin where they live. Some WRUAs, have formulated sub-catchment management plans (SCMPs) to promote water conservation and catchment restoration. The SCMPs recognise the connection between livelihoods and ecosystems in the management of water resources. Specifically, SCMPs set out to ensure equitable water allocation, reduce water pollution, promote sustainable land management practices, improve agricultural productivity, and protect natural wetlands and riparian areas from human encroachment. However, WRUAs faces serious difficulties in scaling up these initiatives due to limited technical and financial capacities. The WRUAs are largely dependent on external actors for resources.
- **Community Forest Associations (CFAs):** Kenya has adopted a Participatory Forest Management (PFM) approach through the formation of CFAs to protect forests and improve livelihoods. CFAs are formed by communities that live adjacent to designated public forests. Some CFAs have entered into forest management agreements with KFS which confer forest management roles to the community while KFS retains the forest resource ownership right. The management role covers various activities, including growing seedlings, conserving forests, and using forest resources sustainably to generate income.
- **The Kenya Wildlife Conservancies Association (KWCA)** represents community and private conservancies across Kenya, advocating for sustainable wildlife conservation and livelihoods. It provides a platform for policy engagement, capacity-

building, and resource mobilization to support conservancies in protecting wildlife habitats while fostering economic benefits for local communities. By promoting coexistence between people and wildlife, KWCA plays a key role in advancing conservation efforts and empowering communities.

- **Ward Climate Change Planning Committees (WCCPCs)** and cooperatives empower local communities to address climate challenges. WCCPCs facilitate participatory planning and implementation of climate actions at the grassroots level, ensuring that adaptation and mitigation efforts align with local needs.
- **Nature Kenya:** Nature Kenya was established in 1909 to promote the study and conservation of nature in Eastern Africa. Specifically, the organisation seeks to advance knowledge of Kenya's biodiversity; promote conservation of key species, sites, and habitats; encourage community participation in conservation through capacity building and promotion of sustainable benefits; and advocate policies favourable to biodiversity conservation.
- **International Union for Conservation of Nature (IUCN):** IUCN is a membership union of governments and CSOs that seeks to advance sustainable development and create a just world that values and conserves nature. The IUCN implements a diverse portfolio of conservation projects globally, including integrating local knowledge with the latest science to reverse habitat loss, restore ecosystems and improve people's well-being. In Kenya, the IUCN is supporting many initiatives including strengthening integrated natural resource management and restoration of degraded landscapes in the Tana Delta; conserving marine protected areas and strengthening climate resilience through nature-based investments; mainstreaming biodiversity and ecosystem services in the agricultural sector and landscapes and reversing land degradation in ASAL areas.
- **World Wildlife Fund – Kenya (WWF-Kenya):** WWF-Kenya is a conservation NGO that supports local communities to conserve natural resources, transform markets and policies toward sustainability, and protect and restore species and their habitats. Their work is focused around six key pillars: climate-resilient and zero-carbon development, sustainable food systems, conservation of key forest ecosystems, protection of freshwater resources and landscapes, healthy oceans, and conservation of wildlife. WWF-Kenya is implementing a wide range of projects including protection of biodiversity rich ecosystems; enhancing the capacity of CSOs to influence natural resource governance across sectors such as water, forests, wildlife, marine and fisheries; and influencing policy through development and implementation of the County Spatial Plans.

Many international donor agencies are financing NbS in Kenya. They include Agricultural Organization (FAO), the World Bank, German Corporation for International Cooperation (GIZ), French Development Cooperation (AFD), International Fund for Agricultural Development, and United States Agency for International Development (USAID). These agencies are largely investing in supporting enabling environment for climate and nature action through measures such as policy reform, securing land tenure and engaging with the private sector around attaining net zero emissions. They are likely to play an important role in contributing financially but also in providing technical expertise.

Research and development are important for advancing sustainable land management practices, addressing land degradation, and developing tools and technologies tailored to local contexts. Capacity building will need to be prioritised at all levels, from national institutions to community and farmer levels, ensuring widespread adoption and implementation of strategies suggested in the IP. Technical expertise to support the projects can be sourced from Kenyan universities, research institutes, and training institutions, such as technical colleges.

International development and research institutions already operate programmes on ecosystems, land, water, and agriculture, often in collaboration with the Kenyan government. They contribute not only through research but also by financing ecosystem restoration and climate resilience projects, aligning with this IP's priorities like water catchment conservation, agroforestry, and enhancing the productivity of rangelands.

7.3.2 MANAGEMENT STRUCTURE FOR NPC-INVESTMENT PLAN IMPLEMENTATION

The suggested management structure for the implementation of the NPC-Investment Plan is shown in Figure 7.1. A dedicated NPC programme steering committee will ensure smooth running of the NPC Investment Plan through the Project Implementation Units (PIUs) for public sector projects. A PIU is a dedicated entity established to provide technical, administrative, and monitoring support for programme implementation. Hosted within NETFUND to ensure alignment with national priorities, the PIUs act as a central hub for project oversight and stakeholder coordination, leveraging existing institutional capacities. The PIUs will oversee public sector project performance, tracking impact indicators, and aligning activities with the Investment Plan results framework. A dedicated Monitoring and Evaluation specialist will ensure coherence and consistency across projects. Additionally, they will be facilitating consultations and learning events to share findings, address challenges, and promote adaptive management practices. The PIUs will lead evaluations, learning reviews, and assessing programme-wide progress to refine strategies and enhance outcomes. They will collaborate with government agencies and MDBs to ensure availability of resources and alignment with development objectives.

The WB and AfDB project concepts will have their own PIUs, hosted within NETFUND, managing their respective project activities. The World Bank PIU will be responsible for managing the implementation of the Nature Capital project, overseeing performance and ensuring alignment with the results framework. Similarly, the Nature People project will be managed by the AfDB PIU.

IFC operations will reflect their private-sector orientation. They will therefore operate independently of government and retain open and collaborative dialogue through information sharing mechanisms. IFC will submit reports to the CIF secretariat detailing operations and results. These reports will include progress updates on project specific outcome indicators as agreed upon with CIF during the project planning phase.

Each PIU will provide annual progress reports to their respective MDBs, ensuring compliance with the monitoring guidelines agreed upon in the integrated results framework. Stakeholder feedback and learning from PIUs will be integrated into programme adaptation and planning through NETFUND facilitated events.

The PIUs will be supported by a Technical Advisory Committee (TAC). The TAC will provide technical advice and guidance to support the implementation and monitoring and evaluation of the projects. The TAC will comprise

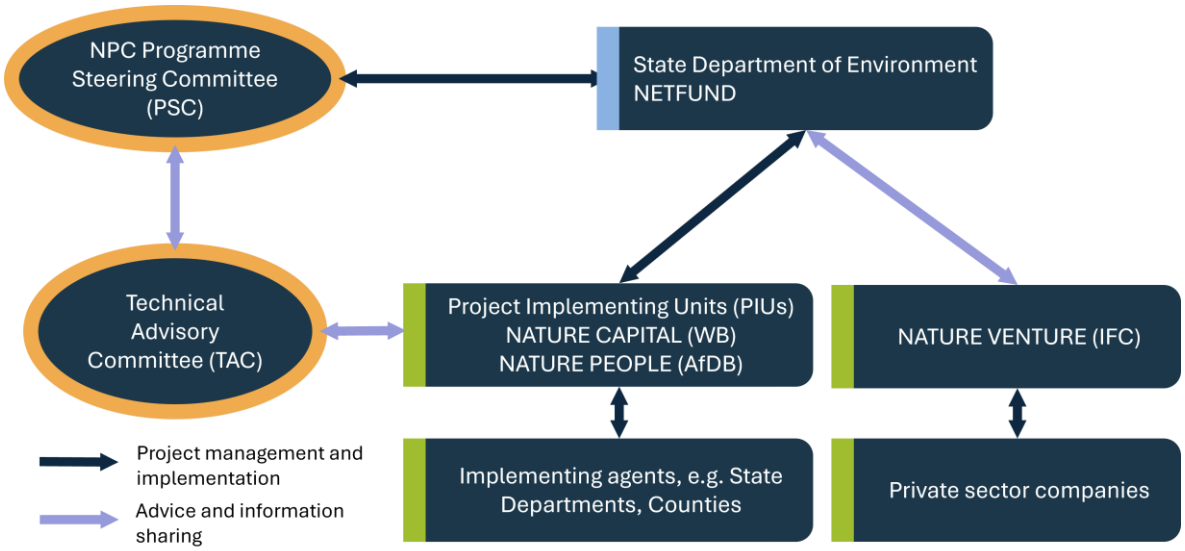

Figure 7.1 Organisational structure for Kenya's NPC Investment Plan

technical staff from relevant agencies, county level governments, and research and academia, as appropriate.

7.3.3 FUNDING FLOWS

The CIF-NPC resources will be allocated through the respective MDBs. In the case of public sector agreements between the GoK and the World Bank and GoK and the AfDB, the funds are then channelled from the MDB (once received from the CIF) to the Kenyan National Treasury. The National Treasury will then open a Designated Account (DA) at the Central Bank of Kenya (CBK). Funds will then be channelled to the respective implementing agencies from the DA.

For private sector projects, the CIF Trustee transfers funds to the IFC, which then invests directly in private clients.

8. MONITORING AND EVALUATION

8.1 THEORY OF CHANGE

The theory of change (ToC) for the IP is structured around a logical framework designed to support interventions and activities addressing specific challenges identified in the target areas. The ToC is depicted in Figure 8.1**.** It follows a logical framework in which the key challenges and barriers are identified, the projects to resolve these and their associated desired outcomes are outlined. The long-term expected outcomes of the proposed activities are healthier landscapes that are providing critical ecosystem services, connected ecosystems which support wildlife and their movement corridors, improved and beneficial human and wildlife coexistence, enhanced climate resilience of communities, improved food and water security, sustainably managed working landscapes with reduced biodiversity loss, and reduced GHG emissions.

The NPC Investment plan addresses a number of important challenges that contribute to GHG emissions and climate change vulnerability. These include widespread land and ecosystem degradation and biodiversity loss, low and declining crop and livestock productivity, increasing human wildlife conflict (HWC), gender inequality and marginalisation of vulnerable groups, and increasing exposure to climate change.

The NPC Investment Plan will include provision for addressing some of the key barriers to addressing these challenges. These include insufficient data on water flows and use, limited financial resources to implement projects, technical know-how and governance capacity, limited access to markets and credit, shortages of inputs including water, and conflicting or inadequate policies and legislation.

The Nature Capital project, led by the World Bank, focuses on the restoration, sustainable management and protection of key "ecological infrastructure." Ecological infrastructure comprises natural and semi-natural ecosystems that complement or replace the need for built infrastructure through the supply of ecosystem services, such as those relating to water supply, and includes rangeland and wildlife assets that support rural livelihoods and the tourism sector. This project involves setting environmental flows, restoring forests, wetlands and riparian areas, and setting in place established and novel measures to incentivise their continued sustainable management, including diversified livelihood activities. The outcomes will contribute to both increased adaptive capacity and avoided GHG emissions from ecosystem degradation and improved carbon retention. These activities are strengthened by supporting activities including baseline research and stakeholder engagement, management guidelines, capacity building and training, policy advice and institutional strengthening.

The Nature People project, led by AfDB, will promote regenerative agriculture, sustainable rangeland management and provide alternative livelihood support for NbS. Promoting regenerative agriculture at sub-catchment scales will improve food security while also increase soil and water retention, reducing negative environmental impacts from agriculture on downstream environments and people, thereby reducing climate vulnerability. The alternative livelihoods component will seek to facilitate the establishment of riparian and wetland buffers through establishment of agroforestry and water harvesting infrastructure outside of these buffer areas as part of introducing the need to maintain these buffers. This component will play an important role in providing alternative farming opportunities for farmers involving water harvesting as well as NbS technologies such as agroforestry. The second component will also seek to help communities take advantage of business opportunities that incentivise respect for forest conservation measures, such as the establishment of indigenous tree nurseries and beekeeping. These measures will help to pave the way for active restoration of forests, riparian areas and wetlands. The supporting digital platforms component is to stimulate value chain activities that specifically support the above interventions.

The Nature Venture project, led by IFC, will incentivise private sector investment in activities that constitute or strongly support the implementation of NbS. The scale of restoration

required to fully realise the value of natural and agricultural land assets in alleviating sectoral challenges, climate change adaptation and mitigation will not be possible without leveraging private sector investment. Actors that have "skin in the game" can be instrumental in mobilising behavioural changes in ecosystem managers. This project will stimulate investment in agro-enterprises and tourism partnerships with local communities that incentivise conservation action, as well as novel large-scale public-private partnerships to bring about forest and riparian restoration through carbon credits or biodiversity credits schemes.

The NPC Investment Plan recognises the importance of proper planning and stakeholder engagement. All three projects will include thorough preparatory stages in which there will be a focus on understanding the baseline socio-ecological context, and capacity building and guidance activities with government and local stakeholders.

The outputs of the projects will lead to more functioning landscapes in which ecosystems are healthier, with improved net carbon retention and thriving wildlife populations, and supporting more resilient, diversified livelihoods that can better withstand climate change. The outputs of the NPC Investment Plan will include gazetted management plans for water, forest, wetland and rangeland resources and areas that make specific allowance for capitalising on their potential capacity to supply valuable ecosystem services. They will include extension services, capacitated and organised farmers who are engaging in more sustainable systems, and diversified livelihood opportunities. The outcomes of the projects will include restored forests, rivers and wetlands, and better managed cultivation and rangeland systems that are not only more productive but that maximise carbon and water retention and that provide better outcomes for biodiversity.

8.2 INTEGRATED RESULTS FRAMEWORK

The Kenya IP Integrated Results Framework, built on the theory of change and aligned with CIF NPC Programme, is shown in Table 8.1. The Integrated Results Framework aims to track and assess the impact of Kenya's CIF programme in driving low-carbon, climate-resilient development. It provides a structured approach to measure progress across key areas, including emissions reductions, resilience building, and socio-economic co-benefits. The final project indicators, baselines, and targets will be developed and confirmed during the preparation process of each of the projects.

The NPC framework uses specific categories to monitor and assess the impact of climate programmes. Category 2: NPC Country Impact Indicators measures national-level outcomes of investments, reflecting their broad impact. NETFUND will oversee reporting on Category 2: NPC Country Impact Indicators. This responsibility involves tracking and documenting the measurable outcomes' contributions to national climate resilience, sustainable development, and socio-economic impacts. Category 3: NPC Core Indicators track essential metrics aligned with programme goals and MDBs will ensure the incorporation of all relevant core indicators into the M&R systems of each project and report to the CIF on an annual basis. Category 4: NPC Co-Benefits indicators capture additional positive effects, such as gender equity and biodiversity conservation. Finally, Category 5: Optional Indicators provides flexibility for projects to monitor context-specific outcomes, complementing the standardised indicators. It is aimed to harmonise indicators and methodologies with already existing initiatives.

Kenya's National Climate Change Action Plan (2023-2027) serves as a key framework for addressing climate resilience and mitigation, and several indicators in the IP align closely with its objectives. Notably, the IP complements Strategic Objective 4, which focuses on enhancing the capacity of forest, tree, and wildlife resources to adapt to climate change impacts, deliver mitigation solutions, and improve the resilience of communities across various landscapes. As part of the NCCAP, Kenya tracks forest cover as a % of total land area, tree cover as a % of total land area, and the proportion of degraded lands as a % of total land area. For example, to reduce emissions from deforestation and forest degradation, the government launched national tree growing and restoration campaigns and aims to have an additional 1% of existing forest cover by 2027. It is also envisioned to restore 35 000 ha of

degraded public forests to reduce emissions from deforestation and forest degradation. KWS plays a critical role in managing and controlling alien invasive species within protected areas. However, the NCCAP does not specify targets or allocate a dedicated budget for this task. To ensure coherence, the indicators for the IP have been carefully reviewed and aligned with the broader targets outlined in the NCCAP.

Additionally, the LADA framework can be used to establish gender sensitive indicators (Biancalani et al., 2013). The framework, originally developed by the FAO, includes tools for assessing land degradation and sustainable land management at multiple scales. While the framework's core focus is on biophysical assessment, it also integrates socio-economic and cultural dimensions. A gendered analysis can evaluate how the implemented projects support women through access to markets or climate smart agricultural practices. For example, their sustainable livelihoods framework helps understand how different household livelihoods interact with the natural, socio-economic and policy environment. An equal gender representation of men and women also needs to be ensured from the start in stakeholder engagements so that gender-specific issues can be brought up and included in the project design. Gender disaggregated data should also be collected throughout the project implementation phase to understand how degradation and restoration activities affect men and women differently.

Figure 8.1 Theory of change for the Kenya NPC Investment Plan

Table 8.1 Proposed IP Results Framework

NATURE, PEOPLE, AND CLIMATE INVESTMENTS PROGRAM INTEGRATED RESULTS FRAMEWORK						
RESULT STATEMENT	**MONITORING APPROACH**					**EVALUATION AND LEARNING APPROACH**
	INDICATORS	**BASE-LINE**	**MEANS OF VERIFI-CATION**	**TARGET**	**NOTES**	**KEY AREAS**
KENYA IP-LEVEL IMPACTS (REPORTED BY GOK)						
Improved use and management of land and other natural resources for low-carbon and climate-resilient livelihoods and businesses	**NPC Impact Proxies:** Proportion of agricultural land under regenerative practices Poverty rates (%) from the biannual household survey Tree cover (as % of total land area) ha of degraded land restored Ha of land under improved management	Country- and territorial-level analyses from land diagnostics, IPs, and project appraisals (non-zero)	KNBS Household survey KFS Tree cover from satellite data Vegetation cover changes from satellite data.	TBD	The indicators will need to be monitored and reported on by NETFUND. Indicators will be compiled for the project areas (counties) To the extent feasible, poverty rates will be further delineated by female-headed households and by other vulnerable/disadvantaged groups.	At the Investment Plan level, it can potentially include (i) relevant signals of transformational change, (ii) effective establishment of an integrated, multi-sectoral, participatory mechanism for climate-responsive land use planning and management at the landscape level, and (iii) gender-responsive analyses of land/ecological systems transformation.

RESULT STATEMENT	MONITORING APPROACH					EVALUATION AND LEARNING APPROACH
	INDICATORS	BASELINE	MEANS OF VERIFI-CATION	TARGET	NOTES	KEY AREAS
KENYA IP-LEVEL OUTCOMES (REPORTED BY MDBS)						
A. Improved management of natural resources	**NPC CORE 1 (= CIF 1). Mitigation**: GHG emissions reduced or avoided or enhancement of carbon stocks (mt CO2 eq) – direct/indirect	0 (with reference scenario esta-blished)	Mid-term and lifetime estimate by projects	Cumulative (2033) 5.5 mt CO_2 eq.	Will be calculated based on change in landcover calculated under NPC2 Land area (see below) based on project activities. This indicator will be calculated annually and reported on as direct vs. indirect reductions (per MDB-approved methodologies) with evidence provided at mid-term and completion.	CIF's targeted evaluations and/or sector studies to fill strategic knowledge gaps. Evaluation and learning activities designed and integrated into projects in response to identified knowledge gaps and learning opportunities.
	NPC CORE 2. Land Area: Area of land or other physical environments covered by climate-responsive natural resource management practices (ha) – mitigation/ adaptation	0	MDB project results data	121 200 ha of farming land under climate smart, conservation agriculture and agroforestry (adaptation and mitigation, AfDB) 12 000 ha of rangeland under restoration (adaptation and mitigation, AfDB) 2500 ha of forest and forest land under restoration (mitigation, WB) 6000 ha of natural grass and woodland under restoration (adaptation and mitigation, WB)	Annual monitoring. Disaggregation : Mitigation vs. Adaptation Obtained from MDB project monitoring data, and available spatial and remote sensing data.	

RESULT STATEMENT	MONITORING APPROACH					EVALUATION AND LEARNING APPROACH
	INDICATORS	BASELINE	MEANS OF VERIFI-CATION	TARGET	NOTES	KEY AREAS
				4000 ha wetland and riparian land under restoration (mitigation, WB) Area of land under new or improved management (ha) Will confirm target value (adaptation + mitigation, IFC)		
B. Increased adoption of sustainable supply chains	**NPC CORE 3. Sustainable Supply Chains:** Number of firms, enterprises, associations, or community groups that have adopted a sustainable supply or value chain approach (#)	TBD	MDB project results data	5 tertiary-catchment scale producer associations / cooperatives (AfDB) % women in leadership positions in associations/cooperatives	The number of enterprises or cooperatives newly engaged in agriculture and forestry value chains compared to baseline analysis. Possible additional indicators include: -Sustainability certifications -Zero deforestation pledges -Corporate roadmaps -Strategies/investments in nature-based solutions -Integration of climate risks in governance/disclosures. Disaggregation of indicators may be by type of actor (private sector vs. community); by sector; by women-owned enterprises and women's community groups.	Reporting and analysis should also examine the extent to which **supply chains are gender responsive.** Such approaches might include the adoption of policies to ensure gender equity in value chains. Signals of transformational change and related learning activities might focus on **the interlinkages of individual supply chains,** with the broader landscape or ecosystem in which they operate. Special attention may also be given to how various forest and farm communities and households with limited access to productive assets stand to gain or lose in the process.
C. Strengthened enabling environment for	**NPC CORE 4. Policies:** Number of policies,	TBD	MDB project results/	World Bank:	Possible additional indicators might be related to:	Changes in policies, plans, and institutional capabilities may also be incorporated in **analyses of**

RESULT STATEMENT	MONITORING APPROACH					EVALUATION AND LEARNING APPROACH
	INDICATORS	BASELINE	MEANS OF VERIFI-CATION	TARGET	NOTES	KEY AREAS
sustainable uses of land and other natural resources	regulations, codes, or standards related to climate-responsive land or natural resource management that have been amended or adopted (#)		country data	3 forest management units with gazetted management plans 2 wetlands with updated and gazetted management plans 7 communal conservancies with gazetted sustainable and wildlife-compatible management plans Gazetted environmental flows and water resource management objectives for Ewaso Ng'iro North Basin	-Environment and ecosystems -Private enterprise -Financial markets, institutions, and products -Livelihoods -Land tenure (gender-responsive) -Gender equality -Empowerment of Indigenous People, local communities, and religious/ethnic minority groups -Just rural transitions.[17]	**signals of transformational change**. For example, specific policy analysis might help support the overall understanding of coherence across international and national policies (i.e., relevance) and linkages between national policy and institutional capacity (i.e., scale).
E. Mobilized public and private capital	**NPC CORE 5 (= CIF 4). Co-Finance:** Volume of co-finance leveraged (US$) – *mitigation/ adaptation*	0	MDB project financial data	(1) World Bank: US$ 55.50 million (estimated co-financing from government: US$ 1.7 million; estimated co-financing from GBFF and KEWASIP: US$ 3.8 million + US$ 50 million). (2) IFC: US$ 32 million (estimated co-financing	Total of non-CIF resources leveraged in NPC projects. Disaggregation: Source of co-financing (MDB, Government, Private Sector, Bilateral, and Other)	

[17] Aligning with the vision of the Partnership for Just Rural Transition in which governments, companies, and local communities collaboratively seek to mobilize solutions and investments for sustainable food production, stewardship of land, natural resources, and ecosystems, and enhancing livelihoods

RESULT STATEMENT	MONITORING APPROACH					EVALUATION AND LEARNING APPROACH
	INDICATORS	BASELINE	MEANS OF VERIFI-CATION	TARGET	NOTES	KEY AREAS
				from IFC: US$ 8 million, estimated co-financing from private sector: US$ 24 million). (3) AfDB US$ 33.70 million (estimated co-financing from government: US$ 1.70 million; estimated co-financing from AFD: US$ 32 million). Total: US$ 121.2 million	Mitigation vs. adaptation: The proportion for mitigation will be larger than for adaptation and it will be estimated during project preparation	
F. Rural communities and Indigenous Peoples' sources of livelihoods improved	**NPC CORE 6. Livelihoods:** Number of people receiving livelihood benefits	0	MDB project results data/ surveys	**Adaptation specific**: 100 000 households adopting regenerative agriculture practices (AfDB) 150 households having shifted from wetland / riparian areas to new areas with water harvesting (AfDB) 150 women outgrowers for tree nurseries (AfDB) Reduction in food insecurity levels among targeted communities (% of households TBC by AfDB) At least 40% participation rate of women and	This indicator[18] measures the number of direct project beneficiaries supported with monetary and/or non-monetary benefits from NPC projects, which straddle the social dimensions of climate change and economic gains. While there might be some overlap with NPC CORE 7, this indicator measures the number of *beneficiaries* rather than the number of *jobs*.	Further just transition aspects of livelihoods related to distributional impacts or social inclusion may be incorporated in studies, evaluations, and analyses.

[18] Informed by FIP Theme 1.2

RESULT STATEMENT	MONITORING APPROACH					EVALUATION AND LEARNING APPROACH
	INDICATORS	BASELINE	MEANS OF VERIFI-CATION	TARGET	NOTES	KEY AREAS
				marginalised groups in agricultural activities (AfDB) **Non-adaptation specific:** 500 of people benefitting from private NbS ventures (of which 250 female; WB) 4000 people with increased water security (of which 2000 female; WB)	<u>Possible disaggregation:</u> By type of benefit (mandatory) By gender (mandatory) By Indigenous People and Local Communities By vulnerable groups (defined per IP/project)	Quality and distribution of jobs: Through both just transition and gender-responsive approaches, further evaluative and learning-oriented analyses may center on the types of jobs created (and lost), and which sub-populations are gaining (and losing) employment opportunities. For example, this might include generating evidence on decent jobs created and plans for addressing jobs lost through skills development and economic diversification activities. Modeling: Indirect job creation, such as induced employment along the supply chain, may be estimated using modeling techniques alongside projects' reporting of direct job creation.
	NPC CORE 7. Jobs: Number of jobs created – direct and indirect	0	MDB project results data/ modelling	**Direct jobs:** World Bank: TBC (50% women) AfDB: TBC (50% women) IFC: TBC (50% women) **Indirect jobs:** TBC	Direct jobs created should be reported by projects. <u>Disaggregation:</u> Direct vs. indirect: Indirect jobs targets expected to be larger than direct jobs and will be estimated during project preparation. By gender (mandatory) and vulnerable groups By type of job	
G. Business case for private sector	**NPC CORE 8. Private Sector Investments:** Number (#) and	0	MDB project results/	- (2) Number of PPPs and other joint venture transactions structured (IFC)	This indicator is closely related to **NPC CORE 5 (Co-Finance)** but focuses on private sector solutions	Evaluation and learning activities may build on the tracking of private sector investments for mitigation vs. adaptation to

RESULT STATEMENT	MONITORING APPROACH					EVALUATION AND LEARNING APPROACH
	INDICATORS	BASELINE	MEANS OF VERIFI-CATION	TARGET	NOTES	KEY AREAS
investments demonstrated	value ($) of CIF-supported private sector investments in sustainable land or natural resource management – *mitigation/ adaptation*		financial data	- $32M Value of financing facilitated (including leveraged from private sector and IFC)	and may not correspond directly to total project financing. Additional examples might include: -Nature-based solutions -Climate-smart agricultural value chain development -Commercial forestry -Other non-timber use of sustainable forestry (i.e., tourism, conservation) Disaggregation: Mitigation vs. adaptation focus By sector and gender	generate lessons on increasing the deployment of private sector adaptation financing toward the Paris Goal of 50/50 parity in total climate financing. Observe and report on the actual investments of private sector and the improvement of access to finance. Further analysis of financial intermediation/on-lending of local climate finance may be undertaken in tandem with market assessments for **CIF Impact 4 (Co-Finance).**
H. Fostered innovation	**NPC CORE 9 (= CCV 1). Innovation**: Number of innovative.19 businesses, entrepreneurs, technologies, and	TBD	MDB project results data	(2) Number of transactions involving innovative instruments (carbon credits, climate-linked debt, etc.) (IFC) 2 digital platforms for marketing sustainable produce (AfDB)	This indicator measures the extent to which businesses, entrepreneurs, technologies, and other ventures with a climate-responsive business model have strengthened their overall business	The progress and effectiveness of new methodologies and technologies need to be monitored and reported on for scalability into other areas and for their potential to influence national plans and strategies.

[19] Refer to the CIF Climate Ventures Proposal for a more precise definition of innovation in the context of the CIF: climateinvestmentfunds.org/sites/cif_enc/files/meeting-documents/scf_tfc.15_inf.4_cif_climate_ventures_proposal.pdf; MDBs will also have some flexibility to define innovation as appropriate to their own country and market contexts when reporting on this indicator. For example, an established business model moving into a new market context might be considered as innovative, if relevant.

RESULT STATEMENT	MONITORING APPROACH					EVALUATION AND LEARNING APPROACH
	INDICATORS	BASELINE	MEANS OF VERIFI-CATION	TARGET	NOTES	KEY AREAS
	other ventures demonstrating a strengthened climate-responsive business model			1200 ha of rangeland which is developing a tradeable permit system (assuming 20% of rangeland restoration areas trial a permit system; WB)	development. This may refer to evidence of advances from ideation to prototyping, R&D, pilot testing, and entry to market, or scaling-up, depending on a business, entrepreneur, technology, or venture's maturity at baseline. It is expected that some investment solutions may overlap with NPC CORE 8.	
RESULT STATEMENT	**MONITORING APPROACH**					**EVALUATION AND LEARNING APPROACH**
	INDICATORS	**BASELINE**	**MEANS OF VERIFI-CATION**	**TARGET (DATE)**	**NOTES AND SDG ALIGNMENT**	**KEY AREAS**
KENYA IP-LEVEL CO-BENEFITS (TO BE REPORTED BY MDBS)						
Social and Economic Development Co-Benefits	**CO-BENEFIT 5.** Biodiversity improvement from project activities	Bio-diversity index in 2025	Independent evaluation, lifetime	31 500 ha with enhanced biodiversity benefits 10% reduction in annual deforestation rate	The application of the Global Biodiversity Standard will serve to validate biodiversity outcomes achieved through project activities.	

8.3 MONITORING AND REPORTING

Landscape wide analysis. The results framework will serve as Kenya's key tool for tracking the NPC programme's progress with measurable indicators and targets. It connects the programme's objectives to the anticipated outcomes of each project. These projects and activities were developed after a detailed assessment of Kenya's national and regional needs, particularly concerning improvements in ecosystem condition and supply of ecosystem services across natural, semi-natural and agricultural landscapes, and ensuring that livelihoods and businesses are more resilient to climate change impacts. This assessment drew from Kenya's national policies, project evaluations, and consultations with local officials and stakeholders to ensure a comprehensive approach.

Anticipated programme impact. The results framework tracks key indicators linked to the NPC-Investment Plan goals. The current indicators and targets are indicative and will be refined during project preparation. The final targets will be broken down by project and will be agreed upon during the project design stage and officially reported at the time of MDB board approval of projects.

PIUs will be established to provide technical, administrative, and monitoring support for the implementation of the programme. Unlike the IFC, which works directly with the private sector and does not require a PIU, MDB-funded public sector projects necessitate direct government involvement. The World Bank and African Development Bank-funded projects will have their own dedicated PIU to manage project-specific activities. To ensure alignment with national priorities and institutional capacity, the PIUs will be embedded within NETFUND. This ensures the institutionalisation of project activities and aligns the implementation process with government development objectives. Embedding the PIU within NETFUND leverages existing structures and capacities, creating a centralised hub for project oversight and stakeholder coordination. NETFUND will be responsible for the IP-level monitoring and evaluation requirements.

The financial costs associated with the establishment and operation of the PIU will be covered by the government. Specifically, the government will co-finance MDB projects through in-kind contributions, including:

- Providing office space for PIU operations,
- Allocating government personnel to support PIU functions.

Each PIU will include a dedicated Monitoring, Evaluation, and Reporting Specialist, tasked with overseeing the collection and analysis of data on project performance. Monitoring and evaluation responsibilities will be embedded within the institutions managing project activities, supported by the PIUs to ensure coherence and consistency.

Project implementing agencies will lead in tracking impact indicators established in the programme's results framework. MDBs will report annually or bi-annually on project outcomes to the CIF Secretariat, adhering to the integrated monitoring and evaluation guidelines. The success of the monitoring and reporting process depends on active collaboration among stakeholders. Stakeholder consultations will be held at critical intervals—at the investment plan level, project start, midterm, and end—to review progress, refine targets, address gaps, and adapt strategies as needed. This participatory approach ensures that all relevant parties remain engaged and that the programme benefits from adaptive management practices.

At the project level, implementing agencies will track impact indicators, collect baseline and endline data, and ensure alignment with the results framework. They will collaborate with stakeholders to set targets, monitor progress, and report annually to MDBs. Each project must integrate socio-economic and ecological indicators, measure transformational change, and ensure regular assessments at key milestones (start, midterm, and end – unless otherwise specified in the results framework), while addressing gaps and adapting targets as needed. Institutions will assign dedicated monitoring and evaluation specialists to compile data and provide feedback for effective

implementation and alignment with programme objectives.

NETFUND will be responsible for the implementation of cross-cutting evaluations, learning reviews and facilitating learning events. They will check that the overall IP's targets are met and ensure consistency across all projects and concepts. They will assess qualitative and quantitative data and periodically report on progress, lessons learned and emerging challenges. At the same time, they will organise regular learning events, such as workshops or webinars, for stakeholders at various levels. This will enable stakeholders to share findings from evaluations and reviews, promote knowledge exchange and learning across concepts and projects, improve collaboration to address any challenges that may arise, and to replicate successful practices. The findings from the evaluations and learning events will then need to be implemented into the programme planning and implementation.

Additionally, the Focal Point, other relevant government actors, and the MDBs will collaborate and coordinate with the CIF Secretariat Evaluation and Learning Team in evaluations of transformational change. The CIF E&L team is responsible for managing and implementing these evaluations, ensuring that they will adhere to the dimensions outlined by the Transformational Change Learning Partnership (TCLP) and align with CIF's framework. These evaluations would address key questions, including who is empowered during transitions (procedural justice), who benefits or loses (distributional justice), the alignment of needs and plans (relevance), required systemic changes (systemic change), the management of urgency and complexity (speed), the scaling of interventions (scale), and the capacity built for sustainable development (adaptive sustainability). This approach ensures a comprehensive assessment of inclusivity, fairness, and long-term impact. Measuring inclusivity requires the collection of gender and age disaggregated data to understand and address specific needs of women and youth. Including participatory feedback mechanisms ensures that their voices are heard and that any concerns and integrated into the programme.

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APPENDIX 1. PROJECT CONCEPT BRIEFS

CONCEPT 1: NATURE CAPITAL (WORLD BANK)

SECURING KEY BIODIVERSITY AND ECOSYSTEM SERVICES FOR CLIMATE-SMART LANDSCAPES

PROBLEM STATEMENT

Kenya has made significant strides in addressing natural resource governance challenges in the country's rangelands through a range of instruments and initiatives. While progress has been made, there is still an opportunity to further enhance policy and implementation capacities at the community, county, and national levels to ensure the sustainable use of rangeland resources. Improving water management is a key focus, particularly in a water-scarce country, and efforts are underway to restore and protect rivers, wetlands, and water source areas, which have been impacted by deforestation. Additionally, initiatives to rehabilitate degraded rangelands are crucial for enhancing carbon retention, reducing environmental degradation and mitigating human-wildlife conflict, ensuring a more harmonious coexistence between communities and wildlife. This concept focuses on the restoration, sustainable management and protection of key ecological infrastructure - the natural and semi-natural ecosystems that complement or replace the need for built infrastructure through the supply of ecosystem services, as well as rangeland and wildlife assets that support rural livelihoods and the tourism sector in the Ewaso Ng'iro North Basin. The components and activities will focus in the upper catchment counties of Laikipia, Nyandarua, Isiolo, and Samburu.

The mountainous forested landscapes in the upper catchment areas of the Ewaso Ng'iro North Basin are not only important for climate mitigation and adaptation but are critical for water security, as they store rainwater and regulate river flows. They are also important for groundwater recharge and for reducing soil erosion and preventing sediment runoff into rivers. Furthermore, they contribute to pollination and play an important role culturally. However, these areas have become deforested and degraded and continue to be threatened by encroachment, largely as a result of weak integration of traditional knowledge systems in the conservation and management of forests, and ineffective community-based institutions for forest management. Most of these forested areas are either formally protected and managed by KFS or they are managed by community forest associations (CFAs) which enter into forest management agreements with KFS. However, many of these CFAs lack the knowledge, capacity and resources to adequately manage these landscapes and reforestation efforts have been slow. Furthermore, CFAs (e.g., Lariak Forest CFA, Rumurti CFA, ILMAMUSI CFA) report that uncontrolled livestock grazing in the forests remains a major problem and threatens tree planting activities. Human wildlife conflict is also a challenge in these areas as elephants move through the forest in search of water and have actively destroyed CFA tree nursery infrastructure and seedlings in the process.

River systems, which flow from the water towers, are vital life support systems in Kenya. Their management affects the quantity and quality of water supply for human activities, as well as the capacity of landscapes to support biodiversity. Much of Kenya is water scarce, yet water use is neither strategically allocated nor tightly controlled, as is the case in the Ewaso Ng'iro North Basin. This leads to upstream-downstream conflicts over water use, and a failure to secure appropriate flows to maintain the health of aquatic ecosystems. While regulations are in place for irrigators to invest in floodwater storage to minimise impacts on low season flows, compliance has been poor. This has been in the case in the Upper Ewaso Ng'iro River North. In addition, aquatic ecosystems are not protected as lifelines that provide valuable services in terms of maintaining water quality as well as harvested resources. Instead, widespread uncontrolled use of riparian and wetland areas for crop production and livestock has eroded the functionality of these systems, some of which have historically supported critical habitat for species, such as for reproduction and seasonal movements. While management structures are in place, in the form of WRUAs supported by the WRA, the overarching knowledge, awareness and capacity to manage river systems sustainably has been

lacking. This includes basic information on how water is being used currently, the trade-offs involved in water allocation and the optimal allocation of water among users and the environment, as well as the benefits of removing pressures on riparian and wetland areas and restoring their functioning.

Kenya's wetlands are also critically degraded due to weak management, inadequate restoration efforts and inadequate policies. Limited community involvement and insufficient funding have hindered effective wetlands conservation. Human encroachment, pollution and climate change further threaten these ecosystems. Immediate action is needed to strengthen policies and institutions for the production and restoration of wetlands whilst funding is urgently needed to strengthen the protection and management of wetland ecosystems.

In the lower catchment areas, rangelands are a vital part of the ecosystem asset base, supporting vast numbers of livestock and wildlife, and providing critical corridors for their movement. However, these rangelands have become severely degraded, threatening not only biodiversity but also the livelihoods of millions of Kenyans. Productivity of rangelands is under threat due to increased land use conversion to commercial agriculture involving monocultures, unchecked commercialization and privatization of land, poor grazing management practices as well as due to invasive alien plants such as Prosopis and Opuntia spp. Human wildlife conflict is also reportedly escalating, especially where livestock and wildlife compete for habitat, grazing or water resources and where general wildlife depletion exacerbates risk of livestock predation. While some community conservancies have been actively trying to restore degraded rangelands, they often lack the ecological expertise and necessary resources to achieve their objective. Community conservancies visited in Laikipia (e.g., Maiyanat, Naibunga Upper, Naibunga Central, Naibunga Lower, Koija, and Shulmai) recognise the importance of wildlife and the need to conserve it for future generations and would like to be able to maximise the use of wildlife through ecotourism for the benefit of the community. However, they acknowledge that the community lacks the resources and marketing ability to do this alone.

Overall, there is a need for restoration of ecosystem health and connectivity at landscape scale to improve livelihoods, capitalise on the natural resource base and increase resilience. These various elements of the landscape – source area forests, rivers, wetlands and rangelands are connected through surface and groundwater flows and their sustainable management and protection is essential to the long-term viability of both human activities and wildlife populations.

PROPOSED CONTRIBUTION TO INITIATING TRANSFORMATIONAL CHANGE

COMPONENTS AND ACTIVITIES

The proposed investments under this concept will deliver opportunities for systemic change by recognising and capitalising on ecosystem and wildlife values, instilling sustainable practices, and building capacity. To achieve this, four core components, each with an indicative suite of activities and supporting activities are proposed (see Table 9.1).

Component 1 focuses on actively restoring and protecting forests in important water source areas. These forests are critical for storing rainwater, regulating river flows, recharging groundwater, reducing soil erosion and reducing sediment runoff, and are also important in terms of pollination and for providing cultural services. As these forests become increasingly encroached and degraded there is a need to ensure that they are clearly demarcated and actively managed to ensure improved protection and restoration. This would involve undertaking detailed forests assessments to spatially map and zone the forested areas and to develop and gazette restoration and management plans. The development and implementation of forest management plans would require extensive community engagement and sensitisation as well as the development of appropriate by-laws with sanctions to discourage new movement into sensitive areas that have been demarcated. Economic and social impact assessments will need to be completed as part of the management plan as well. Once areas for restoration have been identified the next step would be to train and supervise a workforce and undertake restoration using indigenous tree species.

Component 2 focuses on Running Rivers with the goal of increasing water security. River systems connect people and activities across the length and breadth of each of Kenya's six major river basins. In general, the impacts of activities and management decisions are greatest in the headwater areas, as these have ramifications for all the downstream areas. For instance, smallholder irrigation-based development is the leading source of pressure on water resources in the Ewaso Ng'iro North Basin. The sub-catchment water resources are over-abstracted to supply upstream irrigation needs. This is visually manifest in dry riverbeds especially in the downstream sections of the river even in periods of normal flows. Planning needs to be basin wide, and then action needs to start at the top of the basin. Setting of environmental flows has gained traction globally, with much of the valuable experience for this coming from water scarce countries such as South Africa and Australia. This would involve baseline water and environmental studies, allocation decision-making and the gazetting of environmental flows and resource quality objectives. Other activities will include allocation of tradeable water permits. Throughout the process stakeholder participation will be encouraged in order to create equitable resource use and implement plans which reflect community needs as well as ecological sustainability.

Component 3 focuses on actively restoring and protecting wetland areas. This will require creating a wetland inventory, delineating and mapping wetlands and then assessing their use, status, value, opportunities and trade-offs. This also includes an assessment of the socio-economic importance of wetlands. Establishing working wetlands would require gazetting the zonation of wetlands and ensuring that wetland farming is relocated, and that active restoration, and stewardship programmes are implemented to support communities. Management plans for individual wetlands will also need to be prepared to guide restoration actions. Additionally, sensitisation campaigns will be required to promote awareness about the importance of wetlands and the usefulness of relocating farming activities, supported by stewardship programmes.

Component 4 focuses on restoring rangelands through active and passive restoration activities but recognising that this will require potentially both biophysical restoration for areas where there are strong community institutions and social restoration where there is a need for dialogue and improved spatial management of resources. Wildlife conservancy management plans will need to be developed and gazetted to achieve rangeland recovery and wildlife tourism readiness. This will also require assisting communities in negotiating joint venture tourism partnerships. Degraded rangeland areas will need to be restored by supporting the implementation of tradeable grazing permit systems at appropriate scale, and supporting the implementation of sustainable grazing practices, invasive alien plant control, and active restoration of native vegetation cover. Mutually exclusive water points for livestock and elephant need to be installed to reduce HWC.

Component 5 includes a group of supporting interventions that will strengthen national, county and local institutions and ensure successful implementation of the core activities across all components. These include developing appropriate guidelines for restoration and management, strengthening policies and legislation, undertaking focused capacity building and training, and undertaking community engagement and sensitisation throughout the process.

Table 9.1. Nature Capital (World Bank): proposed components and activities.

Activities
COMPONENT 1: FUNCTIONING FORESTS (actively restored and protected forests in water source areas)
• Undertake detailed forest assessment; develop restoration and management plans, including socio-economic impact assessment • Undertake restoration using indigenous tree species
COMPONENT 2: RUNNING RIVERS (environmental flows are set & maintained)
• Assess water needs and use as well as aquatic ecosystem health, analyse water allocation trade-offs and gazette environmental flows (Classification Process) • Allocate tradeable water permits to water users • Design monitoring and enforcement programme
COMPONENT 3: WORKING WETLANDS (actively restored and protected wetland areas)
• Create wetland inventory and delineation; assess use (ecological, cultural and economic importance), status, opportunities and trade-offs; • Develop and gazette wetland management plans which include zonation and restoration activities. • Relocation of wetland farming from areas where it is in conflict with zonation • Undertake active wetland restoration
COMPONENT 4: RESILIENT RANGELANDS (degraded rangelands under restoration)
• Assess rangeland status; assess opportunities and trade-offs; develop and gazette wildlife conservancy management plans to achieve rangeland recovery and wildlife tourism readiness. • Explore the potential to implement a tradeable grazing permit system at appropriate scale. • Support the implementation of sustainable grazing practices, invasive alien plant control, and active restoration of native vegetation cover. • Install mutually exclusive water points for livestock and elephants • Assist communities in negotiating joint venture tourism partnerships
COMPONENT 5: SUPPORTING INTERVENTIONS
• Strengthen the capacity of national, county and community institutions • Pilot the application of carbon and biodiversity credits in selected restoration sites • Assess relevant policy and legislation and undertake workshops with government on how to strengthen this • Train relevant government staff and community members in restoration methods, monitoring and reporting Undertake community engagement and sensitisation throughout the process

RELEVANCE

This concept aligns with the country's National Ecosystem and Landscape Restoration Strategy, Water Policy and it contributes to Kenya's Nationally Determined Contributions (NDC). Water security is already a major issue across the country and is possibly the single biggest concern in terms of the impacts of climate change. Kenya has recently undertaken high level situation assessments of all six basins. These reports, funded by the World Bank, recommend that more detailed assessments are undertaken, as part of a Classification Process that determines environmental flows based on rigorous scientific and economic assessment. Once gazetted, this provides the legal basis for action to protect aquatic ecosystems.

The proposed components and activities align strongly with existing World Bank funded projects. The Kenya Watershed Services Improvement Programme (KEWASIP) is a five-year programme that is aiming to improve watershed services to enhance the health and resilience of ecosystems by addressing environmental challenges like water scarcity, climate change, and land degradation. Activities are focused on a sub-catchment level, within the water towers, forest ecosystems,

rangelands, and smallholder agricultural areas. KEWASIP prioritised sub-basins (5AA, 5AB, 5AC,5AD) referred to as the Marmanet site extends across part of the Ewaso Ng'iro North Basin.

The 'Sustainable Management and Restoration of Threatened Ecological Corridors in Kenya' Project, funded through the Global Biodiversity Framework Fund (GBFF) executed by NETFUND and implemented by The World Bank, is a US$ 3.9 million project, aiming to restore critical ecological corridors in Kenya. The 4-year programme will be targeting the northern wildlife migratory corridor in Laikipia County with the interventions expected to significantly strengthen the management, governance and coordination of targeted ecosystems. Again, these targeted landscapes extend across part of the Ewaso Ng'iro North Basin and are well aligned to the activities outlined under this concept note.

SYSTEMIC CHANGE

Water resources management across Kenya has focused on grey infrastructure solutions to meet growing water demands and water scarcity. The country has embarked on several major infrastructure projects, including the construction of dams and pipelines to tap into surface and groundwater resources. However, very little attention has been paid to the functioning of its aquatic ecosystems and the impacts that this has on water security and biodiversity. The piloting of a classification process that includes the establishment of environmental flows and re-allocation of water rights provides an opportunity to test and apply international best-practice, and so address water use conflicts in the project area. Enhanced planning and zonation of wetlands is also critical to prevent ongoing wetland encroachment and over-use. Testing of these planning instruments are expected to provide an opportunity for learning that could inform the direction of future national policy and action.

In the rangeland areas, there is a need for undertaking activities in an integrated manner to enable local communities to better understand environmental challenges and to incentivise them to manage their resources more sustainably by investing in supporting activities for knowledge and skills development.

Assisting communities to become economically viable and self-sustaining will lead to broader, transformational economic and social change. This project will bring about a more holistic approach in which nature-based solutions including sustainable water resource management can be harnessed to support existing infrastructure and reduce the need for additional infrastructure investments, recognising and capitalising on ecosystem and wildlife values, instilling sustainable practices, building capacity, and reducing vulnerability and exposure to climate risks.

TIMELINESS OF PROPOSAL IN TERMS OF THE SPEED AT WHICH CHANGE SHOULD TAKE PLACE

The process of setting environmental flows (the Classification Process) can take 1-3 years and ends in gazettement. The process of resettling farmers away from riparian areas and wetlands and restoring these areas will require careful spatial prioritisation and extensive engagement to develop a successful approach. At project scale, restoration measures in vacated riparian and wetland areas could be well underway within five years. Demonstration sites in rangelands areas with active restoration interventions have shown impressive results within two years. However, more passive restoration techniques might take longer. Leveraging the coordination and institutional mechanisms developed under the KEWASIP and GBFF projects, as well as cofinancing, will help to ensure that activities can be implemented efficiently.

SCALE

The restoration of wetland areas in the upper basin combined with measures to protect environmental flows, and measures to promote restoration of rangelands for sustainable and wildlife friendly rangeland use can have basin wide impacts. This concept would be executed in one of Kenya's six major basins and provide a model for scaling up to the other basins.

ADAPTIVE SUSTAINABILITY

In order to strengthen sustainability, the project will follow adaptive management principles in order to stop or shift activities in tandem with evolving circumstances, unintended consequences, or the emergence of new breakthroughs.

IMPLEMENTATION READINESS

STAKEHOLDERS BUY-IN STATUS

The affected stakeholders have been identified based on their dependence on and impact on natural resources and climate mitigation and adaptation initiatives. This includes groups managing rangelands facing degradation, farmers and residents dependent on forests, rivers, wetlands, and rangelands for livelihoods and water security. Conservancies and communities managing wildlife and rangeland restoration programmes, as well as those involved in tourism partnerships. National, county, and local authorities responsible for resource management, policy enforcement and capacity building are also key stakeholders.

Communities in forested areas need to be engaged to participate in restoration efforts. Additionally, sensitisation campaigns need to be implemented to promote awareness about wetland zonation and the relocation of farming activities. Dialogues with rangeland users and conservancies needs to be facilitated to improve resource management and build consensus on sustainable grazing practices and tourism partnerships.

The majority of stakeholders consulted were highly concerned about the haphazard nature of water resources management and the risks that this posed. Stakeholders support a process that will involve a broad level of consultation, and that will result in both the equitable allocation of water resources and securing flows to protect environmental integrity, right down to the arid rangeland areas that depend on river and groundwater flows. Most of all they support a process that eliminates upstream downstream conflicts over water through proper enforcement.

Members of community conservancies were highly concerned about the levels of degradation in their rangelands, with invasive Opuntia species being a major problem in addition to denudation and erosion. These communities are very much in support of strengthening existing governance structures through capacity building and technical assistance to develop management plans that address rangeland condition.

IMPLEMENTATION AND INSTITUTIONAL ARRANGEMENTS

This World Bank funded project will have its own Project Implementation Unit (PIU) embedded within NETFUND. The World Bank PIU will manage their respective project, oversee performance, and ensure alignment with the results framework. They will also be responsible for coordinating community consultations and stakeholder engagements. The World Bank PIU will report to NETFUND and provide annual progress updates to their respective MDBs. NETFUND will facilitate integration of stakeholder feedback and learning through regular events and will be supported by the Technical Advisory Committee (TAC), which provides technical advice and guidance. Chaired by NETFUND, the TAC includes representatives from government, academia, and local agencies to ensure alignment with national and local priorities.

GAPS AND BARRIERS TO IMPLEMENTATION

The following are key gaps and barriers to implementation:

- Limited knowledge and capacity of communities, pastoralists, CFAs, WRUAs etc. to transition to sustainable approaches.

- Lack of government capacity for undertaking strategic analysis and planning for water resources.
- Insecure land tenure.
- Limited data (water resources management, restoration etc.).
- Lack of landowner capacity and funds.
- Lack of capacity on restoration practice.

RATIONALE FOR NPC FINANCING

The outlined activities are strongly aligned to the concept of nature-based solutions for climate change adaptation and mitigation. However, there are barriers that exist that are preventing the sustainable management of natural ecosystems and the strategic management of water resources. This is limiting economic and social development. NPC financing can build the necessary capacity and catalyse investments in prioritised catchments to enable scaling-up of best practices. This will generate long-term economic and social benefits, improve resilience and strengthen local governance structures for improved management of natural resources.

RESULTS INDICATORS

An overview of key outcomes and results indicators are outlined in Table 9.2. The list of indicators will be refined during project preparation.

Table 9.2. Outcomes and results indicators for Concept 1: Nature Capital

Outcomes	Indicators
Actively restored and protected forest areas	Number of forest management units with gazetted management plans Forest area under restoration (ha)
Enhanced water governance	Gazetted environmental flows and water resource management objectives Number of people with increased water security (of which female)
Actively restored and protected wetland areas	Number of wetlands with updated and gazetted management plans Area of wetlands under restoration (ha)
Degraded rangelands recovering through active and passive restoration	Number of communal conservancies with gazetted sustainable and wildlife-compatible management plans Area of rangeland which is developing a tradeable permit system (ha) Number of people benefitting from private NbS ventures (of which female) Number of indirect / direct jobs (women / men) Area of grass and woodland under restoration

FINANCING PLAN, INCLUDING FINANCIAL INSTRUMENTS

The components and activities under Concept 1: Nature Capital will be financed by a US$ 12.50 million grant from CIF NPC Program (including US$ 0.3 million project preparation PPG) and estimated co-financing of US$ 55.50 million through the Government of Kenya and the World Bank GBFF and KEWASIP projects (Table 9.3). There will also be parallel financing in the order of US$ 150 million through KEWASIP and GEF 8 Conservation International which will support the activities outlined under this project.

*Table 9.3. Indicative financing plan for Concept 1: Nature Capital (US$ millions). *Note that US$ 50 million in co-financing through KEWASIP does not represent direct co-finance but represents investment within the same sub-catchment areas through KEWASIP.*

Component	Activity	CIF NPC	Estimated co-financing	Parallel financing
Functioning forests	Assess status, restoration plan Establish workforce, undertake restoration	3.70	1.70 (GoK) 50.00* (KEWASIP)	150.00 (KEWASIP, (GEF 8 CI)
Running rivers	Gazette environmental flows Enhance management of riparian zones Monitoring	4.50		
Working wetlands	Wetland inventory, assessment & management plans Relocation of wetland farming Active restoration	2.70		
Resilient rangelands	Gazette conservancy management plans Tradeable grazing permits Rangeland restoration Strategic water points Joint venture negotiations		2.40 (GBFF)	
Supporting interventions	Coordination of project activities Support targeted training and capacity building of CFAs, WRUAs, conservancies Livelihoods enhancement activities Project management, impact documentation and communication Monitoring and evaluation	1.30	1.40	
Project Preparation Grant (PPG)		0.30		
TOTAL	**US$ millions**	**12.50**	**55.50**	**150.00**

PREPARATION TIMETABLE

Table 9.4 provides an overview of the proposed project preparation timetable.

Table 9.4. Project preparation timetable

Stage	Timeline
CIF approval	November 2025
WB Board approval	March 2026
Project effectiveness (start)	July 2026

REQUEST FOR INVESTMENT PREPARATION FUNDING

The World Bank is requesting US$ 300 000 for project preparation grant (PPG). This will form part of the project allocation to the World Bank.

CONCEPT 2: NATURE PEOPLE (AFDB)

PROMOTING NATURE-POSITIVE, CLIMATE-SMART LIVELIHOODS IN AGRICULTURAL LANDSCAPES.

PROBLEM STATEMENT

Kenya has undergone largescale transformation for agricultural use. High population growth means that arable land which is an essential resource is becoming increasingly scarce in Kenya, and farms and household incomes have been getting smaller, and productivity is declining. This has resulted in widespread adoption of unsustainable farming practices and the extension of cultivated land into key ecosystems such as forest edges, riparian areas and wetlands, which has led to severe degradation with adverse impacts on ecosystem productivity and hydrological processes. As a result, there is excessive soil loss, and sedimentation and nutrification of waterways and lakes, impacting on water security, fisheries, frequency and intensity of flooding events and human health. This is especially true in the high agricultural production areas of the Lake Victoria South Basin.

Vegetation cover stabilises the soil and reduces the amount of rainfall that runs off the land surface during rainfall events, which helps slow potential flood flows and provides more opportunity for rainfall to be absorbed by the soil. This can result in higher groundwater recharge and baseflow. Use of inappropriate agricultural management practices which reduce vegetative cover can limit infiltration and increase soil erosion leading to losses in crop productivity, losses in soil carbon and increased sedimentation of rivers and downstream water bodies. Furthermore, soil acidity of arable agricultural soils has increased, and soil health has deteriorated. These negative outcomes have heightened the vulnerability of the rural poor, threatening food and nutrition security and are exacerbated by climate change.

Furthermore, while agriculture dominates the Kenyan economy, it remains relatively unproductive. This is due to weak, underdeveloped smallholder value chains, poor access to markets, poor access to inputs, infrastructure and technologies, and poor access to credit and financial services. It is also due to a lack of financial, technological and human capacity. Many smallholder farmers lack financial and business skills and have a poor understanding of environmental sustainability and its importance in building resilience. Women struggle the most with these obstacles, owing to their higher participation in agriculture compared with men, but also because of limited mobility, lack of information, and gender-based discrimination.

Deforestation, land degradation, and climate change, threaten biodiversity, ecosystem services, and rural livelihoods. In the upper Lake Victoria South Basin and Ewaso Ng'iro North Basin, forest and riparian boundary areas are particularly vulnerable to overuse, leading to soil erosion, reduced water quality, and loss of habitat. Climate change exacerbates these impacts by altering rainfall patterns and increasing the frequency of extreme weather events. Additionally, small-scale producers often lack the resources, market access, and infrastructure needed to adopt sustainable practices, limiting their ability to contribute to restoration and resilience-building efforts.

This project concept will focus on activities for implementation in the productive agricultural areas of the Lake Victoria South Basin where the conversion of forests, riparian areas and wetlands to agricultural lands has been a major factor contributing to declines in ecosystem services and to losses in agricultural productivity, and in the rangelands of the Ewaso Ng'iro North Basin where livestock production has become largely unsustainable through degradation. The activities in this project concept aim to target and prioritise small scale community led efforts to implement sustainable, regenerative climate-smart agricultural practices and to restore degraded and fragmented natural areas through the implementation of nature-based actions. Implementation of activities will be focused in both target landscapes.

PROPOSED CONTRIBUTION TO INITIATING TRANSFORMATIONAL CHANGE

COMPONENTS AND ACTIVITIES

The proposed investments under this concept will focus on providing critical support to smallholder farmers that will enable them to benefit from sustainable land management practices and investing in NbS activities that promote restoration and sustainable management through improved productivity and opportunities for business development. To achieve this, four core components, each with an indicative suite of activities and supporting activities are proposed (see Table 9.5).

The first component focuses on establishing regenerative, climate-smart agriculture at sub-catchment scales to address food security while also improving soil and water retention, reducing negative environmental impacts from agriculture on downstream environments and people, and reducing climate vulnerability. Mobilising farmer cooperatives in these areas will be a possible first step in assessing existing knowledge and skills in sustainable land management and environmental sustainability. The transition to these practices requires a participatory approach that emphasises demonstration and training, ensuring that farmers in these sensitive areas have proof of concept and the skills needed for successful implementation. Demonstration plots and Farmer Field Schools (FFS) or lead farmer programs will build farmers' capacity, especially for women and youth, and provide proof of concept to stimulate interest and uptake. This will require recognising the challenges the youth and women face in order to increase their participation in the project activities. Women's barrier to participation will need to be reduced, for example by ensuring that the training sessions are held in locations which are easily accessible, or by providing flexible training schedules to accommodate caregiving responsibilities. Strengthening farmer focus groups and empowering lead farmers or village-based advisors will help address the gap left by limited government extension services in these landscapes. Women's leadership could be promoted within farmer cooperatives by setting up quotas and training female lead farmers and facilitators for the Farmer Field Schools to serve as role models and educators. Targeted capacity building of local government officials will be important for strengthening extension services. Piloting, demonstration, and training are essential for introducing these new measures to smallholder farmers and communities living in the target landscapes. Integrating technologies into training and facilitating interactive learning, for example through mobile apps for climate-smart farming techniques, could help appeal to younger generations. Opportunities for innovation and entrepreneurship in agriculture and climate-resilient agribusinesses should be highlighted to make the activities more appealing for the younger generation. Internship and apprenticeship programmes that link youth to experienced farmers and businesses could be developed. Highlighting successful young farmers and agricultural entrepreneurs' success stories could inspire other youth and demonstrate viable career paths in agriculture.

The sustainable livestock production component will assist farmers with the necessary extension support to improve grass cover and livestock productivity through appropriate management of livestock numbers and grazing regimes, integration of fodder trees and shrubs, and climate-smart water harvesting methods (e.g., bunds). There will also be activities centred on improving community engagement and capacitation for community-led rangeland governance. Activities under this component would be focused in the rangelands of the target sub-basins in the Ewaso Ng'iro landscape.

The third component focuses on alternative livelihoods to support riparian and forest restoration in farming areas. This would involve first assessing and spatially planning opportunities to offset restoration, e.g. areas for agroforestry, areas for water harvesting, areas for beekeeping etc. There is successful precedent in the Tana River Basin for drawing farmers away from riparian or wetland areas by assisting with the establishment of rainwater harvesting infrastructure. Therefore, one of the activities would be to focus on developing, rehabilitating and managing community water harvesting infrastructure in specific areas to encourage the movement out of and away from ecologically sensitive areas. The project will not cause any displacement of farmers or populations, including loss or interruptions of livelihoods. In areas where farmers may need to transition due to riparian or wetland restoration efforts, this component will focus on designing and implementing risk mitigation

measures. These include the development of alternative farming opportunities as part of Resettlement Action Plans (RAPs) and the establishment of Grievance Redress Mechanisms (GRMs) to ensure that affected farmers are supported in a socially and environmentally sustainable manner. This approach maintains compliance with AfDB's environmental and social safeguards while ensuring the restoration objectives are achieved without compromising farmers' livelihoods.

Table 9.5. Proposed components with activities and supporting activities for Concept 2: Nature People.

Activities
Component 1: Nature-positive and climate-smart regenerative farming
• Support investment in nature-positive and climate-smart regenerative farming • Climate adaptation in agriculture, water and agroforestry • Provide extension services and training
Component 2: Sustainable rangeland management
• Agro-pastoral and pastoral climate adaptation • Support the implementation of sustainable grazing practices/regimes. • Integration of fodder trees and shrubs. • Develop climate smart water harvesting methods (e.g., bunds) - to improve water available for livestock and vegetation. • Community engagement and capacitation for community led rangeland governance. • Extension support
Component 3: Alternative livelihoods to support riparian and forest restoration in farming areas
• Assess and spatially plan opportunities to offset restoration • Establish agroforestry tree grove borders adjacent to riparian buffer zones • Develop, rehabilitate and manage community water harvesting infrastructure in relocation areas • Establish indigenous tree nurseries (hub and spokes) • Establish beekeeping in restoration areas
Component 4: Small scale targeted value chain development
• Develop inclusive MSMEs and cooperatives with access to climate finance • Develop sustainable and inclusive value chains to support efficient production, processing and utilization of technologies, marketing infrastructure and capacity enhancement along value chains • Increase access to digital advisory services and markets
Supporting interventions
• Undertake detailed situation and needs assessment of targeted communities • Assess relevant policy and legislation and undertake workshops with government on how to strengthen this • Undertake capacity building of local and national government officials and CBOs • Undertake community engagement and sensitisation throughout the process • Train relevant government staff and community members in sustainable practices, monitoring and reporting (e.g., seed propagation and nursery management, agroforestry and CSA etc.)

Agroforestry in forest boundary and riparian areas aims to protect and improve soil health, biodiversity, water resources, and climate resilience, while enhancing long-term agricultural productivity and profitability. This holistic approach integrates trees with crops and livestock, working in harmony with nature to restore and protect vital ecosystems. Key goals of this approach are to prevent further encroachment, stabilising soils and reducing sediment runoff, supporting farmer livelihoods and enhancing climate resilience through diversified and sustainable income sources, such as agroforestry products (e.g., fruits, nuts, honey) that are suited to riparian and forest edge environments. This will also contribute towards climate change mitigation by enhancing

carbon sequestration in both soil and trees, particularly in buffer zones that protect forests and waterways. Agroforestry in boundary areas could be supported through the creation of tree nurseries. A centralised tree nursery (hub) with satellite nurseries (spokes) will facilitate scalable reforestation efforts. This model ensures the propagation of appropriate species while empowering local communities to participate in restoration activities. Such initiatives will restore and protect indigenous forests and riparian areas, improving biodiversity, climate resilience, and ecosystem services. These activities need to be well tailored and need to work towards addressing existing economic barriers that are faced by smallholder farmers. This could include microcredit facilities for equipment, labour and inputs; performance-based payments to tree growers and assistance with rainwater harvesting.

Interest in sustainable regenerative and climate-smart agricultural practices is growing across the entire food value chain. Component 4 focuses on unlocking funds for market support and improved technology. Opportunity exists to engage with private agri-businesses and investors to form partnerships and to develop appropriate marketing technology and market chains to improve farmer incomes and stimulate further investment in regenerative practices. Developing market chains and supporting access to markets stimulates further investment and drives technology adoption. Under this component, appropriate coordination mechanisms will be developed with the IFC to ensure effective collaboration and alignment with the Nature Venture project.

Supporting interventions are needed to ensure the successful implementation of the core activities outlined under the four project components. Many of these are cross-cutting.

RELEVANCE

This concept aligns with several of Kenya's national policies, strategies and plans, including the National Ecosystem and Landscape Restoration Strategy, National Agroforestry Strategy, Kenya's Nationally Determined Contributions (NDC) to the UNFCCC, Kenya's Climate Smart Agriculture Strategy, and the Agricultural Sector Transformation and Growth Strategy. It is also well aligned with existing projects being undertaken by AfDB. 'Building Climate Resilience for Food and Livelihoods in the Horn of Africa (BREFOL)' is a newly approved GCF-AFDB project with the key objective being to reduce vulnerability and increase resilience of agro-pastoral and pastoral communities to climate-induced food insecurity and to reduce greenhouse gas (GHG) emissions in the region. The implementing agency is the Government of Kenya, acting through the National Treasury and Economic Planning (NTEP) and the Ministry of Agriculture, Water, Fisheries, Livestock and Cooperatives (MoAWFLC). BREFOL has a budget of US$ 335.30 million, with US$ 151.00 million from GCF and US$ 184.30 million from the African Development Fund (ADF).

Phase II of the Green Zones Development Support Project (GZDSP II) is being implemented in 15 counties and has a focus on forest conservation and sustainable livelihoods with a strong component on agroforestry and inclusive value chain development for various horticultural crops. The budget of this project is US$ 43 million. It aims to increase the country's forest cover through rehabilitation of degraded forest areas and also expand areas planted with trees in community farmlands. The project will also improve household incomes and food security through production of selected crop value chains food through agroforestry systems.

The 'Drought Resilience and Sustainable Livelihoods Program-Kenya Project' (DRSLP- Kenya) is a US$ 57 million project that is aiming to enhance drought resilience and improve sustainable livelihoods of the communities in the arid and semi-arid lands of six counties in Kenya. Results to date are promising with over 350 000 farmers having benefitted from improved agriculture through increased irrigated area and construction of water harvesting structures and modern crop and livestock marketing centres. The project has also re-seeded over 1000 hectares of pasture/rangelands thus contributing to increased resilience of pastoralists to cyclical drought cycles in the project area. The average crop yields in the project area increased from 2.4 tons per hectare to 8.8 ton per hectare through irrigation while average annual beneficiary incomes rose from KES 150 000 per household to KES 214 000 per household during the project period.

The 'Smallscale Irrigation and Agriculture Value Chain Development Project' (SIVAP) was conceived by the Government of Kenya (GoK) and built on the 'Smallscale Horticulture Development Project' (SHDP) which closed in 2016. Building on the successes of SHDP, SIVAP will expand the development of irrigation schemes in eleven (11) ASAL counties and bring an additional 3336 hectares of land under irrigation. In addition, the project will focus on improved access to market, enhance processing, storage production and post-harvest handling technologies, market accessibility, nutrition and capacity building. To date, the project has contributed to improved agricultural productivity through increased average yields of crops and has also contributed to increased offtake of livestock products for sale and household consumption. Post-harvest losses reduced from 40% to 25% thereby increasing agricultural output available for consumption.

The Rural Livelihoods' Adaptation to Climate Change (RLACC) project with a budget of US$ 2.8 million worked to fully integrate climate change-related adaptation measures into development plans of targeted local governments in Baringo and Turkana counties respectively. The project greatly increased (by over 100%) awareness and involvement of local stakeholders in planning pro-active adaptation measures to climate change. The project also developed and implemented adaptation practices to respond to specific climate change-induced stresses in livestock sector in the two counties.

This concept also aligns with the AfDB US$226 million investment program to 'Build Resilience for Food and Nutrition Security in the Horn of Africa' (BREFONS), which has the specific objective to build resilience to food insecurity and climate change by enabling participating countries to increase agropastoral productivity and production systems; make agropastoral value chains more competitive, thereby ultimately boosting trade and incomes; and enhance populations' adaptive capacity so that people can better prepare for and manage climate change, climate risks, and climate variations. The budget for this project in Kenya is US$ 42.7 million and the key project outcomes are increased crop and livestock productivity, increased carbon sequestration, increased incomes from agro-pastoral value chains.

Other projects in Kenya focusing on regenerative agriculture, which could provide valuable information and lessons learned, include:

- Farm Africa which is helping to increase the production, incomes and climate resilience of farmers in Embu and Tharaka Nithi counties through training of farmer groups.
- 'Regenerative Agricultural practices for improved Livelihoods and Markets' (REALMS) project which is a four-year € 6 million project funded by the IKEA Foundation and implemented by SNV aiming to create an enabling environment for regenerative agriculture targeting 5000 farmers in Kenya.
- Regenerative Pulses Program is being implemented by the Alliance for Green Revolution in Africa (AGRA) in Embu, Tharaka-Nithi, Makueni, and Kitui counties in Eastern Kenya and aims to increase food security through regenerative agriculture and strengthen local extension services for farmers to adopt it. Importantly the impact of the project is being evaluated on farm profitability, household resilience, and the environment by comparing 1000 farmers who are participating in the regenerative pulses program with 1000 farmers who are not receiving the program.
- The Strengthening Regenerative Agriculture in Kenya (STRAK) Project, also funded by the IKEA Foundation, and being implemented by AGRA in partnership with the Cereal Growers Association (CGA) is entering its second phase following a successful initial phase in 2020/2021. The main objective of the project is to assist smallholder farmers in diversifying their crops, diversifying income streams, and adopting regenerative farming techniques to enhance soil health.

SYSTEMIC CHANGE

A climate-smart, restorative, and regenerative approach to farming practices is crucial for enhancing the environmental and socio-economic resilience of agricultural and natural ecosystems in Kenya.

Practices such as regenerative agriculture, agroforestry, sustainable rangeland management, riparian buffer zone planting, and sustainable water management techniques improve soil health, reduce soil loss, increase biodiversity, promote carbon storage and sequestration, and enhance water retention, providing direct benefits to both society and businesses.

This concept will focus on supporting local communities to become economically viable and self-sustaining in the long term, with an emphasis on empowering women and youth through targeted training, skill-building, access to finance, high-quality inputs, and market support. This will drive broader social and economic transformation within the communities, enhancing adaptive capacity and enabling them to maintain sustainable practices that support productive agricultural landscapes, and wetland and riparian ecosystem health and resilience.

TIMELINESS OF PROPOSAL IN TERMS OF THE SPEED AT WHICH CHANGE SHOULD TAKE PLACE

The benefits of regenerative climate-smart agriculture and agroforestry are not immediate due to the restoration processes required in the short term, such as replenishing soil health and improving water infiltration. As a result, productivity gains in such systems typically occur after 2-5 years. However, other components, such as capacity building and leveraging investment, can run in parallel with agroforestry and regenerative agriculture implementation. This includes strengthening market linkages through value chain development, which can provide farmers with access to sustainable markets for agroforestry products like timber, fruits, honey, and other non-timber forest products. Strengthening these market chains will not only incentivise farmers to adopt agroforestry practices but also enhance their livelihoods and create new income opportunities.

By integrating agroforestry and regenerative agriculture with value chain development, this project can generate broader economic and environmental benefits, such as improved biodiversity, increased carbon sequestration, and enhanced water management. Additionally, co-financing opportunities can be explored to scale up the impact across larger target areas. Coordination and institutional mechanisms, such as those through existing AfDB projects, can be leveraged to accelerate implementation and ensure that agroforestry becomes an integral part of the agricultural landscape, promoting long-term environmental sustainability and socio-economic resilience.

SCALE

The integration of NbS into policy and institutional frameworks supports national-level adoption and resource allocation, embedding sustainable practices in longer term strategies. Regenerative, climate-smart agriculture, agroforestry, water harvesting, and indigenous tree nurseries are geographically scalable, promoting ecological restoration across riparian and forest edge areas. Training models, such as Farmer Field Schools, and demonstration plots can be replicated in other landscapes, reaching more smallholder farmers, particularly women and youth. Using a participatory approach fosters a shared understanding and support for sustainable practices. Showcasing successful models can strengthen buy-in and increase interest in shifting toward climate-smart agriculture and ecological restoration.

ADAPTIVE SUSTAINABILITY

Longer term viability of the programme will be achieved through market chain development and development of agri-businesses which will improve income diversification. Income sources like honey production and agroforestry products will support longer term resilience. The restoration of forest boundaries will improve biodiversity and ecosystem resilience. Training programmes will aim to be inclusive and promote equitable participation and leadership. Additionally, strengthening government extension services will improve capacity for adaptive management. It is envisioned that sustainable land management practices will be anchored in local governance and farmer cooperatives to improve continued application of sustainable practices.

IMPLEMENTATION READINESS

Kenya exhibits strong absorptive capacity for the financing and implementation of this concept as part of the NPC program, as reflected in the wider macro-economic context and outlook, the policy environment and institutional setup, and in its experience in managing similar programs and investments in the past.

STAKEHOLDERS BUY-IN STATUS

Stakeholders are interested in value addition as it provides a way to enhance the economic viability of agroforestry and other sustainable practices, ensuring that farmers can derive greater income from their land while contributing to environmental restoration. There is strong support for strengthening the protection of biodiversity and ecosystem services in cultivated areas, alongside building resilience and increasing incomes for smallholder farmers. Introducing agroforestry practices not only helps improve soil health and secure hydrological services but also provides farmers with opportunities to diversify their income, reduce food insecurity, and improve livelihoods.

Targeted value chain development, such as beekeeping in public forests, agroforestry in sensitive boundary areas, and rainwater harvesting to sustain environmental flows, further amplifies these benefits by creating marketable products that incentivise sustainable land use practices. Supporting these actions ensures that farmers gain better access to markets, strengthening local economies and fostering long-term environmental sustainability. These interventions aim to reverse environmental degradation, enhance climate adaptation, and create economic opportunities, ultimately strengthening both ecosystems and the resilience of vulnerable communities.

IMPLEMENTATION AND INSTITUTIONAL ARRANGEMENTS

The AfDB funded project concept will have its own Project Implementation Unit (PIU) hosted within NETFUND. The activities under each of the concept components will be implemented by relevant state departments and agencies including State Department for Forestry, State Department for Water, State Department for Wildlife, State Department for Irrigation, State Department for ASALs and Regional Development, State Department for Livestock, NEMA, KALRO, KFS, KEFRI, WRA, KWS, MESPT, NEMA, and CoG, as applicable.

The AfDB PIU will manage their respective project, oversee performance, and ensure alignment with the results framework. They will also coordinate community consultations and stakeholder engagements. The PIU will further report to NETFUND and provide annual progress updates to their respective MDBs. NETFUND will facilitate integration of stakeholder feedback and learning through regular events and will be supported by the National Technical Advisory Committee (NTAC), which provides technical advice and guidance. Chaired by NETFUND, the NTAC includes representatives from government, academia, and local agencies to ensure alignment with national and local priorities.

GAPS AND BARRIERS TO IMPLEMENTATION

A large number of smallholder farmers engaging in small scale agriculture and livestock production in Kenya are often unable to benefit from markets, due to large distances, underdeveloped market infrastructure, high marketing costs and weak bargaining power (Mathenge *et al.*, 2010; Shiferaw & Muricho, 2011). This is the case even in areas where potential is high (Shiferaw & Muricho, 2011).

Financial constraints such as funding and need for insurance are some of the challenges of implementing NbS-type interventions that have been highlighted by practitioners and reported in the literature (AECOM, 2021). Barriers to accessing finance and technology result in unsustainable practices in harvesting and processing of forest products as well as in farming, contributing to forest cover loss, soil loss and degradation (AECOM, 2021). Small scale producer's access to inputs, services, and technical knowledge need to be improved while facilitating their entry into profitable

markets (Ambrosino *et al.*, 2021). It is also reported that material needs such as planting stock, land and water, are key barriers, as well as a lack of access to markets or low prices for nature-positive outputs, all of which affect the financial bottom line.

Farmer perceptions and perceived risks of switching to regenerative practices (i.e., the trade-off between short-term loss and long-term gains) and to engage in new practices, such as beekeeping, is another challenge.

RATIONALE FOR NPC FINANCING

Regenerative, climate-smart farming and agroforestry align with the NPC program having a strong nature-positive focus with the main aim being to protect biodiversity and secure ecosystem services while improving profitability and productivity. However, major barriers exist such as the lack of smallholder farmer capacity and funds to invest in new practices, and poor market access and underdeveloped markets. NPC financing can build the necessary capacity and could help to unlock private sector investment and catalyse investments in prioritised catchments to enable scaling-up of best practices.

RESULTS INDICATORS

An overview of key outcomes and proposed results indicators are outlined in Table 9.6. The list of indicators will be refined during project preparation.

Table 9.6. Proposed target outcomes and results indicators for Concept 2: Nature People. Estimated quantitative and qualitative indicators are provided under the Integrated Results Framework

Target outcomes	Proposed indicators
Smallholder farmers are well supported and investing in nature-positive, climate-smart agriculture and sustainable rangeland management .	• Number of households adopting regenerative agricultural practices • Number of households adopting sustainable livestock management practices • Number of farmers with increased adaptive capacity. • Number of households having shifted from wetland / riparian areas to new areas with water harvesting • Area of farmland under conservation agriculture • Adoption of climate smart and regenerative agriculture which are nature based • Area of farmland under agroforestry • Area of rangeland under improved livestock management • Participation rates of women and marginalised groups in agricultural activities • GHG emissions (metric tons CO_2 equivalent)
Livelihoods are diversified and more resilient	• Number of (direct and indirect) jobs created through restoration and land management activities • Reduction in food insecurity levels among targeted communities
Agribusinesses and inclusive & sustainable value chains developed	• Number of women out growers for tree nurseries • Number of digital platforms for marketing sustainable produce (such as honey) • Level of improvement in climate adaptation practices in agribusiness value chain
Reduced soil erosion and sedimentation	• Ha of farming land under regenerative agriculture and agroforestry • Area of landscape restoration (ha)

FINANCING PLAN, INCLUDING FINANCIAL INSTRUMENTS

The component and activities under Concept 2: Nature People will be financed by a US$ 13.00 million grant from CIF NPC Program (including US$ 0.5 million PPG) and estimated co-financing of US$ 33.70 million from GoK, ADF and other sources and parallel financing of US$ 65.40 million through the AfDB Green Zone and BREFOL projects (Table 9.7).

Table 9.7. Indicative financing plan for Concept 2: Nature People (US$ millions).

Component	Activities	CIF NPC	Estimated co-financing	Parallel financing
Nature-positive and climate-smart farming	Climate smart agriculture Climate adaptation in agriculture, water and agroforestry	4.50	1.70 (GoK) 32.00 (ADF & other sources)	45.30 (Green Zone) 20.10 (BREFOL)
Sustainable rangeland management	Agro-pastoral and pastoral climate adaptation Sustainable grazing regimes. Fodder trees and shrubs. Climate smart water harvesting Community engagement Extension support	1.00		
Alternative livelihoods to support riparian and forest restoration in farming areas	Assess and plan Agroforestry riparian marking Community water harvesting infrastructure Tree nurseries Beekeeping in restoration areas	3.50		
Small scale targeted value chain development	Inclusive MSMEs and cooperatives Sustainable inclusive value chains Digitisation for market access	3.00		
Supporting interventions	Situation and needs assessment Strengthen policy and legislation Capacity building and training Community engagement	0.50	-	
Project Preparation Grant (PPG)		0.50		
Total US$ million		**13.00**	**33.70**	**65.40**

PREPARATION TIMETABLE

Table 9.8 provides an overview of the proposed project preparation timetable.

Table 9.8. Project preparation timetable

Stage	Date
Project Submission to CIF for approval	April 2026
Project approval by MDB Board	September 2026
Project implementation and supervision	November/December 2026

REQUEST FOR INVESTMENT PREPARATION FUNDING

The AfDB will be requesting US$ 500 000 in project preparation grant (PPG). This will form part of the project allocation to AfDB.

CONCEPT 3: NATURE VENTURES (IFC)

STIMULATING PRIVATE SECTOR INVESTMENT IN NATURE-BASED SOLUTIONS

PROBLEM STATEMENT

Diversifying livelihood activities in Kenya's rangelands and croplands, as well as in the adjacent areas is essential for sustainable development. To unlock these opportunities, facilitating private sector investment is crucial.

Communal rangelands support significant wildlife populations, but these populations are diminishing as rangelands are becoming severely degraded and competition for resources (grazing and water) increases as the human population grows and livestock numbers rise. This has led to increasing levels of human wildlife conflict to the detriment of both wildlife and communities. These threats are exacerbated by climate change and communities are becoming increasingly more vulnerable to these impacts. Partnerships with hospitality sector companies operating in these areas and/or in the adjacent areas may represent a source of investment and impact, including improving resilience and addressing rural poverty, and at the same time offsetting and reducing the impacts of human wildlife conflict, including but not limited to biodiversity decrease. However, investment in activities aimed to combat the negative impact is lacking due to lack of awareness and capacity of both potential private sector sponsors, as well as local communities. This prevents integration of relevant partnerships and plans into investment activities already pursued or those that might potentially be pursued on a standalone basis or part of broader investment initiatives to promote sustainable tourism and ecotourism.

Further, unsustainable farming practices on croplands, especially those implemented by smaller farmers, lead to soil fertility reduction, soil erosion and therefore lower yields with additional effort and expenses potentially required for irrigation and fertilizer applications, reducing overall resilience of the farming activities. More widespread adoption of climate-smart practices such as agroforestry, soil stabilization, as well as flood control, could significantly improve overall resilience of the activities. This would also help reduce deforestation, improve biodiversity and improve overall livelihoods of the communities. At the same time, these activities are often not in focus of the investment plans, both those of private sector sponsor and agricultural sector aggregators, and also often not aligned with larger-scale nature-based solutions implanted in an agricultural area.

Deforestation due to human activities, related but not limited to the above factors, represents a standalone issue, further contributing to climate change and jeopardizing climate resilience of the communities.

Innovative instruments for de-risking related investment projects and project components are required, along with incentives for private sector entities, to make sure that these projects are embedded in their strategies and investment plan, and that stakeholder dialogues with affected and beneficiary communities is established and is efficient. These will need to be supplemented by existing and innovative financial mechanisms and incentives emerging in the markets, such as carbon and biodiversity credits, climate- and sustainability-linked debt instruments, etc.

PROPOSED CONTRIBUTION TO INITIATING TRANSFORMATIONAL CHANGE

COMPONENTS AND ACTIVITIES

The proposed project will support a range of eligible activities, implemented by private sector sponsors on a standalone basis, as well as part of broader investment projects and initiatives. CIF NPC funds will also support enabling stakeholder dialogues and capacity building, early-stage

project development to ensure integrated approach by the private sector companies, and local communities, with the ultimate goal to design projects and bring them to bankability.

The proposed investments under this concept will deliver opportunities for systemic change by recognising and capitalising on ecosystem and wildlife values, instilling sustainable practices, contributing to the restoration and protection of indigenous forest and riparian areas, and building capacity. It is proposed to define a number of eligible activities across the key components raised in the Problem statement, which will be eligible for such support (see Table 9.9).

The financing under the envelope shall be allocated to projects on a blended finance concept: junior debt or equity waterfall instruments, as well as performance-linked incentives and project development financing (convertible and non-convertible into equity) will be leveraged by investment by IFC and other institutional investors, including private banks, equity funds, as well as through equity of the project sponsors themselves. This approach offers an effective mechanism to incentivise private sector investment in NbS, addressing key challenges related to scalability and long-term sustainability in ecosystem restoration. By leveraging third-party capital to de-risk NbS investments, the project can attract resources necessary to scale restoration efforts, enabling the realisation of the economic, social, and environmental value of natural and agricultural land assets. The proposed project can mobilise private sector participation in the following sectors:

Component 1 - Ecotourism partnerships

Support from CIF NPC resources will have a direct and significant impact on the uptake of sustainable land use and biodiversity preservation and restoration practices, which lead to healthier rangelands and enhanced wildlife conservation. The projects may be implemented by private sector entities (such as developers and providers of lodging and other hospitality products), as well as joint ventures established between the private sector and communal conservancies. It is expected that supported projects will further demonstrate benefits for communities, including but not limited to income diversification. A situation and needs assessment should be undertaken to assess what geographical areas are well suited for ecotourism and where the most socio-economic benefits can we achieved.

The component includes on assisting communities and potential private sector sponsors in identifying the scope of eligible activities and, where necessary, structuring formal concession agreement and to finalise legal and administrative arrangements. Expected outcomes include a higher number of ecotourism projects and lodging facilities that specifically includes biodiversity, conservation and wildlife preservation features. This may include assets operating directly on affected land, as well as assets the operations of which directly impacts adjacent affected land. This is expected to be an enabling activity to help identify and develop projects eligible for the blended financing support (but not exclusive to it). Women's representation in conservancy boards and negotiation committees needs to be promoted to ensure their voices influence agreements with tourism partners.

Component 2 – Restoration of forests

IFC will utilize CIF NPC resources to help catalyze investment in reforesting lands, including public lands, such as riparian buffer zones, as well as adjacent and otherwise impacted areas, as standalone projects and initiatives implemented by the private sector, as well as through broader initiatives of the private sector sponsors that include the eligible activities as a key component.

Eligible activities may include reforestation, afforestation, deforestation prevention projects with an overall aim on conservation of forest resources vis-à-vis baseline and towards defined targets. Important impact elements include positive impact on soil composition, flood control etc. Women could play a key role in planting and maintaining forested areas.

Additionally, to help develop large-scale restoration and conservation efforts, innovative financing mechanisms like carbon credits, biodiversity credits, and hydro credits, and public private

partnerships (PPPs) will be explored. Target investments will support sustainable land management and seek to incentivise long-term stewardship of indigenous forests and riparian zones. Youth could be involved in developing technology-based solutions for monitoring reforestation progress, for example through drone mapping and GIS tools.

Table 9.9. Proposed components with activities for Concept 3: Nature Ventures.

Activities
Component 1: Ecotourism partnerships
• Potentially eligible projects to be identified based on the dialogues with potential private sector sponsors (including lodging developers and operators, tourism operators) as well as communities operating in eligible and affected areas, including those identified based on gazetted management plans. • Project development support will be provided to determine the scope and design of the initiatives, integrate them into private sector sponsors' broader strategies and plans, as well as to structure concessions and to finalise legal and administrative arrangements • Capacity building and awareness activities may be envisaged • Structure of supported investment transactions shall include financing from CIF NPC on the blended finance principle described above
Component 2: Restoration of forests
• Identification of priority geographical areas in consultations with potential private sector sponsors across a variety of sector, as well as through the consultations with communities and relevant stakeholders engaged by NETFUND. • Support will be provided to develop and execute restoration and other eligible activities • Enabling work will be supported to set up the framework for enabling instruments, such as carbon and biodiversity credits, climate- and sustainability-linked instruments. This includes guidelines for issuers and developers, as necessary, including the MRV framework. Support will be further provided to register project with certification bodies, issue credits / linked debt instruments and connect with market. • Capacity building and awareness activities may be envisaged • Structure of supported investment transactions shall include financing from CIF NPC on the blended finance principle described above.
Component 3: Sustainable agribusiness
• Agribusiness entrepreneurs stimulate investment by farmers in agroforestry, livestock, soil restoration and flood control activities, including those combined with activities under Components 1 and 2 • Capacity building and awareness activities may be envisaged • Structure of supported investment transactions shall include financing from CIF NPC on the blended finance principle described above.

Component 3: Sustainable agribusiness

This component will focus on incentivising agri-business activities that support NbS in agricultural landscapes. Some of the identified opportunities would be linked to activities described under Components 1 and 2. Eligibility of projects under multiple components would be an additional factor for project selection for financing.

By stimulating investment in agribusiness tied to forest and soil conservation, the project will not only diversify income streams for farmers but also enhances the adoption of sustainable agricultural practices and products that directly support ecosystem health. The eligible activity types may include, but will be not limited to, crop farming (maize, avocado, etc), honey production, agroforestry, as well as livestock farming, among others. It could additionally develop women-led cooperatives to enhance bargaining power and market access for their products and connect female

farmers with value chains and market opportunities. Mentorship programmes could be established for the youth where experienced agribusiness leader guide youth entrepreneurs.

Capacity building is one of the eligible project preparation and support activity and may be delivered not directly by the IFC but rather facilitated through the businesses actively engaging with farmers in the target areas. These businesses, driven by their own operational interests, will be encouraged to enhance the knowledge and skills of their supplier networks. By doing so, they can strengthen the sustainability and efficiency of their supply chains while contributing to the development of local farming communities.

RELEVANCE

This proposed concept aligns with the country's National Ecosystem and Landscape Restoration Strategy, National Climate Change Response Strategy, National Climate Change Action Plan, National REDD+ Strategy, Kenya's Climate Smart Agriculture Strategy, the Agricultural Sector Transformation and Growth Strategy, National Wildlife Strategy, Tourism Strategy for Kenya and National Tourism Policy. The components in this concept will incentivise rangeland restoration, offset and reduce human wildlife conflict and diversify livelihoods in line with improving resilience and addressing rural poverty.

SYSTEMIC CHANGE

By recognising and capitalising on ecosystem and wildlife values, the IPC investment can assist communities to become economically viable and self-sustaining which will lead to broader, transformational economic and social change.

Key barriers, such as limited market access for farmers, inadequate financing, and low adoption of climate smart practices will be targeted. The project is aligned with national and regional conservation and climate strategies ensuring strategic support. Spatial mapping will be used to identify high-priority areas for restoration and community water harvesting to ensure efficient allocation of resources. Through targeted training, mentorship and representation in governance structures, local stakeholders will be empowered.

SCALE

The initiative is embedded in the broader policy frameworks. By demonstrating the economic and ecological benefits of NbS, the project can influence private sector investment in restoration, agroforestry, and sustainable land use practices. The envisioned partnerships with conservancies, private sector, and certification bodies will support institutionalising carbon credit trading.

Agroforestry models which are designed for riparian and forest boundary zones could be replicated in other ecosystems requiring protection. Similarly, ecotourism partnerships can be extended to other conservancies. Additionally, the satellite nurseries allow for scalability to a wider geographic region.

Throughout the process it has been aimed to engage a wider range of stakeholders, including local communities, policy-makers, and private sector actors to co-design the activities. Community participation and farmer cooperatives will ensure that the interventions are rooted in the local context and supported by the stakeholders.

ADAPTIVE SUSTAINABILITY

The proposed interventions leverage mechanisms such as carbon credits, biodiversity credits, and ecotourism partnerships to create self-sustaining financial models that persist beyond the project lifecycle. By creating partnerships between private entities and conservancies, the programme

ensures that ownership, management, and benefits are retained locally, reducing dependency on external funding.

At the same time, the project aims to achieve ecological, social, and economic sustainability: Restoration and sustainable land management activities are expected to improve carbon sequestration while reducing land degradation. Equitable participation in and benefit from project activities is ensured by including women and youth in leadership roles, cooperatives, and mentorship programs.

Training programmes and capacity-building efforts will equip local communities, conservancy boards, and smallholder farmers with the skills and knowledge to sustain and evolve project outcomes. Support for local governance structures will ensure that they can manage natural resources effectively and flexibly adapt to future challenges.

IMPLEMENTATION READINESS

STAKEHOLDERS BUY-IN STATUS

Stakeholder engagement within community conservancies revealed strong support for developing ecotourism partnerships. Ecotourism provides opportunities for livelihood diversification, recognised as being important for building resilience to climate change. Investing in forest restoration and indigenous tree nurseries offers stakeholders an opportunity to address critical environmental and socio-economic challenges while generating economic returns. Ongoing forest restoration projects often face funding gaps that limit their scale and impact. Supporting these initiatives not only enhances biodiversity, climate resilience, and ecosystem services but also creates economic opportunities, increases sustainable supply chains, and builds local capacity.

IMPLEMENTATION ARRANGEMENTS

The IFC, reflecting its private-sector focus, will directly engage with businesses. The IFC will maintain alignment with the IP's goals by submitting semi-annual reports to the CIF Secretariat and collaborating closely with NETFUND through regular meetings. GoK's role on the CIF Committee allows for some input into IFC-led projects to ensure national priorities are considered.

GAPS AND BARRIERS TO IMPLEMENTATION

The following are key gaps and barriers to implementation:

- Limited knowledge and capacity of communities to transition to sustainable approaches.
- Insecure land tenure.
- Lack of landowner capacity and funds.
- Lack of capacity on restoration practice
- Perceived risk by private sector to investing

RATIONALE FOR NPC FINANCING

This concept is strongly aligned to nature-based solutions for climate change adaptation and mitigation. The outlined activities will incentivise the maintenance of healthy landscapes that will improve the supply of regulating and cultural services to the benefit of the entire landscape. The activities would lead to strengthening local governance structures, capacitating local communities, with a focus on women and youth through eco-tourism opportunities, which would have long term social and economic benefits as well as strengthening resilience to climate change through diversification.

RESULTS INDICATORS

An overview of key outcomes and results indicators are outlined in Table 9.10. The list of indicators will be refined during project preparation.

Table 9.10. Target outcome and proposed results indicators for Concept 3: Nature Ventures.

Target outcomes	Proposed indicators
Increased private sector investment in NbS	• Net GHG Emissions (tCO_2e) • Area of land under new or improved management (ha) • Number of PPPs and other joint venture transactions structured • Number of direct jobs created (men / women) • Number of direct jobs supported (men / women) • Value of financing facilitated (including leveraged from private sector and MDBs) • Number of transactions involving innovative instruments (carbon credits, climate-linked debt etc.)

FINANCING PLAN, INCLUDING FINANCIAL INSTRUMENTS

The components and activities under Concept 3: Nature Ventures will be financed by a US$ 8.5 million grant from CIF NPC Program (including US$ 0.5 million PPG) and estimated co-financing of US$ 8.00 million through the IFC which will leverage further investment through the private sector targeting around US$ 24 million (Table 9.11).

Financial instruments may include:

(1) Grants to support enabling activities (such as capacity building and awareness), business development and consultations as well as to provide early project preparation support- jointly referenced as a table as a 'project preparation grant'
(2) Grants for project preparation support that presume investment rights and/or are convertible into debt or equity (under any eligible activity in the table) and project structuring and implementation support
(3) Direct financing to projects under the blended financing principle:
    a. Subordinated debt allocation [returnable or non-returnable, reusable, zero-interest]
    b. Subordinated equity allocation [subordinated equity waterfall, returnable or non-returnable];
    c. Guarantees, risk-sharing facilities [first loss or structured, funded or unfunded]
    d. Direct cash grants for capex associated with impactful pilot eligible initiatives [capped at 20% of the CIF NPC allocation]
    e. Performance incentives [grants to finance a stepdown in debt interest or a direct cash payout linked to the achievement of development outcomes, including under a sustainability-linked structure];
    f. Other de-risking instruments [such as advance allowances to cover the gaps between carbon/biodiversity credits and monetization]

Table 9.11. Indicative financing plan for Concept 3: Nature Ventures (US$ millions).

Component	Activity	CIF NPC	IFC	Private sector
Ecotourism partnerships	• Eligible projects and communities identified • Project development support • Capacity building and awareness activities			
Restoration of forests	• Identify priority geographical areas • Support to develop and execute restoration activities • Support for framework for enabling instruments • Capacity building and awareness activities	8.00	8.00	24.00
Sustainable agribusiness	• Agribusiness entrepreneurs stimulate investment by farmers in agroforestry, livestock, soil restoration and flood control activities. • Capacity building and awareness activities			
Project Preparation Grant (PPG)		0.50		
TOTAL US$ MILLIONS		**8.50**	**8.00**	**24.00**

PREPARATION TIMETABLE

Table 9.12 provides an overview of the proposed project preparation timetable.

Table 9.12. Project preparation timetable

Stage	Timeline
Pipeline development	Up to 18 months
Project preparation for Board Submission	Up to 36 months
Project implementation and supervision	Post-Board approval

REQUEST FOR INVESTMENT PREPARATION FUNDING

IFC is requesting US$ 500 000 for project preparation grant (PPG). This will form part of the project allocation to IFC.

APPENDIX 2. STAKEHOLDER CONSULTATIONS

OVERVIEW

The Kenya CIF-NPC Investment Plan is the outcome of a comprehensive, participatory stakeholder process that was led by the Government of Kenya. The process was carried out through the National Environment Trust Fund (NETFUND) under the Ministry of Environment, Climate Change and Forestry in collaboration with several other ministries, institutions, agencies, multilateral development banks, NGOs, community organisations and other relevant stakeholders. The objective of the consultation process was to ensure meaningful participation, to learn of intentions and gain feedback on proposed options for consideration, and to identify and prioritise and agree on the IP concept notes and their target areas.

STAKEHOLDER MAPPING

This stakeholder analysis draws from a review of the institutional landscape for climate and nature action in Kenya. The analysis allowed the categorization of stakeholders based on functional roles and relevance in climate mitigation and adaptation and conservation and management of natural resources.

In the context of this analysis "relevance" relates to the mandates, roles and responsibilities, and statutory obligations of specific public and non-state institutions with regard to the implementation climate and nature actions. "Influence" on the other hand, is the "scale of resources – human, financial, technological, or political – available to the institution and its ability to mobilize them for action. This may determine the level of power with which an institution can mobilize local communities to translate Kenya's ambitious climate agenda into scaled up action on the ground. The influence is determined by the statutory mandate and extent of resources committed to climate action.

The differentiation and classification of stakeholders is informed by Reed *et al.*, (2009) who distinguished four actors' categories, namely: Players, Subjects, Crowd, and Context Setters. Stakeholders with high influence and interest are known as Players. Subjects exhibit high interest but low influence and can organize themselves into coalitions to increase their bargaining power. Context Setters have low interest but high influence, while Crowd has low interest and low influence.

The institutions were analysed with respect to relevance and influence and placed in one of the four quadrants shown in Figure 9.1 to help determine the appropriate level of engagement relative to their attributes. The highest priority stakeholders are "Players" – they should be fully engaged and kept informed on efforts to translate ambitious climate and biodiversity goals into scaled up actions on the ground. The list of stakeholders considered contains a variety of actors, including national government institutions, county governments, research institutions, non-governmental organisations (NGOs) and development partners.

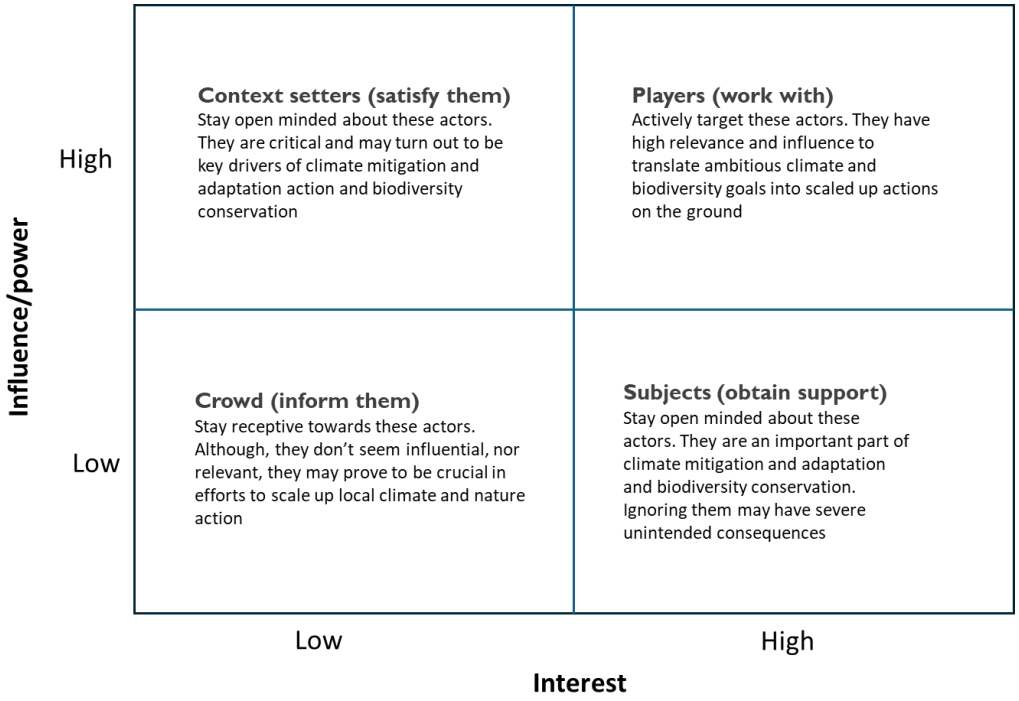

Figure 9.1. Conceptual framework for actors' prioritization

Table 9.13. Categorization of relevant stakeholders

TYPE OF STAKEHOLDER	STAKEHOLDER	PRIORITY
National government institutions	National Treasury	Satisfy
	State Department of Environment & Climate Change	Work with
	State Department of Forestry	Work With
	State Department of Wildlife	Work with
	State Department of Water	Work with
	State Department for Crop Development and Agricultural Research	Work with
	State Department of Livestock	Obtain support
	State Department for Development of the ASALs	Obtain support
	State Department of Irrigation	Inform
	National Drought Management Authority (NDMA)	Work with
	Kenya Meteorological Department (KMD)	Inform
	Kenya Forest Services (KFS)	Work with
	Water Resources Authority	Work with
	Kenya Wildlife Services (KWS)	Work with
	National Environment Management Authority (NEMA)	Obtain support
County Governments	47 county governments, Council of Governors	Work with
Academia and research institutions	Kenya Agricultural & Livestock Research Organization	Inform
	Kenya Forestry Research Institute (KEFRI)	Work with

	Kenya Marine and Fisheries Research Institute (KMFRI)	Inform
	Universities	Inform
Non-governmental and community-based associations	Nature Kenya	Obtain support
	Northern Rangeland Trust	Work with
	International Union for the Conservation of Nature (IUCN)	Work with
	The Nature Conservancy (TNC)	Work with
	Association for Coastal Ecosystem Services	Obtain support
	Conservation International	Obtain support
	African Wildlife Foundation (AWF)	Obtain support
	Wetlands International	Obtain support
	World Wildlife Fund (WWF)	Obtain support
	Concern Worldwide	Obtain support
	Community Forest Associations	Work with
	Community conservancies	Work with
	Grassroot level feedback mechanisms	Work with
	Water Resource User Associations	Work with
Donor Agencies	Food and Agriculture Organization	Satisfy
	United States Agency for International Development	Satisfy
	GIZ	Satisfy
	AFD	Satisfy
	WFP	Satisfy
	International Fund for Agricultural Development	Satisfy
Local community	Pastoralists, farmers, etc. Indigenous People and Local Communities	Work with

CORE TEAM AND TECHNICAL WORKING GROUP

The project was carried out by a core team with input from a technical working group drawn from key ministries and institutions (Table 9.14).

DISCOVERY MISSION

The Discovery Mission took place from 23-30 September 2024 starting with meetings in Nairobi to introduce key stakeholders to the programme and to meet with Technical Working Group (TWG) (see Table 9.14). The logistics for the mission were also discussed. The mission team comprised of representatives from NETFUND, KWS, KFS, KEFRI, NEMA, World Bank, and the consulting team (Anchor Environmental Consultants). The team visited numerous landscapes in Laikipia County and met with several important government and non-government stakeholders to hear about existing interventions, levels of planning and opportunities for further investment. The discovery mission consultations are described in Table 9.15.

Table 9.14. Core Team members and Technical Working Group (TWG).

Group	Affiliation	Name
Core Team	NETFUND	Chrispine Omondi
	NETFUND	Andrew Machora
	The World Bank	Dominick Revell de Waal
	The World Bank	Boaz Okoth Akello
	The World Bank	Douglas Malcolm Macfarlane
	The World Bank	Erica Cristine Honeck
	The World Bank	Alfred Ndungu Gichu
	The World Bank	Raymond S. Kirwa
	The World Bank	Daniel C. Monchuk
	AfDB	Nnaemeka Korie
	AfDB	Asmerom Gilau
	AfDB	Ken Johm
	IFC	Tendai Madenyika
	IFC	Alexander Larionov
	IFC	Neelam Patel
	Anchor Environmental Consultants	Jane Turpie
	Anchor Environmental Consultants	Gwyn Letley
Technical Working Group	State Department for Environment & Climate Change	Vicky Betty
	NEMA	Mr. James Kamula
	KFS	Julius Ekwam
	WRA	Shirley Odongo
	KALRO	Agnes Yobterik
	State Department for ASALs and Regional Development	Fawzia N. Barasa
	State Department for Irrigation	Dr. Elly A Yaluk
	NETFUND	Cynthia Naishulu
	NETFUND	Andrew Cheboi
	State Department for Livestock	Nathan Muturi
	MESPT	Erick Njoroge
	KEFRI	Betty Prissy
	NEMA	Wilfred Osumo
	CoG	Veronica Wanyora
	NETFUND	Fredrick Kamoi
	Council of Governors	Veronica Mueni
	State Department for Forestry	Peterson Kamau
	State Department for Wildlife	Felister Wanjira
	Kenya Water Towers Agency	Peter Kamau
	NETFUND	Benedict Muyale

Key messages from discussions with the Government, including representatives from the Ministries of Forestry, Water, Wildlife, Environment, and Agriculture included the following:

- Unsustainable practices, non-compliance, and environmental problems are widespread, and water security is a major concern.
- There are policy and plans to address this, including at county and sub-catchment level, but there are very limited resources and capacity.
- There is a lack of mechanisms for coordination among different government levels and sectors leading to inefficiencies and conflicting mandates.
- There is a need to increase the capacity of national, county and community institutions, particularly on ecosystem functional roles and NbS.

Key messages from discussions with NGOs and CBOs:

- Interested in focusing on water security, especially sustainable water supply from the towers
- County conservation efforts need to be improved
- Consolidate efforts across NGOs to create better synergies
- Need for conservation legislation in Laikipia County
- Concern about the degradation of wildlife corridors
- Need for better grazing management
- Farming is done to the edge of riparian areas
- Increased groundwater uses with decreasing recharge rates due to degraded landscape

Discussions during the mission helped identify potential NbS activities that could be prioritised for the NPC projects:

- Water resources assessment and allocation
- Water storage for agriculture
- Riparian and wetland restoration
- Forest restoration
- Communal rangeland restoration
- Communal rangeland ecotourism development

The Discovery Mission was enriched with the participation of a wide range of stakeholders from the government, development partners, the private sector, and civil society. The engagement allowed participants to learn about the NPC as well as share experiences and insights related to nature-based solutions and landscape management, including lessons learned, knowledge, capacity, support gaps, and potential priorities.

NETFUND nominated a member from Mainyoito Pastoralists Integrated Development Organization (MPIDO) to represent interests of the IPLCs. Consequently, the member participated in the kick-off meeting, field visits, and technical working group meetings. Additionally, the NPC programme was presented during the International Association of IPLCs conference held in Nairobi.

Table 9.15. Discovery mission consultations 23-30 September 2024.

Date	AM	PM	Focus
Monday 23/09/24	Kick-off meetings in Nairobi with GoK, Technical Working Group, other stakeholders		Introductions to key stakeholders. Overview of CIF NPC IP to stakeholders. Logistics for mission.
Tuesday 24/09/24	Workshop with government departments	Workshop with NGOs, private sector	Strengthen understanding of institutional roles, responsibilities and priority actions. Focused stakeholder meetings (small focus group discussions with key stakeholders): State Department of Environment, State Department of Wildlife, State Department of Agriculture, NEMA, Kenya Water Towers Agency, TNC, MESPT, WWF.
Wednesday 25/09/24	Travel from Nairobi to Laikipia County (Nanyuki)	Meeting with Laikipia County Government	Workshop with government stakeholders: This included County & National Government Representatives. Focused on building an understanding of key issues and priorities linked with project objectives.
Thursday 26/09/24	Meeting with NGOs working in the region	Makugodo Forest (ILMAMUSI CFA)	Workshop with NGOs: (Laikipia Conservancies Association, Kenya Wildlife Trust, Northern Rangelands Trust, Mount Kenya Ewaso Water Partnership, Conservation International, Wild Landscapes International Terrafund for AFR100, Natural State, Space for Giants (NPO), East African Wildlife Society, Laikipia Wildlife Forum(LWF), Laikipia County Natural Resource Network (LAICONAR), various Community Groups. Provided brief overview of project to stakeholders and allowed stakeholders to share what they are doing and identified areas of potential intervention. Meeting with ILMAMUSI CFA to hear about the participatory management of Mukogodo Forest and the key challenges experienced, and interventions implemented (successes and failures).
Friday 27/09/24	Visit to local Community Conservancy (Maiyanat)		The team visited the Maiyanat Community Conservancy and met with representatives from five other conservancies (Naibunga Upper, Naibunga Central, Naibunga Lower, Koija, and Shulmai). The team visited restoration site where rangelands had recovered through specific active restoration activities. The team listened to the conservancy members to hear about their main challenges and their needs and the opportunities for conservation and ecotourism investment. The team also visited areas of the conservancy that had been badly infested with invasive plant species Opuntia.
Saturday 28/09/24	Meeting with WRA and WRUAs (Rumuruti)	Visit to Lariak Forest (KFS and CFA)	Met with the WRA and members of the WRUA in Rumuruti on the status of catchment planning and implementation (action plan for the Ewaso Ng'iro North River Basin) and the restoration of wetlands. Built an understanding of role and level of planning currently in place. Lariak Forest: The team heard from the KFS and the local CFA about forest management plans, threats, challenges, and restoration efforts.
Sunday 29/09/24	Travel back to Nairobi		
Monday 30/09/24	Feedback sessions with TWG		Provided feedback, including key learnings and emerging recommendations from field trips.

JOINT MISSION

The objective of the joint mission was to assist the GoK in developing the NPC IP, building broad-based consultations with key stakeholders, and analysing investment options that support the Government's strategic development strategies. The Joint Mission will focus on consultation, consolidation, and prioritisation of plans and proposals to contribute to developing a country-led Investment Plan.

At the beginning of the joint mission, the draft IP was presented and discussed in the context of nature-based solutions, identifying existing technical, economic, socio-environmental, and institutional information gaps, including the private sector, stakeholder engagement, and gender issues. Throughout the mission, the teams assessed options for developing concept notes that the NPC will support. Inputs, comments, and considerations were collected from representatives of local communities, non-government and civil society organizations, the private sector, and other potential partners. Towards the end of the mission, the funding modalities and institutional arrangements to manage the NPC, and co-financing opportunities by the WB, AfDB, and IFC as the lead MDBs were discussed in plenary. Additionally, co-financing opportunities and linkages with other projects funded by the GoK and other development partners relevant to the IP were highlighted.

The final geographical focus of the CIF NPC programme was still to be determined at the end of the joint mission. A geographical focus for the NPC programme through a catchment approach using prioritisation criteria including degradation levels, climate vulnerability, impact and ongoing interventions was suggested by the consultant team. The geographical focus has subsequently been decided on by the technical working group.

Table 9.16. Joint mission consultations 18-22 November 2024.

Date	Focus
Monday 18/11/24	Workshop in Nairobi with GoK, Technical Working Group, and other stakeholders: Presentation of the prioritisation analysis and the proposed investment plan followed by a discussion.
Tuesday 19/11/24	Team A: Meeting with Nakuru county representatives, meeting with local actors at the Barina wetland, meeting with an agroforestry lead farmer. Team B: Meeting with Narok county government, visit of a privately run nursery close to the banks of the Ewaso Ngiro river, meeting with Nashulai community conservancy
Wednesday 20/11/24	Team A: meeting with the Siaya county office Team B: Visit to Nyanturago wetland in Kisii County; visit to Nyamataro Banana Facility
Thursday 21/11/24	Team A: Visit of a riparian afforestation site and berm on large river as well as a local nursery in Siaya county Team B: Meeting at Kisii county with assistant commissioner followed by a meeting with the local county government, including representatives from water and sanitation, culture, agriculture, environment and natural resources, NEMA, water resources authority. Followed by a visit to Acofresh Processor Ltd who buys avocados from local farmers and turns them into crude oil for export. This was followed by a visit to a forest conservancy (Nyangweta CFA).
Friday 22/11/24	Workshop on report back from the join missions with Team A and Team B sharing key takeaways from their respective trips. Discussion and agreement on overall plan location, activities, etc.) and the next steps.

Key points reported back from Team A:

- Nakuru County: Issues with flooding, catchment degradation, ineffective environmental committees, underfunded WRUA/CFAs, and small-scale restoration efforts.
- Olobanita Swamp: Grazing conflicts with desire to do ecotourism, low tree cover, and upstream water use is degrading the wetland.
- Demonstration Farm: No nurseries for tree planting, and lack of extension support.
- Siaya County: Increasing tree cover loss and wetland encroachment; there is a need for dam restoration and integrated catchment management.
- Vihiga County: Wetland and forest restoration required, sand harvesting management, promoting indigenous trees, and small land sizes causing unsustainable practices.
- Nadanya Farm: Integrated farming, riparian management, and use of solar/biogas for green energy.
- Lake Victoria Wetland: Mostly converted to agriculture with minimal riparian restoration efforts.

Key points reported back from Team B:

- Key environmental issues discussed during the field trip: poor water quality, deforestation (specifically in the Mau Forest), overgrazing, and riparian encroachment.
- Most management plans require review and updates.
- Naishula Conservancy: Funding gaps, encroachment, human-wildlife conflict, lack of mobility, skilled labour, and value addition in pastoralism.
- Kisii County Wetlands/Forests: Wetland degradation, inappropriate restoration efforts, fencing needs, and removal of eucalyptus by NEMA.
- Value Addition: Capacity constraints, seasonal supply for example of avocados and bananas, lack of automation and infrastructure for scaling production.

PUBLIC AND EXPERT REVIEW OF DRAFT NPC INVESTMENT PLAN

The Draft NPC Kenya Investment Plan was published on the Government of Kenya's NETFUND website on 11 Dec 2024 for a period of two weeks. Comments received during this external public review period are shown in Table 9.17 and have been addressed. An independent technical reviewer reviewed the Draft IP as per CIF NPC protocols. These detailed comments and responses are shown in Table 9.18.

Table 9.17. Comments received through the public review of the Draft IP.

Paragraph	Provided for	Proposed amendment	Rationale	Response
Page 4, Fig. 1 Kenya Investment Plan Theory of Change under Column 4: Output	Capacity building of national and local government officials	Add: Strengthening of both national and county institutions	It is necessary to strengthen the institutions to be able to be to effectively undertake their mandates and achieve the project objectives	Training of national and county staff has been added.
Page 96 Section 10.1.1 Proposed Contribution to Initiating Transformational Change and Page 96. Table No. 10.1. Nature Capital (World Bank) Proposed Components and activities under Component 5: Supporting interventions	Not provided for	Include a specific cross cutting activity on Strengthening of both National and County Institutions	This as stated above to support project implementing institutions to be able to effectively implement the project activities	This has been added.
Page 32; Table 3.2. The main institutions of potential relevance to implementation of Nature-based Solutions in Kenya, Under Roles in row 2, role of the National Environmental Management Authority (NEMA)	Provided for	The National Environment Management Authority (NEMA) is agency mandated with the protection and restoration of wetlands and pollution in accordance to the Environmental Management and Co-Ordination (Wetlands, River Banks, Lake Shores and Sea Shore Management) Regulations, 2009 and management of pollution by effluent discharge in accordance to the Water Quality Regulations, 2006.	In addition to overall coordination of environmental matters, the National Environment Management Auth	This has been added.
Pg 32. the National Environment Trust Fund (NETFUND) is listed with the role of *"restoration and protection of degraded ecosystems such as forests, wetlands, and rangelands."*		We believe this is an error and respectfully request that this be deleted.	The primary focus of NETFUND is mobilizing resources for environmental management. Other roles include facilitating research and capacity building. Therefore, NETFUND does not have a mandate or responsibility for the restoration and protection of degraded ecosystems such as forests, wetlands, and rangelands. As	This has been deleted

Paragraph	Provided for	Proposed amendment	Rationale	Response
			correctly outlined on the NETFUND website under "Who We Are," the National Environment Trust Fund (NETFUND) is a State Corporation under the Ministry of Environment, Climate Change, and Forestry in Kenya. NETFUND was established by the Environmental Management and Coordination Act (EMCA) of 1999 to mobilize and allocate resources for environmental management in the country.	
Page 37. Supporting the establishment of community conservancies and CFAs and/or land use and management plans is an important step for leveraging sustainable management.	Provided for	Include capacity building and strengthening of both national and county institutions Add: County Environment Committees (CECs)	This is important to ensure a well-coordinated and effective implementation of the program and success of the proposed NBS initiatives	This has been added.
Page 96 Paragraph 2, Line starting with 'Component 3 focuses on….	Not provided for	Include sentence: The programme will support mapping of capital valuation of the wetlands, determine their biodiversity, develop and implement specific wetland management plans	There is need to map the various wetlands, evaluate their biodiversity and determine their capital values Some wetlands have unique attributes, there is therefore need to develop specific integrated management plans for the wetlands	This has been added.
Page 97: Sub-topic on Systemic Change	Not provided for	Add 'Kenya's wetlands are critically degraded due to weak management, inadequate restoration efforts and inadequate policies. Limited community involvement, insufficient funding, have hindered effective wetland conservation. Human encroachment, pollution, and climate change further threaten these ecosystems. Immediate action is needed	This is necessary to bring out challenges and opportunities in the restoration of wetlands as a Nature Based Solution (NBS)	This has been added.

Paragraph	Provided for	Proposed amendment	Rationale	Response
		to strengthen policies and institutions for the protection and restoration of wetlands'		
Page 99. Table 10.2. Outcomes and results indicators for Concept 1: Nature Capital	Not provided for	Indicators under Environmental flows are set and maintained through strategic management of water use add:		This has been added.
Page 99. Table 10.2. Outcomes and results indicators for Concept 1: Nature Capital	Provided for	Reframe the indicators under Actively restored and protected wetland areas to: Proportion of the targeted wetlands for restoration No. of integrated wetland management plans developed and gazetted Wetland condition based on a structured assessment index Riparian areas mapped and proportion rehabilitated and restored. Area designated and rehabilitated with natural biota and ecosystem functioning within zonation plans Proportion of the targeted wetland area under active restoration stewardship programs Degree of adherence to developed and gazetted management plans	This is to ensure clarity in the project indicators	This has been reworded to improve clarity.
Page 121: Socio-Economic Benefits. Sub-topic on Empowerment of women and youth:	Provided for	Include empowerment of the elderly	The elderly play a crucial role in the management of natural resources, they often have exclusive land tenure rights	This has been added.

Table 9.18. Comments received from the independent technical reviewer and response to how these were addressed.

Criteria	Review observations and comments	Response
Overall Comment	The draft Kenya NPC investment Plan is an excellent document developed with tremendous regard of the country's situation analysis context. Efforts have been made to build on the existing enormous institutional framework strengths, policy and regulatory frameworks and ongoing similar initiatives that are aligned to NbS context. The three projects concept briefs are responsive to what Kenya has developed and mapped for prioritization in the existing strategies and plans and this IP has demonstrated intensions to align with priorities, opportunities and gaps that have been identified. Its commendable that the IP has been programmed to align it invest plan to contribute to restoration, adaptation and mitigation targets and biodiversity targets. A good example is the National Landscape and Ecosystem Restoration Strategy (NLERS 2023-32) a key government strategy which this draft IP has proposed to support the implementation of five of the eight opportunities mapped therein. Further specific comments are outlined below including some general observations and recommendations.	No response required.
Complies with the principles, objectives and criteria of the relevant program as specified in the design document, programming modalities, and Operational Guidelines	The Kenya draft IP is compliant with the guideline's principles, objectives and criteria as outlined in the NPC design document. The objectives have been structured in a programmatic way with a wide stakeholder engagement evident from the mapping of stakeholders, discovery and joint missions conducted and thematic working group sessions held, while taking to consideration the potential to upscale investments that are nature-based and overcome barriers and risks through innovative and incentivized funding to better the livelihoods for communities and IPLCs. The main modalities for developing a CIP program and projects have been articulated in the draft IP vide: Government-led investment plan – by conduction all the prescribed missions and consultative meetings. Taking to account the engagement of private sector by proposing the establishment of the Nature Venture Fund that has potential to creates a powerful mechanism to incentivize private sector investment in NbS while addressing critical challenges of scale and sustainability in ecosystem restoration. The IP Consideration for the Dedicated Grant Mechanism (DGM) for Indigenous Peoples and Local Communities will provide for a pathway for direct funding access for local communities leading to greater empowerment. However, the coastal systems have not received adequate attention on how they will tackle financing barriers neither on how they will contribute to sustainable use. This is despite the program description indicating that 'Restoration of degraded coastal and marine	A section has been added to the country context on coastal ecosystems and climate vulnerability. Included restoration targets. Just aquatic ecosystems included in the IP. Clarified this upfront in the IP Summary (introduced geographic focus).

Criteria	Review observations and comments	Response
	ecosystems' is one of the key (5) interventions with the greatest potential to be implemented as NbS. Further, Under the Country context – the role of marine ecosystem in addressing climate change and supporting socio-economic development has not been included and aquatic system have not been discussed in the same depth like farmers and pastoralists. NB. This inconsistence is notable through the document and decision need to be made on whether the aquatic and marine ecosystems are part of the IP or its only aquatic.	
Takes into account the country capacity to implement the plan	The IP has taken note of the strong institutional framework with roles/functions and responsibilities that are aligned to environmental conservation and climate actions with potential to support implementation of Nature-based Solutions (Table 7.2). It is evident that the process is country / government led with noble record of capacity to coordinate similar initiatives and good funds absorption capacity. The numerous ongoing projects that are aligned to the IP initiatives (Appendix 4), that are focusing on nature-based solutions will enhance synergy and complementarity including past record of implementing similar initiatives successfully e.g FLoCCA Existence of enabling policies and regulatory environment framework that will support the NBS initiatives and an array of state and non-state actors presenting immense collaboration and partnership opportunities. An implementation organogram has been developed to guide coordination during implementation.	No response required
Has been developed on the basis of sound technical assessments	The draft IP is compliant and has benefited from a comprehensive Stakeholder engagement. The plan has been designed to implement interventions that have already been mapped out and prioritized in the national strategies and plans that aims to contribute to restoration, adaptation and mitigation targets as well as several development and biodiversity targets. The following was considered; - Conducted the cost benefit analysis to guide prioritization which is commendable - Used multicriteria analysis to prioritize interventions taking into account economic and livelihood benefits, population, poverty index, climate vulnerability and benefit to biodiversity.	No response required
Demonstrates how it will initiate transformative impact	The draft IP in each of the three concepts has illustrated how transformative impact will be initiated by outlining components with accompanying activities and further, outlining the key transformational dimensions vide; defining relevance, systemic change, speed at which change is expected to take and scale of implementation and adaptive sustainability. However, in the draft IP adaptive sustainability has not been exhaustively demonstrated through any unique approach that each concept will apply for adjustment to maintain a positive trajectory of the envisioned objectives. This attempt has been made for the Nature Capital concept.	Section added to the IP on Transformative Change, including adaptive sustainability. We have explained the approach in more detail in the relevant section: "Capacity building will not be delivered directly by the IFC but rather facilitated

Criteria	Review observations and comments	Response
	Table 10.5 Proposes components with activities for Nature Venture concept and the IP does not demonstrate how one of the biggest challenges of community - knowledge and capacity will be enhanced to encourage/promote adoption of the proposed activities.	through the businesses actively engaging with farmers in the target areas. These businesses, driven by their own operational interests, will be encouraged to enhance the knowledge and skills of their supplier networks. By doing so, they can strengthen the sustainability and efficiency of their supply chains while contributing to the development of local farming communities."
Provides for prioritization of investments, stakeholder consultation and engagement, adequate capturing and dissemination of lessons learned, and monitoring and evaluation and links to the results framework	The IP has provided for prioritization of investments using multicriteria and cost benefit analysis to establish economic value of restoration and other interventions. The IP has also integrated result framework that is built on the theory of change using specific categories to monitor and assess the impact of the program. Stakeholder engagement has been adequately covered. However, it's not clear how cross-cutting thematic or program-level independent evaluations, sector-specific learning reviews and facilitated learning events for each project/ concept will be achieved.	A paragraph has been added to the Monitoring, Evaluation and Learning section: "NEDFUND will be responsible for the implementation of cross-cutting evaluations, learning reviews and facilitating learning events. They will check that the overall IP's targets are met and ensure consistency across all projects and concepts. They will assess qualitative and quantitative data and periodically report on progress, lessons learned and emerging challenges. At the same time, they will organise regular learning events, such as workshops or webinars, for stakeholders at various levels. This will enable stakeholders to share findings from evaluations and reviews, promote knowledge exchange and learning across concepts and projects, improve collaboration to address any challenges that may arise, and to replicate successful practices. The findings from the evaluations and learning events will then need to be implemented into the program planning and implementation."

Criteria	Review observations and comments	Response
Adequately addresses social and environmental issues, including gender	The IP has addressed the social and environmental issues including gender. Consideration has been made for a dedicated Grant Mechanism for IPLCs. The IP proposes to address gender equality and social inclusion during both preparatory stage and implementation. The proposal to have a portion of the blended financing reserved to support women led initiatives including a monitoring and evaluation that disaggregates indicators by gender is commendable. However, none of the three concepts have articulated how to identify, evaluate and address existing context specific barriers and gaps in gender equality and social inclusion.	Gender and inclusion elements have been strengthened in the three concept notes, and we have added gender indicators into each concept. A section on just transitions has also been added to the IP.
Supports new investments or funding is additional to on-going/planned MDB investments	The IP has provided for an investment plan budget depicting a total financing gap of about US$ 980 million for full restoration to be achieved. This has potential to attract support from other actors beyond the IP partners. The proposed establishment of the Nature Venture Fund as an instrument to incentivize private sector investment in NbS will catalyze new investments and attract new actors.	No response required
Takes into account institutional arrangements and coordination	This IP has presented an elaborate inventory of institutions in Kenya that have functions aligned to its objectives and are also implementing Nature based Solutions related interventions as illustrated in Table 3.2. A further analysis of ongoing projects that are NbS aligned have equally received adequate coverage. Also, Figure 7.1 illustrates the organisational structure for Kenya's IP Organogram to demonstrate the coordination arrangement. However, the IP could benefit from a clear collaboration framework with Counties where the projects will be implemented.	Collaboration framework with counties added to section 7.
Promotes poverty reduction	The IP makes a good case on how the priority sub-catchment arears for NbS interventions were identify vide the consideration of; return on investment, population size, extent of poverty, level of climate change vulnerability and benefits to biodiversity. The IP has ably demonstrated how engagement with small holder farmers and communities and promoting nature positive and climate smart farming while supporting diverse alternative livelihoods including agribusiness will reverse environmental degradation, enhance climate adaptation, and create economic opportunities, ultimately strengthening both ecosystems and the resilience of vulnerable communities. The proposal to restore and protect ecological infrastructure, introduction of a Nature Venture Fund and promotion of regenerative agriculture have mapped out numerous intervention that promotes poverty reduction while addressing climate adaptation and contribution to climate mitigation and biodiversity targets. The development benefits and co-benefits in this IP promotes poverty reduction. The Theory of Change has outlined short-, medium- and long-term outcomes that are expected to contribute to poverty reduction when achieved.	Poverty indicators added to the IP. Included in country-level indicators. Indicators at a project level can be refined at the next stage by the MDBs.

Criteria	Review observations and comments	Response
	However, the IP does not demonstrate quantifiable parameters to show poverty reduction.	
Considers cost effectiveness of investments	The IP has alluded to potential benefits of restoration by giving an account of the share of different ecosystems services benefits of the total value gains as illustrated if Figure 4.1. while noting some Nbs intervention could leverage over $10 per $1 spent in some case. The Cost effectiveness of the interventions across the basins is addressed with an indication of positive but varying benefit: cost ratios or return on investment as outlined in Table 4.2 and cost benefit analysis of top sub-catchments outlined in Table 4.3	No response required
Specific to NPC		
Reduced or avoided GHG emissions stemming from the changing use of land and erosion of natural resources and systems across various sectors	The IP does not demonstrate clearly how the diverse nature-based solution initiatives will reduce or avoid GHG emissions in a measured way for monitoring and reporting For example, the Nature capital concept that focuses on restoration, sustainable management and protection of key "ecological infrastructure" would be expected to demonstrate how the MtCO2e sequestered will be quantified. Even though the proposed IP result framework has indicated that 'The specific target of Mt CO2 eq will be agreed upon during project confirmation'. and that the Theory of Change long term outcome aims to reduce GHG emissions, the draft IP has not demonstrated a solid investment plan on MRV mechanism neither application of a credible globally recognized methodologies and tools to account for the emissions been factored in the plan.	Target added to the results framework and methodology and tools for monitoring and measuring reduction in GHG emissions also added. Points about reduced emissions and enhanced storage/retention have been strengthened in the project concept as well as measurement of gains using credible globally recognized methods.
Enhanced climate-resilience of communities, local economies, and/or businesses dependent on natural resources through ecosystems-based planning and natural management measures	The draft IP has satisfactorily articulated the strengthening of climate resilience by making a good case on how the NC project will focus on restoration, sustainable management and protection of key ecological infrastructure. The introduction of a Nature Venture Fund that will encourage private sector investment in NbS interventions and promotion of regenerative agriculture that will focus on providing alternative livelihoods as outlined in Table 4.5 However, the draft IP has not demonstrated how capacity will be enhanced (having been highlighted as a key challenge) to support implementation of the fund and the activities thereof.	We have explained the approach in more detail. Capacity building not provided through IFC but through the business that is engaging directly with the farmers for their self-interest. These businesses would be encouraged to improve the knowledge and capacity of their suppliers in the target areas.
Builds the climate-resilience of natural resources and ecosystems (e.g., ecosystem-based adaptation; green and blue infrastructure, protecting and restoring coastal and	In the Theory of Change the intervention for nature capital includes among other things aquatic ecosystems. This ecosystem has not received adequate attention running through the IP for example Table 10.1 proposed components and activities, Table 10.3 indicative financing plan for the concept (aquatic and coastal) The program description for the National NBS Investment Plan has denoted that; "The interventions listed in the National Landscape and Ecosystem Restoration Strategy (NLERS	The IP focuses on the chosen landscapes which do not focus on coastal and marine ecosystems.

Criteria	Review observations and comments	Response
inland water systems, buffering against sea-level rise and storm surge, planting and protecting mangroves and maintaining other 'Blue Forests,' water management, etc	2023-32) vary in terms of the extent they would qualify as NbS. The first three and last two types of interventions listed have been noted to have the greatest potential to be implemented as NbS that can address climate change challenges for people while also being beneficial for biodiversity and are hereafter referred to as NbS interventions'' NB. Restoration of degraded coastal and marine ecosystems is one of the interventions listed (Page 40). This has not been adequately covered in the IP	
Supporting livelihoods of rural communities and indigenous peoples, empowering of women, and, as appropriate, the management of biodiversity.	The IP has adequately covered this including the Proposed separate funding for IPLCs through a Dedicated Grant Mechanism that is aligned with the priorities of the plan to support their activities that focus mainly on sustainable forest management, conservation and climate resilient initiatives.	No response required
Additional		
Clear focus on Nature-based Solutions to Climate Change.[20]:	The IP has demonstrated significant focus on Nbs to climate in strengthening resilience, livelihood, biodiversity outcomes, gender gaps analysis and institutional and policies including the targets outlined in the IP Result framework. However, specific action to address gender gaps related to NbS need to be enhanced. The Nature Capital and Nature People concepts have also identified some NbS initiatives with a focus to solution to climate change, however, there lacks comprehensive description on how the innovation and systems will be deployed to generate GHG mitigation, monitoring and reporting of the $Mtco_2^{eq}$ attained from the approaches for ease of accountability. The IP is not explicit on parallel activities supportive of NbS that other partners could fund.	Gender indicators added to each concept note and strengthened throughout. Strengthened sections on scalability to indicate that there is opportunity for other partners to get involved.
Catalyze increased investments in NbS:	The financing gap of approx. 980 million US$ captured in the IP is a trigger and opportunity for other partners from non-CIF sources to plug in. The IP has given an indicative financing plan (Table 5.1) where Co-financing and potential parallel financing is factored in with complementary NbS activities and additional projects (Appendix 4) are expected to build on during the detailed project design phase. The ongoing projects that are similar and aligned to the objectives of this IP presents a catalytic platform.	No response required

[20] Note: NbS are actions to protect, conserve, restore, sustainably use and manage natural resources. Therefore, while NPC initiatives can work to complement built climate solutions, the program is not intended to support hard infrastructure development.

Criteria	Review observations and comments	Response
Enabling environment:	The IP intends to build on existing nationally driven climate-related plans or long-term strategies, with a view to ensuring alignment with country priorities. It has outlined the ongoing NbS aligned initiatives, national strategies and plans that have mapped and isolated similar or related interventions that present an enabling environment. Kenya has a very elaborate policy and regulatory response to environmental and climate challenges including a comprehensive institution framework for NbS activities implementation which this IP has taken note of. Climate change sensitivity assessment has been considered.	No response required
Implementation capacity:	The draft IP has presented an inventory of the numerous existing/ ongoing projects that are related to each of the three concepts, citing potential collaboration with the ongoing NBS activities driven by government, international organizations, NGOs and private sector. This provides a strong foundation for the implementation of the projects and alludes to the existing capacity that will support the implementation of the IP The Nature Venture has further enumerated how the proposed Nature Venture Fund will be instrumental in incentivizing private sector investment to catalyze new investment and attract other actors.	No response required
General observations and recommendations		
1	Box 2.1. Multilateral and regional environmental agreements that Kenya is party to *Nagoya Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on* Biosafety (2010); Please note Kenya is not signatory to this protocol	Noted, updated.
2	Table 4.1 should also include Marine /coastal ecosystems as an intervention since its restoration is among the NBS opportunities that are mapped out in the '*Technical report on the national assessment of forest and landscape restoration opportunities in Kenya (2016)*'. And among the five areas identified for prioritization in this IP.	This section has been reorganized and moved to NbS context. We have added marine/coastal ecosystems to the table.
3	The Kenya Water Towers Agency (KWTA) has been disbanded and hence all literature on this institution should be removed from the IP vide; in the text on page 30, Table 3.2 page 32 and Table 7.2 on page 74	Noted, updated.
4	Figure 4.7 on Synergetic … Pg 54 The two concepts /projects (Nature Capital and Nature People) are to be implemented in different ecosystem and therefore the complementarity cannot be cyclical but V shaped and the arrows joining NC and NP directly should not be included. The perceived accrued social, economic and environmental benefits will not be realized on the same landscape and hence the outlined complementarity is theoretical and would apply to the IP if it were V shaped. If this figure was in the NbS solution context section, then the synergic description and complementarity could hold in context.	Originally this figure was created for a single landscape. We have decided to remove it now that it no longer holds for the two landscapes.

Criteria	Review observations and comments	Response
5	Table 7.2 List of Institutions Kenya Forest Research Institute (KEFRI) is missing and is a key institution in restoration	KEFRI has been added
6	Figure 8.1. Kenya Investment Plan Theory of Change In the text before Figure 8.1 its referred to as Table 8.1. The list of barriers - A number of them starts with the word **lack** which is a misrepresentation of facts especially for a document that government will collaborate in its implementation. It is proposed that the use of words like inadequate, Insufficient, low, limited, poor etc. The same has been repeated in the section for Gaps and Barriers to Implementation of the three project Concept Briefs. For example **lack of data** – Kenya has massive depository of data on natural resources and Nbs activities however, the key problem is that data is scattered in many organizations, it's is in different configurations e.g description of degraded land in km^2, Hectares, Acre, presenting a challenge of collating data. Data sharing protocols are not well developed/defined across institutions to facilitate sharing and data protection. Preparation for this IP has benefited from that data depository.	Thank you, agreed. We have corrected this throughout the document.
7	The three concepts have outlined the gaps and barriers to implementation with limited mention of gap in markets access by Nature people concept. Gap analysis for services and market would benefit from deeper analysis across concepts.	Noted but this would form part of the next detailed project development phase.
8	While mitigation benefits are expected to be achieved from the projects, efforts to indicate ways of accounting the carbon sequestered/ abated in $Mtco_2^{eq}$ need to be demonstrated else the projected long-term outcome in the Theory of Change will be difficult to account for.	Target added to the results framework and methodology and tools for monitoring and measuring reduction in GHG emissions also added. Points about reduced emissions and enhanced storage/retention have been strengthened in the project concept as well as measurement of gains using credible globally recognized methods.
9	Acronyms not listed in the IP– GEF, KEWASIP, HWC, UTNWF, NLERS, BREFOL, IFAD, GBFF, BREFONS, CCCF, CoG, WSTF, NTAC, NPSC, TCLP,	Added to acronym list.

3. DEVELOPMENT BENEFITS AND CO-BENEFITS

The interventions outlined in this IP offer a wide range of benefits, making the adoption of NbS a highly advantageous approach. These benefits extend beyond the primary objectives, bringing about significant positive impacts in various areas. In this section, we will provide a brief overview of the co-benefits, with particular attention given to the socio-economic and environmental advantages that arise from implementing the concepts.

SOCIO-ECONOMIC BENEFITS

Adaptation to climate change: The restoration of aquatic ecosystems and invasive species control which is envisioned under Concept 1 will reduce vulnerability to droughts and floods, improving water security for agricultural and domestic use. The joint venture partnerships for eco-tourism as well as carbon, biodiversity, and ecosystem services credits can offer local communities an alternative livelihood during times of low agricultural output due to climate variability. The agroforestry practices and small-scale business value chain development, suggested under Concept 2, will increase climate resilience, food security and economic opportunities under climate change.

Diversified income streams: Environmental stewardship agreements will provide performance-based payments under Concept 1. Eco-tourism will enable communities to generate income from access fees. Agroforestry opens new revenue streams beyond traditional farming, such as through sustainable products and tree nurseries.

Sustainable flows of finance: Partnerships between conservancies and tourism investors will create blended financing models, creating self-sustaining financial flows. Small scale business and value chain development will be enhanced by microcredit and market support, improving product value and access to markets.

Empowerment of women, youth and elderly: The suggested investment activities create opportunities for women and youths to actively engage in sustainable livelihoods, as well as for the elderly to contribute to decisions on natural resource management. Eco-tourism brings employment and business ownership opportunities which can include specifically targeting women and youth in conservancy areas. The organisation of farmer cooperatives and provision of training can put emphasis on women and youth. The preparation of management plans should involve the elderly.

Employment: Many activities in the IP will generate employment opportunities for local communities, for example it is envisioned to establish a restoration workforce for both aquatic ecosystems and rangelands and eco-tourism related employment will increase under Concept 3. The increase in household incomes will improve economic stability in the region and resilience against economic shocks. The IP aims to empower local community members with meaningful work and is therefore expected to also improve social cohesion.

ENVIRONMENTAL BENEFITS

NbS help both communities and ecosystems adapt to climate variability and extreme weather events by improving their resilience. The implementation of the activities outlined in this IP is expected to yield several key environmental benefits, including:

Mitigation of GHG emissions: The restoration of riparian and rangeland areas will increase the absorption of CO2 through increased vegetation cover which will help reduce GHG emissions. Preserving large conservation areas, e.g. through the creation of eco-tourism opportunities, will help maintain landscapes which are important for carbon retention and sequestration. Regenerative agricultural practices, such as agroforestry, will increase carbon sequestration.

Improved soil conservation and quality: Restoration activities and stewardship programmes will protect the soil from erosion, increase soil fertility, and prevent degradation. Sustainable rangeland management and controlled livestock is expected to improve soil health and vegetation cover. Tree planting will enhance soil health and reduce erosion.

Improved water quality: The restoration of aquatic ecosystems and improving water management will reduce water runoff and sedimentation which will improve water quality and benefit downstream ecosystems as well as communities living in those regions. Reduced reliance on chemical inputs for agricultural production will decrease contamination in water sources.

Improved water infiltration and groundwater recharge: Strategic restoration efforts will increase water infiltration and recharge ground water reserves which is critical during drier period throughout the year. Preserving natural landscapes will help water absorption, maintain regional water tables and alleviate future drought impacts. Agroforestry practices will improve soil structure, allowing better water infiltration, which will additionally support ground water recharge and reduce surface water runoff.

Reduced flood risk: Restored wetlands will act as natural buffers, slowing water flow and reducing the risks of floods. Healthy conservancy landscapes will be able to better manage rainwater flow naturally, decreasing flood risks and potential damages to local housing structures.

Biodiversity: Conservation stewardship programmes will protect and rehabilitate habitats which support a wide range of species. Conservancies will improve wildlife protection, support species diversity and create a refuge for threatened species. Integrating tree species and native vegetation into agricultural production will support pollinator and wildlife populations.

CO-BENEFITS

Each concept proposed in the IP contributes to co-benefits, such as green growth, improved governance as well as better land rights, which are elaborated in a bit more detail below.

Green growth: Concept 1 supports economic growth through restoration activities which will improve land and water resources, creating sustainable livelihoods Concept 2 promotes growth through regenerative practices that diversify and increase agricultural productivity, offering farmers new income streams for local communities and stimulating green jobs in conservation and ecosystem management. Concept 3 fosters income through eco-tourism, increasing community revenues and creating sustainable job opportunities.

Governance, Policy, and Planning: The IP does not focus on specific policy interventions; however, land use planning and zoning are fundamental to the success of the proposed initiatives. For example, Concept 1 strengthens governance by integrating water resource management, ecosystem conservation, and community involvement in landscape planning. It could help with harmonising policies across sectors, ensuring sustainable and better regulated use of natural resources.

Land Tenure, Rights, and Access: Concept 1 emphasises community stewardship of riparian and wetland areas and promotes better access to land management activities. Performance-based incentives require tenure security for communities actively involved in restoration. Concept 2 increases smallholder farmers' use of regenerative practices which will be supported through subsidies, credit, and tenure security mechanisms. Concept 3 promotes equitable access to tourism opportunities through transparent concession agreements, ensuring that communities retain access to their lands while benefiting economically from tourism partnerships.

APPENDIX 4. EXISTING NBS MITIGATION AND ADAPTATION ACTIVITIES

OVERVIEW

This appendix provides a summary of existing activities around nature-based solutions for climate mitigation and resilience strengthening of lands and communities, particularly activities of development partners. The details of some key projects are summarised, including potential contributions toward enhancing resilience, nature conservation, and livelihoods, and highlights where significant investments are taking place.

GOVERNMENT LED PROJECTS

THE KENYA FOREST SERVICE'S TREE PLANTING PROGRAM

- **Initiators**: Government of Kenya.
- **Objective**: Increase Kenya's forest cover to 10% by 2030.
- **Environmental Impact**: Planting millions of trees across degraded landscapes, enhancing carbon sequestration and biodiversity.
- **Socio-Economic Impact**: Creates employment through tree planting initiatives, improves agricultural productivity through agroforestry.
- **Resilience Contribution**: Helps mitigate climate change and land degradation, supports watershed management, and improves local climate resilience.
- **Assessment**: it is crucial that this key government policy will receive additional support to increase planning, management and MEL capacity, increase collaboration with NGO and private sector partners and to include environmental education. Other NBS projects and programmes should be aligned with this flagship project of the GoK.

KENYA FOREST SERVICE (KFS) NATIONAL REDD+ STRATEGY

- **Management Entity**: Kenya Forest Service (KFS)
- **Size**: Nationwide (no exact hectares, but targets all forests)
- **Beneficiaries**: National scale, including forest-dependent communities and smallholder farmers
- **Key Objectives**:
    - Reduce deforestation and degradation.
    - Enhance forest carbon stocks.
    - Promote sustainable forest management and conservation.
    - Improve the livelihoods of communities dependent on forests.
- **Results**:
    - Development of Kenya's national REDD+ strategy, in line with international commitments under the UNFCCC.
    - Enhanced policy and legal frameworks for sustainable forest management.
    - Ongoing capacity building for monitoring, reporting, and verification (MRV) of carbon emissions from forests.

LAMU BLUE CARBON PROJECT

- **Management Entity**: Kenya Marine and Fisheries Research Institute (KMFRI), Plan Vivo Foundation
- **Size**: 4,000 hectares of mangrove forests
- **Key Objectives**:
  - Restore and conserve mangrove forests in Lamu
  - Enhance carbon sequestration through the restoration of degraded mangroves.
  - Support community livelihoods through the sale of carbon credits.
- **Results**:
  - Sequestration of approximately 3,000 tonnes of CO_2 annually.
  - Generation of revenue from carbon credits, reinvested in community development projects such as water provision, education, and healthcare.
  - Improved biodiversity and ecosystem services in the coastal region.
- **Assessment**: mangrove forest restoration and conservation seems to be very successful in attracting funding, partly because of the ease of planting mangrove trees. Additionality of funding of mangrove planting is questionable given the large number of existing initiatives.

COASTAL REGION WATER SECURITY AND CLIMATE RESILIENCE PROJECT

- **Management entity:** Ministry of Water, Sanitation, and Irrigation
- **Lender:** World Bank
- **Partners**: County Governments in the Coastal Region: Including Kwale, Kilifi, Taita Taveta, and Mombasa, which collaborate in local implementation; Local Communities and Water User Associations: Engaged in watershed management, conservation, and local water governance.
- **Overall objective:** This project is part of a broader effort to improve water security, enhance climate resilience, and reduce vulnerabilities to water scarcity and climate change impacts in the coastal region.

  NbS element: The project involves ecosystem-based approaches to water management and climate adaptation, making it an example of Nature-Based Solutions (NBS) that focus on:
  - Watershed management
  - Restoration of water catchments
  - Sustainable water resource management
  - Wetland conservation

  These interventions leverage natural ecosystems to enhance water security and mitigate climate risks such as floods, droughts, and water shortages.
- **Specific Objectives:** The overarching goal of the project is to enhance water security and build resilience to climate variability and change in Kenya's coastal region. Specific objectives include:
  - Improving water supply and reliability for communities, agriculture, and industries in the coastal region.
  - Strengthening the management of water resources by restoring watersheds and conserving natural ecosystems to ensure sustainable water availability.
  - Reducing climate-related risks, such as droughts and floods, by investing in nature-based and infrastructure solutions for water storage, distribution, and conservation.
  - Improving livelihoods and the resilience of local communities by providing reliable access to water for domestic, agricultural, and industrial use.
  - Protecting ecosystems that support water resources and promoting sustainable practices to safeguard natural catchments.

- **Results and Achievements.** While the project is ongoing, it has already yielded significant results in several areas:
    - Improved Water Infrastructure: Development of critical water infrastructure, including pipelines, water treatment plants, and storage facilities, which has enhanced access to clean water for households, industries, and agriculture.
    - Watershed Restoration: Restoration and management of critical watersheds in the coastal region have contributed to increased water availability, improved water quality, and reduced environmental degradation.
    - Flood and Drought Risk Reduction: The project has contributed to reducing the risks associated with climate variability by implementing water conservation practices and constructing resilient infrastructure.
    - Community Benefits: Local communities have benefited from improved water services, increased water supply reliability, and livelihood improvements through water-dependent activities like agriculture.

ENHANCING COMMUNITY RESILIENCE AND WATER SECURITY IN THE UPPER ATHI RIVER CATCHMENT AREA, KENYA - GREEN CLIMATE FUND PROJECT ID:FP175

- **Implementer:** National Environment Management Authority (NEMA)
- **Dates**: 2021-2028
- **Objective**: Increase water security and strengthen communities' resilience to climate change in Kenya's Upper Athi River Catchment area, which is least water-secure region in the country with most of its tributaries having significantly reduced or dried-up river flows.
- **Actions**: Integrated water resources management and investment in water supply infrastructure in four vulnerable counties. Interventions include hydrological and meteorological information management; installation and rehabilitation of water infrastructure; and strengthening planning and regulatory frameworks for water resource management.
- **Assessment:** not strongly NbS, as it is infrastructure focused but could be extended to include NbS as supporting/complementary interventions.

GREEN ZONES DEVELOPMENT SUPPORT PROJECT - PHASE II

- **Funder:** African Development Project (KES 33,974,609)
- **Implementer:** Ministry of Environment and Forestry
- **Dates**: 2019-2025
- **Objectives**: Improve forest conservation and livelihoods for sustainable forest management in 15 counties in Kenya, specifically:
    - to enhance forest conservation and livelihood support for climate change resilience;
    - to develop timber, bamboo, potato, cereals and pulses value chains for improved household incomes.
- **Location:** Embu, Meru, Machakos, Tharaka-Nithi, Nyeri, Murang'a, Kirinyaga, Kiambu, Nyandarua, Nakuru, Baringo, Kericho, Bomet, Nyamira and Kisii Counties. These counties cover four forest conservancies and three out of five Kenya's water towers including Mt. Kenya, Aberdares, and the Mau complex.
- **Activities**. Three main components (i) Forest Conservation and Livelihood Support (ii) Sustainable and Inclusive Value Chains Development and (iii) Project Management and Coordination.
- **Assessment:** Forest cover is increased by planting exotic species and bamboo rather than restoration. The forest conservation angle or outcome is not clear. There is not strong evidence that the project is biodiversity positive and would qualify as NbS.

INTEGRATED PROGRAMME TO BUILD RESILIENCE TO CLIMATE CHANGE AND ADAPTIVE CAPACITY OF VULNERABLE COMMUNITIES IN KENYA

- **Implementer**: National Environment Management Authority (NEMA), through KEFRI, TARDA, CDA
- **Funder:** Adaptation Fund grant US$ 9,998,302
- **Dates:** 2014-2016
- **Objective**: Enhance resilience and adaptive capacity to climate change for selected communities in various Counties in Kenya in order to increase food security and environmental management.
- Components:
    - Enhancing Climate Change resilience for improved food security in selected Counties
    - Improving climate resilient water management systems to enhance food security in selected Counties in Kenya
    - Increasing resilience to the effects of rise in sea level and shoreline changes through Integrated Shoreline and Mangrove Ecosystem Management in the Coastal region of Kenya
    - Disaster risk reduction and increasing preparedness among targeted vulnerable communities
    - Strengthening institutional capacity and knowledge management on climate change adaptation

INTERNATIONAL ORGANISATION-LED PROJECTS

RESTORATION AND RESILIENCE OF KENYA'S URBAN RIVERS

- **Implementer**: Kenya, National Environment Management Authority (NEMA): World Bank, Cities4Forests.
- **Objective:** Restoring degraded river systems in Nairobi and other cities to mitigate urban flooding and enhance biodiversity.
- **Environmental Impact:** Rehabilitates urban ecosystems, promotes biodiversity, and reduces urban heat islands.
- **Socio-Economic Impact:** Improves public health through cleaner urban water systems, increases green spaces, and creates job opportunities in restoration work.
- **Resilience Contribution:** Directly enhances urban climate resilience by addressing flood risks and improving water management.

MOUNT ELGON REGIONAL ECOSYSTEM CONSERVATION PROGRAMME (REDD+)

- **Management Entity**: IUCN, East African Community (EAC), WeForest
- **Size**: Transboundary (Kenya and Uganda), targeting over 200,000 hectares of forested land
- **Beneficiaries**: Approx. 150,000 people across Kenya and Uganda
- Key Objectives:
    - Conserve forest ecosystems on Mount Elgon, which are critical water catchments.
    - Enhance the resilience of local communities to climate change.
    - Reduce greenhouse gas emissions from deforestation and forest degradation.
- Results:
    - Ongoing capacity-building for local communities in sustainable forest management.
    - Improvement of ecosystem services, including water regulation and soil stabilization.

EWASO NG'IRO NORTH INTEGRATED CLIMATE CHANGE MITIGATION AND ADAPTATION PROJECT

- **Initiators:** Ewaso Ng'iro North River Basin Development Authority (ENNDA)
- **Objective:** Restore riparian zones and improve water management for downstream users.
- **Environmental Impact:** Riparian restoration, erosion control, and improved water quality.
- **Socio-Economic Impact:** Provides stable water access for pastoralist communities, increasing food security.
- **Resilience Contribution:** Strengthens water availability for agriculture and livestock, securing livelihoods in dryland areas.
- **Status:** proposal

NGO-LED PROJECTS

KENYA AGRICULTURAL CARBON PROJECT (KACP)

- **Manager:** Vi Agroforestry
- **Objective:** focuses on promoting Sustainable Agricultural Land Management (SALM) practices among smallholder farmers in Western Kenya, specifically in the Siaya, Kisumu, and Bungoma Counties.
- Main Activities:
    - Agroforestry: The project integrates tree planting with agricultural crops, which helps in carbon sequestration both in soil and trees.
    - Soil Management: Practices like composting and using cover crops help improve soil fertility, water retention, and resilience to droughts.
    - Carbon Sequestration: By adopting sustainable practices, farmers store carbon in soils and trees, generating carbon credits that are sold to companies and individuals.
    - Farmer Training: The project provides training to farmers on how to implement SALM techniques, improving both their environmental and economic outcomes.
- Results:
    - The project covers an area of 22,000 hectares and involves about 30,000 smallholder farmers, many of whom are women.
    - Carbon credits are generated and sold, offering farmers additional income. While carbon revenue is an important component, the primary benefits have been increased crop yields and food security for participating families.
    - The project has been recognized globally for its innovative methodology, certified by the Verified Carbon Standard (VCS).

UPPER TANA-NAIROBI WATER FUND

- **Initiators**: The Nature Conservancy, private investors, local stakeholders.
- **Objective**: Improve water security in the Tana River basin by conserving upstream lands.
- **Environmental Impact**: Restoration of degraded riparian zones, reforestation, and soil conservation measures across 150,000 hectares.
- **Socio-Economic Impact**: Secures livelihoods of 350,000 smallholder farmers by improving agricultural yields and access to water.
- **Resilience Contribution**: Enhances water availability and reduces flood risks, benefiting Nairobi's water supply and generating significant long-term socio-economic returns.
- **Assessment**: a complex project that is very relevant in terms of ecological and socio-economic benefits. Check with TNC is needed to establish funding requirements.

GREEN BELT MOVEMENT (GBM) – WATERSHED PROTECTION

- **Initiators**: Green Belt Movement, UNEP.
- **Objective**: Restore forests, watersheds, and promote sustainable land use.
- **Environmental Impact**: Restores forests and watersheds across key regions in central Kenya.
- **Socio-Economic Impact**: Empowers women by involving them in tree planting and land rehabilitation efforts.
- **Resilience Contribution**: Enhances water security, improves soil health, and builds community resilience against droughts and deforestation.
- **Assessment**: a well-known project that is probably good at attracting funding.

LAKE NAIVASHA BASIN ECOSYSTEM BASED MANAGEMENT

- **Initiators**: WWF, Kenyan government.
- **Objective**: Protect and rehabilitate the Lake Naivasha Basin from environmental degradation.
- **Environmental Impact**: Reforestation, wetland restoration, and water conservation in the basin.
- **Socio-Economic Impact**: Enhances water access for farming, supports eco-tourism, and secures jobs in agriculture.
- **Resilience Contribution**: Strengthens water security, supports biodiversity, and mitigates the impact of climate variability on livelihoods.

RANGELAND REHABILITATION AND CONSERVATION IN NORTHERN KENYA

- **Initiator:** Northern Rangelands Trust (NRT)
- Objectives:
    - Promote sustainable rangeland management to enhance the productivity and resilience of degraded lands in Northern Kenya.
    - Support wildlife conservation and biodiversity by restoring habitats in community conservancies across Northern Kenya.
    - Improve livelihoods of pastoralist communities through the introduction of holistic grazing management practices and nature-based solutions for land restoration.
- **Size**: NRT works across more than 40 community conservancies, covering over 42,000 square kilometers in Northern and Coastal Kenya.
- Beneficiaries:
    - Approximately 400,000 pastoralists and local communities benefit from improved grazing lands, livestock productivity, and increased food security.
    - Wildlife species, including endangered species like elephants and rhinos, benefit from restored habitats and reduced human-wildlife conflict.
- Results:
    - NRT's rangeland rehabilitation efforts have improved grazing lands, enhanced water retention, and reduced soil erosion across vast areas.
    - Local conservancies have implemented rotational grazing practices, reducing land degradation and boosting livestock productivity.
    - Wildlife populations have increased, and community conservancies have generated income from eco-tourism and sustainable livestock markets.
    - The project has fostered peace and reduced conflict in the region through community-led natural resource management.

CHYULU HILLS REDD+ PROJECT

- **Management Entity**: Maasai Wilderness Conservation Trust, Big Life Foundation, Just Diggit, Kenya Wildlife Service (KWS)
- **Size**: 410,000 hectares
- **Beneficiaries**: Over 20,000 people (primarily Maasai pastoralists)
- Key Objectives:
    - Prevent deforestation and degradation of the Chyulu Hills watershed.
    - Conserve critical water catchments and biodiversity.
    - Provide sustainable income for local Maasai communities through carbon credits.
- Results:
    - Reduction of CO_2 emissions by approximately 37.5 million tonnes over the project's 30-year lifetime.
    - Creation of alternative livelihoods for local Maasai communities through eco-tourism and sustainable agriculture.
    - Enhanced capacity for forest patrols, biodiversity conservation, and fire prevention.

MOMBASA WATER FUND

- **Initiator:** The Nature Conservancy, in collaboration with local stakeholders, including water utilities, businesses, and local communities.
- **Objectives:** The fund aims to ensure a reliable and clean water supply to the city of Mombasa and surrounding regions by addressing watershed management challenges in upstream areas, particularly in the Taita Hills and the Tsavo River basin.
- **Watershed Conservation:** Improve the health of critical watersheds that supply water to Mombasa and nearby regions by reducing soil erosion, preventing sedimentation, and conserving water resources.
- **Water Security:** Ensure reliable water access for Mombasa's growing population and industrial needs by managing water resources sustainably and improving the efficiency of water delivery.
- **Livelihood Improvement:** Support the livelihoods of upstream communities by promoting sustainable agricultural practices and enhancing water-use efficiency, leading to both environmental and socio-economic benefits.
- **Climate Change Mitigation:** Help communities and ecosystems adapt to the impacts of climate change, such as erratic rainfall and droughts, by improving water management and conserving natural ecosystems.
- **Public-Private Partnership:** Engage private sector entities, local governments, and communities in shared investment models that promote long-term, sustainable watershed management.
- **Geographic Focus**: The Mombasa Water Fund targets key watersheds that supply water to Mombasa, specifically focusing on the **Taita Hills**, **Upper Tsavo River Basin**, and parts of the **Galana/Sabaki River Basin**.
- **Area Covered**: the fund covers multiple watersheds upstream of Mombasa that collectively span thousands of hectares.
- **Water Supply Reach**: The Mombasa Water Fund serves over **1 million people** in the city of Mombasa and its surrounding areas by ensuring improved water quality and supply reliability.
- **Upstream Farmers and Communities**: Approximately **25,000 smallholder farmers** in the Taita Hills and other upstream areas benefit from improved agricultural practices, training in sustainable land use, and enhanced water security.
- **Businesses and Industries**: Businesses and industries in Mombasa, particularly those dependent on reliable water supplies, benefit from the fund's efforts to secure long-term water access.

- **Ecosystems**: The initiative also benefits ecosystems by restoring degraded landscapes, protecting biodiversity, and improving water quality in the rivers feeding into Mombasa.
- Key Results and Achievements
    - **Reduced Sedimentation**: One of the major achievements of the fund is the reduction in sedimentation in rivers and reservoirs. This results from upstream land restoration activities, which include tree planting, terracing, and other erosion control measures.
    - **Water Supply Improvement**: The fund has contributed to more consistent water supply for Mombasa by reducing water loss due to inefficiencies in the watershed and improving the natural filtration capacity of ecosystems.
    - **Increased Agricultural Yields**: Through the promotion of sustainable farming practices, upstream farmers have seen an increase in crop yields while reducing their environmental footprint. Practices such as agroforestry, water conservation techniques, and erosion control have improved farm productivity and resilience to climate change.
    - **Livelihood Enhancement**: Smallholder farmers benefit from new economic opportunities through improved crop yields and the adoption of more sustainable agricultural techniques. This has helped alleviate poverty and improve food security in upstream areas.
    - **Public-Private Collaboration**: The Mombasa Water Fund has been successful in bringing together multiple stakeholders, including private sector companies, local governments, and NGOs. This collaboration ensures shared responsibility and investment in maintaining and managing the watershed.

PRIVATE LED PROJECTS

KASIGAU CORRIDOR REDD+ PROJECT

- **Management Entity**: Wildlife Works Carbon (WWC)
- **Size**: 200,000 hectares
- **Beneficiaries**: Approx. 100,000 local people in the region
- Key Objectives:
    - Avoid deforestation and degradation of dryland forests.
    - Protect the habitat of endangered species.
    - Create sustainable employment opportunities for local communities.
- Results:
    - Over 1 million tonnes of CO_2 equivalent emissions avoided annually.
    - Creation of over 300 jobs in the local community, including in carbon monitoring, forest patrols, and sustainable farming.
    - 95% reduction in charcoal production in the area.
    - Establishment of schools, scholarships, and healthcare services for the community.
- **Assessment**: this seems to be a well-functioning project and in size the largest privately managed NBS project in Kenya. However, probably no immediate need for funding as the programme has successfully attracted carbon funding.

FOREST RESTORATION IN THE RIFT VALLEY

- Initiator: Eden Reforestation Projects
- Objectives:
    - Restore deforested and degraded areas in the Rift Valley through large-scale tree planting and agroforestry initiatives.

    - Alleviate poverty in local communities by creating employment opportunities in forest restoration activities.
    - Contribute to global efforts to combat climate change by sequestering carbon through reforestation.
- Size: Eden Reforestation Projects focus on large-scale reforestation, planting millions of trees over thousands of hectares across Kenya's Rift Valley and other regions.
- Beneficiaries:
    - Local communities benefit from employment as tree planters and from improved environmental services, such as enhanced soil fertility and water retention.
    - Ecosystems benefit from restored forests that support biodiversity and help regulate the local climate.
- Results:
    - Eden has planted over 10 million trees in Kenya, restoring vast areas of degraded land.
    - The organization has created thousands of jobs, particularly for women and marginalized groups, helping improve livelihoods.
    - The reforestation efforts have contributed to carbon sequestration and improved soil and water conservation in the project areas.

The Climate Investment Funds

The Climate Investment Funds (CIF) were established in 2008 to mobilize resources and trigger investments for low carbon, climate resilient development in select middle and low income countries. To date, 14 contributor countries have pledged funds to CIF that have been channeled for mitigation and adaptation interventions at an unprecedented scale in 72 recipient countries. The CIF is the largest active climate finance mechanism in the world.

THE CLIMATE INVESTMENT FUNDS

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