REPUBLIC OF KENYA

MINISTRY OF MINING, BLUE ECONOMY AND MARITIME AFFAIRS

MINISTRY OF ENVIRONMENT CLIMATE CHANGE AND FORESTRY

Kenya's Blue Carbon Ecosystems-Nationally Determined Contributions Implementation & Investment Plan (2025-2035)

A National Framework for High-Integrity Blue Carbon Actions, Climate Resilience, and Sustainable Coastal Development

This Implementation and Investment Plan defines Kenya's long-term vision for positioning ocean-based Blue Carbon Ecosystems as a key pillar of national climate action, coastal resilience and a sustainable blue economy. It consolidates commitments from the 2020–2030 and 2031–2035 Nationally Determined Contribution (NDC) cycles into a cohesive strategy focused on the restoration, protection, scientific research, community stewardship and sustainable financing of coastal wetlands—especially mangroves and seagrass beds. The plan reflects the Government of Kenya's commitment to high-integrity ocean climate actions and outlines the measures required to safeguard these critical ecosystems while enhancing the resilience and prosperity of coastal communities.

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Foreword

Kenya's coastal and marine ecosystems are a cornerstone of our national climate and biodiversity ambition and a vital foundation for the prosperity and resilience of coastal communities. Among these, Blue Carbon Ecosystems, particularly mangroves and seagrass beds, provide essential ecological services, safeguard our shorelines, sustain fisheries, and contribute significantly to national mitigation and adaptation outcomes. As Kenya advances its commitments to the Paris Agreement, Blue Carbon Ecosystems have emerged as strategic natural assets for both ocean climate actions and a sustainable blue economy.

The *Blue Carbon Ecosystems-NDC Implementation and Investment Plan (2025–2035)* is a major step in operationalizing Kenya's climate commitments across two NDC cycles. By consolidating the 2020–2030 and 2031–2035 periods, it sets a clear path for scaling restoration, building capacity and mobilizing sustainable financing at national and county levels. The plan aligns with Kenya's Vision 2030, the Bottom-Up Economic Transformation Agenda, the National Climate Change Action Plan III, the Marine Spatial Plan, the Blue Economy Strategy, the National Biodiversity Strategy and Action Plan, and relevant regional and international frameworks.

This plan reflects the Government of Kenya's commitments to advancing high-integrity ocean climate actions while ensuring that coastal communities benefit from resilient livelihoods, improved governance and equitable access to emerging opportunities in the blue economy sector. It sets out the measures required to enhance transparency, strengthen monitoring and reporting systems, and attract long-term investment into nature-based solutions.

> "Through shared commitment, Kenya will strengthen its leadership in nature-based climate solutions and secure a resilient, prosperous blue growth."

We commend the collaboration between government, research institutions, partners, civil society and coastal communities in developing this plan. We urge all stakeholders to continue supporting its implementation to protect and sustainably manage Kenya's Blue Carbon Ecosystems. Through shared commitment, Kenya will strengthen its leadership in nature-based climate solutions and secure a resilient, prosperous blue growth.

H.E. Hon. Hassan Ali Joho, EGH

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Preface

The Government of Kenya recognizes the strategic importance of Blue Carbon Ecosystems in advancing the nation's climate and biodiversity commitments, safeguarding coastal resilience and supporting a sustainable blue economy. Mangroves, seagrasses and coastal wetlands are vital natural resources that support the country's efforts to reduce its carbon footprint, protect coastal communities from climate risks and other environmental shocks, and maintain important ecological and economic functions. As the ministries mandated to oversee environment, climate change and forestry, blue economy and maritime affairs and fisheries, we affirm our collective responsibility to ensure the effective stewardship, restoration and long-term sustainability of these ecosystems.

This Implementation and Investment Plan consolidates Kenya's blue carbon commitments across the 2020–2030 and 2031–2035 NDC cycles into a single, coherent framework for coordinated national action. It holistically recognizes the value of Blue Carbon Ecosystems, articulates the scientific, institutional, governance and financial measures required to operationalize these commitments, and provides a structured pathway for delivering high integrity mitigation outcomes, strengthening adaptation and resilience and mobilizing sustainable investment at scale. The plan further outlines the roles of national and county governments, research institutions, communities, development partners and the private sector in advancing Kenya's blue carbon agenda, embodying the whole of government and whole of society approach.

The line ministries reaffirm their commitment to evidence-based planning, inter-agency coordination, and transparent implementation of this plan. We call upon all stakeholders to support the realization of its objectives and to contribute to the protection and sustainable management of Kenya's coastal ecosystems. Through this collective effort, Kenya will strengthen its leadership in natural climate solutions and secure the long-term resilience and prosperity of its coastal regions.

> "Through this collective effort, Kenya will strengthen its leadership in natural climate solutions and secure the long-term resilience and prosperity of its coastal regions."

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We acknowledge the leadership of the Ministry of Environment, Climate Change, and Forestry; the Ministry of Mining, Blue Economy, and Maritime Affairs; the National Treasury; the Climate Change Directorate; and the State Department for the Blue Economy and Fisheries for guiding the overall process. Much appreciation goes to Fauna & Flora, The Pew Charitable Trusts and Oceans 5, a sponsored project of Rockefeller Philanthropy Advisors for their leading financial and technical support throughout the plan development process. We further recognize the contributions of county governments along the Kenyan coast, whose insights and priorities have ensured that the Plan is practical and locally grounded.

Special appreciation is extended to the technical working groups, experts and implementing agencies whose analyses, fieldwork, and policy inputs informed the strategic direction and investment priorities contained herein. We also acknowledge the support of other development partners and regional organizations, including;, The International Union for Conservation of Nature (IUCN), Wetlands International Eastern Africa, World Wide Fund for Nature (WWF) Kenya, The Nature Conservancy and The East African Wildlife Society, among others, for their technical expertise, and financial support throughout the formulation process.

Finally, we express our deepest gratitude to the coastal communities, particularly the Community Forest Associations (CFAs) and Beach Management Units (BMUs), and local leaders who generously shared their knowledge, experiences, and aspirations. Their stewardship and life experiences remain vital to the success of Kenya's blue-carbon agenda.

> "This plan is the result of extensive collaboration across ministries, departments and agencies, county governments, development partners, civil society organizations and coastal communities."

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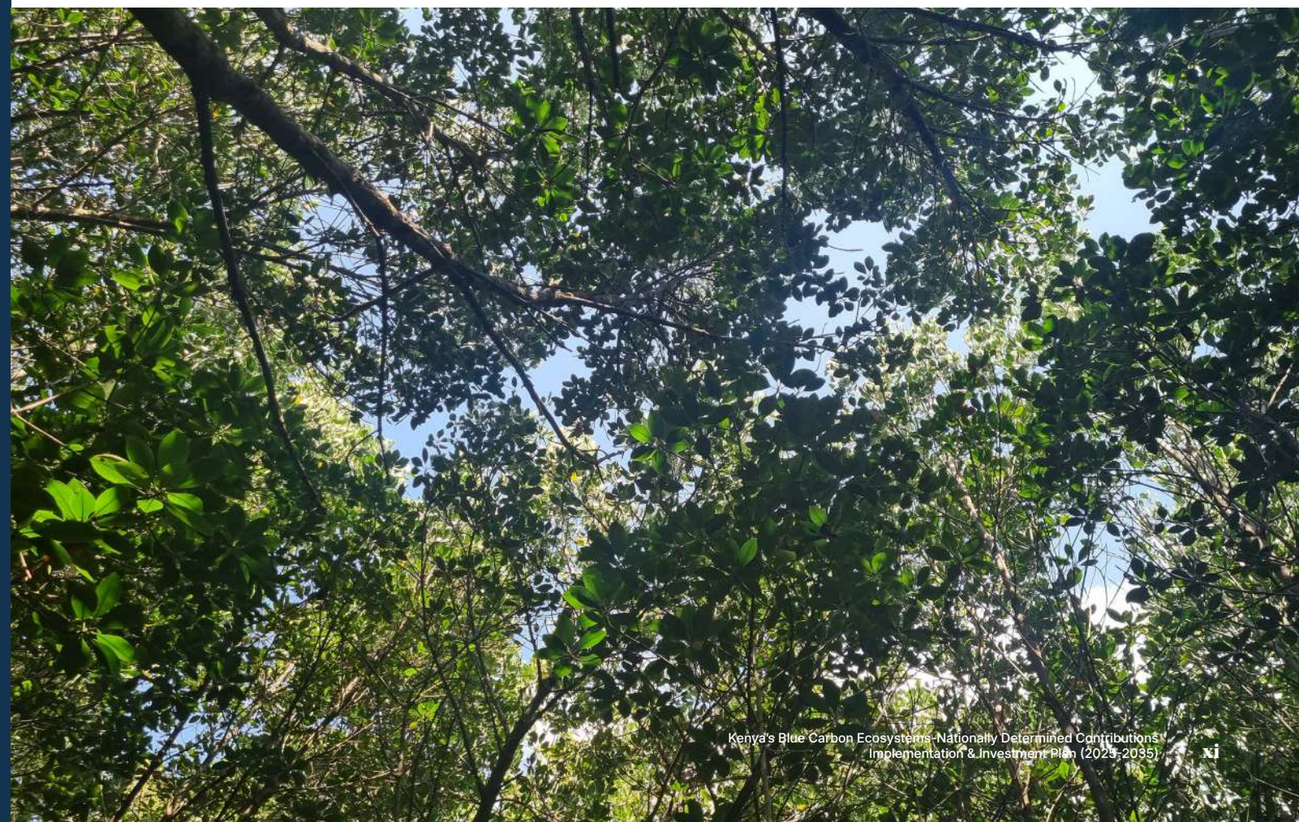

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Abbreviations and Acronyms

AFOLU	Agriculture, Forestry and Other Land Use
BCE-NDC I&IP	Blue Carbon Ecosystems-Nationally Determined Contributions Implementation and Investment Plan
BCE	Blue Carbon Ecosystem
BETA	Bottom-Up Economic Transformation Agenda
BMU	Beach Management Unit
BNFF	Blue and Nature Finance Facility
BTR	Biennial Transparency Report
CAPEX	Capital Expenditure
CBO	Community-Based Organization
CCAP	County Climate Change Action Plan
CCCF	County Climate Change Fund
CCD	Climate Change Directorate
CCCU	County Climate Change Unit
CDA	Community Development Agreement
CEC	County Environment Committee
CECM	County Executive Committee Member
CFA	Community Forest Association
CIDP	County Integrated Development Plan
CoG	Council of Governors
CSO	Civil Society Organization
CWA	Community Wildlife Association
DFIs	Development Finance Institutions
DNA	Designated National Authority
EMCA	Environmental Management and Coordination Act
ESG	Environmental, Social and Governance
ETF	Enhanced Transparency Framework
FAO	Food and Agriculture Organization
FMCG	Fast-Moving Consumer Goods
FPIC	Free, Prior and Informed Consent
IRR	Internal Rate of Return
GCF	Green Climate Fund
GDP	Gross Domestic Product
GHG	Greenhouse Gas

ICZM	Integrated Coastal Zone Management
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for Conservation of Nature
JCMA	Joint Co-Management Areas
JKP	Jumuiya ya Kaunti za Pwani
KeFS	Kenya Fisheries Service
KFS	Kenya Forest Service
KEFRI	Kenya Forestry Research Institute
KMFRI	Kenya Marine and Fisheries Research Institute
KPA	Kenya Ports Authority
KPI	Key Performance Indicator
KRA	Key Result Area
KWS	Kenya Wildlife Service
LLCA	Locally Led Climate Action
LULUCF	Land Use, Land Use Change and Forestry
MECC&F	Ministry of Environment, Climate Change and Forestry
MEL	Monitoring, Evaluation and Learning
MFI	Microfinance Institution
MiBEMA	Ministry of Mining, Blue Economy and Maritime Affairs
MRV	Monitoring, Reporting and Verification
MSP	Marine Spatial Plan
MTP	Medium Term Plan
NBCM	National Biodiversity Coordination Mechanism
NBE	Nature-Based Enterprise
NCCC	National Climate Change Council
NbS	Nature-based Solution
NBSAP	National Biodiversity Strategy and Action Plan
NCCAP	National Climate Change Action Plan
NDC	Nationally Determined Contribution
NEMA	National Environment Management Authority
NGHGI	National Greenhouse Gas Inventory
NGOs	Non-Governmental Organizations
NMEMP	National Mangrove Ecosystem Management Plan
OPEX	Operational Expenditure
PES	Payments for Ecosystem Services
PFM	Public Finance Management
PFMP	Participatory Forest Management Plan
PPP	Public-Private Partnership
REDD+	Reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks
SDGs	Sustainable Development Goals
SME	Small and Medium-sized Enterprise
SOP	Sustainable Ocean Plan
UN	United Nations
UNCRPD	United Nations Convention on the Rights of Persons with Disabilities
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
VCM	Voluntary Carbon Market
WCCPC	Ward Climate Change Planning Committee
WRTI	Wildlife Research and Training Institute

Definition of Terms

Adaptation: Adjustments made within ecological, social or economic systems in response to actual or anticipated climatic stimuli and their impacts. It involves changes in processes, practices and structures to reduce potential damages or to benefit from opportunities associated with climate change.

Article 6: This means Article 6 of the Paris Agreement

Beach Management Units (BMUs): These are legally registered community entities at fishing landing sites comprising fishers, traders, boat owners and other stakeholders. They partner with the government to co-manage fisheries by promoting sustainable practices, conserving resources, resolving conflicts, enforcing regulations and supporting community livelihoods.

Blue Carbon: Carbon captured and stored by coastal wetlands, particularly mangroves, seagrass beds and salt marshes.

Blue Carbon Ecosystems: Highly productive coastal vegetated habitats, primarily mangrove forests, seagrass beds and salt marshes, that capture and store significant amounts of organic carbon in both plant biomass and underlying sediments.

Community-Based Organization (CBO): A voluntary association of individuals from the same community, which is self-organized for a common purpose. It is aimed at improving the livelihood of the group members or for a community benefit and includes a special interest group and community project.

Community Forest Association (CFA): A legally registered community entity that, in accordance with the law, participates in the conservation and management of a public forest through a management agreement with the Kenya Forest Service.

Mitigation: Actions or activities that limit emissions of greenhouse gases (GHGs) from entering the atmosphere and/or reduce their levels in the atmosphere. The ultimate goal of mitigation is to preserve a biosphere that can sustain human civilization and ecosystem services.

Nationally Determined Contribution (NDC): A national climate action plan prepared, communicated and maintained by each Party to the Paris Agreement. It outlines a country's commitments to reduce greenhouse gas emissions and to adapt to the impacts of climate change.

Nature-based Solutions (NbS): Actions that harness natural processes and ecosystems, such as mangroves, seagrasses and forests, to address societal challenges like climate change, biodiversity loss and disaster risk. NbS promotes sustainable management, restoration and conservation of ecosystems to deliver environmental, social and economic benefits.

Payment for Ecosystem Services (PES): A voluntary transaction in which a clearly defined ecosystem service is purchased by one or more buyers from one or more service providers. Payment is made only if the service provider ensures the delivery of the agreed service, making the arrangement conditional on verified service provision (conditionality).

Resilience: The capacity of social, economic and environmental systems to cope with hazardous events or disturbances, responding or reorganizing in ways that maintain their essential function, identity and structure, while also maintaining the capacity for adaptation, learning and transformation.

Executive Summary

Kenya's Blue Carbon Ecosystems (BCEs), comprising approximately 61,000 ha of mangroves and 39,000 ha of seagrass beds, are critical natural assets that safeguard coastal communities, sustain fisheries and contribute significantly to the nation's climate mitigation and adaptation goals as well as biodiversity goals. Recognized as some of the world's most carbon-dense ecosystems, BCEs help Kenya advance its commitments under the Paris Agreement while supporting a sustainable blue economy. However, these ecosystems face serious decline: mangroves have diminished by 40% over the last 40 years, with an ongoing annual reduction rate of 0.57%, and seagrass beds are falling by 0.26% per year, resulting in negative impacts on biodiversity, coastal stability and economic livelihoods.

In response, Kenya has developed the Blue Carbon Ecosystems-Nationally Determined Contributions Implementation and Investment Plan (BCE-NDC I&IP) for the 2025–2035 period. This plan provides a comprehensive blueprint to restore, conserve and sustainably manage BCEs, aligning with Kenya's Nationally Determined Contributions under the Paris Agreement and supporting national policies such as the Climate Change Act (2016), National Climate Change Action Plan III, the Blue Economy Strategy, and the National Biodiversity Strategy and Action Plan (NBSAP).

By focusing on BCE restoration and conservation, the Plan aims to conserve all mangroves, 60% of which are intact; restore at least three-quarters of the 40% of degraded mangroves, and extend protections to at least 20,000 ha of seagrass ecosystems reducing greenhouse gas emissions by approximately 0.5 million tonnes of CO_2e by 2030, and an additional 0.18 to 0.19 million tonnes by 2035. This mitigation potential represents significant opportunities to participate in emerging global blue carbon markets, where carbon credits currently trade between USD 30 and 50 per tonne.

Beyond climate benefits, BCEs perform vital ecosystem services that protect against storm surges, coastal erosion and flooding. The Plan projects that investments in BCEs will contribute to a 10–20% reduction in coastal damages by 2035, averting economic losses estimated between USD 200 and 500 million. Fisheries productivity is expected to increase by up to 25%, directly supporting between 300,000 and 600,000 coastal households.

The Plan is grounded in a strong socioeconomic framework that emphasizes sustainable livelihoods such as seaweed farming, mariculture, ecotourism and Payment for Ecosystem Service schemes. These initiatives are projected to create between 15,000 and 30,000 jobs by 2030, increasing to 40,000 to 70,000 by 2035. Household incomes

0.5+ million

tonnes of CO_2e emissions targeted for reduction by 2030 through BCE restoration and conservation

100,000 ha

of Blue Carbon Ecosystems comprising mangroves and seagrass beds in Kenya

40%

of Kenya's mangroves have been degraded, requiring urgent restoration efforts

20,000

hectares of seagrass ecosystems targeted for protection under the BCE-NDC Implementation and Investment Plan

200-500 million

USD in coastal damage losses expected to be averted by 2035 through BCE investments

80.1 billion (KES)

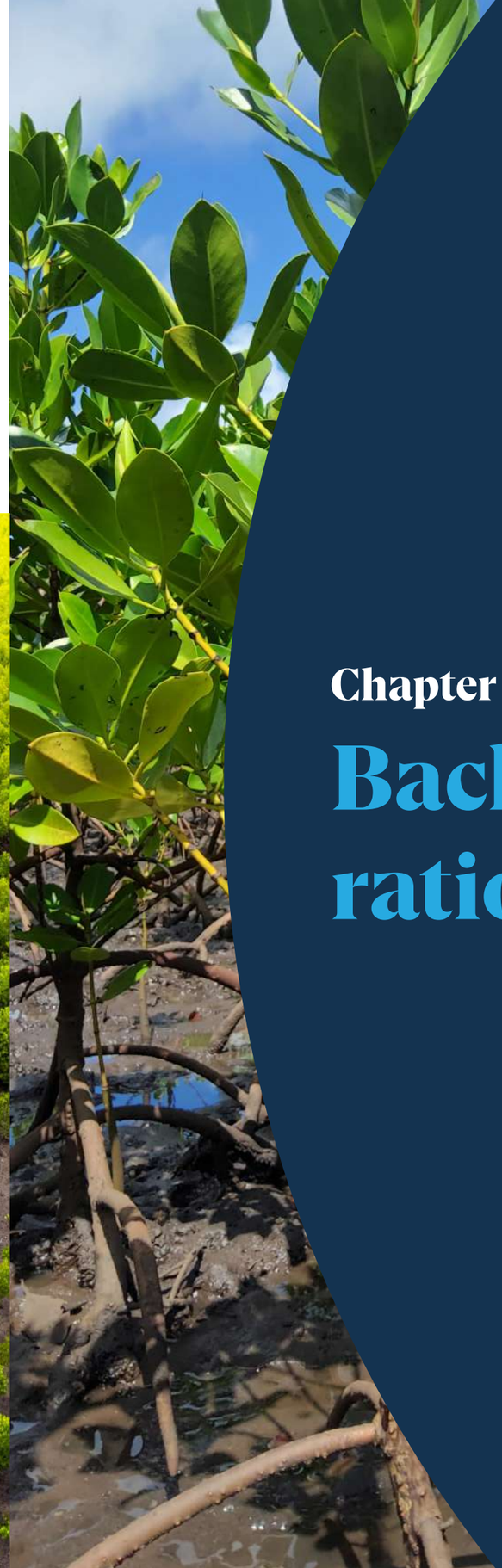
estimated investment required from 2025–2035 to restore, conserve, and sustainably manage Kenya's Blue Carbon Ecosystems

are expected to rise by 15 to 30%, generating community revenues ranging from USD 30 million to 100 million. This approach aims to drive inclusive coastal development by fostering economic growth, job creation and enhanced community well-being.

Implementation of the Plan requires an estimated investment of KES 80.1 billion (approximately USD 620 million) from 2025 to 2035, with KES 36.4 billion allocated by 2030 and KES 43.50 billion by 2035. Funding will focus on five Key Result Areas (KRAs): conservation and restoration of Blue Carbon Ecosystems (BCE); community stewardship and resilient livelihoods; scientific research and monitoring; governance and policy alignment; and sustainable finance and market development. To support these efforts, the Plan aims to mobilize over USD 620 million in climate and nature finance by 2035 through innovative mechanisms such as the Blue Nature Finance Facility, blended finance, carbon market readiness under Paris Agreement Article 6, blended finance models and public-private partnerships.

The Plan is founded on a strong coordination framework linking national, county and community levels, with clearly defined roles, capacity-building pathways and risk management strategies. A comprehensive Monitoring Reporting and Verification (MRV) system ensures transparency and integrates with national climate inventories.

By protecting and sustainably managing BCEs, Kenya positions itself as a regional leader in ocean-based climate action, including harnessing blue carbon potential. The Plan delivers climate, biodiversity, social, and economic benefits while strengthening resilience for millions of coastal residents. Achieving these ambitions requires urgent government support and cross-sector collaboration to fully unlock the transformative potential of Kenya's Blue Carbon Ecosystems for sustainable development.



Chapter 1

Background and rationale

Kenya's national climate commitments under the Paris Agreement—expressed through the First NDC (2016), the Updated First NDC (2020–2030), the submission of the first Biennial Transparency Report (BTR1) in 2024, and the enhanced Second NDC (2031–2035)—reflect a steadily strengthening focus on nature-based and ocean-climate actions. While the First NDC did not adequately capture Blue Carbon Ecosystems (BCEs), the Updated NDC (2020) formally integrated BCEs as part of Kenya's ocean climate action agenda, recognising their role in mitigation, adaptation and coastal resilience. This progression is further reinforced in the Second NDC, which expands commitments on coastal and marine ecosystems, MRV systems and Article 6 readiness. Community-led initiatives such as *Mikoko Pamoja* and *Vanga Blue Forest* demonstrate Kenya's practical steps in operationalising BCE-based climate action, delivering verified emissions reduction, community benefits and strengthened ecosystem stewardship. Together, these developments position BCEs as a central pillar of Kenya's evolving climate ambition and its broader green-growth and resilience pathway.

1.1

Policy Evolution and Legal Framework for Blue Carbon Ecosystem Management in Kenya

Kenya's policy and legal framework for the conservation, protection, restoration and sustainable management of BCEs has evolved through a coordinated progression of global commitments, national reforms, sectoral strategies and community-level governance. This integrated framework provides the foundation for implementing the BCE-NDC Implementation and Investment Plan.

1.1.1

Alignment with Global and Regional Frameworks

Kenya's BCE agenda is anchored in international commitments that recognize nature-based solutions as essential for climate mitigation, adaptation and sustainable development. Key frameworks include the following:

- **United Nations Framework Convention on Climate Change:** Article 5 encourages Parties to take action to conserve and enhance sinks and reservoirs of greenhouse gases, including terrestrial, coastal and marine ecosystems
- **Paris Agreement (2015):** Recognizes ecosystems as essential to achieving long-term climate goals and strengthening transparency frameworks. Under the Agreement, Kenya is implementing its updated NDC I (2020) and has recently submitted NDC II (2031–2035) in April 2025, which for the first time, explicitly includes BCEs such as mangroves and seagrasses.
- **Sustainable Development Goals (SDGs):** BCEs contribute directly to SDGs 13 (Climate Action), 14 (Life Below Water) and 15 (Life on Land), and indirectly to SDGs 1 (No Poverty), 2 (Zero Hunger) and 8 (Decent Work and Economic Growth), through livelihoods and resilience.
- **Kunming-Montreal Global Framework under the Convention on Biological Diversity:** Provides a global set of markers guiding countries to protect and restore ecosystems, halt biodiversity loss and align national actions with biodiversity conservation ambitions.
- **African Union Agenda 2063:** Emphasizes sustainable blue economy development and climate-resilient ecosystems.

Other global and regional frameworks relevant to the BCEs are summarized in Table 1.1. These global frameworks have shaped Kenya's national climate commitments and the integration of BCEs into long-term development planning.

Table 1.1: Summary of Key Global and Regional Frameworks Relevant to Blue Carbon Ecosystem Conservation and Management

Framework / Convention / Strategy	Description
Africa Blue Economy Strategy	Guides an inclusive and sustainable blue economy that significantly contributes to Africa's transformation and growth.
UN Decade on Ecosystem Restoration (2021–2030)	Calls for large-scale restoration of degraded ecosystems, including mangroves and seagrasses.
Nairobi Convention 2025–2028 Programme of Work	Decision CP11/11 on Conservation, Restoration and Management of Critical Habitats and Species urges Contracting Parties to strengthen measures for the protection, restoration and sustainable management of Blue Carbon Ecosystems, including seagrasses, mangroves and salt marshes.
Ramsar Convention on Wetlands	Strengthens the case for treating Blue Carbon Ecosystems as wetlands of national and international importance.
United Nations Convention on the Law of the Sea	Provides the overarching legal framework for ocean governance, including the duty of States to protect and preserve the marine environment. It helps position investment in Blue Carbon Ecosystems not only as a climate action, but as part of responsible ocean governance and sustainable blue economy development.
FAO Code of Conduct for Responsible Fisheries	Blue carbon ecosystems, especially mangroves and seagrass meadows, are critical fish habitats and nursery grounds. The Code promotes responsible fisheries that conserve aquatic resources, protect biodiversity and respect ecosystems.
Biodiversity Beyond National Jurisdiction Agreement	Reinforces ecosystem-based ocean governance and helps connect national Blue Carbon Ecosystem management actions to wider ocean-climate-biodiversity ambition, including migratory species protection, offshore pressures, regional collaboration, knowledge sharing and ocean finance.
IFC Performance Standards on Environmental and Social Sustainability	The Performance Standards are directed toward clients and provide guidance on identifying environmental and social risks and impacts. They are designed to help clients avoid, mitigate and manage these risks and impacts in a manner that promotes sustainable business practices, including effective stakeholder engagement and the fulfilment of disclosure obligations related to project-level activities.
UN Guiding Principles on Business and Human Rights	All States have a duty to protect individuals from human rights abuses committed by businesses, while companies themselves have a responsibility to respect human rights in all their operations and activities.
United Nations Convention on the Rights of Persons with Disabilities (UNCRPD)	Protects the rights and dignity of disabled people. It shifts from treating people with disabilities as subjects of charity to rights-holders, aiming to ensure full, equal participation, accessibility and fundamental freedom for all.
United Nations Declaration on Human Rights	Sets out fundamental human rights to be universally protected.

1.1.2
Alignment with national and county-level frameworks

The BCE-NDC I&IP is aligned with the Constitution of Kenya and key national development frameworks, sectoral policies, strategies, and legal and regulatory instruments that guides implementation across relevant sectors.

i. The Constitution of Kenya and Vision 2030

a. **Constitution of Kenya (2010):** Articles 42 and 69 guarantee the right to a clean and healthy environment and require sustainable management and conservation of natural resources, including genetic resources and biological diversity.

b. **Kenya's Vision 2030** and the **Bottom-Up Economic Transformation Agenda (BETA)** position the blue economy as a driver of inclusive growth, job creation, and climate resilience.

c. BCEs are recognized as foundational to fisheries, tourism, coastal protection, and community livelihoods.

ii. National Climate Policies, Strategies and NDC Commitments

Kenya's national climate policy landscape has progressively strengthened the role of BCEs through strategic planning, legislation, and institutional reforms:

a. The **National Climate Change Framework Policy** (2017) provides a structured approach to integrate climate change adaptation and mitigation into national development planning.

b. The **National Climate Change Response Strategy (2010)** and **NCCAP I–III (2013–2027)** established the foundation for integrating ecosystems into climate action.

c. The **National Adaptation Plan (2015–2030)** identifies coastal ecosystems as priority adaptation assets and calls for integrated shoreline management.

d. The **Updated NDC (2020–2030)** explicitly recognizes mangroves and seagrasses as mitigation and adaptation assets, calling for their integration into GHG inventories, PES schemes and restoration programmes.

e. The **Second NDC (2031–2035)** elevates nature-based solutions, including BCEs as core to Kenya's decarbonization pathway, resilience building and just transition agenda. It emphasizes:

i. scaling BCE restoration and protection,

ii. strengthening MRV systems for blue carbon,

iii. expanding community-based stewardship, and

iv. enabling high-integrity nature markets.

f. **Long-Term Low Emission Development Strategy (LT-LEDS)**guides the country's transition to a low-emission, climate-resilient future by promoting sustainable economic growth, fulfilling international commitments, attracting green investments and integrating nature-based solutions to enhance carbon sequestration and ecosystem resilience.

iii. Legal and Regulatory Framework

Kenya's legal framework provides enforceable mandates for BCE protection, climate action and benefit sharing:

a. The **Climate Change Act (Cap 387A)** provides the legal basis for NDC implementation, MRV systems and climate governance structures.

b. The **Environmental Management and Coordination Act (EMCA, Cap. 387)** establishes environmental safeguards, Environmental Impact Assessment (EIA)/ Environment & Social Impact Assessment (ESIA) requirements and compliance mechanisms.

c. **Intergovernmental Relations Act (IGRA) 2012**: provides the constitutional framework that enables coordinated, devolved, and collaborative implementation of Blue Carbon Ecosystem functions across national and county governments.

d. The **Forest Conservation and Management Act (Cap. 385),** the **Wildlife Conservation and Management Act (Cap. 376)** and the **Fisheries Management and Development Act (Cap. 378)** establish mandates for protecting mangroves, seagrasses and associated biodiversity.

e. The **Climate Change (Carbon Markets) Regulations (2024)** define carbon rights, establish benefit-sharing rules (minimum 40% for land-based projects) and operationalize the national carbon registry.

f. The **Climate Change (Non-Market Approaches) Regulations (2026)** provides a national framework for cooperative, nonmarket climate actions that mobilize technical assistance, capacity-building and public finance for blue carbon conservation and restoration.

g. The **Environmental Management and Coordination (Access to Biological Resources and Benefit-Sharing) Regulations (2025)** strengthen equitable sharing of benefits from biodiversity-based enterprises.

Together, these laws create a coherent regulatory environment for high-integrity BC climate actions and nature markets.

iv. Sectoral Policies and Plans

Sector-specific policies translate national climate commitments into actionable guidance for BCE conservation and restoration:

a. The **Blue Economy Strategy (2025)** provides the national framework for prioritizing sustainable coastal ecosystems, climate-resilient livelihoods and nature-positive economic growth as core pillars of Kenya's blue economy transition.

b. The **Kenya Fisheries Policy (2023)** provides the national framework for sustainable fisheries management, aquaculture development, BMU strengthening and ecosystem-based fisheries governance.

c. The **National Aquaculture Policy 2025** aims to sustainably develop Kenya's aquaculture sector to increase fish production, improve food security and support economic growth while safeguarding environmental resources.

d. The **National Mangrove Ecosystem Management Plan (NMEMP, 2017–2027)** provides restoration targets, zoning and co-management frameworks. The national mangrove plan informed the development of the National Mangrove Restoration Guidelines, the Mangrove Tree Nursery Manual and the Mangrove Harvest Management Plan for Lamu county. Additionally, it guided the formulation of technical orders for effective mangrove conservation in Kenya.

e. The **National Landscape and Ecosystem Restoration Strategy 2023–2035** elaborates the visionary roadmap that aims to restore 10.6 million hectares of degraded landscapes and ecosystems over the next decade, increase our national tree cover to 30% and create sustainable livelihoods for our communities.

f. The **National Seagrass and Coral Reef Action Plan (2026–2036)** outlines national priorities for seagrass and coral reef protection, restoration, monitoring and community stewardship.

g. The **Kenya Marine Spatial Plan (MSP)** and the **Sustainable Ocean Plan (SOP)** aim to create a strategic framework that clarifies spatial priorities for conservation, restoration and nature-based solutions ensuring biodiversity-inclusive spatial planning, while positioning Blue Carbon Ecosystems as vital assets for climate resilience, sustainable ocean governance and blue carbon market opportunities.

v. County Policies, Legislations and Plans

County governments along Kenya's coast operate within a devolved climate-governance architecture, guided by a suite of county policies and planning instruments that integrate BCE priorities into development planning, land-use regulation, climate finance and blue economy investments. These policy frameworks include:

a. **County Policies, Acts and Regulations related to climate change, environment, blue economy and fisheries** that establish County Climate Change Funds (CCCFs), County Climate Change Units (CCCUs) and devolved climate-action governance structures.

b. **County Integrated Development Plans (CIDPs)**, which embed BCE restoration, coastal resilience, fisheries and blue economy priorities into five-year development planning and budgeting cycles.

c. **County Spatial and Land-Use Plans**, which guide zoning for mangroves, wetlands, estuaries, MPAs, mariculture zones and coastal infrastructure.

d. **County Climate Change Action Plans (CCCAPs)**, which outline county-specific environmental priorities including pollution control, watershed protection and ecosystem restoration.

e. **Ward-level Climate Change Strategies**, which define ward-level climate priorities and allocate CCCF resources to BCE restoration and livelihoods.

vi. Community-level Management Frameworks

At the community level, BCE stewardship is anchored in **co-management systems** that empower BMUs, CFAs, JCMAs and local climate institutions to jointly manage fisheries, mangroves, seagrass and nearshore ecosystems through participatory planning, monitoring and benefit-sharing mechanisms.

a. **BMU Management framework** – community-based fisheries governance frameworks established through BMUs to regulate fisheries access and resource use, strengthen compliance and surveillance and promote sustainable management and stewardship of mangroves, seagrasses and nearshore marine ecosystems.
b. **Joint Co-Management Areas (JCMA) Plans** – coordinated management frameworks where multiple BMUs, county and national agencies jointly govern ecologically connected coastal and marine areas, harmonising rules, enforcement, restoration actions and benefit-sharing across shared ecosystems.
c. **Participatory Forest Management Plans (PFMPs)** – guide community-led mangrove conservation and management actions.
d. **Community Conservancy Management Plans** – support wetland, delta and coastal forest conservation through community-based governance structures.
e. **Community-Based MRV Protocols** – BMU/CFA-led monitoring of mangroves, seagrass, fisheries and shoreline change feeding into county and national MRV systems.
f. **Local Benefit-Sharing Frameworks** – ensure equitable distribution of revenues from carbon credits, biodiversity credits and blue economy enterprises.

1.2
Institutional Mandates and Governance

The Ministry of Mining, Blue Economy and Maritime Affairs (MiBEMA) is central to Kenya's sustainable development agenda, spearheading policies and initiatives that drive responsible use and conservation of freshwater, marine and coastal resources. The ministry formulates and enforces policies for sustainable use of both marine and freshwater resources, coastal zone management and blue economy development. Departments and Agencies under the ministry, such as the State Department for Blue Economy and Fisheries, oversee the implementation of the Kenya Fisheries Policy (2023) and coordinate fisheries management, marine spatial planning and protection of marine biodiversity. The Kenya Coast Guard Service enforces maritime safety, pollution control and resource protection laws, while the Kenya Maritime Authority regulates shipping and port operations to align with ecosystem conservation.

The Ministry of Environment, Climate Change and Forestry (MECC&F) provides overall policy direction on climate change matters, supported by the National Climate Change Council (NCCC), chaired by His Excellency the President. The Climate Change Directorate (CCD) serves as the technical secretariat for climate action at all levels of government.

The Kenya Forest Service (KFS) is responsible for managing state forests, including mangrove ecosystems, while research and monitoring are led by the Kenya Forestry Research Institute (KEFRI), the Wildlife Research and Training Institute (WRTI), the Kenya Marine and Fisheries Research Institute (KMFRI) and the Academia. The Kenya Fisheries Service (KeFS) oversees the management of fisheries resources including fish habitats, while the Kenya Wildlife Service (KWS) oversees the management of marine parks and reserves, and their associated ecosystems. The National Environment Management Authority (NEMA) regulates environmental compliance and serves as the Designated National Authority (DNA) for carbon markets. At the subnational level, county governments play a crucial role in mainstreaming climate action and managing Blue Carbon Ecosystems (BCEs) through the relevant county departments, the County Environment Committees (CECs), the County Climate Change Units (CCCUs) and the Ward Climate Change Planning Committees (WCCPCs). Additionally, community-based organizations, including Community Forest Associations (CFAs) and Beach Management Units (BMUs), alongside private sector actors and development and conservation partners are instrumental in on-the-ground implementation, monitoring and equitable benefit sharing. Together, these institutions form a collaborative framework essential for sustainable environmental management and climate resilience in Kenya.

Kenya has established a strong national governance framework for climate and nature finance, anchored in the Carbon Markets Regulations (2024) and Access to Biological Resources and Benefit-Sharing Regulations (2025) and the legal requirement for Community Development Agreements (CDAs). These instruments provide the policy foundation for transparent, equitable and accountable benefit-sharing from nature-based solutions, including blue carbon initiatives. They ensure that financial flows from carbon markets and biodiversity-related investments align with national priorities, safeguard community rights and reinforce Kenya's commitment to high-integrity, inclusive climate action.

1.3
Role of BCEs in Climate and Development Agenda in Kenya

The BCEs are central to Kenya's climate mitigation strategy, with the potential to abate millions of tonnes of CO_2e annually through conservation, restoration and sustainable management. They also enhance adaptation by buffering coastal communities against storms, sea-level rise and erosion, while supporting food security, livelihoods and biodiversity. Community-led projects like Mikoko Pamoja and Vanga Blue Forest show that sustainable blue carbon projects can deliver Verified Emissions Reductions (VERs), community development and ecosystem restoration. Kenya is experiencing intensifying climate pressures, with temperatures rising +0.88°C above average and increasingly erratic rainfall marked by depressed coastal precipitation and prolonged dry spells (KMD, 2026). These shifts heighten salinity, disrupt sediment flows and increase the vulnerability of mangroves and seagrasses to erosion, storm surges and heat extremes, underscoring the need to fully integrate BCEs into national climate and development planning.

1.3.1
Blue Carbon Ecosystem (BCE) Commitments in Kenya's NDCs and their Linkages to NCCAPs

BCEs are recognized across Kenya's NDCs, (2020–2030) and (2031–2035), as critical assets for achieving national mitigation and adaptation goals. These commitments are further operationalized through NCCAPs, which translate high-level NDC priorities into actionable programmes, institutional responsibilities and investment pathways. BCEs contribute directly to national mitigation targets by expanding high-integrity nature-based carbon sinks, enhancing avoided emissions and strengthening AFOLU-sector MRV and National GHG inventory integration, including readiness for future cooperative approaches under Article 6 of the Paris Agreement. At the same time, BCEs underpin Kenya's adaptation agenda by providing natural coastal protection, stabilising hydrological and sediment systems, supporting climate-resilient fisheries and blue economy livelihoods, and reducing vulnerability to rising sea level across the five coastal counties. Together, these functions position BCEs as a dual-benefit pillar of Kenya's NDCs, advancing both emissions-reduction pathways and community-centred climate resilience. Table 1.2 outlines BCE-relevant commitments in both NDCs cycles and shows how NCCAP III unpacks them into concrete implementation priorities.

Table 1.2: BCE action areas aligned with Kenya's NDC I and NDC II

NDC I (2020–2030) Commitments	NDC II (2031–2035) Commitments	NCCAP III / National Unpacking	BCE Action Area Linkages
Mitigation			
• Making progress towards achieving a tree cover of at least 10% of the land areas of Kenya • Making efforts towards achieving land degradation neutrality • Scaling up Nature-Based Solutions (NBS) for mitigation • Enhancement of REDD+ activities • Harnessing mitigation benefits of the sustainable blue economy, including coastal carbon PES	• Increasing tree cover (afforestation, reforestation and agroforestry, including mangroves) • Promoting sustainable resource use and green industrialization • Integrating coastal ecosystems into national MRV and GHG inventory improvements • Reducing deforestation and forest degradation (REDD+ approach) • Promoting sustainable blue economy practices that reduce pressure on coastal ecosystems	• Development of a national blue carbon MRV system • Integration into NGHGI • Expansion of mangrove restoration • Incorporation of coastal wetlands into national restoration and land degradation neutrality programmes • Restoration and protection of mangroves, seagrasses and coastal wetlands • Strengthened REDD+ implementation in coastal and mangrove forests • Promotion of blue economy mitigation opportunities, including coastal carbon markets and PES schemes	• Carbon sequestration and avoided emissions • MRV and data systems • Governance, policy and safeguards • Ecosystem-based adaptation • Finance and nature markets • Community livelihoods

NDC I (2020–2030) Commitments	NDC II (2031–2035) Commitments	NCCAP III / National Unpacking	BCE Action Area Linkages
Adaptation			
• Enhancing adaptive capacity and climate resilience across all sectors • Exploring innovative approaches for enhancing climate resilience of local communities through LLCA • Enhancing investment in ocean and blue economy • Rehabilitating and conserving degraded coastal forests, including mangroves • Conducting blue carbon readiness assessments • Marine spatial planning and sustainable coastal management • Nature-based enterprises (seaweed farming, mangrove ecotourism) • Strengthening governance of community structures • Integrating NBS into national and county planning	• Strengthening investment in vulnerable ecosystems (oceans, seagrasses, mangroves) • Protecting, conserving, rehabilitating and restoring using NBS • Updated marine spatial planning and sustainable coastal management • Blue carbon readiness assessments • Expanding nature-based enterprises (seaweed, mangrove ecotourism) • Strengthening governance of community structures	• Sectoral adaptation actions • Coastal resilience planning • LLCA financing • Devolved climate funds • MSP, ICZM, coastal restoration, climate-resilient infrastructure • Coastal ecosystem restoration programmes • Capacity building for BCE adaptation and resilience • County-level coastal resilience planning • Expansion of blue economy livelihood programmes • Strengthened community-based natural resource governance • Integration of BCEs into county climate action plans	• Governance • Policy coherence • Community livelihoods • Ecosystem-based adaptation • Carbon sequestration • MRV • Finance

1.3.2 Financing Commitments for BCE Implementation in Kenya's NDCs

Kenya's Updated NDC (2020–2030) sets an implementation cost of **USD 62 billion**, with **13% domestic** and **87% international** financing, while the Second NDC (2031–2035) establishes a separate **USD 57 billion** envelope for mitigation, adaptation and integrated actions. BCE investment needs were derived from national policy and ecosystem-specific frameworks—including the **National Climate Change Action Plan**, the **National Mangrove Ecosystem Management Plan (2017–2027)** and the **National Seagrass and Coral Reef Action Plan (2026–2036)**—as well as emerging climate-finance instruments such as the **Kenya Green Finance Taxonomy**. These frameworks provided a credible basis for the refined BCE investment estimates underpinning the **BCE-NDC Implementation and Investment Plan (2025–2035)**.

1.4

Rationale and Justification for the BCE NDC I&IP 2025–2035

Kenya's BCEs are strategic national assets that deliver simultaneous climate, economic and social benefits, and their importance is firmly embedded across national frameworks including NDC I & II, NCCAP III, the National Blue Economy Strategy and county climate plans. However, rising temperatures, increasingly erratic rainfall and more frequent extreme events are already undermining coastal stability and ecosystem productivity (KMD, 2026). These accelerating climate pressures heighten salinity, disrupt sediment flows and expose mangroves and seagrasses to erosion, storm surges and heat extremes—reinforcing the need for climate-smart BCE management, integrated catchment–coastal planning and monitoring systems that track key climate variables such as sea surface temperature, tidal extremes and rainfall variability.

Kenya needs a dedicated BCE-NDC Implementation and Investment Plan to transform national climate commitments into coordinated, well-financed and scalable actions. The Plan will enhance coastal resilience, advance inclusive blue economy development and unlock climate and nature finance opportunities to accelerate Kenya's transition to a climate-resilient, low-emission future. The Plan establishes a clear investment framework, outlining core principles and strategic directions for BCE financing, as detailed in Chapter 5. Serving as a structured mechanism, the Plan operationalizes these priorities based on the four strategic foundations below.

i. BCEs Deliver High-impact Mitigation and Adaptation Outcomes

BCEs are among Kenya's most powerful nature-based climate solutions. They contribute directly to national mitigation pathways by expanding high-integrity carbon sinks, supporting avoided-emissions strategies, and strengthening readiness for Article 6 cooperative approaches. At the same time, BCEs underpin Kenya's ecosystem-based adaptation agenda by providing natural coastal protection, stabilising hydrological and sediment systems, and supporting climate-resilient fisheries and livelihoods.

A dedicated BCE I&IP ensures that these dual benefits are systematically planned, financed, and monitored, enabling Kenya to meet its NDC targets while strengthening resilience in the five coastal counties.

ii. BCEs Support Livelihoods, Inclusive Growth and Sustainable Blue Economy

BCEs are central to Kenya's coastal economies. They sustain artisanal fisheries, support nature-based tourism and enable community-driven enterprises such as Mikoko Pamoja and Vanga Blue Forest. These models demonstrate how BCE conservation can generate community benefits, strengthen local governance, and catalyse sustainable blue economy opportunities.

The BCE-NDC I&IP aligns with Kenya's inclusive development agenda including Vision 2030, BETA and the Just Transition Framework by:

- Supporting livelihoods and food security
- Enabling youth and women's economic participation
- Strengthening community stewardship institutions
- Anchoring nature-based enterprise development

A dedicated plan ensures that these socioeconomic benefits are scaled equitably and sustainably.

iii. BCEs Advance Kenya's Climate Policy, Governance, and Development Priorities

BCEs are embedded across Kenya's climate policy architecture. NDC I & II identify BCEs as priority nature-based solutions for mitigation and adaptation, while NCCAP III translates these commitments into programmes, institutional responsibilities and investment pathways. The National Blue Economy Strategy and county development plans further emphasise BCEs as drivers of coastal resilience and economic transformation.

The BCE-NDC I&IP provides the **institutional coherence and implementation structure** needed to:

- Consolidate fragmented bce initiatives
- Harmonise national and county roles
- Strengthen governance and safeguards
- Integrate bces into national mrv and ghg-inventory systems
- Align bce actions with broader development priorities.

This ensures that BCE investments are coordinated, accountable and aligned with national priorities.

iv. BCEs Deliver High-Impact Mitigation and Adaptation Outcomes

BCEs represent among Kenya's most effective nature-based climate solutions. They contribute directly to national mitigation by expanding high-integrity carbon sinks, supporting avoided emissions and enhancing readiness for Article 6 cooperative approaches. Concurrently, BCEs are central to ecosystem-based adaptation, providing natural coastal protection, stabilizing hydrological and sediment dynamics and sustaining climate-resilient fisheries and livelihoods. A dedicated BCE I&IP ensures these mitigation and adaptation benefits are systematically planned, financed and monitored enabling Kenya to meet NDC targets while strengthening resilience across its five coastal counties.

v. BCEs Unlock Climate and Nature Finance Opportunities

BCEs are globally recognised as high-integrity nature-based solutions, positioning Kenya to access emerging climate and nature finance opportunities. Their inclusion in NDC I & II strengthens Kenya's ability to mobilize:

- International climate finance
- Article 6 cooperative-approach investments
- Blue carbon and biodiversity credit markets
- Resilience finance instruments
- Blended finance and public–private partnerships.

The BCE-NDC I&IP provides the investment-ready framework needed to structure, sequence and scale these financing opportunities, ensuring that Kenya captures its fair share of global climate and nature finance flows.

1.5

Purpose and objective of the plan

The purpose of this BCE-NDC Implementation and Investment Plan is to guide Kenya's efforts to enhance the contribution of mangroves and seagrasses to national climate goals while strengthening community livelihoods and catalysing sustainable blue economy opportunities. Specifically, the Plan provides:

- A coherent framework for implementing BCE-related NDC commitments.
- A structured pathway for mobilising and coordinating investments across government, counties, communities and partners.
- A platform for strengthening governance, co-management systems and community participation.
- A roadmap for scaling restoration, conservation and nature-based enterprises.
- A mechanism for monitoring, evaluating, learning and adapting BCE interventions over time.

1.6

The Plan Development Process

The process of developing this Plan is anchored in the evolution of the global climate regime under the UNFCCC. Since the IPCC's First Assessment Report in 1988 identified climate change as a global challenge requiring collective action, countries agreed to establish a cooperative framework to address its causes and impacts. This led to the adoption of the UNFCCC, whose objective is to stabilize greenhouse gas concentrations at levels that prevent dangerous human interference with the climate system.

Over time, two major treaties have shaped global climate action. The Kyoto Protocol (1997) required developed countries to reduce emissions, while the Paris Agreement (2015) established a universal commitment for all countries to undertake climate action. Under the Paris Agreement, each Party

must prepare and implement Nationally Determined Contributions (NDCs) outlining national measures to address climate change.

Kenya submitted its Intended NDC in 2015, which became its First NDC in 2016 upon ratifying the Paris Agreement. This NDC was updated in 2020 and guides national climate action through 2030. In fulfilment of its obligations, Kenya submitted its Second NDC in April 2025, covering the period 2031–2035. Progress on NDC implementation must be reported every two years through Biennial Transparency Reports (BTRs). Kenya submitted its BTR1 in December 2024, which subsequently underwent an in-country Technical Expert Review (TER) in 2025.

During the development of Kenya's Second NDC (2031–2035), stakeholders involved in the management and conservation of marine resources identified the need to amplify the focus on Blue Carbon Ecosystems to fully realize their underestimated adaptation and mitigation potential in climate action. Consequently, they resolved to develop a dedicated implementation and investment plan for the BCE components of both NDCs. This process was initiated through stakeholder virtual meetings in December 2025.

Under the leadership of the Ministry of Environment, Climate Change and Forestry and the Ministry of Mining, Blue Economy and Maritime Affairs, stakeholders adopted a hybrid Technical Working Group (TWG)–consultant approach. A small task team from government and partners developed the Terms of Reference for the consultants and TWG, along with a Concept Note, Roadmap and Budget with clear milestones (Figure 1.1).

The TWG, composed of government, partners and community-based organizations, was established to guide the process. Led by Fauna & Flora, stakeholders mobilized resources to engage local consultants and coordinate consultations and TWG sessions. The TWG held four working sessions. The first onboarded consultants and drafted the plan outline. The second produced the First Order Draft (FOD), which guided stakeholder engagement and ongoing revisions.

Following the FOD, six stakeholder workshops were held across the coastal counties of Lamu, Tana River, Kilifi, Mombasa and Kwale, and one centralized subsector workshop in Mombasa. A public comment period on MyGov allowed 14 days for input. Feedback from consultations and the public was incorporated into the Second Order Draft (SOD), presented at a National Validation Workshop on April 12, 2026, in Mombasa.

A High-Level Breakfast meeting with Governors of the six coastal counties of *Jumuiya ya Kaunti za Pwani* (JKP; Economic Block of Coastal Counties) provided policy oversight. Their inputs, together with validation feedback, were integrated during the fourth TWG session. The finalized plan was then edited, published and launched at the Eleventh Our Ocean Conference on June 18, 2026, in Mombasa, Kenya.

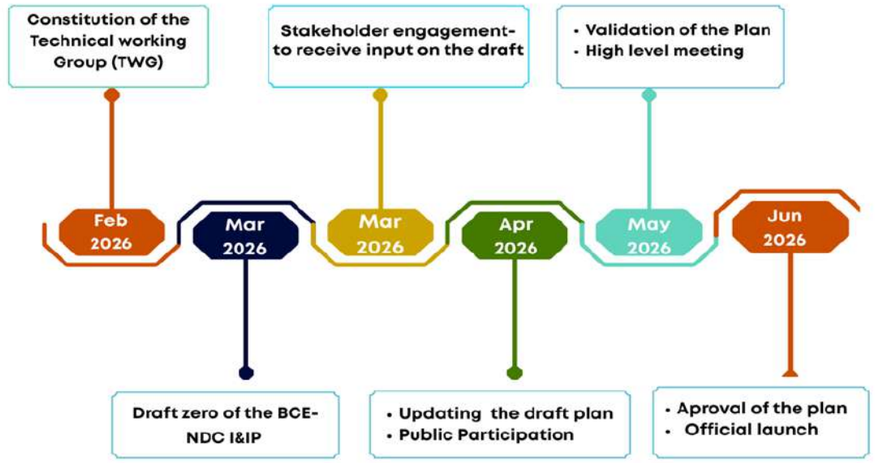


Figure 1.1: Roadmap for the development of Kenya's BCE-NDC_I&IP 2025-2035

1.7 Scope of the Plan

The Plan outlines a 10-year strategy from 2025 to 2035, aligned with Kenya's Nationally Determined Contribution (NDC) cycles. The first phase (2025–2030) aims to establish essential systems, enhance governance and scale up key restoration efforts. The second phase (2031–2035) focuses on expanding these efforts, consolidating gains and preparing for long-term investment.

Geographically, the Plan targets five coastal counties Lamu, Tana River, Kilifi, Mombasa and Kwale where Blue Carbon Ecosystems are present, as well as Taita Taveta, which plays a critical role in influencing land and sea interactions.

The Plan focuses specifically on mangroves and seagrasses, the key Blue Carbon Ecosystems along Kenya's coast, recognizing their vital role in the country's climate mitigation and adaptation goals. Its thematic scope includes:

- Restoration and conservation of mangroves and seagrasses
- Contributions to Kenya's NDC mitigation and adaptation targets
- Livelihoods and blue economy linkages
- Governance and local land and coastal area (LLCA) co-management systems
- Financing and investment pathways
- County-level integration and community participation
- Monitoring, Evaluation, Learning and Review (MEL + Review).

The Plan's boundaries are clearly defined, excluding coral reefs, deep-sea ecosystems, inland wetlands not connected to coastal hydrology and non-coastal carbon pools. Its focus remains strictly on coastal Blue Carbon Ecosystems that directly support Kenya's NDC objectives.

Chapter 2

Situational Analysis

Kenya's climate commitments are anchored in its obligations under the Paris Agreement, articulated through successive Nationally Determined Contributions (NDCs) that outline national priorities for mitigation, adaptation and resilience. The country's updated NDC (2020–2030) strengthened ambition across land-based and coastal sectors, integrating nature-based solutions and advancing transparency frameworks through the Biennial Transparency Report (BTR). Within this broader climate architecture, Kenya's blue carbon ecosystems (BCEs)—mangroves, seagrasses and associated coastal systems—exist within a dynamic socio-ecological landscape shaped by land–sea interactions, climate pressures and human activities spanning coastal zones and upstream catchments. Over the past decade, Kenya has made significant progress in BCE management through comprehensive national and county-level policy, legal and regulatory frameworks, strengthened community co-management strategies and pioneering community-led initiatives such as Mikoko Pamoja and Vanga Blue Forest. These efforts have improved conservation outcomes, expanded restoration activities and fostered digital monitoring platforms that enhance transparency and data accessibility. Lessons from these initiatives underscore the importance of participatory governance, sustained capacity building and integrated, landscape-scale approaches linking upstream catchment management with coastal ecosystem health. Against this backdrop, this chapter synthesises the current state of BCEs by highlighting constraints, challenges and opportunities, providing the analytical foundation for identifying the strategic issues that inform the Strategic Framework presented in this Implementation and Investment Plan.

2.1

Overview of Kenya's Blue Carbon Ecosystems (BCEs)

Kenya's Blue Carbon Ecosystems (BCEs)—mangroves and seagrasses—are critical natural assets that deliver climate, biodiversity and socioeconomic benefits along the country's 600 km coastline. Although they cover only **61,000 ha of mangroves** and **39,000 ha of seagrasses** (Figure 2.1), equivalent to **0.17% of national land area**, they store more than **75 MtCO_2e** and sequester an additional **7.5 tCO_2e/ha/year** (KWS, 2014; GoK, 2017a). Their carbon density is **5–10 times higher** than most terrestrial ecosystems, positioning them as high integrity nature-based solutions within Kenya's climate and development agenda.

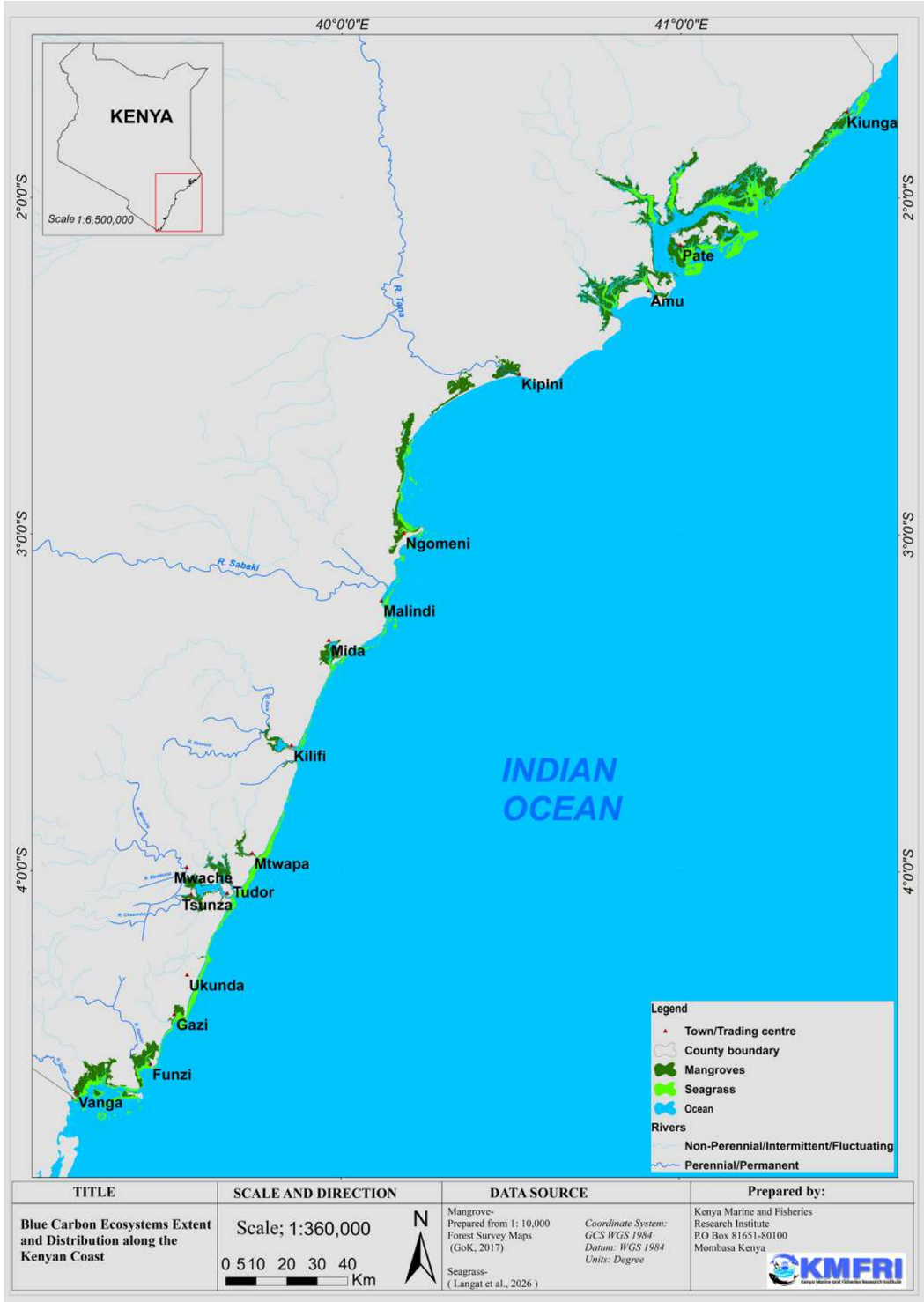


Figure 2.1: Blue Carbon Ecosystems distribution along the Kenyan coast

2.1.1
Ecological Significance and Ecosystem Services

BCEs underpin the productivity and stability of Kenya's coastal zone. They support **over 80% of coastal fisheries**, protect shorelines from erosion, sustain biodiversity and contribute to local economies through fisheries, tourism and wood products. These ecosystems support **over 800,000 artisanal fishers** and contribute up to **USD 600,000 per year** to the national economy. Their role extends beyond carbon: mangroves and seagrasses buffer storm surges, stabilise sediments and maintain water quality – functions that are increasingly vital under accelerating climate risks.

2.1.2
Status, Trends, and Spatial Variability

Despite their importance, BCEs continue to face degradation. Mangroves are being lost at **0.57% per year**, and seagrasses at **0.26% per year**, with degradation concentrated in peri-urban creeks, river deltas and areas affected by sedimentation and pollution. Approximately **40% of mangrove areas are degraded**, while seagrass meadows exhibit patchy decline linked to turbidity, eutrophication and physical disturbance.

Drivers of loss include:

Over-exploitation of wood and fisheries resources

Pollution (plastics, sewage, oil spills)

Sedimentation from poor agricultural practices

Unplanned coastal development

Climate-driven stressors such as sea-level rise, storms and coral bleaching.

If BCEs are lost, **up to 41% of Kenya's coastline** could become highly exposed to hazards, underscoring their role in national disaster-risk-reduction strategies (GoK, 2023).

Despite these pressures, areas such as **Lamu County** and the **Tana Delta** show signs of recovery due to community-based restoration, improved management and reduced harvesting pressure.

2.1.3
Strategic Importance for Climate and Development Agendas

BCEs form a cornerstone of Kenya's strategy to achieve its **32% emissions reduction target by 2030** and **35% by 2035** under NDC I and NDC II. Their high carbon density, coastal-protection functions and livelihood contributions position them as priority nature-based solutions within Kenya's NDCs, LULUCF transition pathway, Vision 2030, the Bottom-Up Economic Transformation Agenda (BETA) and the National Blue Economy Strategy, among other key policy frameworks.

Recent investments in mapping, restoration and community-based management—particularly in Lamu and the Tana Delta—demonstrate growing national commitment to BCE conservation and sustainable use.

2.2
Constraints, Challenges, and Opportunities

Kenya has made notable progress in the conservation and restoration of Blue Carbon Ecosystems (BCEs). However, significant challenges remain across ecological, socioeconomic, governance and financial dimensions. These constraints affect the feasibility, scalability and long-term sustainability of BCE interventions. At the same time, emerging policy, demographic, technological and market-driven opportunities provide a strong foundation for accelerating BCE conservation, restoration and sustainable management efforts.

2.2.1
Climate-Driven Constraints

Kenya's Blue Carbon Ecosystems are increasingly stressed by climate-driven changes that undermine their health, productivity and restoration feasibility. Recent diagnostics show a **+0.88°C warming anomaly**, which heightens evapotranspiration and salinity stress in mangrove creeks. **Depressed rainfall** in coastal and ASAL regions reduces freshwater inflows, altering hydrology and nutrient cycling essential for mangrove zonation and seagrass growth.

More frequent **extreme events**—including floods, heatwaves, strong winds and tidal extremes—accelerate shoreline erosion, damage seagrass beds and narrow restoration windows. **Sea surface temperature anomalies** in the Western Indian Ocean further reduce seagrass productivity and shift species composition, while **tidal extremes** disrupt inundation patterns critical for mangrove establishment.

Collectively, these pressures significantly heighten coastal vulnerability. **If BCEs are lost or degraded, up to 41% of Kenya's coastline becomes highly exposed to coastal hazards**, underscoring the need for climate-smart restoration and adaptive management.

2.2.2
Ecological and Biophysical Constraints

Kenya's BCEs face significant ecological and biophysical pressures that undermine ecosystem integrity and constrain conservation and restoration success. **Habitat quality** continues to decline due to **over-exploitation, sedimentation, pollution (plastics, sewage, oil spills), and unplanned coastal development**. These pressures fragment habitats, reduce ecological functionality and weaken ecosystem resilience. They have contributed to an **estimated 80 $MtCO_2e$ of cumulative historical emissions since 1990**, accounting for approximately 7–14% of LULUCF emissions over the same period, despite BCEs covering only **0.17% of Kenya's land area**. This highlights their disproportionate vulnerability and significance in climate mitigation efforts. In addition, seagrass meadows, remain **under-mapped and under-assessed, limiting accurate planning, valuation and integration into national greenhouse gas inventories**. As a result, significant data gaps persist and these ecosystems remain inadequately represented in the national reporting and decision-making processes.

Restoration effectiveness is also constrained by technical and ecological challenges. **Mangrove restoration initiatives are often inadequately designed or implemented**, with limited hydrological assessments, inappropriate species-site matching and low survival rates. **Seagrass restoration faces even greater challenges**, including high restoration costs, high turbidity, sedimentation, eutrophication, algal overgrowth, physical disturbance (anchoring, trampling, dredging), hydrodynamic exposure and species-specific substrate requirements rarely met in degraded sites.

These challenges are further compounded by **technical and methodological gaps**, especially for seagrass restoration including the absence of national seagrass restoration guidelines beyond the WIO regional guidance, the very limited number of restoration trials undertaken in Kenya, and insufficient longterm monitoring to inform adaptive management and improve restoration outcomes.

Collectively, these ecological and biophysical constraints reduce BCE resilience, hinder natural regeneration processes and increase the cost, complexity and uncertainty associated with restoration and long-term management efforts.

2.2.3
Socioeconomic Challenges

High dependence on nearshore fisheries and mangrove wood continues to place significant pressure on BCEs, particularly in coastal communities with limited livelihood diversification opportunities. Poverty, population growth in coastal counties and limited access to alternative income sources further intensify the extraction of natural resources. Gender disparities also contribute to vulnerability, as women are often heavily engaged in BCE-related value chains while having limited access to resources, benefits and decision-making processes. In addition,

inadequate capacity for community-based natural resource management constrains effective local stewardship and sustainable resource use. Therefore, these socioeconomic challenges create pressures that undermine the sustainable management of BCEs and limit meaningful, long-term community participation in their conservation, restoration and governance, including:

- **Limited recognition and support for community stewardship**: BMUs, CFAs, women's groups and youth groups contribute substantial labour to surveillance, restoration and monitoring with limited recognition or incentives for long-term engagement.
- **Low household incomes**, often **20–40% below the national average**, increase dependence on inshore BCE resources and reduce adaptive capacity.
- **Limited climate-resilient livelihood options** and slow development of BCE-related value chains (eco-tourism, mariculture, seaweed farming) constrain diversification.
- **Weak stewardship capacity**, with only **~30% of BMUs and CFAs active**, limits effective community-driven conservation.
- **Limited community capacity for underwater restoration**, including diving, snorkelling and technical transplanting skills, restricts participation in seagrass restoration compared to mangrove restoration, which is more accessible to community groups.
- **High vulnerability to climate shocks**, which disproportionately affect low-income coastal households.

2.2.4
Governance and Institutional Challenges

Kenya's evolving governance architecture for BCEs presents coordination gaps that limit coherent, accountable and high integrity management across national and county levels. Enforcement remains weak in peri-urban and deltaic systems, and BCEs are insufficiently integrated into national LULUCF MRV frameworks. Spatial data gaps, inconsistent monitoring and limited safeguards and benefit-sharing mechanisms hinder effective management. Coordination across agencies remains limited, constraining the scaling of BCE conservation and restoration. Critical governance and institutional constraints include:

- **Evolving governance architecture with coordination gaps** across national and county institutions leads to inconsistent implementation and limited harmonization of BCE-related mandates.
- **Absence of a national seagrass restoration framework**, unlike mangroves, results in unclear leadership, inconsistent methodologies and limited institutional accountability for seagrass recovery.
- **Inconsistent benefit sharing arrangements** reduce community trust and weaken incentives for long-term stewardship.
- **Complex and lengthy regulatory processes** slow project development, permitting and investment readiness for BCE initiatives.
- **Weak enforcement** of regulations on dredging, anchoring, pollution and coastal development accelerates degradation and undermines both mangrove and seagrass restoration efforts.
- **Uncoordinated external support initiatives** create duplication, uneven geographic coverage and limited alignment with national priorities.
- **Limited knowledge exchange and technical capacity** across institutions and communities, including insufficient training on seagrass ecology, hydrodynamics and restoration techniques, constrains effective implementation.

2.2.5
Financial Constraints

Kenya's BCE interventions face significant financial barriers that limit restoration scale, continuity and long-term impact. **High restoration costs—particularly for seagrasses—reflect the need for specialized equipment, underwater labour and site-stabilization measures**, making these interventions substantially more expensive than terrestrial restoration. These costs are compounded by a **high risk of restoration failure**, driven by hydrodynamic exposure, sediment instability, herbivory, and other site-specific stressors that reduce investor confidence and increase financial uncertainty.

Funding for BCE conservation and restoration remains **inadequate and fragmented**, with short project cycles that undermine programme continuity and limit the ability to maintain long-term monitoring, adaptive management and community stewardship. **Market uncertainties in carbon and nature markets** further elevate investment risk, slowing private-sector participation and limiting the development of bankable BCE projects.

2.2.6
Opportunities

Despite these constraints, Kenya's BCE landscape presents strong opportunities for scaling conservation, restoration and nature-based enterprise development:

- **Strong national and county policy base** and growing alignment across climate, blue economy and biodiversity frameworks.
- **Active community organizations** (BMUs, CFAs, CBOs) with proven models such as Mikoko Pamoja and Vanga Blue Forest.
- **Emerging interest in seagrass mapping and monitoring**, supported by digital MRV tools, creates opportunities to close data gaps and build a foundation for future restoration.
- **Youthful coastal population (≈45%)** offering a demographic dividend for stewardship, innovation and enterprise development.
- **Growing nature-based markets**, including carbon markets, biodiversity credits and resilience-linked finance.
- **High potential for nature-based enterprises**, including eco-tourism, mariculture and seaweed farming.
- **Advances in global seagrass restoration science** offer opportunities for Kenya to adopt tested methodologies, build capacity and pilot small-scale, high-integrity restoration trials.

These constraints and opportunities collectively define the strategic priorities that must guide BCE investment and implementation.

2.3
BCE Roles in Mitigation, Adaptation and Resilience

Kenya's BCEs provide a unique combination of **mitigation**, **adaptation**, **resilience** and **socioeconomic** benefits. Their high carbon density, coastal-protection functions and livelihood contributions position them as core nature-based solutions within Kenya's NDC II, LULUCF transition pathway and Article 6 readiness framework.

2.3.1
Mitigation Potential

Mangroves and seagrasses are globally recognised as high-integrity BCEs due to their exceptional capacity to store and sequester carbon in both living biomass and deep, anoxic sediments. With carbon stocks reaching **up to 739 tCO_2e/ha**, they rank among the most carbon-dense natural systems on Earth. In Kenya, these ecosystems sequester **4–12 tCO_2e/ha/year**, positioning them as critical contributors to the country's land-based mitigation pathways.

Protecting intact BCEs is essential for avoiding large-scale emissions, as disturbance of mangrove or seagrass sediments can release **up to 1,000 tCO_2e/ha**. Restoration further enhances mitigation potential. Restoring **20,000 ha** of degraded mangroves and seagrasses could generate **40,000–90,000 tCO_2e per year** in additional sequestration under optimal ecological conditions. When translated into the realistic, financed restoration programme under this Plan—accounting for achievable scale, survival rates and implementation capacity—these actions are expected to deliver **approximately 0.7 $MtCO_2e$ of cumulative mitigation by 2035**. Combined with avoided-loss measures and enhanced protection of intact ecosystems, this integrated pathway enables BCEs to transition into a **net sink of approximately 9 $MtCO_2e$ by 2035**, reinforcing their role as high-integrity nature-based solutions.

LULUCF emissions are expected to reduce to **approximately 15 $MtCO_2e$ in 2030** and **24 $MtCO_2e$ in 2035**, considering that Kenya's Updated NDC I and NDC II targets require lowering total emissions from **143 $MtCO_2e$ by 32%** and from **215 $MtCO_2e$ by 35%**, respectively. Based on the LULUCF sector's proportional contribution (15–17% of national emissions), BCE-related mitigation—representing roughly **10% of LULUCF emissions**—corresponds to **1.5 $MtCO_2e$ in 2030** and **2.4 $MtCO_2e$ in 2035**. These figures provide a clear basis for defining BCE-specific mitigation contributions within Kenya's broader land-sector decarbonization pathway.

Kenya's **Second Nationally Determined Contribution (NDC II)** recognizes this mitigation potential and identifies BCEs as priority nature-based solutions for achieving national emissions reduction targets. BCEs are also integrated into Kenya's readiness for **Paris Agreement Article 6 cooperative approaches**, positioning the country to participate in high integrity carbon markets and attract performance-based climate finance.

2.3.2
Adaptation and Coastal Resilience Functions

Beyond their mitigation value, BCEs provide essential ecosystem-based adaptation services that reduce climate-related risks along Kenya's coastline. A mangrove belt as narrow as 100 m can reduce incoming wave energy by up to 66%, while also decreasing shoreline erosion by 30–50%. These natural protective functions buffer storm surges, stabilise sediments and reduce the frequency and severity of coastal flooding.

These services are particularly important for Kenya's coastal communities, where more than 100,000 people live in areas directly protected by mangroves and seagrasses. By reducing wave impacts and erosion, BCEs help safeguard critical infrastructure, including roads, schools, markets and tourism assets, and significantly lower disaster-recovery costs. Their role in maintaining coastal stability also supports fisheries, navigation channels and other blue economy activities.

Kenya's **NDC II** emphasizes ecosystem-based adaptation as a core pillar of national resilience planning, explicitly recognising BCEs as frontline natural infrastructure for reducing climate-related impacts and protecting vulnerable coastal populations.

2.3.3
Climate Risk Reduction and Loss and Damage Avoidance

Blue Carbon Ecosystems (BCEs) play a critical role in reducing climate-related risks and avoiding loss and damage across Kenya's coastal zone. By attenuating wave energy, stabilising sediments and supporting climate-resilient livelihoods, BCEs lower exposure to hazards, reduce vulnerability and prevent economic losses that would otherwise escalate under climate change. Their contribution to loss-and-damage avoidance positions them as essential natural infrastructure within Kenya's adaptation and resilience strategy.

Reduced exposure to climate hazards: Healthy mangroves and seagrasses significantly reduce the physical exposure of coastal communities and assets to storm surges, flooding and erosion. National assessments indicate that up to 41% of Kenya's coastline could become highly exposed to climate hazards if BCEs are lost (GoK, 2025). By buffering wave energy and stabilising shorelines, BCEs act as a first line of defence, preventing the expansion of high-risk zones and reducing the frequency and severity of hazard impacts.

Avoided economic losses: BCEs generate substantial avoided loss benefits by protecting infrastructure, settlements and economic assets. Current estimates indicate that BCE-mediated coastal protection helps prevent approximately USD 46 million in annual losses associated with erosion, flooding and damage to roads, schools, markets and other critical infrastructure. These avoided costs represent a major economic co-benefit, reducing the fiscal burden on national and county governments and lowering the need for expensive engineered coastal-protection structures.

Enhanced community resilience and reduced vulnerability: Beyond physical protection, BCEs strengthen the adaptive capacity of coastal communities. By supporting fisheries, food security and nature-based livelihoods, they provide essential buffers during climate shocks and periods of economic stress. Healthy BCEs help maintain social stability, reduce livelihood disruption and support faster recovery following extreme events. This combination of ecological and socioeconomic resilience reduces vulnerability and limits the cascading impacts that contribute to loss and damage.

2.3.4
Socioeconomic and Livelihood Services of BCEs

Blue Carbon Ecosystems are central to the resilience of Kenya's coastal economies, sustaining artisanal fisheries, tourism and nature-based enterprises that underpin household incomes and food security. They support over 70% of artisanal fisheries and can increase local incomes by 20–30% in areas adjacent to healthy mangroves and seagrass meadows. Community-led blue carbon initiatives such as Mikoko Pamoja and Vanga Blue Forest generate USD 30,000–60,000 annually for local services and create 200–500 jobs per county through restoration, monitoring and eco-enterprise development (Plan Vivo, 2014–2023). These livelihood benefits act as critical safety net functions during climate shocks by stabilising household incomes, reducing livelihood disruption and maintaining food security. The planned expansion of these projects in Kwale is expected to double economic and social gains, deepen gender and youth inclusion and strengthen community adaptive capacity. Together, these socioeconomic services complement the physical coastal protection functions of BCEs, forming a core component of Kenya's broader resilience and loss-and-damage-avoidance strategy under NDC II.

2.4
Ecosystem Services and Value Chains

BCEs generate a wide spectrum of ecosystem services that underpin coastal livelihoods, national climate commitments and Kenya's emerging blue economy opportunities. These services arise from a series of interconnected blue carbon value chain nodes, beginning with upstream ecological production functions, flowing through midstream ecosystem-service delivery and culminating in downstream value realization mechanisms such as carbon markets, nature-based enterprises and resilience-finance instruments.

Understanding these nodes and the flows of value between them is essential for identifying where ecological functions translate into economic and social benefits, where value is currently lost, and where targeted investments can unlock high integrity climate and development outcomes. This section maps out the ecological, economic and social nodes of Kenya's blue carbon value chains, analyses the distribution of benefits across communities and sectors, and identifies the strategic opportunities and bottlenecks that shape investable pathways for conservation, restoration and climate-resilient livelihoods.

2.4.1
Upstream Value: Ecological Production Functions

BCEs generate a suite of ecological production functions that underpin Kenya's mitigation, adaptation, biodiversity and livelihood benefits.

- **Carbon sequestration and storage:** Mangroves and seagrasses store more than 75 million tonnes of CO_2e and sequester ~7.5 tCO_2e/ha/year, with mangrove sediments storing carbon for centuries.
- **Sediment trapping and shoreline stabilization:** Root and rhizome structures trap sediments, reduce turbidity, stabilize shorelines and maintain coastal geomorphology.
- **Nutrient cycling and water quality regulation:** BCEs filter pollutants, reduce eutrophication and regulate nutrient flows, improving water quality for fisheries and tourism.
- **Habitat provision for fisheries and biodiversity:** BCEs provide nursery grounds, feeding habitats and refuge for commercially important fish species, invertebrates and endangered fauna such as turtles and dugongs.

These ecological functions form the **biophysical foundation** of Kenya's blue carbon value chain.

2.4.2
Midstream Value: Ecosystem Services

The ecological production functions translate into measurable ecosystem services that support national climate, economic and social objectives.

- **Mitigation services:** Long-term carbon storage and annual sequestration contribute directly to Kenya's NDC targets.
- **Adaptation and coastal protection services:** BCEs attenuate waves, reduce erosion, buffer storm surges and protect coastal infrastructure and communities.
- **Biodiversity and fisheries services:** Healthy BCEs enhance fish biomass, sustain artisanal fisheries and support marine biodiversity.
- **Socioeconomic and cultural services:** BCEs support livelihoods, provide materials (e.g., mangrove poles), sustain cultural identity and underpin nature-based tourism.

These services represent **mid-chain value** that can be quantified, monetized or integrated into policy and planning.

2.4.3
Downstream Value: Value Realisation Mechanisms

Downstream mechanisms determine how BCE value is captured, monetized or leveraged for investment.

- **Blue carbon markets:** Voluntary carbon markets and emerging **Article 6** mechanisms of the Paris Agreement offer pathways for financing high integrity BCE restoration and conservation.
- **Coastal protection investments:** Public and private actors increasingly recognize BCEs as cost-effective natural infrastructure for reducing coastal risk.
- **Climate-resilient fisheries and livelihoods:** Healthy BCEs support sustainable fisheries, mariculture and nature-based enterprises.
- **Cultural services:** BCEs enhance tourism recreation value through biodiversity, scenic quality and cultural heritage.
- **Biodiversity credits and resilience finance:** Emerging markets for biodiversity and resilience outcomes offer new revenue streams for BCE protection.

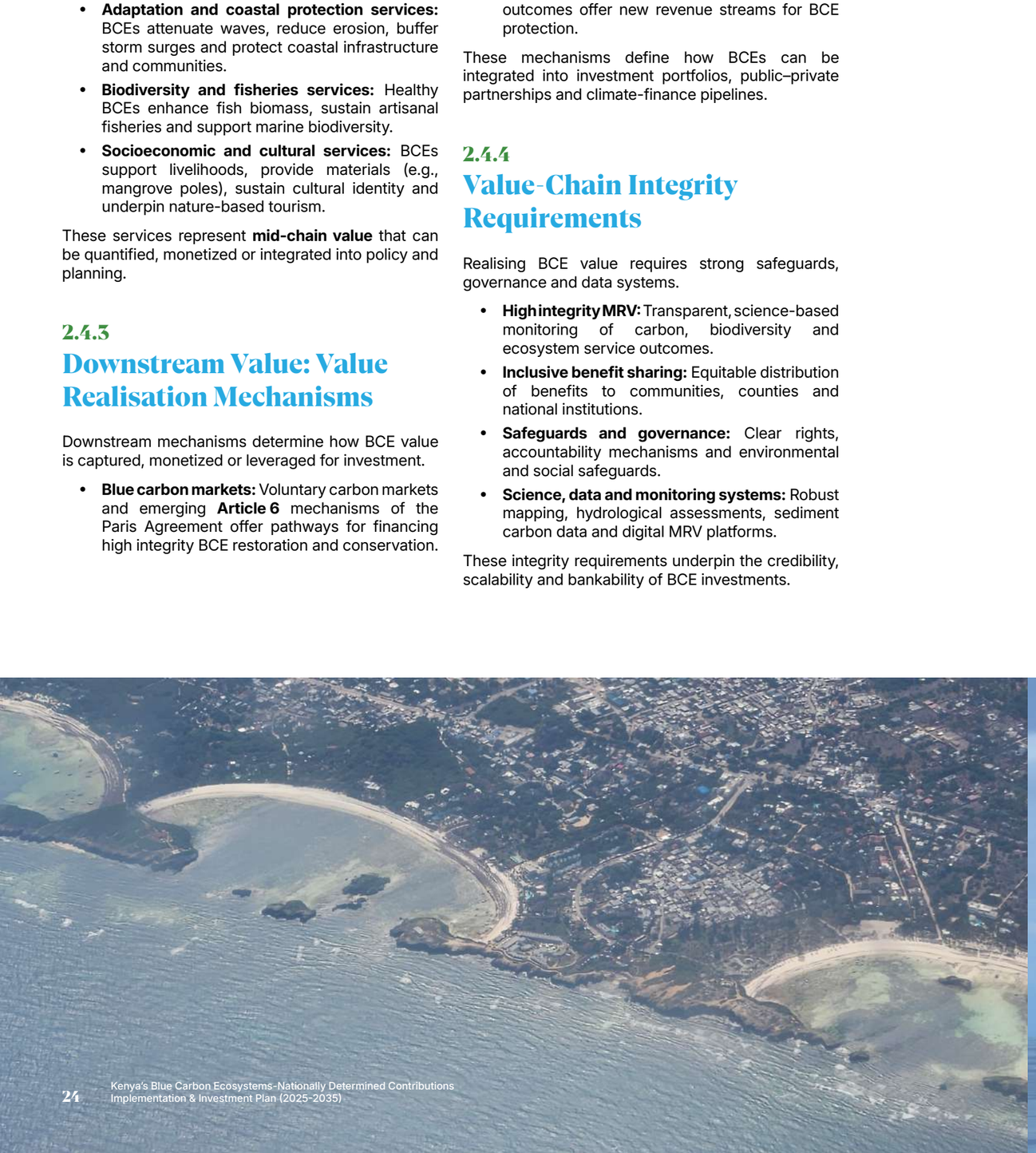
These mechanisms define how BCEs can be integrated into investment portfolios, public–private partnerships and climate-finance pipelines.

2.4.4
Value-Chain Integrity Requirements

Realising BCE value requires strong safeguards, governance and data systems.

- **High integrity MRV:** Transparent, science-based monitoring of carbon, biodiversity and ecosystem service outcomes.
- **Inclusive benefit sharing:** Equitable distribution of benefits to communities, counties and national institutions.
- **Safeguards and governance:** Clear rights, accountability mechanisms and environmental and social safeguards.
- **Science, data and monitoring systems:** Robust mapping, hydrological assessments, sediment carbon data and digital MRV platforms.

These integrity requirements underpin the credibility, scalability and bankability of BCE investments.



2.4.5
Opportunities and Constraints on BCE Value Propositions

Kenya's BCE value chains offer substantial potential for climate action, livelihood enhancement and investment. However, they also face structural challenges that constrain full value realization.

Opportunities

- High mitigation potential and strong alignment with NDCs.
- Growing demand for high integrity blue carbon credits.
- Expanding markets for nature-based enterprises, including eco-tourism, fisheries and seaweed farming.
- Strong community stewardship models (e.g., *Mikoko Pamoja, Vanga Blue Forest*).
- County-level interest in integrating BCEs into CIDPs and climate-action plans.
- Availability of digital MRV technologies for mangroves and seagrasses.

Constraints

- Degradation pressures from land-use change, pollution and overharvesting.
- Fragmented governance and limited cross-sector coordination.
- Insufficient financing for large-scale restoration.
- Limited investment readiness at county and community levels.
- Gaps in MRV, data quality and carbon-stock baselines.
- Weak value chain integration and limited market access for nature-based enterprises.

These opportunities and constraints shape the strategic issues addressed in Section 2.6 and inform the Key Result Areas (KRAs) in Chapter 3.

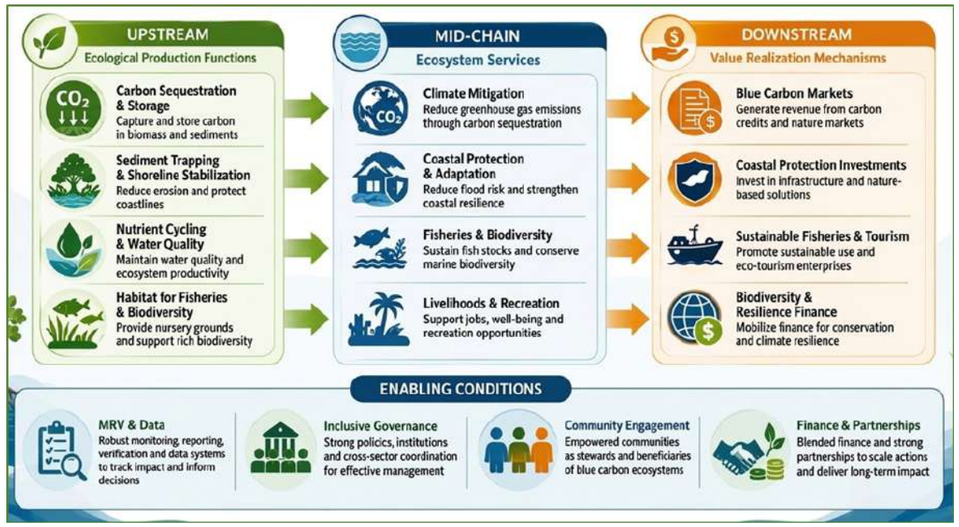


Figure 2.2: BCE value chains in Kenya

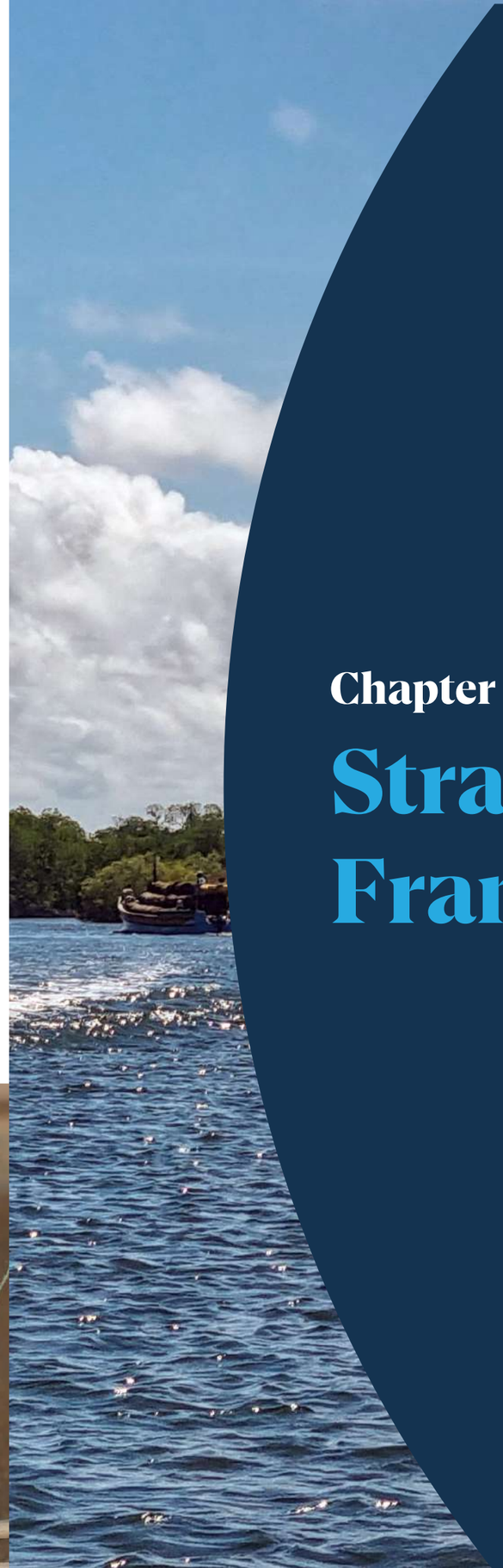
2.5

Strategic Issues

Kenya's BCEs face a set of interconnected strategic issues that undermine their ecological integrity, climate function and socioeconomic value. These issues arise from gaps in assessment and restoration, weak community stewardship systems, fragmented data and governance arrangements and an underdeveloped financing architecture. Addressing them is essential for achieving the BCE-NDC targets and ensuring durable, high integrity outcomes.

- **Insufficient and inconsistent assessment, inappropriate restoration and limited integration of climate-resilient management of BCEs:** Kenya's BCEs remain under-mapped, under-assessed and unevenly monitored, particularly seagrass meadows. Restoration is often ecologically inappropriate, poorly planned and inconsistently implemented, resulting in low survival rates and limited ecological recovery. Persistent degradation from over-exploitation, pollution, sedimentation and climate pressures further reduces ecosystem resilience and limits their contribution to mitigation, adaptation and coastal protection.
- **Weak community stewardship and climate-vulnerable coastal livelihoods**: Coastal communities (BMUs, CFAs, women and youth groups) provide essential stewardship labour but remain hardly recognized, inadequately incentivized and supported, limiting sustained participation in BCE management. Limited climate-resilient livelihood options, low incomes and underdeveloped BCE-related value chains increase dependence on inshore resources, while capacity constraints, especially for underwater seagrass restoration, restrict meaningful engagement. These combined community stewardship constraints weaken local incentives for sustainable management and heighten vulnerability to climate risks.
- **Fragmented BCE data and monitoring systems**: BCE data systems are siloed, inconsistent and poorly integrated into national inventories and digital platforms. Gaps in baseline assessments and long-term monitoring undermine Kenya's ability to generate high integrity MRV, meet Paris Agreement Article 6 requirements and support adaptive management. Limited standardized methodologies, especially for seagrass, further constrain restoration success and investment readiness.
- **Inconsistent governance, policy and institutional frameworks:** Kenya's BCE governance architecture remains **fragmented**, with coordination gaps and overlapping mandates across national and county institutions, weak enforcement, lengthy regulatory processes and inconsistent benefit-sharing arrangements. Absence of a national seagrass restoration framework, limited community rights and inadequate safeguards reduce accountability, hinder coordination and slow project development. Uneven technical capacity across institutions and counties further constrains effective implementation.
- **Unsustainable finance and investment architecture for BCEs:** Financing for BCE conservation and restoration is inadequate, fragmented and short-term, limiting scalability and continuity. High restoration costs, especially for seagrasses, combined with climate risks and market uncertainties reduce investor confidence. Kenya lacks a coherent national BCE investment framework, blended finance mechanisms, project preparation facilities and market readiness systems needed to mobilize climate finance, nature markets and private capital at scale.

Addressing these issues is critical to advancing effective BCE conservation, enhancing climate resilience and securing equitable socioeconomic benefits for Kenya's coastal communities.



Chapter 3

Strategic Framework

Kenya's BCE-NDC strategic framework (2025–2035) prioritizes mangroves and seagrasses as vital to climate resilience and coastal sustainability. Guided by a clear vision, mission, core values, and principles, it uses a Theory of Change and Logic Model to map how interventions lead to long-term goals. The framework is organized around five key pillars: restoration of degraded habitats; promotion of sustainable livelihoods for local communities; robust measurement, reporting, and verification systems; strengthened governance structures; and secured financing for implementation. Together, these pillars provide an integrated pathway to restore coastal ecosystems, enhance community well-being, and achieve Kenya's climate goals.

3.1

Strategic Vision, Mission, Values and Guiding Principles

3.1.1 Vision

A climate-resilient coastal Kenya where blue carbon ecosystems thrive, supporting the well-being of people, nature, and the economy.

3.1.2 Mission

To implement Kenya's NDC by integrating blue carbon ecosystems into national and county climate action through harnessing innovative finance and technologies, strengthening governance and empowering communities to achieve sustainable development.

3.1.3 Core Values and Guiding Principles

Kenya's BCE-NDC I&IP 2025-2035 is guided by core values and principles that ensure all actions are high-integrity, community-centred, climate-aligned, and aligned with national and global policies. This framework provides an ethical and scientific basis for decision-making, promoting responsible and effective interventions that support Kenya's sustainable development and climate goals.

Core Values

- **Sustainability** — Ensuring long-term ecological integrity and resilience of Blue Carbon Ecosystems.
- **Community Empowerment** — Strengthening local stewardship, ownership, and leadership in BCE management.
- **Equity**—Promoting fair access to benefits and opportunities for all stakeholders.
- **Inclusivity** — Ensuring meaningful participation of women, youth, Indigenous peoples, and marginalised and vulnerable groups.
- **Transparency** — Upholding openness in decision-making, data, and resource allocation.
- **Innovation** — Leveraging science, technology, and local knowledge to enhance impact.

Guiding and Investment Principles

- **Evidence-Based and Knowledge-Integrated Decisions** — Combining scientific data with Indigenous and local knowledge to guide high-integrity action.
- **Participatory and Subsidiarity-Driven Governance** — Aligning national, county, and community roles while devolving decision-making to the lowest effective level.
- **Adaptive Management and Continuous Learning** — Adjusting interventions based on monitoring results, climate risks, and community feedback.
- **Additionality and Co-Benefits** — Delivering measurable climate gains beyond business-as-usual while enhancing fisheries, biodiversity, and livelihoods.
- **Inclusivity and Free, Prior and Informed Consent (FPIC)** — Upholding rights, ensuring FPIC and guaranteeing equitable benefit-sharing.
- **Environmental and Social Safeguards** — Complying with national and international standards and protecting communities through grievance mechanisms.
- **High-Integrity MRV and Digital Transparency** — Using robust, transparent systems to verify ecological, carbon, social, and economic outcomes.
- **Diversification and Global Alignment** — Building revenue streams beyond carbon and aligning with global frameworks such as IUCN NbS, GCF, World Bank, and UNFCCC Article 6.

3.2

Theory of Change

Kenya's BCEs are powerful nature-based solutions that can simultaneously deliver climate mitigation, coastal resilience, biodiversity protection and livelihood benefits. The Theory of Change (ToC) for the BCE-NDC Implementation and Investment Plan (2025–2035) outlines how coordinated action across national, county, community and private sector actors will unlock this potential. The long-term goal is that by 2035, mangrove and seagrass ecosystems will be restored, protected, sustainably financed and deliver measurable climate, biodiversity and livelihood benefits through strong governance, community stewardship and a national BCE MRV system.

BCEs currently face a combination of policy gaps, governance challenges, limited financing and intensifying climate pressures that constrain their full potential and access to climate finance. Climate change is now a primary driver of BCE degradation, with rising temperatures, erratic rainfall, prolonged dry spells and more frequent extreme events directly affecting ecosystem health, hydrology, sedimentation and community vulnerability. Addressing these challenges requires stronger policy and institutional coordination, empowered coastal communities, reliable data systems, sustainable financing and advanced MRV tools to support restoration, enterprise development and programme preparation. By 2030 and beyond, these efforts will translate into healthier ecosystems, improved MRV systems, diversified livelihoods, expanded restoration and increased investment, positioning Kenya as a regional leader in the sustainable blue economy and coastal resilience agenda (Figure 3.1).

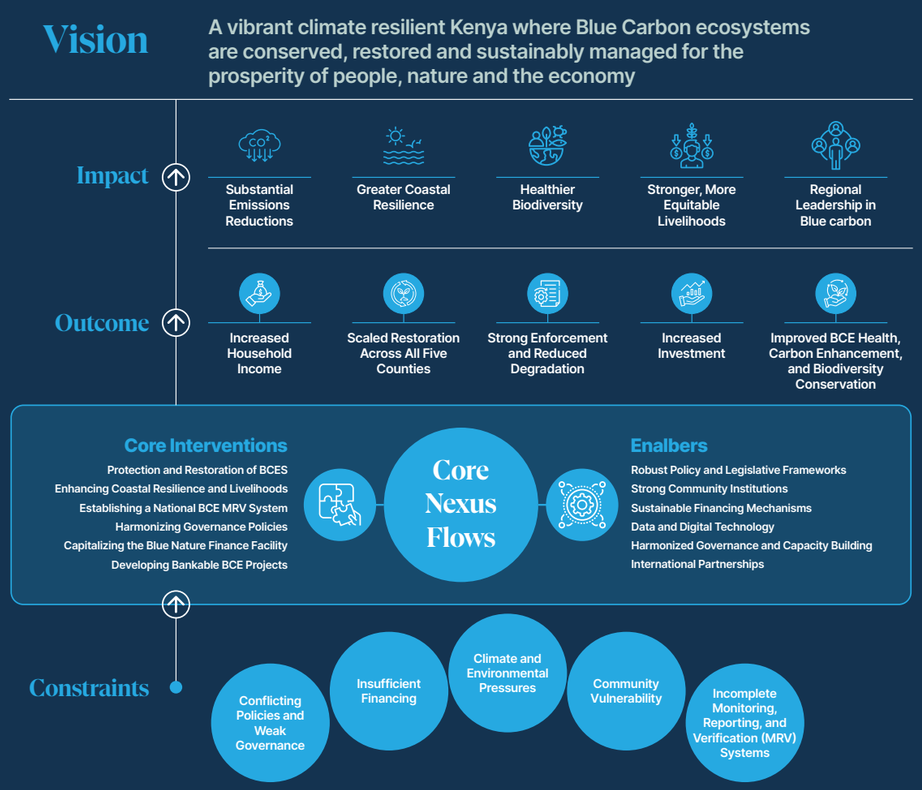


Figure 3.1: Theory of Change for the BCE-NDC Implementation and Investment Plan 2025–2035

Kenya's BCE-NDC programme follows a clear results pathway in which policy, institutional, financial, data and knowledge inputs enable core activities such as restoration, MRV development, governance strengthening, finance mobilization and capacity building. These activities produce outputs such as restored BCEs, operational MRV systems, bankable investment projects and inclusive governance structures. The outputs lead to outcomes including enhanced carbon stocks, improved coastal livelihoods, increased investment flows and stronger national reporting. Ultimately, these outcomes deliver impacts aligned with Kenya's NDCs: climate resilience, biodiversity conservation and sustainable development. This logic depends on key assumptions of sustained political will, effective coordination across actors, timely resource mobilization, high integrity MRV systems, and inclusive, equitable participation and benefit sharing (Figure 3.2).

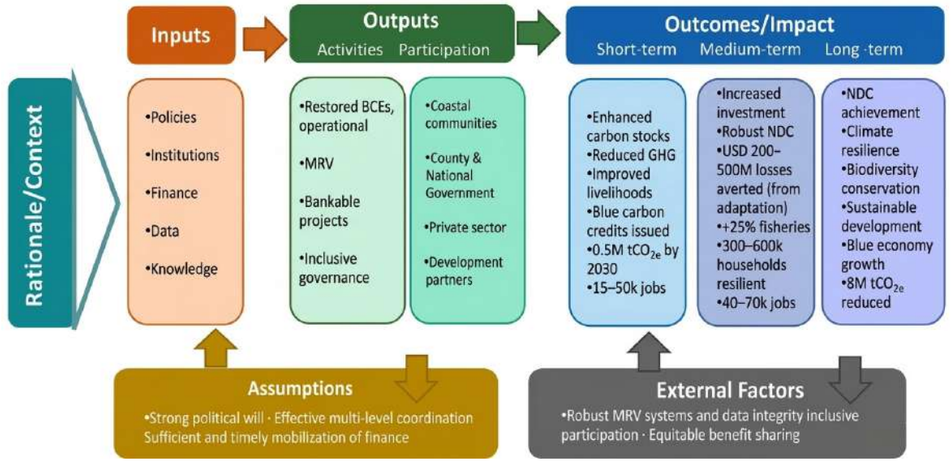


Figure 3.2: The logic model towards achieving the vision for Kenya's BCEs

3.3

Key Result Areas for delivering BCE-NDC priority actions

Kenya's BCE-NDC I&IP 2025–2035 is structured around five mutually reinforcing **Key Result Areas** (KRAs) that provide the operational framework for delivering the plan's objectives. Each KRA is supported by defined strategic objectives, pillars and priority investment areas, enabling coherent action, efficient resource allocation and systematic performance tracking across the BCE-NDC agenda (Table 3.1).

- **KRA 1: Climate-resilient BCE Conservation and Restoration:** Focuses on safeguarding and restoring mangrove and seagrass ecosystems as critical natural assets to enhance blue carbon mitigation and climate adaptation. Restoration and conservation actions must incorporate climate-risk modelling, including temperature anomalies, rainfall variability, tidal extremes and SST trends, to ensure climate-smart ecosystem design.
- **KRA 2: Community Stewardship and Climate-resilient Coastal Livelihoods:** Aims to strengthen community stewardship and promote climate-resilient coastal livelihoods by empowering local institutions to sustain long-term outcomes.
- **KRA 3: BCE Science, Data and Monitoring Systems:** Establishes robust, transparent knowledge and information management systems that integrate research, indigenous knowledge, innovation and emerging technologies for accurate carbon accounting, NDC tracking and national reporting. MRV systems will integrate climate variables—temperature anomalies, rainfall indices, sea surface temperature (SST) anomalies, wave height and tidal extremes—to strengthen climate-linked BCE monitoring and reporting.

- **KRA 4: Integrated Governance, Policy Coherence, Institutional Strengthening and Safeguards:** Enhances governance, policy alignment, institutional capacity and safeguards to ensure transparent, inclusive and accountable BCE management; reduce investment risks; and guarantee equitable benefit-sharing.
- **KRA 5: Sustainable Finance and Long-term Investment Framework:** Focuses on mobilizing sustainable finance and developing market mechanisms to effectively scale up investments in the blue carbon economy.

Table 3.1: BCE-NDC Key Result Areas, showing strategic objectives, core strategy pillars, priority actions, and aligned investment opportunities. Detailed information is provided in Annex 1.

Strategy Pillars	Priority Actions	Strategic Investment Areas
KRA 1: Climate-Resilient BCE Conservation and Restoration **Strategic Objective: Conserve existing BCE areas and restore 30% of degraded BCE areas by 2035, increase blue carbon net sequestration capacity by 30%, reduce emissions from degradation by 20% and strengthen coastal resilience by reducing erosion by 20%.**		
1.1 **Halting degradation and decline of BCEs**	• Map, zone and implement BCE protection programmes • Strengthen ecosystem protection and enforcement • Reduce BCE loss from land- and sea-based activities • Increase the proportion of seagrass ecosystems under effective protection and OECMs • Improve pollution management and enforcement across land–sea interaction zones	• BCE protection and enforcement • Land–sea interface management programmes • Reduction of land–sea-based pressures on BCEs • Catchment and riverine ecosystem restoration and pollution control
1.2 **Climate-smart BCE restoration**	• Promote catchment and riverine conservation and restoration • Implement large-scale BCE restoration and recovery programmes	• Blue Carbon Ecosystems restoration and enhancement • Creek and hydrological restoration • Climate-risk-informed restoration design
1.3 **Climate-resilient BCE conservation**	• Improve nature-based coastal resilience and community-anchored conservation • Deploy nature-based coastal protection systems for climate adaptation • Strengthen adaptive management and monitoring frameworks for BCEs • Conduct climate-risk modelling and ecosystem vulnerability assessments • Conduct erosion and sediment dynamics monitoring • Employ resilience-focused conservation planning	• Coastal protection and resilience infrastructure • Blue carbon value chains • Catchment and riverine conservation • Adaptive management and monitoring – long-term monitoring, MRV, ecosystem health assessments • Climate risk modelling and vulnerability assessment portfolio

Strategy Pillars	Priority Actions	Strategic Investment Areas
KRA 2: Community Stewardship and Climate-Resilient Coastal Livelihoods **Strategic Objective: Strengthen community resilience for coastal populations by expanding BCE-related livelihoods to 70% of coastal households by 2035, increasing household incomes by 15–40% and enhancing community stewardship systems across coastal counties.**		
2.1 **Community capacity development and stewardship systems**	• Strengthen community stewardship, institutions and co-management systems • Conduct capacity development and training for local communities • Facilitate locally led climate actions linked to diversification • Strengthen community benefit-sharing systems • Enhance youth, women and PWD inclusion in stewardship and governance • Strengthen local institutions for co-management (BMUs, CFAs, WRUAs, CBOs)	• Community capacity, stewardship and institutional strengthening • Locally led climate action and community resilience facility • Community benefit sharing and social safeguards mechanism • Youth, women and PWDs blue leadership accelerator
2.2 **Climate-resilient blue livelihoods and circular economy diversification**	• Scale climate-resilient blue livelihoods • Scale circular economy enterprises • Scale BCE-related Nature-based Enterprises (NBEs) • Upscale PES livelihood schemes • Establish enterprise incubation and challenge financing initiatives • Strengthen climate-smart and sustainable fisheries value chains • Support PWDs, women and youth blue enterprise accelerators	• Blue and circular economy enterprise clusters • PES, carbon markets and nature-based livelihood incentives • Climate-smart and sustainable fisheries transition package • Blue carbon-related Nature-based Enterprises accelerator • Enterprise incubation and challenge finance facility • Women and youth blue economy enterprise accelerator
2.3 **Blue value chain infrastructure, market access and enterprise finance and risk management**	• Develop value chain infrastructure • Establish enterprise financing mechanisms and risk management tools • Strengthen market access and aggregation systems • Develop digital platforms for blue SMEs and cooperatives • Improve cold chain, processing and logistics infrastructure • Support certification, standards and traceability systems	• Blue value chain infrastructure and enterprise financing • Market access, certification and traceability systems • Digital platforms for blue SMEs and cooperatives • Risk management and climate insurance facility

Strategy Pillars	Priority Actions	Strategic Investment Areas
KRA 3: BCE Science, Data and Monitoring Systems **Strategic Objective: Strengthen data and knowledge management systems by 2035, leveraging on research, indigenous knowledge, innovation, and emerging technologies for evidence-based BCE management, NDC tracking and national reporting.**		
3.1 **BCE assessment, MRV and interoperable data systems**	• Conduct regular BCE assessments using standardized methodologies and data protocols • Deploy digital MRV systems including climate, biodiversity, socioeconomic and land–sea interaction indicators • Promote quality assurance, quality control and transparency of MRV outputs • Monitor land–sea-based drivers and impacts of BCE degradation and prioritize hotspot areas • Create a transparent interoperable data infrastructure applying Findable, Accessible, Interoperable and Reusable (FAIR) principles • Strengthen county–national MRV coordination and data governance • Build capacity for MRV implementation at national, county and community levels	• National digital MRV and analytics infrastructure • MRV capacity building and service provision PPPs • Integrated land–sea monitoring, modelling and research system • National BCE assessment and monitoring programme • National BCE QA/QC and verification facility

Strategy Pillars	Priority Actions	Strategic Investment Areas
3.2 **BCE science, indigenous knowledge, technology and innovation**	• Strengthen BCE research and land–sea interaction studies to inform adaptive management • Integrate indigenous and local knowledge into BCE monitoring and decision-making • Leverage on emerging technologies such as remote sensing (satellite and drone data capture, IoT sensors), cloud computing (artificial intelligence (AI), digital twins) to conduct robust BCE assessment and monitoring • Develop innovation hubs for BCE science and technology • Support citizen science and community-based monitoring • Establish BCE research partnerships with universities and research institutions	• BCE Science & Innovation Research Hub/Resource Centre • Indigenous Knowledge Integration Programme. • Emerging technology pilots (AI, drones, IoT, digital twins) • Citizen science and community monitoring system
3.3 **BCE integration into the NDC reporting and other national frameworks**	• Integrate BCE data into the national GHG inventory, KNCR and ETF reporting frameworks using high integrity IPCC-aligned methodologies • Develop BCE indicators for national development and climate plans • Build capacity for MRV implementation at county and community levels	• National BCE NDC reporting and transparency facility • High integrity carbon accounting and methodology development programme
3.4 **Blue carbon information and knowledge management**	• Integrate blue carbon information into existing national information systems • Establish BCE knowledge-sharing and open-data platforms • Develop decision-support tools for planners and policymakers • Produce BCE knowledge products, communication materials and data visualizations	• National Blue Carbon Information System (NBCIS) integration programme • National BCE data repository and science hub • Open data and knowledge-sharing platform • Decision support tools for planners and policymakers • BCE knowledge products and communication programme

Strategy Pillars	Priority Actions	Strategic Investment Areas

KRA 4: Integrated Governance, Policy Coherence, Institutional Strengthening and Safeguards

Strategic Objective: Strengthen BCE governance, coordination and institutional capacity, harmonize policies and regulatory frameworks, and embed safeguards into BCE management systems by 2035.

4.1 **BCE coordination and inclusive governance**	• Strengthen governance structures and cross-sector land–sea coordination • Establish multi-level integrated land–sea governance mechanisms • Enhance inclusive governance platforms across national, county and community levels • Strengthen inter-agency coordination for BCE planning and enforcement	• Integrated land–sea governance and institutional coordination mechanism
4.2 **Policy and regulatory frameworks**	• Review and harmonize policy, legal and regulatory frameworks • Review and update BCE management strategic documents • Develop BCE-specific guidelines, standards and compliance procedures • Align BCE governance with climate, blue economy, land-use and biodiversity frameworks	• National BCE programme for policy harmonization, legal reform and regulatory compliance • Review and update BCE management strategies/plans and tools
4.3 **Capacity development and safeguards**	• Strengthen community rights, safeguards systems and co-management • Establish and operationalize BCE knowledge, learning and institutional capacity systems • Develop safeguards frameworks for carbon markets, PES and restoration projects • Strengthen county-level institutional capacity for BCE governance	• Community governance, rights and safeguards strengthening • Safeguards and benefit-sharing framework
4.4 **Blue Carbon Ecosystems collaboration and partnerships**	• Strengthen multi-stakeholder collaboration and partnerships for BCE governance • Establish BCE knowledge exchange and learning networks • Promote public–private partnerships for BCE stewardship and compliance • Strengthen regional and international cooperation on BCE science and governance	• BCE knowledge, learning and institutional capacity

Strategy Pillars	Priority Actions	Strategic Investment Areas

KRA 5: Sustainable Finance & Long-Term Investment Framework

Strategic Objective: Mobilize at least USD 616 millions of diversified finance by 2035 for sustainable BCE investments.

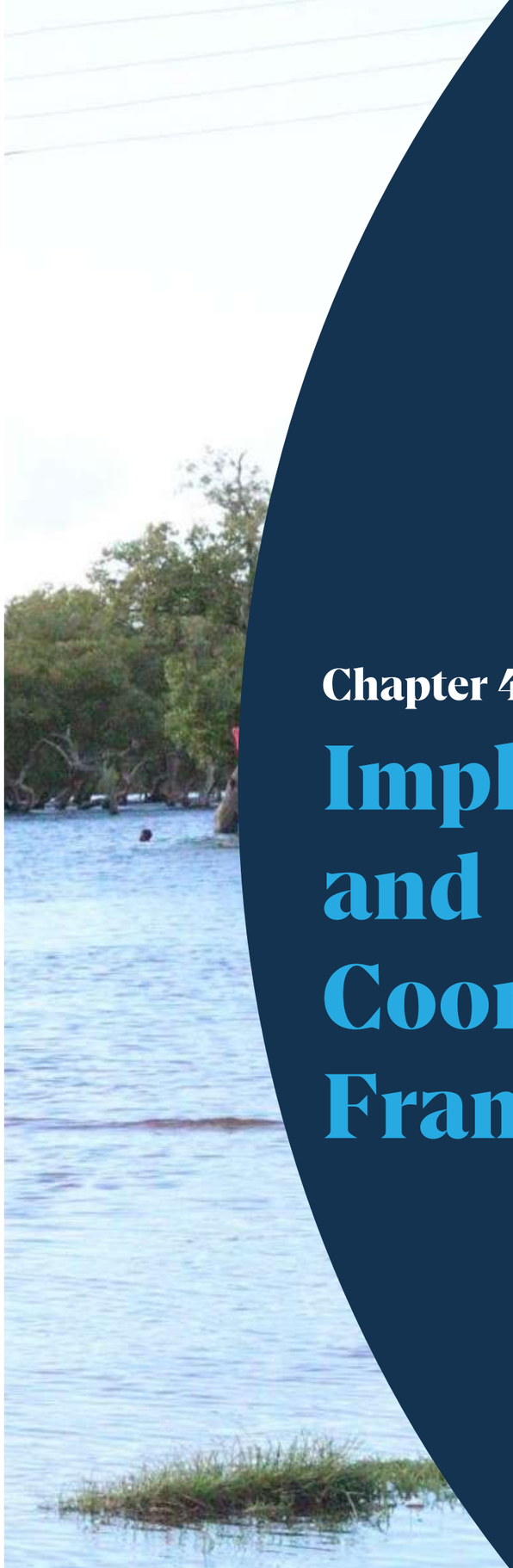
5.1 **Blue finance policy, taxonomy and regulatory frameworks**	• Develop and operationalize a national blue finance taxonomy • Strengthen blue finance policy, regulatory and compliance frameworks • Design fiscal incentives for BCE investments	• Blue finance policy • Taxonomy and regulatory reform programme
5.2 **Sustainable blue financing mechanisms and facilities**	• Establish the blue and nature finance facility / blue and nature investment facility • Operationalize blue and nature finance facilities and investment pipelines • Mobilize climate and blended finance • Develop project preparation facilities (PPFs) and PPP structures	• Blue and nature finance facility / blue and nature investment facility • Blue and nature investment mobilization • Project Preparation Facility (PPF) for BCE investments
5.3 **Innovative blue finance products and nature markets**	• Develop nature markets and hybrid credit mechanisms • Advance Article 6 readiness and bilateral cooperation • Pilot innovative blue finance products with commercial partners • Strengthen market-based instruments for BCE investments	• Nature markets and hybrid credits • Article 6 readiness and cooperative approaches facility • Innovative blue finance products facility
5.4 **Investment readiness, pipeline development and transaction support**	• Develop a pipeline of bankable BCE projects and enterprises • Undertake capacity building for investment readiness and enterprise development • Establish a blue investment facilitation programme • Conduct investment dialogues and investor engagement forums	• Circular economy and blue enterprise financing • Blue investment facilitation and pipeline development programme
5.5 **Community-centred climate finance, risk sharing and fiscal incentives**	• Establish community-centred climate finance and risk transfer systems • Develop insurance, guarantee and risk sharing instruments • Mobilize community-level blended finance and micro-investment models	• Community climate finance, risk sharing and insurance • Fiscal incentives and risk management instruments for BCE investments

The KRAs were developed through a systematic assessment of Kenya's BCE priorities, national climate commitments, sectoral mandates and devolved governance responsibilities. The process examined the roles of key sectors including environment, blue economy, forestry, water, lands, governance, science and finance in advancing ecosystem restoration, climate resilience, sustainable livelihoods, research and investment mobilization. These mandates were grouped into coherent programme domains that reflect functional pathways required to deliver BCE-NDC priorities. The KRAs provide a multi-sectoral framework that links national policy priorities with county-level implementation responsibilities, consistent with the Constitution's Fourth Schedule and the cooperative governance principles under Articles 6 and 189. The environment and forestry sectors play a central role in ecosystem conservation and restoration, while the blue economy and fisheries sectors contribute to strengthening coastal livelihoods and promoting sustainable resource stewardship. Governance, finance, infrastructure and science sectors provide the enabling environment through policy development, financing mechanisms, institutional coordination, information and data systems necessary for effective implementation.

Mapping the KRAs to BCE-related sectors promotes coherence across governance levels and facilitates programme-based planning, budgeting and investment mobilization (see Table 3.2). Collectively, the KRAs translate Kenya's NDC commitments, NCCAP III priorities, and blue carbon opportunities into a unified framework guiding national and county actions through 2035. This integrated approach strengthens coordination across sectors and institutions while providing a clear pathway for achieving Kenya's blue carbon mitigation, adaptation and sustainable development goals.

Table 3.2: Alignment of BCE-NDC Key Result Areas, to Kenya's Fourth Medium Term Plan (MTP IV) sectors for effective delivery of the KRAs within the national and county implementation landscape

KRA	MTP IV Sectors	Lead Sub-sector(s)	Supporting Subsectors
KRA 1: **Climate- Resilient BCE Conservation and Restoration**	Environment and Natural Resources	Natural Resource Conservation and Restoration, Blue Economy, Forestry and Landscape Restoration	Water; Infrastructure (coastal protection); Governance (enforcement); Climate Change
KRA 2: **Community Stewardship and Climate-Resilient Coastal Livelihoods**	Social Sector, Environment and Natural Resources, Finance and Production	Blue Economy and Fisheries, MSME/Enterprise Development, Community Development and Social Protection	Environment (ecosystem base); Infrastructure (landing sites, cold chain); Devolution and Governance (participation, safeguards)
KRA 3: **BCE Science, Data and Monitoring Systems.**	Infrastructure and Social	Environment and Climate Change, Science, Technology and Innovation (ST&I)	Digital Superhighway (data platforms); Governance (planning, reporting); Blue Economy (marine science)
KRA 4: **Integrated Governance, Policy Coherence, Institutional Strengthening and Safeguards.**	Governance, Public Administration	Policy, Legal and Institutional Reforms, Inter-governmental Coordination, Public Sector Management	Environment (policy implementation); Social (rights, safeguards); Finance (PFM, compliance)
KRA 5: **Sustainable Finance, and Long-Term Investment Framework**	Finance and Production	Public Finance and Climate Finance, Financial Services, Blue Economy (Investment)	Governance (PFM, PPPs); Environment (pipeline development); MSME/Private Sector Development



Chapter 4

Implementation and Coordination Framework

This chapter outlines the institutional roles and coordination mechanisms required to implement Kenya's BCE-NDC I&IP 2025–2035. It promotes collaboration among national and county governments, communities, the private sector and development partners, aligned with Kenya's legal and policy frameworks, to ensure effective governance, restoration, financing and equitable benefit-sharing of blue carbon initiatives, advancing the country's climate and sustainable development goals.

4.1 Institutional Mandates and Roles

Kenya possesses a strong legal and institutional foundation to support the implementation of the BCE-NDC I&IP 2025–2035. Key statutes underpinning this framework include the Constitution of Kenya (2010), which establishes overarching governance principles and the Intergovernmental Relations Act 2012, which establishes the coordination structures between the national and county governments, The framework include sector-specific laws such as the Climate Change Act (Cap 387A), the Environmental Management and Coordination Act (Cap 387) and the Fisheries Management and Development Act (Cap 378). The Forest Conservation and Management Act (Cap 385), the Wildlife Conservation and Management Act (Cap 376) and the Kenya Coast Guard Service Act (2018) further strengthen the governance of natural resources. In addition, county policies legislations provide frameworks which support the implementation and coordination of the Plan. More recently, the Climate Change (Carbon Markets) Regulations (2024) provide a regulatory basis for carbon market activities. Together, these legal instruments define clear roles, mandates and coordination mechanisms across national, county and community levels, ensuring effective governance, conservation and management to enable successful implementation of the Plan.

The institutional framework detailed in Table 4.1 defines responsibilities among key stakeholders across government, community and the private sector.

Table 4.1: BCE-related Institutional framework in Kenya

Institution	Mandate
National Government Ministries and Agencies	
Ministry of Mining, Blue Economy and Maritime Affairs (MiBEMA)	Oversees sustainable marine resource management and policy development, supported by agencies like SDBE&F and KeFS, while the Kenya Coast Guard, under the Ministry of Interior, enforces maritime laws and protects marine biodiversity.
Ministry of Environment, Climate Change and Forestry (MECC&F)	MECC&F sets climate and BCE policy, hosts the Climate Change Directorate and NCCC Secretariat, integrates BCEs into national plans and leads Kenya's international climate commitments aligned with Vision 2030 and BETA.
The National Treasury	Convenes the Inter-ministerial Technical Committee on Climate Finance (IMTC), establishes public funds like the Climate Change Fund, coordinates the Kenya Green Finance Taxonomy and collaborates with the Commission on Revenue Allocation to ensure fair funding for county BCE activities.
Ministry of Tourism and Wildlife	The Ministry of Tourism and Wildlife leads the sustainable management and conservation of Kenya's tourism and wildlife resources, including BCEs.
Climate Change Directorate (CCD)	The CCD coordinates climate change plans and MRV systems, including BCE-related intervention and provides technical support and capacity building to ministries, counties and agencies.
National Environment Management Authority (NEMA)	NEMA serves as the Designated National Authority (DNA) for carbon markets and environmental compliance. It approves carbon projects, enforces regulations, manages the National Carbon Registry, leads impact assessments and oversees grievance redress for BCE initiatives. NEMA is also Kenya's Direct Access Entity for the GCF and the National Implementing Entity for the Adaptation Fund.
Sector Agencies and Research Institutions:	
Kenya Forest Service (KFS)	Manages state forests, including mangroves, and implements restoration and co-management agreements with Community Forest Associations (CFAs).
Kenya Fisheries Service (KeFS)	Regulates fisheries and supports sustainable management of marine resources.
Kenya Wildlife Service (KWS)	Oversees wildlife, biodiversity conservation and protected areas and ecosystem health.
Kenya Marine and Fisheries Research Institute (KMFRI)	Leads research, monitoring and technical support for BCEs, including carbon stock assessments and MRV system development.
Kenya Forestry Research Institute (KEFRI)	Supports reforestation, agroforestry and technical research on BCEs.
Wildlife Research and Training Institute (WRTI)	Conducts and coordinates wildlife research and training through innovation, knowledge and technology transfer for sustainable wildlife conservation and management.
National Government Administrative Officers (NGAO), Kenya Maritime Authority and Kenya Coast Guard Service	Ensure coordination, security and safety, as well as regulate shipping and marine transport, ensuring alignment with BCE conservation goals.
Kenya Fishing Industries Corporation (KFIC)	Promotes sustainable and efficient fisheries businesses in Kenya's waters and high seas, supporting livelihoods reliant on BCEs.
Kenya Ports Authority (KPA)	Provides the foundational maritime infrastructure, regulatory oversight and corporate environmental stewardship necessary to scale blue shipping, protect coastal habitats and drive the national blue economy strategy.

Institution	Mandate
County Governments and Local Institutions	
County Governments	Responsible for mainstreaming BCE actions into County Integrated Development Plans (CIDPs), implementing restoration and Payment for Ecosystem Services (PES) programmes and coordinating with national agencies. County Executive Committee Members (CECMs) and County Climate Change Units (CCCUs) are designated to lead climate and BCE initiatives at the subnational level. Counties also manage local budgets, enforce county-level regulations and facilitate community participation in BCE management.
Community Institutions	
Community Forest Associations (CFAs) and the Mangrove CFA Network	Legally recognized groups that co-manage forest resources, including mangroves, with KFS. CFAs drive restoration, monitoring, sustainable use and equitable benefit-sharing. At least 17 mangrove CFAs are currently registered along Kenya's coast.
Beach Management Units (BMUs), Joint Co-Management Areas (JCMAs) and BMU networks	Community organizations managing fisheries and coastal resources to promote sustainable fishing, conservation and conflict resolution. There are 101 BMUs registered along the Kenyan coastline.
Community Wildlife Associations (CWAs)	Local groups actively engaged in conserving wildlife outside state-protected areas. Their roles include empowering local communities in wildlife conservation, BCE conservation, restoration and governance in partnership with county and national agencies.
Water Resource Users Associations (WRUAs)	Community-based organizations overseeing sustainable management of water resources essential to BCE health and resilience.
Other Community-Based Organizations (CBOs)	Play a pivotal role in conservation by bridging local communities with national and global frameworks, ensuring that conservation efforts deliver both ecological and livelihood benefits. They manage critical wildlife habitats, influence policy and empower communities to sustainably use natural resources.
Academia, Private Sector, and Development Partners	
Academia and research institutions	Universities and other research institutes provide data, research, technical expertise and capacity building for BCE valuation, MRV and the development of nature-positive business models. They also support participatory knowledge platforms and innovation in BCE management.
Private sector actors	Financial institutions, developers and business entrepreneurs invest in nature-positive projects, develop blue finance products and integrate nature risks into credit assessments. They collaborate with public and community partners on carbon projects and credit trading.
Development partners and NGOs	Development Finance Institutions (DFIs), international donors, NGOs and philanthropic foundations provide technical and financial support, capacity building and policy development assistance. They also co-develop bankable BCE projects and support pipeline development for climate and nature finance.

4.1.1
Coordination Platforms and Governance Arrangements

Coordination mechanisms will ensure alignment across institutions and levels. The coordination mechanisms for the implementation of the Plan is anchored as much as possible on existing structures at national, county and community levels; and new structures will only be created when the need arises. Table 4.2 outlines some of the existing structures relevant to BCEs..

Table 4.2: Existing coordinating structures which the BCE-NDC implementation could leverage on

Level	Structure	Description
National	National Climate Change Council (NCCC)	Apex body providing overarching political and strategic coordination for all climate-related commitments (including NDCs).
	National Blue Economy Steering Committee	Multi-agency body providing high-level oversight for marine and maritime investments.
	National and County Gornement Coordination Summit (The Summit)	Apex body providing national–county coordination by harmonising policies, guiding joint decisionmaking, and overseeing the implementation of shared BCE priorities.
	Council of Governors; BCE relevant COG Committees	Apex body that facilitates intercounty collaboration by promoting peer learning, coordinating county actions, and advancing collective BCE implementation interests.
	Intergovernmental Relations Technical Committee (IGRTC)	Core technical body that supports the Summit and the Council of Governors in coordinating intergovernmental functions
	The Intergovernmental Budget and Economic Council (IBEC)	Brings together office of the Deputy President, the National Treasury, county governments, and key constitutional offices to consult, coordinate, and agree on national–county fiscal, budgetary, and economic matters.
	Forest Conservation Committee (FCC), especially coast region	Advisory body anchored in the Forest and Conservation Act to advise KFS, coordinate county-level forest actions, support community participation, review forest use decisions and monitor compliance.
	National Mangrove Management Committee (NMMC)	National body anchored in KFS to provide advisory and coordination roles of mangrove management along the Kenyan coast.
	National Project Steering Committee (NPSC)	Platform for large-scale blue economy projects (e.g., KEMFSED) to ensure alignment between national goals and sub-national execution.
	NDC Coordination Unit / Secretariat	A functional body within the climate governance framework tasked with tracking, reporting and verifying (MRV) sectoral commitments to the UNFCCC.
	Technical Working Groups (TWGs)	Thematic clusters (e.g., mitigation, finance or LULUCF/ blue carbon) bringing together technical experts to refine implementation guidelines.
	Sectoral Working Groups	Sector-specific groups (e.g., forestry, fisheries, blue economy) that coordinate cross-sectoral actions, harmonize policies and address overlapping mandates.
County	County Climate Change Steering Committee (CCCSC)	Primary coordinating body at county level, mainstreaming climate actions into local planning and managing climate funds.
	County Project Implementation Units (CPIUs)	Specialized coordination teams to execute specific project activities at county level and report back to national structures.
	Joint Committees	Intergovernmental structures that enable coordinated delivery of specific BCE functions by bringing together national and county actors to address shared mandates and operational issues.
	County Climate Change Planning Committee (CCCPC)	Technical coordination body assisting the steering committee in vetting and prioritizing community-level climate investments.
	County Mangrove Management Committees (CMMCs)	County-level body anchored in KFS to provide advisory and coordination role of mangrove management at the county level in each of the five coastal counties.
Community	Beach Management Units (BMUs) and associated networks	Primary coordinating structure for artisanal fishers and coastal users, responsible for co-managing marine areas and landing sites.
	Community Forest Associations (CFAs) and associated networks	Mechanism for community participation in management of mangrove forests, governed by co-management agreements.
	Ward Climate Change Planning Committees (WCCPCs)	Grassroots structures linking county governments and local communities responsible for coordinating identification and prioritization of climate resilience projects at ward level for funding.
	Community Development Agreement (CDA) committees	A CDA committee is formed for each carbon project on public or community land, bringing together various stakeholders to oversee benefit sharing, ensure compliance and address grievances.
	Community-led project committees	Ad-hoc or project-specific structures (e.g., Mikoko Pamoja, Vanga Blue Forest) coordinate local carbon credit monitoring and revenue distribution.
Regional and other national platforms	Existing regional platforms including the Global Mangrove Alliance (GMA), Kenya Chapter, Western Indian Ocean Marine Science Association (WIOMSA), WIO Mangrove Network, Western Indian Ocean Consortium (WIO-C), among others	Collaborative regional and national networks and partnerships that support knowledge exchange, scientific research, policy dialogue, capacity building, financing mobilization (e.g., mangrove breakthrough proposition) and coordinated action for sustainable coastal and marine ecosystem management.

4.2

Delivery Mechanisms and Implementation Frameworks

These mechanisms and pathways provide a clear framework for action, detailing how Kenya will execute its blue carbon commitments across national, county and community levels. They establish specific institutional roles, technical processes and partnership arrangements to ensure coordinated, effective and measurable implementation (Figure 4.1).

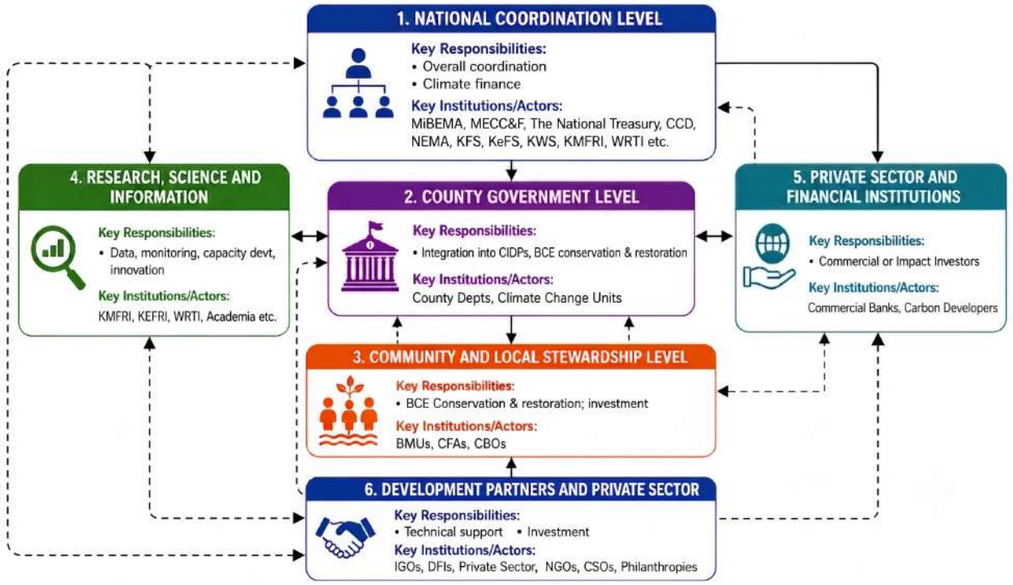


Figure 4.1: Implementation structure for the BCE-NDC I&IP

4.2.1 National-County-Community Delivery Model

Effective delivery of Kenya's blue carbon commitments will be done through a coordinated, multi-level governance system that integrates national leadership, county implementation, and community stewardship. This model serves as the foundational structure for operationalizing all five KRAs.

Table 4.3: Multi-level coordination delivery model for BCE-NDC commitments

Level	Roles/Responsibilities	Key Entities/Platforms	Purpose
National	Policy direction, regulatory frameworks, MRV and transparency systems, finance governance, technical standards, national coordination	MECC&F, MiBEMA, CCD, NEMA, KFS, KMFRI, KeFS, KWS, BCE steering committee, Technical Working Groups	Ensures coherence across all KRAs (1–5)
County	Integrating BCEs into county planning including CIDPs, IDePs, CCAPs, budgets, coordinating restoration, protection, enforcement, community engagement, hosting implementation hubs, managing MRV, supporting CFAs, BMUs, CBOs	County BCE implementation hubs, municipalities, CFAs, BMUs, CBOs	Drive KRAs 1, 2, 3 and 4
Community	Leading restoration, protection, monitoring, participating in co-management, benefit sharing, enforcement, compliance, developing climate-resilient livelihoods	Communities, CFAs, BMUs, JCMAs, CWAs, networks, alliances, other legal community structures	Anchor KRAs 1, 2 and 3
Cross-level coordination	Joint planning, shared reporting systems, co-management agreements, multi-stakeholder platforms	NMMC, CMMC, CoG, JKP, Inter-Governmental Relations Technical Committee (IGRTC)	Ensure alignment across all levels
Collaboration and partnerships	Co-financing, resource mobilization, technical, knowledge sharing and implementation support	CSOs, NGOs, development private sector, FBOs, BCE networks and platforms	Enhance inclusivity and expand the scope of fundraising

4.2.2 County BCE Implementation Hubs

County BCE implementation hubs will be operational centres for delivering BCE-related NDC actions. They will provide a structured, decentralized mechanism for coordinating technical, financial and community-based activities across the coastal counties.

Core Functions of the County Hubs

- **Implementation coordination:** Oversee restoration, protection, MRV, enforcement and livelihood activities.
- **Technical support:** Provide training, tools and technical backstopping to CFAs, BMUs and CBOs.
- **Data and MRV management:** Collect, validate and transmit BCE data to national MRV systems.
- **Resource mobilization:** Support counties and communities to access climate finance, grants and market-based instruments.
- **Stakeholder convening:** Host county-level TWGs, community assemblies and multi-stakeholder dialogues.
- **Compliance and safeguards:** Ensure adherence to environmental and social safeguards, FPIC and grievance mechanisms.

Institutional Composition

Each hub will integrate the following institutions:

- County departments (environment, fisheries, forestry, planning) and municipalities
- National agencies (KFS, KeFS, KWS, KMFRI, NEMA, KEFRI, WRTI, Kenya Coast Guard)
- Community institutions (CFAs, BMUs, CWAs, WRUAs, CBOs)
- Private sector and development partners.

The hubs will operationalize KRAs 1–4 and support KRA 5 through finance mobilization.

4.2.3
Collaborative Management and Community Partnership Frameworks

Collaborative management will form the cornerstone of long-term stewardship of BCEs by formally recognizing and strengthening the role of local communities in the management of mangroves, seagrass beds and associated coastal ecosystems. It will operationalize co-management through structured agreements between government agencies and community institutions such as CFAs and BMUs, supported by community stewardship plans that define roles in restoration, protection, monitoring and enforcement. The framework will be further reinforced through benefit sharing arrangements aligned with the Carbon Markets Regulations (2024), Free, Prior and Informed Consent (FPIC) safeguards to ensure inclusive, rights-based implementation approaches.

- Collaborative management will ensure:
- Local ownership and legitimacy
- Sustainability of restoration and protection efforts
- Equitable distribution of benefits
- Stronger compliance and reduced degradation pressures.

This framework will integrate community-based monitoring systems into county and national MRV frameworks, ensuring local participation in data generation and ecosystem tracking, while linking stewardship activities to livelihood support mechanisms that promote income generation and economic resilience. By embedding these components, collaborative management enhances local ownership and legitimacy, improves the sustainability of restoration and protection efforts, ensures equitable benefit distribution and strengthens compliance while reducing ecosystem degradation pressures. Overall, this framework provides a practical mechanism for achieving integrated outcomes across KRAs 1, 2 and 4.

4.2.4
Technical Coordination and Knowledge Support

Technical coordination will support the BCE-NDC I&IP implementation through standardized guidance, scientific oversight and adaptive learning. The framework leverages existing national and county coordination structures to avoid duplication and enhance technical coherence across sectors.

National Technical Working Groups (TWGs) will lead on themes such as ecosystem restoration, hydrological rehabilitation, MRV and carbon accounting, biodiversity monitoring, safeguards, climate finance and policy alignment. County TWGs will adapt national standards to local priorities and ecological conditions. Specialized task teams may focus on complex or emerging areas like digital MRV systems, seagrass mapping, hydrological modelling, carbon methodologies and blue enterprise development, providing expert support to implementers and county hubs.

The framework also promotes data harmonization, joint reporting, applied research, peer learning and adaptive management across all key result areas, enhancing scientific credibility, minimizing duplication and ensuring consistent BCE implementation nationwide.

4.2.5
Implementation Roadmap

The implementation roadmap outlines a clear, phased framework for realizing the BCE-NDC Plan between 2025 and 2035, engaging national, county and community levels. It breaks down the five Key Result Areas into targeted actions, milestones and measurable outcomes to effectively guide implementation, financing and reporting. The initial phase focuses on ecosystem restoration and strengthening institutions, laying a strong foundation. This transitions into a second phase emphasizing scaled investment mobilization, climate-resilient coastal livelihoods, and the development of mature blue nature capital markets alongside sustainable governance systems. The roadmap aligns closely with Kenya's NDC priorities, county climate strategies and national development goals while promoting inclusivity, accountability, safeguards and long-term resilience. Progress will be systematically tracked and adapted through a comprehensive Monitoring, Evaluation and Learning framework ensuring transparent, evidence-based management throughout the implementation period.

Table 4.4: BCE-NDC implementation roadmap with strategic targets and milestones (2025–2035)

KRA	Strategic Objective	Strategic Pillars	Units of Measurement	Baseline Year (2025)	NDC I Target (2025–2030)	NDC II Target (2031–2035)
KRA 1: **Climate-resilient BCE Conservation and Restoration**	*Conserve* BCE areas, restore 30% degraded sites by 2035, increase carbon sequestration by 30%, cut emissions by 20%, and reduce erosion by 20%.	1.1 Halting degradation and decline of BCEs	% reduction in degraded BCE areas	Fragmented protection systems and increasing degradation pressures	15% reduction in degradation across priority BCE sites	30% reduction in degradation and strengthened protection systems nationally
			% reduction in land-sea based pressures (pollution, runoff, destructive activities)	No integrated system	10% reduction	25% reduction
		1.2 Climate-smart BCE restoration	Hectares of BCEs restored	Limited large-scale restoration programmes	15,000 ha and 1,000 ha of degraded mangrove and seagrass restored, respectively	30,000 ha and 2,000 ha of degraded mangrove and seagrass restored, respectively
		1.3 Climate-resilient BCE conservation and management	% of BCE areas under climate-resilient management systems	Limited ecosystem-based management systems	50% of priority BCE areas are under resilient management systems	100% of priority BCE areas under integrated climate-resilient management
			Coastal erosion and sediment monitoring systems operational	None	3 counties	6 counties

KRA	Strategic Objective	Strategic Pillars	Units of Measurement	Baseline Year (2025)	NDC I Target (2025–2030)	NDC II Target (2031–2035)
KRA 2: **Community Stewardship and Climate-resilient Coastal Livelihoods**	Expand BCE livelihoods to 70% of coastal households by 2035, increasing incomes by 15–40% and strengthening community stewardship.	2.1 Community capacity development and stewardship systems	Number of functional community stewardship groups (e.g., BMUs, CFAs) and no. of community members trained	Weak community stewardship systems	50% of stewardship groups (CFA and BMUs) are active and functional 50% of active stewardship group members trained in BCE livelihoods, governance and ecosystem management	100% of stewardship groups (CFA and BMUs) are active and functional 100% of active stewardship group members trained in BCE livelihoods, governance and ecosystem management
			% of trained community members	Low capacity	50%	100%
			Youth, women and PWD inclusion in BCE programmes	Limited	30%	50%
		2.2 Climate-resilient blue livelihoods and circular economy diversification	Number of climate-resilient blue enterprises supported	Limited access to blue enterprise opportunities	5,000 SMEs and community enterprises supported	15,000 SMEs and community enterprises scaled
			Number of PES livelihood schemes operational	None	50 schemes	120 schemes
		2.3 Blue value chain infrastructure, market access, enterprise finance and risk management	Number of blue value chain and market infrastructure investments operational	Weak value chain infrastructure and high risk for enterprises	25 major value chain investments operational	60 major value chain and market systems are operational
			Digital SME platforms operational	None	1 national platform	Scaled to 6 counties

KRA	Strategic Objective	Strategic Pillars	Units of Measurement	Baseline Year (2025)	NDC I Target (2025–2030)	NDC II Target (2031–2035)
KRA 3: **BCE Science, Data and Monitoring Systems**	Strengthen data and knowledge management systems by 2035, leveraging on research, indigenous knowledge, innovation and emerging technologies for evidence-based BCE management, NDC tracking and national reporting.	3.1 BCE assessment, MRV and interoperable data systems	% BCE coverage under interoperable MRV systems	Fragmented MRV systems and limited digital coverage	70% BCE coverage under national MRV systems	100% interoperable BCE MRV coverage nationally
			QA/QC protocols operational	None	Operational nationally	Fully institutionalized
			% compliance with FAIR data principles	None	50%	100%
		3.2 BCE science, indigenous knowledge, technology and innovation	Number of BCE research, innovation and technology initiatives operational	Limited coordinated BCE research and innovation systems	50 innovation and research initiatives operational	120 science and innovation programmes scaled
			Number of citizen science groups	Few	20 groups	50 groups
		3.3 BCE integration into NDC reporting and national frameworks	% integration of BCE indicators into national reporting systems	Partial integration into national climate systems	BCE fully integrated into NDC/BTR reporting systems	Fully operational integrated BCE national reporting architecture
		3.4 Blue carbon information and knowledge management	National BCE information systems established	Limited coordinated knowledge platforms	National BCE knowledge platform operational	Real-time interoperable BCE information system operational

KRA	Strategic Objective	Strategic Pillars	Units of Measurement	Baseline Year (2025)	NDC I Target (2025–2030)	NDC II Target (2031–2035)
KRA 4: Integrated Governance, Policy Coherence, Institutional Strengthening and Safeguards	Strengthen governance, safeguards, institutional coordination, policy coherence, and inclusive BCE management systems.	4.1 BCE coordination and inclusive governance	Number of operational BCE coordination platforms	Fragmented institutional coordination	National and six county coordination platforms operational	Fully integrated multi-level BCE governance systems operational
		4.2 Policy and regulatory frameworks	% harmonization of BCE-related policy and regulatory frameworks	Fragmented policy and regulatory systems	70% harmonization of BCE policy frameworks	Full harmonization and operationalization achieved
		4.3 Capacity development and safeguards	Number of institutions implementing safeguards and FPIC systems	Few safeguards operationalization	100 institutions trained and safeguards operationalized	Full safeguards integration across BCE investments
		4.4 BCE collaboration and partnerships	Number of BCE partnerships and collaborative initiatives operational	Weak strategic partnerships	50 partnerships established	120 partnerships strengthened
			Number of regional/ international BCE cooperation initiatives	Limited	5 collaborations	15 collaborations

KRA	Strategic Objective	Strategic Pillars	Units of Measurement	Baseline Year (2025)	NDC I Target (2025–2030)	NDC II Target (2031–2035)
KRA 5: Sustainable Finance and Investment Framework	Mobilize and scale sustainable finance, investment readiness, carbon markets and blended finance systems for BCE investments.	5.1 Blue finance policy and taxonomy systems	National blue finance taxonomy operational	No dedicated BCE finance taxonomy	National blue finance taxonomy established	Fully operational BCE tracking systems
		5.2 Sustainable blue financing mechanisms and facilities	Number of financing facilities and blended finance mechanisms operational	Nascent blue finance ecosystem	Four finance and investment facilities fully operational	Four finance and investment facilities scaled to cover the six coastal counties
		5.3 Innovative blue finance products and nature markets	Number of blue finance products available with commercial financial institutions	Limited access to blue nature capital market instruments	Five blue finance financial products available, accessible and affordable	Scaled mature blue finance products available, accessible and affordable
			Article 6 bilateral cooperation agreements	None	2 agreements	5 agreements
			Number of hybrid credit pilots	None	3 pilots	10 pilots
		5.4 Blue investment facilitation programme	Value (USD) of BCE investment pipeline mobilized	Limited bankable investment pipeline	USD 250M investment pipeline mobilized	USD 616M cumulative investment mobilized
			Project Preparation Facility (PPF) operational status	None	PPF established	PPF fully scaled
		5.5 Community-centred climate finance, risk sharing and fiscal incentives	Number of community-centred finance and risk sharing mechanisms operational	Minimal community climate finance access	Three community focused financing and guarantee schemes operational	Six community-centred climate finance systems operational

4.2.6
Partnership & Collaboration Framework

Effective implementation of the BCE-NDC I&IP will require long-term collaboration among government institutions, coastal communities, research organizations, development partners, civil society and the private sector. The partnership framework is intended to strengthen implementation capacity, mobilize investment, support innovation and enhance coordination across the BCE landscape.

Strategic partnerships will support:

- Joint programme implementation;
- Climate finance mobilization;
- Technical assistance and technology transfer;
- Scientific research and innovation;
- Community enterprise development;
- Capacity strengthening and knowledge exchange; and
- Development of bankable bce investment pipelines.

Key partners will include national and county governments, CFAs, BMUs, CBOs, private investors, carbon project developers, academic institutions, NGOs, multilateral agencies, climate funds and philanthropic organizations.

The partnership framework will promote coordinated planning, co-financing arrangements, shared learning platforms and alignment with national climate, biodiversity and blue economy priorities. Emphasis will be placed on strengthening community-centred partnerships and leveraging private sector participation to scale investment into BCE restoration, livelihoods and high integrity carbon and nature markets.

4.3 Capacity Development and Institutional Strengthening

Implementation of the BCE-NDC I&IP will require sustained investment in institutional, technical and community capacity across all levels of governance. Kenya already has several national and county capacity development programmes that can be leveraged to strengthen the skills and systems needed for BCE implementation, MRV and benefit sharing. Building on these platforms, capacity development will integrate climate risk competencies informed by national climate assessment, ensuring that national agencies, counties and community groups are equipped to manage BCEs under increasing climate variability. A dedicated national BCE capacity development programme will be embedded within these existing initiatives to enhance implementation readiness, coordination, scientific capability, safeguards compliance and long-term sustainability.

The BCE capacity development measures aim to strengthen institutional coordination and governance mechanisms at national, county and community levels, including the operationalization of coordination platforms and the enhancement of policy and legal frameworks.

The component also emphasizes strengthening local community capacities through technical training, mentorship, knowledge exchange, improved access to finance and the provision of equipment and infrastructure for restoration, monitoring and protection activities. Particular emphasis is placed on participatory learning approaches, communication and information dissemination, and the empowerment of women, youth, PWD and community organizations to promote inclusive governance, effective ecosystem management, MRV and sustainable blue economy enterprises. Facilitating the community's access to legal support will be critical to ensure informed and equitable involvement in the opportunities provided by the Plan.

4.3.1
Institutional Strengthening of Actors

The capacity development programme will combine structured training modules, peer learning and knowledge exchange, with a strong emphasis on climate-linked BCE monitoring, interpretation of climate forecasts, integration of early warning systems, and the use of climate data—such as temperature anomalies, rainfall variability, SST trends and tidal extremes—in restoration planning and ecosystem management.

- The capacity building programme will be delivered through four core training modules:
- **MRV and carbon accounting** – Training on standardized MRV protocols, digital data collection and transparent reporting for officials and community monitors.
- **Restoration and ecosystem management** – Skills development for CFAs, BMU and CBOs in mangrove and seagrass restoration, nursery management and climate-smart ecosystem practices.
- **Financial management** – Training County officials and community leaders in budgeting, financial reporting and resource mobilization to support BCE initiatives.
- **Market mechanisms** – Building expertise in carbon markets, Article 6 mechanisms and blue carbon finance to enhance investment readiness and community participation.

4.3.2
Community Capacity Building

Strengthening community capacity is essential to ensuring that coastal communities can effectively steward Kenya's Blue Carbon Ecosystems. This Plan prioritizes targeted training, improved access to equipment and technology, participatory knowledge platforms and sustained technical mentorship to enhance local skills, leadership and climate-resilient livelihoods. Special emphasis is placed on women, youth and PWDs, ensuring inclusive participation in governance, restoration, monitoring and benefit sharing.

Community training programmes: Targeted training for community members including community scouts, in protection, governance, restoration, monitoring, MRV and benefit sharing. Special emphasis is placed on gender and youth inclusion, indigenous knowledge and leadership development.

Equipment and infrastructure support: Facilitating the acquisition of equipment, technology and infrastructure facilities to support protection, restoration and monitoring, e.g., patrol boats, surveillance equipment and monitoring tools.

Participatory knowledge platforms: Establishment of digital and physical platforms for knowledge sharing, best practices and adaptive learning among communities, counties and national agencies.

Communication and information dissemination: Enhancing capacity of community structures on strategies to engage, advocate, communicate and disseminate information among stakeholders at local and national levels

Technical assistance and mentorship: Ongoing support from research institutions, NGOs and development partners to build local capacity, provide technical training on blue business ventures and facilitate innovation

Empowerment of women, PWDs and youth: Programmes to enhance the participation and leadership of women, PWDs and youth in BCE governance, restoration and enterprise development.

4.4 Grievance Redress Mechanisms and Dispute Resolution

The purpose of the Grievance Redress Mechanisms (GRMs) is to provide accessible, transparent and culturally appropriate systems for addressing grievances and resolving disputes arising from BCE-related activities (carbon projects, restoration, livelihood enterprises and investments). Grievance redress and dispute resolution related to BCE interventions will be managed under specific projects and programmes in accordance with established national legal and institutional frameworks. This includes community-level mechanisms, county government structures and national statutory bodies such as the Commission on Administrative Justice, the National Environment Tribunal and the Judiciary as well as international frameworks for transboundary disputes where applicable. This will ensure alignment with these systems to guarantee accessible, transparent and accountable grievance handling, consistent with national safeguards. Additionally, have monitoring, evaluation and feedback mechanisms to enhance adaptive management to help identify systemic issues and improve project design and implementation.

Chapter 5 BCE Investment and Financial Framework

This chapter outlines Kenya's BCEs-NDC Implementation and Investment Plan for 2025–2035, providing a fiscally realistic and climate-finance-ready framework to mobilize and manage resources for blue carbon commitments. The investment framework aligns with Kenya's Programme-Based Budgeting (PBB), treating each Key Result Area (KRA) as a programme, strategic pillars as sub-programmes, and investment packages as outputs with defined costs. This ensures coherence with the Medium-Term Expenditure Framework (MTEF) and annual budgets. It presents the total investment required by KRA, sector, investment type and financing source, highlighting current public expenditure and additional funding needs to close the financing gap.

Resource mobilization targets domestic budgets, development partners, climate finance, nature markets, private investors and community financing models. The financing architecture clarifies roles for national and county governments, the private sector, financial institutions, development partners and emerging nature-based markets (e.g., Article 6 cooperative approaches and voluntary carbon markets). Key instruments include project preparation facilities, blue finance facilities, guarantees, insurance and community-centred climate finance systems.

Overall, the chapter offers a concise, investment-ready plan ensuring technical, institutional and financial readiness, positioning Kenya to secure diversified, long-term finance to restore and sustain mangrove and seagrass ecosystems.

5.1
Policy and Strategic Context for BCEs Investment in Kenya

The Investment Plan is firmly aligned with Kenya's broader climate policy, linking national climate commitments to implementation priorities and bankable investments. Kenya's Nationally Determined Contributions (NDC I: 2020–2030 and NDC II: 2031–2035) define targets on mitigation, adaptation, resilience, coastal protection, ecosystem restoration, blue economy and climate adaptation. These commitments are operationalized through the National Climate Change Action Plans (NCCAP III 2023–2027 and future plans), which convert NDC goals into national programmes, institutional frameworks and financing priorities (Figure 5.1).

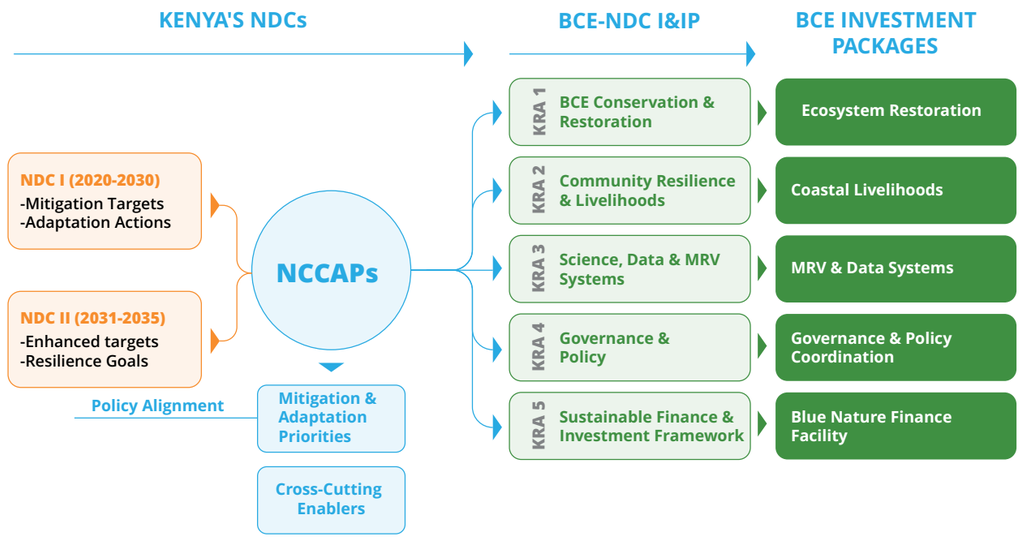


Figure 5.1: Kenya's blue carbon investment aligned with national climate policies and development goals

The BCE-NDC I&IP builds upon this policy foundation by translating national climate and blue investment priorities in the five strategic Key Result Areas (KRAs):

1. Climate-resilient BCE Conservation and Restoration – Conserve, protect and restore mangroves, seagrasses and coastal ecosystems.
2. Community Stewardship and Climate-resilient Coastal Livelihoods – Strengthen local governance, tenure and blue economy livelihoods.
3. BCE Science, Data and Monitoring Systems – Ensure robust monitoring and evidence-based decision-making.
4. Integrated Governance, Policy Coherence, Institutional Strengthening – Enhance coordination across all government levels.
5. Sustainable Finance and Long-term Investment – Unlock diverse, long-term funding for BCE.

These KRAs bridge policy and action, creating targeted, bankable investment packages that attract diverse funding sources. Together, they offer a clear pathway from ecosystem assets through community stewardship, data integrity, governance and finance mobilization—forming a credible, investment-ready platform to drive Kenya's blue carbon transition, boost coastal resilience, support livelihoods and advance sustainable blue economic growth.

5.2
Costing Methodology

The costing methodology adopted a programme-based approach aligned with Kenya's programme-based budgeting (PBB) system (GoK, 2011) and international climate finance guidelines. Each KRA was structured as a programme, with strategic pillars as sub-programmes and investment packages as outputs, each assigned unit costs and target quantities for clear, results-focused costing.

Cost estimates drew from national BCE benchmarks, restoration cost curves, MRV system needs, governance and community implementation models. The costs were categorized into development (CAPEX) and recurrent (OPEX) expenditures, covering restoration, MRV infrastructure, governance, operations and stewardship. The costing is phased across three Medium-Term Expenditure Framework (MTEF) cycles (2025–2035) to reflect the staged implementation of restoration, governance strengthening, MRV maturity and value chain development. Baseline government spending is separated from additional resource needs to identify financing gaps.

References include Kenya's NDC costings, National Climate Change Action Plan, National Mangrove and Seagrass Action Plans, and emerging climate finance frameworks like the Kenya Green Finance Taxonomy. This ensures the cost structure is credible, transparent and investment-ready, forming the basis for the overall investment envelope, financing needs and gap analysis.

5.3
BCE Financing Needs

The overall estimated financing requirement for the BCE-NDC Implementation and Investment Plan (2025–2035) is USD 616 million (approximately KES 80.1 billion), comprising USD 282 million (~KES 36.4 billion) by 2030 and an additional USD 334 billion (~KES 43.50 billion) by 2035. This represents approximately one percent of Kenya's total NDC financing requirement of USD 118 billion for 2025–2035, reflecting a highly targeted and catalytic investment envelope focused specifically on coastal and marine ecosystem resilience, restoration, climate adaptation and blue economy transformation. Relative to the estimated NDC financing needs, the BCE investments are strategic yet cost-efficient in delivering mitigation, adaptation, biodiversity and socioeconomic returns wholesomely.

The financing need further translates to an indicative average annual investment requirement of approximately USD 62 million per year (about KES 8 billion annually) over the implementation period between 2026 and 2035. This annual investment level is considered moderate and achievable within Kenya's broader climate finance landscape, particularly when leveraging blended finance, public climate finance, concessional funding, carbon markets, private sector participation and nature-based financing mechanisms

Table 5.1 below presents a total financing requirements by KRA programme areas reflecting a prioritization of bankable, high-impact sectors, with the majority of resources concentrated in ecosystem restoration and coastal livelihoods, while enabling systems are costed conservatively.

Table 5.1: Priority Programs and Disaggregated Investment Needs

Key Result Area (KRA) / Priority Programmes	Investment Needs by 2030 (USD Million)	Investment Needs by 2035 (USD Million)	Total (USD Million)
KRA 1: Climate-Resilient BCE Conservation and Restoration	**112.75**	**133.70**	**246.45**
1.1 Halting degradation and decline of BCEs	24.58	29.15	53.72
1.2 Climate-smart BCE restoration	55.58	65.92	121.50
1.3 Climate-resilient BCE conservation and management	32.58	38.64	71.22
KRA 2: Community Stewardship and Climate-Resilient Coastal Livelihoods	**84.56**	**100.28**	**184.84**
2.1 Community capacity development and stewardship systems	13.86	16.95	30.81
2.2 Climate-resilient blue livelihoods and circular economy diversification	54.07	66.08	120.15
2.3 Blue value chain infrastructure, market access, enterprise finance and risk management	56.84	69.46	126.30
KRA 3: BCE Science, Data and Monitoring Systems	**29.57**	**44.36**	**73.93**
3.1 BCE assessment, MRV and interoperable data systems	5.92	8.87	14.78
3.2 BCE science, indigenous knowledge, technology and innovation	11.83	17.74	29.57
3.3 BCE integration into NDC reporting and national frameworks	5.92	8.88	14.79
3.4 Blue carbon information and knowledge management	5.91	8.88	14.78
KRA 4: Integrated Governance, Policy Coherence, Institutional Strengthening and Safeguards	**30.81**	**30.81**	**61.62**
4.1 BCE coordination and inclusive governance	9.25	9.24	18.48
4.2 Policy and regulatory frameworks	9.25	9.24	18.48
4.3 Capacity development and safeguards	7.70	7.71	15.41
4.4 BCE collaboration and partnerships	4.62	4.62	9.24
KRA 5: Sustainable Finance and Investment Framework	**19.72**	**29.58**	**49.29**
5.1 Blue finance policy and taxonomy systems	2.37	3.55	5.92
5.2 Sustainable blue financing mechanisms and facilities	5.92	8.87	14.78
5.3 Innovative blue finance products and nature markets	2.96	4.44	7.40
5.4 Blue investment facilitation programme	6.90	10.35	17.25
5.5 Community-centred climate finance, risk sharing and fiscal incentives	1.57	2.37	3.94
TOTAL ESTIMATED INVESTMENT NEEDS	**281.88**	**334.25**	**616.12**

Fundamentals of Costing Drivers

- **KRA 1: Climate-resilient BCE Conservation and Restoration:** Costs are mainly from large-scale mangrove and seagrass restoration, shoreline stabilization, ecosystem rehabilitation and long-term protection under plans like the National Seagrass Strategy (KES 3.3 billion) and Mangrove Management Plan (KES 3.8 billion), plus ongoing carbon monitoring, community stewardship and resilience infrastructure.
- **KRA 2: Community Stewardship and Climate-resilient Coastal Livelihoods:** Major funding is needed to ease ecosystem pressure and support resilient, scalable local blue enterprises. The highest costs come from transforming coastal livelihoods via fisheries value chains, aquaculture, circular economy projects, market infrastructure and inclusive finance.
- **KRA 3: BCE Science, Data and Monitoring Systems:** Costs include building technological infrastructure such as advanced MRV systems, restoration tools, digital carbon accounting, remote sensing, interoperable data platforms and innovation hubs vital for climate finance and carbon markets. Significant investment is also needed for research and innovation in emerging areas like biotechnology.
- **KRA 4: Integrated Governance, Policy Coherence, Institutional Strengthening and Safeguards:** Investment is needed to operationalize national and county coordination, safeguards and FPIC frameworks, institutional strengthening, compliance mechanisms and governance structures that ensure effective BCE implementation and accountability.
- **KRA 5: Sustainable Finance and Investment Framework:** Major cost drivers relate to creating fiscal and financial enablers to scale BCE investments. This includes developing blue finance taxonomies, investment-readiness platforms, carbon market infrastructure and de-risking mechanisms critical for mobilizing large-scale public and private capital.

Around 85–90% of funds target impactful, revenue-generating activities restoration, livelihoods, fisheries, aquaculture, ecotourism and markets with the remaining 10–15% supporting enabling systems like MRV, governance, safeguards, policy, science and investment facilitation. This approach ensures a lean, scalable and investor-aligned BCE financing framework delivering measurable climate, biodiversity and socioeconomic benefits.

5.3.1
Financing Gap Analysis

Despite increasing attention to Blue Carbon Ecosystems, significant financing gaps persist across all Key Result Areas. By 2030, domestic investment commitment is estimated at 13% in line with NDC 2025–2030, leaving a substantial financing gap of USD 245.22 million (~KES 31.880 billion), equivalent to approximately 87% of total financing needs. While domestic financing is projected to improve to 19% through 2035, the gap remains considerable at approximately USD 270.74 million (~KES 35.196 billion), underscoring the need for innovative financing arrangements, more so mobilizing international financial support and private capital at scale.

The most pronounced gaps were observed in **KRA 1** and **KRA 2** where large-scale capital is required to unlock both public and private sector participation and drive economic transformation. These gaps were driven by limited availability of risk capital, underdeveloped project pipelines and weak financial intermediation systems. Addressing these constraints will require a strategic shift toward blended finance mechanisms, market-based instruments and investment facilitation platforms, positioning the BCE framework as a catalyst for mobilizing both public and private capital at scale.

Table 5.2: Financing gaps across the KRAs for 2030 and 2035

Pillar / KRA	Current Financing Situation	Critical Gap Areas	Financing Gap by 2030 (USD Million)	Financing Gap by 2035 (USD Million)	Total Financing Gap (USD Million)
KRA 1: Climate-resilient BCE Conservation and Restoration	Financing is mainly supported through donor-funded restoration projects, conservation grants, pilot blue carbon initiatives and limited public investment.	Large-scale restoration financing; long-term ecosystem maintenance; carbon project development financing; coastal resilience infrastructure; biodiversity conservation financing; sustainable management systems	67.00	62.38	129.38
KRA 2: Community Stewardship and Climate-resilient Coastal Livelihoods	Financing is primarily provided through county programmes, donor initiatives, SACCOs, microfinance and limited SME support.	SME scale-up financing; fisheries and aquaculture investment; blue enterprise working capital; market infrastructure; circular economy financing; blended finance for community enterprises and cooperatives	108.55	123.52	232.06
KRA 3: BCE Science, Data and Monitoring Systems	Funding is largely dependent on short-term donor-supported research, climate readiness grants and isolated MRV initiatives.	MRV infrastructure financing; digital monitoring systems; remote sensing and AI platforms; carbon accounting systems; long-term scientific monitoring; innovation and data interoperability systems	25.72	35.93	61.65
KRA 4: Integrated Governance, Policy Coherence, Institutional Strengthening and Safeguards	Financing is mainly embedded within broader government budgets and technical assistance programmes, with limited dedicated BCE funding.	Institutional strengthening; safeguards operationalization; policy implementation; county-level governance integration; stakeholder coordination; long-term institutional and technical capacity support	26.80	24.95	51.75
KRA 5: Sustainable Finance and Investment Framework	Kenya's blue finance ecosystem remains at an early stage, with limited blended finance, weak project preparation support and low private sector participation.	Project preparation facilities; guarantees and first loss capital; carbon market infrastructure; investment readiness financing; blended finance scaling; blue investment pipeline development	17.15	23.95	41.11
TOTAL			**245.22**	**270.74**	**515.96**

Note: Financing gaps calculated as approximately 87% of total financing needs by 2030 and 81% by 2035 for each KRA, assuming current financing flows remain limited and fragmented relative to total investment requirements.

5.3.2
Market and Investment Potential

Kenya's BCEs represent a significant asset for climate change mitigation and sustainable economic development. Current estimates indicate annual carbon sequestration ranging from 600,000 to 1.2 million tCO_2-e, corresponding to potential revenue between USD 3 and 18 million from voluntary carbon market sales. Complementary sectors, including sustainable fisheries, aquaculture, seaweed production and coastal ecotourism, are projected to grow at compound annual growth rates of 8–10%, driven by increasing demand aligned with blue food systems, biodiversity finance and ESG investment frameworks.

The supply landscape remains characterized by fragmentation and undercapacity. Kenya's operational blue carbon projects are limited in number and insufficiently equipped to meet international verification standards for ecosystem service delivery and carbon market readiness. Systemic challenges include elevated post-harvest losses in fisheries (20–30%), deficient value chain integration, inadequate cold chain infrastructure and shortcomings in MRV systems, alongside insufficient ecosystem data and restoration technology deployment. Financial sector limitations, notably a scarcity of tailored blue finance products and collateral mechanisms, constrain access to capital for blue economy enterprises, particularly MSMEs and community-based operations.

The Kenya BCE-NDC Implementation and Investment Plan addresses these gaps through an integrated approach emphasizing governance reform, implementation of digital MRV platforms, adoption of blended finance instruments and capacity development. The Plan aims to mobilize USD 150–200 million over the next decade, creating scalable investment pipelines spanning ecosystem restoration, sustainable fisheries, aquaculture, ecotourism and climate-resilient coastal infrastructure (Table 5.3). Financial intermediation enhancements focus on risk sharing facilities, project preparation support and inclusive financing modalities to facilitate capital flow to MSMEs, cooperatives and community groups.

Investment return projections indicate that blue SMEs and carbon credit initiatives can generate internal rates of return (IRR) between 15% and 25% annually under market-favourable conditions. Investments targeting enabling infrastructure and governance typically yield lower direct financial returns but function as critical enablers by mitigating systemic risks and catalysing private sector participation. The risk profile of the sector spans from low-risk governance and enabling environment projects, through medium-risk restoration and SME operations supported by blended finance, to higher risk emerging ventures including seagrass carbon credit projects and ecotourism product development.

Strategic deployment of catalytic capital across this risk gradient can significantly leverage private and public investment inflows, positioning Kenya's BCEs as competitive global market assets that deliver integrated climate mitigation, biodiversity conservation and socioeconomic outcomes. Addressing existing operational and financial constraints is critical to unlocking the full market and investment potential inherent within Kenya's BCEs.

Table 5.3: Programme Areas for Strategic Investment Opportunities

KRA	Strategic Investment Areas	Market Opportunity (Scale and Demand)	Revenue / Cashflow Drivers	Estimated Commercial Returns / IRR	Development, Climate and Biodiversity Returns	Key Investment Constraints
KRA 1: Climate-resilient BCE Conservation and Restoration	Halting degradation and decline of BCEs	Expanding voluntary and compliance carbon markets; rising demand for high integrity nature-based carbon assets; Article 6 potential	Carbon credit sales, PES schemes, biodiversity finance, restoration-linked grants	10–18%	Mitigation: Very high; Coastal resilience: High; Biodiversity: High; Jobs: Medium	Weak MRV systems; unclear carbon rights; fragmented tenure systems; limited long-term restoration finance
	Climate-smart BCE restoration	Emerging global demand for seagrass carbon and biodiversity assets	Carbon credits, biodiversity credits, conservation partnerships	12–20% (long-term)	Mitigation: High; Fisheries productivity: High; Biodiversity: Very high	Limited ecosystem data; underdeveloped methodologies; high verification costs
	Climate-resilient BCEs conservation	Growing ESG and nature-positive investment demand	Conservation concession fees, eco-service payments, tourism-linked revenues	8–15%	Biodiversity: High; Livelihoods: Medium–High; Resilience: High	Weak concession frameworks; fragmented institutional coordination
KRA 2: Community Stewardship and Climate-resilient Coastal Livelihoods	Community capacity development and stewardship systems	Increasing demand for recycling, sustainable packaging and bio-products	Recycling revenues, circular economy products, enterprise services	10–16%	Pollution reduction: High; Youth employment: High; Livelihood diversification: High	Weak market access; low product standardization; limited incubation support
	Climate-resilient blue livelihoods and circular economy diversification	Growing demand for nature-based and cultural tourism experiences	Eco-lodge revenues, conservation fees, tourism services	10–18%	Jobs: High; Biodiversity: High; Community income: High	Seasonal tourism fluctuations; weak destination infrastructure
	Blue value chain infrastructure, market access and enterprise Finance and risk management	Strong domestic and regional demand for fisheries and blue products; large untapped SME market; increasing demand for traceable sustainable products	Platform fees, aggregation margins, digital market systems, processing margins, logistics fees, warehousing services	15–25%	Financial inclusion: High; Enterprise growth: High; Jobs: High Export growth: High	Weak enterprise capacity; low aggregation levels; limited digital access High infrastructure costs; fragmented value chains; energy limitations
KRA 3: BCE Science, Data and Monitoring Systems	BCE assessment, MRV and interoperable data systems	Growing demand for transparent, traceable carbon markets drives foundational access to climate finance and participation, supported by insurance, finance, planning and research sectors	Verification services, certification support, government contracts, transaction fees, registry services, certification fees, data subscriptions	Indirect / enabling	Carbon credibility: Very high; Investment readiness: Critical; Market transparency: High; Private capital mobilization: High	Fragmented monitoring systems; MRV capacity challenges; weak digital systems; regulatory uncertainty; interoperability challenges; fragmented datasets
	BCE science, indigenous knowledge, technology and innovation	Rising climate-tech and blue-tech investment opportunities	Analytics services, public contracts, monitoring contracts, digital platforms	Long-term / indirect	Resilience planning: High; Decision-making: High; Innovation: High; Pipeline development: High	High technology costs; weak institutional coordination; limited innovation financing
	BCE integration into the NDC reporting and other national frameworks	Planning and research sectors	Public contracts	Long-term / indirect	Resilience planning: High; Decision-making: High	Weak institutional coordination
	Blue carbon information and knowledge management	Expanding demand for real-time ecosystem intelligence and carbon transparency	Digital platforms, monitoring contracts	8–14%	MRV efficiency: High; Transparency: High	Limited technical expertise; operational costs; weak data governance

KRA	Strategic Investment Areas	Market Opportunity (Scale and Demand)	Revenue / Cashflow Drivers	Estimated Commercial Returns / IRR	Development, Climate and Biodiversity Returns	Key Investment Constraints
KRA 4: Integrated Governance, Policy Coherence, Institutional Strengthening and Safeguards	BCE coordination and inclusive governance	Rising demand for transparent, inclusive governance	Grants, institutional partnerships	Long-term/ indirect	Institutional resilience: High; Policy coherence: High; Social inclusion: High	Weak coordination; limited governance financing
	policy and regulatory frameworks	Strong demand for enabling policy environments	Compliance fees	Indirect	Policy coherence: Very high; Investment readiness: High	Weak enforcement capacity
	Capacity development and safeguards	Growing demand for skilled workforce and safeguard compliance	Training fees; compliance revenues	6–10%	Institutional capacity: High; Safeguards: High	Limited training infrastructure
	Blue Carbon Ecosystems collaboration and partnerships	Growing demand for shared learning	Grants, joint ventures	Indirect	Knowledge transfer: High; Resilience: Medium	Fragmented institutional coordination
	BCE coordination and inclusive governance	Rising demand for transparent, inclusive governance	Donor grants, institutional partnerships	Long-term/ indirect	Institutional resilience: High; Policy coherence: High; Social inclusion: High	Weak coordination; limited governance financing
	Policy and regulatory frameworks	Strong demand for enabling policy environments	Compliance fees	Indirect	Policy coherence: Very high; Investment readiness: High	Weak enforcement capacity
	Capacity development and safeguards	Growing demand for skilled workforce and safeguard compliance	Training fees; compliance revenues	6–10%	Institutional capacity: High; Safeguards: High	Limited training infrastructure
	Blue Carbon Ecosystems collaboration and partnerships	Growing demand for shared learning	Grants, joint ventures	Indirect	Knowledge transfer: High; Resilience: Medium	Fragmented institutional coordination

KRA	Strategic Investment Areas	Market Opportunity (Scale and Demand)	Revenue / Cashflow Drivers	Estimated Commercial Returns / IRR	Development, Climate and Biodiversity Returns	Key Investment Constraints
KRA 5: Sustainable Finance and Investment Framework	Blue finance policy, taxonomy and regulatory frameworks	Regulatory alignment	Advisory fees, transaction support, incubation services	8–14%	Investment readiness: High; Pipeline development: High	Limited transaction advisory capacity; weak investor matchmaking systems
	Sustainable blue financing mechanisms and facilities	Growing demand for blended finance for nature-based solutions	Blue finance facilities, blended finance platforms	10–15%	Climate finance mobilization: High; Resilience: High	Weak pipeline of bankable projects
	Innovative blue finance products and nature markets	Demand for blue bonds, biodiversity credits, insurance products	Bond issuance fees, credit sales, insurance premiums	12–18%	Market innovation: High; Biodiversity finance: High	Limited investor awareness
	Investment readiness, pipeline development and transaction support	Strong demand for bankable projects	Project preparation facilities, advisory services	10–16%	Pipeline development: High; Private capital mobilization: High	Limited technical expertise
	Community-centred climate finance, risk sharing and fiscal incentives	Rising need for inclusive finance and community-based climate solutions	Fiscal incentives	8–10%	Livelihoods: High; Climate resilience: High	Weak local finance institutions

5.4

Financing Framework and Instruments

5.4.1 BCE Financing Architecture

Kenya's BCE-NDC Investment Plan 2025–2035 establishes a strategic financing architecture to meet NDC targets for mangrove and seagrass ecosystems. It moves from Activity-Based Climate Finance (ABCF) for foundational work to Results-Based Climate Finance (RBCF) tied to verified outcomes and then to nature market revenues from carbon credits and sustainable fisheries. This approach reduces grant dependency while mobilizing private capital, creating a sustainable and scalable finance system to support BCE conservation and development. This strategy integrates funds across national, regional and global levels by blending sovereign public resources with private and multilateral capital through Kenya's financial sector (Figure 5.2). This enables efficient allocation from large institutions to community-led projects, ensuring targeted ecosystem impacts.

This plan is guided by three key principles: clarity of purpose, financial sustainability and systemic coherence. It directs capital toward specific ecosystem and community goals, emphasizes a shift to results-driven and private financing and aligns with legal frameworks and global best practices. By fostering collaboration among governments, investors, communities and international partners, Kenya mobilizes diverse capital flows to meet its Nationally Determined Contributions. This forward-looking model not only restores critical BCEs but also strengthens the blue economy, delivering measurable environmental and socio-economic benefits over the next decade.

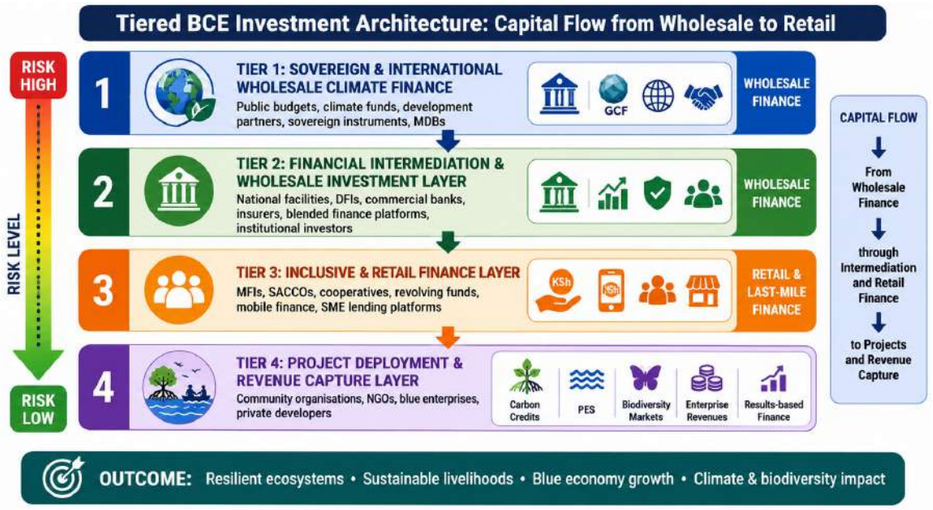


Figure 5.2: Financing architecture for BCE-NDC I&IP 2025–2035

5.4.2 Financing BCE Investments

The financing architecture for BCEs in Kenya is designed as a four-tiered system that mobilizes and channels over USD 600 million needed for implementation between 2025 and 2035. This structure integrates both public (sovereign) and private (non-sovereign) capital through national financial intermediation layers tailored to Kenya's financial landscape:

- **Tier 1: Sovereign and International Wholesale Climate Finance:** This top tier secures large-scale funding from public budgets, international climate funds, development partners, sovereign sources and multilateral institutions. It supports foundational activities like ecosystem restoration, MRV, governance, safeguards and catalytic investments to lay the groundwork for additional financing.
- **Tier 2: Financial Intermediation and Wholesale Investment Layer:** Tier 2 directs wholesale capital through national entities like DFIs, commercial banks, insurers, blended finance platforms and institutional investors. These intermediaries structure financing to create bankable BCE investment opportunities and facilitate funding for viable projects.
- **Tier 3: Inclusive and Retail Finance Layer:** This layer expands access to finance at the grassroots level by using retail and last-mile mechanisms like microfinance institutions, SACCOs, cooperatives, revolving funds, mobile platforms and SME lenders. It aims to support community groups such as BMUs, CFAs, coastal SMEs, fisheries, aquaculture and local enterprises.
- **Tier 4: Project Deployment and Revenue Capture Layer:** The lowest tier allocates funds to specific projects and enterprises that deliver clear climate, biodiversity, livelihood and commercial benefits. These investments generate revenue through carbon credits, Payments for Ecosystem Services, enterprise income and results-based financing, creating sustainable financial returns that flow back into the system.

This tiered financing model provides a comprehensive approach. Tier 1's foundational public capital de-risks investments and funds public goods, paving the way for private and commercial finance in the following layers. It enhances investment readiness, builds core enabling systems and helps scale BCE investments into mature, revenue-generating assets that advance climate, biodiversity and socioeconomic goals.

5.4.2.1 Public and Climate Finance Sources

Public finance serves as the foundation and catalyst for BCE financing by supporting investments that create high public value but attract limited commercial capital, such as ecosystem restoration, MRV systems, governance, institutional strengthening and early-stage projects. It acts as the main de-risking tool by lowering transaction costs, absorbing first loss risk and funding essential infrastructure for market growth. In Kenya's financing framework, public funds primarily flow through Tier 1 (Sovereign/International Climate Finance) and Tier 2 (National Aggregation and Intermediation) before reaching projects via national facilities, county systems and implementing agencies.

Table 5.4: Indicative sources of Public Finance for BCE

Tier 1 and 2 Financial Institutions	Major Sources / Institutions	Primary Objective	Key Channels / Mechanisms	Key Instruments
Sovereign Budgetary Finance	National Treasury; Coastal County Governments	Core national BCE financing; co-financing; enabling systems	Budget allocations; county climate finance windows	Public expenditure, transfers
Global Climate Funds	Green Climate Fund; Global Environment Facility; Adaptation Fund	Restoration, resilience, MRV, safeguards	Climate finance windows	Grants, concessional loans, guarantees
Multilateral Development Finance	World Bank Group; African Development Bank; IFAD	Large-scale programme financing	Sovereign lending facilities	Concessional debt, guarantees
Bilateral Finance	EU, Germany, UK, Norway, Sweden, Japan	Technical assistance, co-financing, pilots	Bilateral support programmes	Grants, blended finance
National Financing Vehicles	Kenya Blue Nature Finance Facility; BCE Preparation Facility	Aggregate and deploy catalytic capital	National trust fund windows	Blended finance, grants, first loss capital
Catalytic Facilities	National catalytic windows; climate facilities	De-risk investment pipeline	Guarantee facilities; concessional windows	Guarantees, concessional lending
Sovereign Capital Markets	National Treasury	Raise large-scale domestic capital	Blue bond programmes	Treasury blue bonds
Debt Conversion Mechanisms	Sovereign creditors / debt partners	Create fiscal space for nature finance	Debt restructuring vehicles	Debt-for-nature swaps

5.4.2.2 Private Sector and Nature Market Integration

Private finance drives commercial growth and scaling by funding bankable BCE investments that generate predictable revenues and returns. This includes sectors like aquaculture, fisheries, blue enterprises, coastal logistics, eco-tourism, carbon assets, biodiversity ventures and scalable blue SMEs. Unlike public finance, private capital demands risk-adjusted returns, relying on clear revenue models, credible MRV systems, investment-ready projects and supportive policies. In Kenya, private funds flow through Tier 2 (National Financial Institutions), Tier 3 (Inclusive Finance Systems) and Tier 4 (Project-Level Revenue Platforms), reaching both large investors and community enterprises.

Table 5.5: Indicative Sources of Private Finance for BCE

Type of Financial institution	Major Sources / Institutions	Primary Objective	Key Channels / Mechanisms	Key Instruments
Development Finance Institutions	IFC, Proparco, FMO, BII, Norfund	Scale bankable projects	Project finance vehicles	Debt, equity, guarantees
Commercial Banks	E.g., KCB Group; Equity Group Holdings; Cooperative Bank of Kenya, Stanbic	Lending to mature BCE enterprises	Commercial lending windows	Loans, structured credit
Institutional Investors	Pension funds; insurance funds; asset managers	Long-term infrastructure finance	Infrastructure / fund platforms	Bonds, debt, equity
ESG / Impact Funds	Impact investors; sustainability funds	Invest in measurable outcomes	ESG investment vehicles	Equity, blended finance
Inclusive Finance Institutions	MFIs; SACCOs; cooperatives; county funds	Finance SMEs and community enterprises	Inclusive finance platforms	SME loans, leasing, cooperative finance
SME / Enterprise Finance	Producer cooperatives; blue enterprise platforms	Working capital and expansion finance	Aggregation and value chain finance	Asset finance, working capital
Carbon Funds / Aggregators	Carbon asset managers; aggregators	Upfront carbon project capital	Carbon finance facilities	Forward purchase agreements, carbon-backed finance
Corporate Buyers / Off-takers	Airlines; shipping firms; FMCGs; corporates	Carbon procurement / restoration investment	Offtake structures	Advance purchase agreements, equity
Nature Market Platforms	Carbon exchanges; biodiversity platforms	Monetize ecosystem services	Nature market settlement systems	Carbon credits, PES, biodiversity credits
Venture / Private Equity	Climate tech funds; venture capital	Innovation and growth capital	Enterprise investment windows	Equity, venture finance

5.4.3
Finance Channelling Options and Modalities

Mobilizing capital for BCEs requires a multi-channel financing structure that addresses gaps across the investment lifecycle, from public goods and early-stage preparation to commercial scale-up and revenue sustainability. Challenges such as high-risk perception, weak pipelines, limited intermediation and underdeveloped markets leave much capital unmet. Kenya's BCE framework uses three complementary channels aligned with public finance, climate funds and the green/blue finance ecosystem to efficiently move capital from global and sovereign sources through national banks, MFIs, SACCOs and community enterprises.

1. Blue and Nature Finance Facility (BNFF)

BNFF is a proposed national public financing facility linked to Kenya's climate finance system and Green Investment Bank. It will mobilize and deploy concessional, catalytic, public, climate and philanthropic capital toward BCE investments, focusing on public goods and early interventions such as ecosystem restoration, MRV, governance, community stewardship and readiness programmes. As a blended finance platform, BNFF de-risks and structures funding to attract private investment in sectors like fisheries, aquaculture, blue enterprises and coastal value chains. Integrated with Kenyan financial institutions (commercial banks, DFIs, MFIs, SACCOs), it channels capital to both large and community-scale projects. Policy alignment will ensure effective operation.

2. County Climate Change Funds

Counties allocate 1–2% of their development budgets to climate actions through County Climate Change Funds (CCCFs). These funds implement the National Climate Change Act locally, enabling counties, especially coastal ones, to finance BCE priorities like mangrove restoration, fisheries resilience and livelihood diversification. CCCFs address risks including coastal erosion, flooding, sea level rise, ecosystem loss and fishery decline, empowering counties to lead locally driven climate solutions.

3. Nature and Carbon Markets

Nature and carbon markets offer Kenya a path to shift BCE conservation from grant dependence to sustainable revenue generation by monetizing verified climate mitigation, biodiversity and ecosystem resilience outcomes. Viable instruments include carbon markets, Paris Agreement Article 6 compliance, biodiversity service markets and blue financial products. Prioritizing market-ready instruments will accelerate private investment and create durable funding streams for restoration, conservation and community blue enterprises.

4. BCE Resilience Fund

The BCE Resilience Fund is a catalytic blended finance platform designed to boost climate adaptation and biodiversity conservation in Kenya's coastal counties. It will mobilize philanthropic, concessional, impact and non-market finance to support community-led resilience projects often overlooked by traditional finance. Focus areas include ecosystem restoration, sustainable fisheries, climate-smart aquaculture, eco-tourism and support for vulnerable groups like BMUs, CFAs, women, youth and early-stage blue enterprises.

The Fund will use flexible financing tools such as grants, concessional loans, first loss capital and technical assistance to attract private investment. Targeting USD 100 million by 2030 and USD 200 million by 2035, it aims to fill key financing gaps while preparing Kenya for carbon and nature market opportunities. This approach will help reduce grant dependence and scale up investment toward Kenya's USD 616 million BCE goals.

5.4.4
Uses of Capital

Capital allocation in the BCE Investment Plan targets five key areas: ecosystem restoration, community livelihoods, science and MRV, governance and sustainable finance, addressing gaps in upfront, scaling, risk and long-term funding.

Investment is structured in two layers. The first includes **direct CAPEX and OPEX investments** in bankable projects like mangrove restoration, sustainable fisheries, aquaculture, eco-tourism, coastal SMEs and blue economy infrastructure, supporting livelihoods and climate outcomes. The second layer covers **enabling investments** that unlock and de-risk projects by financing MRV systems, governance frameworks, project preparation, blended finance tools and capacity building. While these may not generate immediate returns, they improve readiness and reduce risks.

Capital deployment follows national regulations and coordination frameworks, ensuring alignment with the BCE-NDC Plan to advance Kenya's climate resilience, biodiversity, livelihoods and blue economy goals.

5.5
Expected Returns on Investments

The investment in Kenya's Blue Carbon Ecosystems (BCEs) is expected to generate substantial returns across climate mitigation, adaptation and resilience, economic productivity, and socio-economic development. Beyond direct financial returns, BCE investments create high-value ecosystem services through shoreline protection, fisheries productivity, biodiversity enhancement, and climate resilience. Financially bankable blue enterprises, including aquaculture, fisheries value chains, ecotourism, carbon assets, and coastal processing infrastructure, were projected to generate attractive commercial returns, while broader economic returns significantly exceed direct cash flows due to avoided losses, natural capital appreciation, and public co-benefits. Collectively, the BCE portfolio is expected to position Kenya's coastal economy as a globally competitive blue-green growth frontier.

Table 5.6: Expected returns from BCE investments

Category of Return	Key Returns/Values generated from the investments
Climate Mitigation Returns	• 6–10 tCO_2e/ha/year carbon sequestration from restored mangroves • 2–5 tCO_2e/ha/year additional sequestration from seagrass ecosystems • Up to 1,500 tCO_2e/ha avoided emissions through avoided ecosystem degradation • 95–130 $MtCO_2e$ cumulative mitigation potential by 2035 • USD 1.9–6.5 billion potential carbon revenue through voluntary carbon markets and Article 6 mechanisms
Adaptation and Resilience Returns	• 1–2 metres/year reduction in shoreline retreat • 60–70% reduction in wave heights through mangrove buffering • Up to 30% reduction in storm surge intensity through seagrass systems • Up to 50% reduction in sediment loss and improved coastal elevation maintenance • USD 1.0–1.8 billion in avoided climate-related damages and losses • 500,000–800,000 coastal residents benefiting from improved resilience
Financial, Economic and Social Returns	• 12–38% IRR across commercially viable BCE investments • 4–7 years estimated payback period • Up to USD 4.4 billion annually contribution to national GDP • 20–50% increase in fisheries and mariculture productivity • 52,000+ direct jobs and 670,000–950,000 total jobs supported • 15–40% increase in household incomes in participating communities • USD 1.2–2.0 billion in cumulative government revenues • Up to 60% reduction in resource-use conflicts through strengthened governance and benefit sharing systems

Category of Return	Key Returns/Values generated from the investments
Biodiversity Returns	• 35–50% increase in fish and crustacean species richness • Up to 40% increase in invertebrate abundance in restored seagrass habitats • 30–80% increase in juvenile fish density, strengthening breeding and nursery grounds • Restored ecosystems supporting 70%+ of commercially important fish species • Improved habitats for dugongs (sea cows), marine turtles, reef fish, shorebirds and other marine biodiversity • Strengthened ecological connectivity across mangrove–seagrass–coral reef systems, supporting national biodiversity targets including 30×30 conservation commitments

Mitigation Outcome Revenue Scenario: Carbon revenues alone could recover 20–55% of portfolio cost over time, materially improving bankability. Blue carbon credits currently command premium prices (USD 29–50/tCO_2e, with removals often 3–4x higher than reduction credits), creating strong upside potential for Kenya's coastal blue carbon asset base if high integrity MRV, registries and community safeguards are maintained.

Overall impact of investments on management of BCEs

The strengthened management of Blue Carbon Ecosystems (BCEs) will significantly improve inclusive governance, community stewardship and long-term sustainability of coastal ecosystems. Enhanced participation of local communities, including women, youth, BMUs, CFAs and indigenous groups, will strengthen shared decision-making, accountability and ownership of restoration and conservation initiatives. Improved governance systems, safeguards and benefit sharing mechanisms will further support equitable distribution of ecosystem and livelihood benefits while reducing conflicts over natural resources and strengthening social cohesion across coastal landscapes.

Institutional coordination frameworks, community-led stewardship systems and participatory planning processes will also improve transparency, compliance and ecosystem monitoring, enabling more effective conservation and sustainable management of mangroves, seagrasses, fisheries and associated coastal resources. These approaches will align with Kenya's Climate Change Act, national safeguard systems and international principles on inclusive and rights-based natural resource governance, reinforcing a resilient, community-centred and sustainable BCE management framework.

5.6 Investment Roadmap

The BCE financing roadmap presents a phased strategy to advance Kenya's blue carbon finance ecosystem, progressing from early-stage market development and catalytic funding to large-scale private investment and long-term market maturity. It prioritizes establishing foundational governance, MRV infrastructure and investment readiness to build confidence ahead of scaling blended, commercial and market-based financing.

Phase 1 focuses on creating robust systems and readiness frameworks. Phase 2 implements pilot projects, validates market mechanisms and attracts blended and private capital. Phase 3 accelerates large-scale investment mobilization through instruments such as blue bonds, public-private partnerships, carbon markets and SME finance platforms. Phase 4 consolidates sustainability via mature carbon and nature markets and integrated national financing structures. The roadmap identifies 2030 as a pivotal milestone for scaling and market transformation. Key financing channels, including the Blue and Nature Finance Facility, County Climate Change Funds, Nature and Carbon Markets and the BCE Resilience Fund, will operate across wholesale, blended and retail finance layers, collectively driving the effective implementation of Kenya's BCE-NDC Investment Plan.

Table 5.7: BCE Investment Roadmap in Kenya

Timeline	Investment Facility	Arrangement / Key Actions	Type of Capital to Deploy	Expected Milestones
Phase 1: Foundation and Market Setup	Q1 2026 – Q4 2027	Blue and Nature Finance Facility (BNFF)	Establish sovereign BCE financing window; operationalize governance structures; align with Climate Change Fund and PFM systems	Public finance, concessional finance, grants, catalytic capital	BNFF operational and capitalised
		Project Preparation Facility (PPF)	Prepare feasibility studies, safeguards, MRV systems, and transaction advisory support for bankable BCE projects	Technical assistance, readiness finance	10–15 investment-ready projects prepared
		County Climate Change Funds (CCCFs)	Mainstream BCE priorities into county climate finance plans and county investment pipelines	County climate finance	BCE integrated into coastal county climate financing systems
		Establish blue finance taxonomy systems	Establish blue finance taxonomy systems linking to MRV systems, carbon registries, safeguards.	Grants and readiness support	National BCE MRV and carbon market readiness established
		BCE Resilience Fund	Launch philanthropic and adaptation-focused resilience platform	Philanthropy, concessional and catalytic capital	Initial adaptation and resilience, SME resilience financing launched
Phase 2: Pilot Implementation and Market Validation	Q1 2028 – Q4 2031	BNFF and blended finance platforms	Deploy blended finance into restoration, fisheries, aquaculture, eco-tourism and coastal SMEs	Blended finance, concessional finance	20–30 operational BCE investment projects
		Assessment and exploration for blue bonds	Pilot sovereign or thematic blue bond issuances	DFI and institutional finance	First blue bond issued
		Nature and carbon markets	Operationalize blue carbon credits, forward purchase agreements and Article 6 readiness systems	Carbon finance and private capital	Carbon revenue streams established
		BCE resilience fund	Expand adaptation financing and community enterprise support	Venture philanthropy, impact investment	200–500 SMEs and community enterprises financed
		Pilot innovative blue finance products	Scale retail financing systems lending through MFIs, SACCOs, cooperatives and community finance systems	Retail and inclusive finance	Increased local access to BCE finance

	Timeline	Investment Arrangement / Facility	Key Actions	Type of Capital to Deploy	Expected Milestones
Phase 3: Scale-up and Market Expansion	Q1 2032 – Q4 2034	Large-scale BCE financing platforms	Scale national restoration, infrastructure and enterprise investments	Private capital, institutional finance, PPPs	50+ large-scale BCE projects operational
		Carbon and biodiversity markets	Expand participation in voluntary and Article 6 carbon markets, pilot biodiversity credits and PES systems	Market-based finance	Mature carbon and biodiversity market participation
		Blue investment facilitation programme	Strengthen investment matchmaking, pipeline aggregation and transaction support	Blended and commercial finance	Expanded BCE investment pipeline
		Community and SME financing systems	Expand financing for BMUs, CFAs, cooperatives, women and youth enterprises	Commercial, retail and equity finance	1,000+ SMEs financed
		Blue infrastructure and PPPs	Develop blue economy infrastructure and coastal resilience PPP projects	Institutional and PPP finance	Large-scale coastal infrastructure investments operational
Phase 4: Market Maturity and Long-term Sustainability	Q1 2035 – Q4 2036	Mature BCE finance ecosystem	Transition toward self-sustaining, market-led financing systems	Private and market-based finance	Reduced dependence on concessional finance
		Nature markets and carbon revenues	Scale carbon revenues, biodiversity finance, resilience credits and ecosystem service markets	Carbon and nature finance	Long-term recurring revenue streams established
		Integrated national BCE finance systems	Fully integrate BCE finance into national planning, budgeting, climate finance and investment systems	Public and private finance	BCE integrated into national development financing systems
		Institutionalized benefit sharing systems	Operationalize long-term community benefit sharing and safeguards systems	Public and market-based finance	Inclusive and sustainable governance systems operational

5.7 County Investment Profiles

Kenya's coastal counties offer distinct opportunities to advance Blue Carbon Ecosystem (BCE) investments that integrate environmental restoration with community development. Each county focuses on priority actions reflecting local ecological and socioeconomic needs to strengthen climate resilience, biodiversity and sustainable livelihoods through science-based, community-driven approaches. Coastal counties prioritized **mangrove and seagrass restoration**, **mariculture**, **ecotourism** and **community stewardship** as their core BCE investment needs, reflecting local pressures such as sedimentation, trawling, pollution and shoreline erosion. Counties also emphasized **stronger MRV systems**, **county-level coordination** and **direct financing pathways** for CFAs, BMUs and community enterprises. **Taita Taveta**, though inland, identified its critical role in **land–sea interactions**, where upstream catchment degradation, river abstraction, sediment loads and watershed management directly influence coastal BCE health and restoration success. Together, these county-driven priorities form the backbone of Kenya's BCE investment pipeline and reflect the interconnected ecological realities across the coast and its upstream catchments. Interventions were guided by BCE mapping and community priorities to ensure impactful investments (Table 5.8).

Table 5.8: County-specific Priority Investment Areas in Kenya

Priority Investment Area	Description of Investment	County	Expected Outcomes (2030–2035)
KRA 1: Climate-Resilient BCE Conservation and Restoration			
Large-Scale Mangrove Restoration and Hydrological Rehabilitation	Hydrological reconnection, assisted natural regeneration, zonation-correct planting, degraded creek rehabilitation	Lamu, Tana River, Kilifi, Kwale, Mombasa	Restored mangrove cover, improved hydrology, increased carbon stocks
Mangrove Enforcement and Surveillance Systems	Forest guards, patrol boats, surveillance units, illegal logging control	Lamu, Kilifi, Kwale	Reduced illegal harvesting, improved mangrove governance
Inland Water Bodies –Mangrove Hydrological Restoration	Desilting and hydrological reconnection of Lake Kenyatta, Lake Moa, deltaic wetlands	Lamu, Tana River	Improved freshwater–mangrove hydrology, reduced salinity stress
Seagrass Restoration and Protection Initiative	Seagrass mapping, nurseries, trawling mitigation, community-led restoration	Kwale, Kilifi, Lamu	Stabilized seagrass meadows, improved fisheries productivity, enhanced carbon sequestration
Coral Reef Rehabilitation Programme	Coral reef restoration, community reef monitoring	Kilifi, Kwale, Mombasa	Recovered reef habitats, improved biodiversity, strengthened coastal protection
Nature-Based Coastal Protection Infrastructure	Mangrove belts, dune stabilization, shoreline buffers	Kilifi, Kwale, Lamu	Reduced erosion, storm-surge protection, climate-resilient coastlines
Hinterland Conservation and Restoration for Coastal BCE Health	Reforestation, soil conservation, riverbank stabilization, upstream water management to reduce sedimentation and salinity stress on BCEs; removal and control of invasive species, rangeland conservation	Taita Taveta, Tana River	Reduced sediment loads, improved freshwater flows, enhanced BCE restoration success

Priority Investment Area	Description of Investment	County	Expected Outcomes (2030–2035)
KRA 2: Community Stewardship and Climate-Resilient Livelihoods			
Mariculture Value Chain Expansion	Crab fattening, fish cages, oyster farming, prawns, seaweed farming.	All coastal counties	Diversified incomes, reduced pressure on BCEs, improved food security.
Deep-Sea Fisheries Industrialization	Semi-industrial vessels, EEZ access, offshore gear	Lamu, Mombasa, Kilifi, Kwale	Reduced inshore pressure on BCEs
Post-Harvest and Cold-Chain Infrastructure	Ice plants, cold rooms, fish depots, processing plants	Lamu, Tana River, Kilifi, Kwale	Reduced post-harvest losses, reduced destructive fishing
Blue Carbon Ecotourism Development	Boardwalks, eco-camps, mangrove trails, birdwatching sites.	Kilifi, Kwale, Lamu	Increased tourism revenue, community jobs, enhanced conservation incentives.
Apiculture and Honey Value Chain Scaling	Beekeeping equipment, processing plants, branding, market access.	All counties	Strengthened nature-based enterprises, increased household incomes.
KRA 3: BCE Science, Data and Monitoring Systems			
Mariculture Value Chain Expansion	Crab fattening, fish cages, oyster farming, prawns, seaweed farming	All coastal counties	Diversified incomes, reduced pressure on BCEs, improved food security
Deep Sea Fisheries Industrialization	Semi-industrial vessels, EEZ access, offshore gear	Lamu, Mombasa, Kilifi, Kwale	Reduced inshore pressure on BCEs
Post-harvest and Cold Chain Infrastructure	Ice plants, cold rooms, fish depots, processing plants	Lamu, Tana River, Kilifi, Kwale	Reduced post-harvest losses, reduced destructive fishing
Blue Carbon Ecotourism Development	Boardwalks, eco-camps, mangrove trails, birdwatching sites	Kilifi, Kwale, Lamu	Increased tourism revenue, community jobs, enhanced conservation incentives
Apiculture and Honey Value Chain Scaling	Beekeeping equipment, processing plants, branding, market access	All counties	Strengthened nature-based enterprises, increased household incomes

Priority Investment Area	Description of Investment	County	Expected Outcomes (2030–2035)
KRA 4: Integrated Governance, Policy Coherence & Safeguards			
County-level Multi-agency BCE Structures	Coordination platforms linking KFS, KeFS, KWS, NEMA, BMUs, CFAs	All counties	Improved coordination, reduced conflicts, efficient enforcement
Gazettement and Mapping of BCEs	Mapping wetlands, mangrove blocks, seagrass meadows; formalizing JCMAs/LMMAs	Kilifi, Kwale, Lamu	Legal protection, improved management, reduced encroachment
Catchment Governance Strengthening	Strengthening WRUAs, county basin coordination, upstream land-use regulation	Taita Taveta, Tana River	Reduced sedimentation, improved water governance, stronger BCE resilience
BMU Modernization for BCE Governance	Co-management reforms, landing site governance	Lamu, Kwale, Mombasa	Better fisheries governance
Integrated Coastal Zone Management (ICZM) Approach	Coastal zoning, port safeguards	Lamu, Kilifi, Kwale	Reduced BCE degradation
KRA 5: Sustainable Finance and Investment Framework			
County Climate Finance Integration	Linking BCE investments to CCCF, CIDPs, CCAPs; capitalization and disbursement	All counties	Sustainable, predictable financing for BCEs; predictable climate finance
Enterprise Financing and Cooperative Development	Credit access, cooperative formation, value chain financing	Kilifi, Kwale	Stronger community enterprises, fair pricing, improved market access
Catchment – Coastal Investment Linkages	Financing upstream restoration to protect downstream BCE investments	Taita Taveta, Tana River, Kilifi	Reduced restoration costs, improved ecosystem function, long-term resilience
Revenue Automation Systems	Own Source Revenue (OSR) digitization	Lamu, Kilifi, Tana River	Increased revenue

5.8

Enabling Conditions for Investment

Kenya has aligned national reforms with Blue Carbon Ecosystem frameworks to improve investor readiness for climate and nature-based investments. Policies across NDCs, NCCAPs, blue economy and county plans are harmonized to channel capital into priority BCE areas, positioning BCEs as valuable assets with climate, biodiversity and economic benefits.

Strengthened climate finance governance, carbon market readiness, blended finance and PPP frameworks support this environment. Key legislations like the Climate Change Act and County Climate Change Funds provide institutional backing for mobilizing finance. Investments in MRV, digital infrastructure, safeguards and project preparation enhance transparency and reduce risks, boosting BCE bankability. Kenya's finance sector, including banks, DFIs, SACCOs, MFIs and blended finance platforms, increasingly integrates green finance to support fisheries, aquaculture, restoration, eco-tourism and SMEs. Expanding carbon and nature markets create new revenue streams and attract private capital.

Coastal counties enhance readiness via climate funds, planning integration, budgeting and local adaptation systems, acting as implementation hubs by supporting stewardship, SMEs, fisheries, restoration and investment pipelines alongside national efforts, fostering scalable BCE investments.

Enabling Conditions	
Policies: *Kenya has adopted policies combine liberalization, targeted incentives, and climate regulations;*	✓ The development of a Green Finance Taxonomy, and increasing adoption of blended and sustainability-linked finance instruments ✓ Finance Act 2025 exemptions now applicable to blue carbon restoration, will be strengthened to reflect this plan ✓ Investment Promotion Act lifts entry barriers and eases forex controls; Carbon Markets Regulations 2024 mandate validation, reporting, and registries for Article 6 compliance. ✓ NCCAP III and NDCs structures in place to support implementation; Draft Green Fiscal Incentives and SEZ/EPZ expansions (2024 amendments) offer tax relief for blue projects.
Infrastructural Readiness: *Robust transport, digital, and coastal upgrades support blue carbon logistics, monitoring, and scaling under national stability goals;*	✓ Roads, ports, railways, airports, and telecom enable operations; Interventions such as Marine Spatial Planning ongoing to protects BCEs ; NEMA and Climate Change Directorate operationalizing MRV facilities. ✓ Knowledge portals such as the Mangrove portal, climate change knowledge portal in readiness to avail information to investors ✓ SEZs/EPZs provide world-class setups for agro-processing links to blue carbon; digital portals enhance transparency. ✓ PPPs and CAIPs in coastal counties fund restoration.
Institutional Readiness: *Kenya's institutions merge broad facilitation services with blue carbon-specific oversight, ensuring seamless investor onboarding and project validation;*	✓ Ken Invest one-stop shops and SDIP provide end-to-end support for business registration, permits, and aftercare, now extended to blue carbon via NEMA's DNA role for approvals within 12 months. ✓ MiBEMA, MoECCF, and relevant agencies, five coastal counties and communities form working groups, complemented by Ken Invest IPAs for global promotion. ✓ GGGI Article 6 project builds registries alongside Strategic Plan 2023-2027's FDI targets, with privatization of tourism SOEs opening coastal opportunities.

Figure 5.3: Kenya's preparedness for BCE-NDC I&IP 2025–2035

Chapter 6

Monitoring, Evaluation and Learning

6.1

Introduction to the MEL Framework

The BCE-NDC I&IP 2025–2035 will require a robust Monitoring, Evaluation and Learning (MEL) Framework to ensure systematic tracking of progress, evidence-based adaptive management and accountability across all Key Result Areas (KRAs). This Chapter provides the MEL framework for tracking performance and assessing outcomes for the strategic objectives, strategies and priority actions outlined in Chapter Three, leveraging the multi-level governance and coordination platforms detailed in Chapter Four (sections 4.1 to 4.6). By embedding SMART (Specific, Measurable, Achievable, Relevant, Time-bound) Key Performance Indicators (KPIs) directly into monitorable elements such as hectares restored under large-scale mangrove programmes (KRA 1), households benefiting from BCE-linked enterprises (KRA 2), and digital MRV coverage (KRA 3), the MEL system aligns implementation with disaggregated investment needs and priority programmes.

The MEL framework provides the operational system for measuring progress, tracking investments, assessing outcomes and impacts, strengthening safeguards and demonstrating results linked to climate mitigation, adaptation, biodiversity conservation and socioeconomic transformation.

The framework aligns with Kenya's National Climate Change Monitoring Framework, National Carbon Registry, Medium-Term Plans, Public Finance Management systems, County Climate Change Fund mechanisms, SDG reporting systems and international reporting obligations under the UNFCCC Enhanced Transparency Framework (ETF), Biennial Transparency Reports (BTRs), Article 6 mechanisms and biodiversity reporting frameworks.

The MEL framework integrates Monitoring, Reporting and Verification (MRV) systems with evaluation and learning functions to ensure that implementation remains investment-ready, results-oriented and responsive to emerging risks, financing opportunities and ecosystem dynamics. The framework further supports transparency, safeguards compliance, results-based financing and investor confidence for large-scale Blue Carbon Ecosystem investments.

6.2

Strategic Objectives and Monitorable Elements

To effectively track each KRA's strategies and priority actions, a hierarchical structure that unpacks these monitorable elements, with baselines anchored in 2025 conditions (e.g., annual decline rate of 0.57% and 0.26% for mangroves and seagrasses, respectively), mid-term targets at 2030, and end-term ambitions at 2035 to deliver transformative outcomes, including halting degradation and enhancing restoration, targeting up to 10 $MtCO_2e$ sequestration annually, and to mobilize USD 620 million. For KRA 1, monitorable elements include multi-county restoration packages and seagrass recovery zones; KRA 2 tracks enterprise clusters and PES schemes; KRA 3 focuses on digital MRV platforms and capacity building; KRA 4 monitors governance platforms and grievance resolution; and KRA 5 measures the adoption of finance vehicles. Specifically, the MEL framework aims to:

- Track implementation progress across all KRAs and priority programmes;
- Measure climate mitigation, adaptation, biodiversity, governance and socioeconomic outcomes;
- Support national and international climate reporting obligations;
- Strengthen accountability, transparency and safeguards compliance;
- Provide evidence for adaptive management and policy refinement;
- Enable investment readiness, carbon market participation and results-based financing;
- Support county-level planning, budgeting and climate finance mobilization; and
- Generate evidence on returns on investment and long-term ecosystem resilience.

6.3

Outcome Performance Matrix

Annex 2 assesses outcomes for each Key Result Area (KRA) and its associated Key Performance Indicators (KPIs), including relevant programme areas and priority actions. It tracks progress against 2025 baselines, with Mid-Term Targets (2030) and End-Term Targets (2035). The matrix provides a comprehensive view of monitorable elements across all KRAs, highlighting key ambitions such as halting degradation and decline of BCEs by 2035 (KRA 1), over 80,000 households benefiting from blue enterprises (KRA 2), 100% digital MRV coverage (KRA 3), 98% grievance resolution (KRA 4) and USD 620 million from blended finance (KRA 5). Baselines derive from current BCE conditions documented in national assessments, ensuring realistic scaling over the 2025–2035 period.

6.4

Data Sources and Responsibilities

Data collection will be decentralized yet integrated: community institutions like Community Forest Associations (CFAs) and Beach Management Units (BMUs) will be required to provide ground-truthed inputs through participatory monitoring; County BCE Implementation Hubs will aggregate and validate local data; National Technical Working Groups (TWGs) under the Climate Change Directorate (CCD) will ensure technical standardization; while the National Climate Change Directorate (CCD) will oversee strategic reporting aligned with UNFCCC Biennial Transparency Reports (BTRs). KPIs will integrate national MRV systems from KRA 3, with annual progress reviews feeding adaptive learning via TWGs.

6.5

Reporting Mechanism

Integrated Digital MRV Platform: A centralized, user-friendly platform is developed for data collection, analysis and reporting, accessible to national, county and community users. The platform aligns with IPCC Wetlands Supplement and national GHG inventory requirements, supporting NDC and Biennial Transparency Report (BTR) submissions.

Community-based Monitoring: Local monitors are trained and engaged in data collection, validation and reporting, ensuring that MRV is participatory, credible and responsive to community needs.

Biennial Transparency Reporting: Biennial Transparency Reporting to the UNFCCC are coordinated by the CCD, with inputs from counties, communities and project partners. Open access to MRV data, third-party verification and grievance mechanisms ensure transparency and accountability.

Key Performance Indicators (KPIs): KPIs track the BCEs conserved/restored, verified carbon credits generated, number of community beneficiaries, proportion of benefits shared and number of MRV-trained community monitors.

Communication, Education and Public Awareness (CEPA): Long-term sustainability depends on public and stakeholder awareness promoted through clearly defined communication and education structures. The plan will promote national awareness campaigns and community led advocacy campaigns. This includes periodic stakeholder engagement for consistent information sharing.

Partnerships and Collaboration for Transformative BCE Interventions: Successful delivery of the plan requires strong collaboration among government, communities, NGOs, researchers, private sector, investors and development partners. Building strategic partnerships will be prioritized for long-term intervention and sustainable financing.

The BCE MEL framework will operate through a multi-level governance and reporting architecture linking community institutions, county governments, national agencies and independent verification systems.

Table 6.1: Institutional Reporting Responsibilities

Institutional Level	Key Responsibilities	Reporting Functions
Climate Change Directorate (CCD)	National oversight and coordination	National synthesis reporting, NDC tracking, BTR reporting
National BCE Technical Working Groups (TWGs)	Technical standardization and quality assurance	Indicator harmonization, MRV protocols, technical validation
County BCE Implementation Hubs	County coordination and aggregation	County performance reporting, safeguards monitoring
Community Institutions (BMUs, CFAs, CBOs)	Participatory monitoring and local reporting	Ecosystem monitoring, livelihoods tracking, grievance reporting
Independent National Verification Entities	External validation and certification	Carbon verification, safeguards audits, financial assurance

This structure ensures that data generated at project and community level feeds into county and national reporting systems while supporting transparency, adaptive management and climate finance accountability.

6.6

Adaptive Management and Learning Mechanisms

Learning mechanisms will emphasize adaptive management, including annual progress reviews, grievance resolution tracking (targeting 98% resolution by 2035 under KRA 4) and digital platforms for real-time dashboards. Risk mitigation integrates safeguards, Free Prior Informed Consent (FPIC), and gender, youth and PWDs inclusion metrics, fostering equitable benefit sharing and enabling evidence-driven adjustments for scalability.

6.7

Priority Program Linkages and Finance Tracking

Monitorable elements will directly track disaggregated investments for KRA actions by 2035 with finance mobilization (KRA 5) monitored via Treasury climate tagging, through the blue finance taxonomy and the laid financial reporting structures. This will ensure investments yield verifiable returns, supporting long-term NDC alignment through 2035. National and sub-national financial reporting frameworks will be deployed to ensure prudent resource allocation and use.

6.8

Implementation Roadmap and Capacity Building

Implementation of MEL activities will commence with 2025 baseline establishment, supported by KRA 3 capacity building. A phased roll-out will leverage county hubs and TWGs, with calls to action for stakeholders to operationalize the MEL framework and enable scaled climate finance access.

6.9

Bankable Projects Pipeline MEL Framework

In the BCE finance and investment framework in Chapter 5, BCE conservation and restoration projects, blue carbon credits and blended finance vehicles are systematically prepared for climate finance access and to deliver measurable returns aligned with the 2025–2035 BCE-NDC I&IP targets. A dedicated Monitoring, Evaluation and Learning (MEL) framework for the bankable projects pipeline under KRA 5, focusing on investment readiness and realization of investment targets ensures effective assessment of progress realized and outcomes for Bankable Projects Pipelines. Drawing from Chapter 3 bankable initiatives and Chapter 4 coordination platforms (e.g., National Blue Investment Governance Framework), this framework tracks progress from concept to financial closure, with data aggregated via county BCE hubs and TWGs for CCD oversight.

6.9.1 Investment Readiness MEL

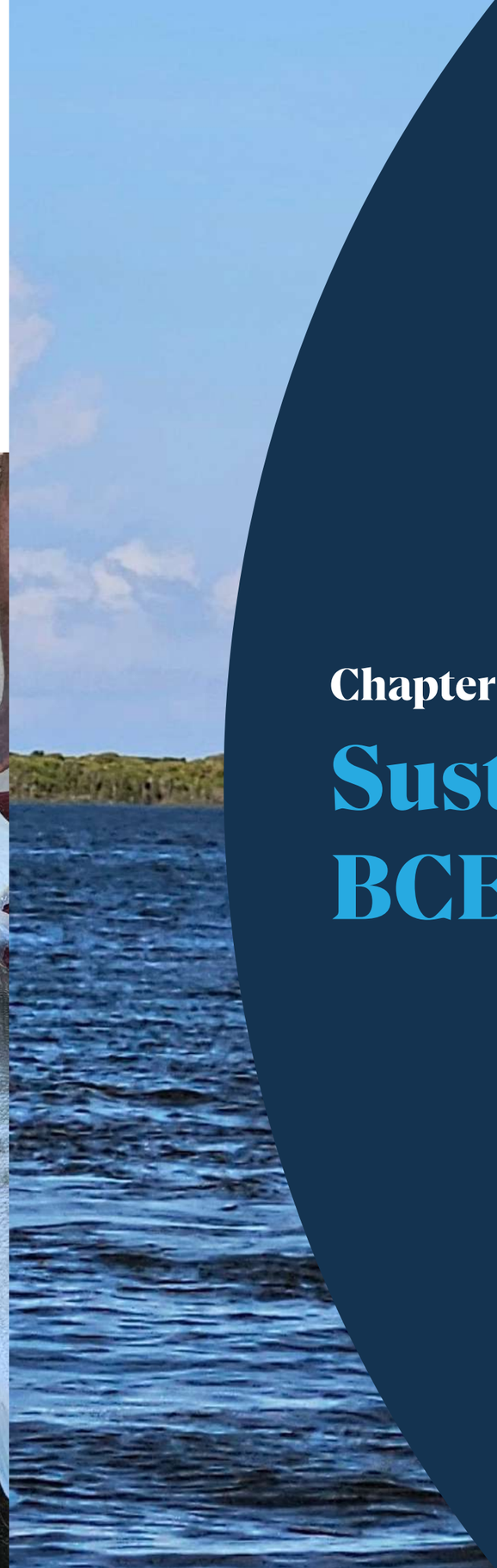
Investment readiness will target assessment of project maturity to attract public, private and international finance. Baselines reflect 2025 status (few mature projects like Mikoko Pamoja), with Mid-Term (2030) and End-Term (2035) Targets scaling pipelines through safeguards, feasibility studies and market linkages. The Investment Readiness Outcome Matrix (Annex 3), monitors pipeline stages for bankable investment projects. It evaluates achievements relative to 2025 baselines, including Mid-Term Targets (2030) and End-Term Targets (2035).

6.10

Investment Targets MEL

Investment targets track financial mobilization and leverage, ensuring diversified funding (grants, carbon revenues, PPPs) meets priority programme needs. in terms of reporting, the National Treasury tagging and KRA 5 steering committees will verify disbursements and impacts.

Data sources will integrate KRA 3 MRV for impact verification, with annual pipeline reviews by the National Blue Investment Steering Committee to enable adaptive matchmaking between projects and financiers. This dual-matrix approach will strengthen investor confidence and accelerate BCE-NDC delivery and other BCE impacts. The Investment Targets Outcome Matrix (Annex 4) monitors financing instruments and their associated KPIs. It evaluates achievements relative to 2025 baselines, including Mid-Term Targets (2030) and End-Term Targets (2035).



Chapter 7

Sustainability of BCE Initiatives

7.1

Long-term sustainability measures

The sustainability of the Kenya Blue Carbon Ecosystem NDC Implementation and Investment Plan will depend on the extent to which its priorities, financing arrangements, institutional systems and community delivery mechanisms are embedded within existing national and county governance structures and sustained through long-term stewardship. Sustainability under this Plan is therefore understood as the ability to maintain climate, biodiversity and livelihood outcomes beyond initial project cycles through durable institutions, predictable financing, community ownership, ecological integrity and adaptive learning.

7.2

Institutional Sustainability

Institutional sustainability will be achieved by anchoring implementation of the Plan within existing national, county and community systems rather than through parallel structures. The responsible ministries (MiBEMA, MECC&F), departments, agencies (NEMA, KFS, KWS, KMFRI, KeFS), county governments and community institutions (CFAs, BMUs and CBOs), shall integrate BCE priorities into their mandates, plans, budgets, coordination arrangements and performance frameworks. National leadership will provide policy direction, standards, oversight and reporting linkages, while county governments will operationalize implementation through local planning, budgeting, enforcement and service delivery systems. Community institutions, including CFAs, BMUs, CBOs and other legally recognized local structures, will play a central role in stewardship, monitoring and implementation.

To strengthen continuity, the Plan will promote formalized coordination mechanisms, inter-institutional collaboration and sustained capacity development at all levels. Technical knowledge, implementation tools and monitoring systems will be institutionalized within public and community structures to reduce dependence on short-term projects or external technical assistance. Sustainability will further be reinforced through alignment with relevant legal, policy and regulatory frameworks governing climate action, biodiversity conservation, blue economy development, safeguards and benefit sharing.

7.3

Financial Sustainability

Financial sustainability is essential to ensure that Kenya's Blue Carbon Ecosystem actions continue beyond project cycles and short-term donor funding. This Plan promotes a diversified financing approach that combines public budget allocations, county climate finance, carbon revenues, Payment for Ecosystem Services, blended finance, public-private partnerships and private sector investment. It further emphasizes transparent and equitable benefit sharing mechanisms to maintain community incentives and reinvest part of the returns into long-term ecosystem management. By linking blue carbon finance with nature-based enterprises, ecotourism, value-added products and innovation, the Plan seeks to build a durable financing base that supports restoration, monitoring, governance and community resilience through 2035 and beyond.

7.4

Ecological Sustainability

Ecological sustainability is the foundation for maintaining the climate, biodiversity, coastal protection and livelihood benefits provided by Kenya's mangroves and seagrass ecosystems. The Plan promotes adaptive management based on regular monitoring, learning and adjustment of restoration and conservation approaches to respond to ecological change, climate risks and emerging pressures. It prioritizes climate-resilient restoration, protection of critical habitats, biodiversity conservation, ecosystem-based adaptation and reduction of land- and sea-based drivers of degradation. Sustaining ecological integrity will require science-based decision-making, long-term ecosystem health monitoring, community stewardship and integration of climate risk assessments into all BCE conservation and restoration interventions.

7.5

Community Sustainability

Community sustainability recognizes that the long-term success of Kenya's BCE-NDC Implementation and Investment Plan depends on the continued leadership, participation and benefit of coastal communities. BMUs, CFAs, CBOs, women, youth, persons with disabilities and local resource users are central to restoration, protection, monitoring, compliance and knowledge generation. The Plan therefore prioritizes inclusive governance, social safeguards respect for indigenous and local knowledge, conflict-resolution mechanisms and equitable benefit sharing. It also supports livelihood diversification through BCE-linked nature-based enterprises, sustainable fisheries, mariculture, ecotourism and circular economy opportunities. Continuous education, awareness and capacity building will strengthen local ownership and ensure that community stewardship remains viable, valued and intergenerational.

7.6

Forward-Looking Priorities

Looking beyond the two NDC cycles, Kenya's priorities centre on scaling BCE restoration to the landscape level, fully operationalizing MRV and registry systems, expanding community-based climate action, strengthening blue economy value chains and mobilizing large-scale blended finance. These forward-looking priorities position Kenya to become a regional and global leader in blue carbon, climate resilience and sustainable coastal development.

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Annexes

Annex 1

Strategies, Key Actions, Outcomes and Impacts for Delivering the Key Result Areas

Strategic Pillar	Key Actions	Expected Outcomes	Impacts
KRA 1 – Climate-resilient BCE Conservation, Management and Restoration			
1.1 Halting degradation and decline of BCEs	• Strengthening law enforcement and compliance mechanisms to address pollution, illegal logging, encroachment and unsustainable harvesting in mangrove areas. • Strengthening evidence-based, ecosystem-approach conservation, management and restoration of Blue Carbon Ecosystems (BCEs), including community-led initiatives. • Mapping, zoning and implementing BCE protection programmes. • Integrating mangroves explicitly into national and sub-national REDD+ strategies, reference levels and safeguard information systems. • Building capacity of community institutions, enforcement agencies and county governments to implement REDD+ aligned mangrove protection measures. • Increasing area of seagrass under effective protection or other Effective Area-Based Conservation Measures (OECMs).	• Rate of mangrove degradation and loss reduced by at least 10% over the implementation period. • Increased community participation and accountability in mangrove protection. • Increased community participation and accountability in mangrove protection. • Expanded seagrass ecosystems under effective protection and OECMs, delivering stronger biodiversity conservation, enhanced blue carbon storage, and improved community livelihood.	• Stabilized and recovering BCE cover, improving long-term carbon sequestration potential. • Reduced emissions from avoided degradation and deforestation. • Strengthened ecological integrity and resilience of coastal ecosystems. • Enhanced community stewardship leading to sustained protection outcomes.

Strategic Pillar	Key Actions	Expected Outcomes	Impacts
1.2 Climate-smart BCE restoration	• Enhancing integration of BCE restoration priorities into county plans (CIDPs, ADPs, CCAPs) through formal planning and review processes. • Applying appropriate restoration and recovery approaches, based on site-level assessment – e.g. Assisted Natural Regeneration (ANR), hydrological connectivity and sediment dynamics, species-site matching and climate-informed restoration design – consistent with global best practice for cost-effective and durable restoration. • Strengthening community participation in restoration implementation and monitoring, including training in planting, site maintenance and basic ecological monitoring, in line with IUCN nature-based solutions standards on inclusive governance and local stewardship. • Establishing or strengthening county level coordination mechanisms (e.g. climate change units, environment committees, mangrove committee, interdepartmental Technical Working Groups) to oversee BCE restoration planning, implementation and reporting. • Promoting catchment and riverine conservation and restoration. • Implementing large-scale BCE restoration and recovery programmes.	• Improved coherence and consistency of BCE restoration implementation across counties. • Increased and more predictable public financing for BCE restoration and management. • Stronger vertical alignment between county actions and national NDC, climate and biodiversity commitments. • Enhanced capacity of county governments to plan, finance and deliver BCE restoration at scale. • Restoration interventions that are ecologically appropriate, cost-effective and aligned with international best practice. • Reduced restoration failure rates through prioritization of natural regeneration and hydrological restoration. • Improved recovery and functionality of degraded mangrove and seagrass ecosystems. • Strengthened community capacity to implement, maintain and monitor BCE restoration activities. • Measurable improvements in BCE condition, supporting carbon sequestration, biodiversity conservation and sustained ecosystem services	• Scaled-up BCE restoration across all coastal counties. • Stronger institutionalization of BCE priorities in public budgets. • Improved long-term sustainability of BCE investments. • Greater resilience of county economies and infrastructure through nature-based planning. • Increased carbon sequestration and avoided emissions. • Enhanced biodiversity and ecosystem services (fisheries, shoreline protection, water quality). • Lower long-term restoration costs due to improved success rates. • Stronger community-led stewardship ensuring permanence of restored sites.

Strategic Pillar	Key Actions	Expected Outcomes	Impacts
1.3 Climate resilient BCEs conservation	• Identifying and mapping climate vulnerable BCE zones across all coastal counties by 2030, using climate risk assessments, historical degradation trends and exposure to sea-level rise, flooding, erosion and extreme weather, and prioritizing these zones for targeted restoration and protection interventions. • Integrating Blue Carbon Ecosystems into county disaster risk reduction (DRR) and climate risk management frameworks, ensuring that mangroves and seagrasses are explicitly recognized as natural infrastructure for coastal protection and are incorporated into all county emergency preparedness and response plans by 2028. • Restoring and maintaining ecosystem processes critical for long-term stability, including sediment flows, tidal connectivity and hydrological function, in at least ten high priority sites by 2030, with interventions designed to enhance resilience under future climate scenarios. • Deploying nature-based coastal protection systems with community stewardship. • Strengthening adaptive management and monitoring frameworks for BCEs.	• Climate vulnerability maps and priority BCE zones completed for all coastal counties, identifying areas at highest risk from sea-level rise, erosion, flooding and extreme weather. • BCEs formally integrated into county DRR and emergency response frameworks, with mangroves and seagrasses recognized as natural infrastructure for coastal protection. • Restoration of sediment flows, tidal connectivity and hydrological processes completed in at least ten high priority sites, with functioning natural processes documented.	• Reduced climate-related losses and damages in coastal communities. • Strengthened natural coastal protection against storms, flooding and erosion. • Improved long-term stability and resilience of BCEs under future climate scenarios. • Enhanced adaptive capacity of counties and communities.

Strategic Pillar	Key Actions	Expected Outcomes	Impacts
KRA 2 – Community Stewardships, Inclusive Governance and Climate-resilient Coastal Livelihoods			
2.1 Community capacity development and stewardship systems	• Strengthening and operationalizing existing co-management arrangements with CFAs, BMUs and other recognized community institutions across coastal counties, ensuring effective implementation, compliance and performance monitoring in at least 75% of coastal communities by 2035. • Building institutional and leadership capacity for inclusive participation, with a specific focus on youth, women and persons living with disability and marginalized groups to achieve a minimum of 40% representation in BCE governance, management and decision-making structures. • Establishing transparent systems to ensure BCE-linked enterprises are fairly distributed. • Establishing a locally managed benefit fund that will be reinvested into community support programmes (e.g. adaptation projects).	• Stronger community ownership and stewardship, resulting in reduced illegal harvesting, improved compliance and better protection of mangroves and seagrasses. • More resilient and diversified local economies, with BCE-linked enterprises providing sustainable income and reducing pressure on ecosystems. • Greater equity and inclusion, with women and youth meaningfully influencing decisions and benefiting from BCE-related opportunities. • Higher integrity and permanence of BCE restoration and carbon outcomes, supported by transparent benefit sharing and accountable local governance.	• Improved ecosystem health and reduced degradation rates. • Increased community income and adaptive capacity. • Long-term permanence of BCE carbon stocks through accountable local governance. • Enhanced social cohesion and reduced conflict over resource access.
2.2 Climate-resilient blue livelihoods and circular economy diversification	• Establishing a BCE livelihood programme with transparent governance, accountability and benefit sharing rules. • Developing standard operating procedures for enterprise selection, investment approval and performance monitoring. • Promoting women and youth leadership through quotas, targeted training and mentorship and access to finance. • Introducing digital record keeping, traceability and performance dashboards for enterprises and investors. • Facilitating coordination between communities, counties, financiers and national institutions.	• Improved trust, equity and efficiency in BCE-linked investments. • Stronger participation of women, youth and persons with disability in blue economy value chains. • Increased investor confidence and deal flow.	• More equitable distribution of BCE-related benefits. • Increased capital inflows into community enterprises. • Stronger governance systems that reinforce transparency, accountability and long-term sustainability.

Strategic Pillar	Key Actions	Expected Outcomes	Impacts
2.3 Blue value chain infrastructure, market access and enterprise finance and risk management	• Identifying and prioritizing high potential BCE-linked enterprises using ecological suitability, market demand and social inclusion criteria. • Conducting market, value chain and feasibility assessments, including demand forecasting and price sensitivity analysis. • Supporting enterprise incubation and acceleration, including business planning, technical training, access to inputs and mentorship. • Supporting and scaling sustainable livelihood alternatives linked to BCE conservation—such as eco-tourism, beekeeping, mariculture and climate-smart aquaculture—with a target of at least 50 new or expanded community-based enterprises established by 2035. • Facilitating long-term market access and offtake agreements with buyers and via development of aggregation models (community group entities) to improve economies of scale and equitable market access bargaining power. • Introducing environmental and social performance standards to ensure enterprises reinforce BCE conservation objectives. • Establishing or upgrading processing, storage and cold chain facilities for BCE-linked products. • Improving quality standards, packaging and branding to meet domestic and export requirements. • Streamlining licensing, permitting and compliance processes at county level. • Improving transport and logistics linkages between production sites and markets. • Promoting public–private partnerships for infrastructure development. • Developing value chain infrastructure. • Establishing enterprise financing mechanisms and risk management tools.	• Increased household incomes from conservation-compatible livelihoods. • Reduced pressure on BCEs through diversified and sustainable economic activities. • Improved resilience of coastal economies.	• Higher economic returns from BCE-compatible value chains. • Reduced illegal harvesting and destructive practices due to viable alternatives. • Stronger community incentives for long-term BCE protection and restoration.
		• Increased competitiveness and profitability of BCE-linked products. • Higher and more stable incomes for producers and enterprises. • Stronger integration of coastal economies into regional and global markets.	• Reduced post-harvest losses and higher product quality. • Expanded market access and export readiness. • Stronger coastal economic growth anchored in sustainable BCE value chains.

Strategic Pillar	Key Actions	Expected Outcomes	Impacts
KRA 3 – BCE Science and Monitoring Systems			
3.1 BCE assessment, MRV and interoperable data systems	• Conducting large scale, standardized mapping of mangroves and seagrasses using remote sensing, field validation and harmonized classification protocols. • Developing and operationalizing digital data platforms to support real-time data sharing, analysis and reporting across national and county institutions. • Building capacity for MRV implementation at national, county and community levels. • Monitoring land–sea-based drivers and impacts of BCE degradation and prioritizing hotspot areas • Deploying digital MRV systems including climate, biodiversity, socioeconomic and land–sea interaction indicators. • Creating a transparent interoperable data infrastructure applying Findable, Accessible, Interoperable and Reusable (FAIR) principles. • Developing and standardizing IPCC-aligned MRV protocols for mangroves and seagrasses, covering activity data, emission factors, disaster risk management uncertainty and Quality Assurance and Control (QA/QC) procedures. • Developing and operationalizing integrated digital MRV platforms for mangroves and seagrasses, incorporating remote sensing, field surveys, community monitoring, analytics dashboards and reporting functions. • Streamlining data flows from CFAs, BMUs, county governments and national agencies through standardized digital tools and APIs. • Integrating BCE MRV platforms with national climate data systems, registries and NDC tracking tools. • Establishing and implementing data governance, access and quality assurance protocols, including version control and audit trails. • Training users at the national, county and community levels on digital data entry and validation.	• Improved accuracy and transparency of BCE-related climate reporting. • Stronger evidence base for planning, investment and policy decisions. • Enhanced national and county capacity to track BCE performance and climate contributions over time. • Fully operational digital MRV platforms. • Harmonized national BCE datasets. • Enhanced conservation and sustainable management of mangrove and seagrass ecosystems due to improved monitoring and reporting systems. • Increased capacity of counties, community institutions, conservation partners and the private sector to contribute and use high quality digital data. • Greater transparency and efficiency in MRV, enabling timely and cost-effective climate action. • Stronger evidence base for planning, finance mobilization and policy development.	• Increased national readiness for high integrity climate finance. • Reduced uncertainty in national GHG reporting. • Better targeted restoration and protection investments, improving ecological and socioeconomic returns. • Improved ecological condition of mangrove and seagrass ecosystems due to better targeted protection and restoration. • Increased national climate ambition and credibility, supported by high integrity MRV and transparent reporting. • Greater access to climate finance, including Article 6 and results-based payments, due to improved data quality and verification readiness. • Strengthened resilience of coastal communities, supported by reliable data for planning, risk reduction and investment. • Long-term permanence of BCE carbon stocks, supported by consistent monitoring and governance. • More effective national and county climate policies, grounded in accurate, interoperable BCE data. • Enhanced trust and accountability among communities, counties, and national institutions.

Strategic Pillar	Key Actions	Expected Outcomes	Impacts
3.2 BCE science, indigenous knowledge, technology and innovation	• Strengthening BCE research and land–sea interaction studies to inform adaptive management. • Leveraging on emerging technologies such as remote sensing (satellite and drone data capture, IoT sensors), cloud computing (artificial intelligence (AI), digital twins) to conduct robust BCE assessment and monitoring. • Developing innovation hubs for BCE science and technology. • Supporting citizen science and community-based monitoring. • Establishing BCE research partnerships with universities and research institutions. • Participatory mapping of customary management systems – Conduct structured, community-led mapping exercises in all coastal counties to identify traditional use areas, seasonal resource patterns and culturally significant sites relevant to BCE management. • Systematic documentation of indigenous and local ecological knowledge – Compile and validate locally held knowledge on species selection, planting techniques, hydrological management, harvesting practices and ecosystem indicators through interviews, focus groups and joint technical reviews. • Codesigning of restoration and management interventions – Integrate documented traditional practices into the design of restoration, assisted natural regeneration and protection measures, ensuring alignment with ecological assessments and county management plans. • Capacity building and intergenerational knowledge transfer – Facilitate training, mentorship and learning exchanges that enable elders, women and youth to apply traditional knowledge within formal BCE governance, restoration and monitoring activities. • Institutional integration and knowledge sharing – Embed indigenous and traditional ecological knowledge into county BCE guidelines, JCMAs, PFMPs, BMU plans and monitoring frameworks, and establish platforms for cross-county learning and exchange.	• Improved alignment of BCE restoration and management interventions with local ecological conditions and customary practices. • Increased community ownership, legitimacy and effectiveness of BCE actions. • Enhanced capacity of women and youth to participate meaningfully in BCE governance and stewardship. • Strengthened integration of indigenous and traditional ecological knowledge into formal planning, monitoring and adaptive management processes. • More effective and context-appropriate restoration outcomes, contributing to sustained BCE health and performance over time.	• More culturally grounded and socially accepted restoration outcomes. • Higher restoration success rates due to context-appropriate practices. • Strengthened social cohesion and intergenerational stewardship. • Long-term permanence of BCE restoration and carbon benefits.

Strategic Pillar	Key Actions	Expected Outcomes	Impacts
3.3 BCE integration into the NDC reporting and other national frameworks	• Establishing and operationalizing a BCE Technical Working Group (TWG) under the national GHG inventory system to coordinate data compilation, review and submission. • Integrating BCE data into the National GHG Inventory, KNCR and ETF reporting frameworks using high integrity IPCC-aligned methodologies. • Building capacity for MRV implementation at county and community levels. • Developing standardized reporting templates and guidance notes for county-level, private sector and community-level data submission. • Conducting periodic inventory improvement plans focusing on BCE data quality and completeness.	• Improved accuracy, transparency and credibility of Kenya's climate reporting. • Readiness for results-based payments and Article 6 participation.	• Increased eligibility for international carbon markets and climate finance. • Strengthened national compliance with Paris Agreement transparency requirements. • Higher confidence in Kenya's reported mitigation contributions.
3.4 Blue carbon information and knowledge management	• Integrating blue carbon information into existing National Information Systems. • Establishing BCE knowledge sharing and open data platforms. • Developing decision support tools for planners and policymakers. • Producing BCE knowledge products, communication materials and data visualizations.	• Blue carbon information integrated into national climate, environment and blue economy information systems. • Accessible, standardized and interoperable BCE datasets that support planning, monitoring and reporting at national and county levels. • Improved decisionmaking capacity. • Strengthened transparency and accountability. • Enhanced national readiness for NDC tracking, LULUCF reporting and Article 6 MRV.	• More effective and better targeted BCE investments. • Higher integrity of BCE restoration and conservation programmes. • Reduced duplication and fragmentation of BCE initiatives. • Increased public and community engagement. • Stronger climateresilience outcomes. • Improved ability to mobilize climate and nature finance.

Strategic Pillar	Key Actions	Expected Outcomes	Impacts
KRA 4 – Integrated Governance, Policy Coherence Institutional Strengthening and Safeguards			
4.1 BCE coordination and inclusive governance	• Operationalizing the National Biodiversity Coordination Mechanism (NBCM). • Strengthening governance structures and cross-sector land–sea coordination. • Establishing county-level BCE coordination units or focal points. • Formalizing co-management agreements. • Developing standard operating procedures (SOPs). • Convening regular multi-stakeholder coordination forums. • Integrating BCE coordination into existing inter-governmental relations mechanisms and climate governance platforms.	• Improved coherence, accountability and efficiency in BCE management. • Stronger alignment between national, county and community actions. • Clear institutional roles and predictable coordination processes.	• More effective and sustained BCE conservation and restoration across all governance levels. • Reduced duplication, conflict and fragmentation in BCE decision-making. • Stronger national–county collaboration supporting long-term NDC delivery.
4.2 Policy and legal regulatory frameworks	• Reviewing and harmonizing policy, legal and regulatory frameworks. • Reviewing and updating BCE management strategic documents. • Harmonizing BCE-related provisions across forestry, fisheries, land-use, climate and marine policies • Streamlining permitting, licensing and regulatory requirements. • Integrating BCE priorities into county and national development plans. • Developing legal guidance notes and compliance checklists.	• Reduced transaction costs and regulatory bottlenecks. • Improved compliance and enforcement of BCE-related laws. • More predictable and enabling environment for BCE investment and implementation.	• Increased investment in BCE restoration and protection due to clearer, harmonized rules. • Stronger legal foundations for long-term BCE governance and carbon integrity. • Enhanced national readiness for climate finance and Article 6 participation.
4.3 Capacity development and safeguards	• Strengthening community rights, safeguards systems and co-management. • Developing and implementing equitable benefit sharing frameworks. • Building capacity of community institutions. • Promoting gender and youth inclusion. • Establishing grievance redress and dispute resolution mechanisms.	• Increased community ownership and legitimacy of BCE actions. • Reduced conflicts and improved compliance. • More equitable distribution of BCE-related benefits.	• Stronger, more durable community stewardship of BCEs. • Improved social cohesion and reduced resource-use conflicts. • Long-term permanence of BCE restoration and carbon outcomes through inclusive governance.

Strategic Pillar	Key Actions	Expected Outcomes	Impacts
4.4 Blue Carbon Ecosystems collaboration and partnerships	Establishing participatory BCE knowledge platforms. Documenting and disseminating best practices, lessons learned and case studies. Developing national knowledge repositories and learning portals. Fostering partnerships and collaborations. Organizing regular learning events, policy dialogues and practitioner exchanges.	Improved evidence-based decision-making. Adaptive governance informed by continuous learning. Better quality and consistency of BCE management practices.	Stronger national capacity to innovate and scale BCE solutions. Sustained improvement in BCE governance through institutionalized learning. More resilient BCE management systems able to respond to emerging climate and ecological risks.
KRA 5 – Sustainable Finance, Nature Markets and Long-term Investment Architecture			
5.1 Blue finance policy, taxonomy and regulatory frameworks	• Developing and operationalizing a national blue finance taxonomy (or subcommittee under an existing structure) to oversee BCE investment prioritization and sequencing. • Developing frameworks for investment screening criteria and sequencing rules. • Creating a national BCE investment pipeline management system. • Aligning BCE investment governance with Programme Based Budgeting, County Climate Change Funds and public investment guidelines. • Establishing fiduciary, environmental and social safeguard requirements applicable to all BCE investments. • Developing performance monitoring and reporting frameworks linked to MRV, NDC reporting and results-based finance triggers.	• Higher quality and bankability of BCE investments. • Faster mobilization of climate and nature finance. • Reduced fragmentation across counties and funding sources.	• Enhanced national coordination and oversight. • Improved transparency and accountability. • Increased investor confidence. • Accelerated climate and nature finance flows. • Strengthened compliance with national and international standards.
5.2 Innovative blue finance products and nature markets	• Scaling and replicating proven blue carbon models. • Developing nature markets and hybrid credit mechanisms. • Advancing Article 6 readiness and bilateral cooperation. • Packaging BCEs as flagship nature-based solutions portfolio. • Integrating project MRV with the National Carbon Registry.	• Increased and diversified nature market revenues. • Stronger international positioning of Kenya's blue carbon portfolio. • Sustained financing for BCE stewardship.	• Greater access to international markets. • Increased carbon and biodiversity revenues. • Improved conservation outcomes. • Enhanced credibility and integrity of blue carbon projects. • Long-term sustainability of coastal ecosystems.

Strategic Pillar	Key Actions	Expected Outcomes	Impacts
5.3 Innovative blue finance products and nature markets	• Establishing the blue and nature finance facility/ blue and nature investment facility. • Establishing de-risking instruments. • Mobilizng climate and blended finance. • Developing the Kenya blue bond framework. • Structuring PPPs for natural infrastructure, MRV platforms, restoration services, ecotourism and value chain facilities. • Introducing tax incentives and fiscal de-risking measures. • integrating insurance and risk transfer products.	• Blue and nature finance facility / blue and nature investment facility. • Blue and Nature Investment Mobilization. • Project • Preparation Facility for BCE investments	• Leveraged private and public capital. • Expanded investment in coastal restoration and infrastructure; • Reduced financial risks; • Stimulated innovation and job creation; • Improved resilience of coastal communities
5.4 Investment readiness, pipeline development and transaction support for BCE initiatives	• Developing a pipeline of bankable BCE projects and enterprises. • Developing investor-grade investment materials (pitch books, teasers and data rooms) for priority initiatives. • Establishing a blue investment facilitation programme. • Standardizing project templates (concept notes, financial models, term sheets, MRV plans). • Building capacity of counties and community institutions in project development, procurement and financial management. • Facilitating structured investor outreach and deal-making and support submissions to climate funds and DFIs.	• Faster deal origination. • Improved absorption of climate finance. • Reduced transaction costs and higher funding success rates.	• Accelerated project development. • Increased number of bankable projects. • Enhanced local capacity. • Improved access to diverse funding sources. • Strengthened project sustainability and impact.
5.5 Community-centred climate finance, risk sharing and fiscal incentives	• Developing transparent carbon and nature revenue sharing frameworks with clear allocation rules, audits and grievance mechanisms. • Establishing community-centred climate finance and risk transfer systems. • Linking local enterprises and producer groups to benefit sharing and performance-based incentive mechanisms. • Piloting Payments for Ecosystem Services (PES) tied to verified stewardship outcomes. • Implementing digital transparency systems tracking revenues, distributions and community expenditures. • Building community capacity in financial management, governance and conflict resolution.	• Increased community ownership and legitimacy. • Reduced conflict and leakage risks. • Stronger incentives for long-term BCE protection and restoration.	• Improved social equity and inclusion • Enhanced local livelihoods and resilience. • Strengthened community stewardship. • Reduced risk of disputes and mismanagement. • Long-term protection of Blue Carbon Ecosystems and associated systems.

Annex 2

KRA Outcome Assessment Matrix

This matrix assesses outcomes for each Key Result Area (KRA) and its associated Key Performance Indicators (KPIs), including relevant Programme Areas and Priority Actions. It tracks progress against 2025 baselines, with Mid-Term Targets (2030) and End-Term Targets (2035).

KRA	Strategic Pillar	Priority Action	Outcome KPI	Unit	Baseline 2025	2030 Target	2035 Target
KRA 1: Climateresilient BCE Conservation and Restoration	1.1 Halting degradation	BCE protection and enforcement	Reduction in degraded BCE areas	% reduction	Fragmented systems	15%	30%
		Pollution control and land–sea pressure reduction	Reduction in land–sea based pressures	% reduction	No integrated system	10%	25%
	1.2 Climatesmart restoration	Largescale mangrove restoration	Mangrove restoration	Hectares	Limited	15,000 ha	30,000 ha
		Seagrass recovery	Seagrass restoration	Hectares	Limited	1,000 ha	2,000 ha
	1.3Climateresilient conservation	Adaptive management	BCE areas under climateresilient management	% coverage	Limited	50%	100%
		Erosion and sediment monitoring	Counties with operational systems	Number	None	3 counties	6 counties
KRA 2: Community Stewardship and Climateresilient Coastal Livelihoods	2.1 Community capacity	Strengthen stewardship systems	Functional stewardship groups	% functional	Weak systems	50%	100%
		Training and LLCA	Community members trained	% trained	Low capacity	50%	100%
		Youth, women and PWD inclusion	Inclusion rate	%	Limited	30%	50%
	2.2 Blue livelihoods	Scale BCElinked enterprises	Blue enterprises supported	Number	Limited	5,000 SMEs	15,000 SMEs
		PES livelihood schemes	PES schemes operational	Number	None	50	120
	2.3 Value chain infrastructure	Market access and infrastructure	Value chain investments	Number	Weak	25	60
		Digital SME platforms	Digital platforms operational	Number	None	1 national platform	Scaled to 6 counties
KRA 3: BCE Science, Data and Monitoring Systems	3.1 MRV systems	Digital MRV deployment	MRV coverage	% coverage	Fragmented	70%	100%
		QA/QC protocols	QA/QC system operational	Status	None	Operational	Institutionalized
		FAIR data principles	FAIR compliance	% compliance	None	50%	100%
	3.2 Science and innovation	Research and technology	Research/innovation initiatives	Number	Limited	50	120
		Citizen science	Citizen science groups	Number	Few	20	50
	3.3 NDC integration	BCE indicators in NDC/BTR	BCE integration	% integration	Partial	Full integration	Fully operational architecture
	3.4 Knowledge systems	BCE information systems	BCE knowledge platform	Status	Limited	Operational	Realtime system

KRA	Strategic Pillar	Priority Action	Outcome KPI	Unit	Baseline 2025	2030 Target	2035 Target
KRA 4: Integrated Governance, Policy Coherence, Institutional Strengthening and Safeguards	4.1 Governance	Coordination platforms	Coordination platforms	Number	Fragmented	National + 6 counties	Fully integrated
	4.2 Policy frameworks	Harmonization	Policy harmonization	% harmonized	Fragmented	70%	100%
	4.3 Safeguards	FPIC and safeguards	Safeguards institutions	Number	Few	100 institutions	Full integration
	4.4 Partnerships	Collaboration	Partnerships	Number	Weak	50	120
		Regional cooperation	Regional BCE collaborations	Number	Limited	5	15
KRA 5: Sustainable Finance and Longterm Investment Framework	5.1 Blue finance policy	Taxonomy	Blue finance taxonomy	Status	None	Established	Fully operational
	5.2 Finance facilities	BNFF/BNIF	Finance facilities	Number	Nascent	4	6 counties
	5.3 Nature markets	Innovative products	Blue finance products	Number	Limited	5	Mature products scaled
		Article 6 readiness	Article 6 cooperation agreements	Number	None	2	5
		Hybrid credit pilots	Number of pilots	Number	None	3	10
	5.4 Investment readiness	Investment mobilization	USD mobilized	USD	Minimal	USD 250M	USD 616M
		Project Preparation Facility	PPF operational status	Status	None	PPF established	PPF scaled
	5.5 Community finance	Risk sharing	Community finance schemes	Number	Minimal	3	6

Annex 3

Investment Readiness Outcome Matrix

This matrix monitors pipeline stages for bankable investment projects. It evaluates achievements relative to 2025 baselines, including Mid-Term Targets (2030) and End-Term Targets (2035).

Pipeline Stage	Monitorable Element	KPI	Baseline 2025	2030 Target	2035 Target
Concept and Scoping	Concepts identified	Number of concepts	~10	50	120
Feasibility	Validated baselines/ ESIAs	% validated	<20%	70%	95%
Structuring	Structured proposals	Number	Minimal	30	80
Validation	Projects validated	Number	Few pilots	25	60
Pipeline readiness	Pitchready projects	USD value	None	Aligned to USD 250M	Aligned to USD 616M

Annex 4

Investment Targets Outcome Matrix

This matrix monitors financing instruments and their associated KPIs. It evaluates achievements relative to 2025 baselines, including Mid-Term Targets (2030) and End-Term Targets (2035).

Financing Instrument	Strategic Link (Table 3.1)	Monitorable Element	KPI	Baseline 2025	2030 Target	2035 Target
Blue finance taxonomy	5.1 Policy and taxonomy	Policy and taxonomy systems	Operational status	None	Established	Fully operational
Finance facilities	5.2 BNFF/BNIF	Blended finance mechanisms	Number operational	Nascent	4	6 counties
Blue finance products	5.3 Nature markets	Financial innovation	Number available	Limited	5	Mature products scaled
Article 6 cooperation	5.3 Nature markets	Bilateral cooperation agreements	Number	None	2	5
Hybrid credits	5.3 Nature markets	Hybrid credit pilots	Number	None	3	10
Investment pipeline	5.4 Investment readiness	BCE investment mobilization	USD mobilized	Minimal	USD 250M	USD 616M
Project Preparation Facility	5.4 Investment readiness	PPF operational status	Status	None	PPF established	PPF scaled
Community finance schemes	5.5 Community finance	Risk sharing and incentives	Number operational	Minimal	3	6

Annex 5

County-Specific BCE Implementation And Investment Profiles

This matrix monitors financing instruments and their associated KPIs. It evaluates achievements relative to 2025 baselines, including Mid-Term Targets (2030) and End-Term Targets (2035).

Annex 5.1

Mombasa

Kenya's coastal metropolis — the national hub for blue economy logistics, fisheries and marine governance.

Mombasa is the country's maritime gateway, hosting major ports, industrial fisheries, coral reefs and urban mangrove systems. It is the centre of Kenya's blue economy industrialization.

Priority Investment Area	Description	Expected Outcomes	Cost (USD M)
KRA 1: Climate-resilient BCE Conservation, Management and Restoration			**21.2**
Mangrove Restoration	Kibarani ecological restoration	Restored mangroves	15.3
Coral Reef Rehabilitation	Coral restoration	Improved biodiversity	5.9
KRA 2: Community Stewardship and Climate-resilient Coastal Livelihoods			**53.3**
Mariculture Value Chain	Fish cages	Diversified incomes	8.9
Deep Sea Fisheries	Liwatoni deep sea port	Reduced inshore pressure	23.7
Cold Chain Infrastructure	Processing plants	Reduced losses	10.4
Ecotourism	Eco-parks	Tourism revenue	6.7
Apiculture	Beekeeping	Increased incomes	3.6
KRA 3: BCE Science and Monitoring Systems			**4.3**
GIS Labs	Smart city GIS hub	Spatial intelligence	4.3
KRA 4: Governance, Policy Coherence, Institutional Strengthening and Safeguards			**3.0**

Priority Investment Area	Description	Expected Outcomes	Cost (USD M)
BMU Modernization	Co-management	Better governance	3
KRA 5: Sustainable Finance and Investment Framework			**2.4**
Climate Finance Integration	CCCF alignment	Predictable finance	2.4
		Grand Total	**84.2**

Annex 5.2
Kwale

Kenya's southern blue carbon frontier — home to the country's most productive mangrove and seagrass systems.

Kwale hosts the Vanga–Shimoni mangrove complex, coral reefs and some of Kenya's richest seagrass meadows. It is a national leader in community-driven mariculture and blue carbon enterprises.

Priority Investment Area	Description	Expected Outcomes	Cost (USD M)
KRA 1: Climate-resilient BCE Conservation, Management and Restoration			**39.6**
Mangrove Restoration	Vanga–Shimoni stabilization	Restored mangroves	13.2
Mangrove Enforcement	Patrol boats	Reduced illegal harvesting	6.6
Seagrass Restoration	Nurseries	Stabilized meadows	6.6
Coral Reef Rehabilitation	Coral restoration	Improved biodiversity	6.6
Nature-based Coastal Protection	Mangrove belts	Storm-surge protection	6.6
KRA 2: Community Stewardship and Climate-resilient Coastal Livelihoods			**42**
Mariculture Value Chain	Seaweed, crab fattening	Diversified incomes	10.8
Deep Sea Fisheries	Offshore gear	Reduced inshore pressure	8.6
Cold Chain Infrastructure	Ice plants	Reduced losses	9.7
Ecotourism	Eco-camps	Tourism revenue	7.6
Apiculture	Beekeeping	Increased incomes	5.3
KRA 3: BCE Science and Monitoring Systems			**10.6**
Community Monitoring	BMU/CFA monitoring	Improved data	4.3
GIS Labs	Digitization	Spatial intelligence	6.3
KRA 4: Governance, Policy Coherence, Institutional Strengthening and Safeguards			**13.3**
Gazettement and Mapping	Mapping BCEs	Legal protection	4.4
BMU Modernization	Co-management	Better governance	4.4
ICZM	Coastal zoning	Reduced degradation	4.4
KRA 5: Sustainable Finance and Investment Framework			**6.7**
Climate Finance Integration	CCCF alignment	Predictable finance	3.5
Enterprise Financing	Cooperative financing	Stronger enterprises	3.2
		Grand Total	**112.2**

Annex 5.3
Kilifi

Kilifi hosts the Sabaki Estuary, extensive mangrove systems, coral reefs and Kenya's most dynamic coastal tourism and fisheries economy. It is a BCE hotspot with high restoration potential.

Priority Investment Area	Description	Expected Outcomes	Cost (USD M)
KRA 1: Climate-resilient BCE Conservation, Management and Restoration			**44.6**
Mangrove Restoration and Hydrological Rehabilitation	Sabaki Estuary rehabilitation	Restored mangroves	14.9
Mangrove Enforcement and Surveillance	Patrol boats, guards	Reduced illegal harvesting	7.4
Seagrass Restoration	Mapping, nurseries	Stabilized meadows	7.4
Coral Reef Rehabilitation	Coral restoration	Improved biodiversity	7.4
Nature-based Coastal Protection	Dune stabilization	Storm-surge protection	7.4
KRA 2: Community Stewardship and Climate-resilient Coastal Livelihoods			**43.5**
Mariculture Value Chain	Seaweed farming	Diversified incomes	11.1
Deep Sea Fisheries Industrialization	Offshore gear	Reduced inshore pressure	9.3
Cold Chain Infrastructure	Malindi cold chain complex	Reduced losses	10.2
Blue Carbon Ecotourism	Trails, eco-camps	Tourism revenue	8.4
Apiculture	Beekeeping	Increased incomes	4.5
KRA 3: BCE Science and Monitoring Systems			**16.8**
Community Monitoring Networks	BMU/CFA monitoring	Improved data	3.7
GIS Labs and Digital Systems	Marine data repository	Spatial intelligence	5.4
Early Warning Systems	Weather stations	Preparedness	4.5
Catchment – Coastal Monitoring	Sediment monitoring	Better planning	3.2
KRA 4: Governance, Policy Coherence, Institutional Strengthening and Safeguards			**7.6**
Gazettement and Mapping	Mapping BCEs	Legal protection	3.8

ICZM Approach	Coastal zoning	Reduced degradation	3.8
KRA 5: Sustainable Finance and Investment Framework			**10.9**
Climate Finance Integration	CCCF alignment	Predictable finance	3
Enterprise Financing	Cooperative financing	Stronger enterprises	2.8
Catchment – Coastal Linkages	Upstream restoration	Improved function	2.8
Revenue Automation	OSR digitization	Increased revenue	2.3
		Grand Total	**123.5**

Annex 5.4
Tana River

Kenya's great delta — the nation's largest wetland carbon engine and biodiversity corridor.

The Tana Delta is one of Africa's most important wetland complexes, supporting mangroves, floodplains, pastoralist systems and migratory bird routes. Its hydrology determines BCE health across the northern coast.

Priority Investment Area	Description	Expected Outcomes	Cost (USD M)
KRA 1: Climate-resilient BCE Conservation, Management and Restoration			**34.3**
Mangrove Restoration and Hydrological Rehabilitation	Tana Delta wetland restoration	Improved hydrology	22.2
Inland Water Bodies – Mangrove Hydrology	Deltaic reconnection	Reduced salinity stress	12.1
KRA 2: Community Stewardship and Climate-resilient Coastal Livelihoods			**14.8**
Post-harvest and Cold Chain Infrastructure	Ice plants, cold rooms	Reduced losses	9.9
Apiculture and Honey Value Chain	Beekeeping	Increased incomes	4.9
KRA 3: BCE Science and Monitoring Systems			**8.4**
Early Warning and Hydrological Monitoring	Weather stations	Improved preparedness	4.8
Catchment – Coastal Monitoring	River flow and sediment monitoring	Better planning	3.5
KRA 4: Governance, Policy Coherence, Institutional Strengthening and Safeguards			**4.1**
Catchment Governance Strengthening	WRUA strengthening	Improved governance	4.1
KRA 5: Sustainable Finance and Investment Framework			**11.3**
Climate Finance Integration	CCCF capitalization	Predictable finance	3.2
Catchment – Coastal Investment Linkages	Upstream restoration	Improved ecosystem function	3
Revenue Automation Systems	OSR digitization	Increased revenue	2.5
		Grand Total	**72.9**

Annex 5.5
Lamu

Kenya's island archipelago — the nation's largest intact mangrove system and marine biodiversity sanctuary.

Lamu hosts Kenya's most extensive mangrove forests, pristine seagrass meadows, coral reefs and unique island ecosystems. It is the ecological anchor of Kenya's northern blue carbon corridor.

Priority Investment Area	Description	Expected Outcomes	Cost (USD M)
KRA 1: Climate-resilient BCE Conservation, Management and Restoration			**60.5**
Mangrove Restoration	Hydrological reconnection	Restored mangroves	24.3
Mangrove Enforcement	Patrol boats	Reduced illegal harvesting	12.1
Seagrass Restoration	Mapping, nurseries	Stabilized meadows	12.1
Nature-based Coastal Protection	Shoreline buffers	Storm-surge protection	12.1
KRA 2: Community Stewardship and Climate-resilient Coastal Livelihoods			**49.6**
Mariculture Value Chain	Seaweed farming	Diversified incomes	18.1
Cold Chain Infrastructure	Ice plants	Reduced losses	13.6
Ecotourism	Mangrove trails	Tourism revenue	10.6
Apiculture	Beekeeping	Increased incomes	7.4
KRA 3: BCE Science and Monitoring Systems			**31.1**
Community Monitoring	BMU/CFA monitoring	Improved data	6
GIS Labs	LIMS	Spatial intelligence	8.7
Marine Research Programme	Biodiversity monitoring	Research hub	9
Early Warning Systems	Weather stations	Preparedness	7.2
KRA 4: Governance, Policy Coherence, Institutional Strengthening and Safeguards			**18.6**
Gazettement and Mapping	Mapping BCEs	Legal protection	6.2
BMU Modernization	Landing site governance	Better governance	6.2
ICZM	Coastal zoning	Reduced degradation	6.2
KRA 5: Sustainable Finance and Investment Framework			**8.6**
Climate Finance Integration	CCCF alignment	Predictable finance	4.8
Revenue Automation	OSR digitization	Increased revenue	3.8
		Grand Total	**168.3**

Annex 5.6
Taita Taveta

Kenya's mountain-to-coast water tower engine — the ecological heartbeat that feeds the entire coastal BCE system.

Taita Taveta anchors the **ridge-to-reef hydrological system**, supplying freshwater to the Sabaki/Galana basin and the Tana Delta. Its cloud forests, volcanic lakes and rangelands determine the success of downstream mangrove, seagrass and estuarine restoration.

Priority Investment Area	Description	Expected Outcomes	Cost (USD M)
KRA 1: Climate-resilient BCE Conservation, Management and Restoration			**15.0**
Hinterland Conservation and Restoration	Taita Hills water towers restoration, soil conservation, riverbank stabilization	Improved freshwater flows, reduced sedimentation	15.0
KRA 2: Community Stewardship and Climate-resilient Coastal Livelihoods			**22**
Mariculture Value Chain Expansion	Freshwater aquaculture (Chala–Jipe), hatcheries	Diversified incomes	12
Post-harvest and Cold Chain Infrastructure	Solar cooling, fish depots	Reduced losses	6
Apiculture and Honey Value Chain	Beekeeping, processing	Increased incomes	4
KRA 3: BCE Science and Monitoring Systems			**8**
County GIS Labs and Digital Systems	Tsavo–Taita GIS hub	Spatial intelligence	5
Catchment – Coastal Monitoring	Sediment and flow monitoring	Integrated data	3
KRA 4: Governance, Policy Coherence, Institutional Strengthening and Safeguards			**3.5**
Catchment Governance Strengthening	WRUA strengthening	Improved governance	3.5
KRA 5: Sustainable Finance and Investment Framework			**6.5**
County Climate Finance Integration	CCCF alignment	Predictable finance	3
Catchment – Coastal Investment Linkages	Financing upstream restoration	Long-term resilience	3.5
	Grand Total		**55**

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