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Kenya Devolution Programme (KDP)

- Timiza Ugatuzi -

Blue Economy Capacity Needs Assessment

(Kisumu, Siaya, Busia, Homa Bay and Migori Counties)

Final Report

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Acknowledgement Statement

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Glossary

Terminology	Description
Blue Economy	Blue Economy (BE) denotes the sustainable utilization and administration of oceanic resources to foster economic advancement, all the while ensuring the preservation and health of marine ecosystems. This approach encompasses diverse sectors like fisheries, aquaculture, maritime transport, renewable energy, tourism, among others, with a central focus on striking a balance between economic advantages and environmental preservation. In the African context, BE encompasses the utilization of aquatic and marine environments, including oceans, seas, coastlines, lakes, rivers, and subterranean water bodies. It encompasses a multitude of productive sectors, such as fisheries, aquaculture, tourism, transport, shipbuilding, energy production, bioprospecting, underwater mining, and associated undertakings.
Carbon credits / carbon offsets	Carbon credits, also known as carbon offsets, represent market-based mechanisms that permit organizations or individuals to invest in projects aimed at diminishing greenhouse gas emissions or removing carbon dioxide from the atmosphere. By doing so, these investments aid in compensating for their own emissions and lend support to global initiatives designed to alleviate climate change. In the context of BE, activities such as fisheries, aquaculture, and renewable energy projects can curtail their carbon footprint by adopting energy-efficient technologies, decreasing fuel usage in fishing vessels, and the like. These carbon credits can then be vended to businesses or individuals seeking to neutralize their own emissions.
Policy framework	A policy framework serves as the high-level blueprint that defines the vision, objectives, and strategies for the sustainable utilization of BE resources. It acts as a guiding framework for the formulation of laws, rules, and other legal instruments within the broader legal and regulatory framework.
Legal framework	A legal framework is the embodiment of policy objectives and principles into enforceable regulations and standards. It serves as the means to ensure adherence to established rules and processes, offering clear delineation of entitlements and obligations while creating mechanisms for oversight, implementation, and conflict resolution.
Direct employment:	Direct employment within the context of BE refers to positions that are directly associated with the core activities and sectors related to the sustainable utilization and management of ocean resources. These jobs are typically concentrated within industries including fisheries, aquaculture, maritime transportation, marine renewable energy, offshore oil and gas, marine tourism, and coastal engineering. Individuals in direct employment are actively engaged in activities such as fishing, operating marine vessels, overseeing marine ecosystems, conducting research, providing marine-based tourism services, or working on offshore energy installations. These individuals have a direct involvement in BE sectors and actively contribute to the production and provision of goods and services related to ocean resources.
Indirect employment	Indirect employment, within the context of BE, pertains to positions that are not directly engaged in the primary activities or sectors of BE but instead provide support to ensure its operations. These jobs are commonly situated in industries that offer products and services to the primary BE sectors. For instance, individuals employed in boat manufacturing, marine equipment supply, seafood processing, marine research institutions, maritime law, marine insurance, logistics, and coastal infrastructure development are considered indirectly employed in BE. Although their roles may not be directly connected to activities like fishing or marine energy production, they play a pivotal role in bolstering the overall functioning and advancement of BE.
Institutional arrangements	Institutional arrangements, in the context of Lake Victoria's BE activities, encompass the organizational structures, policies, and systems that have been established to oversee and regulate the diverse actors and stakeholders engaged in these activities. This pertains to government agencies, regulatory bodies, intergovernmental organizations, and partnerships created to enhance coordination, decision-making, and the execution of BE initiatives.
Human resource capacity	Human resource capacity, within the context of Lake Victoria's BE projects, pertains to the collective knowledge, skills, expertise, and competencies of individuals or groups engaged in these projects. This encompasses the ability to plan, implement, monitor, and evaluate activities related to the sustainable use and management of marine and freshwater resources. It encompasses a diverse range of professionals, scientists, technicians, policymakers, and local communities actively participating in various aspects of BE.

Terminology	Description
Project identification	Project identification, within the context of Lake Victoria's BE, encompasses the systematic process of pinpointing and choosing initiatives or projects. This process involves conducting feasibility studies, evaluating potential benefits and risks, and defining precise objectives and activities that are in line with the sustainable development objectives of BE. Project identification stands as a pivotal stage in planning and resource allocation to ensure effective implementation.
Planning	Planning, in the context of the Lake Victoria region's BE, pertains to the systematic formulation of strategies, policies, and action plans aimed at directing the sustainable development and governance of aquatic resources. This encompasses the establishment of objectives, priorities, and the allocation of necessary resources and activities to attain these goals. Planning plays a pivotal role in harmonizing endeavors, striking a balance between economic advancement and environmental and social concerns, and ensuring the enduring sustainability of the region's resources.
Economic impact	Economic Impact, within the context of the Lake Victoria region's BE, alludes to the repercussions and results of BE undertakings on the economic landscape of the region. This encompasses the creation of job opportunities, income generation, trade and investments, economic expansion, and the overarching contribution to the regional and national economies. The assessment of economic impact involves an evaluation of the favorable and adverse economic consequences brought about by BE initiatives.
Social Impact	Social Impact, in the context of the Lake Victoria region's BE, pertains to the consequences of BE projects on the social dynamics and overall well-being of the local communities. It encompasses considerations of social equity, preservation of cultural heritage, the sustainability of livelihoods, community involvement, and the fostering of social cohesion. The assessment of social impact involves an examination of the transformations, advantages, and difficulties encountered by diverse social groups and stakeholders as a result of BE initiatives.
Sustainable practices	Sustainable practices within the Lake Victoria region encompass the adoption of measures and strategies aimed at ensuring the responsible and environmentally friendly utilization of aquatic resources. These measures include the promotion of sustainable fishing practices, effective aquaculture management, responsible waste management, pollution control, ecosystem conservation, and biodiversity protection. The overarching objective of these sustainable practices is to strike a harmonious equilibrium between economic development, social well-being, and environmental conservation.
Environmental sustainability	Environmental sustainability is the capacity to uphold the well-being, robustness, and durability of the Lake Victoria ecosystem despite human activities. This encompasses the reduction of adverse effects, conservation of biodiversity, maintenance of water quality, habitat management, and efforts to counter and adjust to climate change. Environmental sustainability guarantees the enduring viability and productivity of the natural resources that underpin BE.
Climate change resilience	Climate change resilience pertains to the ability of ecosystems, communities, and economic sectors to endure and rebound from the consequences of climate change. This encompasses the adoption of strategies to diminish vulnerability, boost adaptability, and encourage sustainable approaches that mitigate risks associated with climate change, strengthening resilience.
Biotechnology	Biotechnology involves the utilization of biological processes, organisms, or systems to create novel products, technologies, or services that enhance sustainable economic endeavors. Biotechnology finds application in several realms of BE, including fisheries, aquaculture, agriculture, and pharmaceuticals. It entails the manipulation of living organisms or their constituents to enhance efficiency in production, optimize resource utilization, bolster disease resistance, and promote environmental sustainability.
Spatial planning	Spatial planning is a methodical and all-encompassing method for orchestrating and overseeing the allocation of space and resources within a particular region. It encompasses the analysis and assessment of how BE activities and infrastructure are spatially distributed while taking into account environmental, social, and economic considerations to inform decision-making. Spatial planning serves to enhance the allocation of resources, mitigate conflicts, and ensure the sustainable and effective utilization of coastal and marine areas within Lake Victoria.
Research	Research is centered on comprehending and exploring diverse facets of marine ecosystems, encompassing biodiversity, oceanography, the repercussions of climate change, and the interplay between human actions and the marine environment. Such research is instrumental in evaluating the present condition of oceans, lakes, and rivers, recognizing potential risks and susceptibilities, and providing guidance for policy development and management decisions.

Terminology	Description
Innovation	Innovation encompasses the utilization of research discoveries and the advancement of fresh technologies, products, services, and procedures that bolster sustainable economic endeavors within aquatic environments, whether they be oceans, lakes, or rivers. It involves the origination and integration of inventive methodologies, instruments, and resolutions aimed at confronting environmental, societal, and economic predicaments. Within the realm of BE, innovation might encompass the formulation of sustainable fishing methodologies, environmentally friendly aquaculture practices, renewable energy solutions, tools for marine spatial planning, waste management systems, and strategies for eco-tourism, among various other possibilities.

Acronyms and Abbreviations

Acronym/Abbreviation	
ABDP	Aquaculture Business Development Programme
ACES	Association for Coastal Ecosystem Services
ADP	Annual Development Plan
AGPO	Access to Government Procurement Opportunities
AHADI	Agile and Harmonized Assistance for Devolution
BE	Blue Economy
BETA	Bottom- Up Transformative Agenda
BMU	Beach Management Unit
CEOs	Chief Executive Officers
CIDPs	County Integrated Development Plans
CSOs	Civil Society Organisations
CECMs	County Executive Committee Members
CPMCs	Community Project Monitoring Committees
EC	European Commission
EIAs	Environmental Impact Assessments
EAC	East Africa Community
EU	European Union
FCDO	Foreign, Commonwealth, and Development Office
GCF	Green Climate Fund
GDP	Gross Domestic Product
GeSI	Gender and Social Inclusion
HBLFDC	Homabay Lake Front Development Corporation
ICT	Information Communication and Technology
IUUs	illegal, unreported, and unregulated
JKP	Jumuiya ya Kaunti za Pwani
JLPDI	Joint Lakefront Planning and Development Initiative
KLDC	Kisumu Lakefront Development Corporation
KMFRI	Kenya Marine and Fisheries Research Institute
KCDP	Kenya Coastal Development Project
KEMFSED	Kenya Marine Fisheries and Socio-Economic Development
KPC	Kenya Pipeline Corporation
KDP	Kenya Devolution Programme
KDSP	Kenya Devolution Support Programme
KBEST	Kenya Blue Economy Skills Training
LUP	Land Use Plan
LVSWWDA	Lake Victoria South Water Works Development Agency
LREB	Lake Region Economic Bloc

Acronym/Abbreviation	
MATC	Multi-Agency Technical Committee
M&E	Monitoring and Evaluation
MEL	Monitoring, Evaluation and Learning
MAP	Multi-Agency Action Plan
MTP	Medium Term Plan
NDCs	Nationally Determined Contributions
NGOs	Non-Governmental Organizations
NCBF	National Capacity Building Framework
PES	Payment for Ecosystem Service
PLWD	People Living with Disability
PPP	Public Private Partnership
REDD	Reducing Emissions from Deforestation and forest Degradation
SeyCCAT	Seychelles Conservation and Climate Change Adaptation Trust
SBEF	State Department for Blue Economy and Fisheries
SUED	Sustainable Urban Economic Development
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNEP	United Nations Environment Programme
UNCSD	United Nations Conference on Sustainable Development (UNCSD
UN	United Nations
USD	United States Dollar
WASH	Water Sanitation and Hygiene

Executive Summary

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Introduction

The Kenya Devolution Programme (KDP) -Timiza Ugatuzi is a four-year National Programme (2021-2025) supported by the UK Government. It is implemented by a non-profit consortium led by Act Change Transform. The Programme draws upon the achievements, insights and lessons gained from previous UK Government and other donor initiatives in devolution in Kenya, such as the Kenya Devolution Support Programme (KDSP) and Agile and Harmonized Assistance for Devolution (AHADI). The overall impact of the Programme is improved development results at the county level. This will be achieved through four outputs areas:

- Output 1: Intergovernmental relations devolution;
- Output 2: County Government economic planning and development, trade, and investment capacity strengthened;
- Output 3: County Governments and citizens' engagement to improve service delivery and livelihood; and,
- Output 4: Evidence generation, learning and digital approaches improve county government delivery and reform.

The sustainable utilization, investment, and management of BE resources by counties can drive economic growth, generate revenues for the counties, create employment opportunities for the citizens, and improve the livelihoods of communities residing in the vicinity of inland water bodies (lakes, rivers, and wetlands) and surrounding urban and local areas. To fully tap into this potential, it is crucial for the counties to possess robust capacity in planning, implementation, monitoring, evaluation and reporting on implementation of BE initiatives.

It is against this background that the Kenya Devolution Programme (KDP) conducted a BE capacity needs assessment in Kisumu, Homabay, Siaya, Busia and Migori Counties between August and November 2023. The assessment aimed to provide a holistic understanding of the current state of capacity in terms of gaps, challenges, and opportunities for technical assistance to strengthen the capacity of the counties in development and implementation of BE initiatives. The assessment focused on key parameters essential for successful planning, implementation, monitoring, evaluation and reporting on implementation of BE initiatives. These parameters include: Blue Economy Sectors and Potential; Policy and Regulatory Framework; Institutional Arrangements and Human Resource Capacity; Project Identification, Planning and Implementation Capacity; Economic and Social Impact, and Institutionalization of Monitoring, Evaluation and Learning. The purpose of this report is to present the key findings and recommendations derived from the assessment.

Approach and Methodology

To collect comprehensive information regarding the current capacity gaps, challenges, and opportunities, KDP employed a range of assessment methods including document review, interviews, focus group discussions, and analysis of case studies. The assessment team reviewed International BE Strategies and Conventions, Vision 2030, and Medium Term Plans (MTPs), National Government Bottom-Up Transformation Agenda, Economic Survey 2023, Draft National BE Strategy, Lake Region Economic Blue Blueprint, Lake Victoria Multi-Agency Action Plan (MAP) and County Integrated Development Plans (CIDPs) for the five counties.

The team held interviews and focus group discussions with select Governors, County Executive Committee Members, Chief Officers, and Directors from the five counties as well as the Vice Chancellor and team from Tom Mboya University.

Additionally, the team analyzed local and global case studies on successful blue economy initiatives to obtain insights and best practices for adoption by the five counties. These case studies include; Offshore Renewable Energy in Denmark, Blue Economy Tourism in Seychelles, Carbon Credits Programmes by Mikoko Pamoja Kenya and Conservation International in Chyulu Hills, BlueInvest initiative by the European Union (EU) etc. The collected data was subsequently analyzed and interpreted, leading to the production of this report. The findings were presented to the representatives from the five counties for feedback and validation.

Assessment Findings

Blue Economy Potential and Opportunities

The five counties demonstrated significant potential and opportunities in BE sectors. They have a significant geographical and economic connection to inland water bodies such as Lake Victoria, Rivers and Wetlands which offer a wide range of BE resources that can be harnessed for sustainable development. The opportunities offered by Lake Victoria include but are not limited to:

i. **Fisheries and Aquaculture**: The lake is known for its rich fishery resources, providing opportunities for commercial fishing and fish farming. The sector provides direct and indirect employment opportunities to local communities and has contributed to food security. Adoption of proper management and sustainable practices will increase fish production, value addition and exports.
ii. **Tourism and Recreation**: The scenic beauty and diverse ecosystems of the lake offer immense potential for tourism and recreation activities. This provides opportunities for eco-tourism initiatives such as boat cruises, bird watching, cultural tourism which can attract domestic and international tourisms, create jobs, and promote conservation of the ecosystem.
iii. **Water Transport and Logistics**: The lake provides a natural waterway for transportation and logistics services. Counties have an opportunity to develop efficient and reliable water transport infrastructure, such as ports, jetties, and ferry services, to facilitate trade, enhance connectivity, and stimulate economic growth within and beyond the lake region.
iv. **Renewable Energy:** The water resources offer potential for renewable energy generation such as hydropower and solar energy. Collaboration with the private sector to invest in renewable energy projects will contribute to clean energy production, reduce reliance on fossil fuels, provide electricity to underserved communities and generate revenues for the counties.
v. **Research and Innovation**: The lake serves as a living laboratory for research and innovation in various fields, including biodiversity conservation, water quality monitoring, and climate change adaptation. Investing in research institutions and promoting collaboration between academia, government, and private sectors can drive innovation, inform policy decisions, and support sustainable development.
vi. **Waste Management and Pollution Control:** The efforts to address the environmental challenges in the lake and its environment presents opportunities for developing systems for waste collection, recycling, and water treatment can contribute to environmental sustainability and create employment in the waste management sector.
vii. **Cross-Border Collaboration**: The lake is shared by multiple countries, including Kenya, Uganda, and Tanzania. Embracing cross-border collaboration and partnerships will unlock the full potential of the blue economy sectors. The lake region counties have an opportunity to share investors with the three countries.

Additionally, the five counties have extensive wetland areas along the shores of Lake Victoria. These ecosystems provide vital habitats for various species of fish, birds, and other aquatic organisms. They also contribute to water purification, erosion control, and climate regulation. The conservation and sustainable management of wetlands are essential for the overall health of the BE in the counties. For example, Yala Swamp in Siaya County is one of the largest freshwater wetlands in Kenya and crucial to Lake Victoria's survival. It's Kenya's largest papyrus wetland and a filter for rivers flowing into Lake Victoria.

The potential of the BE sectors to generate revenue for the five counties is immense. Siaya County generated a total of KES 255 million from fish cess and fish caging between FY2019/20 and FY2022/23 (County Treasury, 2023). Homabay County generated KES 71 million, from fish cess, landing fees, cage installation fees, fish processing license and fish distribution fees between FY 2017/18 and FY 2021/22. With a focus on BE, Homabay County has projected generating KES 153 million from BE sectors by 2027 (County Treasury). The county is planning to enhance the current revenue streams and map all untapped BE revenue streams in emerging sectors such as renewable energy, mineral extraction, tourism, and hospitality etc.

The potential of generating revenues beyond fisheries is immense. Implementation of renewable energy projects such as hydroelectric power plants, solar farms, wind farms can generate revenues for the counties and power local communities. In addition, renewable energy projects can enable counties to earn carbon credits or offsets.

These credits can be sold to companies or organizations seeking to reduce their carbon footprint, providing additional revenues to the counties. Counties can also enhance revenues from tourism, infrastructure development, research, and development etc. However, there is need for a policy and legislative framework to guide these initiatives.

It was established that fisheries (capture and culture) is the predominant BE sector in the five counties. Relying solely on fisheries restricts economic diversification and may overlook the potential for developing other sectors within BE in the counties. Secondly, depending heavily on a single sector makes the economies of the counties vulnerable to external factors impacting that sector. For example, changes in climatic conditions, overfishing, pollution, or disease outbreaks can significantly affect fish populations and aquaculture production, leading to economic setbacks and food security concerns.

The five counties face several challenges and gaps that impede the exploration of the potential of BE sectors. These include but are not limited to: limited infrastructure and lack of technological capacity which prevents the counties from fully harnessing the potential of the BE sectors; limited or lack of policy and regulatory frameworks to govern the BE sectors leading to unsustainable resource management, environmental degradation, inefficient resource allocation, lack of investment confidence, inadequate safety and standards etc; limited financial resources hampering development of essential infrastructure needed for exploring the BE potential and limiting investments in technological advancements necessary for efficient and sustainable exploration of BE potential; and, lack of awareness about the BE potential amongst the county officials and communities hindering the development of the sectors as it limits the participation of interested stakeholders. The BE encompasses various sectors beyond fisheries and aquaculture. The lack of awareness about the potential benefits and opportunities in these sectors has resulted in communities not realizing the value of the BE resources in the region.

Policy and Regulatory Frameworks

Policy and regulatory frameworks are essential for guiding the sustainable development of BE sectors. A policy framework sets forth the overarching vision, objectives, and strategies for the sustainable development and stewardship of BE. A legal and regulatory framework translates these policy objectives and principles into precise binding requirements, standards, and established mechanisms for enforcement and compliance. The assessment revealed that there are variations in the policy and regulatory frameworks across the five counties. It is evident from their current County Integrated Development Plans (CIDPs) and Annual Development Plans (ADPs) for 2024/2025 that all the five counties are committed to formulating policies and regulations for BE sectors.

Kisumu County Government has made considerable progress. It has formulated several key policies including the Kisumu City Master Plan, Kisumu County Solid Waste Management Act of 2014, Kisumu County Water Policy of 2018, Kisumu Climate Change Act of 2020, Kisumu County Environmental Health and Sanitation Act of 2022, Kisumu County Fisheries and Aquaculture Management Act of 2016, and the Lakefront Development Act of 2021. These policies and regulations form a comprehensive framework that effectively guides various aspects of BE activities within the county. Homabay County Government has prioritised development of Blue Economy Policy, Blue Economy Master Plan, Fisheries Regulations and Management Plan and County Blue Economy Strategy (CIDP 2023-2027).

In Siaya County, fisheries and aquaculture activities are governed by the Siaya County Fisheries and Aquaculture Act of 2017 that aims to ensure the sustainable utilization, management, and development of fisheries, aquaculture, and other aquatic resources in the county, along with addressing related matters. Blue Spatial Development is one of the spatial development frameworks for Siaya County (CIDP 2023-2027). Busia County has prioritized strengthening of fisheries policies, strategies, and regulations in the next five years (CIDP 2023-2027). Migori County enacted Migori County Fisheries and Aquaculture Act 2016 and Fisheries Management and Aquaculture Act 2016 and has also developed climate change related policies and regulations.

The five counties face several policy and regulatory gaps and challenges as they develop BE sectors. These include: lack of legal and regulatory frameworks tailored to the BE sectors which deter potential investors from engaging in BE activities; lack of specific policies that address the unique needs and requirements of the BE sectors which hinders the optimal utilization and sustainable management of BE; limited enforcement and compliance with existing fisheries and aquaculture policies and regulations resulting in unsustainable fishing practices and overexploitation fish stocks; insufficient financial resources limiting the ability of the counties to invest in research, infrastructure, and capacity building necessary for effective regulations and enforcement of policies and regulations. Finally, Lake Victoria is shared by multiple counties and countries, and coordination is crucial for effective BE governance. The counties in the region have not harmonized policies to guide cross county BE related activities. Without harmonized policies, counties in the region have divergent policies, regulations, and enforcement mechanisms. This has created confusion and inconsistencies in the implementation and enforcement of rules and has created loopholes for illegal activities such as overfishing and pollution.

Institutional Arrangements and Human Resource Capacity

Varying degrees of institutional arrangements and human capacity were observed across the five counties. Homabay and Migori Counties have established Fisheries and Blue Economy Directorates that oversee BE initiatives. The directorates serve as central hubs for coordination, facilitating effective communication, collaboration, and sharing of information among stakeholders.

Kisumu County has established the Kisumu Lakefront Development Corporation (KLDC) that is responsible for coordinating and overseeing implementation of BE initiatives along the lakefront. Both Siaya and Busia, have directorate of fisheries headed by County Directors who oversee the implementation of Blue Economy initiatives.

The notable challenges and gaps include: limited technical expertise in BE sectors which has resulted in suboptimal practices, inefficient production methods, and inadequate utilization of available resources. This has led to lower productivity, reduced economic returns, and missed opportunities for growth and development of BE. Secondly, the departments and directorates overseeing BE activities experience limited financial resources. Budget constraints has hindered implementation of projects, infrastructure development, capacity building, and research initiatives. Effective implementation of BE requires coordination among various departments, agencies, and stakeholders at the county level. However, it was established that departments operate in silos, lack effective communication channels and collaboration mechanisms. This has led to duplication of efforts, fragmented approaches, and lack of synergy in project planning and implementation.

Project Identification, Planning and Implementation

In each of the five counties, project identification occurs during the County Integrated Development Plan (CIDP) and budgeting processes, following the guidelines set forth by the CIDP guidelines, County Government Act of 2012, Public Finance Management Act of 2012, and other pertinent legislation. The review of the County Integrated Development Plans (CIDPs) of the counties confirmed that BE has been prioritized as a key driver of economic growth and job creation. The county officials indicated that during projects identification, they analyze the potential of natural resources in counties and consider county competitiveness to assess the potential of BE sectors. In addition, the counties engage with various stakeholders including local communities to gather input, gain support, and ensure that projects align with the needs and aspirations of local communities and other stakeholders. Detailed project plans are developed to outline project activities, timelines, budgets, resource requirements, and roles and responsibilities of various stakeholders involved in the implementation process.

Limited data and baseline information was identified as one of the challenges counties are facing. The availability of accurate and up-to-date data is crucial for identification and planning for BE projects. Lack of baseline information make it difficult to assess the current state of the BE, identify project opportunities, and establish realistic targets and benchmarks. Secondly, the counties lack the necessary capacity and technical expertise to effectively identify, plan, and implement BE projects. They lack expertise in areas such as project management, economic analysis, environmental impact assessment, financial modelling, prefeasibility study, and stakeholder management. Additionally, limited awareness and understanding among county officials and stakeholders about the potential of BE has hindered the identification of viable BE projects and formulation of comprehensive plans for their implementation. Lastly, limited access to financing, inadequate budgetary allocations, and limited capacity to attract private sector investments has impeded implementation of BE projects which has limited scale and impact of BE initiatives.

Economic and Social Impact of BE

The main objective of assessing economic and social impact of blue economy in the five counties was to evaluate the outcomes and effects of BE projects on the local economy and society. Specifically, the assessment sought to assess the contributions of BE to overall economic growth of the county, number of jobs created by BE (direct and indirect), efforts been made to ensure that local communities benefit from job opportunities generated by BE projects, and stimulation of growth local supply chain and industries related to BE sectors. In addition, the assessment sought to establish if the counties have mechanisms for community engagement and participation in BE. According to the counties, BE has the potential to generate a significant number of direct and indirect jobs if fully harnessed, particularly in sectors such as fisheries, aquaculture, tourism, water transport and renewable energy. It is envisaged that creation of job opportunities will lead to increased households' incomes and improved livelihoods of local communities that depend on these sectors.

Siaya County has adopted an agricultural-focused development approach to combat food and nutrition insecurity, enhance household incomes, and tackle unemployment. It is projected that agriculture, livestock, and fisheries sectors will account for 60% of KES.15.4 billion contributed by the county to the GDP (Siaya CIDP 2023-2027). The local communities have benefitted from employment opportunities in commercial fishing, fish processing, fish farming, and associated activities, leading to poverty alleviation and enhanced livelihoods. Presently, the sector has approximately 3,000 fish farmers, 13,000 fish crew members, 50,000 boat owners, and 5,000 individuals engaged in various trades such as net vendors, net repairers, and boat builders. Additionally, sand mining in the lower areas of Rarienda and Alego Usonga has generated employment for the local population. Over the next five years, the BE projects in Homabay County are expected to generate a total of 250,000 jobs, with 50,000 being direct jobs and 200,000 being indirect jobs. The job distribution per sector is as follows: Fisheries is anticipated to create 20,000 direct jobs, Aquaculture is projected to generate 15,000 direct jobs, Tourism is expected to contribute 10,000 direct jobs, and Renewable Energy is estimated to provide 5,000 direct jobs.

In all the five counties, the BE sectors are envisaged to create economic diversification and development of new industries and businesses particularly in value chains development.

The BE projects have stimulated the growth of local supply chains and industries related to the sectors namely; input suppliers, producers, processors, transporters, marketers, financial service providers and insurance service providers. In addition, the BE sectors have enhanced the quality of the life of the local communities by providing water, income generation which has enabled communities take care of education and healthcare, construction of health facilities along beaches and construction of community social halls.

The five counties face challenges in accurately reporting the number of direct and indirect jobs created by the BE sectors due to limited access to comprehensive and trustworthy data. Specifically, obtaining employment statistics and data variations related to job creation proves to be problematic. Furthermore, the presence of substantial informal sector components within the BE sectors further complicates the matter. Since informal jobs are not recorded and excluded from official statistics, it becomes challenging to fully capture the complete scope of employment generated by these sectors. Lastly, some counties have limited capacity and resources to conduct comprehensive assessments of job creation in the blue economy sector. This includes the lack of trained professionals, technical expertise, and financial resources required to collect and analyze employment data.

Institutionalization of Monitoring, Evaluation and Learning

It was established that the five counties have dedicated and well-structured units responsible for monitoring, evaluation and learning of projects, which are situated in their respective departments for finance and economic planning department. The units are fully capacitated with skilled staff to effectively carry out some monitoring, evaluation and learning activities. However, the counties have not developed a blue economy specific Monitoring Evaluation and Learning (MEL) framework. Without a MEL framework, it is not possible to track the progress and impact of blue economy initiatives. Additionally, there is a lack of standardized and consistent tools and mechanisms for various aspects of monitoring and evaluation of blue economy projects. These aspects include data collection, authentication, analysis, and interpretation, as well as regular reviews, internal utilization of lessons, documentation, sharing of knowledge products, and storage of information. This has resulted in inaccurate and unreliable data, limited learning and improvement, inefficient resource allocation and limited knowledge sharing and collaboration.

Limited capacity in terms of necessary skills and financial constraints were cited as key challenges counties are facing in their efforts to institutionalize MEL. In addition, the existing BE related policies and regulations do not explicitly address MEL requirements for BE sectors. Counties also lack necessary infrastructure and systems for effective data management and technology adoption. This includes data storage, analysis tools, data visualization platforms, and information management systems. Insufficient technological capacity has impeded data-driven decision-making and hindered the institutionalization of MEL.

Recommendations

Blue Economy Potential and Opportunities

i. Proactively identify and promote alternative sectors within BE beyond fisheries and aquaculture. The emerging sectors such as renewable energy (hydropower, wind, wave, and tide), water transport, tourism, research and innovation, infrastructure development etc, offer significant potential for economic growth and present new opportunities for counties and communities.
ii. Collaborate with the private sector and national government to develop transport networks, ports, harbors, roads, and railways to facilitate trade and the movement of goods and services. In addition, development of tourism infrastructure, such as hotels, resorts, and recreational facilities, will attract visitors and boost local economies.
iii. Undertake targeted awareness campaigns and capacity building programs to educate and inform the stakeholders including local communities about the various sectors within BE, their potential, and opportunities. This will ensure stakeholders participate in decision making and implementation of sustainable practices.
iv. Collaboration among counties around Lake Victoria is paramount for the success of BE sectors. Strengthen the existing Lake Region Multi-Agency collaboration framework which brings together the Lake Region Economic Bloc counties, National Government Agencies, Private Sector Institutions and Learning Institutions with an aim to harness the BE resources in the region. The framework has created a platform for dialogue, information sharing and coordination among the counties and institutions implementing BE initiatives in the region.
v. Invest in research and development to enhance understanding of the BE, identify emerging trends, and explore innovative approaches. This will enable evidence-based decision-making and facilitate the development of modern technologies, practices, and solutions for sustainable BE development. This can be achieved through collaboration with research and learning institutions such as Tom Mboya University, Rongo University, Jaramogi Oginga Odinga etc.
vi. Explore diverse financing options to augment the existing mechanisms. These include, public-private partnerships, grants, loans, international development assistance, Climate financing, Carbon Credits etc.
vii. To ensure inclusive and participatory development of the BE sectors, engage stakeholders in the planning, decision making, and implementation of blue economy initiatives. These stakeholders include but are not limited to, fishing communities, private sector entities, research institutions and civil society organizations.

viii. Adopt sustainable resource management practices for the long-term viability of the BE sectors. Implement measures to prevent overfishing, protect ecosystems, and promote biodiversity conservation to ensure the sustainability of resources and the preservation of Lake Victoria's natural heritage.

Policy and Regulatory Frameworks

i. Develop comprehensive BE policy and regulatory frameworks that recognize the interdependencies among different sectors of the BE, such as fisheries, aquaculture, tourism, renewable energy, water transport, environmental protection etc. The frameworks should promote sustainable development, biodiversity, conservation, and socio-economic growth while ensuring coherence and synergy across sectors.

ii. Develop sector-specific strategies tailored to the unique needs and potential of each BE sector in the counties, such as fisheries, aquaculture, tourism, renewable energy, and infrastructure development. These strategies should outlie clear goals, action plans, and targets for sector development and aligned with national government BE strategy.

iii. Enhance monitoring and enforcement mechanisms to ensure compliance with policies and regulations. Collaborate with law enforcement agencies, community-based organizations, and local communities to enhance compliance and deter illegal practices.

iv. Develop harmonized policies and regulations that are applicable to all counties surrounding Lake Victoria including the upstream counties. The policies should be aligned with regional and international frameworks such as the East African Community (EAC) protocols and Agreements.

v. Invest in capacity building programs for county officials, policymakers, and relevant stakeholders to enhance their knowledge and skills in BE governance, policy implementation, and environmental management. Raise awareness among local communities about the importance of sustainable resource use, conservation practices, and the socio-economic benefits of the BE.

Institutional Arrangements and Human Resource Capacity

i. Enhance the current institutional arrangements by providing them with the necessary capacity, including financial resources and staff. Adequate financial resources will enable the departments to effectively carry out their roles and responsibilities. Ensure that the departments have well-defined mandates, roles, and responsibilities to facilitate the efficient implementation of BE activities by other departments. It is crucial that these mandates adhere to the principle of subsidiarity to prevent conflicts with other relevant BE departments.

ii. Strengthen the capacity of county officials and staff in BE-related knowledge and skills through targeted training programs. This includes providing training on relevant topics such as fisheries management, aquaculture, maritime transportation, tourism, and sustainable resource utilization.

iii. Promote collaboration among the institutions in the region by establishing platforms for sharing best practices, lessons learned, and innovative approaches. Encourage knowledge exchange with other counties, national agencies, and international organizations involved in similar BE initiatives.

iv. Foster partnerships and collaboration with relevant institutions, organizations, and experts in the BE sectors to support capacity building efforts and enhance institutional arrangements. For example, Tom Mboya University is planning to establish an Institute of Blue Economy Research, Studies, and Entrepreneurship (IBERSE). The institute will build the capacity of communities and institutions around the lake that will aid in making informed decisions in addressing emerging issues of the BE.

Project Identification, Planning and Implementation

i. Establish project management units within the county government to oversee the implementation of blue economy projects. These units should have skilled personnel with experience in project management, monitoring, and evaluation.

ii. Invest in training and capacity building programs for county officials and project managers involved in blue economy initiatives. Provide them with the necessary skills and knowledge in project management, including project planning, proposal writing, budgeting, risk management, and monitoring and evaluation.

iii. Before initiating any project, conduct thorough feasibility studies to assess the technical, economic, social, and environmental viability of the proposed initiatives. This will help identify potential risks, challenges, and opportunities associated with the projects.

iv. Encourage innovation and research in the blue economy sector. Support research institutions and universities to conduct studies and develop innovative solutions that can enhance the effectiveness and sustainability of projects.

Economic and Social Impact of BE

i. Encourage the diversification of economic activities within the BE. Promote the development of multiple sectors, such as fisheries, aquaculture, maritime transportation, renewable energy, tourism, and biotechnology. Diversification will reduce dependence on a single sector and create more opportunities for employment, entrepreneurship, and economic growth.

ii. Prioritize the sustainable management of Lake Victoria resources to ensure their long-term viability. Implement measures to prevent overfishing, protect marine habitats, and promote responsible tourism development. This will safeguard resource availability and support the continued growth of economic activities dependent on the lake.

iii. Foster collaboration and partnerships between governments, industries, communities, and academia to promote innovation, knowledge sharing, and technology transfer. Collaboration can enhance research and development efforts, drive new investments, and create employment and entrepreneurship opportunities.

iv. Ensure that the benefits of the blue economy are distributed equitably and reach all segments of society. Develop policies and programs that prioritize inclusivity, social welfare, and equal access to opportunities, particularly for marginalized communities and small-scale fishers. Promote gender equality and empower women, youth and people living with disabilities to participate in all aspects of the blue economy.

v. Establish clear and enabling regulatory frameworks that promote investment, ensure sustainable practices, and protect the rights of stakeholders in the blue economy. Develop comprehensive legal frameworks, licensing regimes, and environmental regulations that balance economic growth with environmental conservation and social well-being.

Institutionalization of Monitoring, Evaluation and Learning

i. Allocate adequate financial and human resources for MEL activities. Include MEL costs in project budgets and ensure that MEL activities receive sufficient resources to be conducted effectively. Regularly review resource allocations to align with changing MEL needs.

ii. Develop a comprehensive MEL framework that outlines the objectives, indicators, data sources, methods, and tools for monitoring and evaluating the implementation and impact of blue economy policies and initiatives. This framework should be aligned with national and international MEL standards and guidelines.

iii. Integrate MEL into all stages of blue economy programmes and project management, from planning and design to implementation and evaluation. Ensure that MEL activities are included in project work plans and budgets. Foster a culture of evidence-based decision-making and learning.

iv. Provide training, skills development, and capacity-building programs for the staff of the blue economy sectors and relevant stakeholders. This will enhance the technical skills and knowledge required for effective MEL design and implementation.

v. Foster collaboration and participation among stakeholders in the MEL process, including policymaking, data collection, and analysis, and knowledge sharing. This will ensure that diverse perspectives and interests are taken into account and help build ownership and accountability for blue economy MEL activities.

vi. Establish mechanisms for sharing MEL results, lessons learned, and best practices with relevant stakeholders. This may involve publishing periodic reports, holding seminars and workshops, and using social media platforms and other communication channels.

vii. Regularly review and update the MEL framework and activities to ensure that they are aligned with changing circumstances and evolving blue economy priorities and strategies.

Conclusion

In conclusion, the BE capacity needs assessment conducted in the five counties has provided valuable insights into the key areas that require attention to successfully develop and implement BE projects in the five counties and beyond. Addressing the identified gaps and challenges will enable the counties to unlock the full potential of their BE resources and contribute to sustainable development and prosperity.

Additionally, it is envisaged that this assessment report will provide insights for policymakers, stakeholders, and decision-makers involved in BE to undertake initiatives such as policy development, planning, resource allocation and investment, human resource development, institutional strengthening, collaboration and partnerships, project management, monitoring and evaluation etc.

Contextual Background 2

Kenya Devolution Programme

The Constitution of Kenya provides for a devolved system of governance comprised of a national government, forty seven (47) county governments, and several commissions and independent offices. This system has been saluted as the most transformative changes in Kenya's history since the promulgation of the Constitution in 2010.

Devolution, as defined by the Constitution, grants significant powers and resources to forty-seven county governments, allowing them to govern specific regions within the country. Its primary objectives are to promote inclusivity, equity, and efficient service delivery throughout the nation. Devolution seeks to address historical marginalization and ensure the equitable distribution of resources. After the General Elections in 2013, power and resources were decentralized from national government to counties and further to sub-counties, wards, and villages. This has empowered local communities to participate in decision-making, prioritization of their development needs and participation in the identification and implementation of programmes and projects. This aligns with Article 174 of the constitution specifically, Article 174 (C), which empowers people to govern themselves and enhances their participation in the exercise of state powers and decision-making processes that affect them.

County governments have marked numerous significant achievements since their establishment in 2013. These accomplishments encompass, but are not confined to: improved service delivery, increased citizen engagement and inclusiveness, expedited infrastructure development throughout the counties, elevated economic empowerment at the county level, diminished regional disparities, heightened accountability, and transparency in governance, and enhanced administrative capabilities and service provision.

Notwithstanding the achievements, devolution has faced a myriad of challenges since inception in 2013. These challenges encompass capacity constraints at the county level, limited financial resources and delay disbursement of funds from national treasury, intergovernmental conflicts, duplication of functions, among other issues.

The Kenya Devolution programme - Timiza Ugatuzi is a four (4) year national initiative spanning from 2021 to 2025. It is financially supported by the UK Government and executed by a nonprofit consortium led by Act Change Transform (Act). This programme follows in the footsteps of its predecessors and draws from the knowledge gained through earlier FCDO and other donor interventions in Kenya's devolution process, which include the Kenya Devolution Support programme (KDSP) and Agile and Harmonized Assistance for Devolution (AHADI).

The AHADI programme, supported by USAID and DFID, commenced its engagement with the devolution process in 2014 with the objective of advancing governance systems characterized by transparency, accountability, effectiveness in service delivery, and a strong focus on citizen empowerment. In 2015, the State Department for Devolution, in partnership with the World Bank, initiated the Kenya Devolution Support programme (KDSP). Both the AHADI and KDSP programmes were designed to address the capacity deficiencies that had been identified by the Ministry of Devolution in 2013 and were documented in the National Capacity Building Framework (NCBF).

The aim of KDP is to address some of the challenges facing devolution in selected counties in Kenya. These challenges include; ineffective intergovernmental relations, ineffective county planning, development, trade and investment related challenges, inadequate engagement between county governments and citizens in service delivery, and limited integration of evidence, digital technology and learning as enablers of public service delivery and reform. If the above challenges are addressed, there will be more effective, open, and accountable governments and improved effectiveness and efficiency in service delivery.

The figure below illustrates the four outputs of KDP.

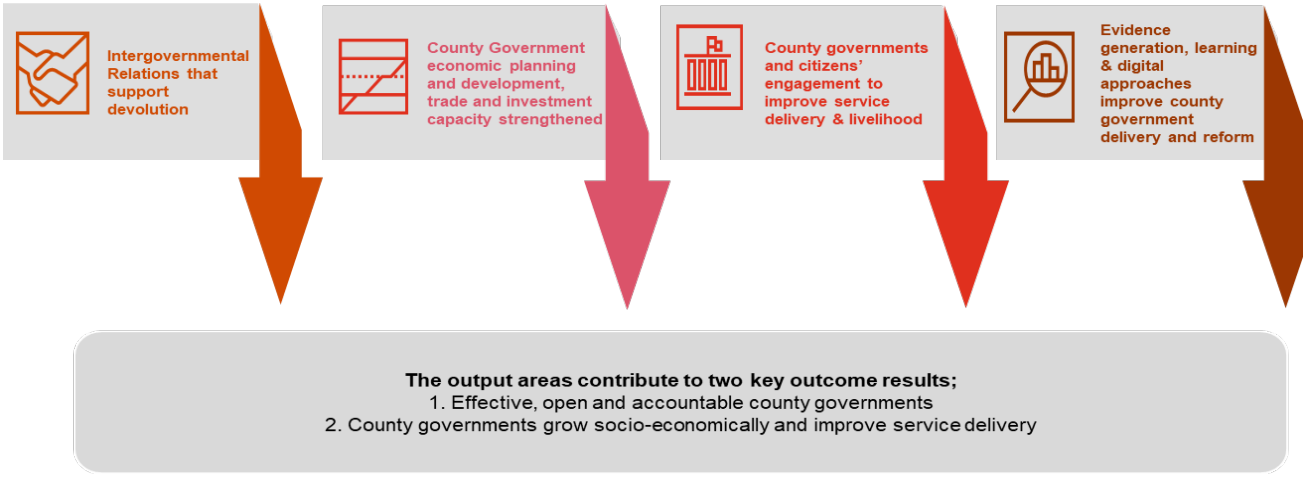


Figure 1: KDP Outputs

Output 2 focusses on providing technical assistance to select county governments and intergovernmental institutions to strengthen their capacity in economic planning, development, trade, and investment. Specifically, KDP is providing;

i. **Technical assistance to Kisumu, Homabay, Siaya, Busia and Migori Counties:** KDP is actively involved in strengthening the capacity of these counties in various aspects of Blue Economy (BE) initiatives. This support encompasses strengthening their ability to plan, implement, monitor, evaluate, and report on BE projects. Strengthening their capacity is crucial for effective and efficient resource management, local development and economic growth, policy alignment and coordination, environmental protection and conservation, and access to funding support.

ii. **Technical assistance to the Lake Victoria Multi-Agency Technical Committee (MATC):** KDP is actively involved in the facilitation of the Multi-Agency Action Plan (MAP). This comprehensive involvement encompasses various crucial components, including; developing a Monitoring, Evaluation, and Learning (MEL) Framework that provides the structure and methodology for managing the performance of MAP, automating MEL activities through the configuration and deployment of an electronic (e) MEL system to streamline the MEL process making it more efficient and effective, strengthening the capacity of committee members, and enhancing their skills and knowledge to effectively carry out MEL activities. This capacity-building ensures that committee members are well-equipped to monitor and evaluate the MAP's implementation.

Overview of Blue Economy

The concept of BE holds great promise to contribute to the United Nations (UN) 2030 Sustainable Development Agenda by driving economic growth and diversification, social prosperity, and environmental protection. BE was first conceptualized in the preparatory process for "Rio+20 UN Conference on Sustainable Development (UNCSD)" in 2012. The Rio+20 was one of the biggest international gatherings and largest event in the history of the UN The conference presented an opportunity to re-direct and re-energize political commitment to the three (3) dimensions of sustainable development, namely: economic growth, social improvement, and environmental protection.

Particularly, the UN Global Agenda 2030 has set a standalone Sustainable Development Goal (SDG) fourteen (14) on Life Below Water (UN,2016) which recognizes the need to conserve and sustainably use the oceans, seas, and lake resources for sustainable development. Subsequently, global institutions have developed various handbooks and guidance on BE.

''Blue Economy" can be defined differently depending on the context and perspective. In the context of **sustainable development focus**, Blue Economy refers to the sustainable and integrated use of oceanic and freshwater resources, including coastal and marine ecosystems, to support economic growth, social well-being, and environmental sustainability. It emphasizes the responsible management and utilization of these resources for long-term benefits.

From an **economic and industry perspective**, Blue Economy encompasses all economic activities, sectors, and industries that are directly or indirectly dependent on water resources, including fisheries, aquaculture, maritime transport, offshore energy, marine biotechnology, tourism, and coastal development. It emphasizes the economic potential and value of these sectors and promotes their sustainable growth.

In the context of **ecosystem -based approach**, Blue Economy focuses on the conservation and sustainable management of marine and freshwater ecosystems, recognizing their intrinsic value and the essential services they provide. It aims to balance economic development with environmental protection, seeking to maintain healthy and resilient ecosystems as the foundation for sustainable economic activities.

Based on **integrated and interdisciplinary perspective**, Blue Economy takes an integrated and interdisciplinary approach, bringing together various stakeholders, including governments, businesses, academia, communities, and civil society, to collaborate in addressing the challenges and opportunities associated with the sustainable use of water resources. It seeks to foster cross-sectoral partnerships and innovative solutions.

Lastly, based on **inclusive and social dimension**, Blue Economy emphasizes social equity, inclusivity, and the involvement of local communities in decision-making processes and benefits sharing. It recognizes the importance of empowering coastal and fishing communities, promoting job creation, and improving livelihoods while ensuring the protection of cultural heritage and traditional knowledge.

The World Bank defines "BE" as "the sustainable use of ocean resources for economic growth, improved livelihoods and jobs while preserving the health of ocean ecosystem"[1]Therefore, according to the World Bank, the "BE" seeks to promote economic growth, social inclusion, and the preservation or improvement of livelihoods while at the same time ensuring environmental sustainability of the oceans and coastal areas.

European Commission (EC) defines BE as "All economic activities related to oceans, seas and coasts."

From the African Union (AU) perspective, "BE comprises of economic activities taking place below, on, or adjacent to the ocean, or aquatic systems more generally. These activities include subsistence and commercial fishing, as well as emerging sectors such as renewable energy, port infrastructure, eco-tourism, blue carbon, among others.

The AU has identified blue ocean economy development as a priority goal towards achieving the aspiration on 'A prosperous Africa based on inclusive growth and sustainable development within the context of the AU Agenda 2063. It was estimated in 2019, that African BE sectors and components generated USD 296 billion and 49 million jobs[2]. The Africa BE Strategy estimated that by 2030, the figures will increase to 405 billion and 78 million jobs.

BE refers to a means of driving economic growth and creating jobs through oceans and seas, coastlines and banks, lakes, rivers, and groundwater (Smith-Godfrey. S., 2016). BE comprises activities that exploit aquatic resources (fisheries, mining, petroleum, biotechnologies, etc.) or use aquatic environments (maritime transport, coastal tourism, etc.) in an integrated, fair, and circular manner. Globally, the oceanic BE is valued annually at around USD 1.5 trillion, making it the 7th largest economy in the world. This is projected to double to USD 3 trillion by the year 2030.

BE activities are proactive in helping to improve the health of aquatic ecosystems by establishing protective and restorative measures. This aligns with SDG 14, which focuses on conserving and sustainably using oceans, seas, and marine resources for sustainable development. The figure below highlights the BE agenda since 1992.

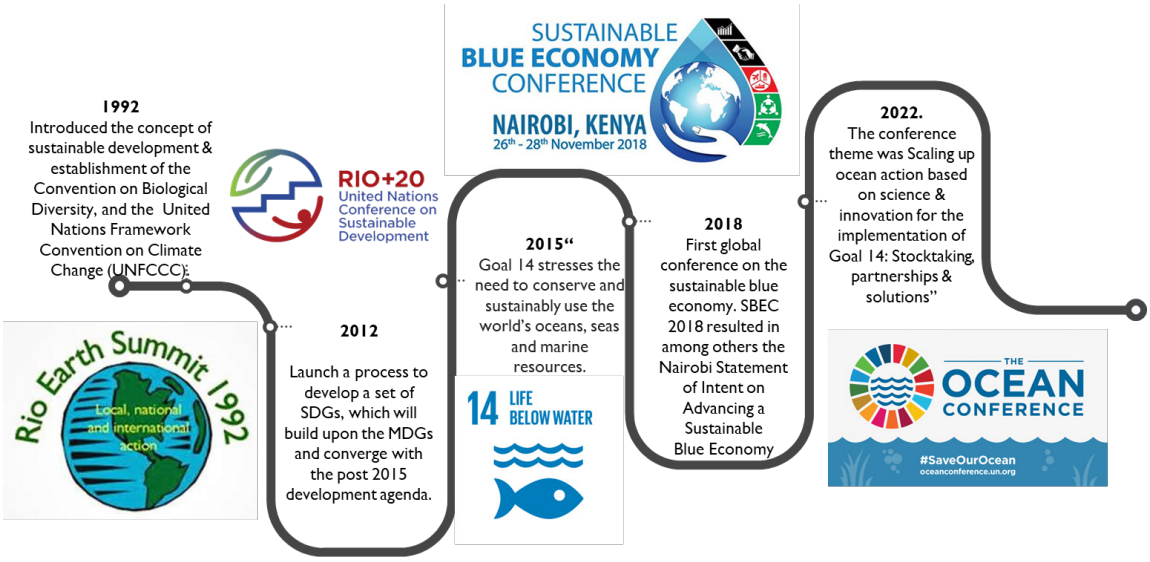


Figure 2: Blue Economy Journey

1 The World Bank, Infographic: What is the Blue Economy? June 6, 2017, available at http://www.worldbank.org/en/news/infographic/2017/06/06/blue-economy

2 Africa Blue Economy Strategy, 2019

Blue Economy trends

BE trends encompass various developments and patterns that shape the utilization and management of ocean resources worldwide. The table below highlights some notable trends.

Table 1: Blue Economy Trends

Trend	Description
BE integration	Many nations are increasingly incorporating BE concepts into their development strategies, policies, and plans.
Maritime spatial planning	The adoption of maritime spatial planning is growing to ensure sustainable and coordinated use of ocean space. It involves a systematic approach to manage competing activities, including shipping, fishing, aquaculture, energy development, and conservation, while considering ecological, economic, and social aspects.
Sustainable fisheries management	There is a growing emphasis on sustainable fisheries management to address overfishing, illegal fishing, and the conservation of fish stocks. Implementation of science-based fisheries policies, ecosystem-based approaches, and the use of technology for monitoring and enforcement are gaining prominence.
Aquaculture expansion	Aquaculture, or fish farming, is experiencing significant growth globally. It serves as an alternative to wild-caught seafood and contributes to meeting the increasing demand for fish protein. Sustainable aquaculture practices, including land-based systems, recirculating aquaculture, and integrated multi-trophic aquaculture, are being adopted.
Marine renewable energy expansion	The development of marine renewable energy sources such as offshore wind, tidal energy, and wave energy is gaining momentum. Countries are investing in these technologies to diversify their energy portfolios, reduce Greenhouse Gas (GhG) emissions, and achieve renewable energy targets.
Blue carbon and coastal resilience	Recognition of the role of coastal ecosystems, including mangroves, seagrasses, and salt marshes, in carbon sequestration and climate change mitigation is increasing. Efforts to protect and restore these ecosystems are gaining attention, promoting coastal resilience and adaptation to climate change impacts.
Climate change adaptation	Strategies for adapting to the impacts of climate change on coastal communities, ecosystems, and infrastructure are increasingly being deployed.
Marine conservation and protected areas	Marine conservation areas and marine protected zones are being expanded to safeguard biodiversity and critical ecosystems.
Plastic pollution mitigation	Concerns over marine plastic pollution have led to increased efforts to reduce plastic waste and improve waste management systems. Initiatives include the development of recycling infrastructure, bans on single-use plastics, and awareness campaigns to promote behavior change.
Ocean-based tourism	Tourism activities focused on coastal and marine environments are expanding. This includes recreational activities like diving, snorkeling, sailing, and wildlife watching. Sustainable tourism practices, including marine protected areas, eco-certification, and community involvement, are being promoted to minimize negative impacts on marine ecosystems.
Marine biotechnology	The exploration of marine organisms for biotechnological applications is on the rise. Marine biotechnology offers potential for the development of pharmaceuticals, nutraceuticals, biofuels, and other high-value products. Research and commercialization efforts are expanding in this field.
BE financing	There is a growing focus on mobilizing finance for BE projects and initiatives. Public and private sector investments, impact investment funds, and innovative financial mechanisms are being established to support sustainable BE sectors and projects.
Investment in BE projects	There are increased investments in BE projects, fostering economic growth and job creation linked to ocean resources.
International collaboration	Countries are increasingly recognizing the need for international cooperation to address transboundary issues and share best practices for sustainable BE development. Collaborative efforts include regional agreements, partnerships, and knowledge-sharing platforms.

Blue Economy in Kenya

Kenya has played a pivotal role in advancing the global BE Agenda. In 2018, the Government of Kenya (GoK), in collaboration with Canada and Japan, hosted the 1st global conference on Sustainable BE. The primary goal of this conference was to facilitate the learning of strategies to build a BE that achieves the following objectives:

i. Harnesses the potential of our oceans, seas, lakes, and rivers to improve the lives of all, particularly people in developing countries, women, youth, and Indigenous population;
ii. Leverages the latest innovations, scientific advances, and best practices to promote prosperity while conserving aquatic resources future generations[3].

The conference concluded with a number of key political messages to advance a sustainable BE. Some of the commitments include:

i. Advocating for action-oriented global strategies that places people and the BE resources at the centre of sustainable development;
ii. Fostering collaboration to establish sustainable partnerships and projects across various sectors of the BE.
iii. Mobilizing financial support from both public and private sources.
iv. Promoting access to technologies and innovations, sharing best practices, and capacity building.
v. Championing gender equality and encouraging the active involvement of women and youth in the BE.
vi. Enhancing scientific research to generate and disseminate evidence-based knowledge and information to inform policy and decision-making.
vii. Strengthening governance mechanisms and promoting synergies among various levels of government.

To incorporate these commitments into the national policy, legal, and institutional frameworks, GoK included BE as the eighth priority sector within the Economic Pillar during the Third Medium Term Plan (MTP III) of the Kenya Vision 2030, effective from 2018 to 2022.

To demonstrate the government's dedication to supporting the BE in Kenya, the Cabinet Secretary (CS) proposed budgetary allocations for various BE initiatives in the fiscal year 2022/23.

Refer to the table below for specific details.

Table 2: Blue Economy Budget Allocation in FY2022/23

No.	BE Initiatives	Allocation in KES (Billions)
1	Aquaculture Business Development Project	1.9
2	Kenya Marine Fisheries and Socio-Economic Development Project	2.8
3	Exploitation of Living Resources under the BE	1.3
4	Construction of Fish Processing Plant in Lamu	1
5	Coastal Fisheries Infrastructure Development	0.27
6	Rehabilitation of Fish Landing Sites in Lake Victoria	0.21
7	Aquaculture Technology Development and Innovation Transfers	0.204
8	Development of the BE initiatives.	0.1263
	Total	**7.8103**

In July 2022, Kenya and Portugal co-hosted the 2nd UN Oceans Conference in Lisbon. The main objective of the conference was to support the implementation of SDG 14. To mobilize action, the conference sought to propel much needed science-based innovative solutions aimed at starting a new chapter of global ocean action.

At the 77th session of the UN General Assembly, H.E President William Samoei Ruto, reiterated GoK's commitment towards sustainable use of Ocean and BE resources as a development priority. The president highlighted that Kenya is developing a National BE Strategy to strengthen community structures in participatory management of freshwater, coastal and marine resources, and ecosystems.

After 2022 general elections, the president created the State Department for BE and Fisheries (SBEF) within the Ministry of Agriculture, Livestock and Fisheries via executive order No. 1/2016. This executive order expanded the mandate of the State Department, including the coordination of BE initiatives, which encompass several key sectors, including fisheries, maritime transport and logistics services, culture, and tourism, as well as extractives, which cover areas such as oil and gas, minerals, and energy.

3 Conference on the Global Sustainable Blue Economy, held at the Kenyatta International Convention Centre, Nairobi from 26th to 28th November 2018. Available at http://www.blueeconomyconference.go.ke/

These sectors have been identified as pivotal in delivering swift and sustainable results. The GoK's Bottom-Up Transformative Agenda (BETA), envisages BE sectors playing a key role in unlocking the untapped potential of Kenya's ocean and coastal resources for the purposes of enhancing food security, generating employment opportunities, and promoting economic growth. It is estimated that in the next ten (10) years, BE sectors will contribute USD 460 billion to the economy and create direct and indirect jobs hence increasing household incomes and contributing to poverty reduction. Statistics have shown that fisheries, as one of the BE sectors, accounts for about 0.5% of the Gross Domestic Product (GDP) and generate employment for over two (2) million Kenyans through fishing, boat building, equipment repair, fish processing, and other ancillary activities[4]. It plays a key role in job creation, income generation, nutrition, and food security.

The production of fish from freshwater sources saw an increase from 135,000 tonnes in 2021 to 141,400 tonnes in 2022. Notably, Lake Victoria, which is the largest contributor to freshwater fish production, experienced a 3.4% increase, reaching 97,500 tonnes in 2022. Additionally, fish production from marine sources also showed a positive trend, rising from 29,100 tonnes in 2021 to 32,200 tonnes in 2022[5]. The overall value of the fish catch witnessed a notable 6.1% increase, equivalent to KES 31.1 billion in 2022 (Economic Survey,2023) as illustrated in Figure 3 below.

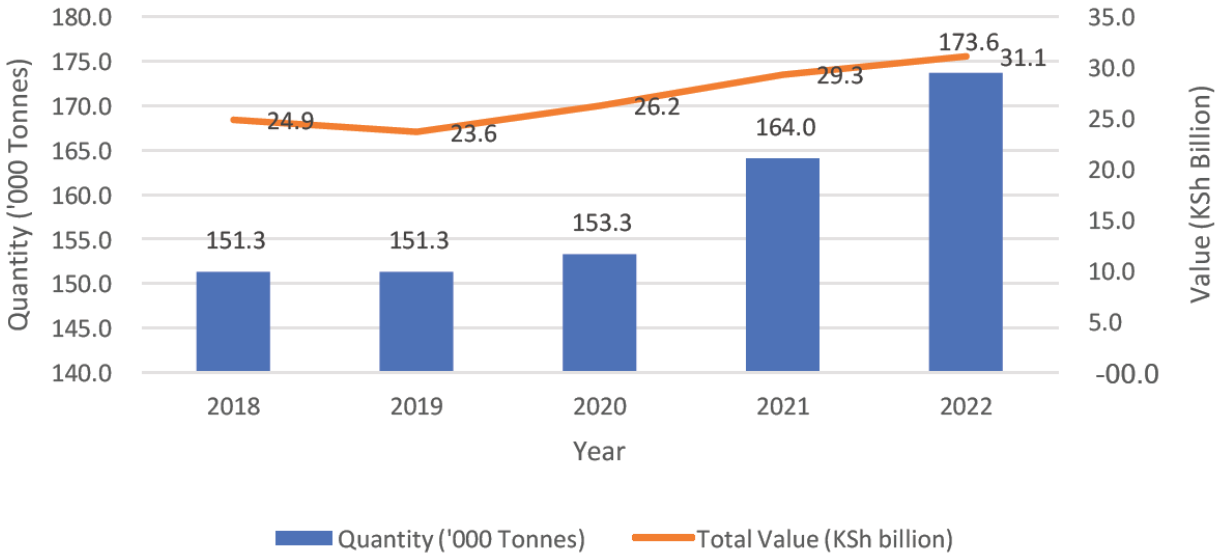


Figure 3: Quantity and Value of Fish Landed, 2018-2022

The Kenya BE sectors generated an estimated 5% during the FY 2016/17 and was estimated to grow at 0 5.4% in FY 2021/22[6] as indicated in the figure 4 below.

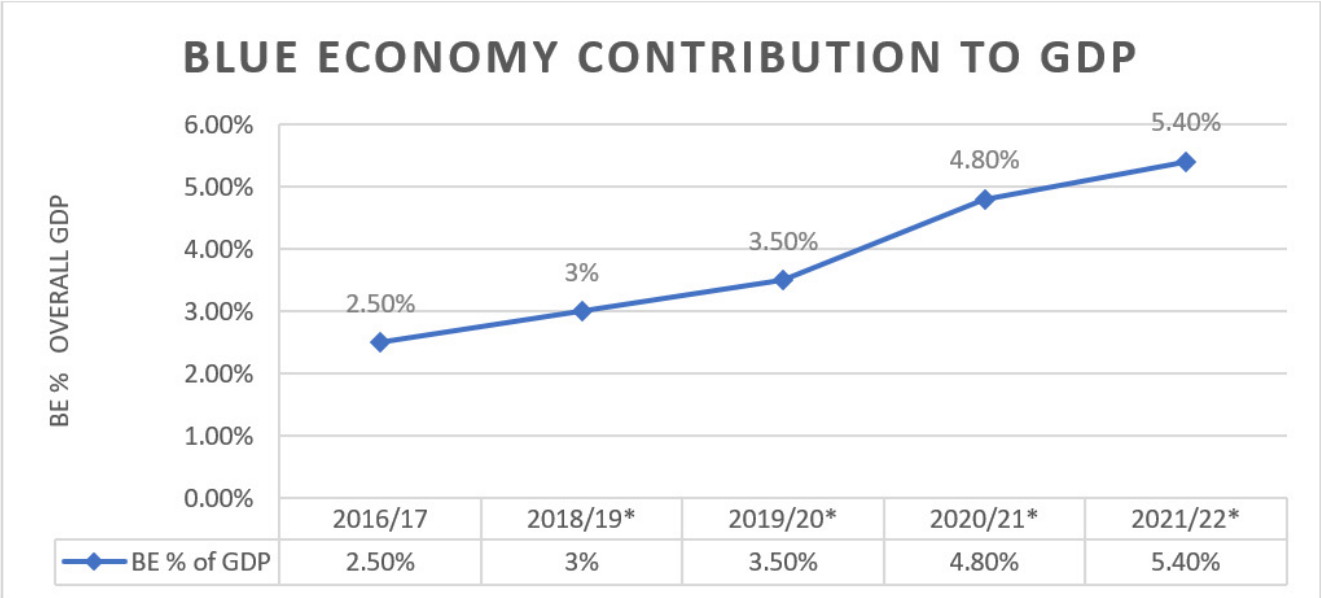


Figure 4: Blue Economy Contribution to GDP

4 Council of Governors, Joint County Bankable Investment Project Handbook
5 Economic Survey, 2023 - KNBS
6 MTP III Indicator Handbook, 2019

The table below offers a summary of the BE initiatives by the national government, development partners, county governments, and other institutions.

Table 3: Kenya's Blue Economy Initiatives

Initiatives	Description
The BE Conference (2018)	Kenya hosted the first-ever global conference on the sustainable BE in Nairobi, Kenya, in 2018 bringing together over 18,000 participants from across the world. The conference resulted in The Nairobi Statement of Intent on Advancing the Global Sustainable BE highlighting the global BE focus areas. BE priority areas mapped at the conference have formed a foundation for Kenya's BE trends. The conference was a foundation for the mainstreaming of BE in the Kenya MTP III economic pillars, the coastal regional bloc and the LREB BE Blueprints.
Coastal Region BE	Various programmes are implemented in the coastal region with the coordination of the Jumuiya ya Kaunti za Pwani (JKP) secretariat established in 2018. These include: i. **Marine Fisheries and Socio-Economic Development Project (KEMFSED) in 2019 by World Bank**. The programme focuses on development of strategic partnerships with the private sector for high-value agriculture or mariculture contract farming schemes. ii. Go Blue by EU is designed to foster a sustainable BE in six (6) coastal counties and generate more than 3,000 jobs for youth and women alone. The programme has 3 components: **a)** **Go Blue Growth** focuses on enhancement of value chains; and strengthening of Jumuiya ya Kaunti (JKP) Secretariat **b)** **Go Blue Environment planning and management** at policy and behavioral level achieved through adoption of climate change mitigation and adaptation measures. **c)** **Go Blue Security** to enhance maritime governance contributing to security and creating an advantageous environment for the economic development of the region.
UK Government support to BE initiative in Kenya	The UK Government funded Sustainable Urban Economic Development (SUED) programme is supporting growth of BE in both Malindi and Lamu municipalities through value addition in the fisheries sector. In Malindi, SUED is supporting 3 potential projects focused on offering improved fishing boats, expanding crab hatchery, and building a cold storage facility to avoid fish spoilage. In Lamu, SUED is assessing the establishment of a fish processing facility which includes improvements in key landing sites and building cold storage facilities. This support will help the 2 Counties diversify local economic activities beyond tourism, create jobs, improve household[7] incomes, enhance people's resilience to climatic shocks and increase the volume of fish and other sea resources that are sustainable.
National BE Strategy	The State Department for the BE and Fisheries has developed a National BE Strategy[8] to provide strategies and mechanisms that will provide sustainable management, development, and utilization of BE resources in Kenya. The Draft Kenya BE Strategy identified inadequate policies, legal, regulatory, and institutional frameworks and financing and weak coordination in management, development, and utilization of BE resources as key barriers to the Kenya BE sector development. The strategy also identified limited capacity, limited investments, and inadequate infrastructure undermining the performance of the sector. It further identified biodiversity losses of the aquatic resources; pollution; climate change; gender disparity as cross-cutting issues in the sector development.
Lake Victoria Region BE	The national government agencies operating within the Lake Victoria Basin have teamed up with 14 county governments in the LREB to collaborate on sustainable management and harnessing of the BE resources in the Lake Victoria region. To achieve this, the region through a consultative process developed the 5-year MAP with initiatives for implementation by the agencies.

7 https://www.suedkenya.org/urban-economic-plan

8 The National Blue Economy Strategy is in draft awaiting validation and launch.

Initiatives	Description
The AECF (Africa Enterprise Challenge Fund)	The programme aims to support the growth and financing of women and young women-owned Small and Medium Enterprises (SMEs) in non-traditional markets, including those related to conserving and sustaining coastal and lake biodiversity. The initiative focuses on the Lake Victoria Basin and Indian Ocean regions encompassing Mombasa, Kwale, Kilifi, Tana River, Lamu, Taita Taveta, Busia, Siaya, Kisumu, Homa Bay, Migori. The programme targets 110 women-owned enterprises, to create 1,490 direct jobs and benefit 1,560 women entrepreneurs, their employees, suppliers, and producers along key supply chains where women are discriminated against in the BE sector in Kenya. The funding focuses on the following areas of Kenya's BE – agriculture and forestry, fisheries, productive use of renewable energy, waste management, biodiversity protection, tourism, supply of inputs and services, and social enterprises that reduce the burden of care.
Devolution Conference 2023	During the 2023 Devolution Conference held in Eldoret, Uasin Gishu County, the CoG organized a BE break away session themed "Exploring the economic opportunities in the BE sector for inclusive growth and benefits for local communities: Reflecting investments in the next 10 years". The breakaway session provided an opportunity for stakeholders (government, private sector, civil society, and farmers) to share experiences, best practices, and lessons learned, and to identify opportunities for collaboration and investment. The stakeholders examined the untapped opportunities in the BE sectors as well as linkages of the BE sector and other sectors such as agriculture, tourism, manufacturing, and energy and identified opportunities for cross-sectoral collaboration.

BE Initiatives in Lake Region Economic Bloc (LREB)

The Lake Region Economic Bloc (LREB) is a regional economic integration initiative that was established in 2015 as a collaborative platform for economic development and cooperation among 14 counties in the western region of Kenya that border Lake Victoria (LREB,2020) The member counties of the LREB are Bomet, Bungoma, Busia, Homa Bay, Kakamega, Kericho, Kisii, Kisumu, Migori, Nandi, Nyamira, Siaya, Trans Nzoia, and Vihiga.

The primary objective of LREB is to promote socio-economic development, investment, and trade within the member counties. Some key areas of focus for LREB include agriculture, tourism, manufacturing, infrastructure development, and human resource capacity building.

By leveraging the collective resources, expertise, and opportunities within the bloc, LREB aims to enhance economic growth, create employment, and improve the living standards of the people in the region. The activities of LREB are coordinated by a secretariat with staff seconded by the county governments. To achieve its objectives, LREB collaborates with national government agencies, development partners, and other regional economic blocs to align its activities with broader national and regional development agendas.

Since its establishment, LREB has been at the forefront of planning for the integration of BE activities in their development plans. In 2014, LREB launched the Lake Region Economic Blueprint developed in partnership with the county governments of LREB. The Blueprint prioritised the sectors below as drivers of economic growth in the region.

i. Productive sectors: Agriculture and tourism;
ii. Social sectors: Education and health; and
iii. Enablers: ICT, Financial Services, and Infrastructure.

The LREB counties have identified and prioritised several flagship projects and initiatives to drive economic development and regional integration. These include the establishment of industrial parks, agro-processing zones, and tourism circuits, as well as the improvement of transportation networks and energy infrastructure. The counties also aim to enhance cross-border trade, harmonize policies and regulations, and foster partnerships with the private sector and development partners to attract investments and support economic growth in the region.

Given that BE was launched 4 years later, the blueprint did not adequately align itself with major sectors like marine development, fisheries, and port activities. Notably, one of the region's most significant natural resources is Lake Victoria, ranking as the largest freshwater lake in Africa and the second largest globally in terms of surface area. Five (5) counties namely; Siaya, Kisumu, Homa Bay, Migori and Busia touch the shores of Lake Victoria. These counties have diverse communities and economies that rely on the resources and opportunities offered by Lake Victoria. BE opportunities presented by the lake include the following:

i. Fisheries and aquaculture;
ii. Trade and transport;
iii. Tourism and recreation;
iv. Renewable energy:
v. Agriculture and irrigation;
vi. Water management and infrastructure; and
vii. Research and innovation.

The nine (9) upstream counties play a critical role in sustainability of the BE resources in the Lake Victoria region. They are responsible for protecting the watersheds and catchment areas that feed into the lake. They play a crucial role in preventing soil erosion, deforestation, and pollution, which can negatively impact the water quality and ecosystem of the lake. These counties participate in environmental conservation efforts, such as reforestation, wetland protection, and biodiversity conservation. Preservation of natural habitats and ecosystems, help to maintain the ecological balance of the lake and its surroundings. In addition, upstream counties implement measures to control pollution from various sources, including industrial activities, agriculture, and residential areas. Development and enforcement of regulations by these counties minimize the discharge of pollutants hence promoting proper waste management practices to prevent contamination of the lake.

Sustainable development and management of the BE resources in Lake Victoria require responsible governance, effective regulations, collaboration amongst stakeholders and consideration of environmental conservation, social inclusivity, and well-being of local communities (Roy, A.,2019). It is against this background that the LREB counties teamed up with government agencies, private sector and academic institutions operating in the Lake Basin, to establish a collaboration framework aimed at harnessing the BE resources to achieve economic growth, increased jobs, increased household incomes, and contribute to poverty reduction while conserving the environment. The Chief Executive Officers (CEOs) of these institutions signed a Memorandum of Cooperation (MoC) in October 2022 and established a framework for collaboration and partnership to enhance economic activities in the Lake Basin region, particularly in the BE sector. The MoC is valid for a period of 5 years and can be extended by mutual agreement.

Through a consultative process, the institutions developed a 5 year (2021/22-2024/25) MAP with prioritised BE projects assigned to each institution for implementation. The action plan focuses on managing and harnessing BE resources in the Lake Victoria region.

It encompasses the following key areas of priority:

Figure 5: Areas of MAP priority

Blue Economy Capacity Needs Assessment

3

The sustainable utilization, investment, and management of BE resources in Lake Victoria offer a significant potential to drive economic growth, generate revenues for the counties, create employment opportunities for the citizens, and improve the livelihoods of communities residing within the vicinity of the lake and surrounding urban and local areas. To harness this potential to its fullest extent, it is imperative for the counties to possess robust capacity in planning, implementing, measuring, and reporting on BE projects.

KDP conducted a comprehensive BE Capacity Needs Assessment (CNA) in Kisumu, Homabay, Siaya and Busia counties from August 29th to 31st, 2023 and on 23rd November 2023 in Migori County. The primary objective of this assessment was to gain a comprehensive understanding of the current capacity landscape and identifying gaps where necessary. The assessment encompassed a wide range of essential capacity parameters crucial for the effective planning, execution, monitoring, evaluation, learning, and reporting of BE projects. These parameters include: Blue Economy Potential and Opportunities; Policy, and Regulatory Framework; Institutional Arrangements and Human Resource Capacity; Project Identification, Planning and Implementation; Economic and Social Impact, and Institutionalization of Monitoring, Evaluation and Learning.

Specifically, the assessment aimed to achieve the following objectives:

i. Gain an elaborate understanding of the BE sectors in each of the four counties, including their associated benefits for both the counties and local communities;
ii. Gain insights into the existing policies and regulations that promote and govern BE projects within the four counties;
iii. Gain insights into the establishment and effectiveness of institutions, departments, or units responsible for overseeing and executing BE projects in the five counties;
iv. Understand the counties' capabilities in identifying, planning, and implementing BE projects;
v. Understand the level of social and economic impact derived from BE initiatives, encompassing aspects such as job creation, income generation, and improved well-being of the vulnerable population;
vi. Gain insights into the MEL mechanisms employed by the counties to track progress, assess results and draw lessons from the implementation of BE projects; and
vii. Produce actionable recommendations and an action plan based on the assessment findings.

The findings from the assessment will be pivotal in shaping decision-making processes across all aspects related to the efficient and effective delivery of BE initiatives.

Why is important to build capacity of counties?
Desired Future

a) Policy, and Regulatory Framework

Developing policy frameworks for blue economy sectors is important for counties for several reasons:

i. Strategic Direction: Policy frameworks provide a strategic direction and vision for the development and management of blue economy sectors. They outline the goals, objectives, and priorities that counties aim to achieve in these sectors. A clear policy framework helps guide decision-making, resource allocation, and the overall development trajectory of the blue economy.

ii. Sustainable Development: Policy frameworks promote sustainable development practices in blue economy sectors. They emphasize the balance between economic growth, environmental conservation, and social well-being. By integrating sustainable practices into policies, counties can ensure the long-term viability and resilience of the blue economy, minimizing negative environmental impacts and maximizing positive social and economic outcomes.

iii. Stakeholder Engagement: Developing policy frameworks involves engaging relevant stakeholders, including government agencies, industry representatives, environmental organizations, and local communities. This engagement fosters collaboration, dialogue, and the incorporation of diverse perspectives. By involving stakeholders, policy frameworks can reflect a wide range of interests and ensure that the needs and aspirations of diverse groups are considered.

iv. Coordination and Integration: Policy frameworks facilitate coordination and integration across various sectors and stakeholders involved in the blue economy. They provide a platform for aligning efforts, breaking down silos, and promoting collaboration between government departments, industry sectors, research institutions, and civil society organizations. This coordination enhances efficiency, promotes synergies, and avoids conflicts in the development and management of blue economy sectors.

v. Regulatory Guidance: Policy frameworks help guide the development of regulations, laws, and other legal instruments related to blue economy sectors. They provide a foundation for establishing clear rules, standards, and procedures that govern activities such as fisheries management, aquaculture operations, tourism practices, and marine spatial planning. Regulatory guidance ensures that operations within the blue economy adhere to sustainable practices, promote responsible resource management, and comply with environmental and social requirements.

vi. Investment and Economic Opportunities: Having well-defined policy frameworks in the blue economy can attract investments and create economic opportunities. Clear policies provide a transparent and predictable business environment, giving confidence to investors and industry stakeholders. This, in turn, can stimulate economic growth, job creation, and innovation within the blue economy sectors, contributing to local and national economic development.

vii. Monitoring and Evaluation: Policy frameworks provide a basis for monitoring and evaluating the progress and effectiveness of blue economy initiatives. They establish indicators, targets, and monitoring mechanisms to assess the implementation of policies and measure outcomes. This monitoring and evaluation process enables counties to learn from experiences, identify areas for improvement, and adapt policies and actions as needed.

b) Institutional Arrangements and Human Resource Capacity

Implementation of blue economy requires the setting up of an effective institutional arrangement that can be defined as Blue Governance as it related to the processes of interaction and decision making among the actors involved in blue economy activities.

i. Effective Governance: Institutional arrangements provide a framework for governance and decision-making in blue economy sectors. They establish rules, regulations, and procedures that ensure sustainable development and efficient resource management. By having clear institutional arrangements, county governments can effectively coordinate different stakeholders, such as local communities, industry, academia, and civil society, to achieve common goals and avoid conflicts.

ii. Sustainable Development: The blue economy encompasses various sectors, including fisheries, aquaculture, marine renewable energy, coastal tourism, and maritime transportation. These sectors have significant economic potential but also face environmental and social challenges. Effective institutional arrangements enable the integration of sustainability principles into policy frameworks, promoting responsible practices and minimizing negative impacts on ecosystems and communities. They can support the development of sustainable practices, conservation efforts, and the protection of marine biodiversity.

iii. Resource Management: The blue economy relies on the sustainable management of marine resources. Institutional arrangements help establish mechanisms for resource allocation, access rights, and enforcement of regulations. They facilitate the development and implementation of effective fisheries management plans, marine spatial planning, and coastal zone management strategies. By ensuring proper governance and resource management, institutional arrangements contribute to the long-term viability and productivity of blue economy sectors.

iv. Investment and Innovation: A robust institutional framework provides stability and predictability for investors and businesses operating in the blue economy. It creates an enabling environment for attracting private and public investments, fostering entrepreneurship, and promoting innovation. Institutions that support research and development, technology transfer, and capacity-building initiatives enhance human resource capacity and promote the growth and competitiveness of blue economy sectors.

v. Collaboration and Partnerships: Institutional arrangements facilitate collaboration and partnerships between different stakeholders involved in the blue economy. They establish platforms for dialogue, information sharing, and coordination among government agencies, research institutions, industry associations, and local communities. Such collaboration allows for the exchange of knowledge, expertise, and best practices, leading to more effective decision-making, increased resilience, and improved outcomes in the blue economy sectors.

vi. Expertise and Skills: Blue economy sectors, such as fisheries, aquaculture, marine renewable energy, and maritime transportation, require specialized knowledge and skills. Human resource capacity ensures that there are trained professionals with expertise in these sectors, including scientists, technicians, engineers, policy analysts, and managers. These individuals possess the necessary technical know-how to make informed decisions, develop innovative solutions, and effectively address the challenges and opportunities within the blue economy.

c) Project Identification, Planning and Implementation

Strengthening the capacity of counties in project identification, planning and implementation will crucial because of the following reasons.

i. Effective Project Selection: Capacity in project identification enables counties to identify and prioritize projects that align with their development goals, resources, and comparative advantages. It involves assessing the feasibility, economic viability, and potential impacts of different project options. Counties with strong capacity can conduct thorough assessments, evaluate risks and benefits, and select projects that are most likely to deliver positive outcomes for their specific contexts. Effective project selection ensures that resources are allocated efficiently and that projects contribute to sustainable economic growth and social development.

ii. Strategic Planning: Capacity in project planning allows counties to develop comprehensive strategic plans for blue economy projects. It involves setting objectives, defining project scopes, identifying target beneficiaries, and establishing implementation timelines. Counties with strong planning capacity can develop realistic and achievable project plans that consider technical, social, environmental, and financial aspects. Strategic planning ensures that projects are implemented in a coordinated and systematic manner, maximizing their effectiveness, and minimizing potential risks and challenges.

iii. Resource Mobilization: Capacity in project planning is crucial for counties to mobilize the necessary financial and technical resources for implementing blue economy projects. It involves estimating project costs, identifying potential funding sources, and developing financing strategies. Counties with strong planning capacity can effectively engage with national and international stakeholders, such as development agencies, investors, and private sector partners, to secure the required resources. Effective resource mobilization enables counties to overcome financial constraints and implement projects that contribute to the sustainable development of their blue economy sectors.

iv. Stakeholder Engagement: Capacity in project planning facilitates stakeholder engagement and participation. It enables counties to identify and involve relevant stakeholders, such as local communities, industry representatives, and environmental organizations, in the project planning process. Counties with strong planning capacity can conduct inclusive consultations, address stakeholders' concerns and interests, and incorporate their perspectives into project designs. Stakeholder engagement fosters ownership, transparency, and accountability, leading to improved project outcomes and stronger support from the local community.

v. Risk Management: Capacity in project planning allows counties to effectively identify, assess, and manage project risks. It involves conducting risk analyses, developing risk mitigation strategies, and establishing monitoring and evaluation mechanisms. Counties with strong planning capacity can anticipate potential risks, such as environmental hazards, market fluctuations, or regulatory changes, and develop contingency plans to minimize their impacts. Effective risk management enhances the resilience of blue economy projects and improves their chances of success.

vi. Efficient Resource Utilization: Effective project implementation capacity ensures that resources, including financial, human, and material resources, are utilized efficiently and effectively. Counties with strong implementation capacity can manage project activities, timelines, and budgets, optimizing resource allocation and minimizing wastage.

This efficiency allows for the maximum utilization of available resources and enhances the overall performance and success of blue economy projects.

vii. Timely Implementation: Capacity in project implementation enables counties to adhere to project timelines and deliver results within predetermined schedules. It involves establishing project management systems, monitoring progress, and addressing any delays or bottlenecks promptly. Timely implementation is crucial for blue economy projects, as it allows for the realization of economic and social benefits within expected timeframes. It also ensures that projects align with broader development plans and can have a positive impact on the local economy and communities.

viii. Quality Assurance: Capacity in project implementation ensures that blue economy projects meet the required quality standards. It involves implementing quality control measures, conducting inspections, and ensuring compliance with relevant regulations and guidelines. Counties with strong implementation capacity can establish robust quality assurance mechanisms, preventing substandard work and safeguarding the integrity of the projects. High-quality implementation contributes to the long-term sustainability and effectiveness of blue economy initiatives.

d) Institutionalization of Monitoring, Evaluation and Learning

It is important to institutionalize Monitoring, Evaluation and Learning in blue economy sector. Strengthened capacity in MEL will lead to;

i. Effective Project Management: MEL capacity allows counties to effectively manage their blue economy projects. Monitoring helps track the progress of project activities, ensuring they are implemented as planned. Evaluation provides an opportunity to assess the impact and effectiveness of projects, identifying strengths and areas for improvement. Learning helps extract valuable lessons and insights from project experiences, enabling counties to make informed decisions and adapt strategies as needed.

ii. Accountability and Transparency: Robust MEL systems promote accountability and transparency in the implementation of blue economy projects. Through monitoring, counties can demonstrate their commitment to project goals, track the use of resources, and report on the progress made. Evaluation provides an objective assessment of project outcomes, verifying if the intended results are being achieved. Transparent reporting of MEL findings enhances public trust and confidence in the county's management of blue economy initiatives.

iii. Evidence-based Decision Making: MEL capacity equips counties with reliable information and evidence to support decision making. Monitoring data provides real-time information on project activities, allowing counties to identify bottlenecks, address challenges promptly, and allocate resources effectively. Evaluation findings provide insights into the impact, relevance, and sustainability of projects, guiding future planning and resource allocation. By basing decisions on sound evidence, counties can enhance the effectiveness and efficiency of their BE interventions.

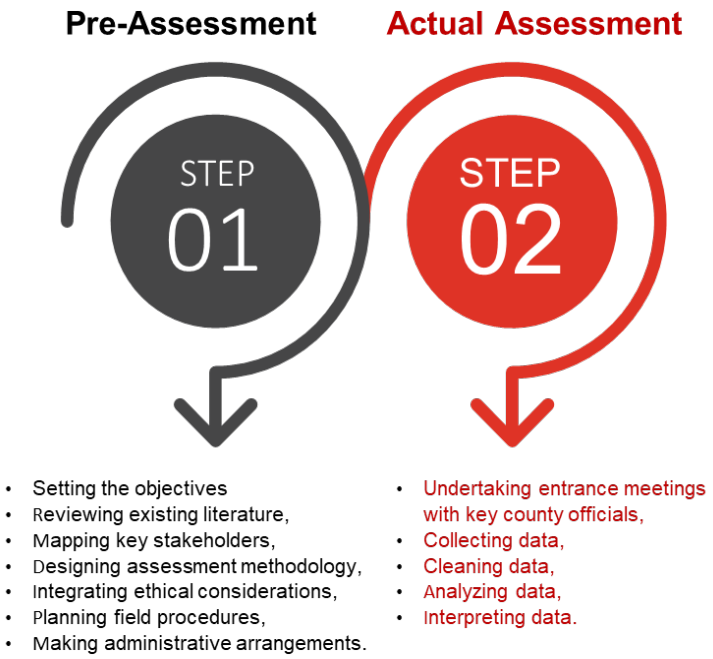
iv. Continuous Learning and Improvement: MEL capacity facilitates a culture of continuous learning and improvement within counties. Learning from monitoring data and evaluation findings helps identify successful strategies, best practices, and areas for innovation. This knowledge can be shared across counties and used to refine policies, improve project design, and replicate successful approaches in similar contexts. By actively learning from their experiences, counties can enhance the overall quality and impact of their BE projects.

v. Resource Optimization: Effective MEL capacity enables counties to optimize the use of resources in their blue economy projects. Monitoring helps identify areas of inefficiency, enabling counties to make timely adjustments and cost-saving measures. Evaluation provides insights into the cost-effectiveness and value for money of projects, informing resource allocation decisions. By maximizing resource utilization, counties can achieve greater impact and sustainability in their BE initiatives.

Assessment approach

KDP followed a two-step approach to initiate and complete the assessment, involving a pre-assessment phase and an actual assessment phase. The pre-assessment phase encompassed all preparatory activities, including setting objectives, reviewing existing literature, mapping key stakeholders, designing the assessment methodology, integrating ethical considerations, planning field procedures, and making administrative arrangements. The actual assessment phase involved undertaking entrance meetings with key county officials, collecting data, cleaning data, analyzing data, and interpreting data, as detailed hereafter.

Figure 6:Assessment Approach



Pre-assessment

KDP undertook the following activities to gather essential information and prepare for the assessment.

a) **Setting of objectives and development of assessment framework:** Clear objectives were set for the capacity needs assessment. These objectives defined the purpose and scope of the assessment, outlining what needed to be achieved. The assessment was structured around six (6) parameters, each with its specific objectives. Figure 6 depicts the adopted assessment framework, providing a visual representation of how the assessment was structured.

b) **Reviewing existing literature**: The pre-assessment begun with a comprehensive desk review of existing literature related to the BE projects and the five counties. This review served as a foundational step in gaining a comprehensive understanding of the current state (including challenges) and prospects within the BE sector, encompassing both national and county government levels. It involved the collection of secondary data that played a crucial role in shaping methodology used in the subsequent evaluation process.

These materials encompassed the following, among other documents:

i. **Global and Africa strategies on BE:** These are the international strategies related to the development and sustainability of blue economies globally and within the African continent;

ii. **International BE conventions and instruments:** These include agreements, treaties, and conventions at the international level that govern aspects of BE;

iii. **Vision 2030 and Medium-Term Plans:** Refer to Kenya's long-term development vision and the medium-term plans which outline economic and social development goals and strategies;

iv. **BETA:** A specific development agenda associated with the national government led by H.E. William Samoei Ruto. This agenda outlines the government's strategies and priorities for achieving economic transformation with a particular focus on a bottom-up approach;

v. **Economic Survey 2023:** An annual report or publication providing an overview of the economic status and trends in a specific year;

vi. **Draft National BE Strategy:** An early version of a national strategy focused on BE development, which is in the process of being finalized and implemented;

vii. **LREB Blueprint:** The blueprint or development plan for the Lake Region Economic Bloc (LREB), which outlines economic development objectives and strategies for the region;

viii. **County Integrated Development Plans (CIDPs) for Kisumu, Homa Bay, Siaya, Busia and Migori:** These are comprehensive development plans created by individual counties, outlining their development priorities and strategies; and

ix. **Lake Victoria MAP:** A coordinated plan involving multiple agencies and stakeholders for the sustainable management and development of Lake Victoria and its resources.

c) **Mapping key stakeholders:** This exercise involved the identification of key stakeholders, including the State Department for BE and Fisheries, the Council of Governors (CoG), Governors of the five respective counties, the LREB Secretariat, and county officials. The stakeholder mapping exercise played an essential role in guiding KDP in determining the relevant parties to involve throughout the assessment process.

d) **Designing the assessment methodology**: In this step, the methodology for the assessment was developed. It involved the selection of suitable data collection methods, including Key Informant Interviews (KIIs), Mini Group Discussions (MGDs), and Focus Group Discussions (FGDs). The choice of these methods considered the specific context of the BE initiatives, the composition of the assessment team, and the availability of county officials, among other factors. The process also involved developing a comprehensive data collection tool, in the form of an interview guide (**annex 6**), to facilitate the systematic gathering of data across the assessment parameters.

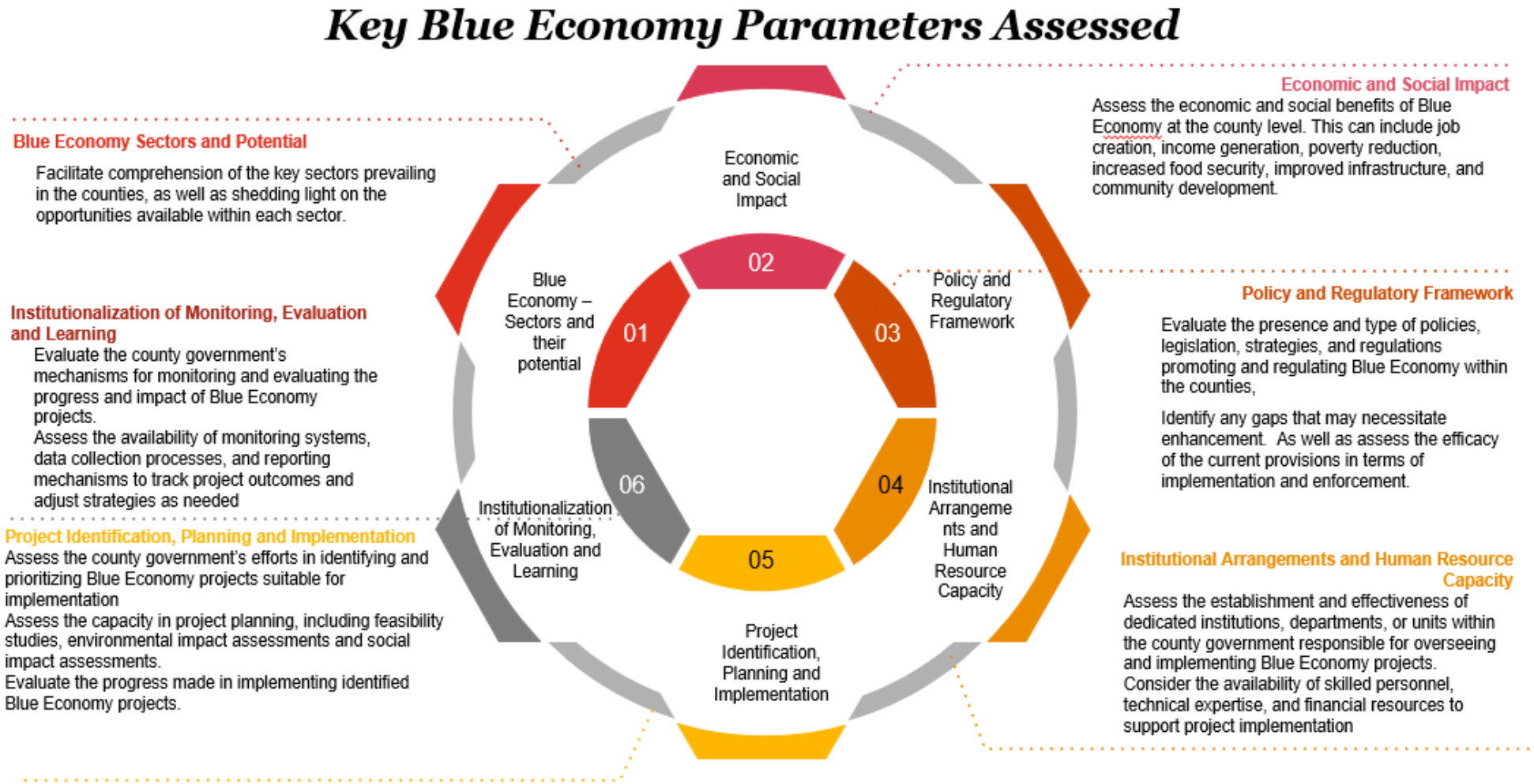
e) **Integrating ethical considerations**: KDP incorporated ethical considerations by compiling a list that covered aspects related to informed consent, confidentiality, and data protection. These considerations were shared with stakeholders, and necessary approvals and permissions were obtained prior to the assessment to ensure that the data collection process strictly adhered to ethical standards and best practices.

f) **Undertaking introductory sessions:** This entailed meeting key officials to introduce them to the planned assessment. On August 15th, 2023, KDP held a virtual meeting with directors in charge of Fisheries from the Kisumu, Homabay, Siaya and Busia counties and shared the objectives of the assessment for their feedback. The KDP team also shared potential dates for assessment and stakeholders to be interviewed to aid in their planning. The introductory meeting with Migori County was held on 23rd November 2023.

g) **Planning for actual assessment:** To ensure a seamless capacity assessment process, a plan was developed to guide how field work will be undertaken. The plan included the assessment program alongside agenda items.

h) **Making logistical arrangements:** During the pre-assessment phase, logistical planning was undertaken to ensure smooth execution. This involved organizing travel arrangements, ensuring the provision of all necessary resources for the fieldwork, and coordinating and scheduling assessment activities with potential interviewees in advance. This thorough logistical planning contributed to the seamless and effective execution of the assessment.

Figure 6: Key Blue Economy Parameters Assessed



Actual assessment

a) The actual assessment took place over 3 days, from August 29th to August 31st, 2022, in Kisumu, Homabay, Siaya and Busia Counties and 2 days in Migori from 23rd November to 24th November 2023. During this period, the following activities were undertaken:

i. **Entrance meetings**: The assessment team held entrance meetings with the county leadership to establish a mutual understanding of the purpose and objectives of the assessment, obtain permission to engage with county staff and set the tone for future interactions. In Kisumu and Migori Counties, the assessment team paid courtesy calls on the Governors, while in other counties, meetings were held with County Secretaries and County Executive Committee Members (CECMs). These meetings served the following purposes:

ii. Establishing a mutual understanding of the assessment's purpose and objectives;

iii. Seeking permission to engage with county staff;

iv. Setting the tone for future interactions;

v. Providing information about the Kenya Devolution Programme (KDP);

vi. Clarifying the objectives of the capacity assessment; and

Assuring the counties that the information collected would be used to develop interventions for implementation by KDP and other institutions interested in strengthening county capacity in the BE.

b) These entrance meetings were critical in building rapport with county leadership, obtaining their support, and ensuring transparency in the assessment process.

c) Data collection, cleaning, analysis, and interpretation: Data was gathered primarily through document reviews and interviews. The document reviews entailed the examination of pertinent materials, including policies, county plans, guidelines, and more. This process aided in gaining insights into the current policy frameworks, institutional structures, and past capacity enhancement initiatives. Additionally, it furnished a contextual foundation and facilitated the pinpointing of deficiencies and zones necessitating enhancement. Interviews served to collect qualitative data, gain insights from various viewpoints, and explore capacity-related concerns more deeply. The team held both in-person and virtual conversations with essential county personnel, as well as the Vice Chancellor and team from Tom Mboya University. The collected data was subsequently analyzed and interpreted, leading to the production of this report.

Assessment Findings

Summary of county specific assessment findings

Parameter	Homa Bay County	Kisumu County	Siaya County	Busia County	Migori County
BE Potential and Opportunities	Homa Bay County, a leading player in BE. The county has 80% of Lake Victoria and extensive wetland areas. To harness the BE, the county plans: i) **Tourism and Recreation:** invest in tourism development, infrastructure improvement, and the preservation of cultural heritage to attract visitors and boost the local economy. ii) **Water Transport:** purchase water buses and ferries to connect movement between islands. iii) **Research and Innovation:** collaborate with Tom Mboya University develop courses on blue economy and promote skills development. iv) **Mineral Extraction:** developing and implementing policies to guide mineral exploitation and sand harvesting, building stones, gold mining, and iron oak that is mined unprocedural. v) **Lakefront Development:** Operationalize the Homa Bay Lake Front Development Corporation for lakeside revitalization and economic activities.	In Kisumu County, the dominant sector is fisheries and aquaculture, with initiatives to explore other sectors. Notable opportunities in these sectors include: • Fisheries and Aquaculture: This sector is a vital source of food and economic benefits in Kisumu County, encompassing activities like recreational fishing, delineation of fish breeding zones, aquaculture, and lakefront fish science exploration. • Tourism and Hospitality: Kisumu has significant potential in maritime tourism, offering water-based activities such as sailing, yachting, cruising, water sports, lake tours, and cruise ships. The region also provides opportunities in mass tourism with hotels, beach resorts, retail shops, entertainment venues, and tours. • Water and Sanitation (WASH): Opportunities here include rehabilitating old water and sanitation infrastructure, constructing new water facilities, promoting proper sanitation practices, developing new sewer treatment facilities, and implementing WASH activities in ECDE and primary schools. • Education: Kisumu County is focusing on research and innovation in sustainable aquaculture practices and technologies. Training programmes are being developed to build a skilled workforce, with marine courses taking priority. • Skills Development and Peer Learning: The county is offering life skills training and advocacy for youth, women, and PWIDs to invest in the BE. Initiatives include digital literacy, youth mobilization, mentorship, and business firm registration. Water sports and cultural innovation are also being promoted, featuring activities like diving, surfing, and cultural entertainment. • Infrastructure Development: The Kisumu Lakefront Development Corporation (KLDC) is prioritizing infrastructure development along Lake Victoria's waterfront. This includes office spaces, Beach Management Units (BMUs), landing piers, fish storage facilities, fish processing plants, boat building yards, floodlights at BMUs, and improved road access to beaches. The above potential opportunities reflect the county's commitment to fostering sustainable development and economic growth in various BE sectors.	The assessment identified Fisheries and Aquaculture as the dominant BE sector in Siaya County, contributing 31,476,000 Metric Tonnes (MT) of fish production between 2018-2022. However, this sector faces several challenges: • Overfishing and Illegal Practices: High demand has led to unsustainable fishing practices, depleting fish stocks and negatively impacting the ecosystem. • Lack of Compliance and Regulation: Enforcing fisheries regulations and sustainable practices is a challenge. • Environmental Degradation: Pollution from industrial and agricultural activities affects water quality and aquatic ecosystems, harming fish populations. • Climate Change: Rising temperatures and altered rainfall patterns have reduced fish populations and aquatic system vulnerability. • Limited Access to Finance and Technology: Small-scale fishers and farmers lack access to modern technology, hindering sustainable practices. • Lack of Market Access and Value Chain Integration: Inadequate facilities limit the sector's ability to reach higher-value markets. • Inadequate Infrastructure: A lack of cold storage facilities and processing plants results in post-harvest losses. Opportunities beyond Fisheries and Aquaculture include: • Offshore Renewable Energy: Exploring offshore wind, wave, and tidal energy projects can provide clean and reliable electricity, enhancing energy security. • Tourism and Hospitality: Opportunities include beach resorts, water sports, boat tours, and cultural tourism, attracting both domestic and international tourists. • Community-Based Tourism: Engaging local communities in tourism can empower them economically, preserving traditions and resources. • Blue Biotechnology and Pharmaceuticals: Utilizing marine biodiversity for pharmaceuticals and bioactive substances can promote economic diversification. • Research and Education: Partnering with institutions to study marine ecosystems and resource management can support sustainable development. To realize the above opportunities, the county should create a conducive environment for private sector investment and establish relevant policies and regulations. Feasibility studies, environmental assessments, community engagement, and participation are essential in project development and implementation. Protection of critical areas like Yala Swamp, which serves as a nursery for fish species, is vital for sustaining the local economy, preserving biodiversity, and ensuring water quality. The county can also explore revenue generation from various BE sectors, such as fish market fees, aquaculture, tourism, and eco-tourism-related streams, by developing appropriate regulations.	Busia County, situated in western Kenya and bordering Uganda, is rich in water resources, particularly Lake Victoria, River Nzoia, and River Malaba, which play a significant role in its local economy. These water bodies contribute to the BE in several ways: • Fisheries: The lakes and rivers, notably Lake Victoria, support a thriving fishing industry. Fishermen and fishmongers depend on these water bodies for their livelihoods. Fish caught from Lake Victoria are consumed locally and even exported to other regions, thus boosting the county's economy. • Irrigation: Rivers in Busia County provide water for irrigation, benefiting farmers who grow crops such as rice, maize, vegetables, and fruits. This enhances agricultural productivity, food security, and income for the local population. • Tourism: While Busia County's tourism industry is still developing, the presence of Lake Victoria and its scenic beauty offers potential for growth. Activities like boat rides, bird watching, and nature walks can be promoted to attract tourists, contributing to the local economy. • Transportation: Water bodies, particularly Lake Victoria, serve as crucial transportation routes connecting Busia County to other parts of Kenya and neighboring countries. This fosters trade and economic integration by enabling the movement of goods and people. To ensure the long-term contributions of these water resources to the county's economy and the well-being of its residents, sustainable management and conservation are vital. Furthermore, Fisheries and Aquaculture are the predominant BE sectors in Busia County, contributing significantly to the local economy. Between 2017 and 2022, fish production saw substantial growth, benefiting from various interventions such as the adoption of cage fishing, establishment of aqua parks, and support for small-scale farmers. These efforts have not only increased fish production but also created employment opportunities and improved livelihoods. In addition to fisheries and aquaculture, Busia County has potential in other BE-related sectors: Renewable Energy Opportunities: • Hydropower: The county's numerous rivers and streams flowing into Lake Victoria offer opportunities for small-scale hydropower projects, providing clean and reliable electricity. • Wind Power: Proximity to Lake Victoria creates favorable wind conditions, making wind power generation feasible. Conducting wind resource assessments can identify suitable locations for wind farms. Tourism and Hospitality Opportunities: • Lake-Based Activities: Lake Victoria is a major attraction for tourists, offering opportunities for boat tours, fishing trips, bird watching, and water sports. Establishing marinas and rental services can enhance tourism. • Ecotourism and Wildlife: Busia County boasts diverse ecosystems, including wetlands, forests, and wildlife habitats. Developing ecotourism initiatives and wildlife tours can attract nature enthusiasts and support conservation efforts. • Community-Based Tourism: Involving local communities in tourism development can provide authentic experiences while supporting the local economy. Partnerships with community-based organizations and training programmes can be part of this approach. • Accommodation and Hospitality: The growth of tourism in Busia County will require suitable accommodation infrastructure, such as hotels, resorts, lodges, and guesthouses, strategically located to cater to tourists.	The county has abundant blue economy resources such as Lake Victoria, Rivers (Migori, Kuja, Awendo etc), wetlands scattered across its landscape and unsurveyed underground water especially on the lower Gucha plains. Lake Victoria is a vital economic resource for the county. The lake is home to various fish species for domestic and commercial purposes. The rivers provide water for domestic use, irrigation, and livestock rearing. They also support biodiversity, including various fish species, and contribute to the overall ecosystem health in the county. The wetlands contribute to overall ecological balance and support various plants and wildlife. The following opportunities can be explored by the county to fully harness the blue economy resources to increase revenue generation, job creation and improve livelihoods: • **Fisheries and aquaculture:** Lake Victoria provide abundant fishery resources, including a variety of fish species such as tilapia, Nile perch, and catfish. Fishing is a significant economic activity in the county, providing livelihoods for the local communities. Aquaculture has the potential to diversify the local economy and provide additional income sources for the community. • **Tourism and Recreation:** Lake Victoria's scenic beauty and diverse wildlife offer opportunities for tourism and recreational activities in Migori County. The lake offers opportunities for various water-based activities such as boat cruises, fishing, kayaking, and canoeing. Development of resorts, eco-lodges, culture villages and recreational facilities along the lakefront will attract domestic and international visitors contributing to job creation and county revenue growth. • **Water Transport:** Lake Victoria offers opportunities for water transport connectivity, including passenger and cargo transportation. Establishing passenger ferry services on Lake Victoria can provide a reliable and efficient mode of transportation for commuters travelling between Migori and neighboring counties or islands within the lake and even to neighboring Tanzania. • **Renewable Energy:** Migori County experiences relatively fierce winds, particularly along the lakefront and in certain elevated areas. Wind energy projects, such as wind turbines, can be developed to harness the power of the wind and generate electricity. The county has several rivers and streams, providing the potential for small-scale hydropower generation. • **Research and Development:** The presence of aquatic resources and ecosystems in Migori County provides opportunities for research and development in areas such as fisheries management, aquaculture techniques, carbon markets and ecosystem conservation. • **Cross-Border Trade:** Migori County shares border with Tanzania and Uganda, both of which have access to Lake Victoria. This strategic geographical advantage can promote cross-border trade and cooperation in various blue economy sectors, including fisheries, maritime transport, safety and security, aquaculture, and tourism. • **County Aggregation Park:** A County Aggregation Park will provide a centralized location where fishers, aquaculturists, and other stakeholders in the blue economy sectors will bring their products for processing, packaging, and value addition. Despite the aforementioned potential and opportunities, the blue economy sectors face a myriad of challenges. These include; Lack of awareness about opportunities in the blue economy by stakeholders, low funding hindering the development and growth of the sectors, lack of policies and institutional framework, overfishing and continued use of illegal fishing gears and methods etc

Parameter	Homa Bay County	Kisumu County	Siaya County	Busia County	Migori County
Policy and Regulatory Framework	Homa Bay County is in the process of developing policies and regulations to support its BE activities. These include; Blue Economy Policy, Blue Economy Master Plan, Fisheries Regulations and Management Plan and County Blue Economy Strategy However, challenges arise from the overlap between county and national policies, causing confusion and enforcement issues in sectors like Fisheries and Aquaculture. To resolve this, the county is promoting coordination, harmonization, and information exchange between local and national authorities to ensure effective and sustainable practices.	Establishing BE policies and regulatory frameworks is essential to ensure the effective governance and management of the BE. Kisumu county has existing policies and regulations that promote BE activities that are aligned with national policies, regulations, and strategies; Kisumu City Master Plan • Aquaculture bill- Not yet aligned with the national government. • Cage fish farming Bill- Not yet aligned with the national government. • Kisumu County Water Bill, regulation awaiting enactment by October 2023 and Water policy. • Kisumu County Solid waste management Act,2014 • Kisumu County water policy ,2018 • Kisumu County disaster and Emergency management act 2015 • Kisumu Climate Change Act ,2020 • Kisumu County Environmental Health & sanitation Act ,2022 • Kenya Environmental Health and Sanitation Policy 2016-2030 • Kisumu County Lake Region Economic Act,2018 • Kisumu County Fisheries and Aquaculture Management Act ,2016 • Kisumu County Lake Front Development Act,2021 • County Roads Act ,2019 • Kisumu County Transport Act,2019 • Developed Youth Integrated Development Plan • Gender mainstreaming policy, Captured in the county CIDP III The Sports and Culture policies have been developed awaiting assembly approval and Bill development. Nevertheless, there are gaps in the existing policies and regulations that require strengthening. These include sensitization and advocacy on BE, capacity building and strengthening of leadership, staff, and public on policies, proper delineation of fish breeding sites, resolving land ownership at the Lake front, and sufficient allocation of funds for development of policies and regulations as well as timely approvals by the county assembly. Enforcement of BE policies and regulations has been slow due to inadequate capacity to enforce the policies and regulation to ensure compliance, and low budgetary allocation. In addition, fisheries extension personnel possess limited capacity to enforce policies and regulations. The BE assessment identified gaps and inconsistencies in existing policies and regulations and recommends necessary reforms, and development of a comprehensive framework that supports sustainable BE practices. The framework should address issues such as spatial planning, licensing, and permitting procedures, pollution control, fisheries management, and biodiversity conservation while promoting social inclusion and equity.	An effective policy and regulatory framework are essential for Lake Victoria's BE sectors. Such frameworks ensure sustainable practices, resource conservation, and equitable access. Currently, the Constitution of Kenya designates agricultural policy as a function of the National Government, transferring elements of agriculture, including fisheries development and disease control, to county governments. In 2021, a collaborative effort between the Ministry of Agriculture, Livestock, Fisheries and Cooperatives, county governments, and key stakeholders led to the formulation of the Agricultural Policy. This policy covers agriculture, livestock, and fisheries. County governments are expected to develop policies and legislation aligned with the National Agricultural Policy. The National Agriculture Policy guide the activities of the County Agriculture, Livestock, and Fisheries department, 2021. Additionally, Fisheries and Aquaculture activities are guided by the Siaya County Fisheries and Aquaculture Act, 2017. This Act focuses on sustainable utilization, management, and development of fisheries, aquaculture, and aquatic resources. It outlines procedures for vessel registration, fishing licenses, pollution prevention, and protection of county fishery waters. Enforcement is conducted by the Directorate of Fisheries with support from sub-county officers. However, challenges arise due to overlapping county and national policies within the Fisheries and Aquaculture sector. These overlaps lead to confusion, inconsistency, compliance issues, and enforcement difficulties. To address this, the team proposed regular consultations, joint planning, a clear mechanism for policy harmonization, and information sharing between national and county governments. Given the cross-sectoral nature of the BE, the county team suggested the need for a national blue policy to guide the sectors. The State Department for BE and Fisheries (SDBEF) has developed a National BE Strategy, which should be disseminated to all county governments once approved by the Cabinet Secretary. As part of the Blue Spatial Development (Zone III), the county has prioritized development of policies, strategies, guidelines, and standards that promote BE development, particularly in Tourism Promotion, Fisheries Development, and Marine Industry. This effort underscores the county's commitment to investing in BE sectors through collaboration with the National Government.	The absence of policies and regulations promoting BE projects in Busia County has significant implications, including: • Limited Incentives: The lack of such policies and regulations can discourage businesses and investors from engaging in BE activities. This hindrance affects the growth of sectors like fisheries, aquaculture, marine tourism, renewable energy, and maritime transportation, all of which have the potential to spur economic growth and job creation. • Unsustainable Practices: The absence of oversight can lead to unsustainable practices in BE resources, such as Lake Victoria and the rivers. Overfishing, pollution, habitat destruction, and other harmful activities can occur without proper regulations. This could result in ecosystem degradation, biodiversity loss, and long-term environmental damage. • Coordination Challenges: Without policies and regulations in place, there can be a lack of coordination among various sectors and stakeholders. This lack of coordination can result in conflicts, inefficient resource allocation, and missed opportunities for synergy among different initiatives and parties.	It was established that some departments have developed policies and regulations though not comprehensive and harmonized. In 2016, the county enacted Migori County Fisheries and Aquaculture Act 2016 and Fisheries Management and Aquaculture Act 2016. Other relevant policies include; The Migori County Climate Change Policy, 2020, The Migori County Climate Change Fund Act, 2021, The Migori County Climate Change Act, 2021, The Migori County Sustainable Solid Waste Management Act, 2021 and The Migori County Sustainable Sand Harvesting Act, 2021. Lack of comprehensive policies and regulations for blue economy sectors at the county level could lead to the following negative impacts in as far as harnessing of blue economy is concerned: • Unsustainable resource management: Without clear policies and regulations, there is a higher risk of unsustainable resource management practices in the blue economy sectors. • Environmental degradation: The lack of policies and regulations can contribute to environmental natural resources degradation which is the foundation upon which all blue resources are anchored. • Lack of investor confidence**:** The absence of policies and regulations can create uncertainty and unpredictable business environment, which can deter potential investors from engaging in the blue economy initiatives in Migori County. • **Social and economic inequities**: The lack of policies and regulations can exacerbate social and economic inequities within the development and harnessing of blue economy sectors

Parameter	Homa Bay County	Kisumu County	Siaya County	Busia County	Migori County
Institutional Arrangements and Human Capacity	The county has established key BE institutions such as the Department of BE, Fisheries, Mining and Digital Economy, the Lakefront Development Corporation, and Directorate for Fisheries. These institutions possess the necessary authority and resources, with staff capacity-building as a top priority. Collaboration with national and regional bodies like the Intergovernmental Relations Secretariat, Council of Governors (CoG), and County Agriculture Sector Steering Committee (CASSCOM) is ongoing. The fisheries sector has spurred growth in industrial fish processing, fish feed cottage industries, and fish markets. Cooperation with other counties in the region and the national government has resulted in the formation of the Homa Bay Lakefront Development Corporation (HLDC). To address specific BE and fisheries challenges, the county team recommends comprehensive training in various areas, including sustainable aquatic resource management, economic development, conservation, fisheries management, aquaculture, water quality control, value addition, ecotourism, climate change adaptation, policy, and governance. Capacity-building is essential given the emerging BE concept and the complexities of fisheries and aquaculture.	Kisumu County has established the Kisumu Lakefront Development Corporation (KLDC) in collaboration with the Lake Region Economic Bloc (LREB). This institution is responsible for overseeing BE initiatives and is well-equipped with the necessary authority and mandate. They have dedicated and experienced staff members seconded from county departments to coordinate BE activities. Capacity-building and knowledge-sharing among local communities are facilitated through peer learning amongst communities. Economic hubs and innovation centers are prioritised for establishment and be used to further engage with the public.	In Siaya County, there are ten departments led by CECMs, with 6 departments—Agriculture, Food, Livestock and Fisheries; Education, Youth Affairs, Gender, and Social Services; Health and Sanitation; Public Works, Energy, Roads, and Transport; Tourism, Culture, Sports, and Arts; and Water, Irrigation, Environment, and Natural Resources—involved in BE projects. However, information on the specific projects implemented by these departments was not provided. The Agriculture, Food, Livestock, and Fisheries department is headed by a CECM and supported by a Chief Officer, County Director, assistant, and sub-county officers. Thirteen additional officers were recently hired to enhance service delivery. Given the cross-sectoral nature of BE, the county is planning to create a dedicated directorate for BE or appoint a Chief Officer to oversee BE activities across these departments. The county has yet to establish mechanisms for improving the skills and knowledge of staff members and stakeholders involved in BE projects. Additionally, programmes aimed to building capacity and facilitating knowledge sharing among local communities benefiting from BE resources have not been developed. Recognizing the emerging nature of the BE concept and the numerous challenges faced by fisheries and aquaculture, the county team proposed comprehensive training on various relevant topics and skills. This training would cover areas such as fisheries management, aquaculture development, water quality management, value addition, ecotourism, climate change adaptation, policy, and governance, among others. There is also a need to raise awareness among county staff and stakeholders regarding BE sectors and their potential.	In Busia County, the department of Agriculture, Livestock, Fisheries is responsible for coordinating BE initiatives and coordinating various government agencies, departments, and stakeholders in the BE sectors. The county is in the process of establishing a dedicated BE directorate to coordinate cross-sectoral initiatives. In the meantime, the directorate of fisheries and aquaculture development oversees these activities. Additionally, the county has implemented mechanisms to enhance the skills and knowledge of staff and stakeholders involved in BE projects. Capacity building is conducted during public participation to develop key plans and budgets. Given the emerging nature of the BE concept and the challenges facing fisheries and aquaculture, the team proposed that they be trained on assorted topics related to sustainable aquatic resource management, economic development, and conservation. These topics include fisheries management, aquaculture development, water quality management, value addition and processing, ecotourism and conservation, climate change adaptation, as well as policy and governance. Furthermore, raising awareness among county staff and stakeholders about BE sectors and their potential should be prioritised.	The blue economy activities are coordinated by the Directorate of Fisheries and Blue Economy under the Department of Agriculture, Livestock, Fisheries and Blue Economy. The department has adequate staff with skills and experience required for development and implementation of fisheries and aquaculture projects. A proposed organogram has the Directorate of Blue Economy which is distinct from the Directorate of Fisheries. The two directorates will be under one Chief Officer for Fisheries and Blue Economy. The Directorate of Blue Economy once established will have staff up to the ward level and will coordinate blue economy initiatives of relevant departments. Having a dedicated unit to coordinate blue economy initiatives within a county government is important for the following reasons: • Effective coordination: A unit specifically focused on blue economy initiatives will ensure effective coordination among various departments, agencies, and stakeholders involved in the development, management, and implementation of the blue economy initiatives. • Strategic planning and implementation: A dedicated unit will lead the strategic planning and implementation of blue economy initiatives in a coordinated and systematic manner. • Policy and regulatory development: The unit will play a crucial role in the development and implementation of policies and regulations that govern the blue economy sectors. • Stakeholder engagement and capacity-building: The unit will facilitate stakeholder engagement and capacity-building initiatives within the blue economy sectors. • Monitoring and evaluation: The unit will work with the county department in charge of monitoring and evaluation to establish monitoring and evaluation mechanisms to track the progress, performance, and impact of blue economy initiatives. It was established that the county sets aside an annual budget for capacity building initiatives aimed at empowering the staff responsible for implementing blue economy initiatives.

Parameter	Homa Bay County	Kisumu County	Siaya County	Busia County	Migori County
Project Identification, Planning and Implementation	Effective project planning and implementation are essential to maximize the economic and social benefits of the BE while minimizing environmental harm. This involves feasibility studies, risk assessment, financial viability analysis, and stakeholder involvement. Ensuring alignment with national and regional development priorities, sustainability, and monitoring and evaluation is vital for long-term success. The county government has identified and prioritized BE projects for the fiscal year 2024/2025, such as Lakefront Spatial Plan development, promenade establishment, pier construction, and mineral site mapping. These projects are executed in partnership with the National Government, private sector organizations, and international financiers, with an emphasis on risk mitigation and gender equity. The county is committed to reducing its carbon footprint through sustainable practices like climate-smart fish farming, the use of solar energy, and embracing carbon credit concepts. Public participation and Environmental and Social Impact Assessment (ESIA) are integral to addressing potential risks in project planning. Gender Equity and Social Inclusion are mainstreamed in project identification and implementation to ensure equal opportunities for all. Public-Private Partnerships (PPPs) and comprehensive ESIA are adopted to foster project sustainability and environmental safeguards. Strict adherence to the Public Finance Management Act, 2021, ensures efficient fund management and disbursement. Project planning and implementation is affected by; Lack of comprehensive plan on the BE, Lack of knowledge and awareness of blue economy and its potential, and Weakness of human resources on implementation of the BE initiatives	Effective project selection, planning, and implementation are essential for maximizing the benefits of the BE while minimizing environmental impacts. This involves conducting feasibility studies, risk assessments, and socio-economic viability evaluations, as well as considering stakeholder participation, resource allocation, monitoring, and adaptive management. It is crucial to align projects with national or regional development plans, engage stakeholders, prioritize sustainability, and focus on long-term viability. The county government's BE projects for 2024/2025 align with CIDP 2023-2027 and involve collaboration with various partners. Risk mitigation is ensured through public participation, and gender equity and social inclusion are integrated into projects in line with the Constitution of Kenya, 2010. Efforts to reduce the carbon footprint are incorporated into departmental work plans and budgets. The projects are in line with SDG 14: Life below water. To promote community engagement, the county government has initiated ward-level public participation and established Community Project Monitoring Committees (CPMCs). Public participation and Environmental and Social Impact Assessment are used to address project risks. Gender equity and social inclusion are emphasized to adhere to the constitutional requirements. Public-Private Partnerships (PPPs) are embraced, and public participation and ESIA ensure public ownership of projects. Comprehensive ESIA during project inception and the development of Environmental Management Plans are used to safeguard environmental and social aspects. The Public Finance Management Act, 2021 is strictly adhered to for effective fund management and disbursement. In the current CIDP 2023-2027, the county government has prioritized the following projects areas for implementation: **Fisheries sector:** Promotion of capture and culture fish production, enhance extension services, promote diversification of fish farming methods, promote market access, promote climate smart technologies, promote fisheries infrastructure development, review, and formulation of legal and policy framework, enhance surveillance and early warning systems etc. In addition, the county has prioritised strengthening technical capacity of staff in modern fishing knowledge and skills. i. **Infrastructure:** The county government through KLDC has prioritized the following projects to promote blue economy: • Construction of a 46KM long promenade along the lakefront. • Backfilling & Reclamation of land to Protect shoreline facilities from extreme fluctuations in lake surface due to climate change. • Upgrading of the existing golf- course shoreline to 18 hole international standards • Construction of a Marina • Construction of High End Housing at the Lakefront	Effective project selection, planning, and implementation are essential for maximizing the benefits of the BE while minimizing environmental impacts. This involves conducting feasibility studies, risk assessments, and socio-economic viability evaluations, as well as considering stakeholder participation, resource allocation, monitoring, and adaptive management. It is crucial to align projects with national or regional development plans, engage stakeholders, prioritize sustainability, and focus on long-term viability. Siaya County has prioritized the BE as a key driver of economic growth and job creation, and it has planned to improve existing beaches, fisheries, fish production, water transport infrastructure, and environmental protection and conservation. The county's CIDP 2023-2027 outlines the Green, Brown, and Blue Spatial Development Frameworks, with the Blue Spatial Development focusing on fishing, tourism, the marine economy, water transport, and renewable energy. The CIDP has identified specific zones for Tourism Promotion, Fisheries Development, and Marine Industry and Commerce, proposing strategies and guidelines for each. The county has prioritized water transport and renewable energy, including plans to develop landing bays, provide ferries, construct parking bays, and install high masts for safety and to facilitate commercial transport and recreational activities. Renewable energy sources like wind and solar power are being considered. The development of Lake Kanyaboli Eco City and the incorporation of Yala Swamp as part of the Eco City are flagship projects aimed at environmentally friendly industrial development, wildlife conservation, cultural and artistic hubs, water and waste management systems, and tourism. However, it was not clear whether comprehensive prefeasibility studies were conducted for these projects, and the county cited budget and technical capacity limitations as challenges. Environmental and social impact assessments are conducted for all county projects to evaluate potential risks and impacts. However, there was no evidence of specific initiatives to promote the reduction of carbon footprint in BE activities. To address this, Siaya County should consider initiatives like integrating renewable energy sources, adopting energy-efficient measures, promoting sustainable fishing and aquaculture practices, implementing waste management and pollution control measures, and conducting awareness and capacity-building programmes to reduce the carbon footprint. These steps will help align BE activities with sustainability goals and mitigate environmental impacts.	In the upcoming fiscal year 2024/2025, Busia County has prioritized the following key fisheries projects: • Fish and Aquaculture Development: This project aims to promote fish and aquaculture activities in the county, including establishing aqua parks, fish cage aquaculture, and backyard fishponds. • Fisheries Infrastructure Development: Focuses on enhancing infrastructure for the fisheries sector, including fishing harbors, landing sites, processing facilities, cold storage, and more. • Fish Value Addition: Aims to increase the value of fish products through processing, packaging, and branding, with initiatives like developing fish processing plants and training programs for fish processors. • Fish Post-Harvest Management: Concentrates on improving post-harvest handling and storage systems for fish, which includes better storage facilities, training programs for fishermen, and quality control measures to reduce losses and maintain product freshness. The above projects align with the county's commitment to promote the fisheries sector, boost economic growth, create jobs, and ensure sustainable utilization of marine resources. The selection of these projects also considers factors such as risks, gender equity, social inclusion, and reducing the carbon footprint. By aligning projects with the broader development agenda and considering associated risks, the county aims to ensure their long-term viability and success. Moreover, gender equity and social inclusion are essential considerations in project identification, aiming to provide equal opportunities for all genders and marginalized groups, promoting inclusivity and empowerment. The county's focus on reducing the carbon footprint underscores its dedication to environmental sustainability, incorporating measures for responsible resource management and mitigating climate change. To evaluate potential environmental and social impacts, the county conducts environmental and social impact assessments before implementing projects. These assessments consider effects on ecosystems, natural resources, communities, livelihoods, cultural heritage, and public health, allowing the development of appropriate mitigation measures. The financing sources for Busia County's projects include: • County Government Funding: Allocated through annual budgets and specific economic development allocations, these funds support infrastructure development, capacity building, research, and other BE initiatives. • International and Bilateral Funding: Provided by international organizations, development agencies, and bilateral partnerships in the form of grants, loans, or technical assistance, to promote sustainable economic activities and infrastructure development. The county also aims to achieve financial sustainability by increasing local revenues through licensing, permits for fishing, and tourism activities within the BE sector. Generated rev enue can be reinvested to maintain and expand projects, ensuring their long-term sustainability. Despite these efforts, the implementation of BE projects in Busia County faces several challenges: • Limited Financial Resources: Inadequate budget allocation poses a significant constraint on project implementation, making it challenging to address the department's priorities. • Understaffing and Lack of Training: The shortage of personnel working on BE initiatives and limited training opportunities hampers effective project implementation. • Lack of Understanding of BE: The relatively new concept of the BE is not well-understood among many residents, affecting the progress of projects. • Inadequate Policy and Legislative Framework: The county lacks a comprehensive policy and legislative framework for BE projects. • Competing interests among political players in prioritizing and distributing projects can further complicate the implementation process.	The Department of Agriculture, Livestock, Fisheries, and Blue Economy has formulated a comprehensive ten-year strategic plan detailing the blue economy initiatives to be implemented by various county departments. These initiatives have also been prioritized in the County Integrated Development Plan (CIDP) and are in line with the long-term vision outlined in Vision 2030. Furthermore, as part of the budget cycle, the county ensures active public participation in all sub-counties to ensure that the initiatives align with the specific needs and preferences of the local communities. The following projects have been prioritized for implementation in FY2024/2025: i. Establishment of fish hatchery unit ii. Establishment of fish feeds processing unit iii. Development of cold storage facilities iv. De-siltation and removal of invasive weeds along the shoreline v. Establishment of cage farms vi. Construction/rehabilitation of fish landing sites: vii. Establishment of fish rescue center viii. Construction of piers and jetties ix. Opening and grading of access roads to the beaches

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Economic and Social Impact	Understanding the BE's contribution to sustainable development requires evaluating its economic and social impacts. This assessment encompassed factors like job creation, income generation, poverty reduction, food security, and sustainable livelihoods, both directly and indirectly. It also considered potential trade-offs and risks associated with BE initiatives, including environmental concerns and social inequalities. By fully harnessing the BE's potential, the county can ensure its sustainable growth, maximizing economic and social benefits for current and future generations. BE projects in the county are expected to generate 50,000 direct jobs and 200,000 indirect jobs in the future. Specific sectors contribution is as follows: Fisheries - 20,000, aquaculture - 15,000, tourism- 10,000, and renewable energy -5,000. These projects have significantly contributed to the county's overall economic growth, fostering economic diversification and the development of new industries and businesses, especially in value chain development. They have stimulated the growth of local supply chains and related industries, including input suppliers, producers, processors, transporters, marketers, financial service providers, and insurance service providers. The establishment of a processing zone in Riwa, Rachuonyo North, and export promotion has enhanced value addition and the marketing of BE products. Small-scale producers and businesses have been integrated into the BE value chain through advocacy for value chain development. On the social impact and community well-being front, there have been notable corporate social responsibility (CSR) activities by commercial fish cage farmers and industrial fish processors, including support for clean drinking water, local schools, and improved road networks around beaches. These efforts have improved the quality of life for local communities, particularly in terms of access to essential services, education, healthcare, and infrastructure. BE projects have promoted equitable benefits distribution across various social groups. Initiatives like the Aquaculture Business Development Programme (ABDP) aim to allocate 30% of opportunities to women, youth, and people with disabilities. The Beach Management Units Regulation, 2007, explicitly mandates adherence to the one-third gender rule when forming executive committees. Public participation and Environmental and Social Impact Assessment (ESIA) exercises raise awareness among local communities about the benefits and potential impacts of BE projects, emphasizing a value chain development approach.	Assessing the BE's economic and social impact is vital for understanding its role in sustainable development. This evaluation includes direct and indirect effects, like job creation, income generation, poverty reduction, food security, and sustainable livelihoods. It also considers potential risks and trade-offs, such as environmental harm and social inequalities. Various BE sectors in the county are expected to create jobs, contributing to overall economic growth and diversification. This growth stimulates local supply chains and related industries, including input suppliers, producers, processors, transporters, marketers, financial services, and insurance providers. The BE has improved local communities' quality of life, providing clean water, income opportunities for education and healthcare, constructing health facilities, and community social halls. Infrastructure upgrades like the bitumen standard Dunga Beach road have enhanced accessibility and reduced business costs, boosting tourism. These projects aim to distribute benefits equitably across different social groups. Efforts to raise awareness about BE benefits and potential impacts involve public participation forums led by the Department of Public Service, County Administration, and Participatory Development.	Siaya County's CIDP 2023-2027 has adopted an agriculture-driven development model to address food insecurity, increase household incomes, and combat unemployment. The plan emphasizes that agriculture, livestock, and fisheries will contribute 60% of the county's GDP, estimated at KES. 15.4 billion. The county has identified BE as a key driver of economic growth and job creation, especially in revitalizing fishing resources. Leveraging its water resources, particularly Lake Victoria, Siaya County has experienced several economic benefits. These include: • Job Creation: Fisheries and aquaculture projects have created employment opportunities, including commercial fishing, fish processing, fish farming, and related activities. These initiatives have provided jobs for local communities, with an estimated workforce that includes 3,000 fish farmers, 13,000 fish crew, 5,000 boat owners, and 5,000 other tradespeople. • Income Generation: Fisheries and aquaculture projects have generated income for individuals and businesses, leading to increased economic activities, improved living standards, and economic well-being within the county. • Infrastructure Development: The development of landing sites, cold storage facilities, and fish processing plants has contributed to overall infrastructure development, stimulating economic growth in related sectors. However, specific data on the number of direct and indirect jobs created by the fisheries and aquaculture sector in Siaya County is currently unavailable. These projects have also stimulated the growth of local supply chains and industries related to the sector: Fish Processing Plant: The establishment of a fish processing plant is expected to create opportunities for local entrepreneurs and stimulate the growth of fish processing industries. This plant will employ local workers and source raw materials from local fishermen, thereby creating a local supply chain for fish products. Value addition activities, such as filleting, smoking, and packaging, can also be undertaken locally, further boosting the growth of related industries. In terms of social impact: Enhanced Food Security and Nutrition: The implementation of fishing and aquaculture projects in Siaya County has significantly improved food security and nutrition in local communities. Fish, being a valuable source of protein, essential nutrients, and omega-3 fatty acids, has contributed to improved diets, reduced malnutrition, and enhanced health outcomes within the community. Empowerment of Women: Women in Siaya County have been empowered through their participation in fish processing, marketing, and value addition activities. Increased investment in the sector has enabled women to gain economic independence, improve their social status, and contribute to decision-making processes within their households and communities. Infrastructure Development: The development of infrastructure, such as landing sites, fish markets, processing facilities, and access roads, has enhanced market access, reduced post-harvest losses, and promoted trade, benefiting the entire value chain and the local economy. Capacity Building: Local communities have benefited from capacity building activities, equipping individuals with the necessary skills and knowledge to engage effectively in fishing, fish farming, and related activities. These initiatives in Siaya County not only promote economic growth but also have significant positive social impacts.	Leveraging the abundant water resources, particularly Lake Victoria, Busia County has witnessed significant economic benefits from sustainable BE activities. These include: • Job Creation: Fisheries and aquaculture initiatives have led to employment opportunities for local citizens. This includes roles in commercial fishing, fish processing, fish farming, and related activities. As a result, poverty levels have decreased, and livelihoods have improved. Approximately 2,070 households are currently benefiting from aquaculture development, with a projected increase to 2,570 in the next fiscal year. • Income Generation: Fisheries and aquaculture ventures have not only created jobs but also generated income for individuals and businesses. This has improved living standards and overall economic well-being within the county. • Infrastructure Development: The growth of the fisheries and aquaculture sectors has driven the development of critical infrastructure. This includes landing sites, cold storage facilities, and fish processing plants, contributing to the overall infrastructure improvement in Busia County. This, in turn, stimulates economic growth in related sectors. Furthermore, the development of these sectors has stimulated the growth of local supply chains and industries. These include: • Fish Processing: The establishment of fish processing plants presents opportunities for local entrepreneurs, supporting the growth of fish processing industries. These plants employ local workers and source raw materials from local fishermen, creating a local supply chain for fish products. Value addition activities, such as filleting, smoking, and packaging, can be undertaken locally, further boosting the growth of related industries. • Local Manufacturing and Supply Industries: The increased demand for fishing nets, boats, fish cages, and processing machinery driven by the fishing industry's growth has stimulated the development of local manufacturing and supply industries that produce and provide these equipment and technologies. • Support Services: The fisheries and aquaculture sector require various support services, such as logistics, transportation, packaging, marketing, and financial services. The sector's growth has led to the development of local service providers specializing in catering to these needs. For instance, transportation companies focusing on the movement of fish products have thrived due to the opportunities created by the fishing and aquaculture activities. The community has benefited in many ways. These include: • Food Security and Nutrition: The implementation of fishing and aquaculture projects in Busia County has played a crucial role in enhancing food security and nutrition in local communities. Fish, being a valuable source of protein, essential nutrients, and omega-3 fatty acids, contributes to improved diets, reduced malnutrition, and enhanced health outcomes within the community. • Empowerment of Women: The projects have empowered women in Busia County, as they actively participate in fish processing, marketing, and value addition activities. Increased investment in the sector allows women to gain economic independence, improve their social status, and contribute to household and community decision-making processes. • Enhanced Market Access: Infrastructure development, such as landing sites, fish markets, processing facilities, and access roads, has facilitated market access, reduced post-harvest losses, and promoted trade, benefiting the entire value chain and local economy. • Capacity Building: Local communities have benefited from capacity-building activities that equip individuals with the necessary skills and knowledge to engage effectively in fishing, fish farming, and related activities. Local communities actively participate in the planning of BE projects during the development of the County Integrated Development Plan (CIDP) and Annual Development Plans (ADPs). However, there is currently no clearly defined mechanism for meaningful community participation in the monitoring of project activities.	Fishing and fish cage culture have made significant contributions to the overall economic growth of Migori County. Here are some ways in which these activities have had an impact: • Employment Generation: The fisheries sector, including fishing and fish cage culture, has created employment opportunities for a large number of people in Migori County. It provides direct employment to fishermen, fish farmers, fish processors, and other individuals involved in the value chain. Indirectly, it supports jobs in transportation, marketing, distribution, and other related services, thereby contributing to livelihoods and income generation. For example, aquaculture has created 100,000 jobs and capture fisheries 50,000. These numbers are expected to increase as the county harness and invest in the sectors. • Income Generation: Fishing and fish cage culture activities have been a source of income for individuals and households in Migori County. Fishermen and fish farmers sell their catch or fish products in local markets, regional markets, and even export markets. This has enabled them to earn income and improve their economic well-being. • Revenue Generation: The fisheries sector has contributed to the county's revenue through various channels. Fishing licenses, permit fees, and taxes on fish sales have generated revenue for the county government. This revenue has been used for infrastructure development, social welfare programs, and other initiatives that benefit the county and its residents. • Value Addition and Processing: The development of fish processing facilities and value-added products has provided opportunities for higher returns on fish products. Fish processing activities such as smoking, drying, and has added value to the products and enabled fishermen and fish farmers to fetch better prices. • **Tourism and Recreation**: Fisheries and aquaculture activities, including fishing and fish cage culture, have also contributed to the growth of tourism in Migori County. Fishing-related tourism, such as sport fishing and recreational fishing, attracts visitors and generates revenue for the county through tourism services, accommodations, and related businesses.

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	is crucial for sustainable BE growth. A systematic approach to MEL enhances decision-making, adaptive management, and ongoing progress. This involves developing structures, methods, and processes, along with fostering a culture of learning and innovation. The county has a dedicated MEL unit in the finance and economic planning department. While this unit is well-equipped for general MEL activities, the Department for BE and Fisheries is yet to develop a specific MEL framework for BE projects since its establishment in 2023. Without a MEL framework, it is not possible to track the progress and impact of blue economy initiatives. The county lacks standardized and consistent tools and mechanisms for various aspects of monitoring and evaluation of blue economy projects. This has resulted in inaccurate and unreliable data, limited learning and improvement, inefficient resource allocation and limited knowledge sharing and collaboration. Limited capacity in terms of necessary skills and financial constraints were cited as key challenges the county facing in their efforts to institutionalize MEL. In addition, the existing BE related policies and regulations do not explicitly address MEL requirements for BE sectors. The county lacks necessary infrastructure and systems for effective data management and technology adoption. This includes data storage, analysis tools, data visualization platforms, and information management systems. Insufficient technological capacity has impeded data-driven decision-making and hindered the institutionalization of MEL.	The county has a well-structured MEL unit within the finance and economic planning department, staffed with skilled professionals. It employs standardized tools for data collection, authentication, analysis, and interpretation, along with regular reviews, reporting, internal utilization of lessons, documentation, and knowledge sharing. An automated monitoring and evaluation information system, implemented with the support of the World Bank, aids electronic data collection and analysis for evidence-based decision-making. Limited capacity in terms of necessary skills and financial constraints were cited as key challenges the county facing in their efforts to institutionalize MEL. In addition, the existing BE related policies and regulations do not explicitly address MEL requirements for BE sectors. The county lacks necessary infrastructure and systems for effective data management and technology adoption. This includes data storage, analysis tools, data visualization platforms, and information management systems. Insufficient technological capacity has impeded data-driven decision-making and hindered the institutionalization of MEL.	Siaya County has a dedicated and well-structured unit responsible for monitoring, evaluation, and learning of projects, situated within the finance and economic planning department. This unit is fully equipped with skilled staff to effectively conduct monitoring, evaluation, and learning activities. While this unit is well-equipped for general MEL activities, the Directorate for Fisheries is yet to develop a specific MEL framework for BE projects. Without a MEL framework, it is not possible to track the progress and impact of blue economy initiatives. The county lacks standardized and consistent tools and mechanisms for various aspects of monitoring and evaluation of blue economy projects. This has resulted in inaccurate and unreliable data, limited learning and improvement, inefficient resource allocation and limited knowledge sharing and collaboration. Limited capacity in terms of necessary skills and financial constraints were cited as key challenges the county facing in their efforts to institutionalize MEL. In addition, the existing BE related policies and regulations do not explicitly address MEL requirements for BE sectors. The county lacks necessary infrastructure and systems for effective data management and technology adoption. This includes data storage, analysis tools, data visualization platforms, and information management systems. Insufficient technological capacity has impeded data-driven decision-making and hindered the institutionalization of MEL.	The County Government currently lacks a dedicated unit for overseeing the MEL of BE projects. Instead, this responsibility falls under the department of finance and economic planning, which manages the MEL for all projects in the county. Furthermore, there is no specific MEL framework in place for BE projects, and standardized tools and mechanisms for various MEL aspects are lacking. These gaps have significant implications such as: • Inaccurate and unreliable data: Without proper tools and mechanisms, data collection may be inconsistent or incomplete, leading to unreliable information that hinders decision-making and project management. • Limited learning and improvement: The absence of standardized tools makes systematic data analysis difficult, missing opportunities for learning and informed decision-making for project improvement, potentially resulting in a lack of progress and repeated mistakes. • Inefficient resource allocation: In the absence of regular reviews and data analysis, it becomes challenging to assess project performance and impact, potentially leading to inefficient resource allocation. • Limited knowledge sharing and collaboration: The lack of mechanisms for documentation, knowledge sharing, and information management impedes effective collaboration among stakeholders, hindering overall progress and growth of the BE sector. To address these issues, the department has prioritized the development of a Monitoring and Evaluation Framework for the fiscal year 2024/2025. Limited capacity in terms of necessary skills and financial constraints were cited as key challenges the county facing in their efforts to institutionalize MEL. In addition, the existing BE related policies and regulations do not explicitly address MEL requirements for BE sectors. The county lacks necessary infrastructure and systems for effective data management and technology adoption. This includes data storage, analysis tools, data visualization platforms, and information management systems. Insufficient technological capacity has impeded data-driven decision-making and hindered the institutionalization of MEL.	The County Government lacks a specific unit to oversee the monitoring, evaluation and learning of blue economy projects. Instead, this responsibility falls under the jurisdiction of the department of finance and economic planning, which manages the monitoring and evaluation of all the projects in the county. The county has not developed a monitoring, evaluation and learning framework for implementation of blue economy projects. The absence of a dedicated monitoring, evaluation, and learning framework tailored for blue economy projects can hinder effective project management, limit learning and improvement, reduce transparency and accountability, and result in missed opportunities for economic growth and sustainability. Additionally, there is a lack of standardized and consistent tools and mechanisms for various aspects of monitoring and evaluation of blue economy projects. This includes data collection, authentication, analysis, and interpretation, as well as regular reviews, internal utilization of lessons, documentation, sharing of knowledge products, and storage of information. This has the following implications. • Inaccurate and unreliable data: Without proper tools and mechanisms, data collection may be inconsistent or incomplete, leading to inaccurate and unreliable information. This can hinder decision-making processes and compromise the effectiveness of project management and evaluation. • Limited learning and improvement: The lack of standardized tools and mechanisms makes it difficult to systematically analyze and interpret data. As a result, opportunities for learning from project experiences and making informed decisions for improvement may be missed. Lessons learned may not be effectively captured and utilized for future projects, leading to a lack of progress and potential repetition of mistakes. • Inefficient resource allocation: In the absence of regular reviews and data analysis, it becomes challenging to assess the performance and impact of blue economy projects. This can result in inefficient resource allocation, as decision-makers may not have accurate information to identify underperforming projects or areas that require additional investment. • Limited knowledge sharing and collaboration: The absence of mechanisms for documentation, sharing of knowledge products, and information management hampers effective knowledge sharing and collaboration among stakeholders. Valuable insights, best practices, and lessons learned may not be properly captured and disseminated, impeding the overall progress and growth of the blue economy sector.

Sector specific opportunities in the Lake Victoria Region

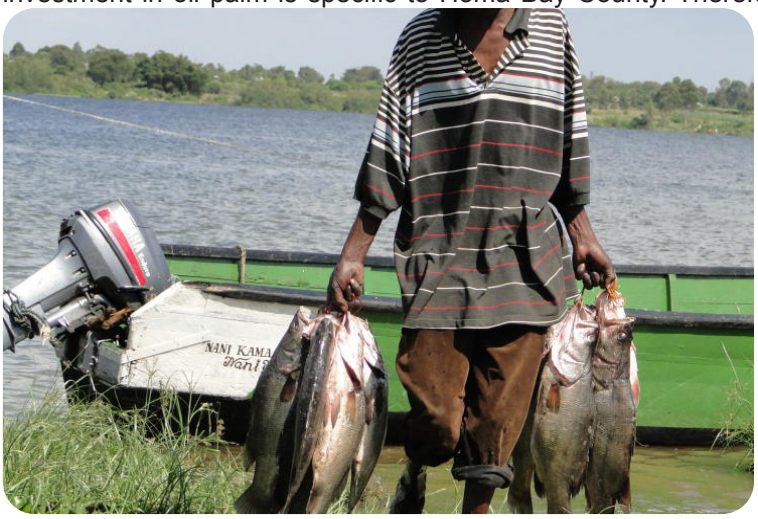
BE is fundamentally aimed to driving economic growth, improving livelihoods, and creating jobs through harnessing productive activities that occur in, on or around oceans, seas, lakes, rivers, and underground waters. These water bodies collectively constitute "blue resources." Such productive activities include fisheries and aquaculture, under water mining, maritime transport, coastal and riparian zone tourism (aqua tourism), hospitality, use of aquatic weeds, and water sports. It is crucially important that these sectors are undertaken in an integrated, fair, and circular manner and ensuring that the health of the water bodies is sustained. Globally, the oceanic BE is valued annually at around USD 1.5 trillion, making it the seventh (7th) largest economy in the world. This is projected to double to USD 3 trillion by the year 2030 (The World Bank, 2017). These figures underscore the significant economic potential and importance of harnessing blue resources for sustainable and inclusive economic development.

BE is quite nascent in Kenya and had largely remained unharnessed until 2018 when the Government of Kenya (GoK), in partnership with Canada and Japan, hosted the 1st global conference on the Sustainable BE in Nairobi. This certainly served as an awakening call that has now placed Kenya as a lead in BE. The country has established a dedicated State Department for BE and Fisheries responsible for BE.

The assessment conducted in five counties highlighted significant untapped potential in BE. The assessment identified numerous opportunities within key BE sectors, including fisheries and aquaculture, tourism and hospitality, renewable energy, infrastructure development, trade and investment, and ship and boat building. These opportunities present prospects for revenue generation, job creation, private sector engagement in harnessing blue resources, climate change resilience, environmental sustainability, and cross-border collaboration.

The assessment findings underscore the importance of leveraging these opportunities to promote sustainable development, economic growth, and resilience in the face of the impact of climate change. The engagement of both public and private sectors is essential to harness the full potential of blue resources in these counties.

Based on the assessment and literature review, several BE sectors around Lake Victoria share similar opportunities, and encounter nearly identical challenges, there are certain sectors that are unique and specific to individual counties. For example, shipbuilding is a distinctive feature of Kisumu County, reflecting its historical background, while the investment in oil palm is specific to Homa Bay County. Therefore, the common Blue Economy sectors have been grouped together to address them comprehensively, focusing on their existing opportunities they offer in relation to revenue generation for counties, job creation and livelihood improvement, private sector opportunities, environmental sustainability, climate change resilience, biotechnology, cross-border collaboration, and water and sanitation (waste management).



Fisheries

The fisheries sector plays and a key role in promoting BE at both the national government (oceanic) and county governments (mainly inland waters). The primary mandate of this sector is to provide for the exploration, utilization, management, development, and conservation of fisheries resources with the ultimate objective of contributing to livelihood improvement, wealth creation as well as job creation in the country. This aligns with the objectives of BETA. For instance, in Busia County, in 2019, the fish production from inland capture fisheries contributed 5,004,810 kgs **of the** county's total fish production amounting to KES 509,152,638 million with the principal fishery being that of Lake Victoria. Aquaculture production amounted to 151,200.2 kgs, earning farmers KES 74,640,827, which represented a 4% increase from the previous year (https://busiacounty.go.ke/index.php/fisheries). Capture fisheries production also increased by 2.6% owing to the weekend ban giving room for reproduction and growth of smaller fish and introduction of fish cages, which led fishermen to shift to aquaculture in open waters, reducing pressure on capture fisheries. Despite the above mentioned performance, the county has experienced a decline of fish stocks in Lake Victoria which has created a wide gap between supply and fish in the county. To address the decline, the county is promoting aquaculture development by encouraging fish cage farming in Lake Victoria.

Similarly, during the same period, Kisumu County recorded an increase in revenue from fisheries. According to county records, fisheries production, encompassing capture fisheries and aquaculture production, increased by 10% (from 1,891 MT to 064 MT) and 22% (122 MT to 149 MT), respectively. This increase in production was attributed to various factors, including the capacity building of aquaculture farmers in modern production technologies, the supply and delivery of 712,000 fingerlings, the distribution of 280 predator nets, the development of post-harvest handling facilities (such as 115 pond liners and 10 harvesting nets), the installation of a cold storage facility at Jubilee Market, and the construction of 4 fish 'bandas'. In addition, restructuring of the governance of Beach Management Unit (BMU) was done (Kisumu County Integrated Development Plan (2023-2027). Besides revenue generation, the sector plays a critical role in providing food, nutrition, and income to a hundred of thousands of people while earning the county millions in foreign exchange. As shown by examples from these two counties, the fishery sector offers several opportunities, especially in revenue generation and job creation.

In Migori County, fish production increased from 18 to 42 MT in the FY 2022/2023 (Migori ADP 2024/2025). This is attributed to the initiatives that were undertaken by the Directorate of Fisheries and Blue Economy. The directorate supplied quality fish fingerlings, fish feeds and encouraged adoption of cage culture in Lake Victoria waters. The directorate also purchased and distributed 850,000 pieces of monosex Nile Tilapia fingerlings and 50,000 pieces of African catfish to 850 fish farmers. Four dams (Bondo Nyironge, Silanga, Nyagesese and Nyamome) were restocked with 100,000 pieces of mixed sex Nile tilapia fingerlings. Twenty-eight fish harvesting nets and 50 weighing crane scales were bought and distributed to 28 Small Aquaculture Groups (SAGs).

Land-based Blue Economy resources like rivers, wetlands, springs, and underground water sources, make a substantial contribution to the overall blue resource inventory. However, this resource brings both advantages and disadvantages, primarily due to periodic flooding caused by lake backwash and rivers overflowing their banks. Additionally, in recent years, there has been a significant decrease in fish population in Lake Victoria, severely impacting the potential of the fisheries sector to contribute to economic growth. In response to this unfavorable situation, all the selected counties have taken concrete measures to promote aquaculture development by introducing and implementing Fish Cage Farming in Lake Victoria. As previously mentioned, Kisumu County serves as a prime example of this. Most of the rivers that flow into Lake Victoria from these counties, such as Nzoia, Yala, Sondu, Nyando, Kuja, and Migori, among others, have similarly embraced aquaculture as a method of tapping into the fisheries sector's potential to enhance productivity. Undoubtedly, the potential for fisheries development in these riparian counties is substantial and can significantly contribute to the socio-economic advancement of both the counties and the nation by increasing revenue and generating employment opportunities.

It was established that fisheries sector faces the following challenges;

a) **Overfishing and Illegal, Unreported and Unregulated Fishing:** high demand for fish for consumption and commercial has led to unsustainable fishing practices, depletion of fish stocks, imbalances in the ecosystem and reduced economic opportunities for fishermen.

b) **Weak enforcement of Fisheries Laws and Regulations:** Weak enforcement has resulted in low compliance and unsustainable fishing practices.

c) **Environmental Degradation:** Pollution of the lakes and rivers from industrial and agricultural activities, and solid waste disposal negatively impact water quality and the health of aquatic ecosystems, affecting fish populations and aquaculture production.

d) **Impact of climate change:** Impact of climate change has reduced fish populations, affected fish species (both diversity and richness), and increased vulnerability of aquatic systems. This has been caused by raising temperatures in the lake, extreme weather conditions and altered rainfall patterns.

e) **Limited Access to Finance and Technology:** Small scale fishers and fish farmers have limited access to finance and modern technology. This has hindered adoption of modern and sustainable fishing and aquaculture technologies.

f) **Lack of Market Access and Value Chain Integration**: The ability of the sector to capture higher-value markets has been limited by inadequate value addition and processing facilities in the county.

g) **Inadequate Infrastructure and post-harvest losses:** Inadequate cold storage facilities, processing plants, and transportation networks has resulted in post-harvest losses and reduced the quality and value of fish products impacting the income of fishers and fish farmers.

Despite the above mentioned challenges, there are numerous opportunities presented through the exploitation of the fisheries sector in these counties, as highlighted in the subsequent section.

a) Opportunities

Revenue Generation

From the assessment, it is evident that there are huge opportunities in revenue enhancement in counties if the fisheries sector is harnessed and fully exploited. For instance, figures from Homa Bay County indicate that some of the initiatives taking place in the fisheries and aquaculture sector, under BE, include activities like capture fisheries, pond fish farming, cage fish farming, fishing gear manufacturing, restocking of the lake, community dams and rivers, fish processing, marketing, fisheries research, and the development of spatial plans for fish landing beaches, among others.

These initiatives, executed between period 2017 to 2022, have been able to unlock an impressive fish production increase from 42,000 MT in 2017, valued at KES. 9.5 billion to 52,000 MT valued at KES.12 billion. Fish farming (aquaculture) production increased from 37 MT valued at KES. 8 million to 475 MT, valued at KES.144 million. Partly, this can be attributed to the increased amount of fishponds from 1,801 in 2017 to 3,226 in 2022 and rigorous promotion of fish cage culture/farming, with more than 1,200 fishponds established recently. This illustrates how well-executed, relatively simple interventions can lead to a significant increase in revenue generation.

Expanding revenue streams within counties can have a similar positive impact by providing additional opportunities for revenue collection. Between 2017 and 2022, Homa Bay County generated KES. 71.4 million from sources such as fish cess, landing fees, cage installation fees, fish processing licenses, and fish distribution fees. This revenue is projected to increase to KES. 188.6 million by 2027(County Government of Homa Bay Treasury, 2023).

The Counties can further enhance existing revenue streams and explore potential ones within the fisheries and aquaculture sectors.

Table 4: Potential Fisheries Revenue Streams

No	Revenue Stream	Description
1	Fishing License Fees	• Counties can generate revenue by issuing fishing licenses to individuals, cooperatives, or companies engaged in commercial fishing activities in the Lake Victoria waters. • License fees can be structured based on vessel size, fishing gear used, or catch quotas.
2	Fish Market Fees	• Counties can collect fees from fish markets and landing sites where fishers sell their catch. • Charging vendors and traders for access to fish markets can generate revenue for the county government.
3	Fish Auctions:	• Counties can establish fish auction centers where fishers bring their catch to be sold to buyers. • Counties can earn revenue by charging fees or commissions on the transactions that take place in these auctions.
4	Fish Processing and Value Addition	• Counties can promote fish processing and value addition activities within their jurisdiction. By supporting the establishment of fish processing plants or encouraging value-added products such as fish fillets, smoked fish, or fish-based snacks, counties can generate revenue through taxes, levies, or partnerships with private enterprises.
5	Aquaculture Licensing and Permits:	• Counties can generate revenue by issuing licenses and permits for aquaculture operations. • This includes fish farming in ponds, cages, or other controlled environments. Licensing fees can be collected based on the size of the aquaculture operation or the species being cultivated
6	Fish Farm Input Sales:	• Counties can establish fish farm input supply centers where fish farmers can purchase essential inputs such as fingerlings, fish feed, and aquaculture equipment. • The sale of these inputs can generate revenue for the county government.
7	Research and Consultancy Services:	• Counties can leverage their expertise and resources in fisheries and aquaculture to offer research and consultancy services to external stakeholders, such as academic institutions, NGOs, or private enterprises. • These services can be monetized, generating revenue for the county government.

In addition to the potential revenue streams mentioned earlier, the fisheries sector also contributes to greenhouse gas

emissions through various activities like fuel consumption, processing, and transportation. By adopting sustainable fishing practices, promoting energy efficiency, and reducing waste within these sectors, it is possible to minimize carbon emissions. There is an opportunity to generate carbon credits through projects that focus on implementing sustainable practices and reducing emissions in fisheries and aquaculture.

To harness the potential of carbon credits in the fisheries sector, it is essential to establish reliable systems for measuring, reporting, and verifying the actual emission reductions or carbon sequestration achieved by specific projects. Furthermore, engaging with pertinent international standards and certification bodies is crucial to ensure the credibility and marketability of the carbon credits generated. This way, the fisheries and aquaculture sector can contribute to both environmental sustainability and additional revenue streams.

Job creation and livelihoods improvement

The fisheries sector has the potential to generate a substantial number of jobs if well harnessed (https://www.busiacounty.go.ke). For instance, in Busia County alone, the fisheries sector directly employs over 1,000 people as fishermen. The stocking of 227 ponds has further generated additional 1,868 jobs. Fisheries and aquaculture have also facilitated the creation of approximately 20,065 jobs, encompassing roles such as fishers, traders, processors, suppliers, merchants of fishing accessories, as well as employees and their dependents.

As counties work towards fully realization of the potential of BE through value addition, it is expected that additional employment opportunities will emerge. These may include opportunities such as fish inspectors, cold room operators, boat crew members, fish net makers, fish feed stockists, breeders, and transporters.

In recent times, the four counties through their respective fisheries sector, have introduced cage fish farming in the surrounding Lake Victoria waters to increase fishery and so far, this initiative has led to the operation of thousands of cages in the lake waters, providing employment opportunities for the youth and women. It has also guaranteed food and nutrition security throughout the year, improved income, and trade, and reduced the pressure of fishing on the lake.

Furthermore, the counties have invested in providing extension services to fish farmers in sub-counties. These services include sensitizing farmers on fish farming and assisting them in constructing fishponds and stocking them with fingerlings, thereby creating additional jobs. It is anticipated that through value addition and the establishment of more fish processing firms and the revival of fish feed plants in the counties, the supply of quality and affordable fish feeds to farmers will increase, leading to the creation of more jobs. The revitalization of the fisheries sector is expected to result in the creation of numerous employment opportunities.

Below are the categories of direct employment opportunities provided by the fisheries sector:

i. **Commercial fishing:** Commercial fishing in Lake Victoria involves a significant workforce engaged in fishing operations. This includes fishermen, boat operators, crew members, and fish processors. These individuals are involved in activities such as netting, handling, and processing fish. Additionally, there are supporting roles such as boat repairers, gear suppliers, and transporters, which contribute to the overall fishery value chain.
ii. **Fish farming and aquaculture:** Aquaculture, including fish farming and other related activities, also creates direct employment opportunities. Fish farmers engage in activities such as pond or cage construction, fish stocking, feeding, managing water quality, and harvesting. Additionally, there are roles in hatcheries, feed production, and fish health management, which contribute to the aquaculture industry.
iii. **Processing and value addition:** The processing and value addition activities associated with the fisheries sector also generates direct jobs. Workers in fish processing plants are involved in activities such as cleaning, filleting, smoking, and packaging fish. Other value addition activities, such as fish drying, salting, and fish product manufacturing, also create job opportunities.
iv. **Supporting services:** Various supporting services contribute to the fisheries and aquaculture in Lake Victoria. These services include boat maintenance, equipment supply, ice production, transportation services, and acting as market intermediaries. These supporting services indirectly create additional job opportunities linked to the fisheries sector.

Tourism and hospitality

Lake Victoria, often referred to as “Victoria Nyanza,” is the largest lake in Africa. It covers an area of 68,850 square kilometers (KM^2), making it the second-largest freshwater lake globally and the largest tropical lake. This magnificent body of water is commonly known as “The Pearl and Pride of Africa” as it is shared by three countries: Uganda, Kenya, and Tanzania, with its catchment area extending to Rwanda and Burundi, defining a truly remarkable touristic zone known as the Lake Victoria Basin.

Lake Victoria holds a special place in the world of tourism as it is surrounded by some of the most iconic tourist sites, including the Mara and Serengeti ecosystems. This tourism circuit extends to Uganda and Rwanda, known for the famous mountain gorillas. Additionally, Lake Victoria is the source of the mighty Nile River, the longest river on the African continent.

The lake is renowned for its rich biodiversity, with a variety of fish species, including colorful cichlids and the large Nile Perch. Fishing, especially for the Nile Perch, which is considered a world-class game fish, attracts many visitors to the region.

In recent years, tourism in the Lake Victoria region has seen a significant upswing due to improvements in infrastructure around the lake basin and the revitalization of the port of Kisumu. Cross-border collaboration and the introduction of one-stop-border posts at key entry points like Busia, Malaba, and Sirare/Isebania have also contributed to the growth of tourism in the region. Improved road networks and increased investments in the hospitality industry, coupled with easier cross-border travel, have led to a surge in the number of tourists visiting the Lake Victoria region.

Furthermore, the development of world-class resorts, game lodges, and hotels on the island's surrounding Lake Victoria has transformed the region from a traditional fishing area into a tourist paradise. Notably, there are many opportunities for game drives and wildlife viewing in the area. Iconic sites such as the Bridge Island and Rusinga fossil sites in Homa Bay County, where renowned archaeologist Dr. Leakey discovered the oldest skull, offer unique experiences. The lake itself is a prime location for game fishing.

Lake Victoria boasts more than 170 tourist sites and numerous heritage sites, outnumbering many other tourism circuits in Kenya. With over 50 world-class resorts established along the lake and its many islands, the potential for BE is vast. A notable development in the region is the beautification programmes by counties in the region, including park renovations and new park creation, aimed at enhancing the appeal and diversity of tourism products.

For instance, Kisumu County (https://www.kisumu.go.ke/) has deliberately increased diversity, competitiveness, and attractiveness of tourism products. The department of tourism recently organized and participated in three cultural tourism festivals and 10 sport based tourism. On improving hospitality management capacity among tourism practitioner, the department has trained 200 beach operators and 4 community based eco-tourism groups. Furthermore, Kisumu City has witnessed infrastructure development that has never been seen before. The county has improved drainage systems to address perennial flooding within the city and residential areas as well as implementing a total of 10.514 km of non-motorized transport corridors, complete with cycle lanes and pedestrian walkways, service ducts and drainage works to decrease traffic congestion and enhance safety to road users and enhance inclusivity in the city.

Similarly, initiatives aimed at promoting tourism can be observed in Busia, Siaya, and Homa Bay Counties, each at varying stages of implementation.

Opportunities

The investments that the select counties have put in creating a conducive environment for tourism and hospitality are substantial. These investments have, in turn, created a plethora of opportunities for socio-economic development in the counties and by extension national level. It is worth noting that each county in the Lake Victoria region has unique characteristics and attractions, so it is important for them to identify and leverage these specific strengths and resources to establish sustainable revenue streams in the tourism and hospitality sector. For instance, Siaya County, located strategically next to the lakefront, offers diverse tourism opportunities, especially in the realm of water sports and outdoor water-based restaurants. The county also boasts cultural heritage sites that hold enormous potential as tourism attractions but remain underutilised. To position Siaya County as a premier tourism hub in the Lake Victoria region, the county government has developed and implemented several strategies to harness the potential of tourism and hospitality. These strategies include:

i. **Construction and equipping of cultural centers:** Developing cultural centers to showcase the rich cultural heritage of the county, providing tourists with unique experiences and insights into the local traditions and history.
ii. **Promoting water sports tourism:** Promoting water-based sports and activities such as boat racing, water skiing, swimming competitions, and boat tours to attract sports enthusiasts and tourists seeking water-related adventures.
iii. **Developing high-end hotel and conference facilities:** Building hotels and conference centers by the private sector to accommodate visitors, including business travelers and conference attendees.
iv. **Facilitating community-based tourism activities:** Involving local communities in tourism initiatives, providing them with opportunities to benefit economically and offering tourists authentic cultural experiences.

v. **Executing marketing initiatives**: Implementing marketing campaigns to enhance the visibility of the county and attract a broader audience of tourists.

vi. **Forging partnerships on wildlife conservancies:** Collaborating on the development of wildlife conservancies to promote tourism and mitigate wildlife-human conflicts.

vii. **Establishing standards for tourism products and services:** Ensuring that tourism products and services in the county meet specific standards to enhance visitor satisfaction.

viii. **Developing road networks:** Expanding and improving road networks within the county, particularly targeting areas with unique heritage facilities and scenic landscapes.

The above strategies can also be adopted by other riparian counties in the Lake Victoria region. The tourism and hospitality sector offers numerous opportunities that can be harnessed for the benefit of local communities, businesses, and the broader economy.

Revenue generation

From the foregoing potential, there are several opportunities for revenue generation by exploiting a number of streams namely:

i. **Hotels and lodging establishments:** Due to the increase in tourism activities, there is a growing demand for food and accommodations from both local and foreign tourists. Counties can develop and promote a variety of accommodations such as hotels, resorts, lodges, guesthouses, and eco-lodges, catering to different budgets and types of tourists, thereby increasing revenue.

ii. **Tourism and ecotourism:** Given the interplay of land, water, and forests, there is immense potential for ecological tourism. Creating circuits that connect places like Lake Victoria to islands like Rusinga or Mfangano, followed by a game drive to Ruma National Park, could generate multiple revenue streams. Counties can invest in ecotourism and conservation by establishing nature trails, botanical gardens, and eco-parks, generating additional revenue for communities. Renewable energy initiatives can also attract eco-tourism, creating revenue through accommodations, guided tours, and recreational activities.

iii. **Collaborating with local communities:** Counties can collaborate with local communities to promote sustainable tourism practices, educate visitors about the importance of conserving natural resources, and provide authentic cultural experiences.

iv. **Water-based activities:** The lake offers opportunities for various water-based activities such as fishing, boat tours, kayaking, sailing, and water sports. Counties can promote and organize these activities, partnering with local operators and ensuring safety measures, which can lead to revenue generation.

v. **Cultural tourism:** The Lake Basin region is culturally rich with diverse ethnic groups and their unique cultural events. Organizing cultural festivals, traditional dances, music performances, and providing opportunities for visitors to explore local customs, traditions, and cuisine can significantly boost revenue.

vi. **Sale of artefacts:** Various artefacts made from water weeds like papyrus and water hyacinth have become popular souvenirs in lakeside counties. This has evolved to include furniture like tables and seats, becoming a regular source of revenue through sales.

vii. **Natural beauty and wildlife:** The Lake region are abundant in natural beauty and wildlife. Counties can establish nature reserves, wildlife sanctuaries, and protected areas to attract tourists interested in bird watching, game drives, nature walks, and photography.

viii. **Tour guides:** The growing tourism sector necessitates the services of tour guides, both community-based and corporate, offering another revenue source for residents, tour companies, and counties.

ix. **Air travel:** The region is well-served by Kisumu International Airport and recently launched Homabay Airport, providing flight options for travelers across the Lake region, including the select counties. This creates opportunities for travel agents to generate revenue.

x. **Transport:** The tourism and hospitality sectors require well-organized logistics, including land, water, and air transport. This sector provides opportunities for revenue collection from firms and transport providers.

Job creation and livelihood improvement

There are significant opportunities in the tourism and hospitality sector within the context of the BE in the select counties. Harnessing these opportunities can lead to job creation and improved livelihoods for the residents. Some key areas of job creation include:

i. **Water sports and recreation:** Activities like boating, sailing, kayaking, and jet skiing require skilled guides, trainers, boat operators, and support staff, directly leading to employment opportunities.

ii. **Ecotourism and wildlife:** Ecotourism activities, such as bird watching, wildlife safaris, nature walks, and visits to national parks or nature reserves, can generate jobs for tour guides, park rangers, hospitality personnel, and related positions.

iii. **Cruise and leisure tourism:** The size of Lake Victoria allows for leisure cruises, attracting tourists seeking scenic beauty and relaxation. This sector can provide employment for cruise operators, boat crew, hospitality staff, and maintenance personnel.

iv. **Cultural and heritage tourism:** Cultural tourism experiences, including visits to traditional villages, music and dance performances, and craft markets, can create jobs for local artisans, tour guides, and cultural ambassadors.

Private sector opportunities

The tourism and hospitality sector relies heavily on the private sector. Government, at either the national or county level, plays a role in policy formulation and providing infrastructure to support private sector investment. Both public and quasi-public banks play a significant role in offering affordable credit facilities for investment, along with microfinance institutions. Private sector engagement in the BE has immediate impacts, including job creation and livelihood improvement. There are numerous opportunities for the private sector in this sector:

i. Establishment and management of hotels and lodges.
ii. Operating tour companies.
iii. Marketing and promotion of tourism.
iv. Providing air travel services.
v. Development and management of conference facilities
vi. Offering logistics and transport services.
vii. Conducting research on tourism and hospitality.
viii. Facilitating investment through credit services provided by private banks and microfinance institutions.

Environmental sustainability

The tourism and hospitality sector heavily relies on the conservation of biodiversity and the preservation of natural scenic and aesthetic sites. Environmental sustainability is of paramount importance for the sector's long-term viability. Therefore, it is crucial that tourism and hospitality, within the framework of the BE, operate in alignment with the principles of sustainable development. This entails fostering sound economic growth that is socially acceptable and environmentally friendly.

Many emerging players in the hospitality industry are adopting environmentally friendly approaches, such as promoting resource efficiency and implementing cleaner production technologies. In areas where facilities are located within conservation zones, it is imperative to prioritize environmental conservation and rehabilitation programmes. Counties can enhance the enforcement of environmental regulations and mandate relevant companies to engage in environmental conservation and rehabilitation efforts. This can encompass activities like land reclamation, effective water management, and reforestation initiatives. By doing so, the tourism and hospitality sector can contribute to the conservation of the environment, supporting the principles of sustainable development.

Climate Change resilience

The tourism and hospitality sector in the context of BE heavily rely on natural resources like wildlife, forests, wetlands, and water bodies. However, they are highly vulnerable to the impacts of climate change. For example, climate change can affect water availability in Lake Victoria, leading to changes in lake levels, reduced water quality, and increased water scarcity. This can directly impact tourism activities such as water-based recreational activities, fishing, and boating. Secondly, alterations in the ecosystem of Lake Victoria, including changes in biodiversity, fish population, and vegetation due to climate change can negatively impact the attractiveness of the region for tourists visiting for birdwatching and nature based activities. Extreme weather events such as storms, floods and droughts can disrupt tourist infrastructure, damage accommodations and impact transportation systems hence affecting the tourism industry's operations and visitor experiences.

Therefore, it is crucial that the development and management of these sectors incorporate strategies for resilience, encompassing both adaptation and mitigation measures.

Cross-border collaboration

Tourism in the Lake region is primarily focused on Lake Victoria and the biodiversity hotspots within the basin. Lake Victoria is an internationally shared resource, and other inland water resources, like rivers, are transboundary from the perspective of the counties in the region. Consequently, regional tourism and hospitality heavily rely on cross-border collaboration.

The relationship between tourism and cross-border collaboration in this context is mutual and interdependent. Cooperation among counties and nations sharing these natural resources is vital for the sustainable development of the tourism and hospitality sectors. Collaborative efforts can help in the preservation of the environment, the promotion of regional attractions, and the facilitation of tourism across borders. It allows for the harmonization of policies, regulations, and standards, ensuring that tourists have a seamless and enjoyable experience while also protecting the natural and cultural assets that drive the tourism industry in the Lake region.

Water and sanitation

The hospitality industry plays a significant role in maintaining lofty standards while also influencing national policies to protect the ecosystem and vital inland blue resources. Hygiene and sanitation are fundamental requirements for the hospitality sector, and effective wastewater infrastructure is essential.

To support the tourism and hospitality industry, counties can invest in water supply and sanitation infrastructure, including the development of water treatment plants, sewage systems, and wastewater treatment facilities. Additionally, modern technologies like bio-digester technology can be promoted to reduce the costs associated with wastewater treatment plants.

Sustaining the tourism industry requires the conservation of ecosystems, both aquatic and terrestrial, that support biodiversity. This necessitates the adoption of integrated water resources management practices and conducting regular research on environmental flows. Comprehensive water allocation plans by county governments are also essential to ensure the responsible use and conservation of water resources in the region. These measures contribute to the long-term sustainability of the tourism and hospitality industry while safeguarding the environment and its water sources.

Renewable energy

County economies are reliant on fuel imports for generating energy, which leaves them vulnerable to international price fluctuations. Moving to renewable sources of energy is a priority for the country and counties, and given recent technological advances, many riparian counties in Lake Victoria are reviewing the potential of the lake to generate energy. Blue renewable energy encompasses a range of methods for utilizing the lake's unique characteristics, including wave, tidal, thermal conversion, and salinity gradient energy, as well as offshore wind energy.

Given the growing global concern about the impact of climate change and the increasing interest in renewable energy, investment in lake-based energy is expected to increase in the coming decades (Gordon, E. 2018). The riparian counties have the potential to generate significant amounts of energy from the lake; however, they face financial constraints and lack of a policy framework. Among the various lake-based energy resources, power generation holds the most promise, but limited capacity and financial resources pose challenges to its widespread adoption.

In summary, the long-term potential for power generation from Lake Victoria is substantial and widespread. While these technologies are at various stages of development, numerous opportunities exist that, if harnessed, could provide sufficient energy for both industrial and domestic use in the counties. The following section outlines some of these potential opportunities.

Opportunities

The riparian counties surrounding Lake Victoria have a range of opportunities in the renewable energy sector, which can contribute significantly to their development and sustainability. These opportunities include but are not limited to:

i. **Hydroelectric power:** While not strictly a blue energy source, the flow of rivers into Lake Victoria presents opportunities for hydroelectric power generation. Dam projects and hydroelectric plants can tap into this energy source. The region's substantial water resources present opportunities to build hydroelectric power plants. These plants can generate electricity for sale to the national grid or local industries, creating a revenue source for the counties. For example, Siaya County is exploring the possibility of hydropower generation in River Nzoia and Yala (Siaya CIDP, 2023-2027). In addition, the county has prioritised development and implementation of an energy reticulation master plan, establishment of energy innovation centres and promotion of sustainable energy solution. The county will partner with the Rural Electrification and Renewable Energy Corporation (REREC) to increase last mile connectivity in every Sub-County.

ii. **Solar power:** Counties can install solar panels on floating platforms on the lake's surface to harness solar energy. Solar technologies can provide an additional renewable energy source for the counties. Abundant sunlight throughout the year makes the region suitable for solar power generation. Counties can establish solar farms or encourage private investments in solar energy projects, with the generated electricity sold to power local communities.

iii. **Wind power:** The installation of offshore wind turbines on Lake Victoria can capture wind energy to generate electricity. This approach is similar to traditional wind farms but adapted for offshore conditions. The region's open spaces and proximity to the lake create favorable conditions for wind power generation, particularly on the islands. Counties can set up wind farms and lease land to private companies for clean energy generation, with the electricity sold to utilities or industries.

iv. **Biomass energy:** Organic waste, agricultural, and forestry waste are abundant in the counties. These materials can be utilized for biomass energy production, which provides another renewable energy source.

v. **Wave energy:** The energy generated from the motion of waves on the lake's surface can be harnessed using wave energy converters. These devices can be strategically placed in areas with high wave activity to generate electricity.

vi. **Tidal energy:** Tidal energy is generated by the rise and fall of tides in the lake. Tidal stream generators and tidal range systems can be used to capture this energy and convert it into electrical power.

vii. **Eco-tourism:** Some renewable energy initiatives, such as wind farms and solar installations, can attract eco-tourism to the region. Counties can generate revenue through visitor accommodations, guided tours, and recreational activities related to sustainable practices and renewable energy projects.

viii. **Research and development centers:** Counties have the potential to establish research and development centers focused on renewable energy technologies. Collaborations with universities and private companies can attract grants, funding, and partnerships, creating employment opportunities and stimulating economic growth.

ix. **Carbon credits:** Engaging in renewable energy projects allows counties to earn carbon credits or offsets. These credits can be sold to companies or organizations looking to reduce their carbon footprint, providing an additional revenue stream.

x. **Workforce training:** Counties can offer training programs and workshops to educate the local workforce about renewable energy technologies. This effort can position the counties as hubs for renewable energy expertise, attracting businesses and generating revenue through training fees.

xi. **Energy efficiency incentives:** Counties can partner with local businesses to offer incentives for energy efficiency improvements. This collaboration can help reduce energy consumption and potentially lead to financial benefits through energy savings.

xii. **Cross-border collaboration:** Collaboration with neighboring countries, such as Uganda and Tanzania, can unlock the full potential of blue energy resources by sharing knowledge, expertise, and resources.

Biotechnology

According to Prof. Mula, a renowned scientist and academic at the University of Nairobi (UoN), biotechnology is a term that is often misunderstood and misused, leading to misconceptions about it. In simple terms, biotechnology can be defined as the processes that result from using biology as a tool for production. The term “biology” itself is broad, encompassing plants, animals, and microorganisms. Therefore, anything produced using these living organisms, if it results in a process, can be considered biotechnological or related to biotechnology.

”Marine biotechnology” refers to the utilization of marine living organisms for various purposes, including industrial applications and the creation of novel chemical compounds or the exploitation of pharmacological properties. Biotechnology has the potential to address a wide range of global challenges, such as ensuring sustainable food supplies, improving human health, enhancing energy security, and remediating environmental issues. It can significantly contribute to sustainable and environmentally friendly growth in various industrial sectors. Moreover, marine bio-resources offer essential ecosystem services that must be preserved.

Biotechnology offers significant potential for promoting economic growth, enhancing livelihoods, and creating job opportunities, among other benefits. Some of the potential associated with biotechnology in the context of the BE include the following:

i. Biotechnology has a growing role in the health sector, particularly in the exploration of marine microbes, such as bacteria, which have been found to be a valuable source of potential drugs. This holds substantial promise for advancements in biomedical science.

ii. Marine biotechnology has demonstrated significant commercial potential in the development of industrial products and processes, as well as in the life sciences industry. It serves as a novel source of enzymes and polymers.

iii. In the energy front: algal biofuels offer promising prospects especially as a source of renewable energy. Within the last 2 years, billions of dollars have been injected into alga-culture or algal farming right around the world. Due to the dynamics of Lake Victoria and other freshwater lakes, there exist immense potential from algal blooms, especially in Lake Victoria.

Opportunities

Biotechnology is a new field that harnesses biological systems, living organisms, or their components to create and develop various products. Numerous industries, including the food and medical sectors, have benefited from biotechnology, particularly in the production of drugs and seafood derived from marine life in both freshwater and saline water bodies. As the focus on BE expands to include inland waters, biotechnology is also making a shift toward freshwater biota, encompassing both aquatic animals and plants, thereby increasing opportunities for biotechnological applications.

Biotechnology has proven to be highly valuable in many ways, such as job creation, refining industrial processes, environmental remediation, and advancements in agricultural biotechnology. In the United States, for example, the biotechnology industry employs over 800,000 people. These employees work across multiple biotech sectors, including research, development, manufacturing, and technical support. Additionally, given the rapid evolution of the biotech industry, employment rates for biological technicians are expected to grow by 5% between 2019 and 2029.

Similar trends and opportunities are emerging in Africa, creating potential for investment in both oceanic and inland water-based BE initiatives. In riparian counties situated along freshwater bodies, there are prospects to explore blue biotechnology and pharmaceuticals. The rich biodiversity of lakes can serve as a source for marine-based products, such as natural compounds with pharmaceutical potential or bioactive substances suitable for cosmetic and nutritional applications.

Further opportunities in biotechnology can be found in areas like tissue culture, fisheries, crop protection solutions, the pharmaceutical industry, food science and technology, as well as household goods and services. Many post-harvest solutions in the agricultural sector are biotechnological in nature, and there is significant potential for further development in this area. For instance, tissue culture, which can be used to produce disease-free planting materials, has the potential for commercialization beyond laboratory-scale production. The demand for biotechnological solutions is expected to continue growing, making it a promising field for economic and industrial development.

Water and sanitation

The water and sanitation situation in Kenya continues to be a significant challenge. According to UNICEF records from 2020, only 59% of the Kenyan population has access to safe drinking water, and a mere 29% have access to improved sanitation facilities. Furthermore, 1,765 villages still practice open defecation. However, when viewed from a unique perspective, these statistics underscore the immense potential in water, and sanitation, initiatives within the riparian counties. This potential includes:

i. **Revitalization of current and development of fresh water and sanitation infrastructure**: This involves refurbishing and enhancing the existing water and sanitation facilities to optimize their performance and reach, particularly in underserved areas.

ii. **Promoting proper water and sanitation practices:** This entails the dissemination of information and education to endorse enhanced water and sanitation practices.

iii. **Promotion of water and sanitation activities in schools:** Implementing water and sanitation initiatives in Early Childhood Development and Education (ECDE) and primary schools to equip young learners with knowledge and skills related to water and sanitation.

1.1.1.1. Opportunities

Below are some notable opportunities in water and sanitation within the riparian counties:

i. **Investment in water supply and sanitation infrastructure:** Counties can invest in improving water supply and sanitation infrastructure, which includes upgrading water treatment plants, expanding sewage systems, and establishing wastewater treatment facilities. This infrastructure development can generate revenue through user fees while enhancing the quality of life for residents and tourists.

ii. **Private water suppliers:** Private water suppliers can collaborate with county water departments to enhance water supply and distribution, thereby expanding coverage and reliability.

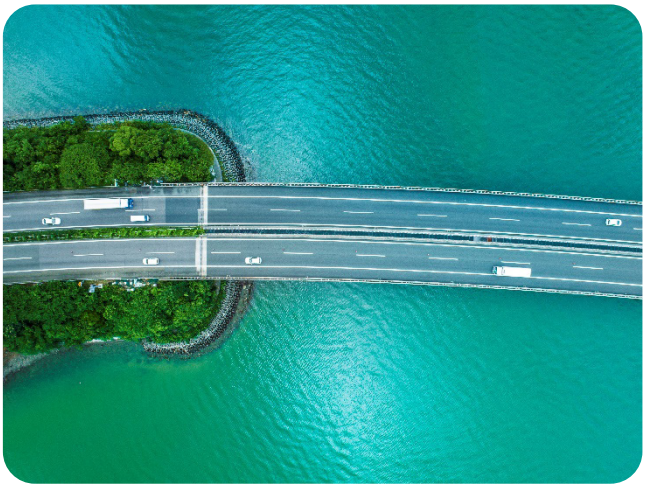
iii. **Waste disposal:** Opportunities exist in waste disposal services, particularly for areas lacking sewerage connectivity. Exhauster trucks can be used to manage waste and sewage in these locations.

iv. **Water sports:** The region offers excellent potential for various water sports and recreational activities. These include diving, surfing, water polo, rowing, yacht racing, jet skiing, dragon boat racing, synchronized swimming, kayaking, canoeing, fishing, kite boating, parachuting, river and lake trekking, rescue swimming, water volleyball, cave diving, spearfishing, underwater photography, beach sports, and more.

v. **Cultural innovation and entertainment:** Counties can explore opportunities for cultural innovation and entertainment. This may involve hosting water festivals, providing water sports equipment, showcasing cultural entertainment, creative arts, narratives, poetry, storytelling, cultural fashion, and attire, promoting local dishes, music, and cultural traditions.

vi. **Entertainment industry:** There are additional prospects in the entertainment industry, such as the development of beachfront entertainment venues and islands, promoting filming and initiatives related to BE, creating handicrafts from BE products like reeds, and establishing arts galleries and sculptures to showcase local talent and creativity.

Infrastructure Development



Transport infrastructure in the Lake Region has witnessed notable improvements in urban areas over the past decade, however, rural areas continue to grapple with underdeveloped road networks. In semi-urban areas, less than half of the roads are paved, and a sizable portion of the population lacks access to electricity, clean water, and proper sanitation services. These infrastructure challenges are exacerbated by the rural nature of the counties, leading to higher service provision costs. Additionally, low-income households in these rural areas often struggle to afford the connection costs associated with rural electrification.

The Lake Victoria region has witnessed significant improvements in its urban transport infrastructure over the past decade. However, rural road networks in this region continue to lag in development. In semi-urban areas, fewer than 50% of roads are paved, and only 30% of the population enjoys access to electricity, clean water, and proper sanitation services. The infrastructure sector faces specific challenges in these rural counties, where higher service delivery costs can be a burden on the local population. Many rural households, with limited income-generating capacity, find it challenging to cover the expenses associated with rural electrification connections.

Moreover, there are opportunities in the water infrastructure sector for interconnecting the riparian counties. The improvement of airstrips, including those in Homa-Bay and Busia Counties, can further enhance air transport in the region. Key sectors such as Agriculture, Tourism, Education, Health, ICT, and financial services rely on a well-structured and efficient infrastructure network to operate effectively. A robust and interconnected infrastructure network plays a pivotal role in facilitating inter-county market integration, reducing production and transaction costs, streamlining the movement of goods and information, ameliorating inequalities and poverty, and boosting the economic capacity of the region.

At the national level, the infrastructure sector significantly contributes to GDP, with the transport and communications sub-sectors being the most prominent contributors over the past 3 years, outperforming other infrastructure subsectors. Remarkable potential for infrastructure development exists in the lake region since less than 50% of roads are currently paved in the Lake Basin Region. The region's energy generation capacity, at approximately 124 kilowatt hours (kWh) per capita per year, is insufficient to meet the needs of its large population. Although surrounded by the world's second-largest freshwater lake, the region's water transport infrastructure remains underdeveloped. Sanitation coverage in the area is dismal, with 40% of the population lacking access to safe drinking water and 60% lacking basic sanitation facilities. These infrastructure challenges, if addressed, can be converted into opportunities for contributing to BE development.

Opportunities

The riparian counties that border Lake Victoria have substantial infrastructure opportunities that, if harnessed, can contribute significantly to the development of BE. These opportunities include:

i. **Investment in port and harbor development:** The riparian counties, such as Kisumu, Homa Bay, Siaya, and Busia, can invest in the development and expansion of ports and harbors, which can enhance trade and generate revenue through port fees and related services.
ii. **Power generation and energy infrastructure:** These counties can explore power generation and energy infrastructure projects, including renewable energy sources like hydroelectric power plants, solar farms, and wind farms. This investment can lead to sustainable revenue through energy sales and contribute to the regional power supply.
iii. **Water supply and sanitation infrastructure:** Investment in water supply and sanitation infrastructure, including water treatment plants, sewage systems, and wastewater treatment facilities, is another opportunity. Public-private partnerships can be established to develop these facilities, which can generate revenue through user fees and improve the quality of life for residents and tourists.
iv. **Infrastructure maintenance and expansion:** Counties can focus on the maintenance and expansion of various infrastructure projects in the Lake Basin Region. This includes improving the railway network, expanding airports and airstrips, constructing, and upgrading roads to facilitate the transportation of agricultural produce, enhancing rural electrification, implementing street lighting projects, and improving waste disposal and treatment systems.

Maritime transport

The development of Lake Victoria ports is a significant project in the implementation of the East African Community (EAC) Inland Waterway Transport infrastructure development program, which was agreed upon by Partner States to strategically connect Uganda, Tanzania, and Kenya through the Northern and Central transport corridors. These three countries are working to revitalize connected ports and maritime operations on the shared waters, aiming to enhance integration and boost trade by providing more cost-effective cross-border transport options. In Tanzania, the ports of Mwanza, Musoma, and Bukoba are already operational and are the busiest on the lake. In contrast, the Kisumu port has been rehabilitated, while Uganda is in the process of constructing the Bukasa port to complement the services provided at Port Bell.

The development of these ports has always been part of the larger East Africa Corporation (EAC) development plans. Kenya, Uganda, and Tanzania are collaborating to revitalize the neglected and underdeveloped Lake Victoria maritime transport infrastructure, which has the potential to generate around USD 60 billion in trade annually[9]. However, currently, the three countries together realize only USD 6 billion from this trade. Kenya has invested USD 7 million in the construction of infrastructure at the Kisumu port, including fuel and feeder jetties, piers, shunting areas, berths,

9 https://www.theeastafrican.co.ke/tea/news/east-africa/lake-victoria-untapped-trade-3203598

a terminal, yards, as well as administrative and customs facilities to reclaim Kisumu's position as the nerve center of inland maritime transport in East Africa. The port has also been equipped with forklift trucks, mobile cranes, and tractor-trailers ready for imports and exports. These initiatives have the potential to spur economic potential in the region. However, their success depends on the cooperation and reciprocity of other EAC countries, namely Uganda and Tanzania, given the interconnected nature of maritime transport.

Within Kenya, there are notable initiatives, particularly from the private sector, aimed at promoting maritime transport in the Lake. These initiatives include Sio Port, Luanda Kotieno, Homa Bay pier, and Mbita. One of the main challenges in maritime transport in Lake Victoria is the occurrence of accidents and incidents, with an estimated 5,000 people losing their lives due to accidents on the lake every year. In addition to the developments in maritime transport, Kenya is also reviving the meter gauge railway connection to the port, complementing the Mombasa-Naivasha standard gauge railway. The Kenya Pipeline Corporation (KPC) completed the construction of a USD 17 million oil jetty in 2018. However, the utilization of the Kenyan oil jetty is awaiting readiness on the part of their counterparts on the other side of the lake, which is Uganda.

Opportunities

Maritime transport is one of the most pivotal sectors within BE, and it carries the potential to unlock substantial opportunities for enhancing socio-economic development, uplifting livelihoods, and generating employment. Despite the sector's various challenges, it presents a multitude of prospects, including:

i. **Lake transport operations by ship and boats:** Operating ships and boats for transportation on Lake Victoria provides employment and opportunities for the transportation of goods and passengers;
ii. **Sale of protective gear:** The regulatory framework governing lake transport mandates that all passengers must use protective gear (such as life jackets), creating a demand for life jacket manufacturers and suppliers.
iii. **Boat making:** The environmentally friendly construction of boats, aside from ships, presents a substantial potential, especially for the private sector.
iv. **Aids to navigation:** To mitigate accidents and incidents on the lake, which have resulted in fatalities, there are opportunities for installing aids to navigation equipment in the lake. Initiatives have already begun through the EAC regional body responsible for Lake Victoria;
v. **Weather forecasting:** Many accidents and incidents on Lake Victoria are weather-related. Therefore, opportunities exist for the installation of weather forecasting equipment in the lake, which would be invaluable for early warning systems and enhancing safety.
vi. **Navigation maps:** Lake Victoria lacks modern navigation maps, with the current maps dating back to the early 1900s. Creating up-to-date navigation maps for the lake presents a significant opportunity.
vii. **Opportunities for employment:** With the increased shipping activity on the lake, there will be a growing demand for captains, engineers, and crew members, offering employment opportunities.
viii. **Tourism and recreation:** With a safe lake, there will be more investments such as cruise ships and floating restaurants. A safe and well-managed lake can attract more investments, such as cruise ships and floating restaurants, enhancing tourism and recreation opportunities.
ix. **Increased trade activities:** Improved Lake transport can boost both inter and intra-regional trade, creating opportunities for revenue generation and employment.

Research and Innovation

BE, as an emerging economic sector, relies on the dynamic interaction between blue resources (oceans, seas, lakes, rivers) and various user sectors. This interaction is crucial for unlocking the full potential of the BE. However, if not guided by well-informed policies and a robust legal framework, it can lead to the degradation of these valuable resources, undermining the promising prospects of the BE.

The future policies that will shape the BE should be grounded in research, especially given the multifaceted nature of the sector. As the BE continues to gain momentum, particularly with the increasing focus on a diverse range of blue sectors in inland water bodies, innovative approaches are essential. Research will play a pivotal role in facilitating innovation, as innovative research generates the necessary data and insights to inform and optimize the benefits derived from various BE sectors.

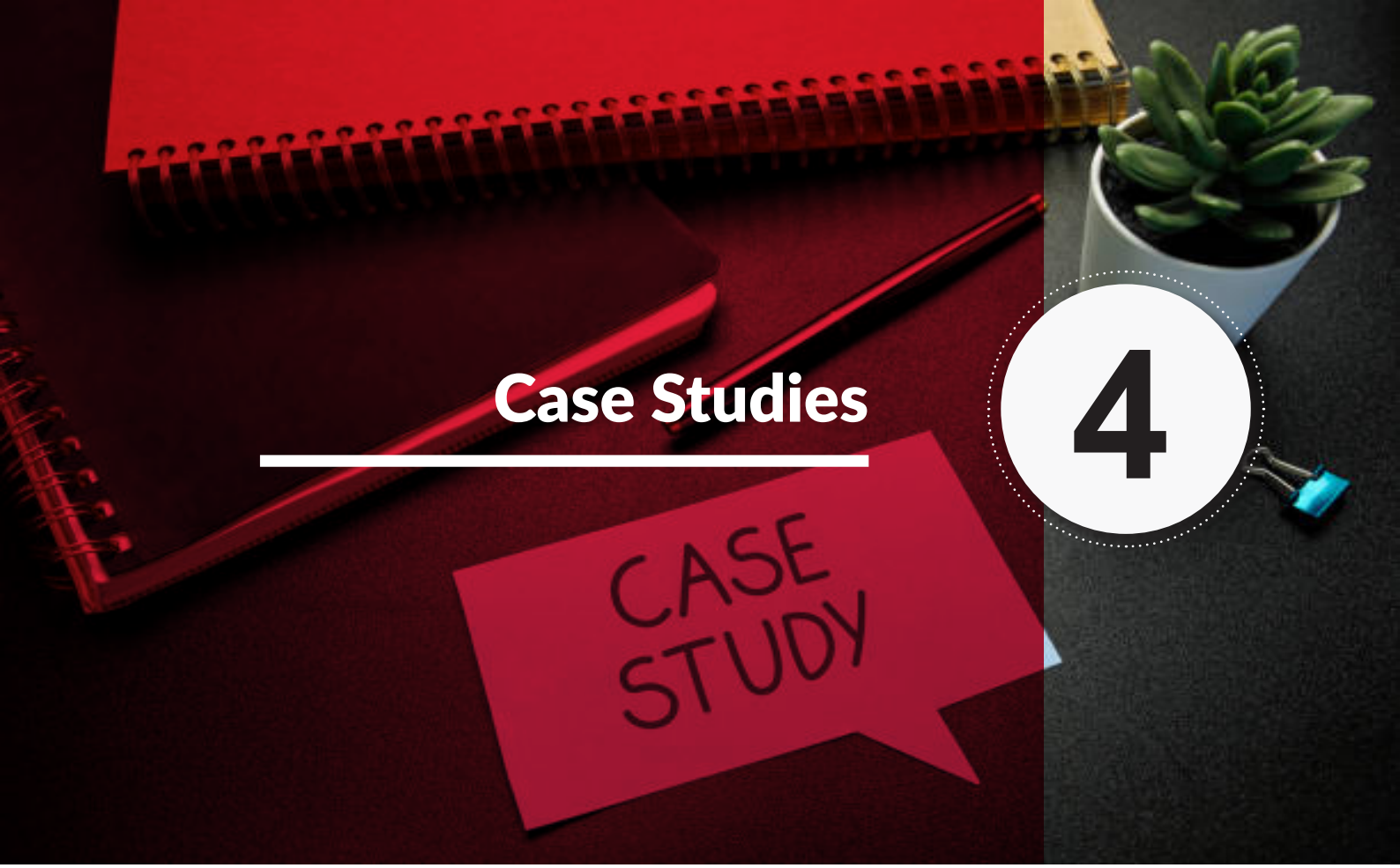
Innovation will bring significant value to products and services derived from blue resources, by introducing more profitable methods, popular products, and services from both oceanic and inland waters.

This innovation will uncover the untapped potential of the BE. For example, in the realm of marine and maritime research and innovation, a deeper understanding of the marine environment will pave the way for creating the BE of the future. It will contribute to a country's ambition to lead in the BE sectors within the region. Through research and innovation, the BE can evolve and thrive sustainably, unlocking its full economic and environmental potential.

Opportunities

The establishment of new tertiary and higher education institutions offering modules in the BE such as Bandari College in Mombasa and in the Lake Victoria region, Tom Mboya University, which is planning to roll out BE courses, is a positive development that creates a solid foundation for science and innovation in support of the country's ambition for a sustainable BE. Additionally, Jaramogi Oginga Odinga in Siaya has established a Blue Economy Research Hub. The ultra-modern BE research hub aims to attract local and international researchers whose findings are expected to unlock potential in the BE in the region and Kenya. These educational institutions provide a range of opportunities, including:

i. **Skilled workforce:** The availability of educational programmes in BE equips students with the skills and knowledge necessary to pursue careers in various BE sectors, such as marine biology, aquaculture, maritime law, and environmental science. This, in turn, contributes to the creation of a skilled workforce that can drive the growth of the BE.
ii. **Research and innovation:** Tertiary institutions play a critical role in research and innovation. By offering modules and conducting research in BE-related fields, these institutions contribute to the generation of new knowledge, innovative solutions, and technologies that can enhance the sustainability and productivity of BE sectors.
iii. **Entrepreneurship and startups:** Education institutions often foster an entrepreneurial spirit among students. Graduates who are exposed to BE modules may be inspired to create their startups, driving innovation and economic growth in the BE sectors. These startups can range from sustainable fishing practices to aquaculture ventures and environmentally friendly tourism initiatives.
iv. **Policy and regulation expertise:** Graduates in BE-related programmes can become experts in the development and implementation of policies and regulations that govern BE activities. They can work with government agencies and organizations to create frameworks that promote sustainable resource management and responsible business practices.
v. **Environmental stewardship:** Education in the BE emphasizes the importance of environmental conservation and sustainable resource management. Graduates from these programmes are more likely to advocate for practices that protect aquatic ecosystems, reduce pollution, and promote biodiversity conservation.
vi. **Collaboration and partnerships:** Tertiary institutions often engage in partnerships with government agencies, research organizations, and the private sector. These collaborations can lead to joint research projects, knowledge exchange, and capacity-building initiatives, strengthening the overall BE ecosystem.
vii. **Public awareness:** Education institutions can contribute to raising public awareness about the importance of the BE and the need for its sustainable development. This awareness can lead to increased support for BE initiatives.



Case Studies

4

Renewable energy – Denmark

Over the past forty (40) years, Denmark has made remarkable strides in integrating renewable energy sources, with a total of seven (7) gigawatts (GW) of wind and Photovoltaic (PV) Solar capacity being integrated into its electric grid. The most recent data from 2022 highlights that Denmark now meets 60% of its electricity needs with renewables. Even more astonishing is the projection that this figure will quadruple in a mere 8 years.

Denmark's journey offers valuable lessons on the potential of renewable energy to contribute to BE initiatives. This success is underpinned by a steadfast commitment to sustainability, which has paved the way for significant advancements in renewable energy development, especially in the offshore wind sector. Below are some of the benefits from renewable energy projects:

i. **Offshore wind power:** Denmark has demonstrated a strategic utilization of its offshore wind resources, resulting in the generation of a significant amount of renewable energy. The nation stands as a pioneer in the development of offshore wind farms, with the installation of the world's first offshore wind farm, Vindeby Offshore Wind Farm, dating back to 1991. Denmark has since furthered its commitment to offshore wind energy, with several large-scale wind farms now operational within its territorial waters. This sustained effort underscores Denmark's leadership in harnessing offshore wind for renewable energy production.

ii. **Energy self-sufficiency:** Denmark's offshore wind farms have played a crucial role in achieving energy self-sufficiency. The country has set ambitious renewable energy targets and aims to be completely independent of fossil fuels by 2050. Renewable energy, including offshore wind, has enabled Denmark to reduce its reliance on imported energy sources and enhance energy security.

iii. **Job creation and economic growth:** The development of the offshore wind industry has contributed significantly to job creation and economic growth in Denmark. The sector has created thousands of jobs in areas such as wind turbine manufacturing, installation, operation, and maintenance.

Danish companies involved in the offshore wind supply chain have gained expertise and become global leaders, exporting wind energy technologies and services worldwide.

iv. **Environmental benefits:** Offshore wind power has helped Denmark reduce GhG emissions and combat climate change. By shifting away from fossil fuels, Denmark has significantly reduced its carbon footprint and improved air quality. Offshore wind farms also provide additional environmental benefits by acting as artificial reefs, enhancing marine biodiversity, and promoting fish habitats.

v. **Export of expertise:** Denmark's success in offshore wind has positioned the country as a global leader in renewable energy expertise. Danish companies have capitalized on their experience and knowledge to export wind energy technologies and consultancy services to other countries. This export of expertise has not only supported Denmark's economy but has also contributed to the global expansion of renewable energy.

From the foregoing, Denmark has only capitalized on one source of renewable energy – wind. In the lake region, the sources of renewable energy are many include solar, wind, biomass, geothermal due to 4000 Km² of open surface water. From the case study some critical aspects regarding renewable energy includes: its indefinite potential to expand; ability to create self-reliance in energy; job creation; and the importance of inter-sectoral collaboration in harnessing of blue resources.

Lessons

Denmark's success in renewable energy can indeed serve as a valuable source of lessons for other regions and countries. Here are some key takeaways from Denmark's experience:

vi. Supportive policy framework**:** Denmark's dedication to renewable energy success is underpinned by a robust policy framework. Establishing supportive policies, regulations, and incentives that encourage the growth and utilization of inland water resource-based renewable energy projects is essential. These policies provide a stable and predictable environment for investors and industry players, which is crucial for the development of renewable energy.

i. Public-Private Partnerships**:** Denmark has effectively nurtured public-private partnerships to drive renewable energy ventures. Collaborating with private industry stakeholders, including developers, investors, and technology providers, can help mobilize resources, tap into specialized expertise, and expedite the execution of renewable energy projects. Such partnerships create a win-win scenario where the public sector benefits from private sector innovation and investment.

ii. Investment in research and development**:** Denmark's significant investments in research and development have been instrumental in advancing renewable energy technologies. Promoting research institutions, facilitating technology transfer, and fostering knowledge exchange between academia, industry, and government play a pivotal role in the adoption of blue renewable energy solutions. Research and innovation are critical drivers of technological progress in the renewable energy sector.

iii. Community engagement**:** Denmark places a strong emphasis on involving local communities in renewable energy projects. Engaging local communities in the planning and execution of blue renewable energy initiatives is vital for gaining social acceptance. This can be achieved through public consultations, addressing community concerns, and ensuring the equitable distribution of benefits. A supportive and engaged local community can mitigate opposition and help smooth the path to project development.

Blue Economy Tourism – Seychelles

Seychelles, an enchanting archipelago situated in the Indian Ocean off the eastern coast of Africa, is celebrated for its awe-inspiring natural beauty, pristine white sandy beaches, and diverse marine ecosystems. In recent years, the country has emerged as a leading global destination for sustainable tourism, with a specific focus on the concept of BE. Seychelles recognized the potential of its marine resources and ecosystems to drive sustainable economic growth while preserving its natural heritage. The country sought to harness its abundant marine biodiversity, encompassing coral reefs, marine parks, and a plethora of marine life, to cultivate a tourism industry that is socially, economically, and environmentally sustainable.

Seychelles implemented a comprehensive policy framework to facilitate the development of BE tourism. The government established the Seychelles Sustainable Development Strategy (2012-2020) and the Seychelles BE Roadmap (2018-2030) to guide the sector's growth.

These strategies focused on sustainable tourism practices, marine conservation, and community involvement, with the aim of ensuring equitable benefits for local communities and long-term environmental preservation. Seychelles pursued various initiatives to promote sustainable tourism practices, including the establishment of marine protected areas such as the Aldabra Atoll UNESCO World Heritage Site and the Marine National Parks. These areas safeguard critical habitats, endorse sustainable fishing, and support ecotourism activities. Furthermore, the country encouraged the development of eco-friendly accommodations, the utilization of renewable energy, waste management programmes, and efforts to protect vulnerable species such as sea turtles.

Community participation and empowerment were central to the success of BE tourism in Seychelles. The government engaged local communities, including fishermen, tour operators, and indigenous groups, in the decision-making process and ensured their active involvement in tourism activities. This approach aimed to foster a sense of ownership, distribute economic benefits, and safeguard cultural heritage.

BE tourism has brought significant economic benefits to Seychelles. The sector has led to the creation of jobs, increased foreign exchange earnings, and contributed to poverty reduction. The influx of tourists has generated revenue for local businesses, including accommodations, restaurants, and tour operators. Additionally, the growth of the tourism industry has provided opportunities for skill development and entrepreneurship, particularly in the areas of marine conservation and sustainable practices. Despite its successes, BE tourism in Seychelles faces several environmental challenges. Climate change and rising sea levels pose significant threats to the country's fragile ecosystems, including coral reefs and coastal habitats. Over-tourism and improper waste management can also impact the marine environment. Addressing these challenges necessitate ongoing monitoring, research, and adaptive management strategies to ensure the long-term sustainability of the tourism industry.

Lessons:

BE tourism in Seychelles has indeed implemented several strategies that could serve as valuable lessons for Lake Victoria counties when it comes to sustainable management, conservation of natural resources, and tourism development. Here are some key points to consider:

i. Eco-friendly regulations and practices**:** The Seychelles have implemented strict regulations to protect its coral reefs, marine biodiversity, and sensitive ecosystems. Lake Victoria counties can adopt similar regulations and sustainable fishing practices to protect their natural resources and preserve their ecosystems.

ii. Collaboration**:** Collaboration between the government, local communities, and the private sector has been a driving force in the Seychelles' tourism success. Lake Victoria counties can engage with private sector entities to attract investment, develop tourism infrastructure, and ensure equitable distribution of benefits. This collaborative approach can help create a more sustainable and inclusive tourism industry.

iii. Diversification of tourism offerings**:** The Seychelles has diversified its tourism offerings to include marine-based activities, yacht charters, and eco-tourism experiences. Lake Victoria counties can explore diverse tourism products that align with their natural assets, such as birdwatching, boat safaris, cultural tourism, and water sports. Diversification can attract a wider range of visitors and increase their length of stay.

iv. Infrastructure development**:** Investing in tourism-related infrastructure is crucial. Lake Victoria counties can prioritize the development of airports, ports, accommodation facilities, and transportation networks to enhance accessibility and improve visitor experiences.

v. Effective marketing**:** The Seychelles has effectively marketed itself as a unique and pristine destination with a focus on natural beauty and sustainability. Lake Victoria counties can invest in marketing efforts to build a strong brand image, highlight their uniqueness, and target market segments that appreciate sustainable and nature-based tourism.

Carbon Credits – Mikoko Pamoja Kenya and Chyulu Hills REDD+

Mikoko Pamoja Kenya

Mikoko Pamoja (Mangroves together), based in Gazi Bay in Kenya, is the first mangrove Payment for Ecosystem Services (PES) project in the world which seeks to restore and conserve mangroves, degraded by years of legal and illegal cutting, through the sale of carbon credits. The community received technical support in restoration of the mangrove forests and in carbon quantification through scientists from the Kenya Marine and Fisheries Research Institute (KMFRI) in Mombasa. The project is accredited by the Plan Vivo system and standards to trade in 3000t CO2. Mangroves are referred to as Blue Forests and they have been documented to contain 6 times the carbon sequestration potential of terrestrial forests. Mangrove forests also offer additional ecosystem support services such as the provision of nursery grounds for important fish species and coastal protection services. Under this project, about 117 hectares of natural and planted mangrove forests are under a co-management regime where communities safeguard the forests and its resources.

The carbon credits produced by the project are sold on the international voluntary carbon market through a charity known as the Association for Coastal Ecosystem Services (ACES). The carbon verification is done through Plan Vivo. Benefits from the credits are used to support various community needs in the Gazi village.

The Mikoko Pamoja blue carbon project is run by the community based Mikoko Pamoja Community.

Organization in partnership with the KMFRI and in collaboration with Earth watch. Since its inception in 2014, this community-led initiative incorporates mangrove rehabilitation and PES to ensure co-management and benefits sharing. This project provides a successful example of cooperation between multiple stakeholders including the local communities, state agencies, and non-governmental organizations. Secondly, the Mikoko Pamoja initiatives demonstrates that a voluntary carbon market can both successfully fund a small-scale community-based blue carbon mangrove restoration project and benefit local communities in a developing country[10].

An important aspect of this endeavor is the fact that it provides financial benefits for conservation and the work is currently promoting the national dialogue for inclusion of blue carbon from mangroves in the Kenyan Nationally Determined Contributions (NDCs). According to the Africa BE Strategy, NDCs form an essential component of BE and projects such as this lend themselves to providing conservation benefits and securing critical areas of biodiversity even as the drive for large developments are promoted by African governments.

Chyulu Hills REDD+ conservation programme

The Chyulu Hills region serves as a vital watershed, supplying water to nearby communities, livestock, and wildlife. Unfortunately, this watershed has been subjected to deforestation, primarily driven by practices such as slash and burn agriculture and the harvesting of charcoal for fuel. Over the past decade, local communities, in collaboration with the Maasai Wilderness Conservation Trust (MWCT), private sector entities, and other partners, have joined forces with Conservation International to protect and restore the forests and grasslands within this critical landscape.

In 2017, the Chyulu Hills region achieved verification as a REDD+ project, an initiative endorsed by the United Nations. This initiative offers financial incentives to communities, regions, and countries that are committed to maintaining the integrity of their forests, thus preventing carbon emissions resulting from deforestation. The project generates revenue through the sale of carbon credits, which represent a reduction in greenhouse gas emissions. Countries, companies, or individuals can purchase these credits to offset emissions produced elsewhere.

Since its establishment, the Chyulu Hills REDD+ conservation project has effectively preserved and rejuvenated a substantial area of approximately 400,000 hectares, equivalent to one (1) million acres. This conservation effort has not only safeguarded iconic wildlife species such as elephants and rhinos but has also thwarted the release of approximately 37 million metric tons of carbon emissions. Furthermore, the project has been a catalyst for local economies, as the sale of carbon credits alone yielded more than USD 3 million in 2020. This consistent influx of income from carbon credit sales has undeniably had a transformative impact on the livelihoods of local communities, which include indigenous Maasai pastoralists and Kamba agriculturalists. A distinguishing feature of this initiative is the direct involvement of these communities in determining how the proceeds from carbon credits are allocated, aligning with their specific priorities and needs.

This empowerment mechanism ensures a more sustainable and equitable approach to sharing benefits, a quality often lacking in most of the natural resource and blue resource programmes. Considering the distinctive nature of inland blue resources, which heavily emphasize conservation efforts, this project can serve as a replicable model for many of our blue resource “hope spots.” Implementing similar initiatives in these areas holds the potential to enhance sustainability and promote the overall well-being of aquatic ecosystems.

In addition to the ecological advantages of the Chyulu Hills restoration, there have been several recorded socio-economic benefits:

i. Beekeeping farms**:** Local communities in both the eastern and western regions of Chyulu Hills have received support in establishing their own beekeeping farms. These farms produce honey, which serves a variety of purposes. People can sell honey to generate income, use it for medicinal applications, or include it as a source of food for their families.

10 https://www.sciencedirect.com/science/article/pii/S0308597X15003905#bib18

ii. Increased beehives**:** The project has gone further to establish over 630 beehives across the region. This initiative not only creates employment opportunities for community members, particularly women who have historically had limited job prospects in the area, but it has also resulted in an increase in pollinators. This, in turn, has contributed to improved crop growth on local farms and supported the overall restoration of the surrounding savannas and forests.

iii. Human-wildlife **c**onflict mitigation**:** The project has played a significant role in reducing human-wildlife conflicts, particularly those involving elephants. Setting up beehives along fences around farms or houses acts as a deterrent for elephants, as these animals are averse to bees. This approach helps in keeping elephants away from human settlements without causing them harm.

iv. Investment in education**:** The revenue generated from the sale of REDD+ carbon credits has been directed towards addressing challenges in the local education system. Over the past 2 years, the programme has funded the salaries of seven new teachers, a new cook, a community health worker, and 4 new cleaners. Additionally, the funding has been instrumental in renovating multiple schools and constructing new latrines. This investment has significantly improved the educational infrastructure and quality of education for the children of Chyulu Hills, addressing issues related to overcrowded schools, a shortage of teaching staff, and poor facilities.

Lessons

The lessons from the Mikoko Pamoja project and the broader context of carbon offset projects can provide valuable insights for counties looking to engage in carbon credit initiatives. Here are some specific lessons:

i. Development of carbon offset projects**:** Counties can explore a variety of carbon offset projects that align with their local context and resources. Reforestation and afforestation, renewable energy projects, waste management and recycling programmes, and improved agricultural practices are just a few examples. These projects not only generate revenue but also promote sustainable practices and contribute to reducing greenhouse gas emissions. Customizing projects to the local environment is key.

ii. Robust Measurement, Reporting, and Verification (MRV) Systems**:** Establishing dependable MRV systems is essential for accurately measuring and reporting emission reductions achieved through carbon offset projects. Counties should invest in the necessary infrastructure and expertise to ensure transparent reporting. Learning from countries or programmes with well-established MRV systems can provide valuable guidance and help avoid common pitfalls in data collection and verification.

iii. Market access and financial mechanisms: Understanding the carbon market landscape is crucial for counties to effectively generate revenues from carbon credits. Learning from countries that have successfully accessed carbon markets, whether voluntary or compliance markets under international agreements, can provide insights into how to navigate market complexities. Additionally, exploring financial mechanisms like carbon funds, green bonds, and impact investment can provide financial support for project development and implementation.

iv. Policy and regulatory framework**:** Developing supportive policy and regulatory frameworks is vital to incentivize carbon credit projects and create an environment conducive to their implementation. Counties can draw inspiration from countries or programmes with progressive policies and regulations in the carbon market. These frameworks should encourage private sector investment, foster community engagement, and align with broader sustainable development goals.

Community engagement and partnership: Seaweed (macro algae) farming Kenya

In 2001, an experiment was initiated in Kenya to explore the potential of seaweed farming as a means of improving the livelihoods of local villagers. The project aimed to determine the suitability of various sites for commercial seaweed cultivation. Kibuyuni, a village on the south coast of Kenya, became one of the study sites where seaweed farming took root. Technical support for this endeavor was provided through the Kenya Marine and Fisheries Research Institute (KMFRI) under the World Bank-funded Kenya Coastal Development Project (KCDP), which helped enhance the efficiency of seaweed farming practices.

Seaweed farming has since become a source of income and employment for the community, primarily benefitting women who are heavily involved in the process. The economic gains from seaweed farming have also translated into improved education opportunities for the children of farming families. Additionally, the development of seaweed farming has gone hand-in-hand with mangrove forest conservation. The planting of hundreds of mangrove seedlings has not only improved the health of fish stocks but also created vital refuge and breeding grounds.

The project has moved toward commercialization, with more than 50 farmers actively participating. In 2019, the Kenyan BE Committee provided support for value addition, resulting in the production of branded juice, salads, soaps, and shampoos derived from this unique ocean product. This effort aims to promote value addition and enhance the benefits to coastal livelihoods by establishing processing plants. The provision of energy for these plants is crucial for upscaling village-level industries that aim to leverage BE. The rising demand for energy, particularly in African countries, is evident through electrification efforts. Many of these nations rely on hydroelectric power, which is increasingly vulnerable to climate change impacts. As a result, there is a renewed focus on sustainable blue energy sources, including wind, wave, solar energy, and algal biofuels.

This case study highlights the importance of involving local communities through capacity building and partnerships with government institutions such as KMFRI. Training opportunities ensure that communities acquire the necessary skills to produce higher-quality seaweed. The success of seaweed farming in Kenya not only reflects communities' motivation to diversify their livelihoods but also their commitment to environmental sustainability, as evidenced by their active role in mangrove conservation.

Lessons

The case study on seaweed farming in Kenya offers several important lessons for the development of sustainable BE projects:

i. Community involvement and capacity building**:** Involving local communities through capacity building and partnerships with government institutions is crucial. Training ensures that communities acquire the necessary skills for better-quality production. This case underscores that communities are not only motivated to diversify their livelihoods but are also willing to take responsibility for environmental sustainability, as evident in their active role in mangrove conservation.

ii. Collaboration and partnerships**:** Successful BE projects often result from collaboration and partnerships involving government agencies, non-governmental organizations, private sector entities, and local communities. Counties can learn from this the value of building strong partnerships to leverage resources, expertise, and networks. Collaborative efforts are essential for more sustainable and impactful BE projects.

iii. Integration of environmental conservation**:** BE projects prioritize environmental conservation alongside economic development. It's crucial for counties to learn the importance of integrating environmental considerations into their policies and practices. This involves promoting sustainable waste management, controlling pollution, addressing invasive species, and protecting biodiversity within Lake Victoria and its surrounding areas. The coexistence of environmental preservation and economic growth is a fundamental aspect of successful BE initiatives.

Blue Finance: The Seychelles Conservation and Climate Change AdaptationTrust and BlueInvest by European Union

The Seychelles Conservation and Climate Change Adaptation Trust

Seychelles stands out as a leader in the development of BE, and one of the significant contributors to this success is the Seychelles Conservation and Climate Change Adaptation Trust (SeyCCAT). Established in 2015 by the Government of Seychelles, SeyCCAT serves as a pivotal financial mechanism with the primary goal of mobilizing and allocating resources to support various projects and initiatives related to conservation, climate change adaptation, and sustainable development within Seychelles.

SeyCCAT plays a crucial role in both financing and coordinating efforts aimed at protecting the diverse marine and terrestrial ecosystems of Seychelles. The trust provides grants and financial assistance to a wide range of organizations, government agencies, and communities actively engaged in projects that promote the sustainable management of natural resources, biodiversity conservation, climate change adaptation, and the broader BE concept.

SeyCCAT's mission is to back initiatives that not only advance the sustainable development of Seychelles but also safeguard its unique and fragile ecosystems. This mission encompasses a focus on projects that promote sustainable fisheries, the establishment of marine protected areas, sustainable tourism practices, climate change resilience, and active community engagement.

The trust operates through a transparent and competitive grant-making process, where projects are rigorously selected based on their alignment with SeyCCAT's objectives, potential impact, innovation, and feasibility. It also actively encourages partnerships and collaborations among diverse stakeholders, recognizing that collective efforts are key to maximizing the effectiveness of conservation and climate change adaptation endeavors.

By providing vital financial resources and support, the SeyCCAT a significant role in driving sustainable development, environmental conservation, and climate resilience in Seychelles. Its contributions extend to the protection of Seychelles' rich biodiversity, the promotion of sustainable livelihoods for local communities, and the nation's ability to adapt to the challenges posed by climate change.

Lessons

The SeyCCAT initiative offers valuable lessons for counties aiming to develop sustainable conservation and BE projects:

i. Financial mechanism for conservation**:** SeyCCAT highlights the importance of establishing a dedicated financial mechanism to support conservation efforts. Counties can learn from this and consider creating similar trusts or funds that specifically mobilize and allocate resources for conservation, climate change adaptation, and sustainable development projects in their respective regions.

ii. Integrated approaches**:** SeyCCAT promotes an integrated approach to conservation and climate change adaptation. Counties can learn from this approach, emphasizing the need to consider the interconnected nature of ecosystems, climate change impacts, and sustainable development. Addressing multiple challenges simultaneously and developing projects that integrate conservation, climate resilience, and sustainable livelihoods is vital.

iii. Transparent and competitive grant-making process**:** SeyCCAT's transparent and competitive grant allocation process ensures fairness, accountability, and effective resource utilization. Counties can benefit from adopting similar processes, which involve establishing clear criteria, evaluation mechanisms, and procedures for project selection, monitoring, and reporting.

iv. Focus on sustainable fisheries and BE**:** SeyCCAT places a strong emphasis on supporting sustainable fisheries and BE. Counties can learn the importance of prioritizing sustainable management practices, including combating illegal fishing, promoting responsible fishing techniques, and supporting alternative income-generating activities within BE sector. These efforts can contribute to the long-term sustainability of fisheries and overall economic development.

v. Community engagement and empowerment**:** SeyCCAT recognizes the significance of engaging and empowering local communities in conservation and climate change adaptation efforts. Counties can draw from this experience by actively involving communities in decision-making processes, incorporating traditional knowledge, and supporting capacity building initiatives. This approach fosters community ownership, creates sustainable livelihood opportunities, and ensures the long-term success of projects.

BlueInvest Initiative by EU

The BlueInvest initiative, established by the European Union (EU) in 2019, is an investment platform and support programme with the primary goal of promoting sustainable growth and investment in BE sector. This sector encompasses a wide range of economic activities associated with oceans and seas. BlueInvest assists startups, small and medium-sized enterprises (SMEs), and entrepreneurs by offering access to financial resources, business support services, and opportunities for networking and collaboration[11]..

11 https://maritime-forum.ec.europa.eu/theme/investments/blueinvest_en

BlueInvest initiative has the following components:

i. **Investment platform:** BlueInvest operates an online investment platform that connects investors with innovative and sustainable BE projects. The platform allows entrepreneurs to showcase their projects and facilitates access to different types of financing, including venture capital, private equity, and debt financing. It aims to bridge the funding gap faced by BE ventures and attract investment into the sector.

i. **Investor network:** BlueInvest establishes and maintains a network of investors interested in BE sector. The initiative organizes matchmaking events and pitching sessions where entrepreneurs can present their projects to potential investors. This networking facilitates connections and partnerships between investors and BE businesses, promoting investment opportunities and collaboration.

ii. **Business support:** BlueInvest provides business support services to help entrepreneurs and SMEs develop and scale their BE projects. This support includes advisory services, coaching, mentoring, and technical assistance. Through tailored support, entrepreneurs can improve their business plans, financial models, and market strategies to attract investment and accelerate their growth.

iii. **Market access and Internationalization:** BlueInvest aims to facilitate market access and internationalization for BE ventures. It provides guidance and assistance in navigating regulatory frameworks, trade agreements, and market entry requirements. Furthermore, the initiative offers opportunities to showcase BE products and services at international events and exhibitions, promoting their visibility and increasing market opportunities.

iv. **Sustainable innovation:** BlueInvest places a strong emphasis on sustainable innovation in BE sector. It supports projects that demonstrate environmental sustainability, resource efficiency, and social responsibility. The initiative seeks to identify and invest in innovative solutions that address challenges related to sustainable fisheries, marine pollution, renewable energy, coastal and maritime tourism, and other areas within BE.

v. **Policy and regulatory support:** BlueInvest collaborate with policymakers and regulatory bodies to identify and address barriers that hinder investment and growth in BE sector. The initiative works towards creating an enabling environment through policy dialogue, sharing best practices, and advocating for supportive regulations that promote sustainable investment and development.

Lessons

The lessons that counties can learn from the BlueInvest initiative are invaluable for the development and growth of their own BE sectors. Here's a summary of these lessons:

i. Facilitating financial access**:** BlueInvest extends financial access to BE projects through its dedicated investment platform. Counties can gain insights into the importance of enabling financial access for entrepreneurs and businesses within the Lake Victoria BE sector. This may encompass the establishment of similar platforms, facilitating connections between investors and viable projects, and providing financial incentives or assurances to encourage investment.

ii. Supporting business growth**:** BlueInvest provides comprehensive business support services, including coaching, mentoring, and technical assistance, to assist entrepreneurs and SMEs in developing and expanding their projects. Counties can appreciate the significance of offering analogous support to local entrepreneurs and businesses operating in BE sector. This could involve implementing capacity-building initiatives, providing entrepreneurship training, and fostering mentorship programmes to enhance the competitiveness and success of ventures.

iii. Promoting networking and collaboration: BlueInvest fosters networking and collaboration opportunities by connecting entrepreneurs, investors, and stakeholders within BE sector. Counties can recognize the value of cultivating collaboration and networking among local entrepreneurs, government agencies, research institutions, and investors. This approach can facilitate the sharing of knowledge, the formation of partnerships, and the exchange of best practices.

iv. Encouraging innovation and technology adoption: BlueInvest places a strong emphasis on supporting innovative, technology-driven projects within BE sector. Counties can acknowledge the importance of promoting innovation, research, and the adoption of technology to drive sustainable economic growth. This may involve backing startups and entrepreneurs who are developing pioneering solutions for fisheries, aquaculture, water management, renewable energy, and other pertinent sectors.

v. Emphasizing sustainable development: BlueInvest underscores the significance of sustainable practices and environmental considerations within BE sector. Counties can appreciate the importance of integrating principles of sustainability into their policies, regulations, and project implementation. This includes advocating for sustainable fisheries, marine conservation, pollution control, and ecosystem restoration to ensure the long-term viability of BE.

vi. Exploring market access and internationalization: BlueInvest actively supports market access and international expansion for BE ventures. Counties can realize the value of exploring regional and global markets for their BE products and services. This may involve facilitating trade agreements, promoting brand development and marketing efforts, and participating in relevant exhibitions and events to showcase local products and attract investment.

Based on the findings of the assessment, this section offers a set of recommendations for consideration. These recommendations are specifically designed to tackle the identified gaps that have been identified through the assessment

Recommendations 5

process. By implementing these recommendations, it is expected that the areas of concern will be addressed, and improvements will be achieved. The recommendations aim to provide practical and actionable guidance for decision-makers and stakeholders involved in the subject matter of the assessment. The goal is to foster positive changes and improvements based on the assessment's insights.

Sector specific Blue Economy potential

To address the challenges facing the existing BE sectors and optimize opportunities in harnessing this emerging sector, the 4 counties should explore implementation of the following recommendations.

i. **Diversification of BE sectors:** Counties should proactively identify and promote alternative sectors within BE beyond fisheries, including marine tourism, aquaculture, renewable energy, carbon trading, and infrastructure development. These emerging sectors hold immense potential, offering new economic opportunities and reducing dependence on a limited range of industries. The geographical proximity of the five counties to Lake Victoria presents additional opportunities, encompassing renewable energy sources (hydropower, wind, wave, and tide), various forms of tourism, water and sanitation projects, and infrastructure development. Counties should harness the potential of traditional sectors while developing emerging ones through partnerships with development partners, the private sector, and local communities. Prioritizing high-impact projects for traditional sectors and pilot initiatives for emerging sectors will be crucial for success.

ii. **Infrastructure development and connectivity:** Infrastructure development and connectivity initiatives are pivotal for the growth of BE sectors. These efforts, including transportation, communication, and access to facilities, lay the foundation for economic activities and sustainable development in the region. Enhancing trans modal transport networks, ports, harbors, roads, and railways will facilitate trade and the movement of goods and services. The improvement of tourism infrastructure, such as hotels, resorts, and recreational facilities, will attract visitors and boost local economies. Additionally, collaboration with national government agencies and the private sector is essential for infrastructure improvement, and counties should consider budget allocations to fund these initiatives.

iii. **Awareness and education:** BE is a relatively new concept, and not all county stakeholders are well-informed about its potential. Counties should launch awareness campaigns and educational programmes to promote sustainable BE practices among local communities, stakeholders, and the general public.

iv. **Strengthening regional cooperation:** Collaboration among counties around Lake Victoria is paramount for the success of BE sectors. County governments should establish regional cooperation frameworks to share best practices, harmonize policies, and jointly address challenges. Regional cooperation can create a larger market, attract greater investments, and enhance the overall competitiveness of the region.

Active participation in BE initiatives promoted by regional organizations, such as the Lake Region Economic Bloc (LREB), Joint Lakefront Planning and Development Initiative, and the Lake Victoria Multi-Agency Team, is crucial.

v. **Establishment of research and education centers:** The establishment of research and education centers dedicated to BE can significantly contribute to knowledge development, innovation, and capacity building. These centers can offer training, research opportunities, and technical expertise in areas such as fisheries management, aquaculture practices, water quality monitoring, and environmental conservation. They play a vital role in promoting best practices and informed decision-making, thereby contributing to the sustainable development of BE in Lake Victoria. Counties should explore partnerships and collaborations with existing universities and research institutions in the region, such as Tom Mboya University in Homa Bay, Jaramogi Odinga University in Siaya, and the Kabonyo Fisheries Aquaculture Service and Training Centre of Excellence (once launched), which will facilitate training, research, innovation, and best practices in Fisheries and Aquaculture through demonstrations and incubations.

Research and innovation will add value to the BE in many ways including:

i. **Improved resource management:** Research findings provide valuable insights into the lake's ecosystems and the dynamics of its resources. This knowledge can inform evidence-based policies and management strategies that promote the sustainable use of the lake's resources. By balancing economic growth with environmental conservation goals, research helps prevent overexploitation, habitat degradation, and pollution, ensuring the long-term health of the lake and its surrounding communities.

ii. **Economic growth and employment opportunities:** Innovation and skill development driven by research can lead to the creation of new industries, businesses, and job opportunities. Sectors such as fisheries, aquaculture, tourism, and renewable energy can benefit from research-backed innovations, which, in turn, contribute to economic growth. Increased economic opportunities also help in poverty reduction by providing livelihood options for the local population.

iii. **Environmental conservation:** Research and innovation are essential for understanding the lake's ecosystems and promoting sustainable practices. By identifying key ecological processes and potential threats, research can help prevent environmental degradation. This, in turn, supports the conservation of biodiversity and the preservation of ecosystem services. A healthy ecosystem benefits local communities by ensuring the availability of resources and maintaining a balanced environment.

iv. **Resilience to climate change:** Lake Victoria is vulnerable to the impacts of climate change. Research and innovation can help in monitoring and understanding these changes, as well as developing adaptive strategies to mitigate risks. By identifying potential climate change impacts on the lake and its surrounding areas, researchers can assist in building resilience in the face of changing environmental conditions. This includes implementing measures to address water level fluctuations, extreme weather events, and other climate-related challenges.

Policy and regulatory framework

Policies and regulatory frameworks play a fundamental role in establishing a favorable environment for the successful execution of BE activities, projects, and programmes by county governments. These frameworks serve as essential roadmaps, defining the vision, objectives, and intended outcomes of BE initiatives, ensuring alignment among all stakeholders, including local communities. Moreover, robust policy and regulatory frameworks are instrumental in instilling confidence among domestic and international investors by offering a level playing field.

In collaboration with relevant national government departments and county governments in the Lake Victoria region, counties should consider the following actions:

i. **Develop a comprehensive BE strategy:** County governments should establish a comprehensive BE strategy that articulates their vision, objectives, and strategies for advancing BE sectors. This strategy should pinpoint pivotal sectors and investment prospects, articulate regulatory frameworks, and underscore potential incentives for investors. Ensuring alignment with County Integrated Development Plans (CIDPs), Regional Blueprints, the National BE Strategy, and International Strategies and Conventions is essential.

ii. **Reinforce policy, legal, and regulatory frameworks:** In the context of BE, the terms "policy framework" and "legal and regulatory framework" pertain to specific facets of governance and decision-making concerning the sustainable utilization and management of BE resources. A policy framework sets forth the overarching vision, objectives, and strategies for the sustainable development and stewardship of BE. Meanwhile, a legal and regulatory framework translates these policy objectives and principles into precise binding requirements, standards, and established mechanisms for enforcement and compliance. Policy frameworks play a pivotal role in fostering coordination and integration across diverse sectors and stakeholders involved in BE. They serve as a foundation for harmonizing efforts, dismantling silos, and encouraging cooperation among government departments, industry segments, research institutions, and civil society organizations. Counties equipped with well-defined policy, legal, and regulatory frameworks are well-positioned to attract investments and cultivate economic opportunities. These transparent and predictable frameworks offer assurance to investors and industry stakeholders, ultimately igniting economic growth, job generation, and innovation within BE sectors, thus contributing to local and national economic advancement.

iii. **Enhance monitoring and enforcement capabilities:** Implement robust monitoring and enforcement mechanisms to guarantee adherence to regulations and standards. This can entail the establishment of surveillance systems, conducting routine inspections, and the imposition of penalties for non-compliance. It also involves the creation of dedicated units or departments within county administrative structures with the specific mandate of monitoring and enforcing BE policies and regulations. Furthermore, the development of resilient monitoring systems for tracking and evaluating compliance with BE policies and regulations is crucial. Foster collaboration and the exchange of information among relevant stakeholders as part of these measures.

iv. **Implement regular policy review and updates:** Set up mechanisms for periodic review and updates of BE policies and regulations to ensure their continued relevance and effectiveness. This could involve conducting systematic evaluations at regular intervals, tracking trends and developments, and integrating emerging priorities and technologies into the policy framework.

v. **Promote cross-sector collaboration:** BE encompasses a spectrum of sectors, including fisheries, aquaculture, tourism, renewable energy, water, and sanitation, among others. Encouraging collaboration across these sectors is pivotal as it enables an integrated approach and eliminates siloed methods in policy development and implementation. By fostering cooperation between various departments and stakeholders from diverse sectors, a comprehensive and holistic strategy can be formulated, accounting for the interdependencies and interactions between these sectors. This approach ensures a coordinated and coherent implementation of BE policies and regulations. Furthermore, cross-sector collaboration fosters policy consistency and alignment among different sectors, reducing conflicts, redundancies, and gaps in the execution of BE initiatives. This, in turn, amplifies the overall effectiveness and efficiency of policy outcomes. Counties should contemplate the establishment of inter-departmental or multi-stakeholder platforms that facilitate dialogue, information sharing, and collaborative decision-making.

vi. **Integrate sustainability into policy development:** Embed sustainability principles into the policy and regulatory framework to ensure the safeguarding and preservation of aquatic ecosystems. This involves promoting responsible practices aimed at reducing pollution, preventing habitat destruction, and averting the degradation of natural resources. Furthermore, incorporating sustainability into policies facilitates more effective adaptation and mitigation of climate change. Sustainable practices not only enhance economic resilience but also bolster the long-term viability of BE. Measures such as sustainable fishing methods, responsible aquaculture techniques, and eco-friendly approaches to tourism are instrumental in preventing the overexploitation and depletion of resources. By doing so, these practices maintain the productivity and profitability of BE sectors, thus ensuring their sustainability for future generations. County governments should actively encourage both communities and private sector entities engaged in BE activities to embrace sustainable practices and adopt technologies that minimize the adverse environmental impact of their operations.

vii. **Strengthen regional cooperation:** Collaboration among counties surrounding Lake Victoria is essential for the success of BE (BE) sectors. County governments should institute mechanisms for regional cooperation to facilitate the exchange of best practices, alignment of policies, and collective solutions to challenges. Regional collaboration not only expands the market but also attracts more substantial investments, heightening the overall competitiveness of the region. It is imperative that counties actively engage in BE initiatives advanced by organizations such as the Lake Region Economic Bloc (LREB), Joint Lakefront Planning and Development Initiative, and the Lake Victoria Multi-Agency Team, among others.

viii. **Promote peer learning and experience sharing:** Create avenues for peer learning and the exchange of experiences among counties within the Lake Victoria region. This can be realized through regional workshops, conferences, or forums where policymakers and technical officials convene to share knowledge, best practices, and insights gained during the development and implementation of BE policies and regulations.

Institutional arrangements and human resource capacity

To bolster planning, coordination, policy and regulation development, investment attraction, and meaningful stakeholder engagement, it is imperative for counties to enhance the capabilities of their institutions and human resources. Drawing from the assessment results, the following recommendations can be considered:"

i. **Establishment of Dedicated BE Departments/Units:** Siaya, Kisumu, and Busia counties should consider establishing specialized BE departments or units with a primary focus on the management and development of blue resources. These departments would play a crucial role in coordinating and executing BE initiatives, offering technical expertise, and extending support to other county departments. Moreover, they would serve as central hubs for coordination, facilitating effective communication, collaboration, and the sharing of information among stakeholders. This streamlined approach would minimize duplication and enhance the impact of interventions. Dedicated departments can also be instrumental in mobilizing resources by identifying funding opportunities and overseeing grant applications. Furthermore, they would be responsible for prudent resource allocation, ensuring that funds are directed towards the most promising and impactful initiatives, and are efficiently utilized. These departments would also engage in research, data collection, and trend analysis to inform policy decisions, while advocating for supportive BE policies at the county and national levels. Ensuring the necessary legal and regulatory frameworks are in place to facilitate sustainable BE activities is part of their responsibility.

It is essential to staff these departments with qualified professionals who can provide technical guidance, conduct research and analysis, and offer strategic advice to county governments in various aspects of BE. Siaya, Kisumu, and Busia counties may explore adopting a similar departmental structure as observed in Homa Bay, Migori and Mombasa counties, which oversee the development of BE sectors.

ii. **Capacity Building for County Government Institutions:** To ensure the successful implementation of BE projects, counties should make investments in enhancing the capacity of county government institutions responsible for BE planning and management. This involves allocating resources to the relevant departments and providing training for county officials in critical areas such as project identification, planning, and fundraising strategies. The training should encompass various aspects, including grant writing, proposal development, and engagement with donors. Building the expertise and skills of county officials is crucial for effective BE planning and execution.

Programme identification, planning and implementation.

Enhancing the capacity of counties in the identification, planning, and execution of BE projects is of paramount importance to guarantee the effective realization of BE initiatives. This enhancement empowers counties to identify BE projects that align with their available resources, strengths, and development priorities. It enables them to undertake comprehensive feasibility studies, evaluating the economic and environmental viability of projects and making informed choices regarding those with the most promising potential for success. To bridge the identified capacity gaps, counties may consider adopting the following recommendations:

i. **Develop maritime spatial planning:** Spatial planning holds a critical role in the sustainable development and management of BE sectors. Effective spatial planning ensures that BE activities are executed in a coordinated and sustainable manner, while taking into account the ecological, social, and economic dimensions of the lake. A spatial plan will delineate and zone different areas for diverse activities, such as fishing, aquaculture, tourism, and conservation. Homa Bay County has already prioritized the development of a Lakefront and marine master plan within its 2023-2026 County Integrated Development Plan (CIDP). Similarly, Siaya County's CIDP for 2023-2027 includes a Blue Spatial Development framework (Zone III) aimed at leveraging BE. This zone focuses on fishing, tourism, marine economy (including shipbuilding and boat making), water transport (shipping and harbors), and the exploration of energy sources like wind and solar power.

ii. **Formulate project development guidelines:** Counties should establish clear guidelines and templates specific to BE for the identification and development of projects. These guidelines should provide a step-by-step process for identifying viable projects, conducting feasibility studies, evaluating potential risks and impacts, and developing comprehensive project proposals. The importance of feasibility studies lies in the capacity to assess project viability from financial, environmental, risk, social, community, legal, and regulatory perspectives.

iii. **Training of staff:** Equip County staff with the essential skills needed for effective BE project management and execution. This includes training in areas related to project identification, planning, prefeasibility studies, procurement, contract management, monitoring and evaluation, quality control, and reporting. Enhanced capacity empowers counties to streamline project implementation, ensure compliance with regulations and standards, closely monitor progress, and address emerging issues promptly.

iv. **Foster stakeholder engagement:** Counties should make deliberate efforts to involve stakeholders throughout the project identification and implementation process. These stakeholders encompass local communities, civil society organizations (CSOs), private sector entities, and relevant government agencies. Engaging stakeholders ensures that projects align with community needs and aspirations, creating a sense of ownership and sustainability. Counties should include local communities in early-stage project planning and decision-making processes, seeking their input, feedback, and suggestions to align blue projects with their needs, aspirations, and cultural practices. Promote inclusivity by involving a diverse range of community groups, such as fisherfolk, farmers, women, youth, and indigenous communities.

v. **Develop a resource mobilization strategy:** Counties should establish a comprehensive understanding of available funding opportunities for BE projects at national, regional, and international levels. A resource mobilization strategy should outline specific approaches for securing financial resources for BE projects, extending beyond equitable revenue shares and locally generated revenues. Examples of funding opportunities for BE projects in Kenya include, but are not limited to:

- **Government funds and grants:** Access to funds and grants provided by government agencies.
- **International development agencies:** Funding from international organizations such as the World Bank, African Development Bank (AfDB), and the European Union (EU).
- **Impact investment funds:** Organizations like Acumen, SunFunder, and BlueOrchard Finance specialize in investments in businesses and initiatives that yield positive social and environmental impacts.
- **Philanthropic foundations:** Both local and international philanthropic foundations may offer funding opportunities for BE projects.

- **Public-Private Partnerships (PPPs):** Collaborative ventures between county governments and private sector entities for the implementation of BE projects. Counties should explore potential PPPs with private companies in sectors such as fisheries, aquaculture, tourism, and maritime infrastructure.
- **Climate funds:** Climate funds such as the Green Climate Fund (GCF) and the Adaptation Fund provide funding for climate adaptation and mitigation projects. BE projects that align with climate resilience and sustainable resource management may qualify for funding from these climate funds.
- **Research and tailored proposals:** Counties should conduct research on each funding opportunity to comprehend their requirements and eligibility criteria. Subsequently, they can tailor project proposals to align with their objectives and maximize their chances of securing funding.

vi. **Diversification of local revenue streams:** The assessment has revealed that counties primarily generate revenue and income from the fisheries and aquaculture sectors. Over-reliance on a single revenue stream makes counties vulnerable to external factors beyond their control. For instance, dependence on fisheries can be severely affected by fluctuations in fish stocks, climate change, or alterations in fishing regulations. Adverse changes in these external factors can significantly impact the revenue and economic stability of the counties.

To mitigate these risks and capitalize on new opportunities, diversifying local revenue streams is imperative. Homa Bay County has initiated diversification efforts, incorporating various revenue sources such as Fish Cess, Landing Fees, Cage Installation Fees, Fish Processing Licenses, and Fish Distribution Fees. Additionally, the county is generating revenue from activities such as Sport Fishing Registration, Sport Fishermen Licenses, as well as Ballast, Sand, Stones, and Murram sales.

Counties can adopt the following strategies to diversify their revenue streams:

- **Promote tourism as a revenue generator:** Counties should prioritize tourism as a significant revenue source by nurturing and promoting the region's distinctive natural and cultural attractions. This can encompass ecotourism initiatives, wildlife conservation efforts, the development of tourism infrastructure, and the promotion of water-based recreational activities. Collaborating with private sector partners to establish tourist resorts, hotels, and complementary amenities can attract both domestic and international tourists, effectively diversifying revenue streams.
- **Boost aquaculture growth:** Counties should encourage the expansion of aquaculture activities by offering support and incentives to fish farmers. This support might involve training programmes, access to financial resources, technical assistance, and infrastructure development to stimulate the establishment of fish farms. This diversification strategy not only generates income opportunities for local communities but also alleviates the pressure on wild fish stocks.
- **Foster fish processing and value addition:** Counties can support the establishment of fish processing and value addition facilities within the region. This could encompass the development of fish processing plants, cold storage facilities, and fish product packaging units. By adding value to fish products, counties can access higher-value markets, thereby increasing revenue generated from BE sector.
- **Develop renewable energy projects:** Counties can encourage the creation of renewable energy projects, including hydroelectric power generation, solar energy initiatives, and biogas production. By providing incentives and support for private sector investments in renewable energy infrastructure, counties not only generate revenue through energy sales but also contribute to sustainable development and reduce dependence on fossil fuels.
- **Invest in research and development:** Counties should invest in research and development activities linked to BE. This can involve the establishment of research institutions, collaboration with universities and research organizations, and funding research projects focused on sustainable resource management, aquaculture techniques, water quality monitoring, and innovative BE practices. The results of such research can lead to the development of modern technologies, products, and services that generate revenue and create employment opportunities.
- **Foster Public-Private Partnerships:** Counties should promote partnerships between the public and private sectors to harness expertise, resources, and investments. Engaging with private companies through public-private partnerships allows for the development and management of infrastructure projects, tourism initiatives, aquaculture ventures, and renewable energy projects. This collaboration can attract investments, provide technical expertise, and introduce innovative business models, effectively diversifying revenue streams and driving economic growth.
- **Promote inter-county collaboration:** Counties should encourage collaboration and networking among those in the Lake Victoria region to share experiences, best practices, and resources. Forming partnerships, consortiums, or associations among counties enables them to jointly promote BE sector, attract investments, and share the benefits of regional development. By working together, counties can leverage their collective strengths and create synergies that enhance revenue diversification efforts.
- Economic and social impact

BE in Lake Victoria has the potential to generate significant economic and social impacts. The realization of these depends on effective governance, inclusive policies, sustainable management practices, and engagement of local communities throughout the development and implementation of BE in Counties. To achieve this, Counties should undertake the following:

i. **Job creation and livelihood enhancement:** County governments should prioritize BE activities, projects, and programmes that actively create employment opportunities and enhance local livelihoods. The counties should encourage the development of value chains and support industries that can generate sustainable jobs within sectors such as fisheries, aquaculture, tourism, transportation, and manufacturing.

ii. **Equitable benefit sharing:** Counties should ensure that the benefits resulting from BE initiatives are fairly distributed among local communities. Implementation of mechanisms that allow for direct participation and involvement in project-related activities, including employment opportunities, integration into supply chains, and equitable revenue sharing, is essential. The consideration of establishing community-based enterprises or cooperatives can enhance community ownership and foster economic empowerment.

iii. **Embrace sustainability practices:** The sustainability of inland water bodies is of paramount importance to promote the long-term well-being of the environment, societies, and economies that rely on their resources. Counties in the Lake Victoria Region should adopt an integrated and collaborative approach to ensure sustainability. They should work closely with government agencies, local communities, civil society organizations (CSOs), and international organizations to ensure the health of the water bodies. Emphasizing the significance of environmental conservation and sustainable resource management is key. Projects undertaken by the counties, local communities, and the private sector should adhere to best practices for minimizing environmental impacts, protecting biodiversity, and preserving the health of Lake Victoria and other water bodies in the region. These practices encompass sustainable fishing, responsible tourism, effective waste management, and pollution control measures.

Institutionalization of Monitoring, Evaluation and Learning

It is critical to strengthen the BE institutions in monitoring, evaluation, and learning. This will lead to evidence-based decision-making, improve project outcomes, and contribute to the sustainable development of the BE in the counties. The following recommendations can be adopted,

i. **County leadership commitment:** Successful monitoring, evaluation and learning activities require commitment from top management and leadership. The leadership should allocate adequate resources for MEL activities and recognize its importance for decision-making, accountability, and learning.

ii. **Develop Monitoring and Evaluation (M&E) Frameworks:** Counties should establish clear M&E frameworks specifically tailored to blue economic projects. These frameworks should define key indicators, data collection methods, and reporting mechanisms to track project progress and outcomes. It is essential to align Monitoring, Evaluation and Learning Frameworks with the county and national standards and guidelines.

iii. **Build institutional capacity:** Counties should invest in building institutional capacity for effective monitoring, evaluation, and learning. This includes recruiting and training dedicated M&E staff with expertise in project monitoring and evaluation techniques. Continuous capacity-building programmes can be conducted to enhance skills in data collection, analysis, and reporting. Counties should also consider partnering with universities, research institutions, or specialized M&E organizations for technical support and knowledge sharing.

iv. **Establish baseline data:** Prior to project implementation, counties should collect baseline data to establish a reference point for monitoring and evaluation. This includes collecting relevant socio-economic, environmental, and resource-related data. Baseline data serves as a benchmark for measuring the impact of blue economic projects over time and enables evidence-based decision-making.

v. **Regular data collection and reporting:** Counties should implement regular data collection and reporting mechanisms to track project progress. This can involve periodic surveys, interviews, focus group discussions, and data analysis. Counties can consider using technology-based tools, such as mobile data collection platforms, to streamline data collection processes. The collected data should be compiled and analyzed to generate comprehensive reports that highlight project achievements, challenges, and lessons learned.

vi. **Stakeholder engagement:** Engage relevant stakeholders, including local communities, government agencies, private sector entities, and civil society organizations, in the monitoring and evaluation process. Counties should ensure their participation in data collection, validation, and analysis. Stakeholder engagement helps capture diverse perspectives, fosters ownership, and enhances the quality and relevance of monitoring and evaluation efforts.

vii. **Promote learning and knowledge sharing:** Establish platforms for sharing lessons learned and best practices among counties implementing blue economic projects. This can include organizing workshops, seminars, and conferences where experiences and insights can be shared. Counties can also foster peer-learning networks and promote collaboration to exchange knowledge, innovations, and successful approaches to blue economic project implementation.

viii. **Adaptive management**: Embrace adaptive management principles by using monitoring and evaluation data to inform project adjustments and decision-making. Counties should use the findings from monitoring and evaluation activities to identify areas for improvement, make necessary course corrections, and strengthen project implementation strategies. This iterative process allows for continuous learning and enhances the effectiveness of blue economic projects.

ix. **Continuous training and capacity development:** Provide continuous training and capacity development opportunities to county staff involved in monitoring, evaluation, and learning activities. This can include workshops, seminars, and webinars on M&E methodologies, data analysis techniques, and knowledge management. Counties can also encourage staff to pursue professional development courses or certifications in monitoring and evaluation.

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ANNEXES

7

Annex 1: Capacity assessment findings for Homa Bay County

Dimension	Key Findings	Recommendations
Blue Economy Potential and Opportunities	With regards to the BE, Homabay County holds the title of being the champion, claiming a significant 80% portion of Lake Victoria (CIDP, 2023-2027). Lake Victoria is known for its abundant fishery resources, and the county benefits from the lake's rich biodiversity. The county has a considerable number of fishing communities engaged in both artisanal and commercial fishing. Nile perch, tilapia, and several other fish species are harvested from the lake, providing livelihoods and economic opportunities for local communities. The county has favorable conditions for aquaculture, particularly fish farming. Tilapia and catfish are commonly cultured in fishponds and cages. The county government promotes aquaculture as an alternative income-generating activity and provides support to fish farmers through training and technical assistance. The county has extensive wetland areas and forests along the shores of Lake Victoria. These ecosystems provide vital habitats for various species of fish, birds, and other aquatic organisms. They also contribute to water purification, erosion control, and climate regulation. The conservation and sustainable management of wetlands and mangroves are essential for the overall health of the blue economy in the county. Fisheries and aquaculture are the most dominant blue economy sectors. The county government has established a blue economy department to support other departments in developing other sectors. Opportunities in other sectors include: • Blue Economy (Maritime transport- lake transport, Ship/boat building, Dry docking facilities, Fueling for vessels, Warehousing, Insurance services; Maritime tourism- eco-tourism (sport fishing and water sports), Maritime energy, Maritime biotechnology etc). • Fisheries (Capture fisheries; pond fish farming; cage fish farming; fishing gear manufacturing; restocking of the lake, community dams and rivers; fish processing a marketing; fisheries research; development of spatial plans for fish landing sites). Additionally, the county is looking into exploring the following blue economy sectors: i) **Tourism and Recreation:** Lake Victoria's scenic beauty and diverse wildlife offer opportunities for tourism and recreational activities. Visitors can enjoy boat rides, bird watching, sport fishing, and cultural experiences. The county government is planning to invest in tourism development, infrastructure improvement, and the preservation of cultural heritage to attract visitors and boost the local economy (CIDP 2023-2027) ii) **Water Transport:** Lake Victoria serves as a transportation route for both passengers and cargo. Homabay County has several landing sites and harbors where boats and ferries operate, connecting various parts of the county and neighboring regions. Water transport plays a crucial role in facilitating trade, transportation of goods, and movement of people in the area. The county is planning to purchase water buses and ferries to connect movement between islands. iii) **Research and Innovation:** The county in consultation and collaboration with Tom Mboya University (TMU), has embarked on research of the Lake Flora and Fauna to provide insights to developing literature and ways of enhancing sustainable harnessing of blue economy activities within the lake. The county government will support the university to develop courses on blue economy and promote skills development. iv) **Mineral Extraction**: Homabay County is developing and implementing policies to guide mineral exploitation and sand harvesting, building stones, gold mining, and iron oak that is mined unprocedural. These policies will be important to ensure that extraction activities adhere to strict environmental regulations and sustainable practices to preserve the health of the lake and its surrounding communities. v) Homabay county has established Homabay Lake Front Development Corporation (HBLFDC) and in the process of operationalizing it. HBLFDC will develop the lake front that is currently covered by settlement, by planting trees and paving access to the lake front. The corporation will also develop and manage economic and social activities of the lakefront, as well as mobilization of resources for connected purposes. This will ensure the realization of Homabay's transformation agenda and the dream to have the county to attract new investments.	• Invest in development of key infrastructure such as road network, landing sites, cold storage facilities, and fish processing plants to enhance fish value chain and support the growth of BE in the county. Collaborate with the private sector and national government. • Encourage research and innovation in the BE sectors through collaboration with academic institutions and research organizations to drive technological advancements, improve productivity, and promote sustainable practices. • Emphasize the importance of environmental conservation and sustainable resource management practices such as responsible fishing practices, habitat restoration, and pollution control measures. This will preserve the long-term viability of the aquatic resources. • The BE department in collaboration with the environment department to identify and monitor upstream activities affecting the lake related to green economy and design, implement policies, frameworks, and mitigation measures. • Market and branding of potential attraction sites: - collaborate with the national government to facilitate construction of road networks connecting the beaches for easy access hence promoting tourism in the region. • Mobilize land resources in the Lakefront, through acquisition, purchase, compensation, and land banking to release land for tourism promotion. • Map and conserve all tourism potential zones in the entire county i.e., Simbi Nyaima, Oyugis Bird Sanctuary, birds island etc.; • Facilitate market development and improve market access for blue economy products and services. Develop marketing campaigns, branding initiatives, and quality standards to enhance the visibility and competitiveness of BE sectors in national and international markets. Foster trade agreements and partnerships that promote the export of blue economy products.

Dimension	Key Findings	Recommendations
Policy and Regulatory Framework	Effective policies and regulations help to ensure sustainable practices, resource conservation, and equitable access to blue economy resources. Homabay county has existing policies and regulations such as the Lakefront Development Corporation Act, 2023, that promote blue economy activities that are aligned with national policies and strategies. However, there are gaps in the existing policies and regulations that require strengthening. The county also requires additional policies and regulations such Blue Economy Policy, Fisheries Policy, Fisheries Regulations, and Fisheries Management Plan. To achieve this, the county has prioritized development of regulatory policy frameworks in most of blue economy sectors in the current CIDP (2023-2027) and Annual Development Plan (ADP) 2023-2024. Once the Lakefront Development Corporation (LDC) is operationalized, the technical team and the board will support in designing and implementation of the regulatory policy framework for approval by the county assembly. The county is in the process of recruiting the board and technical team which will oversee the activities of the corporation. According to the county stakeholders, one of the issues facing the Fisheries and Aquaculture sectors is the overlap of county and national policies. The overlap has caused confusion and inconsistency in the fisheries and aquaculture sector. Conflicting regulations between counties and the national government cause misconceptions, compliance concerns, and enforcement difficulties. As a result, fisheries management becomes ineffective, and practices become unsustainable. To solve this, the team advocated for regular consultations, coordinated planning, a clear policy harmonization framework, and information exchange between national and county governments. The county team has prioritised development of the following policies in FY2023-2024; i. **Blue Economy Policy:** This will provide a set of guidelines, strategies, actions to promote sustainable and inclusive economic development in BE. The policy will provide guidelines on sustainable fisheries management, aquaculture development, marine tourism, renewable energy, research and innovation, environmental conservation etc. ii. **Blue Economy Master Plan**: This will outline the long-term vision, goals, and actions for sustainable development and management of the county's BE resources. The plan will serve as a roadmap for integrating various sectors and stakeholders to leverage the economic potential of the BE while ensuring environmental conservation and social inclusiveness. iii. **Fisheries Regulations and Management Plan**: This will provide a framework for the sustainable management and conservation of fisheries resources within the county's jurisdiction. Its aim is to ensure the long term viability of fish stocks, promote responsible fishing practices, promote ecosystems, and support the social economic well-being of fishing communities. iv. **County Blue Economy Strategy:** This will aim to balance economic growth with environmental sustainability and social well-being, recognizing the interconnectedness of these aspects.	• The county government has prioritized the designing and implementation of blue economy policies and regulations in the current CIDP (2023-2027), ADP 2024/2025. Allocation of adequate budget for development of the prioritised policies, strategies, guidelines, and standards will promote development of blue economy. • Develop a blue economy policy and regulatory framework that acknowledges the interdependencies across various blue economy sectors, such as fisheries, aquaculture, tourism, renewable energy, water transportation, environmental protection, etc. The framework should support socio-economic growth, biodiversity conservation, sustainable development, and government cohesion. • Involve stakeholders in development of policies and regulatory frameworks. Other county governments sharing the lake with homa bay county, national agencies, fishing communities, local communities, the private sector, environmental organizations, and regional universities will play a vital role in these initiatives. • Establish mechanisms for regular review and update of blue economy policies and regulations to ensure that they remain relevant and effective. This involve conducting periodic evaluations, monitoring trends and developments, and incorporating emerging priorities and technologies into the policies.

Institutional Arrangements and Human Capacity	The county has established institutional structures that are responsible for coordinating and overseeing blue economy initiatives. The Department of Blue Economy, Fisheries, Mining and Digital Economy; Directorate of Fisheries and co-management Framework between the Department and Beach Management Units (BMUs) are the institutional arrangements that have been established by the county.
	
	These institutions have the authority, mandate, and resources to effectively implement and oversee blue economy initiatives. Although the institutions have dedicated and experienced staff members assigned to coordinate blue economy initiatives (CECM, Chief Officer, County Director, Deputy County Director, and the Advisor to the Governor on blue economy matters) capacity strengthening of the human capital is required.
	
	The county team suggested that they be trained on a wide range of thematic areas and skills linked to sustainable aquatic resource management, economic development, and conservation because blue economy is a new concept and fisheries, and aquaculture are facing numerous difficulties. Fisheries management, aquaculture development, water quality control, value addition and processing, ecotourism and conservation, adaptation to climate change, policy, and governance, among others, are some of the areas for staff capacity strengthening.
	
	The county has entrenched robust mechanisms to enhance staff, stakeholders and local communities' skills, knowledge and participation through capacity building and knowledge sharing. These programs align with those of the national government, regional bodies, and international partners such as, Council of Governors (CoG), County Agriculture Sector Steering Committee (CASSCOM) in terms of leveraging resources.
	
	Fisheries sector has stimulated growth of industrial fish processing, fish feeds cottage industries and establishment of fish markets. County prioritization of the blue economy, internal and external collaboration, and consultations between other counties (Kisumu County) and national government has led to establishment of Homabay Lakefront Development Corporation (HLFDC). In addition, there's need to train BMUs on sustainable fisheries management and fast track operationalization of Lakefront Development Corporation.
		• Partner with private sectors and academic institutions to capacity build and strengthen staff on developing concept notes and proposal writing for resource mobilization to promote trade and investment. Also, explore partnerships with development partners for technical assistance.
		• The county blue economy, fisheries, and mining department in partnership with the county department for education, Tom Mboya University (TMU) to develop blue economy curriculum and training materials.
		• Mobilize funds for capital investment to develop the Lakefront (infrastructure, building lodges and resorts) through Public-Private Partnership, National and County Government, Foreign Direct Investment, and local investors.
		• Implement the following initiatives to improve staff knowledge and abilities about the blue economy;
		  ○ create and conduct training and capacity-building initiatives: Set up training sessions, workshops, and seminars so that staff members are knowledgeable about the blue economy's different facets, including sustainable tourism, water quality monitoring, fisheries management, aquaculture techniques, and policy formulation.
		  ○ collaborate and form relationships with universities, colleges, and institutions of higher education to provide training programs that are both relevant and market driven.
		  ○ encourage the professional growth of employees, offer technical assistance and mentoring programs. This can be accomplished by providing persons working on blue economy projects with professional mentors or advisers to help them and support them.

Dimension	Key Findings	Recommendations
Project Identification and Planning	To maximize economic and social benefits while limiting detrimental environmental effects, it is crucial for counties to identify projects that would help grow the blue economy. Conducting feasibility studies, choosing acceptable project locations, identifying potential risks, and mitigating actions, and determining the projects' financial and socio-economic viability are all necessary for successful project selection, planning, and implementation. To assure project success, good project planning and execution should also include stakeholder participation, resource allocation, monitoring and evaluation, and adaptive management. By effectively identifying, planning, and implementing blue economy projects while aligning with national or regional development plans, goals, and priorities, as well as stakeholder engagement, monitoring and evaluation, and prioritizing sustainability, counties and communities can maximize the benefits of the blue economy while ensuring its long-term viability. BE projects and initiatives identified and prioritised by the county government for implementation in the fiscal year 2024/2025 in alignment with CIDP 2022-2027 include the following: • **Development of Lakefront Spatial Plan.** This will guide the allocation and management of land uses along the lakefront. Help to determine where specific activities should be located, such as residential areas, conservation areas, commercial zones, and infrastructure development. The plan will provide a framework for ensuring a balanced and sustainable use of the lakefront resources. • **Construction of Lakefront Promenade**. This will provide a public space along the lakefront that offers recreational opportunities, enhancing the scenic beauty of the area, and promoting community engagement. • **Development bankable project profiles.** The purpose of developing blue economy bankable project profiles is to identify and assess potential investment opportunities in the blue economy sectors that have the potential for financial viability and sustainability. • **Development of piers and jetties.** This will enhance transportation infrastructure, promote economic activities, facilitate tourism, and improve the overall connectivity and accessibility. • **Conservation of riparian ecosystem and biodiversity.** Riparian ecosystems around Lake Victoria support a wide range of plant and animal species, including endemic and endangered ones. Conserving these ecosystems helps protect their biodiversity and ensures the survival of unique and ecologically valuable species. • **Monitoring, Control, and surveillance Programmes for disasters management.** This will ensure early warning and preparedness in case of potential disasters such as floods, storms, or landslides. • **Mapping riparian mineral sites**. This will help the county to identify potential mineral reserves that can be exploited for commercial purposes, attracting investments, and promoting the growth of the mining sector. This will lead to job creation, increased revenue, and economic diversification for the county. The projects will be implemented in collaboration and partnerships with the National Government, Private Sector Organizations, and International Financiers. The one third gender rule adherence to the provision in the Constitution of Kenya, 2010 is considered in all the projects. Deliberations for the reduction of carbon footprint agenda are mainstreamed in the Blue Economy Department's Work Plan and Budget. The projects are aligned to Sustainable Development Goal 14: Conserve and sustainably use the oceans, seas, and marine resources for sustainable development goal – *Life below water to* conserve and sustainably use the oceans, seas, and marine resources for sustainable development. To ensure meaningful community engagement and participation in the planning, implementation, and monitoring of BE projects, the county government has embraced ward level public participation during identification of projects and established Community Project Monitoring Committees (CPMCs). Any potential risks in project planning are addressed through public participation and Environmental and Social Impact Assessment (ESIA) is undertaken before implementation of projects. Conducting impact assessments helps identify potential environmental risks and allows for implementation of measures to mitigate them. This ensures that projects are developed in a manner that protects biodiversity, water quality, and ecosystem health. In addition, assessing the social and environmental impacts of blue economy projects helps counties to ensure that development is pursued in a sustainable and responsible manner. Counties will be able to identify potential negative effects on local communities, livelihoods, and cultural heritage. To ensure equal opportunities and rights for all individuals, regardless of their gender, social-economic status, or other characteristics, the county has mainstreamed Gender Equity and Social Inclusion (GeSI) in identification and implementation of projects. By adopting climate smart practices in fish farming – use of pond liners; adopting use of solar in running water circulation in fingerling production systems and embracing carbon credit concept, the county can promote reduction of carbon footprint of blue economy activities. To safeguard sustainability of blue economy initiatives, the county embraces Public-Private Partnerships (PPPs) approach and always engage the public during public participation to ensure public ownership of the projects. To achieve effective management and disbursement of funds to eligible projects, the Public Finance Management Act, 2021 is strictly adhered to.	• **Identify project opportunities and develop a project pipeline:** Conduct a scoping exercise to identify potential blue economy projects that align with national or regional development plans, priorities, and goals. Once identified, rank the projects by level of priority and feasibility, and develop a project pipeline to ensure a continuous flow of projects. • **Conduct feasibility studies:** Conduct feasibility studies for each blue economy project in the pipeline. The studies should assess the technical, financial, economic, social, and environmental viability of the proposed project. The feasibility study findings can inform project design and provide a basis for decision-making and resource allocation. • **Develop project proposals:** Develop comprehensive project proposals for each prioritized project in the pipeline. The project proposals should articulate project objectives, scope, implementation strategy, financing structure, monitoring and evaluation plan, and stakeholder engagement strategy. Prepare detailed budgets and timelines for project implementation. • **Formulate project management plans:** Develop project management plans that detail the project's implementation strategy, governance structure, risk management approach, procurement and contracting procedures, and stakeholder engagement plan. Establish clear roles and responsibilities for all project stakeholders. • **Build project teams:** Build project teams consisting of individuals with the required technical, financial, and managerial expertise to ensure the successful implementation of the project. Assign qualified project managers to oversee the project, monitor its progress and ensure timely delivery on project milestones. • **Engage stakeholders:** Develop a stakeholder engagement plan that outlines how various project stakeholders will be involved and consulted at various stages of the project. Establish communication channels to ensure timely and transparent communication with stakeholders. • **Data collection and monitoring:** Invest in robust data collection and monitoring systems to gather accurate and timely information on the performance and impact of blue economy sectors. Regularly assess the economic, social, and environmental outcomes of these sectors to inform policy decisions, identify areas for improvement, and support evidence-based planning.

Dimension	Key Findings	Recommendations
Project Implementation	The county government has successfully enacted the Lakefront Development Corporation Act, 2023 with establishment of Lakefront Development Corporation Board of Directors. The county has experienced numerous challenges hindering implementation of blue economy project implementation such as; • **Lack of comprehensive plan on the BE:** Homa bay county has no comprehensive development plan for the blue economy, such as the Blue Economy Development Master Plan and Marine Spatial Plan, to manage Blue Economy related developments and to coordinate implementation of cross-cutting projects. • **Lack of knowledge and awareness of blue economy and its potential:** Since the inception of the blue economy concept, the county stakeholders seem unaware of its potential. Fisheries and aquaculture are the most predominant sectors that are deemed as blue economy whereas blue economy is cross cutting. County and community advocacy and sensitization is needed to exploit and harness the full potential of blue economy initiatives present in the county. • **Lack of regulation and guidance on blue economy development:** For instance, the Shipping/Maritime Affairs sector does not have an Integrated National Maritime Policy as of now, and the development is identified as National Flagship Projects in Kenya Vision 2030 that counties can borrow. Due to sustainable and efficient development for each sector, the formulation of a legal framework is essential, and prompt actions on this matter are needed. • **Weakness of human resources on implementation of the BE initiatives:** Human resources in both private and public sectors are weak. Capacity development is recommended, such as developing blue economy course, colleges to train sailors, capacity development/revival of inefficient organizations, and aquaculture training for private fish farmers through KMFRI.	• **Mobilize resources:** Mobilize the financial and technical resources necessary to implement the project. This may involve engaging with international and domestic sources of funding, such as development banks, private equity and venture capital firms, and governmental, philanthropic, and civil society organizations. • **Monitor and evaluate project outcomes:** Develop a monitoring and evaluation plan that captures project progress, achievements, and lessons learned. Regularly evaluate the project and adjust the implementation strategy as needed to achieve the desired project outcomes. • **Ensure sustainability:** Ensure the project promotes the sustainability of the blue economy by prioritizing environmental and social sustainability, creating opportunities for local communities, and supporting the conservation and sustainable use of the lake resources. • **Engage stakeholders:** Develop a stakeholder engagement plan that outlines how various project stakeholders will be involved and consulted at various stages of the project. Establish communication channels to ensure timely and transparent communication with stakeholders.
Economic and Social Impact	Understanding the BE's contribution to sustainable development depends on evaluating its economic and social effects. Impacts such as employment creation, income production, poverty reduction, food security, and sustainable livelihoods should be taken into account as well as both direct and indirect effects. The county can harness the full potential of the blue economy, ensuring its sustainable growth and maximizing its economic and social impacts for the well-being of present and future generations. BE projects in the county are projected to create 50,000 direct and 200,000 indirect jobs in the future. Various BE sectors are expected to create the following jobs: • Fisheries (20,000); • Aquaculture (15,000); • Tourism (10,000); • Renewable energy (5,000). Implementation of BE projects have overly contributed to the overall economic growth of the county. The sector is envisaged to create economic diversification and the development of new industries and businesses particularly in value chains development. The projects have stimulated the growth of local supply chains and industries related to the sector namely, input suppliers, producers, processors, transporters, marketers, financial service providers and insurance service providers. Establishment of processing zone at Riwa in Rachuonyo North and export promotion has increased value addition and promotion of processing and marketing of blue economy products. Small-scale producers and businesses have also been integrated into the blue economy value chain through value chain development advocacy. On social impact and community well-being there has been noticeable CSR activities by the commercial fish cage farmers and industrial fish processors in terms of supporting provision of clean drinking water to the locals, supporting local schools, and improving road network around the beaches. Thus, enhancing the quality of life for local communities, particularly in terms of access to basic services, education, healthcare, and infrastructure. Blue economy projects have promoted the equitable distribution of benefits across different social groups. Efforts have been made to give 30% of opportunities in Aquaculture Business Development Programme (ABDP) to women, youth and people living with disability. The Beach Management Units Regulation, 2007, expressly stated that one third gender rule should be adhered to when constituting executive committees. Awareness about the benefits and potential impacts of BE projects among local communities is created during public participation and ESIA exercise specifically with the emphasis of value chain development approach to projects.	• **Diversification of economic activities:** Encourage the diversification of economic activities within the blue economy. Promote the development of multiple sectors, such as fisheries, aquaculture, maritime transportation, renewable energy, tourism, and biotechnology. Diversification can reduce dependence on a single sector and create more opportunities for employment, entrepreneurship, and economic growth. • **Sustainable resource management:** Prioritize the sustainable management of Lake Victoria resources to ensure their long-term viability. Implement measures to prevent overfishing, protect marine habitats, and promote responsible tourism development. This will safeguard resource availability and support the continued growth of economic activities dependent on the lake. • **Collaboration and partnerships:** Foster collaboration and partnerships between governments, industries, communities, and academia to promote innovation, knowledge sharing, and technology transfer. Collaboration can enhance research and development efforts, drive new investments, and create employment and entrepreneurship opportunities. • **Capacity building and skills development:** Invest in building the skills and knowledge of the workforce engaged in the blue economy. Develop training programs and vocational courses that align with the needs of the industry, such as marine sciences, aquaculture, maritime transportation, and renewable energy. Enhancing workforce capabilities will support job creation and improve the competitiveness of the blue economy sectors. • **Promote inclusive growth and social equity:** Ensure that the benefits of the blue economy are distributed equitably and reach all segments of society. Develop policies and programs that prioritize inclusivity, social welfare, and equal access to opportunities, particularly for marginalized communities and small-scale fishers. Promote gender equality and empower women, youth and people living with disabilities to participate in all aspects of the blue economy. • **Innovation and technology adoption:** Encourage the adoption of innovative technologies, including digital solutions, data analytics, remote sensing, and automation, to improve efficiency, productivity, and sustainability in blue economy sectors. Support research and development initiatives that focus on improving resource management, reducing environmental impact, and optimizing value chains. • **Supportive regulatory frameworks:** Establish clear and enabling regulatory frameworks that promote investment, ensure sustainable practices, and protect the rights of stakeholders in the blue economy. Develop comprehensive legal frameworks, licensing regimes, and environmental regulations that balance economic growth with environmental conservation and social well-being.

Dimension	Key Findings	Recommendations
Institutionalization of Monitoring, Evaluation and Learning	For the BE to grow sustainably, monitoring, evaluation, and learning (MEL) should be institutionalized. The effective design, implementation, and evaluation of policies and projects is guaranteed by a systematic and all-encompassing approach to MEL, which promotes better decision-making, adaptive management, and learning for ongoing progress. To simplify the gathering, analysis, and use of data for tracking and evaluating the implementation and efficacy of blue economy policies and initiatives, institutionalizing MEL entails developing the proper structures, methods, and processes. It also entails fostering a culture of learning and knowledge exchange that supports innovation and ongoing progress. Institutionalizing monitoring, evaluation, and learning (MEL) within an organization involves embedding MEL practices and principles into its culture, systems, and processes. It was established that the county has a dedicated and well-structured unit responsible for monitoring, evaluation and learning of projects, which is situated in the finance and economic planning department. The unit is fully capitated with skilled staff to effectively conduct monitoring, evaluation and learning activities. The county department for blue economy and fisheries is yet to establish a monitoring, evaluation, and learning framework or system specifically tailored for blue economy projects since the department was established this year. Standardized and consistent tools for conducting the following monitoring, evaluation, and learning activities; data collection, data authentication, data analysis and interpretation, regular reviews and reporting, internal utilization of lessons, documentation and sharing of knowledge products, storage and information management are important aspects for sustainable implementation of blue economy projects. Institutionalizing MEL is critical for the blue economy's long-term development. It necessitates a systematic and comprehensive strategy that includes the establishment of appropriate structures, systems, and procedures, the development of capability, the promotion of collaboration, and the promotion of information exchange and dissemination.	• **County Leadership commitment:** It is important for the top management and leadership of the county to be committed to MEL and recognize its importance for decision-making, accountability, and learning. Encourage leaders to champion MEL efforts and allocate resources for its implementation. • **Capacity building:** Invest in building the MEL capacity of staff at all levels. Provide training and workshops on MEL concepts, methodologies, tools, and data analysis techniques. Encourage staff to continuously upgrade their MEL skills and knowledge. • **MEL integration:** Integrate MEL into all stages of blue economy programmes and project management, from planning and design to implementation and evaluation. Ensure that MEL activities are included in project work plans and budgets. Foster a culture of evidence-based decision-making and learning. • **Stakeholder engagement:** Involve stakeholders, including beneficiaries, in MEL processes. Seek their inputs and feedback while developing MEL frameworks, indicators, and evaluation tools. Share evaluation findings and reports with stakeholders to promote transparency, accountability, and learning. • **Financial and resource allocation:** Allocate adequate financial and human resources for MEL activities. Include MEL costs in project budgets and ensure that MEL activities receive sufficient resources to be conducted effectively. Regularly review resource allocations to align with changing MEL needs. • **Learning culture:** Foster a learning culture within the county, where staff are encouraged to reflect on their work, learn from successes and failures, and adapt strategies based on MEL findings. Celebrate achievements and acknowledge efforts towards MEL integration and learning. • **Monitoring and evaluation champions:** Identify staff members who are enthusiastic about MEL and can serve as champions within the organization. These individuals can advocate for MEL, provide technical support, and create awareness of its importance across different departments and teams.

Annex 2: Capacity assessment findings for Kisumu County

Dimension	Key Findings	Recommendations
Blue Economy Potential and Opportunities	The assessment examined the BE sectors economic potential, technological innovations, environmental impacts, social benefits, and potential for value addition and diversification. It considered sectors such as fisheries and aquaculture, tourism and hospitality, renewable energy, infrastructure development, water and sanitation, education, and skills development. In Kisumu County, fisheries and aquaculture are the dominant sectors with proactive exploration of the other emerging sectors. The following sectors have enormous potential of contributing to economic growth, creating jobs, and improving livelihoods; • **Fisheries and aquaculture:** These sectors play a crucial role in providing income, employment, and food security for local population**.** Fishing harbors, landing sites and associated processing facilities provide significant employment and economic benefits to communities living in Kisumu County. Some of the activities conducted include recreational fishing, delineation of fish breeding zone, aquaculture, and lakefront fish science exploration. • **Tourism and hospitality:** Have opportunities in maritime tourism which entails water-based activities such as sailing, yachting, cruising and other nautical sporting events, water sports, lake tours, and cruise ships, public beaches and parks, leisure vessels, viewing decks, water sports/ beach sports and golf course. In addition, Kisumu has opportunities in mass tourism, which is characterized by hotels, beach resorts, retail shops, entertainment joints and tours. • **Water and sanitation.** Existing opportunities include: Rehabilitation of the old water and sanitation infrastructure, construction of new water infrastructure, development of WASH Sanitation facilities, proper sanitation practices promotion across the county, development of new sewer treatment facilities in urban and peri-urban towns to match the high urban and peri-urban populace and promotion of WASH activities in ECDE and primary schools to equip learners with knowledge and skills at tender ages. • **Education sector.** The county is keen on research and innovation for sustainable aquaculture practices and technologies to improve production and reduce environmental impact. In addition to providing training programs for residents in various blue economy sectors, fostering a skilled workforce. e.g., training on marine courses has been prioritised. • **Water sports and cultural innovation.** Existing opportunities on water sports include – diving, surfing, water polo, rowing, yacht racing, jet skiing, dragon boat racing, synchronized swimming ,kayaking, canoeing, fishing, kite boating, parachute, river and lake trekking , recue swimming, water volley ball, cave diving, spearfishing, aquathlon, underwater photography, beach sports etc. other prospects on cultural innovation and entertainment advocated by the county comprise of water festivals and provision of water sports equipment, cultural entertainment , creative arts, narratives, poetic and storytelling, cultural fashion and attires, promotion of local dishes, music and entertainment industry in beaches and islands, filming and promotion of blue economy initiatives, handicraft innovation from blue economy products- reeds, and establishment of arts gallery and sculpture. • **Infrastructure development.** The county government through the Kisumu Lakefront Development Corporation (KLDC) have prioritized infrastructural development of the lakefront such as Lakefront office spaces, Beach Management Units (BMU), landing piers, fish storage facility, fish processing plant, Boat Building yard/industry, floodlight in BMUs and construction of roads for easier access to the beaches.	• Invest in the development of critical infrastructure to support blue economy sectors. These include; construction of ports, harbors, marinas, fish handling facilities, and other transportation and logistics infrastructure. Adequate infrastructure will facilitate the movement of goods, services, and people, and enhance the efficiency and competitiveness of the blue economy. • Through trade promotion, quality standards compliance and market intelligence, facilitate market linkages for blue economy products, both domestically and internationally • Embrace inclusivity and participatory approaches in development of the blue economy sectors. This entails engaging stakeholders in the planning, decision making, and implementation of blue economy initiatives. These stakeholders include but are not limited to; fishing communities, private sector entities, research institutions and civil society organizations. • Facilitate market development and improve market access for blue economy products and services. Develop marketing campaigns, branding initiatives, and quality standards to enhance the visibility and competitiveness of blue economy sectors in national and international markets. Foster trade agreements and partnerships that promote the export of blue economy products. • Develop a comprehensive blue economy policy framework: Create a robust policy framework that outlines the objectives, strategies, and action plans for the blue economy. This framework should be aligned with international best practices and incorporate principles of sustainability, inclusivity, and transparency. • Promote research and innovation: Invest in research and development to enhance understanding of the blue economy, identify emerging trends, and explore innovative approaches. This will enable evidence-based decision-making and facilitate the development of modern technologies, practices, and solutions for sustainable blue economy development. • Enhance data collection and analysis: Improve the availability and quality of data on the blue economy sector through enhanced data collection, analysis, and reporting mechanisms. This will provide crucial information for policy formulation, monitoring, and evaluation.
Policy and Regulatory Framework	Establishing blue economy policies and regulatory frameworks is essential to ensure the effective governance and management of the BE. Kisumu county has existing policies and regulations that promote blue economy activities that are aligned with national policies, regulations, and strategies; • Kisumu City Master Plan. • Kisumu County Water bill, regulation awaiting enactment by October 2023 and Water policy. • Kisumu County Solid waste management Act,2014 • Kisumu County water policy ,2018 • Kisumu County disaster and Emergency management act 2015 • Kisumu Climate Change Act ,2020 • Kisumu County Environmental Health & sanitation Act ,2022 • Kenya Environmental Health and Sanitation Policy 2016-2030 • Kisumu County Lake Region Economic Act,2018 • Kisumu County Fisheries and Aquaculture Management Act ,2016 • Kisumu County Lake Front Development Act,2021 • County Roads Act ,2019 • Kisumu County Transport Act,2019 • Developed Youth Integrated Development plan. • Gender mainstreaming policy, Captured in the county CIDP III The sports and culture policies have been formulated, awaiting the development of a bill and subsequent approval by the county assembly. However, there are deficiencies in the current policies and regulations that need to be addressed and reinforced. These include the need to establish regulations and a framework for sports and culture, create regulations pertaining to youth and gender, raise awareness and advocate for the Blue Economy, enhance capacity building, and strengthen the staff and leadership of the county. Inadequate financing/ low budgetary allocations has hindered both the implementation and enforcement of policies and regulations. The assessment identified gaps and inconsistencies in existing policies and regulations and recommends necessary reforms, and development of a comprehensive framework that supports sustainable blue economy practices. The framework should address issues such as spatial planning, licensing, and permitting procedures, pollution control, fisheries management, and biodiversity conservation while promoting social inclusion and equity.	• **Encourage cross-sector collaboration:** Foster collaboration and coordination across different sectors and stakeholders involved in the blue economy. This can be achieved by establishing inter-departmental or multi-stakeholder platforms that facilitate dialogue, information sharing, and joint decision-making. • **Develop a legal and regulatory framework:** Establish a comprehensive legal and regulatory framework that encompasses the various sectors and activities within the blue economy. This framework should address licensing, permits, environmental impact assessments, resource management, maritime spatial planning, and other relevant aspects. Ensure that the framework is transparent, fair, and enforceable. • **Promote sustainable practices:** Incorporate sustainability principles into the policy and regulatory framework. Encourage industries and stakeholders to adopt sustainable practices and technologies that minimize the negative environmental impact of their activities. This may include promoting renewable energy, sustainable fisheries management, marine biodiversity conservation, and reducing pollution and waste generation. • **Strengthen monitoring and enforcement:** Establish strong monitoring and enforcement mechanisms to ensure compliance with regulations and standards. This may involve developing surveillance systems, conducting regular inspections, and imposing penalties for non-compliance. • **Engage with stakeholders:** Involve stakeholders, including local communities, indigenous groups, industry representatives, civil society organizations, and academia, in the policy development and decision-making processes. Ensure that their perspectives, knowledge, and interests are considered and integrated into the policy framework. • **Regularly review and update policies:** Establish mechanisms for regular review and update of blue economy policies and regulations to ensure that they remain relevant and effective. This may involve conducting periodic evaluations, monitoring trends and developments, and incorporating emerging priorities and technologies into the framework.

Dimension	Key Findings	Recommendations

Institutional Arrangements and Human Capacity	Developing an effective institutional set-up is critical for supporting the BE. This assessment focused on establishing whether the Kisumu County has dedicated blue economy institutions, with adequate resources, authority, and capacity to govern and regulate blue economy activities. Also, the assessment sought to establish if the county has considered building the capacity of relevant stakeholders, including government agencies, private sector entities, civil society organizations, and local communities, to promote sustainable blue economy practices and achieve sustainable development goals.
	
	It was established that the county has departments in overseeing implementation of blue economy projects. These departments include; Agriculture, Fisheries, Livestock Development, and Irrigation; Water, Environment, Natural Resources and Climate Change; Trade, Tourism, Industry and Marketing; Sports, Culture, Gender, and Youth Affairs; and Infrastructure, Energy and Public Works. In addition, the County has established the Kisumu Lakefront Development Corporation (KLDC) that is responsible for coordinating and overseeing implementation blue economy initiatives along the lakefront.
	
	The institutions have the authority, mandate, and human resources to effectively implement and oversee blue economy initiatives. To enhance the skills and knowledge of staff members and stakeholders, the departments conduct regular needs assessment and skills gap analysis as well as training and building capacity of the staff.
	
	Additionally, the county facilitates capacity building and knowledge sharing among local communities through peer learning and bench marking for the best practices. The county plans to initiate economic hubs and innovation centers to enhance their public participation. Policies, regulations, and programmes domestication is embraced and a well-developed multi-stakeholders forum for Kisumu County sector working group for Gender, Youth and PWIDs is in place. Blue economy projects have stimulated the growth of local supply chains and industries through creation of employment opportunities for youth and women. To foster internal and external collaboration between county departments and the national government, the county works in collaboration with the Lake Region Economic Bloc (LREB).
		• **Build institutional capacity:** Provide adequate training, skills development, and capacity-building programs for the staff overseeing implementation blue economy initiatives. This will ensure that they have the necessary knowledge and expertise to effectively implement blue economy policies and initiatives. Adopt the following actions to improve staff knowledge and abilities about the blue economy;
		  ○ create and conduct training and capacity-building initiatives: Set up training sessions, workshops, and seminars so that staff members are knowledgeable about the blue economy's different facets, including sustainable tourism, water quality monitoring, fisheries management, aquaculture techniques, and policy formulation.
		  ○ collaborate and form relationships with universities, colleges, and institutions of higher education to provide training programs that are both relevant and market driven.
		  ○ encourage the professional growth of its employees, offer technical assistance and mentoring programs. This can be accomplished by providing persons working on blue economy projects with professional mentors or advisers to help them and support them.
		• **Promote knowledge sharing and dissemination:** Facilitate the exchange of best practices, lessons learned, and success stories within and across blue economy sectors, regions, and countries. This will contribute to a collective learning process and promote the replication and scaling up of successful blue economy initiatives.

Project Identification and Planning	Identifying viable blue economy projects is essential for maximizing economic and social benefits while minimizing negative environmental impacts. Successful project identification, planning and implementation involves conducting feasibility studies, identifying suitable project sites, assessing potential risks and mitigation measures, and estimating the financial and socio-economic viability of the projects. Additionally, effective project planning and implementation should include stakeholder engagement, resource allocation, monitoring and evaluation, and adaptive management to ensure project success. The BE projects identified and prioritised by the county government for implementation in the fiscal year 2024/2025 are in aligned with CIDP 2023-2027. The County has identified partners for collaboration in funding and implementation of the projects. These include but are not limited to: National Government Departments; Private Sector Organizations; International Financiers; Development Partners; WASH forum network; Lake Victoria South Water Works Development Agency (LVSWWDA); Kenya Blue Economy Skills Training (KBEST (KBEST) and UN-Habitat. Kenya Blue Economy Skills Training (KBEST) is a 7-year, $25 million project funded by Global Affairs Canada to support the Government of Kenya in achieving its goals for an enhanced Blue Economy. Gender and social inclusion in identification, planning and implementation of blue economy projects are essential for promoting equality, empowerment, sustainable development, poverty reduction, resilience, social justice, and policy compliance. Considering this, the county ensures that GeSI is factored in all the stages of identification, planning and implementation of blue economy projects including access to employment opportunities. Deliberations for the reduction of carbon footprint agenda are mainstreamed in the Departments' work plans and budgets. Reducing carbon footprint is essential for climate change mitigation, environmental conservation, adaptation and resilience, health and well-being of the lake and communities. All the blue economy projects implemented by the county are aligned with Sustainable Development Goal 14: Conserve and sustainably use the oceans, seas, and marine resources for sustainable development goal – *Life below water to* conserve and sustainably use the oceans, seas, and marine resources for sustainable development. To ensure meaningful community engagement and participation in the planning, implementation, and monitoring of blue economy projects the county government has embraced ward level public participation to provide an opportunity for the Citizens to participate in decision making process. This has been enhanced through establishment of Community Project Monitoring Committees (CPMCs). Community project monitoring committees play a vital role in ensuring the successful implementation and outcomes of development projects at the grassroots level. These committees are composed of representatives from local communities who actively engage in monitoring and evaluating the progress and impact of projects. Any potential risks in project planning are addressed through public participation and Environmental and Social Impact Assessment at the inception of projects. To safeguard sustainability of blue economy initiatives, the county embraces Public-Private Partnerships (PPPs) approach to projects and engaging the public during public participation. Comprehensive ESIA during project inception and development of Environmental Management Plans for all projects is employed to warrant environmental and social safeguards. To achieve effective management and disbursement of funds to eligible projects, the Public Finance Management Act, 2021 is strictly adhered to.	• **Identify project opportunities and develop a project pipeline:** Conduct a scoping exercise to identify potential blue economy projects that align with national or regional development plans, priorities, and goals. Once identified, rank the projects by level of priority and feasibility, and develop a project pipeline to ensure a continuous flow of projects. • **Conduct feasibility studies:** Conduct feasibility studies for each project in the pipeline. The studies should assess the technical, financial, economic, social, and environmental viability of the proposed project. The feasibility study findings can inform project design and provide a basis for decision-making and resource allocation. • **Develop project proposals:** Develop comprehensive project proposals for each prioritized project in the pipeline. The project proposals should articulate project objectives, scope, implementation strategy, financing structure, monitoring and evaluation plan, and stakeholder engagement strategy. Prepare detailed budgets and timelines for project implementation. • **Mobilize resources:** Mobilize the financial and technical resources necessary to implement the project. This may involve engaging with international and domestic sources of funding, such as development banks, private equity and venture capital firms, and governmental, philanthropic, and civil society organizations.

Dimension	Key Findings	Recommendations
Project Implementation	Projects implemented in the 2018/22 CIDP period under the fisheries production, capture fisheries and aquaculture production increased by 10 % (from 1,891MT to 2, 064MT) and 22% (122MT TO 149MT) respectively. The increase in production was attributed to the following interventions; capacity building of aquaculture farmers in modern production technologies, supply, and delivery of 712,000 fingerlings, 280 predator nets, development of post-harvest handling facilities i.e., 115 pond liners, 10 harvesting nets, installation of cold storage facility at Jubilee and Obunga Markets, and construction of 4 fish bandas. In addition, restructuring of governance of Beach Management Unit was done. In the current CIDP 2023-2027, the county government has prioritized the following projects areas for implementation: i. **Fisheries sector:** Promotion of capture and culture fish production, enhance extension services, promote diversification of fish farming methods, promote market access, promote climate smart technologies, promote fisheries infrastructure development, review, and formulation of legal and policy framework, enhance surveillance and early warning systems etc. In addition, the county has prioritised strengthening technical capacity of staff in modern fishing knowledge and skills. ii. **Infrastructure:** The county government through KLDC has prioritized the following projects to promote blue economy: • Construction of a 46KM long promenade along the lakefront. • Backfilling & Reclamation of land to Protect shoreline facilities from extreme fluctuations in lake surface due to climate change. • Upgrading of the existing golf- course shoreline to 18 hole international standards • Construction of a Marina • Construction of High End Housing at the Lakefront The main obstacles to implementing blue economy projects have been the insufficient policies and legislative framework for regulating the sectors, limited resources, and a lack of awareness and understanding of blue economy concepts. The county government is committed to addressing these challenges by adopting a Public-Private Partnerships (PPP) approach, implementing resource mobilization strategies, conducting sensitization programs, and advocating for increased awareness about the potential of the blue economy sectors.	• **Formulate project management plans:** Develop project management plans that detail the projects implementation strategy, governance structure, risk management approach, procurement and contracting procedures, and stakeholder engagement plan. Establish clear roles and responsibilities for all project stakeholders. • **Engage stakeholders:** Develop a stakeholder engagement plan that outlines how various project stakeholders will be involved and consulted at various stages of the project. Establish communication channels to ensure timely and transparent communication with stakeholders. • **Monitor and evaluate project outcomes:** Develop a monitoring and evaluation plan that captures project progress, achievements, and lessons learned. Regularly evaluate the project and adjust the implementation strategy as needed to achieve the desired project outcomes. • **Ensure sustainability:** Ensure the project promotes the sustainability of the blue economy by prioritizing environmental and social sustainability, creating opportunities for local communities, and supporting the conservation and sustainable use of ocean resources.
Economic and Social Impact	Economic and social impact of the blue economy is crucial in understanding its contribution to sustainable development. The assessment considered both direct and indirect impacts, such as job creation, income generation, poverty alleviation, food security, and sustainable livelihoods. It also examined the potential risks and trade-offs associated with blue economy activities, such as environmental degradation and social inequalities. The various blue economy sectors in the county have and are expected to create jobs directly or indirectly. Implementation of blue economy projects has overly contributed to the overall economic growth of the county. The sectors are envisaged to create economic diversification and the development of new industries and businesses particularly in value chains development. The projects have stimulated the growth of local supply chains and industries related to the sector namely; input suppliers, producers, processors, transporters, marketers, financial service providers and insurance service providers. In addition, the blue economy sectors have enhanced the quality of the life of the local communities in provision of potable water, income generation which has enabled communities take care of education and healthcare, construction of health facilities along beaches and construction of community social halls. For instance, the Dunga Beach road upgrade constructed to bitumen standard connecting to the streetlights has enhanced ease of access and reduced cost of doing business leading to an increased tourism in the area. Blue economy projects have promoted the equitable distribution of benefits across different social groups. Initiatives to raise awareness about the benefits and potential impacts of blue economy have been undertaken comprising holding public participation forums spearheaded by the department of Public Service, County Administration and Participatory Development.	• **Diversification of economic activities:** Encourage the diversification of economic activities within the blue economy. Promote the development of multiple sectors, such as fisheries, aquaculture, maritime transportation, renewable energy, tourism, and biotechnology. Diversification can reduce dependence on a single sector and create more opportunities for employment, entrepreneurship, and economic growth. • **Promote inclusive growth and social equity:** Distribute benefits of the blue economy equitably and to reach all segments of society. Develop policies and programs that prioritize inclusivity, social welfare, and equal access to opportunities, particularly for marginalized communities and small-scale fishers. Promote gender equality and empower women to participate in all aspects of the blue economy. • **Collaboration and partnerships:** Foster collaboration and partnerships between governments, industries, communities, and academia to promote innovation, knowledge sharing, and technology transfer. Collaboration can enhance research and development efforts, drive new investments, and create employment and entrepreneurship opportunities. • **Innovation and technology adoption:** Encourage the adoption of innovative technologies, including digital solutions, data analytics, remote sensing, and automation, to improve efficiency, productivity, and sustainability in blue economy sectors. Support research and development initiatives that focus on improving resource management, reducing environmental impact, and optimizing value chains. • **Capacity building and skills development:** Invest in building the skills and knowledge of the workforce engaged in the blue economy. Develop training programs and vocational courses that align with the needs of the industry, such as marine sciences, aquaculture, maritime transportation, and renewable energy. Enhancing workforce capabilities will support job creation and improve the competitiveness of the blue economy sectors.

Dimension	Key Findings	Recommendations
Institutionalization of Monitoring, Evaluation and Learning	The institutionalization of monitoring, evaluation, and learning (MEL) is crucial for the sustainable development of the blue economy. A systematic and comprehensive approach to MEL ensures that policies and initiatives are designed, implemented, and evaluated effectively, leading to improved decision-making, adaptive management, and learning for continuous improvement. Institutionalizing MEL involves establishing appropriate structures, systems, and processes to facilitate the collection, analysis, and use of data for monitoring and evaluating the implementation and effectiveness of blue economy policies and initiatives. It also involves creating a culture of learning and knowledge sharing that promotes continuous improvement and innovation. The county has a dedicated and well-structured unit responsible for monitoring, evaluation and learning of projects, which is situated in the county department for finance and economic planning department. The unit is fully capacitated with skilled staff to effectively conduct monitoring, evaluation and learning activities. The unit is equipped with standardized and consistent tools for conducting monitoring, evaluation, and learning activities; data collection, data authentication, data analysis and interpretation, regular reviews and reporting, internal utilization of lessons, documentation and sharing of knowledge products, storage, and information management. M&E unit has an automated county integrated monitoring and evaluation information system implemented by the World Bank in collaboration with the county government. The system supports in conducting electronic data collection and analysis/interpretation tools, as well as dissemination to facilitate evidence-based decision making and planning. Institutionalizing MEL is essential for the sustainable development of the blue economy. It requires a systematic and comprehensive approach that involves establishing appropriate structures, systems, and processes, building capacity, fostering collaboration, and promoting knowledge sharing and dissemination.	• Develop a comprehensive MEL framework: Create a robust MEL framework that outlines the objectives, indicators, data sources, methods, and tools for monitoring and evaluating the implementation and impact of blue economy policies and initiatives. This framework should be aligned with national and international MEL standards and guidelines. • Integrate MEL into policy design and implementation: Ensure that MEL is integrated into the design and implementation of blue economy policies and initiatives from the outset. This involves identifying MEL needs and requirements at the policy design stage and developing appropriate monitoring and evaluation plans that are regularly reviewed and updated. • **Build MEL capacity:** Provide training, skills development, and capacity-building programs for the staff of the blue economy institution and relevant stakeholders. This will enhance the technical skills and knowledge required for effective MEL design and implementation. • **Encourage stakeholder participation:** Foster collaboration and participation among stakeholders in the MEL process, including policymaking, data collection, and analysis, and knowledge sharing. This will ensure that diverse perspectives and interests are taken into account and help build ownership and accountability for blue economy MEL activities. • **Promote knowledge sharing and dissemination:** Establish mechanisms for sharing MEL results, lessons learned, and best practices with relevant stakeholders. This may involve publishing periodic reports, holding seminars and workshops, and using social media platforms and other communication channels. • **Regularly review and update the MEL framework:** Regularly review and update the MEL framework and activities to ensure that they are aligned with changing circumstances and evolving blue economy priorities and strategies.

Annex 3: Capacity assessment findings for Siaya County

Dimension	Key Findings	Recommendations
Blue Economy Potential and Opportunities	During the assessment and review of documents, it was established that Fisheries and Aquaculture are the predominant BE sectors in Siaya County. Between 2018-2022, fish production was 31,476,000 MT comprised of 30,000,000MT for fishing and 1,476,000 MT for aquaculture[12] It was established that Fisheries and Aquaculture sectors face the following challenges. • **Overfishing and Illegal, Unreported and Unregulated Fishing:** High demand for fish for consumption and commercial has led to unsustainable fishing practices, depletion of fish stocks, imbalances in the ecosystem and reduced economic opportunities for fishermen. • **Weak enforcement of Fisheries Laws and Regulations** *The Siaya County & Aquaculture Act 2017* in-place with regulations in-process. Weak enforcement has resulted in low compliance and unsustainable fishing practices. • **Environmental Degradation:** Pollution of the lakes and rivers from industrial and agricultural activities, and solid waste disposal negatively impact water quality and the health of aquatic ecosystems, affecting fish populations and aquaculture production. • **Impact of climate change:** Impact of climate change has reduced fish populations, affected fish species (both diversity and richness), and increased vulnerability of aquatic systems. This has been caused by raising temperatures in the lake, extreme weather conditions and altered rainfall patterns. • **Limited Access to Finance and Technology:** Small scale fishers and fish farmers have limited access to finance and modern technology. This has hindered adoption of modern and sustainable fishing and aquaculture technologies. • **Lack of Market Access and Value Chain Integration**: The ability of the sector to capture higher-value markets has been limited by inadequate value addition and processing facilities in the county. Currently the county has 2 modern fish handling facilities, mini-fish processing plant at Lwanda Kotieno and fish auction centre at Usenge. • **Inadequate Infrastructure and post-harvest losses:** Inadequate cold storage facilities, processing plants, and transportation networks has resulted in post-harvest losses and reduced the quality and value of fish products impacting the income of fishers and fish farmers. According to the county team, there's enormous potential in other sectors such as renewable energy, tourism and hospitality, water transport, water, and sanitation etc. This is because the county is endowed with natural resources including its proximity to Lake Victoria, which is the largest freshwater lake in Africa and the second-largest freshwater lake in the world. The following opportunities can be explored. i. **Offshore Renewable Energy:** Siaya County can harness the potential of offshore renewable energy sources, such as offshore wind, wave, and tidal energy. These projects can provide clean and reliable electricity to nearby communities and industries. The county can explore development of solar and wind energy as well as min-hydro along Yala and Nzoia River. Conducting feasibility studies and collaborating with renewable energy developers can help identify suitable locations for offshore energy projects. This can contribute to the county's energy security and reduce reliance on fossil fuels. ii. **Tourism and Hospitality potential and opportunities:** such as beach resorts, floating hotels, fishing trips, kayaking, canoeing, sailing, boat tours, and recreational facilities. Promoting ecotourism, cultural tourism, and adventure tourism along the lake can attract domestic and international tourists to the County. iii. **Community-Based Tourism**: Engaging local communities in tourism development can have multiple benefits. It can empower communities economically and socially while preserving their cultural traditions and natural resources. Initiatives like community-run guesthouses, guided village walks, and community-led tour operators along the lake can be established to create sustainable tourism models. iv. **Blue Biotechnology and Pharmaceuticals**: Siaya County can explore opportunities in blue biotechnology and pharmaceuticals. The lake's biodiversity can serve as a source for marine-based products, such as natural compounds with pharmaceutical potential or bioactive substances for cosmetic and nutritional applications. Encouraging research and development in this field can lead to economic diversification and job creation. v. **Research and Education:** Siaya County can promote research and education in blue economy sectors. Establishing partnerships with universities, research institutions, and government agencies can facilitate studies on marine ecosystems, water quality, and sustainable resource management. This knowledge can inform decision-making processes and support sustainable development of the blue economy sectors. To realize the full potential of the above-mentioned sectors, the county should create a conducive environment for the private sector players to invest in the sectors and develop relevant policies and regulations to govern the implementation of projects. In addition, it is crucial to conduct feasibility studies, assess the environmental impact, and ensure community engagement and participation in the development and implementation of projects. Besides Lake Victoria, the County has other lakes including: Lake Kanyaboli located in Alego Usonga sub-county and known for its scenic beauty, as a refugia for endemic fish species and popular spot for birdwatching; and Lake Sare. In addition, the County is traversed by several rivers that contribute to the water supply, agriculture, fishing, and other economic activities. These include; River Yala and River Nzoia that traverse the County and enter Lake Victoria through Yala Swamp. Yala swamp located in the County, is one of the largest freshwater wetlands in Kenya and crucial to Lake Victoria's survival. It's Kenya's largest papyrus wetland and a filter for rivers flowing into Lake Victoria. It covers an extensive area, stretching across Siaya and Busia counties. The swamp is a vital habitat for a variety of bird and plant species and serves as a water catchment area. The swamp provides water, firewood, thatch grass, papyrus, fish, herbal medicine, bush meat, fruits, charcoal, fodder, and timber. Nature Kenya, in collaboration with Siaya and Busia Counties has facilitated development of Yala Delta Land Use Plan (LUP). The plan provides a framework on how land within the swamp and the surrounding areas will be used. This is an important plan for Siaya County as it explores the potential of blue economy in Lake Victoria. Protection of Yala Swamp is important because of the following reasons. i. Lake Kanyaboli, Lake Naboya and Lake Sare are important reservoir of indigenous fish which has drastically reduced in Lake Victoria due to pollution. The Yala swamp serves as a nursery and spawning grounds for many fish species. It provides a safe and productive environment for fish to lay eggs and for the juvenile fish to grow and develop. ii. The swamp supports a diverse range of plant and animal species, including aquatic plants, insects, which form the base of the food chain providing a continuous food supply for fish, ensuring their survival and growth. iii. The swamp acts as natural filters, trapping sediments, pollutants, and excess nutrients from the surrounding land. This helps improve water quality by reducing the amount of pollutants and suspended solids entering the lake. iv. The swamp function as buffers against environmental changes, including fluctuations in water levels, temperature, and pollution. They absorb excess rainfall, reducing the risk of flooding and erosion, and, v. Ensures sustained fish production, which directly supports the local economy and food security. Blue economy sectors have the potential to generate revenue for the county. Currently the county is collecting revenue from fish cess and licensing of vessels. The County should explore revenue generation from fishing licenses and permits, fish market fees, fish auctions, fish processing and value addition, aquaculture licensing and permits, research and consultancy, eco-tourism related revenue streams etc. The county is planning to develop regulations to guide revenue collection from untapped potential streams in Fisheries and Aquaculture, Renewable Energy, Tourism and Hospitality, Infrastructure etc.	• Harness traditional sectors such as fisheries and aquaculture to capture their full potential. This will be achieved through additional funding and partnership with development partners, private sector, and communities. Emerging sectors should also receive specific attention to create enabling conditions for their emergence. Efforts should be directed to the implementation of a series of high impact projects dedicated to improving the status of traditional sectors and pilot initiatives to develop capacities in the emerging sectors. • Develop a comprehensive blue economy policy framework. The policy framework will outline the objectives, strategies, and action plans for the blue economy. This framework should be aligned with international best practices and incorporate principles of sustainability, inclusivity, and transparency. • Invest in research and development initiatives related to the blue economy sectors. Partner with universities, research institutions, and private sector organizations to conduct studies on sustainable fisheries management, aquaculture techniques, water quality monitoring, and other relevant areas. The findings can be used to inform policy decisions and support the development of blue economy sectors. • Collaborate with the private sector to invest in the development of infrastructure and facilities that support blue economy activities. These include upgrading and modernizing fish landing sites, and fish processing facilities. In addition, the private sector can develop and market tourist attractions such as beach resorts, wildlife sanctuaries, boat cruises, and water sports facilities. • Through trade promotion, quality standards compliance and market intelligence, facilitate market linkages for blue economy products, both domestically and internationally • To ensure inclusive and participatory development of the blue economy sectors, engage stakeholders in the planning, decision making, and implementation of blue economy initiatives. These stakeholders include but are not limited to, fishing communities, private sector entities, research institutions and civil society organizations.

Dimension	Key Findings	Recommendations
Policy and Regulatory Framework	A robust policy and regulatory framework are crucial for the successful development and management of the blue economy sectors in Lake Victoria. Effective policies and regulations help ensure sustainable practices, resource conservation, and equitable access to blue economy resources. The Fourth Schedule of the Constitution of Kenya (CoK) provides for development of Agricultural Policy as a function of the National Government. It transfers key components of agriculture including crop and animal husbandry, fisheries development and control of plant and animal diseases amongst others to the County governments. In 2021, the Ministry of Agriculture, Livestock, Fisheries and Cooperatives, in collaboration with County Governments and key stakeholders formulated the Agricultural Policy which formed the basis of legislation, strategies, plans, projects and programmes for the country's agricultural development. This policy covers the agriculture, livestock, and fisheries sub-sectors. County governments are expected to develop policies and legislations that conform to the Agricultural Policy. It was established that the National Agriculture Policy guide the activities of County Agriculture, Livestock and Fisheries department, 2021. Additionally, Fisheries and Aquaculture activities are guided by The Siaya County Fisheries and Aquaculture Act, 2017. The Act provides for the sustainable utilization, management and development of Fisheries, Aquaculture, and other Aquatic resources and for connected purposes. It provides procedures for registration and licensing of new vessel, application of fishing license, prevention of pollution and protection and conservation of county fishery waters etc. Enforcement of the provisions of the Act is undertaken by the Directorate of Fisheries with support from officers from the six (6) sub counties. According to the county stakeholders, one of the issues facing the Fisheries and Aquaculture sectors is the overlap of county and national policies. The overlap has caused confusion and inconsistency in the fisheries and aquaculture sector. Conflicting regulations between counties and the national government cause misconceptions, compliance concerns, and enforcement difficulties. As a result, fisheries management becomes ineffective, and practices become unsustainable. To solve this, the team advocated for regular consultations, coordinated planning, a clear policy harmonization framework, and information exchange between national and county governments. Since blue economy is cross sectoral, the County team proposed that National Government should develop a blue policy to guide the sectors. It was noted that the State Department for Blue Economy and Fisheries (SDBEF) has development a National Blue Economy Strategy. The SDBEF should disseminate the strategy to all county governments once approved by the Cabinet Secretary. Under the Blue Spatial Development (Zone III), the county prioritised development of policies, strategies, guidelines, and standards that promote blue economy development – Tourism Promotion, Fisheries Development and Marine Industry. This will be achieved through collaboration with the National Government. This demonstrates the commitment by the County Government to invest in blue economy sectors.	• Allocate adequate resources for development of policies, strategies, guidelines, and standards that promote blue economy development as prioritised in the 2023-2027 CIDP. • **Adopt an Integrated Policy Approach:** Develop a blue economy policy and regulatory framework that recognizes the interdependencies among different sectors of the blue economy, such as fisheries, aquaculture, tourism, renewable energy, water transport, environmental protection etc. The framework should promote sustainable development, biodiversity, conservation, and socio-economic growth while ensuring coherence and synergy across sectors. • **Sector Uniqueness:** Develop sector-specific policies and strategies tailored to the unique needs and potential of each blue economy sector in the county, such as fisheries, aquaculture, tourism, renewable energy, and infrastructure development. These strategies should outlie clear goals, action plans, and targets for sector development. • **Stakeholder Engagement:** Involve stakeholders in policy development. These stakeholders include but are not limited to; other county governments, national agencies, fishing communities, local communities, private sector, environmental organizations, and local universities. • **Embrace Science-Based Decision Making**: Develop policies and regulations that are informed by the best available scientific knowledge. Collaborate with research institutions and universities to conduct research on blue economy sectors including the lake's ecosystems, climate change impacts, biodiversity, and socio-economic factors. • **Cross-Border Cooperation:** Strengthen cross-border cooperation and coordination among counties sharing Lake Victoria to address familiar challenges and pursue harmonization of policies and regulations. • **Review and Update:** Regularly review and update policies and regulations to ensure they remain relevant and responsive to emerging issues and best practices. • **Strengthen Monitoring and Enforcement**: Enhance monitoring and enforcement mechanisms to ensure compliance with policies and regulations. Invest in capacity building and infrastructure for effective surveillance, monitoring of fishing activities, pollution control, and enforcement of environmental standards. Collaborate with law enforcement agencies, community-based organizations, and local communities to enhance compliance and deter illegal practices. • **Capacity Building and Awareness**: Invest in capacity building programs for county officials, policymakers, and relevant stakeholders to enhance their knowledge and skills in blue economy governance, policy implementation, and environmental management. Raise awareness among local communities about the importance of sustainable resource use, conservation practices, and the socio-economic benefits of the blue economy. • **Policy coordination and alignment:** Align County blue economy programs and policies align with national blue economy strategies and frameworks. This involves actively engaging in policy dialogues and consultations with the national government to incorporate national priorities and objectives into county-level plans. Regular communication and coordination channels can be established to facilitate policy alignment and exchange of information. • **Engagement with regional bodies:** Engage with regional bodies that focus on the blue economy in the Lake Victoria region. This can include participating in regional forums, workshops, and conferences where best practices, experiences, and lessons learned can be shared. Collaboration with regional bodies can help ensure that county programs are in line with regional priorities and initiatives, fostering regional integration and cooperation. • **Data sharing and reporting:** Establish mechanisms for data sharing and reporting, ensuring that relevant information on blue economy programs is shared with national and regional authorities. This includes submitting regular progress reports, data on project implementation, and impact assessments. By providing accurate and timely information, county governments can enable effective monitoring, evaluation, and coordination across various levels of governance. • **Alignment with international commitments and agreements:** Align blue economy programs with international commitments and agreements related to sustainable development and environmental conservation. This can include commitments such as the Sustainable Development Goals (SDGs), the Paris Agreement on climate change, and regional agreements on fisheries management and conservation. Aligning with international commitments helps demonstrate county governments' commitment to global sustainability goals and enhances the potential for accessing international support and funding.

Institutional Arrangements and Human Capacity	A strong and resourced institutional setup and human capacity within county governments are crucial for effective governance, sustainable management, and inclusive development of the blue economy sectors. Siaya county has 10 departments headed by CECMs. Out of these, six (6) departments namely; Agriculture, Food, Livestock and Fisheries, Education, Youth Affairs, Gender and Social Services, Health and Sanitation, Public Works, Energy, Roads and Transport, Tourism, Culture, Sports and Arts, Water, Irrigation, Environment and Natural Resources are implementing blue economy related projects. It was however not established the projects that are being implemented by these departments.
	
	The Agriculture, Food, Livestock and Fisheries department is headed by a CECM who is deputized by a Chief Officer. The department has a directorate for fisheries headed by a County Director who has other technical officers. Fisheries Directorate recently employed 13 officers in August 2023 to enhance service delivery. Since blue economy is cross sectoral, the team indicated that the County is planning to establish a standalone directorate for blue economy or a chief officer in charge of blue economy. The directorate or chief officer will coordinate blue economy activities in all the departments mentioned above.
	
	It was established that the County has not established mechanisms to enhance skills and knowledge of staff members and stakeholders involved in the implementation of blue economy projects. In addition, the county has not implemented programmes aimed to build capacity and share knowledge among local communities benefiting from blue economy resources.
	
	Since blue economy is an emerging concept and fisheries and aquaculture is facing many challenges, the county team proposed that they be trained on a wide range of topics and skills related to sustainable aquatic resource management, economic development, and conservation. These include but not limited to;
	
	Fisheries management, Aquaculture development, water quality management, value addition and processing, ecotourism and conservation, climate change adaptation, policy, and governance etc. In addition, there's need to create awareness among the county staff and stakeholders about blue economy sectors and potentials.
		• Consider establishing a directorate in charge of blue economy. The directorate will coordinate all the blue economy activities in the county. Homabay County has created a blue economy department, the county should consider learning from Homabay.
		• To enhance skills and knowledge of staff on blue economy, the county to undertake the following;
		  ○ Design and implement training and capacity building programs: Organize training sessions, workshops, and seminars for staff to understand various aspects of blue economy such as fisheries management, aquaculture techniques, water quality monitoring, sustainable tourism, and policy development.
		  ○ establish partnerships and collaborations with universities, colleges, and vocational training institutions to offer relevant and demand-driven training programmes.
		  ○ provide technical assistance and mentorship programs to support the professional development of their staff members. This can be achieved by assigning experienced mentors or advisors to guide and support individuals working on blue economy projects.
		  ○ encourage and support research and innovation activities related to the blue economy. This involves providing funding opportunities, establishing research partnerships, and supporting the development of innovative solutions and technologies.
		  ○ promote peer to peer learning platforms where staff members and stakeholders can interact, share experiences, and learn from each other. These platforms can include workshops, conferences, seminars, and online communities' members in pursuing advanced degrees or certifications in fields relevant to the blue economy.

Dimension	Key Findings	Recommendations
Project identification, planning and implementation.	To maximize economic and social benefits while limiting detrimental environmental effects, it is crucial to identify projects that would help grow the blue economy. Conducting feasibility studies, choosing acceptable project locations, identifying potential risks, and mitigating actions, and determining the projects' financial and socio-economic viability are all necessary for successful project selection, planning, and implementation. To assure project success, good project planning and execution should also include stakeholder participation, resource allocation, monitoring and evaluation, and adaptive management. By effectively identifying, planning, and implementing blue economy projects while aligning with national or regional development plans, goals, and priorities, as well as stakeholder engagement, monitoring and evaluation, and prioritizing sustainability, counties and communities can maximize the benefits of the blue economy while ensuring its long-term viability. The County has prioritised blue economy as a key driver of economic growth and job creation (CIDP 2023-2027). The County will put in place mechanisms to improve over 60 existing beaches, fisheries and fish production, water transport infrastructure and regulations, irrigation, environmental protection, and conservation. The Spatial Development Framework (SDF) in the CIDP 2023-2027 has described three broad zones namely, the Green Spatial Development, Brown Spatial Development, and the Blue Spatial Development. The Blue Spatial Development (Zone III) seeks to tap into the blue economy opportunities for economic development. The County will focus on fishing, tourism, the marine economy (ship building and boat making), water transport (shipping, harbors) and exploration energy (wind and solar power). The framework has 3 zones namely; o Zone III A- Tourism Promotion Zone – this focuses on the lakefront comprised of Lake Victoria, Lake Kanyaboli, Lake Nyamboyo and Lake Sare; o Zone III B- Fisheries Development Zone - this focuses on the fishing industry and proposes strategies to promote development of the zone. These strategies include; development of policies, strategies, guidelines, standards and legislation, development of fish landing beaches, infrastructure development etc. o Zone III C- Marine Industry and Commerce Zone - provides a framework for development of the port in areas such as Asembo Bay and Port South Bay. Other activities in this zone include; ship and boat building, water and leisure sports, boat racing, water transport, ferry services, hauling traded goods and services, logistical support (clearing and forwarding, warehousing, safety, and security operations) In addition, the following sectors have been prioritised in the CIDP for funding; i. **Water transport:** Lake Victoria links Siaya to Migori, Homabay, Kisumu and Busia as well as Tanzania and Uganda. The County has identified water transport for exploration as a county and through the Lake Region Economic Bloc (LREB). In the 2023-2027, the County plans to develop landing bays, provide more ferries through Public-Private Partnership, construct parking bays, install high masts/security lighting etc. The county will collaborate with Kenya Maritime Authority to provide safety standards to facilitate commercial transport and recreational activities in the lake. ii. **Renewable Energy:** Siaya county plans to harness hydro power generation at Ndanu Falls on River Yala, promote renewable energy by identifying sites suitable for wind and solar energy plants. The County has proposed in the CIDP to develop Lake Kanyaboli Eco city and make Yala swamp part of Eco city. The Eco city is a flagship project which will encompass, environmentally friendly industrial development, Wildlife conservation, Cultural sporting artistic hub, Water and waste management systems and Tourism. Therefore, implementation of the Yala Delta Land Use Plan (LUP) in collaboration with Busia County should be prioritised. The identification and prioritization of the above projects were done after public participation during the CIDP development phase. During the identification of the projects, the county considered the impact such as job creation, increased household incomes. However, it was not established if the county undertakes comprehensive prefeasibility studies to determine the viability of the projects. The county team cited lack of budget and technical capacity to undertake prefeasibility studies as a challenge. The projects are aligned with the long-term development agenda of the County. The county will seek partnerships with National Government and private sector to implement some of the prioritised projects. For example, the county will collaborate with Kenya Maritime Authority to provide safety standards in order to facilitate commercial transport and recreational activities in the lake. County budgets and development partners finance the projects. It was established that environmental and social impact assessments is conducted for all the projects implemented by the county. Environmental impact assessments (EIAs) help identify and evaluate potential environmental risks and impacts associated with projects. Social assessments help the county and stakeholders gain a comprehensive understanding of the social context in which the project will be implemented. These include the social structures, demographics, cultural norms, and values of the affected communities. There was no evidence of the efforts undertaken by the county to promote the reduction of carbon footprint of blue economy initiatives. The county can consider the following initiatives. i. **Renewable Energy Integration**: Encourage the use of renewable energy sources such as solar, wind, and tidal power in blue economy projects. This includes promoting the installation of renewable energy systems on vessels, offshore platforms, and lake infrastructure. Reduction reliance on fossil fuels, significantly lower the carbon emissions associated with blue economy activities. ii. **Energy Efficiency Measures:** Implementing energy-efficient practices and technologies can help reduce the carbon footprint. This includes optimizing vessel and equipment design for energy efficiency, adopting energy-saving technologies, and promoting energy management practices. iii. **Sustainable Fishing and Aquaculture Practices**: promote sustainable fishing and aquaculture practices that minimize environmental impacts and carbon emissions. This includes implementing responsible fishing methods, reducing bycatch, promoting sustainable fish stock management, and adopting eco-friendly aquaculture practices. iv. **Waste Management and Pollution Control:** Effective waste management and pollution control measures are essential for reducing the carbon footprint. Counties can implement proper waste disposal systems, encourage recycling, and waste reduction practices, and enforce regulations to prevent pollution from vessels and lake infrastructure. This helps minimize the release of greenhouse gases and other pollutants into the environment. v. **Awareness and Capacity Building**: Counties can raise awareness about the importance of reducing the carbon footprint among stakeholders, including industry players, local communities, and tourists. They can organize workshops, training programs, and educational campaigns to promote sustainable practices and provide technical assistance to help businesses and individuals adopt low-carbon approaches.	• **Identify project opportunities and develop a project pipeline**: Conduct a scoping exercise to identify potential blue economy projects that align with national or regional development plans, priorities, and goals. Once identified, rank the projects by level of priority and feasibility, and develop a project pipeline to ensure a continuous flow of projects. • **Conduct feasibility studies:** Conduct feasibility studies for each blue economy project in the pipeline. The studies should assess the technical, financial, economic, social, and environmental viability of the proposed project. The feasibility study findings can inform project design and provide a basis for decision-making and resource allocation. • **Develop project proposals:** Develop comprehensive project proposals for each prioritized project in the pipeline. The project proposals should articulate project objectives, scope, implementation strategy, financing structure, monitoring and evaluation plan, and stakeholder engagement strategy. Prepare detailed budgets and timelines for project implementation. • **Formulate project management plans:** Develop project management plans that detail the project's implementation strategy, governance structure, risk management approach, procurement and contracting procedures, and stakeholder engagement plan. Establish clear roles and responsibilities for all project stakeholders. • **Build project teams:** Build project teams consisting of individuals with the required technical, financial, and managerial expertise to ensure the successful implementation of the project. Assign qualified project managers to oversee the project, monitor its progress and ensure timely delivery on project milestones. • **Engage stakeholders:** Develop a stakeholder engagement plan that outlines how various project stakeholders will be involved and consulted at various stages of the project. Establish communication channels to ensure timely and transparent communication with stakeholders. • **Data collection and monitoring:** Invest in robust data collection and monitoring systems to gather accurate and timely information on the performance and impact of blue economy sectors. Regularly assess the economic, social, and environmental outcomes of these sectors to inform policy decisions, identify areas for improvement, and support evidence-based planning.

Dimension	Key Findings	Recommendations
Economic and Social Impact	The County Integrated Development Plan (CIDP) 2023-2027, has adopted an agricultural driven development model to address food and nutrition insecurity, increase household incomes and address unemployment in the county. It is estimated that agriculture, livestock, and fisheries will contribute 60% of KES.15.4 billion contributed by the County to the GDP (Siaya CIDP 2023-2027). The County has identified blue economy as one of the key drivers of economic growth and job creation. Revitalization of the blue economy to improve fishing resources is one of the resource potential growth areas prioritised in the CIDP (2023-2027) under spatial development framework. By leveraging the county's water resources, specifically Lake Victoria, and engaging in sustainable blue economy activities, Siaya County has experienced several economic benefits: i. **Job Creation:** Fisheries and aquaculture projects have generated employment opportunities to the citizens. Commercial fishing, fish processing, fish farming, and related activities have provided jobs for local communities, contributing to poverty reduction and improved livelihoods. Currently, the sector has estimated 3000 fish farmers, 13,000 fish crew, 5000 boat owners and 5000 other traders (net vendors, net repairers, boat builders etc.). Sand mining in the lower side of Rarienda and Alego Usonga has created jobs for the locals. ii. **Income Generation**: Fisheries and aquaculture projects have generated income for individuals and businesses. Increased economic activities and revenue generation has led to improved standards of living and economic well-being within the county. iii. **Infrastructure Development:** Infrastructure development, such as landing sites, cold storage facilities, fish processing plants, have contributed to overall infrastructure development in Siaya County, stimulating economic growth in related sectors. However, there is no available data on the number of direct and indirect jobs that have been created by fisheries and aquaculture sector. Fishing and aquaculture projects in Siaya County have stimulated the growth of local supply chains and industries related to the sector. i. The established fish processing plant is expected to create opportunities for local entrepreneurs and stimulates the growth of fish processing industries. The plant will employ local workers and source raw materials from local fishermen, thereby creating a local supply chain for fish products. Value addition activities, such as filleting, smoking, and packaging, can also be undertaken locally, further boosting the growth of related industries. a) **Social Impact** i. Implementation of fishing and aquaculture projects in Siaya has played play a significant role in enhancing food security and nutrition in local communities. Fish is a valuable source of protein, essential nutrients, and omega-3 fatty acids. By increasing fish production and availability, these projects contribute to improved diets, reduced malnutrition, and enhanced health outcomes within the community. ii. Implementation of fishing and aquaculture projects has empowered women in Siaya County. Women participate in fish processing, marketing, and value addition activities. Increased investment in the sector will enable women gain economic independence, improve their social status, and contribute to decision-making processes within their households and communities. iii. Development of infrastructure such as landing sites, fish markets, processing facilities, and access roads has enhanced market access, reduced post-harvest losses, and promoted trade, benefiting the entire value chain and local economy. iv. Local communities have benefited from capacity building activities. The programs have equipped individuals with the necessary skills and knowledge to engage in fishing, fish farming, and related activities effectively.	• **Diversification of economic activities:** Encourage the diversification of economic activities within the blue economy. Promote the development of multiple sectors, such as fisheries, aquaculture, maritime transportation, renewable energy, tourism, and biotechnology. Diversification can reduce dependence on a single sector and create more opportunities for employment, entrepreneurship, and economic growth. • **Sustainable resource management:** Prioritize the sustainable management of Lake Victoria resources to ensure their long-term viability. Implement measures to prevent overfishing, protect marine habitats, and promote responsible tourism development. This will safeguard resource availability and support the continued growth of economic activities dependent on the lake. • **Collaboration and partnerships:** Foster collaboration and partnerships between governments, industries, communities, and academia to promote innovation, knowledge sharing, and technology transfer. Collaboration can enhance research and development efforts, drive new investments, and create employment and entrepreneurship opportunities. • **Capacity building and skills development:** Invest in building the skills and knowledge of the workforce engaged in the blue economy. Develop training programs and vocational courses that align with the needs of the industry, such as marine sciences, aquaculture, maritime transportation, and renewable energy. Enhancing workforce capabilities will support job creation and improve the competitiveness of the blue economy sectors. • **Promote inclusive growth and social equity**: Ensure that the benefits of the blue economy are distributed equitably and reach all segments of society. Develop policies and programs that prioritize inclusivity, social welfare, and equal access to opportunities, particularly for marginalized communities and small-scale fishers. Promote gender equality and empower women, youth and people living with disabilities to participate in all aspects of the blue economy. • **Innovation and technology adoption:** Encourage the adoption of innovative technologies, including digital solutions, data analytics, remote sensing, and automation, to improve efficiency, productivity, and sustainability in blue economy sectors. Support research and development initiatives that focus on improving resource management, reducing environmental impact, and optimizing value chains. • **Supportive regulatory frameworks:** Establish clear and enabling regulatory frameworks that promote investment, ensure sustainable practices, and protect the rights of stakeholders in the blue economy. Develop comprehensive legal frameworks, licensing regimes, and environmental regulations that balance economic growth with environmental conservation and social well-being
Institutionalization of Monitoring, Evaluation and Learning	The institutionalization of monitoring, evaluation, and learning (MEL) is crucial for the sustainable development of the blue economy. A systematic and comprehensive approach to MEL ensures that policies and initiatives are designed, implemented, and evaluated effectively, leading to improved decision-making, adaptive management, and learning for continuous improvement. Institutionalizing MEL involves establishing appropriate structures, systems, and processes to facilitate the collection, analysis, and use of data for monitoring and evaluating the implementation and effectiveness of blue economy policies and initiatives. It also involves creating a culture of learning and knowledge sharing that promotes continuous improvement and innovation. The county has a dedicated and well-structured unit responsible for monitoring, evaluation and learning of projects, which is situated in the finance and economic planning department. The unit is fully capacitated with skilled staff to effectively conduct monitoring, evaluation and learning activities. Standardized and consistent tools for conducting the following monitoring, evaluation, and learning activities; data collection, data authentication, data analysis and interpretation, regular reviews and reporting, internal utilization of lessons, documentation and sharing of knowledge products, storage and information management are important aspects for sustainable implementation of blue economy projects. The county M&E activities are guided by the County Integrated Monitoring and Evaluation System (CIMES) Institutionalizing MEL is critical for the blue economy's long-term development. It necessitates a systematic and comprehensive strategy that includes the establishment of appropriate structures, systems, and procedures, the development of capability, the promotion of collaboration, and the promotion of information exchange and dissemination.	• **Develop a comprehensive MEL framework:** Create a robust MEL framework that outlines the objectives, indicators, data sources, methods, and tools for monitoring and evaluating the implementation and impact of blue economy policies and initiatives. This framework should be aligned with national and international MEL standards and guidelines. • **Integrate MEL into policy design and implementation:** Ensure that MEL is integrated into the design and implementation of blue economy policies and initiatives from the outset. This involves identifying MEL needs and requirements at the policy design stage and developing appropriate monitoring and evaluation plans that are regularly reviewed and updated. • **Build MEL capacity:** Provide training, skills development, and capacity-building programs for the staff of the blue economy institution and relevant stakeholders. This will enhance the technical skills and knowledge required for effective MEL design and implementation. • **Encourage stakeholder participation:** Foster collaboration and participation among stakeholders in the MEL process, including policymaking, data collection, and analysis, and knowledge sharing. This will ensure that diverse perspectives and interests are taken into account and help build ownership and accountability for blue economy MEL activities. • **Promote knowledge sharing and dissemination:** Establish mechanisms for sharing MEL results, lessons learned, and best practices with relevant stakeholders. This may involve publishing periodic reports, holding seminars and workshops, and using social media platforms and other communication channels. • **Regularly review and update the MEL framework:** Regularly review and update the MEL framework and activities to ensure that they are aligned with changing circumstances and evolving blue economy priorities and strategies

Annex 4: Capacity assessment findings for Busia County

Dimension	Key Findings	Recommendations
Blue Economy Potential and Opportunities	Busia County is in western Kenya and bordering Uganda. The County is home to several small rivers and lakes that contribute to the local economy. Lake Victoria, River Nzoia and River Malaba contribute to the blue economy in several ways: These include; i. **Fisheries:** The water bodies, especially Lake Victoria, support a vibrant fishing industry. Fishermen and fishmongers rely on the lakes and rivers for their livelihoods. The fish catch from Lake Victoria is not only consumed locally but is also exported to other regions, contributing to the county's economy. ii. **Irrigation**: The rivers in Busia County provide water for irrigation purposes. Farmers utilize the water resources to cultivate crops such as rice, maize, vegetables, and fruits. Irrigation enhances agricultural productivity, food security, and income generation for the local population. iii. **Tourism:** While Busia County's tourism industry is not as developed as in other regions of Kenya, the presence of Lake Victoria and its scenic beauty offer potential for tourism growth. Activities such as boat rides, bird watching, and nature walks can be promoted to attract visitors to the county, thereby boosting the local economy. iv. **Transportation**: Water bodies facilitate transportation and trade. Lake Victoria serves as a significant transportation route, connecting Busia County to other parts of Kenya and neighbouring countries. It enables the movement of goods and people, fostering trade and economic integration. The sustainable management and conservation of these water resources are essential to ensure their long-term contributions to the county's economy and the well-being of its residents. During the assessment, it was established that Fisheries and Aquaculture are the predominant blue economy sectors in Busia County. i. **Fisheries:** Lake Victoria is a significant resource for Busia County, and fishing plays a vital role in the local economy. The county boasts various fish species, including Nile perch, tilapia, and Nile tilapia. Fishing activities, such as commercial fishing, fish processing, and fish farming (aquaculture), provide employment opportunities and contribute to the local economy. ii. **Aquaculture:** Busia County has embraced aquaculture as a means of diversifying fish production and reducing pressure on wild fish stocks. Fish farming activities, including pond culture, cage culture, and integrated fish farming with agriculture, are promoted to enhance fish production, create jobs, and boost the local economy. Between 2017-2022, the volume of fish produced increased from 5,738 tons to 16,097 tons against a target of 6,857 tons for landed fish and from 71 tons to 312 for Aquaculture against a target of 90 tons. The county government implemented several interventions such as adoption of cage fishing with 243 cages currently operating at Lake Victoria and supporting over 428 fisher folks, establishment of 290 cluster production ponds across the county: establishment of four (4) aqua parks in Bunyala, Samia, Butula and Teso South sub counties with a total of 270 production ponds, upgrading Wakhungu Fish Hatchery with support from Kenya Climate Smart Agriculture Project (KCSAP)[13] The hatchery has an annual production capacity of 1.5 million fingerlings and distribution of over 180 fish harvesting nets to small holder farmers. Aquaculture Business Development Programme (ABDP) supported small holder farmers with inputs such as predator nets and pond liners hence reducing fish mortality rates by 50%. Besides, fisheries and aquaculture, the county has potential in other blue economy related sectors; These include, Renewable energy, Renewable energy opportunities for exploration include. i. **Hydropower**: with several rivers and streams in the county that flow into Lake Victoria, there is an opportunity for small-scale hydropower projects. Harnessing the energy from these water sources can generate clean and reliable electricity for local communities and industries. ii. **Wind Power:** The county's proximity to Lake Victoria can create favorable wind conditions for wind power generation. Conducting a wind resource assessment can identify suitable locations for wind farms. Large-scale wind turbines can generate clean and sustainable electricity for the county and potentially contribute to the national power grid. The county can explore the following tourism and hospitality opportunities. i. **Lake-based Activities:** Lake Victoria is a major attraction for tourists visiting Busia County. Opportunities for water-based activities such as boat tours, fishing trips, bird watching, and water sports can be developed. Establishing marinas, boat rental services, and fishing charters can enhance the tourism experience and attract visitors. ii. **Ecotourism and Wildlife:** Busia County is blessed with diverse natural ecosystems, including wetlands, forests, and wildlife habitats. Developing ecotourism initiatives, nature reserves, and guided wildlife tours can attract nature enthusiasts and contribute to conservation efforts. Promoting bird watching, nature walks, and wildlife photography can be appealing to tourists. iii. **Cultural Tourism**: Busia County is home to various ethnic communities, each with its unique cultural traditions, music, dance, and crafts. Promoting cultural tourism can involve organizing cultural festivals, showcasing traditional performances, and offering homestays or cultural immersion experiences for tourists visiting Lake Victoria to learn about the local culture and traditions. iv. **Community-Based Tourism:** Engaging local communities in tourism development is a sustainable approach. Initiatives like community-run guesthouses, guided village walks, and community-led tour operators can provide authentic experiences for tourists while supporting the local economy. This can involve partnerships with local community-based organizations and training programs for community members. v. **Accommodation and Hospitality:** The growth of tourism in Busia County will require the development of suitable accommodation and hospitality infrastructure. This can include hotels, resorts, lodges, and guesthouses near the lake or in strategic locations along the lake.	• Harness traditional sectors such as fisheries and aquaculture to capture their full potential. This will be achieved through additional funding and partnership with development partners, private sector, and communities. Emerging sectors should also receive specific attention to create enabling conditions for their emergence. Efforts should be directed to the implementation of a series of high impact projects dedicated to improving the status of traditional sectors and pilot initiatives to develop capacities in the emerging sectors. • Develop a comprehensive blue economy policy framework. The policy framework will outline the objectives, strategies, and action plans for the blue economy. This framework should be aligned with international best practices and incorporate principles of sustainability, inclusivity, and transparency. • Invest in research and development initiatives related to the blue economy sectors. Partner with universities, research institutions, and private sector organizations to conduct studies on sustainable fisheries management, aquaculture techniques, water quality monitoring, and other relevant areas. The findings can be used to inform policy decisions and support the development of blue economy sectors. • Collaborate with the private sector to invest in the development of infrastructure and facilities that support blue economy activities. These include upgrading and modernizing fish landing sites, and fish processing facilities. In addition, the private sector can develop and market tourist attractions such as beach resorts, wildlife sanctuaries, boat cruises, and water sports facilities. • Through trade promotion, quality standards compliance and market intelligence, facilitate market linkages for blue economy products, both domestically and internationally • To ensure inclusive and participatory development of the blue economy sectors, engage stakeholders in the planning, decision making, and implementation of blue economy initiatives. These stakeholders include but are not limited to, fishing communities, private sector entities, research institutions and civil society organizations.

13 County Integrated Development Plan for Busia

Dimension	Key Findings	Recommendations
Policy and Regulatory Framework	During the assessment, it was established that Busia County has not developed policies and regulations to promote blue economy projects. The absence of policies and regulations that promote blue economy activities in a county can have the following implications. i. limited incentives for businesses and investors to engage in blue economy activities. This can hinder the development of sectors such as fisheries, aquaculture, marine tourism, renewable energy, and maritime transportation, which have the potential to contribute to economic growth and create jobs. ii. lead to unsustainable practices in the blue economy resources such as Lake Victoria and the rivers. These will include; Overfishing, pollution, habitat destruction, and other harmful activities can occur without proper oversight. This can result in the degradation of ecosystems, loss of biodiversity, and long-term damage to the environment. iii. lack of coordination among various sectors and stakeholders, resulting in conflicts, inefficient resource allocation, and missed synergies.	• Allocate adequate resources for development of policies, strategies, guidelines, and standards that promote blue economy development as prioritised in the 2023-2027 CIDP. • **Adopt an Integrated Policy Approach:** Develop a blue economy policy and regulatory framework that recognizes the interdependencies among different sectors of the blue economy, such as fisheries, aquaculture, tourism, renewable energy, water transport, environmental protection etc. The framework should promote sustainable development, biodiversity, conservation, and socio-economic growth while ensuring coherence and synergy across sectors. • **Sector Uniqueness:** Develop sector-specific policies and strategies tailored to the unique needs and potential of each blue economy sector in the county, such as fisheries, aquaculture, tourism, renewable energy, and infrastructure development. These strategies should outlie clear goals, action plans, and targets for sector development. • **Stakeholder Engagement:** Involve stakeholders in policy development. These stakeholders include but are not limited to; other county governments, national agencies, fishing communities, local communities, private sector, environmental organizations, and local universities. • **Embrace Science-Based Decision Making**: Ensure that policies and regulations developed are informed by the best available scientific knowledge. Collaborate with research institutions and universities to conduct research on blue economy sectors including the lake's ecosystems, climate change impacts, biodiversity, and socio-economic factors. • **Cross-Border Cooperation:** Strengthen cross-border cooperation and coordination among counties sharing Lake Victoria to address shared challenges and pursue harmonization of policies and regulations. • **Review and Update:** Regularly review and update policies and regulations to ensure they remain relevant and responsive to emerging issues and best practices. • **Strengthen Monitoring and Enforcement**: Enhance monitoring and enforcement mechanisms to ensure compliance with policies and regulations. Invest in capacity building and infrastructure for effective surveillance, monitoring of fishing activities, pollution control, and enforcement of environmental standards. Collaborate with law enforcement agencies, community-based organizations, and local communities to enhance compliance and deter illegal practices. • **Capacity Building and Awareness**: Invest in capacity building programs for county officials, policymakers, and relevant stakeholders to enhance their knowledge and skills in blue economy governance, policy implementation, and environmental management. Raise awareness among local communities about the importance of sustainable resource use, conservation practices, and the socio-economic benefits of the blue economy. • **Policy coordination and alignment:** Align blue economy programs and policies align with national blue economy strategies and frameworks. This involves actively engaging in policy dialogues and consultations with the national government to incorporate national priorities and objectives into county-level plans. Regular communication and coordination channels can be established to facilitate policy alignment and exchange of information. • **Engagement with regional bodies:** County governments can actively engage with regional bodies that focus on the blue economy in the Lake Victoria region. This can include participating in regional forums, workshops, and conferences where best practices, experiences, and lessons learned can be shared. Collaboration with regional bodies can help ensure that county programs are in line with regional priorities and initiatives, fostering regional integration and cooperation. • **Data sharing and reporting:** County governments can establish mechanisms for data sharing and reporting, ensuring that relevant information on blue economy programs is shared with national and regional authorities. This includes submitting regular progress reports, data on project implementation, and impact assessments. By providing accurate and timely information, county governments can enable effective monitoring, evaluation, and coordination across various levels of governance.

Dimension	Key Findings	Recommendations
Institutional Arrangements and Capacity	Establishing an institutional framework or structure to coordinate and oversee blue economy initiatives at the county level ensures effective governance, collaboration, policy development, resource management, investment attraction, capacity building, and knowledge sharing. This leads to more coherent and well-managed blue economy development. Blue economy initiatives are coordinated by the department of Agriculture, Livestock, Fisheries. The department coordinates different government agencies, departments and stakeholders involved in the blue economy sector. The County is planning to establish a blue economy directorate which will be in charge of coordinating cross sectoral initiatives. In the meantime, staff in the directorate of fisheries and aquaculture development oversee the activities. It was established that the County has established mechanisms to enhance skills and knowledge of staff members and stakeholders involved in the implementation of blue economy projects. The capacity of the communities is strengthened during public participation when developing CIDP, ADP and budget making process. Since blue economy is an emerging concept and fisheries and aquaculture is facing many challenges, the county team proposed that they be trained on a wide range of topics and skills related to sustainable aquatic resource management, economic development, and conservation. These include but not limited to; Fisheries management, Aquaculture development, water quality management, value addition and processing, ecotourism and conservation, climate change adaptation, policy, and governance etc. In addition, there's need to create awareness among the county staff and stakeholders about blue economy sectors and potentials.	• Consider establishing a directorate in charge of blue economy. The directorate will coordinate all the blue economy activities in the county. Homabay County has created a blue economy department, the county should consider learning from Homabay. • To enhance skills and knowledge of staff on blue economy, the county should undertake the following; ○ Design and implement training and capacity building programs: Organize training sessions, workshops, and seminars for staff to understand various aspects of blue economy such as fisheries management, aquaculture techniques, water quality monitoring, sustainable tourism, and policy development. ○ establish partnerships and collaborations with universities, colleges, and vocational training institutions to offer relevant and demand-driven training programmes. ○ provide technical assistance and mentorship programs to support the professional development of their staff members. This can be achieved by assigning experienced mentors or advisors to guide and support individuals working on blue economy projects. ○ encourage and support research and innovation activities related to the blue economy. This involves providing funding opportunities, establishing research partnerships, and supporting the development of innovative solutions and technologies. ○ promote peer to peer learning platforms where staff members and stakeholders can interact, share experiences, and learn from each other. These platforms can include workshops, conferences, seminars, and online communities' members in pursuing advanced degrees or certifications in fields relevant to the blue economy.

Dimension	Key Findings	Recommendations
Project Identification, Planning and implementation.	In the upcoming fiscal year 2024/2025, the County has prioritized the following fisheries projects: i. **Fish and aquaculture development:** This project aims to establish aqua parks, fish cage aquaculture, backyard fishponds, and other initiatives to promote the growth and development of fish and aquaculture activities in the County. ii. **Fisheries infrastructure development**: This project focuses on the creation and improvement of infrastructure necessary for the fisheries sector. It may include the construction or upgrading of fishing harbors, landing sites, processing facilities, cold storage, and other infrastructure to support the fishing industry. iii. **Fish value addition:** This project aims to enhance the value of fish products through various processes such as processing, packaging, and branding. Value addition activities can include the development of fish processing plants, training programs for fish processors, and the promotion of value-added fish products in local and export markets. iv. **Fish post-harvest management:** This project focuses on improving post-harvest handling and storage systems for fish. It may involve the establishment of better storage facilities, training programs for fishermen on proper handling techniques, and the implementation of quality control measures to reduce post-harvest losses and ensure the freshness and quality of fish products. These projects reflect the County's commitment to promoting the fisheries sector and maximizing the economic potential of its marine resources. By investing in fish and aquaculture development, infrastructure, value addition, and post-harvest management, the County aims to create opportunities for economic growth, job creation, and sustainable utilization of its fisheries resources. The prioritized fisheries and aquaculture projects in the County are in line with its overall development agenda, needs and aspirations of local communities and stakeholders. The projects were selected after considering a range of factors, including associated risks, gender equity, social inclusion, and the reduction of carbon footprint. By aligning the projects with the development agenda, the County ensures that the fisheries and aquaculture sector contributes to the broader goals and objectives of the region, such as economic growth, poverty reduction, and sustainable development. The consideration of associated risks implies that the County has assessed potential challenges and uncertainties related to the projects. This assessment helps in identifying and mitigating risks to ensure the successful implementation and long-term viability of the projects. Gender equity and social inclusion are important considerations in project identification. The County recognizes the need to create equal opportunities for all genders and ensure that marginalized groups have meaningful participation and benefit from the projects. This promotes inclusivity, social justice, and empowerment within the fisheries sector. The emphasis on reducing the carbon footprint indicates the County's commitment to environmental sustainability. By incorporating measures to minimize environmental impacts, such as energy-efficient infrastructure and sustainable fishing practices, the County aims to mitigate climate change and promote responsible resource management. The prioritised projects undergo environmental and social impact assessments to evaluate the potential environmental and social effects of proposed projects before they are implemented. This includes impacts on ecosystems, natural resources, communities, livelihoods, cultural heritage, and public health. By understanding these potential impacts, appropriate mitigation measures can be developed to minimize or eliminate adverse effects. The financing sources of projects in Busia County vary depending on the specific projects. Some of the financing sources include but are not limited to; i. **County Government funding:** this is funding through annual budgets or specific allocations for economic development. Annually, the county allocates funds for infrastructure development, capacity building, research, and other initiatives related to blue economy sectors. ii. **International and bilateral funding:** The county receives financial support from international organizations, development agencies, and bilateral partnerships. These funding sources provide grants, loans, or technical assistance to promote sustainable economic activities, capacity building, and infrastructure development. Financial sustainability will be achieved if the county enhances local revenues from licensing and permits for fishing, tourism activities, and other revenue-generating activities within the blue economy sector. The generated revenue can be reinvested in maintaining and expanding the projects, ensuring their long-term sustainability. The implementation of blue economy projects in Busia County has faced several challenges. These include: i. **Limited financial resources**: The county has a scarcity of funds to support the implementation of blue economy projects. The budget allocation is insufficient to meet the department's priorities. ii. **Understaffing and lack of training opportunities**: There is a shortage of personnel working on blue economy initiatives, and limited opportunities for refresher trainings. This hampers the effective implementation of projects. iii. **Lack of understanding of blue economy**: blue economy is a relatively new concept, and many people in the county do not have a clear understanding of its principles and potential benefits. This lack of awareness can hinder the progress of blue economy projects. iv. **Inadequate policy and legislative framework:** The county lack a comprehensive and enabling policy and legislative framework for blue economy projects. Additionally, competing interests among political players in prioritizing and distributing projects across the county can further complicate the implementation process.	• **Identify project opportunities and develop a project pipeline**: Conduct a scoping exercise to identify potential blue economy projects that align with national or regional development plans, priorities, and goals. Once identified, rank the projects by level of priority and feasibility, and develop a project pipeline to ensure a continuous flow of projects. • **Conduct feasibility studies:** Conduct feasibility studies for each blue economy project in the pipeline. The studies should assess the technical, financial, economic, social, and environmental viability of the proposed project. The feasibility study findings can inform project design and provide a basis for decision-making and resource allocation. • **Develop project proposals:** Develop comprehensive project proposals for each prioritized project in the pipeline. The project proposals should articulate project objectives, scope, implementation strategy, financing structure, monitoring and evaluation plan, and stakeholder engagement strategy. Prepare detailed budgets and timelines for project implementation. • **Formulate project management plans:** Develop project management plans that detail the project's implementation strategy, governance structure, risk management approach, procurement and contracting procedures, and stakeholder engagement plan. Establish clear roles and responsibilities for all project stakeholders. • **Build project teams:** Build project teams consisting of individuals with the required technical, financial, and managerial expertise to ensure the successful implementation of the project. Assign qualified project managers to oversee the project, monitor its progress and ensure timely delivery on project milestones. • **Engage stakeholders:** Develop a stakeholder engagement plan that outlines how various project stakeholders will be involved and consulted at various stages of the project. Establish communication channels to ensure timely and transparent communication with stakeholders. • **Data collection and monitoring:** Invest in robust data collection and monitoring systems to gather accurate and timely information on the performance and impact of blue economy sectors. Regularly assess the economic, social, and environmental outcomes of these sectors to inform policy decisions, identify areas for improvement, and support evidence-based planning.

Dimension	Key Findings	Recommendations
Economic and Social Impact	a) **Economic Impact** By leveraging the county's water resources, specifically Lake Victoria, and engaging in sustainable blue economy activities, Busia County has experienced several economic benefits: i. **Job Creation:** Fisheries and aquaculture projects have generated employment opportunities to the citizens. Commercial fishing, fish processing, fish farming, and related activities have provided jobs for local communities, contributing to poverty reduction and improved livelihoods. Currently, 2070 households are benefiting from aquaculture development. The number is projected to increase to 2570 in the next fiscal year. ii. **Income Generation:** Fisheries and aquaculture projects have generated income for individuals and businesses. Increased economic activities and revenue generation has led to improved standards of living and economic well-being within the county. iii. **Infrastructure Development:** Infrastructure development, such as landing sites, cold storage facilities, fish processing plants, have contributed to overall infrastructure development in Busia County, stimulating economic growth in related sectors. However, there is no available data on the number of direct and indirect jobs that have been created by fisheries and aquaculture sector. Fishing and aquaculture projects in Busia County have stimulated the growth of local supply chains and industries related to the sector. i. The established fish processing plant is expected to create opportunities for local entrepreneurs and stimulates the growth of fish processing industries. The plant will employ local workers and source raw materials from local fishermen, thereby creating a local supply chain for fish products. Value addition activities, such as filleting, smoking, and packaging, can also be undertaken locally, further boosting the growth of related industries. ii. The growth of the fishing industry in Busia County has led to increased demand for fishing nets, boats, fish cages, and processing machinery. This demand has stimulated the growth of local manufacturing and supply industries that produce and supply these equipment and technologies. iii. Fishing and aquaculture projects require various support services, such as logistics, transportation, packaging, marketing, and financial services. The growth of the sector in Busia has stimulated the development of local service providers that cater specifically to the needs of the sector. Transportation companies that specialize in the movement of fish products have benefited greatly from the opportunities provided by the fishing and aquaculture activities. b) **Social Impact** i. Implementation of fishing and aquaculture projects in Busia has played play a significant role in enhancing food security and nutrition in local communities. Fish is a valuable source of protein, essential nutrients, and omega-3 fatty acids. By increasing fish production and availability, these projects contribute to improved diets, reduced malnutrition, and enhanced health outcomes within the community. ii. Implementation of fishing and aquaculture projects has empowered women in Busia County. Women participate in fish processing, marketing, and value addition activities. Increased investment in the sector will enable women gain economic independence, improve their social status, and contribute to decision-making processes within their households and communities. iii. Development of infrastructure such as landing sites, fish markets, processing facilities, and access roads has enhanced market access, reduced post-harvest losses, and promoted trade, benefiting the entire value chain and local economy. iv. Local communities have benefited from capacity building activities. The programs have equipped individuals with the necessary skills and knowledge to engage in fishing, fish farming, and related activities effectively. **Community Engagement** • The local communities participate in the planning of the blue economy projects during development of CIDP and Annual Development Plans (ADPs). However, there is not clear mechanism for the meaningful participation in monitoring of activities.	• **Diversification of economic activities:** Encourage the diversification of economic activities within the blue economy. Promote the development of multiple sectors, such as fisheries, aquaculture, maritime transportation, renewable energy, tourism, and biotechnology. Diversification can reduce dependence on a single sector and create more opportunities for employment, entrepreneurship, and economic growth. • **Sustainable resource management:** Prioritize the sustainable management of Lake Victoria resources to ensure their long-term viability. Implement measures to prevent overfishing, protect marine habitats, and promote responsible tourism development. This will safeguard resource availability and support the continued growth of economic activities dependent on the lake. • **Collaboration and partnerships:** Foster collaboration and partnerships between governments, industries, communities, and academia to promote innovation, knowledge sharing, and technology transfer. Collaboration can enhance research and development efforts, drive new investments, and create employment and entrepreneurship opportunities. • **Capacity building and skills development:** Invest in building the skills and knowledge of the workforce engaged in the blue economy. Develop training programs and vocational courses that align with the needs of the industry, such as marine sciences, aquaculture, maritime transportation, and renewable energy. Enhancing workforce capabilities will support job creation and improve the competitiveness of the blue economy sectors. • **Promote inclusive growth and social equity**: Ensure that the benefits of the blue economy are distributed equitably and reach all segments of society. Develop policies and programs that prioritize inclusivity, social welfare, and equal access to opportunities, particularly for marginalized communities and small-scale fishers. Promote gender equality and empower women, youth and people living with disabilities to participate in all aspects of the blue economy. • **Innovation and technology adoption:** Encourage the adoption of innovative technologies, including digital solutions, data analytics, remote sensing, and automation, to improve efficiency, productivity, and sustainability in blue economy sectors. Support research and development initiatives that focus on improving resource management, reducing environmental impact, and optimizing value chains. • **Supportive regulatory frameworks:** Establish clear and enabling regulatory frameworks that promote investment, ensure sustainable practices, and protect the rights of stakeholders in the blue economy. Develop comprehensive legal frameworks, licensing regimes, and environmental regulations that balance economic growth with environmental conservation and social well-being.

Dimension	Key Findings	Recommendations
Institutionalization of Monitoring, Evaluation and Learning	The institutionalization of monitoring, evaluation, and learning (MEL) is crucial for the sustainable development of the blue economy. A systematic and comprehensive approach to MEL ensures that policies and initiatives are designed, implemented, and evaluated effectively, leading to improved decision-making, adaptive management, and learning for continuous improvement. Institutionalizing MEL involves establishing appropriate structures, systems, and processes to facilitate the collection, analysis, and use of data for monitoring and evaluating the implementation and effectiveness of blue economy policies and initiatives. It also involves creating a culture of learning and knowledge sharing that promotes continuous improvement and innovation. The County Government lacks a specific unit to oversee the monitoring, evaluation and learning of blue economy projects. Instead, this responsibility falls under the jurisdiction of the department of finance and economic planning, which handles the monitoring and evaluation of all the projects in the county. The county has not developed a monitoring, evaluation and learning framework for implementation of blue economy projects. The absence of a dedicated monitoring, evaluation, and learning framework tailored for blue economy projects can hinder effective project management, limit learning and improvement, reduce transparency and accountability, and result in missed opportunities for economic growth and sustainability. Additionally, there is a lack of standardized and consistent tools and mechanisms for various aspects of monitoring and evaluation of blue economy projects. This includes data collection, authentication, analysis, and interpretation, as well as regular reviews, internal utilization of lessons, documentation, sharing of knowledge products, and storage of information. This has the following implications. i. **Inaccurate and unreliable data**: Without proper tools and mechanisms, data collection may be inconsistent or incomplete, leading to inaccurate and unreliable information. This can hinder decision-making processes and compromise the effectiveness of project management and evaluation. ii. **Limited learning and improvement:** The lack of standardized tools and mechanisms makes it difficult to systematically analyze and interpret data. As a result, opportunities for learning from project experiences and making informed decisions for improvement may be missed. Lessons learned may not be effectively captured and utilized for future projects, leading to a lack of progress and potential repetition of mistakes. iii. **Inefficient resource allocation:** In the absence of regular reviews and data analysis, it becomes challenging to assess the performance and impact of blue economy projects. This can result in inefficient resource allocation, as decision-makers may not have accurate information to identify underperforming projects or areas that require additional investment. iv. **Limited knowledge sharing and collaboration:** The absence of mechanisms for documentation, sharing of knowledge products, and information management hampers effective knowledge sharing and collaboration among stakeholders. Valuable insights, best practices, and lessons learned may not be properly captured and disseminated, impeding the overall progress and growth of the blue economy sector. In fiscal year 2024/2025, the department has prioritised development of a Monitoring and Evaluation Framework	• **Develop a comprehensive MEL framework:** Create a robust MEL framework that outlines the objectives, indicators, data sources, methods, and tools for monitoring and evaluating the implementation and impact of blue economy policies and initiatives. This framework should be aligned with national and international MEL standards and guidelines. • **Integrate MEL into policy design and implementation:** Ensure that MEL is integrated into the design and implementation of blue economy policies and initiatives from the outset. This involves identifying MEL needs and requirements at the policy design stage and developing appropriate monitoring and evaluation plans that are regularly reviewed and updated. • **Build MEL capacity:** Provide training, skills development, and capacity-building programs for the staff of the blue economy institution and relevant stakeholders. This will enhance the technical skills and knowledge required for effective MEL design and implementation. • **Encourage stakeholder participation:** Foster collaboration and participation among stakeholders in the MEL process, including policymaking, data collection, and analysis, and knowledge sharing. This will ensure that diverse perspectives and interests are taken into account and help build ownership and accountability for blue economy MEL activities. • **Promote knowledge sharing and dissemination:** Establish mechanisms for sharing MEL results, lessons learned, and best practices with relevant stakeholders. This may involve publishing periodic reports, holding seminars and workshops, and using social media platforms and other communication channels. • **Regularly review and update the MEL framework:** Regularly review and update the MEL framework and activities to ensure that they are aligned with changing circumstances and evolving blue economy priorities and strategies

Annex 5: Capacity assessment findings for Migori County

Dimension	Key Findings	Recommendations
Blue Economy Potential and Opportunities	The county has abundant blue economy resources such as Lake Victoria, Rivers (Migori, Kuja, Sare etc), wetlands scattered across its landscape and unsurveyed underground water especially on the lower Gucha plains. Lake Victoria is a vital economic resource for the county. According to H.E The Governor, the lake supports the livelihoods of estimated 1.2 million people (250 households) in the county. The lake is home to various fish species (*Rastrineobola argentea* (omena), *Lates niloticus* (mbuta), *Oreochromis niloticus* (nile tilapia), *haplochromis* (fulu), *barbus etc*) for domestic and commercial purposes. The rivers provide water for domestic use, irrigation, and livestock rearing. They also support biodiversity, including various fish species, and contribute to the overall ecosystem health in the county. The wetlands contribute to overall ecological balance and support various plants and wildlife. Conservation and sustainable management of these wetlands are crucial to preserving their ecological functions and biodiversity. Being a riparian county, Migori county plays a crucial role in the utilization of Lake Victoria's resources. The county has several factors that make it strategic for harnessing of blue economy. It boasts of a long stretch of the Lake Victoria's shoreline from Sori town to Muhuru Bay estimated at 37km. Lake Victoria is the largest freshwater lake in Africa and provides opportunities for Migori County to turn around the economic fortunes of the residents living along the shoreline and the county at large (CIDP 2023-2025). The predominant activity along this shoreline is majorly fishing and subsistence farming with potential of irrigation owing to the availability of land and reliable water sources as well as renewable energy (wind). Moreover, the national government through its project- National Rural Inclusivity Growth did a massive project of expanding the lower Kuja irrigation scheme which saw vast tracts of land being converted to irrigate rice fields. Recently, we have had local investors (individuals and groups) coming into the Lake to invest in the cage fish farming. Cognizant of the potential and opportunities in the blue economy sectors, the Directorate of fisheries and blue economy has prioritized programmes that will benefit the fishing community through value addition and marketing of fish and fishery products. Through public private partnerships, the sector intends to develop lake-front facilities such as an ultra-modern hatchery, cold storage, fish, and feed processors to support fishing and fish production, value addition cottage industries and marketing of fish and fishery products. Other blue economy activities include construction and operationalization of sports fishing and recreation parks, cage farms, aqua parks, fishponds, establishment of search and rescue centre, landing site development and introduction of commuter ferries/water buses. (CIDP 2023-2027) The following opportunities can be explored by the county to fully harness the blue economy resources to increase revenue generation, job creation and improve livelihoods: i. **Fisheries and aquaculture:** Lake Victoria provide abundant fishery resources, including a variety of fish species such as tilapia, Nile perch, and catfish. Fishing is a significant economic activity in the county, providing livelihoods for the local communities. The Lake also creates opportunities for aquaculture, which involves the farming of fish and other aquatic marine life. The county's proximity to the lake allows for access to water resources needed for fish farming. Aquaculture has the potential to diversify the local economy and provide additional income sources for the community. During the FY 2022/2023 the county increased fish production from 18 to 42 MT through the supply of quality fish fingerlings, fish feeds and encouraging the adoption of cage culture in Lake Victoria waters. The Directorate of Fisheries purchased and distributed 850,000 pieces of monosex Nile Tilapia fingerlings and 50,000 pieces of African catfish to 850 fish farmers. More than 100,000 mixed sex nile tilapia were stocked in dams across the county such as Nyamome dam, silanga dam, stella dam, siabai dam and Uriri dam to enable the local community get fish as food and income purposes. The Directorate also constructed 71 fishponds, distributed fish farm inputs such as 32 harvesting nets, 50 digital weighing balances, predator nets and bird nets to fish farmer groups. Four dams (Bondo Nyironge, Silanga, Nyagesese and Nyamome) were restocked with 100,000 pieces of mixed sex Nile tilapia fingerlings. Twenty-eight fish harvesting nets and 50 weighing crane scales were bought and distributed to 28 small aquaculture groups (SAGs). (ADP 2024/2025). The improve value addition, the county operationalized Opapo Mini Fish Processing Plant and Nyangwina Fish Auction Centre in Rongo and Nyatike Sub Counties respectively. Additionally, the Directorate distributed 878 life jackets fishermen and 13 sesse (flat at one end) wooden patrol boats to 13 Beach Management Units (BMUs). Monitoring, control, and surveillance was done that netted 19 illegal gears (7 small seines, 5 beach seines, 2 cast nets and 5 monofilament nets) aimed at reducing illegal fishing activities in Lake Victoria waters. The netted gears were eventually burnt upon securing a court order. Additionally, Beach Management Units' (BMU) elections were successfully held, and the officials were subsequently trained on co-management of lake resources. ii. **Tourism and Recreation:** Lake Victoria's scenic beauty and diverse wildlife offer opportunities for tourism and recreational activities in Migori County. The lake offers opportunities for various water-based activities such as boat cruises, fishing, kayaking, and canoeing. Development of resorts, eco-lodges, culture villages and recreational facilities along the lakefront will attract domestic and international visitors contributing to job creation and county revenue growth. Other opportunities include; sport fishing, beach tourism (beautiful white and black sandy beaches for sunbathing, picnic, and leisure), cultural tourism (cultural festivals, cultural village tours, and showcasing traditional arts, crafts, and music) etc. According to the County Executive Committee Member (CECM) Tourism, the county is planning to gazette the above mentioned sites as tourist destinations. To fully exploit these opportunities, the county government, tourism stakeholders, and private investors should collaborate to develop infrastructure, improve transportation networks, enhance marketing effort, and ensure sustainable practices to preserve the natural resources and ecosystems. iii. **Water Transport:** Lake Victoria offers opportunities for water transport connectivity, including passenger and cargo transportation. Establishing passenger ferry services on Lake Victoria can provide a reliable and efficient mode of transportation for commuters travelling between Migori and neighboring counties or islands within the lake and even to neighboring Tanzania. Passenger ferry services can improve accessibility, reduce travel time, and connect communities. Investing in cargo transportation will offer alternative mode of moving goods produced in the county. Development of proper infrastructure such as ports and jetties, can facilitate the loading and unloading of cargo hence supporting trade and commerce, particularly for agricultural products, fishery products, and other commodities produced in the county. The county is planning to invest in water transport such as water bus and jetties (CIDP 2023-2027). iv. **Renewable Energy:** Migori County experiences relatively strong winds, particularly along the lakefront and in certain elevated areas. Wind energy projects, such as wind turbines, can be developed to harness the power of the wind and generate electricity. The county has several rivers and streams, providing the potential for small-scale hydropower generation. Micro-hydro installations can be developed to utilize the flow of water and produce electricity for consumption by communities in rural areas where grid connectivity is limited. In addition, cold rooms for preservation of fish within the beaches can be powered using renewable sources of energy such as wind or solar. Use of clean cooking technologies can also be adopted by the fishmongers and/or other sectors such as hotels within the blue economy sectors**.** To harness the renewable energy potential, the county should establish supportive policies and regulations, encourage, and incentivize private sector investment, and promote community participation. v. **Research and Development:** The presence of aquatic resources and ecosystems in Migori County provides opportunities for research and development in areas such as fisheries management, aquaculture techniques, carbon markets and ecosystem conservation. Such research can lead to the implementation of sustainable practices and the development of innovative technologies, contributing to the growth of the blue economy. It was established that the county is exploring partnership and collaboration with Rongo University to undertake blue economy related research and development initiatives. vi. **County Revenue Generation:** Blue economy presents immense opportunities for revenue generation by the county. Leveraging the potential for solar, wind, and hydropower generation can contribute to electricity production and revenue from energy sales. Establishing efficient ferry services, cargo transportation, and passenger transport will support economic activities and contribute to revenue generation. Additionally, the county can partner with research institutions, universities, and private sector entities to develop innovative solutions, technologies, and products related to fisheries, aquaculture, tourism, and sustainable resource management. This will attract investments and generate revenues for the county and the institutions. Currently, the county is generating revenues from boat registration, private marks, fishermen licensing, fish traders licensing, fish movement permit and rent from fish handling facilities at Opapo Mini Fish Processing Plant and Nyangwina Fish Auction Center. Other potential revenue streams are fish processing license, ice plant licenses, ornamental fisheries licenses which are yet to be enforced. vii. **Cross-Border Trade:** Migori County shares border with Tanzania and Uganda, both of which have access to Lake Victoria. This strategic geographical advantage can promote cross-border trade and cooperation in various blue economy sectors, including fisheries, maritime transport, safety and security, aquaculture, and tourism. viii. **County Aggregation Park:** A County Aggregation Park will provide a centralized location where fishers, aquaculturists, and other stakeholders in the blue economy sectors will bring their products for processing, packaging, and value addition. This will lead to production of high quality and value added products that meet market demands. Additionally, the County Aggregation Park will provide essential infrastructure and services to support blue economy activities. This includes cold storage facilities, processing units, waste management systems, quality control laboratories and logistics support. This will enhance efficiency and competitiveness of key sectors and attract private sector investments. Lastly the Aggregation Park will serve as a hub for collaboration, incubation of innovations and knowledge sharing among stakeholders in the blue economy. It will provide a platform for fishers, aquaculturists, processors, researchers, and county government departments to come together, exchange ideas and share best practices. This will lead to innovation, improved production techniques, and adoption of sustainable practices.	• Improve on the management of traditional sectors such as fisheries and aquaculture to capture their full potential. This can be done through additional funding and partnership with development partners, private sector, and communities. Additionally, emerging sectors should also receive specific attention to create enabling conditions for their development. Deliberate efforts should be directed to the implementation of a series of high impact projects dedicated to improving the status of traditional sectors and pilot initiatives to develop capacities in the emerging sectors such as blue carbon, renewable energy, skills development, and biotechnology. • Invest in research and skills development in blue economy related sectors. To achieve this, the County could partner with universities, TVET, research institutions, and private sector organizations to conduct studies on sustainable fisheries management, aquaculture techniques, water quality monitoring, watershed management and conservation and other relevant areas. The findings can be used to inform policy, decision making and support the development of blue economy sectors. • Collaborate with the private sector to invest in the development of infrastructure and facilities that support harnessing of blue economy. These include upgrading and modernizing fish landing sites, and fish processing facilities. In addition, the private sector can develop and market tourist attractions such as beach resorts, wildlife sanctuaries, boat cruises, and water sports facilities. • To ensure inclusive and participatory development of the blue economy sectors, the county should engage stakeholders in the planning, decision making, and implementation of blue economy activities, project, and programs. These stakeholders include but not limited to, fishing communities, private sector entities, research institutions and civil society organizations. • To conserve the largely inland blue economy ecosystems, the county should implement the following environmental initiatives. i. **Implementation of Sustainable Fishing Practices**: Implementing sustainable fishing practices is crucial for the conservation of fish stocks and the overall health of the lake. This includes enforcing fishing regulations, promoting selective fishing methods, and establishing protected areas where fish can spawn and grow undisturbed. Encouraging responsible fishing practices, such as using proper fishing gear, avoiding the use of illegal fishing methods, and practicing catch and release, will help to maintain a balance between fishing activities and the preservation of fish populations. ii. **Pollution Control and Waste Management:** Measures should be taken to reduce industrial and agricultural pollution, including the proper treatment and disposal of waste materials. Promoting the use of eco-friendly farming practices, minimizing the use of chemical fertilizers and pesticides, and implementing effective wastewater treatment systems will help prevent the contamination of the lake's waters and protect aquatic life. iii. **Wetland Conservation and Restoration:** Wetlands play a critical role in maintaining the ecological balance of Lake Victoria. Protecting and restoring wetland areas is crucial for preserving biodiversity, regulating water flow, and filtering pollutants. Efforts should focus on preventing encroachment into wetland areas, reforesting degraded wetlands, and promoting sustainable land-use practices that minimize the negative impact on these valuable ecosystems. The county should engage local communities in wetland conservation initiatives and raise awareness about the importance of wetland ecosystems to foster a sense of stewardship and ensure their long-term preservation. iv. **Watershed management** – the quality and quantity of water in rivers and lakes depends to a considerable extent on the management practices exercised in the watershed. Deforestation leads to decreased infiltration and recharge of the aquifers. This leads to unregulated water flows and increased runoffs that lead to soil erosion and subsequently sedimentation and eutrophication of water bodies. Efforts should be made to ensure enforcement of existing legislation of restoration and protection of water catchment areas as well as protection of the riparian zones. Agroforestry practices should be encouraged on farms to balance tree cover and food production. The county aims to plant 5 million trees by 2032 (CECM Environment)

Dimension	Key Findings	Recommendations
	ix. **Private sector opportunities:** The county offers several private sector opportunities in its blue economy sectors. Firstly, the county's access to Lake Victoria creates potential for private investment in fisheries and aquaculture. This includes fish processing facilities, manufacturing of nets, fish farms, and the export of fish and fish products. Secondly, Migori County has tourism potential, and private companies can invest in resorts, hotels, recreational facilities, and cultural tourism initiatives to attract visitors. Additionally, private sector involvement in maritime transport and logistics can be explored, including passenger and cargo transportation services, water bus operations, and port development. Infrastructure development, such as fishing harbors and boatyards, also presents opportunities for private investments. Moreover, renewable energy projects, research and technology development, and collaborations with local communities and stakeholders are essential considerations for businesses interested in the blue economy sectors of the County. **Challenges facing blue economy sectors in the county.** The following challenges were identified: i. **Lack of awareness about opportunities in the blue economy:** It was established that many stakeholders, especially county staff and local communities, are not aware of the potential economic benefits and employment opportunities that exist within the blue economy. This lack of awareness hinders the development of the sectors as it limits the participation of interested stakeholders. To address this challenge, there is a need for targeted awareness campaigns and capacity-building programs that educate and inform the public about the various sectors within the blue economy, such as aquaculture, maritime tourism, and marine renewable energy. Increasing awareness and knowledge by local communities and other stakeholders will enable them to actively engage in and benefit from the opportunities offered by the blue economy. ii. **Low funding**: The blue economy sectors in Migori County face the challenge of low funding. Insufficient financial resources hinder the development and growth of the maritime industry, aquaculture, and other related sectors. Limited funding restricts the implementation of necessary infrastructure projects, research and development, capacity-building programs, and the acquisition of modern equipment and technologies. The lack of financial support also affects the promotion of entrepreneurship and the establishment of small and medium-sized enterprises in the blue economy sectors, thus limiting job creation and economic growth opportunities in the county. iii. **Lack of policies and institutional framework**: Migori County's blue economy sectors face the challenge of a lack of comprehensive policies and an institutional framework. The absence of clear guidelines and regulations hampers the sustainable management and utilization of blue economy resources. Without proper policies, there is a risk of overexploitation, illegal activities, and environmental degradation. Additionally, the absence of a robust institutional framework makes it difficult to coordinate and monitor activities in the blue economy sectors effectively. There is a need to develop regulatory frameworks, strengthen governance structures, and develop policies that promote sustainable practices, protect marine ecosystems, and ensure the equitable distribution of benefits among stakeholders. iv. **Overfishing and continued use of illegal fishing gears and methods**: The fisheries sector in Migori County faces the challenge of overfishing and the persistent use of illegal fishing gears and methods. Overfishing has depleted fish stocks, disrupted marine ecosystems, and undermined the long-term viability of the fishing industry. Additionally, the use of illegal fishing gears and methods, such as dynamite fishing and small-mesh nets, further exacerbates the problem, leading to unsustainable fishing practices and a decline in fish populations. These activities not only threaten the livelihoods of local fishermen but also jeopardize the ecological balance of the marine environment. Addressing this challenge requires strict enforcement of fishing regulations, public awareness campaigns on sustainable fishing practices, and support for alternative livelihoods to reduce dependence on fishing. v. **Silt accumulation and invasive weeds along some beaches**: Migori County's blue economy sectors face challenges related to silt accumulation and invasive weeds along some beaches. Siltation occurs when sediment carried by rivers and lake currents settles in beaches, impeding navigation, reducing water quality, and affecting marine biodiversity. Invasive weeds, such as water hyacinth, can rapidly spread across water bodies, obstructing waterways, and hindering fishing activities. These challenges not only impact the aesthetic value of the beaches but also hamper tourism, fishing, and other maritime activities. Mitigating these issues requires regular dredging and sediment management, introduction of effective measures to control invasive species, and community engagement in beach cleanup initiatives. vi. **Pollution**: Pollution poses a significant challenge to the blue economy sectors in Migori County. Industrial, agricultural, and domestic activities contribute to water, air, and land pollution, impacting marine ecosystems. Pollution from improper waste disposal, oil spills, and chemical runoff can harm marine life, degrade water quality, and affect the health of communities depending on the blue economy resources for livelihoods. It also undermines the potential for tourism and other economic activities dependent on clean and healthy environments. Addressing this challenge requires the enforcement of environmental regulations, the promotion of sustainable waste management practices, public education on the importance of pollution prevention, and the adoption of cleaner production technologies by industries and agriculture. vii. **Climate Change:** Migori County's blue economy sectors face the significant challenge of climate change. Climate change impacts, such as rising water levels, lake acidification, and increased frequency and intensity of extreme weather events, pose threats to marine ecosystems and communities living around the lake. These changes can disrupt fisheries and alter the distribution and behavior of marine species. Additionally, climate change can affect the availability of water resources, impact aquaculture operations, and increase the vulnerability of infrastructure to erosion and flooding. To address this challenge, it is important to implement adaptation measures that enhance the resilience of the blue economy sectors. This includes promoting sustainable fishing practices, implementing lake protection measures, and investing in climate-resilient infrastructure. Furthermore, efforts to mitigate climate change, such as reducing greenhouse gas emissions and transitioning to renewable energy sources, are crucial for the long-term sustainability of the blue economy in Migori County. viii. **Lack of processing technologies in fisheries**: Efficient and modern processing technologies are essential for enhancing the value addition and marketability of fish products. Without adequate processing facilities and techniques, fishermen and fisherwomen are limited in their ability to preserve, package, and add value to their catch. This hinders their access to higher-value markets and reduces the economic returns from their fishing activities. To overcome this challenge, there is a need for investment in processing infrastructure, such as fish processing plants and cold storage facilities. Additionally, training programs and knowledge-sharing initiatives can be implemented to educate fishermen on proper processing techniques, quality control, and product diversification, enabling them to maximize the value of their catch and expand their market reach. ix. Inadequate staffing levels- The Directorate of Fisheries has 18 technical staff stationed in all 8 sub counties. They are also responsible for blue economy activities. Therefore, each sub county has either one or two technical staffs, this poses a challenge in providing adequate extension services to the fish farmers. This challenge is aggravated further in Nyatike sub county where Lake Victoria lies. The County has 28 beaches manned by two technical staffs and one ship crew. Therefore, reaching all beaches is a challenge. Data collection from these beaches becomes a big headache for the staff. To overcome this challenge, the county needs to honor the requests made by the directorate for recruitment of more staffs. x. Lack of aggregated data on blue economy initiatives in the county. Blue Economy being a new concept is still a mystery to many. The various sectors within the blue economy are yet to come together to share data and compile them as BE data that can inform policy makers on Blue Economy initiatives. The Department of M & E are yet to develop performance indicators that are specific to Blue Economy Sector, therefore it becomes a challenge to get data specifically on Blue Economy. To overcome this challenge, the county needs to form a county multiagency committee that will bring all the sectors relevant to blue economy and it is upon this platform that streamlining of data in the blue economy can be aggregated and made available to interested parties.	

Dimension	Key Findings	Recommendations
Policy and Regulatory Framework	It was established that some departments have developed policies and regulations though not comprehensive and harmonized. In 2016, the county enacted Migori County Fisheries and Aquaculture Act 2016 and Fisheries Management and Aquaculture Act 2016. The National government, the state department of fisheries and aquaculture also enacted the national act called the Fisheries Management and Aquaculture Act 2016. Other relevant policies that have been developed by the county include: i. The Migori County Climate Change Policy, 2020 which provides a framework for addressing climate related challenges facing the county now and in future. ii. The Migori County Climate Change Fund Act, 2021 which provides for financing of climate actions. iii. The Migori County Climate Change Act, 2021 which provides regulatory framework for enhanced climate change interventions and mainstreaming climate change actions. iv. The Migori County Sustainable Solid Waste Management Act, 2021 which provides for sustainable management of solid waste, prohibiting dumping wastes in water bodies. v. The Migori County Sustainable Sand Harvesting Act, 2021 which provides for sustainable sand harvesting practices prohibiting unsustainable sand harvesting along the lake. It is also appreciated that other than the county legislation, there exist a plethora of national government pieces of legislation that are applicable and supportive to sustainable blue economy development. Lack of comprehensive policies and regulations for blue economy sectors at the county level could lead to the following negative impacts in as far as harnessing of blue economy is concerned: i. **Unsustainable resource management**: Without clear policies and regulations, there is a higher risk of unsustainable resource management practices in the blue economy sectors. This can lead to overfishing, illegal fishing activities, degradation of blue resources and the destruction of marine habitats. The absence of regulations can result in uncontrolled and unregulated activities that deplete fish stocks, harm biodiversity, and degrade the overall health of marine ecosystems. This not only threatens the long-term sustainability of the blue economy sectors but also undermines the livelihoods of local fishermen and the economic potential of the county. ii. **Environmental degradation**: The lack of policies and regulations can contribute to environmental natural resources degradation which is the foundation upon which all blue resources are anchored. Without guidelines and enforcement mechanisms, there may be inadequate waste management practices, pollution from industrial and agricultural activities, and the use of harmful fishing gears and methods. This can lead to water pollution, water over-abstraction, habitat destruction, and the loss of valuable lake ecosystems. The absence of regulations to mitigate and control these impacts can result in long-term damage to the environment, affecting not only the blue economy sectors but also the overall ecosystem health and the well-being of local communities. Blue economy is aimed at conserving and maintaining the health of the aquatic ecosystems as they provide facilitate provision of services for socio-economic development. iii. **Lack of investor confidence:** The absence of policies and regulations can create uncertainty and unpredictable business environment, which can deter potential investors from engaging in the blue economy initiatives in Migori County. Investors generally seek stable regulatory frameworks that provide clarity, transparency, and a level playing field. Without clear policies, there may be a lack of incentives for private sector investments, limiting the potential for economic growth, job creation, and innovation in the blue economy sectors. This lack of investor confidence can hinder the development of infrastructure, technology adoption, and value-added activities, hampering the overall growth and competitiveness of the sector. iv. **Social and economic inequities**: The lack of policies and regulations can exacerbate social and economic inequities within the development and harnessing of blue economy sectors. Without clear guidelines, there can be an uneven distribution of benefits, limited access to resources, and exploitation of vulnerable groups. This can further marginalize small-scale fishermen and local communities who may lack the capacity to navigate an unregulated environment. The absence of policies and regulations can perpetuate a cycle of poverty, exclusion, and limited opportunities for socio-economic development within the blue economy sectors.	• Develop a comprehensive blue economy policy framework. The policy framework will outline the objectives, strategies, and action plans for the blue economy. This framework should be aligned with international best practices and incorporate principles of sustainability, inclusivity, and transparency. • Adopt an Integrated Policy Approach**:** Develop a blue economy policy and regulatory framework that recognizes the interdependencies among different sectors of the blue economy, such as fisheries, aquaculture, tourism, renewable energy, water transport, environmental protection etc. The framework should promote sustainable development, biodiversity, conservation, and socio-economic growth while ensuring coherence and synergy across sectors. • Develop sector-specific policies and strategies tailored to the unique needs and potential of each blue economy sector in the county, such as fisheries, aquaculture, tourism, renewable energy, and infrastructure development. These strategies should outline clear goals, action plans, and targets for sector development. • Involve stakeholders in policy development. These stakeholders include but are not limited to; other county governments, national agencies, fishing communities, local communities, private sector, environmental organizations, and local universities. • Embrace Science-Based Decision Making: Ensure that policies and regulations developed are informed by the best available scientific knowledge. Collaborate with research institutions and universities to conduct research on blue economy sectors including the lake's ecosystems, climate change impacts, biodiversity, and socio-economic factors. • Review and Update: Regularly review and update policies and regulations to ensure they remain relevant and responsive to emerging issues and best practices. • Strengthen Monitoring and Enforcement: Enhance monitoring and enforcement mechanisms to ensure compliance with policies and regulations. Invest in capacity building and infrastructure for effective surveillance, monitoring of fishing activities, pollution control, and enforcement of environmental standards. Collaborate with law enforcement agencies, community-based organizations, and local communities to enhance compliance and deter illegal practices. • Capacity Building and Awareness: Invest in capacity building programs for county officials, policymakers, and relevant stakeholders to enhance their knowledge and skills in blue economy governance, policy implementation, and environmental management. Raise awareness among local communities about the importance of sustainable resource use, conservation practices, and the socio-economic benefits of the blue economy. • Allocate adequate resources: for development of policies, strategies, guidelines, and standards that promote blue economy development as prioritized in the 2023-2027 CIDP.

Dimension	Key Findings	Recommendations
Institutional Arrangements and Human Capacity	The blue economy activities are coordinated by the Directorate of Fisheries and Blue Economy under the Department of Agriculture, Livestock, Fisheries and Blue Economy. The department has staff with skills and experience required for development and implementation of fisheries and aquaculture projects. A proposed organogram has the Directorate of Blue Economy which is distinct from the Directorate of Fisheries. The two directorates will be under one Chief Officer for Fisheries and Blue Economy. The Directorate of Blue Economy once established will have staff up to the ward level and will coordinate blue economy initiatives of relevant departments. Having a dedicated unit to coordinate blue economy initiatives within a county government is important for the following reasons: i. **Effective coordination**: A unit specifically focused on blue economy initiatives will ensure effective coordination among various departments, agencies, and stakeholders involved in the development, management, and implementation of the blue economy initiatives. It will serve as a central point of contact for information, collaboration, and decision-making, enabling better communication, synergy, and alignment of efforts. This coordination helps to avoid duplication and create synergy of work, streamlines processes, and maximizes the impact of initiatives within the county. ii. **Strategic planning and implementation**: A dedicated unit will lead the strategic planning and implementation of blue economy initiatives in a coordinated and systematic manner. It will develop a comprehensive roadmap, set clear objectives, and establish actionable plans to guide the development and growth of the blue economy sectors. The unit will also conduct research, gather data, and analyze trends and opportunities to inform evidence-based decision-making and prioritize interventions. This will ensure that resources are allocated efficiently, investments are targeted appropriately, and efforts are focused on areas with the highest potential for socio-economic and environmental impact. iii. **Policy and regulatory development:** The unit will play a crucial role in the development and implementation of policies and regulations that govern the blue economy sectors. It will conduct policy research, engage with stakeholders, and facilitate the formulation of guidelines and frameworks that promote sustainable practices, protect the environment, and ensure equitable distribution of benefits. The unit will also monitor policy implementation, assess its effectiveness, and recommend adjustments or improvements based on emerging trends and challenges. This will help to create an enabling environment for businesses, investors, and communities to thrive within the blue economy sectors. iv. **Stakeholder engagement and capacity-building**: The unit will facilitate stakeholder engagement and capacity-building initiatives within the blue economy sectors. It will foster collaboration between government agencies, private sector actors, local communities, and civil society organizations. This engagement will ensure that diverse perspectives are considered, local knowledge is valued, and the interests of various stakeholders are taken into account. In addition, the unit will organize training programs, workshops, and awareness campaigns to enhance the skills, knowledge, and participation of individuals and communities in the blue economy sectors. This inclusive approach promotes social cohesion, empowers local actors, and strengthens the resilience of the sector. v. **Monitoring and evaluation:** The unit will work with the county department in charge of monitoring and evaluation to establish monitoring and evaluation mechanisms to track the progress, performance, and impact of blue economy initiatives. This entails development of indicators, collection of data, and analysis of outcomes to assess the effectiveness of interventions, identification of areas for improvement which will inform evidence-based decision-making. The monitoring and evaluation processes will lead to transparency, accountability, and the continuous learning and adaptation of strategies and interventions within the blue economy sectors. vi. **Resource mobilization for cross-cutting interventions**: The unit shall lead efforts in resource mobilization for cross-cutting initiatives such as capacity building, research, climate change and coordination. It is important that the unit's mandate is guided by the principle of subsidiarity and restricts to facilitation, promotion, and coordination. This is crucially important to avoid conflict with the relevant blue economy sectors. It was established that the county sets aside an annual budget for capacity building initiatives aimed at empowering the staff responsible for implementing blue economy initiatives. However, the allocated budget falls short in adequately addressing all the prioritized needs. The following are areas should be prioritized for support to strengthen the capacity of staff; i. **Blue economy policy and legal framework development**. This will enhance staff understanding of the principles and concepts of the blue economy, the legal and regulatory frameworks governing blue economy initiatives and improve the ability to align county strategies and policies with blue economy goals. ii. **Project proposals writing and resource mobilization for projects.** This will improve skills in developing comprehensive and effective project proposals, increase the ability of staff to identify funding sources and mobilize resources for blue economy projects and enhance capacity to create partnerships and engage with stakeholders to secure project funding. iii. **Monitoring, Evaluation and Learning (MEL).** Staff will acquire knowledge in designing and implementing monitoring and evaluation frameworks for blue economy projects, enhance their ability to collect and analyze data to assess project performance and impact, and improve skills in using evaluation findings to inform decision-making and improve project outcomes. iv. **Blue economy sectors coordination awareness.** This will strengthen staff understanding of the roles and responsibilities of different stakeholders in blue economy sectors, improve coordination and collaboration among various entities involved in blue economy initiatives and enhance capacity to facilitate dialogue and partnership development for effective sector coordination. v. **Cage aquaculture production value chain.** This will increase staff knowledge on cage aquaculture production techniques, best practices, challenges and understanding of the entire value chain, from production to marketing and distribution. As a result, the staff will be able to support cage farmers effectively. vi. **Project management.** This will enhance skills in planning, implementing, and monitoring blue economy projects and improve ability to manage project timelines, budgets, and resources effectively.	• Operationalize the Directorate for blue economy. The directorate will coordinate and promote all the blue economy activities in the county within the principle of subsidiarity. Homa bay County has created a blue economy department, the county should consider learning from Homa bay. • To enhance skills and knowledge of staff on blue economy, the County should undertake the following; ○ Design and implement training and capacity building programs: Organize training sessions, workshops, and seminars for staff to understand various aspects of blue economy such as fisheries management, aquaculture techniques, water quality monitoring, sustainable tourism, and policy development. ○ Establish partnerships and collaborations with universities, colleges, and vocational training institutions to offer relevant and demand-driven training programmes. ○ Provide technical assistance and mentorship programs to support the professional development of their staff members. This can be achieved by assigning experienced mentors or advisors to guide and support individuals working on blue economy projects. ○ Encourage and support research, incubation hubs and innovation activities related to the blue economy. This involves providing funding opportunities, establishing research partnerships, and supporting the development of innovative solutions and technologies. ○ Promote peer to peer learning platforms where staff members and stakeholders can interact, share experiences, and learn from each other. These platforms can include workshops, conferences, seminars, and online communities' members in pursuing advanced degrees or certifications in fields relevant to the blue economy.

Dimension	Key Findings	Recommendations
Project Identification, Planning and implementation.	The Department of Agriculture, Livestock, Fisheries, and Blue Economy has formulated a comprehensive ten-year strategic plan detailing the blue economy initiatives to be implemented by various county departments. These initiatives have also been prioritized in the County Integrated Development Plan (CIDP) and are in line with the long-term vision outlined in Vision 2030. Furthermore, as part of the budget cycle, the county ensures active public participation in all sub-counties to ensure that the initiatives align with the specific needs and preferences of the local communities. The following projects and initiatives have been prioritized for implementation in FY2024/2025: **i. Establishment of fish hatchery unit** • This project aims to create a facility for breeding and hatching fish species. • The hatchery unit will help in increasing fish stock and supporting sustainable aquaculture practices. **ii. Establishment of fish feeds processing unit** • This project focuses on setting up a facility to produce high-quality fish feeds. • It aims to ensure a consistent and affordable supply of nutritious feeds for fish farming activities. **iii. Development of cold storage facilities** • The objective of this project is to construct or upgrade cold storage facilities. • These facilities will provide proper preservation and storage conditions for harvested fish, reducing post-harvest losses and ensuring product quality. **iv. De-siltation and removal of invasive weeds along the shoreline** • This project entails clearing and removing silt and invasive weeds along the shoreline. • It aims to improve the water quality and ecosystem health, enhancing the overall productivity of the lake region. **v. Establishment of cage farms** • The focus of this project is to set up cage farming systems in suitable water bodies. • Cage farms will enable controlled fish rearing and contribute to increased fish production. **vi. Construction/rehabilitation of fish landing sites:** • This project involves constructing new fish landing sites or rehabilitating existing ones. • It aims to provide safe and efficient infrastructure for fishermen to offload their catch and facilitate fish trade activities. **vii. Establishment of fish rescue center** • The goal of this project is to establish a facility for rescuing and rehabilitating injured or stranded fish. • The fish rescue center will contribute to conservation efforts and promote sustainable fishing practices. **viii. Construction of piers and jetties** • This project focuses on building piers and jetties in strategic locations along the coastline or water bodies. • It aims to improve accessibility for fishing vessels, enhance transportation capabilities, and support fishing-related activities. **ix. Opening and grading of access roads to the beaches** • This project involves the opening and grading of roads to provide better access to the beaches. • It aims to facilitate tourism, enhance transportation, and promote economic activities in the lake region. **x. Capacity building of all stakeholders in the blue economy sector** • Capacity build staff from blue economy sectors • Capacity build beach management units and other stakeholders The projects were given priority due to their potential to make a significant impact and address the present challenges encountered by the blue economy sectors. Capture fisheries resources have been steadily declining over an extended period due to human-induced factors such as pollution, overfishing, environmental degradation, and climate change. Hence, it is crucial to explore alternative livelihood options for fishermen. Aquaculture, specifically cage farming, is an emerging venture that offers substantial returns and can serve as a viable alternative livelihood for fishermen. To implement blue economy projects especially in fisheries and aquaculture, the county has formed partnerships and collaborations with development partners and stakeholders. The county is working with Blue Cross Nyatike (BCN) and Kenya Agricultural and Livestock Research Organization (KALRO) with funding from European Union (EU) to promote cage fish farming in Nyatike. The programme includes training fisherfolks on best practices of fish farming, as well as the assembly and installation of cages. Additionally, they facilitate the sale of fingerlings to cage farmers.	• **Identify project opportunities and develop a project pipeline**: Conduct a scoping exercise to identify potential blue economy projects that align with national or regional development plans, priorities, and goals. Once identified, rank the projects by level of priority and feasibility, and develop a project pipeline to ensure a continuous flow of projects. • **Conduct feasibility studies:** Conduct feasibility studies for each blue economy project in the pipeline. The studies should assess the technical, financial, economic, social, and environmental viability of the proposed project. The feasibility study findings can inform project design and provide a basis for decision-making and resource allocation. • **Develop project proposals:** Develop comprehensive project proposals for each prioritized project in the pipeline. The project proposals should articulate project objectives, scope, implementation strategy, financing structure, monitoring and evaluation plan, and stakeholder engagement strategy. Prepare detailed budgets and timelines for project implementation. • **Formulate project management plans:** Develop project management plans that detail the project's implementation strategy, governance structure, risk management approach, procurement and contracting procedures, and stakeholder engagement plan. Establish clear roles and responsibilities for all project stakeholders. • **Build project teams:** Build project teams consisting of individuals with the required technical, financial, and managerial expertise to ensure the successful implementation of the project. Assign qualified project managers to oversee the project, monitor its progress and ensure timely delivery on project milestones. • **Data collection and monitoring:** Invest in robust data collection and monitoring systems to gather accurate and timely information on the performance and impact of blue economy sectors. Regularly assess the economic, social, and environmental outcomes of these sectors to inform policy decisions, identify areas for improvement, and support evidence-based planning. • **Mobilize resources:** Mobilize the financial and technical resources necessary to implement the project. This may involve engaging with international and domestic sources of funding, such as development banks, private equity and venture capital firms, and governmental, philanthropic, and civil society organizations. • **Monitor and evaluate project outcomes:** Develop a monitoring and evaluation plan that captures project progress, achievements, and lessons learned. Regularly evaluate the project and adjust the implementation strategy as needed to achieve the desired project outcomes. • **Ensure sustainability:** Ensure the project promotes the sustainability of the blue economy by prioritizing environmental and social sustainability, creating opportunities for local communities, and supporting the conservation and sustainable use of the lake resources. • **Engage stakeholders:** Develop a stakeholder engagement plan that outlines how various project stakeholders will be involved and consulted at different stages of the project. Establish communication channels to ensure timely and transparent communication with stakeholders.

Dimension	Key Findings	Recommendations
Economic and Social Impact	Understanding the blue economy's contribution to sustainable development depends on evaluating its economic and social effects. Impacts such as employment creation, income production, poverty alleviation, food security, and sustainable livelihoods should be taken into account as well as both direct and indirect effects. The county can harness the full potential of the blue economy, ensuring its sustainable growth and maximizing its economic and social impacts for the well-being of present and future generations. Fishing and fish cage culture have made significant contributions to the overall economic growth of Migori County. Here are some ways in which these activities have had an impact: i. **Employment Generation:** The fisheries sector, including fishing and fish cage culture, has created employment opportunities for a large number of people in Migori County. It provides direct employment to fishermen, fish farmers, fish processors, and other individuals involved in the value chain. Indirectly, it supports jobs in transportation, marketing, distribution, and other related services, thereby contributing to livelihoods and income generation. For example, aquaculture has created 100,000 jobs and capture fisheries 50,000. These numbers are expected to increase as the county harness and invest in the sectors. ii. **Income Generation**: Fishing and fish cage culture activities have been a source of income for individuals and households in Migori County. Fishermen and fish farmers sell their catch or fish products in local markets, regional markets, and even export markets. This has enabled them to earn income and improve their economic well-being. iii. **Revenue Generation:** The fisheries sector has contributed to the county's revenue through various channels. Fishing licenses, permit fees, and taxes on fish sales have generated revenue for the county government. This revenue has been used for infrastructure development, social welfare programs, and other initiatives that benefit the county and its residents. iv. **Value Addition and Processing:** The development of fish processing facilities and value-added products has provided opportunities for higher returns on fish products. Fish processing activities such as smoking, drying, and has added value to the products and enabled fishermen and fish farmers to fetch better prices. v. **Tourism and Recreation**: Fisheries and aquaculture activities, including fishing and fish cage culture, have also contributed to the growth of tourism in Migori County. Fishing-related tourism, such as sport fishing and recreational fishing, attracts visitors and generates revenue for the county through tourism services, accommodations, and related businesses.	• **Diversification of economic activities:** Encourage the diversification of economic activities within the blue economy. Promote the development of multiple sectors, such as fisheries, aquaculture, maritime transportation, renewable energy, tourism, and biotechnology. Diversification can reduce dependence on a single sector and create more opportunities for employment, entrepreneurship, and economic growth. • **Sustainable resource management:** Prioritize the sustainable management of Lake Victoria resources to ensure their long-term viability. Implement measures to prevent overfishing, protect marine habitats, and promote responsible tourism development. This will safeguard resource availability and support the continued growth of economic activities dependent on the lake. • **Collaboration and partnerships:** Foster collaboration and partnerships between governments, industries, communities, and academia to promote innovation, knowledge sharing, and technology transfer. Collaboration can enhance research and development efforts, drive new investments, and create employment and entrepreneurship opportunities. • **Capacity building and skills development:** Invest in building the skills and knowledge of the workforce engaged in the blue economy. Develop training programs and vocational courses that align with the needs of the industry, such as marine sciences, aquaculture, maritime transportation, and renewable energy. Enhancing workforce capabilities will support job creation and improve the competitiveness of the blue economy sectors. • **Promote inclusive growth and social equity:** Ensure that the benefits of the blue economy are distributed equitably and reach all segments of society. Develop policies and programs that prioritize inclusivity, social welfare, and equal access to opportunities, particularly for marginalized communities and small-scale fishers. Promote gender equality and empower women, youth and people living with disabilities to participate in all aspects of the blue economy. • **Innovation and technology adoption:** Encourage the adoption of innovative technologies, including digital solutions, data analytics, remote sensing, and automation, to improve efficiency, productivity, and sustainability in blue economy sectors. Support research and development initiatives that focus on improving resource management, reducing environmental impact, and optimizing value chains. • **Supportive regulatory frameworks:** Establish clear and enabling regulatory frameworks that promote investment, ensure sustainable practices, and protect the rights of stakeholders in the blue economy. Develop comprehensive legal frameworks, licensing regimes, and environmental regulations that balance economic growth with environmental conservation and social well-being.
Institutionalization of Monitoring, Evaluation and Learning	For the blue economy to grow sustainably, monitoring, evaluation, and learning (MEL) should be institutionalized. The effective design, implementation, and evaluation of policies and projects is guaranteed by a systematic and all-encompassing approach to MEL, which promotes better decision-making, adaptive management, and learning for ongoing progress. To simplify the gathering, analysis, and use of data for tracking and evaluating the implementation and efficacy of blue economy policies and initiatives, institutionalizing MEL entails developing the proper structures, methods, and processes. It also entails fostering a culture of learning and knowledge exchange that supports innovation and ongoing progress. Institutionalizing monitoring, evaluation, and learning (MEL) within an organization involves embedding MEL practices and principles into its culture, systems, and processes. It was established that the county has a dedicated and well-structured unit responsible for monitoring, evaluation and learning of projects, which is situated in the finance and economic planning department. The unit is fully capitated with skilled staff to effectively conduct monitoring, evaluation and learning activities. Standardized and consistent tools for conducting the following monitoring, evaluation, and learning activities; data collection, data authentication, data analysis and interpretation, regular reviews and reporting, internal utilization of lessons, documentation and sharing of knowledge products, storage and information management are important aspects for sustainable implementation of blue economy projects. Institutionalizing MEL is critical for the blue economy's long-term development. It necessitates a systematic and comprehensive strategy that includes the establishment of appropriate structures, systems, and procedures, the development of capability, the promotion of collaboration, and the promotion of information exchange and dissemination. The County Government lacks a specific unit to oversee the monitoring, evaluation and learning of blue economy projects. Instead, this responsibility falls under the jurisdiction of the department of finance and economic planning, which handles the monitoring and evaluation of all the projects in the county. The county has not developed a monitoring, evaluation and learning framework for implementation of blue economy projects. The absence of a dedicated monitoring, evaluation, and learning framework tailored for blue economy projects can hinder effective project management, limit learning and improvement, reduce transparency and accountability, and result in missed opportunities for economic growth and sustainability. Additionally, there is a lack of standardized and consistent tools and mechanisms for various aspects of monitoring and evaluation of blue economy projects. This includes data collection, authentication, analysis, and interpretation, as well as regular reviews, internal utilization of lessons, documentation, sharing of knowledge products, and storage of information. This has the following implications. i. **Inaccurate and unreliable data**: Without proper tools and mechanisms, data collection may be inconsistent or incomplete, leading to inaccurate and unreliable information. This can hinder decision-making processes and compromise the effectiveness of project management and evaluation. ii. **Limited learning and improvement:** The lack of standardized tools and mechanisms makes it difficult to systematically analyze and interpret data. As a result, opportunities for learning from project experiences and making informed decisions for improvement may be missed. Lessons learned may not be effectively captured and utilized for future projects, leading to a lack of progress and potential repetition of mistakes. iii. **Inefficient resource allocation:** In the absence of regular reviews and data analysis, it becomes challenging to assess the performance and impact of blue economy projects. This can result in inefficient resource allocation, as decision-makers may not have accurate information to identify underperforming projects or areas that require additional investment. iv. **Limited knowledge sharing and collaboration:** The absence of mechanisms for documentation, sharing of knowledge products, and information management hampers effective knowledge sharing and collaboration among stakeholders. Valuable insights, best practices, and lessons learned may not be properly captured and disseminated, impeding the overall progress and growth of the blue economy sector.	• **County Leadership commitment:** Embrace top management and leadership commitment to MEL and recognize its importance for decision-making, accountability, and learning. Encourage leaders to champion MEL efforts and allocate resources for its implementation. • **Capacity building:** Invest in building the MEL capacity of staff at all levels. Provide training and workshops on MEL concepts, methodologies, tools, and data analysis techniques. Encourage staff to continuously upgrade their MEL skills and knowledge. • **MEL integration:** Integrate MEL into all stages of blue economy programmes and project management, from planning and design to implementation and evaluation. Ensure that MEL activities are included in project work plans and budgets. Foster a culture of evidence-based decision-making and learning. • **Stakeholder engagement:** Involve stakeholders, including beneficiaries, in MEL processes. Seek their inputs and feedback while developing MEL frameworks, indicators, and evaluation tools. Share evaluation findings and reports with stakeholders to promote transparency, accountability, and learning. • **Financial and resource allocation:** Allocate adequate financial and human resources for MEL activities. Include MEL costs in project budgets and ensure that MEL activities receive sufficient resources to be conducted effectively. Regularly review resource allocations to align with changing MEL needs. • **Learning culture:** Foster a learning culture within the county, where staff are encouraged to reflect on their work, learn from successes and failures, and adapt strategies based on MEL findings. Celebrate achievements and acknowledge efforts towards MEL integration and learning. • **Monitoring and evaluation champions:** Identify staff members who are enthusiastic about MEL and can serve as champions within the organization. These individuals can advocate for MEL, provide technical support, and create awareness of its importance across different departments and teams.

Annex 6: Blue Economy Capacity Assessment Questionnaire

Introduction

The Kenya Devolution Programme (KDP) is set to undertake a BE Capacity Needs Assessment in Kisumu, Homabay, Busia and Siaya counties in the week of August 28, 2023, and in Migori County in November 2023. The objective of the assessment is to gain an in-depth understanding of the gaps, challenges and opportunities in planning, implementation and monitoring of Blue Economy projects. This will help KDP to develop interventions aligned with county needs that will be prioritized for implementation within the timeframe of the Kenya Devolution Programme (KDP).

Furthermore, the assessment findings will play a pivotal role in guiding decision-making, shaping policy formulation, resource allocation, and other relevant aspects, all geared towards fostering sustainable and inclusive development of the Blue Economy.

In a bid to undertake the assessment, KDP has prepared questions which have been formulated based on six (6) key parameters. These parameters are: Blue Economy Sector and Opportunities; Policy and Regulatory Framework; Institutional Setup and Capacity, Project Identification, Planning; and Implementation, Economic and Social Impact, and Institutionalization of Monitoring, Evaluation and Learning

Section A. Blue Economy Sectors and Opportunities

1. Which Blue Economy sectors are predominant in the county?
2. What opportunities are present in each sector?
3. What are the constraints and challenges facing the sectors?

Section B. Policy and Regulatory Framework

1. Are there policies and regulations that promote Blue Economy activities in the county? If yes,
   i. Which policies and regulations are they?
   ii. Has the county aligned them with National Government policies and strategies?
   iii. Are there any gaps in the existing policies and regulations that require strengthening?
2. How well are the existing policies and regulations implemented and enforced?
3. Does the county possess the capacity to enforce policies and regulations to ensure compliance?

Section C. Institutional Arrangements and Human Resource Capacity

1. Is there an established institutional framework/structure that is responsible for coordinating and overseeing Blue Economy initiatives in the county?
2. Do the institutions have necessary authority, mandate, and resources to effectively implement and oversee Blue Economy initiatives?
3. Are there dedicated staff members assigned to coordinate Blue Economy initiatives?
4. Are there mechanisms or forums in place to:
   a) Enhance the skills and knowledge of staff members and stakeholders involved in the implementation of Blue Economy projects?
   b) Facilitate capacity building and knowledge sharing among local communities to enhance their participation in the Blue Economy sector?
   c) Align the county's programs with those of the national government, regional bodies, and international partners, particularly in terms of leveraging resources?
   d) Foster internal and external collaboration between county departments and with other counties in the Lake Victoria region, and the national government?

Note: If the answer to the above is YES, please give details.

Section D. Project Identification, Planning and Implementation

1. What Blue Economy projects have been identified and planned for implementation by the county government in FY2024/2025?
2. Have the projects been prioritized based on their potential impact and feasibility?
3. Are the projects aligned with the county governments' long-term development plans and Blue Economy strategies?
4. Have the projects considered the needs and aspirations of local communities and stakeholders?
5. What partnerships and collaborations have been established for project implementation?
6. How are the projects financed and what is the financial sustainability plan? Evaluate the availability and sources of financing for the projects.
7. Have the selected projects undergone any environmental and social impact assessments?
8. Are there considerations for promoting the reduction of carbon footprint of Blue Economy initiatives.

9. What capacity-building initiatives have been undertaken to support project implementation?

Section E. Economic and Social Impact

A. Economic Impact

1. Job Creation
    a) How many direct and indirect jobs have been created because of implementation of Blue Economy projects, or are expected to be created in the future?
    b) What is the breakdown of these jobs in terms of various sectors within the Blue Economy, such as fisheries, aquaculture, tourism, or renewable energy, etc.?
    c) Have efforts been made to ensure that local communities benefit from job opportunities generated by Blue Economy projects?
2. Economic Growth and Diversification
    a) Has the implementation of Blue Economy projects contributed to the overall economic growth of the county?
    b) Are there signs of economic diversification and the development of new industries and businesses within the Blue Economy sector?
3. Value Chain Development
    a) Have Blue Economy projects stimulated the growth of local supply chains and industries related to the sector?

B. Social Impact

1. Community Well-being:
    a) How have Blue Economy projects improved the quality of life for local communities in terms of access to basic services, education, healthcare, and infrastructure?
    b) Have there been initiatives to empower marginalized groups and ensure social inclusion in the benefits generated by Blue Economy activities?
2. Community Engagement and Participation
    a) Are there mechanisms for meaningful community engagement and participation in the planning, implementation, and monitoring of Blue Economy projects?
    b) Has the county facilitated capacity building and knowledge sharing among local communities to enhance their participation in the Blue Economy sectors?
    c) Are there initiatives to raise awareness about the benefits and potential impacts of Blue Economy projects among local communities?

Section F. Institutionalization of Monitoring, Evaluation and Learning

1. Institutional set-up
    a) Does the county have a dedicated unit/department responsible for monitoring, evaluation and learning of projects, including those related to Blue Economy?
    b) Is the monitoring, evaluation and learning unit/department structured in a formal manner?
    c) Are there dedicated staff members within the unit or department to fulfill its mandate?
    d) Do the staff members possess the necessary qualifications to effectively carry out monitoring, evaluation, and learning activities?
2. Monitoring, Evaluation and Learning Framework
    a) Has the county established a monitoring, evaluation, and learning framework or system specifically tailored for Blue Economy projects?
    b) When was the monitoring, evaluation, and learning framework developed, customized, or adapted?
3. Tools/Mechanisms/Appropriate Technology
    a) Are there standardized and consistent tools or mechanisms in place for conducting the following monitoring, evaluation, and learning activities?
        i. Data collection - for the purposes of monitoring, evaluation, and learning?
        ii. Data authentication - to ensure data quality, including accuracy, reliability, and consistency?
        iii. Data analysis and interpretation - to derive learnings about the ongoing activities and results?
        iv. Regular reviews and reporting – to determine the progress of activities and results achieved on Blue Economy projects?
        v. Internal utilization of lessons - to inform future project planning and implementation?

vi. Documentation and sharing of knowledge products (such as lessons learned) from the implementation of Blue Economy projects with relevant stakeholders (including national government agencies and development partners) - to demonstrate best practices among other needs?

vii. Storage and information management – to secure pertinent information related to monitoring, evaluation and learning for Blue Economy initiatives?

b) Has the county utilized appropriate technology, including electronic data collection and analysis/interpretation tools, as well as communication platforms, for conducting the monitoring, evaluation, and learning activities?

c) Are there any written guides available on how to use the tools, mechanisms, and appropriate technology?

4. Implementation Process:

a) Are you already collecting data for the purposes of monitoring, evaluation, and learning? Including data for environmental and social governance.

b) Which tactics for ensuring data quality are you applying during the data collection process?

c) Is the collected data being analyzed and interpreted to extract insights about the ongoing activities and results?

d) Are you regularly undertaking reviews and reporting on the progress of activities and results achieved on Blue Economy projects?

e) Are the lessons learned being utilized internally to guide future project planning and implementation?

f) Are knowledge products (including lessons learned) being documented and shared with relevant stakeholders, including national government agencies and development partners?

g) What digital communication methods are used in dissemination of knowledge products?

h) Are you effectively storing and managing information pertaining to monitoring, evaluation, and learning for Blue Economy initiatives?

5. Staff Capacity

a) Is there a staff capacity building plan in place?

b) Has the county already conducted training or capacity-building initiatives to enhance the skills and expertise of staff members involved in monitoring, evaluation, and learning for Blue Economy projects?

c) Are there opportunities for staff members to participate in external workshops, conferences, or learning events related to monitoring, evaluation and learning within the context of Blue Economy initiatives?

6. Sustainability of monitoring, evaluation, and learning

a) Does the unit or department responsible for monitoring, evaluation, and learning regularly convene meetings to review performance and identify potential areas for improving the monitoring, evaluation, and learning system?

b) How often is the monitoring, evaluation and learning framework, along with its associated tools, results, mechanisms, and appropriate technology, reviewed and updated?

c) How committed are stakeholders within the county on the monitoring, evaluation and learning of Blue Economy initiatives?

d) Are there established external partnerships that provide support for the monitoring, evaluation, and learning of Blue Economy initiatives?

e) Are there any existing interests from other partners (external) to support the monitoring, evaluation, and learning process of Blue Economy initiatives within the county?

7. Budget

a) Is there a budget that has been allocated to operationalize the planning and execution of monitoring, evaluation, and learning activities?

b) Does the county have a plan in place to secure funding from external sources to undertake monitoring, evaluation, and learning activities?

Any general comments

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Thank you for your Time and Corporation!

Kenya Devolution Programme

Blue Economy Capacity Needs Assessment

(Kisumu, Siaya, Busia, Homa Bay and Migori Counties)

Final Report | **January 2024**