



KMFRI
Kenya Marine and Fisheries Research Institute



KENYA MARINE AND FISHERIES RESEARCH INSTITUTE

STRATEGIC PLAN

2023–2027



Excellence in Sustainable Blue Economy Research

✓ ISO 9001:2015
CERTIFIED

VISION

A World Class Centre of Excellence in Innovative Research for Sustainable Blue Economy and Fisheries Development.

MISSION

To Generate and Disseminate Scientific Information for Sustainable Development of the Blue Economy and Fisheries.

CORE VALUES

- Integrity
- Transparency and Accountability
- Professionalism
- Teamwork
- Equity and Equality





The Kenya Marine and Fisheries Research Institute (KMFRI), in line with Government policies and development plans, has developed a five-year strategic plan. The Plan covers the period 2023/24- 2027/28 and is anchored on Kenya Vision 2030, the Bottom-Up Economic Transformation Agenda (BETA), 2022-2027 and the Fourth Medium Term Plan (MTP IV) 2023 - 2027 considering the provisions and expectations of the Constitution of Kenya 2010. The Vision 2030 is the long-term development blueprint expected to transform Kenya into a rapidly industrializing middle-income nation enjoying a high quality of life by the year 2030.

The Government has established a Ministry of Mining, Blue Economy, and Maritime Affairs thus, underscoring the significance of Blue Economy in line with the Constitution of Kenya 2010. The Fourth Medium Term Plan (MTP IV) of the Kenya Vision 2030 has identified Blue Economy (BE) and fisheries research as one of the sectors supporting the Country's development. It is against this background that KMFRI being a National Research Institute has developed this Strategic Plan.

The Strategic Plan has incorporated issues under the Blue Economy (BE) research, and the pivotal role played by KMFRI.

During the plan period, KMFRI, under the guidance of the Board of Management will continue to provide quality and relevant BE research data, knowledge and information required to inform investment in the sector.

This is in line with increasing demand for BE products and other resources while ensuring their sustainability for the present and future generations.

To enhance KMFRI's efficiency and improve service delivery, the Strategic Plan proposes to align with the organization structure. The new structure takes into consideration the needs of the Devolved Government system, BE research and the emerging issues in the sector. In the development of this Strategic Plan, a participatory process involving key internal and external stakeholders was embraced, the result of which is this Strategic Plan. The implementation of the Plan will lead to provision of effective and quality service to Kenyans and beyond.

I have no doubt that with cooperation and support from other government ministries, departments and agencies, development partners and stakeholders, KMFRI will greatly contribute towards transforming the BE sector into an innovative and commercially oriented sector in line with the aspirations of Vision 2030, and the Bottom-Up Economic Transformation Agenda 2022 -2027.

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HON. JOHN SAFARI MUMBA
CHAIRMAN, KMFRI BOARD OF MANAGEMENT



The Strategic Plan 2023 – 2027 lays a firm foundation for fulfilling the mandate of KMFRI which is anchored on research and innovation. The Institute is mandated to undertake research in Blue Economy (BE) resources for sustainable development. In delivering this mandate, the Institute will focus on environmental, economic, and social considerations, which are critical for sustainable development of the BE.

This Strategic Plan 2023 – 2027 focuses on five key result areas, namely to:

(i) **Research and Innovation:** KMFRI supports basic and applied innovative research for improved management and development of sustainable Blue Economy. The outputs of research are geared towards enhancing food security, livelihood support, and provide information for policy development to drive sustainable transformation and diversification of the Blue Economy.

(ii) **Knowledge Management and Dissemination:** There is an increasing need for data and information for the different facets of the Blue Economy. Transfer of knowledge and information is the backbone for key decision-making to support policy development and uptake of research and innovation.

(iii) **Resource mobilization and institutional capacity building:** Funding and human resource capacity are critical facets of our operations as they ensure the achievement of our mandate.

(iv) **Collaboration and Partnerships:** KMFRI will continue to build on the existing expertise through national, regional and international strategic collaborations to promote economic development.

(v) **Community and Private Sector Engagement:** KMFRI is committed to co-designing research and innovations and increasing the participation of women and youth, local communities and the private sector for a sustainable Blue Economy.

The Strategic Plan sets out strategies and interventions that seek to enhance promotion of quality service delivery, efficiency and effectiveness of operations, development of alternative financing options, development of human capacity and enhancement of her capacity, support systems and good governance. The Strategic Plan is the basis for the formulation of KMFRI's annual work plans, resource bidding and performance contract targets. I, therefore, call upon all KMFRI staff and relevant stakeholders to work together for the realization of the strategic objectives contained in this Strategic Plan. With effective implementation of this plan, I am confident that research at KMFRI will achieve the desired contributions for development of the BE and Fisheries sector.

I wish to thank the Chairman of KMFRI Board of Management, Hon. John Safari Mumba and the entire Board of Management for the support and policy direction provided in preparation of this Strategic Plan. I would additionally like to thank KMFRI team which spearheaded the development of the Plan. Special thanks also go to KMFRI staff and all other external stakeholders who directly or indirectly contributed towards the improvement of this Strategic Plan.

A handwritten signature in black ink, appearing to read 'J. Njiru', written over a horizontal line.

PROF. JAMES M. NJIRU, PhD
DIRECTOR GENERAL/CEO

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Baseline: Baseline is an analysis describing the initial state of an indicator before the start of a project/ programme, against which progress can be assessed or comparisons made.

Blue Economy (BE): Blue Economy covers both aquatic and marine spaces, including oceans, seas, coasts, lakes, rivers, and underground water. It encompasses a range of productive sectors, including fisheries, aquaculture, tourism, transport, shipbuilding, energy, bio-prospecting, and underwater mining, and related activities (United Nations Economic Commission for Africa, 2016).

Indicator: An indicator is a sign of progress/change that results from a project. It measures a change in a situation or condition and confirms progress towards achievement of a specific result. It is used to measure a project impact, outcomes, outputs, and inputs that are monitored during project implementation to assess progress.

Key Activities: Actions taken or work performed, through which inputs are mobilized to produce outputs.

Key Results Areas: This is an outline of KMFRI's areas of focus. It also refers to the general areas of outputs or outcomes for which KMFRI's role is responsible. Example: Research and Innovation.

Outcome Indicator: This is a specific, observable, and measurable characteristic or change that will represent achievement of the outcome. Outcome indicators include quantitative and qualitative measures. Examples: fish production level, carbon sequestration rates, fish mortality rates etc.

Outcome: Measures the intermediate results generated relative to the objective of the intervention. It describes the actual change in conditions/situation as a result of an intervention output(s) such as changed practices as a result of a programme or project.

Output: Immediate result from conducting an activity i.e. goods and services produced.

Performance Indicator: A measurement that evaluates the success of an organization or of a particular activity (such as projects, programmes, products and other initiatives) in which it engages.

PESTELE Analysis: It is a framework or tool used to analyse and monitor the environmental (external) factors that have an impact on an organization.

Programme: A grouping of similar projects and/or services performed by a Ministry or Department to achieve a specific objective; the programmes must be mapped to strategic objectives.

Project: A project is a set of coordinated activities implemented to meet specific objectives within defined time, cost, and performance parameters. Projects aimed at achieving a common goal form a programme.

Strategic Issues: These are problems or opportunities emanating from situational analysis that an organization has to manage in order to be able to fulfil its mandate and mission. *Example: Investment in the Blue Economy.*

¹United Nations Economic Commission for Africa, 2016. Africa's Blue Economy: A Policy Handbook. Economic Commission for Africa Addis Ababa, Ethiopia, 92pp.

Strategic Goal: General qualitative statements on what an organisation is hoping to achieve in the long term. Each strategic goal is linked to a strategic issue. Goals are the foundations of your plan and need to be set at the start of the planning process. Example: Promote focus on Blue Economy Research.

Strategic Planning: It is the process of defining an organization's strategy or direction and making decisions on allocating its resources to pursue this strategy; it involves setting goals, determining actions to achieve the goals, and mobilizing resources to execute the actions.

Strategic Objectives: These are what the organization commits itself to accomplish in the long term; they establish performance levels to be achieved on priority issues and measures of success in fulfilling critical mission statement elements.

SWOT Analysis: It is used for understanding the strengths and weaknesses (internal factors) of the organization and for identifying both the opportunities open to the organization and the threats it faces (external factors).

Target: A target refers to planned level of an indicator achievement.

The Plan: KMFRI Strategic Plan 2023 - 2027

Top Leadership: Individuals or groups of people who carry the Vision of KMFRI and are responsible for achieving its mandate. Top leadership in the Plan include Board of Management, CEO and Directors.

Value Chain: A description of the production-to-market linkages, generating value to the customer through efficient processes and procedures. Value chains are about understanding how creation of value is distributed along the chain.



ACRONYMS AND ABBREVIATIONS

AD	Assistant Director
AMIP	Aquaculture Marketing Information Platform
ARD	Aquaculture Research and Development
ARK	Aquatic Resources Kenya
ASAL	Arid and Semi-Arid Areas
ASK	Agricultural Society of Kenya
BIMS	Biodiversity Information Management System
BMU	Beach Management Unit
BE	Blue Economy
BETA	Bottom-Up Economic Transformation Agenda
BOM	Board of Management
CCAs	Community Conservation Areas
CD	Centre Director
CM	Centre Manager
CEO	Chief Executive Officer
CFAs	Community Forest Association
CIDP	County Integrated Development Plan
COP	Conference of Parties
CORDIO-EA	Coastal Oceans Research and Development in Indian Ocean-East Africa
CPUE	Catch Per Unit Effort
CS	Corporation Secretary
DCS	Director Corporate Services
DLS	Director Legal Services
EAC	East Africa Community
EAF	Ecosystem Approach to Fisheries
EAFFRO	East Africa Freshwater Fisheries Research Organization
EAMFRO	East Africa Marine Fisheries Research Organization
EEZ	Exclusive Economic Zone
EFMIS	Enhanced Fish Marketing Information System
EIA	Environmental Impact Assessment
ERP	Enterprise Resource Planning
EU	European Union
F&P	Finance and Planning
FADs	Fish Aggregation Devices
FAO	Food and Agriculture Organization
FDEMU	Fish Diseases and Environmental Monitoring Unit
FKE	Federation of Kenya Employers
FWS	Fresh Water Systems
GDP	Gross Domestic Product
GEF	Global Environment Facility
GOK	Government of Kenya

ACRONYMS AND ABBREVIATIONS

GOOS	Global Oceans Observing System
GVP	Gross Value Production
HOD	Head of Department
IAEA	International Atomic Energy Agency
ICT	Information Communication Technology
ICZM	Integrated Coastal Zone Management
IEC	Information, Education and Communication
IFS	International Foundation for Science
ILO	International Labor Organization
IMS	Institute of Marine Science
IOC	Intergovernmental Oceanographic Commission
IOIEA	International Ocean Institute
ISO	International Standards Organization
IT	Information Technology
IUCEA	Inter University Council of East Africa
IUCN	International Union for Conservation of Nature
IUU	Illegal Unregulated Unreported
KEBS	Kenya Bureau of Standards
KEPHIS	Kenya Plant Health Inspectorate Service
KFS	Kenya Forestry Service
KIPI	Kenya Industrial Property Institute
KMA	Kenya Maritime Authority
KMFRI	Kenya Marine and Fisheries Research Institute
KRA	Key Results Areas
KShs	Kenya Shillings
LAN	Local Area Network
LAVIBI	Lake Victoria Biodiversity Informatics
LVFO	Lake Victoria Fisheries Organization
LVFRO	Lake Victoria Fisheries Research Organization
MDAs	Ministries, Departments and Agencies
M&E	Monitoring and Evaluation
MGT	Management
MOU	Memorandum of Understanding
MSc	Master of Science
MT	Metric Tonnes
MTEF	Medium Term Expenditure Framework
MTP II	Second Medium Term Plan
NACOSTI	National Commission for Science Technology and Innovation
NEMA	National Environment Management Authority
NORAD	Norwegian Development Agency
NPVA	Natural Products Value Addition
OCS	Oceans and Coastal Systems

ACRONYMS AND ABBREVIATIONS

ODINAFRICA	Ocean and Data Information Network for Africa
OH	Oceanography and Hydrography
PAS	Performance Appraisal System
PESTELE	Political, Economic, Social, Technological, Environmental, Legal and Ethics
PC	Performance Contract
PhD	Doctor of Philosophy
PPP	Public Private Partnership
PPPGs	Policies, Procedures, Plans and Guidelines
PR	Public Relations
RBA	Retirement Benefits Authority
RMS	Risk Management System
RRR	Reduce Recycle and Re-use
RV	Research Vessel
SCAC	State Corporations Advisory Committee
SDF-BE	State Department of Fisheries and Blue Economy
SDG	Sustainable Development Goals
SE	Socio-economics
SIDA	Swedish International Development Agency
SP	Strategic Plan
SRO	Senior Research Scientist
STI	Science Technology and Innovation
SWIOFP	South West Indian Ocean Fisheries Project
SWOT	Strength, Weakness, Opportunities and Threats
TAFIRI	Tanzania Fisheries Research Institute
UN	United Nations
UNCLOS	United Nations Convention on Law of Sea
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nation Educational Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
USA	United States of America
WIOMSA	Western Indian Ocean Marine Science Association
WWF	World Wide Fund for Nature

This Strategic Plan is guided by the Constitution of Kenya 2010, the Kenya Vision 2030, the Bottom-Up Economic Transformation Agenda (BETA), the Fourth Medium Term Plan (MTP IV) 2023 - 2027, the Blue Economy and Fisheries Sector Plan (2023 - 2027), Executive Orders, the Kenya Fisheries Policy, 2023, the East Africa Community Vision 2050, the African Agenda 2063 and United Nations Sustainable Development Goals (SDGs), The UN Ocean Decade for Sustainable Development 2021-2030, UN Decade for Ecosystem Restoration 2021-2030 and other government policy documents, agreements and international conventions. The Plan is also guided by lessons learnt, constraints and challenges encountered in the implementation of the KMFRI's Strategic Plan 2018 - 2022.

The Strategic Plan is structured into eight chapters. Chapter One sets out the context for strategic planning; Chapter Two provides the Strategic Direction for the Organization; Chapter Three presents the Situational and Stakeholder Analyses; while Chapter Four covers the Strategic Issues, Goals and Key Results Areas (KRAs). Chapter Five outlines the Strategic Objectives and Strategies; Chapter Six provides the Implementation and Coordination Framework; Chapter Seven presents Resource Requirements and Mobilization Strategies; while Chapter Eight describes the Monitoring, Evaluation and Reporting Framework.

The strategic objectives of the Plan are:

1. To promote research and innovation to drive transformation of Blue Economy (BE) towards sustainable development.
2. To transfer knowledge and information to support policy development and uptake of research findings and innovations.
3. To mobilize and manage human and financial resources to strengthen institutional capacity.
4. To strengthen national, regional, and international collaboration and partnerships.
5. To strengthen community participation and integration of indigenous knowledge in research development.

Key activities and strategies to achieve each of the strategic objectives are provided. Further, the approved institutional structure has been provided for effective and efficient service delivery.

The Strategic Plan covers the following five Key Results Areas (KRA):

- i. Research and Innovation;
- ii. Knowledge Management and Dissemination;
- iii. Resource mobilization and Institutional Capacity Building;
- iv. Collaboration and Partnerships; and
- v. Community and Private Sector Engagement.

To implement the Strategic Plan, the resources required over the five-year period will be mobilized through lobbying the Government for additional funding, collaboration with development partners and other stakeholders, utilization of the partnership arrangements, exercising prudence in financial management and establishing income generating activities. The total cost of implementing this plan is KShs. 42.233 Billion.

To realize effective implementation of the Strategic Plan, monitoring and evaluation will be undertaken annually. The activities and outputs will be monitored throughout the Plan period and will be mainstreamed to the Directorates on account of responsibility. The outputs will further be mainstreamed in the Institute's annual Performance Contract (PC) targets and Performance Appraisal System (PAS) of KMFRI staff. The Strategic Plan will be evaluated at the midterm and end of the Plan period.



This chapter provides an introduction of the Plan. The chapter also covers sections on the importance and contribution of the strategy towards the success of the Institute, the alignment of the strategy with global, regional and national policy frameworks, government vision and agenda, the history of the Institute and the methodology used to develop the Plan.

1.1 Strategy as an imperative for KMFRI's success

The Strategic Plan is a pivotal tool to guide the implementation of the organizations programs and facilitate efficient service delivery. The strategies are aligned to KMFRI's mandate and enable her to provide the data and information needed to support policy development and management of Kenya's Blue Economy sector.

The proposed strategies will contribute to the achievements of the Bottom-Up Economic Transformation Agenda (BETA); East African Community (EAC) Vision 2050; Africa Union Agenda 2063; Sustainable Development Goals (SDGs); as well as United Nation's Decade for Ocean Science for Sustainable Development and the Decade on Ecosystem Restoration (2020 to 2030).

This Strategic Plan was informed by the need to: -

- a) Align the Strategic Plan to the Bottom-Up Economic Transformation Agenda (BETA) and MTP IV framework in line with guidelines for the preparation of the Government's 5th generation strategic plans 2023-2027.
- b) Harmonize the Institutes' strategies with the Government's Development Agenda;
- c) Take advantage of the existing opportunities and tackle the complex challenges to exploit the blue growth potential.
- d) Align to the Science, Technology, and Innovation Act No. 28 of 2013.
- e) Align to the Kenya Fisheries Policy, 2023 and Fisheries Management and Development Act, 2016.
- f) Comply with Section 68 (2) part (g) of the Public Financial Management Act, 2012 that requires Accounting Officers for every national government entity to prepare a Strategic Plan for the entity in conformity with the medium-term fiscal framework and fiscal policy objectives of the National Government.
- g) Comply with East African Community (EAC) Vision 2050, Africa Agenda 2063, United Nations (UN) 2030 Agenda for Sustainable Development, UN decade of Ocean Science (2021-2030) and the UN decade of Restoration (2021-2030).

The strategic plan has been developed in line with the following international, regional and national development frameworks.

1.2.1 United Nations 2030 Agenda for Sustainable Development

The United Nations 2030 Agenda provides a shared blueprint for Sustainable Development Goals of the planet, now and into the future. The Institute has a critical role to play in advancing Sustainable Development Goals (SDGs) relevant to her mandate as summarized in Table 1.1.

Table 1.1: The Institute's Role in SDGs

S/No.	SDG Description	Strategic Response by the Institute
Goal 1	End Poverty in all its forms everywhere	Goals 1 and 2 will be achieved through development and implementation of pro-poor research programmes/projects along the sub sector's value chains.
Goal 2	End hunger, achieve food security and improved nutrition and promote sustainable Agriculture	
Goal 3	Ensure healthy lives and promote well-being for all at all ages	This will be achieved through promotion of consumption of value-added fish and fish products through research.
Goal 5	Achieve gender equality and empower all women and girls	This will be attained through research on social inclusion of women, youth, and vulnerable and marginalized groups in Blue Economy and fisheries opportunities.
Goal 6	Ensure availability and sustainable management of water and sanitation for all	The focus will be on promoting water efficient production systems in aquaculture and reduction of pollution in water bodies.
Goal 7	Ensure access to affordable, reliable, sustainable and modern energy for all	This will be achieved through research on adoption of climate smart energy efficient technologies and affordable marine energy.
Goal 12	Ensure sustainable consumption and production patterns	This will be achieved through targeted research on interventions geared to reduction of post-harvest losses and increased access to fish.
Goal 13	Take urgent action to combat climate change and its impacts	This will be addressed through research on Blue Carbon, and climate-smart technologies in Blue Economy.
Goal 14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	The focus will be on sustainable management of our oceans and inland water resources through ecosystem approach to fisheries management; strengthening of fisheries governance; enhance research capacity and transfer of marine technologies.
Goal 17	Strengthen means of implementation and revitalize the global partnership for sustainable development	This will be achieved through strengthening of collaboration and partnerships at the national, regional and international levels for sustainable management and development of Blue Economy resources.

1.2.2 Africa Union Agenda 2063

Agenda 2063 is a shared framework for inclusive growth and sustainable development for Africa to be realized by 2063. The Institute will during the period contribute to the realization of Africa Union Agenda 2063 as outlined in Table 1.2.

Table 1.2: The Institute's role in Africa Union Agenda 2063

S/No.	Aspirations of the AU Agenda 2063	Strategic Response by the Institute
Goal 1	A high standard of living, quality of life and well-being for all citizens.	This will be achieved through development and implementation of research technologies along the sub sector's value chains for increased income.
Goal 2	Well educated citizens and skills revolution underpinned by science, technology and innovation.	The Institute is mandated to collaborate with other organizations and institutions of higher learning in competitive capacity development for exploitation of the Blue Economy. The Institute also empowers communities through knowledge and technology transfer from research.
Goal 3	Healthy and well-nourished citizens.	This will be achieved through promotion of consumption of value-added fish and fish products through research.
Goal 6	Blue/ocean economy for accelerated economic growth.	The focus will be on sustainable management of our oceans and inland water resources through ecosystem approach to fisheries management; strengthening of fisheries governance; enhance research capacity and transfer of marine technologies.
Goal 7	Environmentally sustainable and climate resilient economies and communities.	This will be addressed through research on Blue Carbon, and climate-smart technologies in Blue Economy.

1.2.3 East Africa Community Vision 2050

The East Africa Community Vision 2050 is a long-term development blueprint that identifies policy for spearheading regional growth. The Institute will during the plan period contribute to the goal as outlined in Table 1.3.

Table 1.3: The Institute's role in East Africa Community Vision 2050

S/No.	EAC goal	Strategic Response by the Institute
Goal 1	Improved access to affordable and efficient regional transport, energy and communication network for increased competitiveness.	This will be addressed through environmental and socio-ecological studies, and marine research including chemical and physical oceanography and hydrography (generation of tide tables), and marine geology.
Goal 2	Increased investment and enhanced agricultural productivity for food security and a transformation of the rural economy.	This will be addressed through Blue Economy research on post-harvest losses reduction and value addition.
Goal 4	Sustainable utilisation of natural resources, environment management and conservation with enhanced value addition.	The focus will be on sustainable management of our oceans and inland water resources through ecosystem approach to fisheries management; strengthening of fisheries governance; enhance research capacity and transfer of marine technologies
		This will be addressed through research on Blue Carbon, and climate-smart technologies in Blue Economy.
Goal 5	Enhance tourism, trade in goods and other services within the EAC region and with the rest of the world.	This will be achieved through continued partnership with the local communities, county governments and other stakeholders in the tourism sector in research geared to protect marine ecosystems and promoting ecotourism.

1.2.4 Constitution of Kenya, 2010

The Constitution of Kenya, 2010 Chapter 4 provides for the Bill of Rights and Article 10 sets out the national values and principles of governance. The Constitution further aims to ensure sustainable exploitation, utilization, management and conservation of the environment and natural resources. It further aims to ensure the equitable sharing of the accruing benefits from the Blue Economy resources throughout Kenya. Under its Fourth schedule, the Constitution assigns the national Government the function of Protection of the environment and natural resources with a view to establishing a durable and sustainable system of development, including fishing, hunting and gathering. In carrying out its mandate, the Institute shall abide by the national values and principles of governance set out in Article 10 of the Constitution of Kenya and the Institute also endeavors to undertake demand driven research in the Blue Economy for sustainable utilization and management of the aquatic environment and natural resources.



1.2.5 Kenya Vision 2030, Bottom-Up Economic Transformation Agenda and Fourth Medium Term Plan

KMFRI's mandate as per Science, Technology and Innovations (STI) Act No. 28 of 2013 fits into her national, regional and international roles including Kenya Vision 2030, Bottom-Up Economic Transformation Agenda (BETA) and Fourth Medium Term Plan (MTP IV) among other national and international obligations.

To achieve the aforementioned and to promote Blue growth, KMFRI is identified with research on:

- a) Economic valuation of Blue Economy resources.
- b) Development of appropriate post-harvest technologies, value addition, marketing and techniques.
- c) Identification, assessment of the potential, and enabling access to new and under exploited BE resources and stocks.
- d) Development of environmental friendly Blue Economy harvesting technologies.
- e) Improvement and transfer of adaptive Blue Economy culture technologies in feed and seed production.
- f) Adaptation of indigenous knowledge in exploitation of Blue Economy resources and livelihood
Monitoring and evaluation of the integrity of the Blue Economy ecosystems, and management.
- g) Generation of data on climate change and physical oceanographic processes.
- h) Geology and spatial planning.

1.2.6 Sector Policies and Laws

KMFRI has integrated Blue Economy and fisheries sector specific policies, laws and international obligations, treaties and conventions in the Strategic Plan for implementation. The policies, laws and international obligations, treaties and conventions are presented in Table 1.4.

Table 1.4: Sector Policies, Laws, International Obligations, Treaties and Conventions

S/No.	Policies and Laws	Blue economy and fisheries issues
1.	Kenya Fisheries Policy, 2023	Aims to ensure increased and sustainable fish production and utilization by properly managing the Kenya fishery waters.
2.	Fisheries, Management and Development Act, 2016	Conservation, Management and development of fisheries resources
3.	Climate Change Act, 2016	Development, management, implementation and regulation of mechanisms to enhance climate change resilience and low carbon development for sustainable development of blue economy and fisheries.
4.	Maritime Zones Act, CAP 371	Provide for establishment and delimitation of EEZ of Kenya ((Annex 4 – Map of Kenya EEZ)) and provide for exploration, exploitation conservation and management of maritime zones
5.	State Corporations Act, Cap 446	Rules for the establishment, administration, management and operation of state corporations which promotes management and development of fisheries resources.
6.	The Merchant Shipping Act (Cap 389)	Oil pollution control in aquatic resources
7.	The Mining Act (Cap 306)	Prohibits release of poisonous substances into waterways
8.	State Corporations Act, Cap 446	
9.	UN Convention on the Law of the Sea (UNCLOS)	Delineate maritime zones, sustain marine environment, fisheries, monitoring and surveillance of territorial waters and generally regulate ocean affairs in accordance with the Convention.
10.	UN Fish Stock Agreement, (UNFSA) for Straddling and Highly Migratory Fish, 1995	Enhancement of long-term conservation and sustainable use of straddling fish stocks and highly migratory fish stocks

11.	UN 1993 FAO Compliance Agreement	Promote compliance with international conservation and management measures by fishing vessels on the high seas so as to deter any activity that undermines the effectiveness of international conservation and management measures
12.	FAO Code of Conduct for Responsible Fisheries (CCRF)	Promote a long-term conservation and sustainable use of fisheries through the ecosystem approach and Rights Based Fisheries Management,
13.	Port State Measures Agreements	Ensure proper detection and investigation of IUU fishing; Ensure reporting and notification of fishing activities in all EEZ and high sea to stop fish caught from IUU fishing reaching markets; Establish and notify designated fishing ports and establish Inter-Agencies Entity for Port Inspection; and to participate in regional forums and activities to deter the IUU; Establish Observer coverage of at least 5%
14.	Indian Ocean Tuna Commission (IOTC) Agreement	co-ordinate the regulation and management of the highly migratory and straddling tuna and tuna-like fish species in the Indian Ocean, Domesticate and implement the obligatory Resolutions on Conservation and Management Measures (CMM)
15.	South West Indian Ocean Commission Convention (SWIOFC)	Participation in the scientific and compliance committees and working parties' activities, ratification of management protocols on Minimum Terms and Conditions for Access to the fishing resources in the region
16.	Western Indian Ocean Marine Science Association (WIOMSA)	To promote the educational, scientific and technological development of all aspects of marine sciences throughout the region of Western Indian Ocean with a view toward sustaining the use and conservation of its marine resources
17.	International Convention for Regulation of Whaling, 1946	Establishment of Whale Research Unit, training on by catch whaling, development of sustainable use of whales through whale watching activities
18.	The Common Market for Eastern and Southern Africa Fisheries Strategy (COMESAFS)	Fish handling and safety to reduce post-harvest losses
19.	UN Decade of Ocean Science for Sustainable Development (2021-2030)	Support efforts to reverse the cycle of decline in ocean health



1.2.7 History of Kenya Marine and Fisheries Research Institute

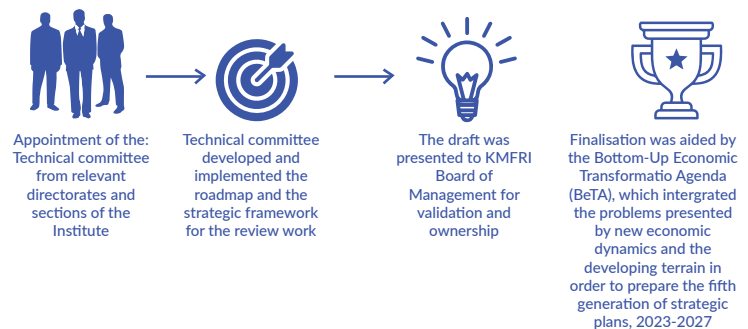
Kenya Marine and Fisheries Research Institute (KMFRI, hereinafter known as “the Institute”) is a State Corporation established in 1979 through amendment of the Science and Technology Act (Cap.250 of the Laws of Kenya) that followed the dissolution of the two research-related institutions of the East Africa Community, namely the East Africa Freshwater Fisheries Research Organization (EAFFRO) and the East Africa Marine Fisheries Research Organization (EAMFRO). EAFFRO and EAMFRO were headquartered at Jinja, Uganda and Zanzibar, Tanzania, respectively. The Science and Technology (Amendment) Act was later repealed by the Science, Technology and Innovations Act No. 28 of 2013. The institute embarked on expanding the training programmes to provide the necessary skills to expand research on fisheries, oceanography, aquaculture, limnology, and environmental studies in marine and freshwater and socioeconomics.

The Institute is now under the Ministry of Mining, Blue Economy and Maritime Affairs and anchored in the State Department for the Blue Economy and Fisheries. KMFRI is governed by the Board of Management. KMFRI is organized into eight directorates namely: Ocean, Coastal Systems and Blue Economy; Freshwater Systems Research; Aquaculture; Socioeconomics; Strategy, Partnerships, and Resource Mobilization; Corporate Services; Internal Audit; and Corporate Secretary/ Legal Services. KMFRI has three (3) Research Centres namely Mombasa, Kisumu and Sagana. The Institute also has eight (8) research stations at Naivasha, Kegati, Baringo, Turkana, Sangoro, Shimoni, Mutonga and a liaison office in Nairobi. KMFRI is ISO 9001:2015 certified and therefore conforms to international standards on quality management and relevant national legislations and its research meets international standards.

KMFRI's mandate is to generate scientific data and information in "marine and freshwater fisheries, aquaculture, environmental and ecological studies, and marine research including chemical and physical oceanography and hydrography, marine geology, minerology, bio-prospecting, and energy (oil and gas, hydropower, wind and water currents)", for sustainable development of the Blue Economy. The Institute is also mandated to collaborate with other organizations and institutions of higher learning in competitive capacity development for exploitation of the Blue Economy.

1.2.8 Methodology of Developing the Strategic Plan

The preparation of the draft Strategic Plan 2023-2027 was initiated in October 2022 by the Director General through the appointment of a technical committee drawn from the relevant directorates and sections of the Institute. The technical committee held review meetings and adopted the Terms of Reference, developed and implemented a costed roadmap and the strategic framework for the review of the Plan. The development of the Plan involved use of primary and secondary literature in form of national, regional and international legal and policy frameworks relevant to KMFRI's mandate. The draft strategic plan was circulated to relevant stakeholders for comments and inputs. An advanced draft strategic plan was developed after incorporating inputs from stakeholders. The draft Strategic Plan 2023-2027 was presented to KMFRI Board of Management for validation and ownership. The finalization of the Plan was guided by the revised guidelines for preparation of the fifth-generation strategic plans 2023 -2027, the Bottom-Up Economic Transformation Agenda (BeTA) which integrated the evolving landscape and challenges posed by new economic dynamics.

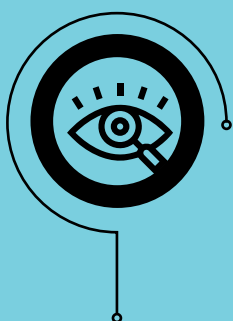


This chapter presents the strategic direction and covers the Mandate, Vision Statement, Mission Statement, Strategic Goals, Core Values and Quality Policy Statement of the Institute.



2.1 Mandate

KMFRI's mandate is to generate scientific data and information in "marine and freshwater fisheries, aquaculture, environmental and ecological studies, and marine research including chemical and physical oceanography and hydrography, marine geology, mineralogy, bio-prospecting, and marine energy (oil and gas, hydropower, wind and water currents)", for sustainable development of the Blue Economy. The Institute is also mandated to "collaborate with other organizations and institutions of higher learning in competitive capacity development for exploitation of the Blue Economy."



2.2 Vision Statement

A World Class Centre of Excellence in innovative research for Sustainable Blue Economy and Fisheries development.



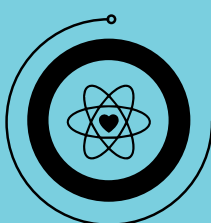
2.3 Mission Statement

To generate and disseminate scientific information for sustainable development of the Blue Economy and Fisheries.



2.4 Strategic Goals

- Promote Blue Economy research;
- Optimize value of data through knowledge management and dissemination;
- Enhance institutional capacity;
- Enhance service delivery through collaborations and partnerships.



2.5 Core Values

To fulfil KMFRI's mandate and realize its mission, the operations are guided by the following core values:

- Integrity:** Our staff will adhere to strong moral and ethical principles and values.
- Transparency and Accountability:** We are committed to ensuring that all services are rendered in a transparent and accountable manner.
- Professionalism:** Our staff will uphold high moral standards and professional competence in service delivery.
- Teamwork:** We embrace trans-disciplinary and multi-stakeholder teamwork in the co-designing and delivery of our research mandate.
- Equity and Equality:** We aspire to promote equity and equality in all aspects of our mandate.



2.6 Quality Policy Statement

KMFRI is committed to delivering to her customers and stakeholders high quality standards of innovative research and information in marine, fisheries and the blue economy for utilization of resources towards food production, improve livelihood while preserving the health of the ecosystem. This commitment is enshrined in our quality principles as stated:

- Customer focus:** KMFRI shall consistently and regularly undertake engagement with her customers and stakeholders to determine their requirements.

- b) **Quality objectives:** KMFRI shall set quality objectives that are compatible with the context and strategic direction. These quality objectives shall be set annually at the various functions and levels, and shall be implemented, monitored, measured and reviewed annually to be in line with changing customer and stakeholder needs and her direction.
- c) **Products and service standards:** KMFRI shall consistently deliver , to the best of her capabilities, and all the times, quality and innovative scientific information that meet or exceed customer expectation and applicable statutory and regulatory requirements.
- d) **Capabilities to meet and improve products and service standards:** KMFRI shall determine, provide, and manage human capital and infrastructure necessary for the operation and control of processes so as to achieve conformity to quality and improve on products and service standards.
- e) **Quality and Risk management:** KMFRI shall at all times ensure integrations of QMS 9001:2015 quality principles as well as risks and opportunities associated with her core business processes of providing quality and innovative scientific information.
- f) **Communication on Quality Policy:** As a sign of commitment and dedication to quality service, this Quality Policy shall be openly discussed, displayed and posted strategically, and communicated to KMFRI staff so that its understood and applied throughout KMFRI, as well as be made available to stakeholders.
- g) **Quality Policy Review:** KMFRI shall review the implementation of her Quality Policy periodically to ensure that it reflects the priorities of her customers, other stakeholders, operational dynamics and the changing Quality Management System Principles.



This chapter analyses the implications of both the external and internal factors on the effective implementation of this Strategic Plan. It presents the Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis; Political, Economic, Social, Technological, Environmental and Legal (PESTEL) analysis; and an analysis of the key stakeholders' roles in the implementation of the Plan between 2023/2024 and 2027/2028. It also presents a review of the former KMFRI Strategic Plan 2018-2022, in terms of key achievements, challenges faced, and lessons learnt.

3.1 Situational Analysis

3.1.1 External Environment

External environment are the outside factors that influence and affect the Institute's operations. These factors include political, economic, social, technological, environmental, and legal factors (PESTEL).

3.1.1.1 Macro-environment

The analysis was done in the context of the PESTEL factors and their strategic implications and responses. The analysis is presented in Table 3.1.

Table 3.1: Political, Economic, Social, Technological, Environmental and Legal (PESTEL) analysis

No	Category		
	Political	Factors	Description
1.	Political goodwill and Stability	<ul style="list-style-type: none"> • Conducive environment for research • Support from the County Governments • Favourable policies supporting Blue Economy • Goodwill from relevant Ministry, Departments and Agencies (MDAs) 	<ul style="list-style-type: none"> • Extension and Outreach programs to be enhanced • Strategic partnerships with County Governments • Increased research and resource mobilization for Blue Economy • Improved working environment and better output
2.	Devolution as provided by the Constitution of Kenya 2010	<ul style="list-style-type: none"> • Opportunities for collaboration and mobilization of resources • Integration of CIDPs in the National Research Agenda • Devolution of aquaculture to counties 	<ul style="list-style-type: none"> • Develop strong engagement plans with county governments through initiatives such as County Integrated Development Plans (CIDPs) • Develop targeted programmes to address County Government priorities • Need to harmonize county and national laws to support Blue Economy development.

			Aquaculture was devolved to counties but now coordination has become difficult
3.	Prioritization of the Blue Economy by the National and County Governments	<ul style="list-style-type: none"> Increased prominence of KMFRI as the driving institute 	<ul style="list-style-type: none"> Take a lead role in planning for the Blue Economy Increase collaborations with other players in the Blue Economy Provision of scientific data and information for policy decisions
4.	Favorable global political agenda for emerging issues such as international disputes under UNCLOS and Piracy	<ul style="list-style-type: none"> Availability of financing from international organizations for relevant global issues of concern Increased awareness and sensitization on emerging global issues 	<ul style="list-style-type: none"> Develop research proposals and collaborations in relevant global issues KMFRI would front itself to contribute to the global issues
5.	Prioritization of climate change at global level	<ul style="list-style-type: none"> Availability of financing for research on climate change from development partners 	<ul style="list-style-type: none"> Develop research proposals on climate change KMFRI would take lead on climate change research to support Blue Economy development
6.	UN Decade where the UN declared 10 years of the science – sustainable ocean	<ul style="list-style-type: none"> Increased support from development partners for Blue Economy research 	<ul style="list-style-type: none"> KMFRI to participate in development of multidisciplinary research proposals
Category			
	Economic	Factors	Description
1.	Projected economic growth from investments in the Blue Economy	<ul style="list-style-type: none"> New opportunities for businesses, training, and research Demand for Blue Economy space and investments 	<ul style="list-style-type: none"> Contribute data and information for the development of Marine Spatial Planning Enhance collaborations and linkages for research to address opportunities and investment in the Blue Economy
2.	Research funding	<ul style="list-style-type: none"> Increased research in the Blue Economy 	<ul style="list-style-type: none"> Increased lobbying for the GOK to support research as a driver of investments in the Blue Economy Partner with strategic collaborators and donors for research funding

			<ul style="list-style-type: none"> • Public Private Partnership (PPP)
3.	<p>Kenya Vision 2030</p> <ul style="list-style-type: none"> • Fourth Medium Term Plan (MTP IV) • Economic revival of the realization of natural resources • Science Technology and Innovations (STI) 	<ul style="list-style-type: none"> • Prioritization of Blue Economy in national development planning • Increased utilization of EEZ resources • Increased aquaculture production • Reduced fish post-harvest losses • Recognition of STI as a key pillar of development 	<ul style="list-style-type: none"> • Allocation of resources for Blue Economy research and development • Acquisition of appropriate technologies to exploit EEZ resources • Public Private Partnership (PPP) • Develop appropriate technologies • Develop resource maps
4.	<p>Integration (East African Community, COMESA, IGAD)</p>	<ul style="list-style-type: none"> • Enhanced opportunities for collaborative research • Opportunities for larger market • Reduced cost for doing business • Free cross boarder movement • Common platforms for doing business 	<ul style="list-style-type: none"> • Integration of research in to EAC protocols • Enhanced sale of value-added products
5.	<p>Bottom-Up Economic Transformation Agenda (BETA)</p>	<ul style="list-style-type: none"> • Food security and economic loss • Improving livelihoods 	<ul style="list-style-type: none"> • Develop innovative technologies to increase fish production and reduce fish post-harvest losses • Formulation of value-added products • Promote alternative livelihoods
6.	<p>Executive Order No. 1 on Reorganization of the Republic of Kenya</p>	<ul style="list-style-type: none"> • Drive sustainable transformation and diversification of the ocean's economy by promoting research and innovation; • Increase local participation and investment in the blue economy through private sector engagement and partnerships; 	<ul style="list-style-type: none"> • Enhancing research and innovation in the Blue Economy Sector • Blue Economy data archiving and dissemination

		<ul style="list-style-type: none"> • Economic development-oriented Fisheries Research. 	
	Category		
	Social	Factors	Description
1.	Indigenous Knowledge	<ul style="list-style-type: none"> • Need for research in indigenous knowledge • Create opportunities to use, develop and improve technologies that are appropriate to the various communities 	<ul style="list-style-type: none"> • Documenting, validating, and protecting the indigenous knowledge and technologies • Provide opportunities to utilize the knowledge of research process. • Liaise with relevant MDAs to safeguard Bio-cultural heritage • Dissemination of information on indigenous knowledge
2.	Diseases	<ul style="list-style-type: none"> • Reduced productivity of human resource • Lost opportunities 	<ul style="list-style-type: none"> • Promote awareness and access to medical care for staff
3.	Cultural Diversity	<ul style="list-style-type: none"> • Tapping of indigenous knowledge to support • management of the Blue Economy resources • Demand of fish food • Affects investment in BE sector 	<ul style="list-style-type: none"> • Value addition to promote fish consumption • Provision of data and information for sensitization on food diversity
4.	Rapid population growth	<ul style="list-style-type: none"> • Demand for research on alternative livelihoods • Reduced employment opportunities • Decline in capture fisheries in artisanal fishers 	<ul style="list-style-type: none"> • Develop Blue economy technologies and programmes that create employment and improve food security • Promote Value-addition to enhance incomes • Provide data and information to contribute to improved fisheries management
5.	Ethnic diversity	<ul style="list-style-type: none"> • Embrace and enhance cohesion and integration at workplace 	<ul style="list-style-type: none"> • Sensitize staff on ethnic harmony • Promote diversity among staff during recruitment • Promote teamwork • Affect the adoption of new technology on BE development

Category			
	Technological	Factors	Description
1.	Digitalization of government services	<ul style="list-style-type: none"> • Better access to online information resources • Improved avenues for information dissemination • Increased capacity for analysis 	<ul style="list-style-type: none"> • Embrace digital superhighway in the automation and online records management (Enterprise Resource Planning (ERP), E-waste Management and mainstream ISMS) • Promote and upscale the use of KMFRI's Electronic Fish Marketing Information Service (EFMIS) • Promote professionalism in all functional lines through continuous Professional Development (CPDs)
2.	Cyber security risk	<ul style="list-style-type: none"> • Potential for plagiarism • Loss of data • Un-authorized access to data/information • Information security risks 	<ul style="list-style-type: none"> • Improve information security system • Training and sensitization on information security • Operationalize the KMFRI ICT Policy • Apply information security standards - firewalls, back-ups
3.	Emerging technologies	<ul style="list-style-type: none"> • Inadequate research infrastructure and facilities 	<ul style="list-style-type: none"> • Upgrade laboratory equipment and train staff • Adoption of the state-of-the-art research procedures plus equipment and application of biotechnology • Collaborate with relevant institutions
Category			
	Environmental	Factors	Description
1.	Climate change and natural calamities	<ul style="list-style-type: none"> • Destruction of experimental areas • Loss of field sensors and equipment • Loss of field sites 	<ul style="list-style-type: none"> • Opportunity for research on climate mitigation and adaptation • Conduct research and disseminate information on Climate Change

			<ul style="list-style-type: none"> • Training and sensitization on climate change • Opportunity for mapping of potential natural calamity hotspots in aquatic systems
2.	Tsunamis and storms	<ul style="list-style-type: none"> • Hinder access to field sites • Loss or damage of equipment • Injuries to staff 	<ul style="list-style-type: none"> • Opportunity to develop scenario models for extreme events • Monitoring climate change induced sea level rise of the Indian Ocean through the Global Sea Level Observing System (GLOSS) • Provide the tsunami early warning through the Indian Ocean Tsunami Warning System (IOTWS)
Category			
	Legal	Factors	Description
1.	The Constitution of Kenya 2010	<ul style="list-style-type: none"> • Changed governance and operational environment including devolution, gender balance, bill of rights, affirmative action, leadership and integrity, and cost of compliance • Public participation has empowered and enlightened the citizenry who are demanding effective service delivery • Increased litigations 	<ul style="list-style-type: none"> • Alignment of KMFRI operations with the Constitution • Inclusion of gender balance and focus on vulnerable and marginalized communities • Avail information to the public in line with requirements of the Constitution • Sensitization on constitutional and statutory requirements • Embrace public participation in research and decision-making • Improve services to reduce litigation • Need to harmonize the county and national legislations to support BE development. Need create awareness at decision making levels • Aquaculture was devolved to the counties but now coordination has become difficult

			<ul style="list-style-type: none"> • Allocation of resources to fisheries and related dwindled.
2.	Science and Technology Act, Cap 250, repealed by the Science, Technology and Innovation Act No. 28 of 2013	<ul style="list-style-type: none"> • Recognition of KMFRI as a national research institution under section 56, fourth schedule 	<ul style="list-style-type: none"> • Review the current legal structures to support the current expanded needs of the Institute
3.	Fisheries Management and Development Act No. 35 of 2016	<ul style="list-style-type: none"> • Provides for consultation between KMFRI and KeFS, KFMA, Fish Levy Trust Fund and other players on matters of research 	<ul style="list-style-type: none"> • To align with the provisions of this Law and collaborate with the relevant Fisheries agencies
4.	International and regional conventions, treaties, and agreements	<ul style="list-style-type: none"> • Obligation to support the Government to comply with these conventions and agreements 	<ul style="list-style-type: none"> • Collate and provide relevant information for compliance

3.1.1.2 Micro-environment

This gives an analysis of the immediate operating environment that affect access to resources which are necessary for the achievement of the strategic objectives. These factors are within the control of the Institute. They include labour markets, trade unions, customer profiles, creditors, suppliers among others. They can be managed through measures like continuous engagement with key stakeholders, capacity building to cope with emerging issues and advancing innovations that are easy to adopt in the sector.

3.1.2 Summary of Opportunities and Threats

Based on the analysis of the external environment, the Institute is aware of various opportunities that it needs to take advantage of and threats that may affect effective implementation of the Strategic Plan.

Table 3.2: Summary of opportunities and threats

Environmental factor	Opportunities	Threats
Political	<ul style="list-style-type: none"> • Stable political environment to attract investments • Recognition of the role of blue economy sector in national development • Strong political and stakeholder good-will • Political cooperation in the management of the shared 	<ul style="list-style-type: none"> • Political uncertainties/change of regimes that brings about change in policies and priorities • Bureaucratic processes by National and County Governments that brings about change in policies and priorities • Weak coordination framework • Inadequate funding

	<p>resources such as conservation, preservation and decision making</p> <ul style="list-style-type: none"> • Strong coordination between the National and county Governments. • Clear government development agenda in various blueprints and strategies • Devolved system of Government 	
Economic	<ul style="list-style-type: none"> • Resilient economy amid considerable risks • Robust mitigation measures against risks/shocks • Robust private sector 	<ul style="list-style-type: none"> • High commodity prices brought by prolonged Russian invasion of Ukraine • Dwindling donor funding • Prolonged drought • Slow global economic recovery. • Illegal unreported and unregulated fishing • Introduction of non-tariff trade barriers
Social	<ul style="list-style-type: none"> • Availability of highly skilled youths • Equal investment opportunities for women, youth and people abled differently in the blue economy sector • Modernization of fish processing and preservation 	<ul style="list-style-type: none"> • High unemployment rate amongst the youth • Social decadence of morals such as (increased drug abuse and prostitution) and hopelessness among others • Unsustainable utilization of blue economy resources • Increased fishing pressure • Social conflict over diminishing resources • Inadequate social amenities e.g access to clean water and healthcare services
Technological	<ul style="list-style-type: none"> • Availability of fast and affordable internet • Availability of credit lines and other forms of financing, i.e. mobile financial transaction apps. • Available infrastructure for further IT development • Readiness to adopt and utilize Artificial Intelligence (AI). • Improving market access through digitization • Advancement in the use of Information Communication Technology (ICT) 	<ul style="list-style-type: none"> • Increased cases of cybercrime • Loss of jobs due to increased automation of processes • Inadequate technological infrastructure to monitor and combat IUU fishing activities • Rapid advancement in technology development • Low adoption of technologies

Environmental	<ul style="list-style-type: none"> • Availability of diverse inland and marine fishery resources • Underexploited Kenya EEZ and Lake Turkana fishery • Increased awareness amongst stakeholders on ecosystem approach to fisheries management and development 	<ul style="list-style-type: none"> • Exploitative and natural-resource based economy degrades fishery resources. • Pollution from anthropogenic sources • Negative impacts of climate change and weather variability • Ineffective implementation of environmental laws and regulations • Natural disasters
Legal	<ul style="list-style-type: none"> • Enabling policy and legal frameworks to govern the blue economy and fisheries sector e.g FMDA, Kenya Fisheries Policy • International and regional conventions such as UNCLOS 	<ul style="list-style-type: none"> • Sections of Fisheries Management and Development Act 2016 invalidated by court of law • Ineffective implementation of laws and regulations. • Non-compliance to the legal framework • Litigation • Overlapping mandates

3.1.3 Internal Environment

The Institute in carrying out the internal environment analysis, the Institute has considered Governance and Administrative structures, Internal business processes, Resources, and capabilities to determine their contribution to its overall performance.



3.1.3.1 Governance and Administrative Structures

The successful implementation of this Strategic Plan hinges on both human, financial and technological capacities of the Institute to undertake the planned activities and achieve set targets and objectives spelt out in the Plan as enlisted below:

1) Board of Management

The Institute is governed by the Board of Management. The Board is the supreme decision-making organ mandated to provide strategic direction to the Institute as well as ensuring availability of adequate resources to implement the organizations objectives.

2) Office of Director General

The management is responsible for the day-to-day operations of the Institute. The Director General provides stewardship to the management team. The office of the Director General is established pursuant to the State Corporations Act Cap 446 and Human Resource Policy Instruments approved by the State Corporations Advisory Committee (SCAC). The office is responsible for day-to-day operations of the Institute, and ensuring achievement of the mandate, objectives and strategies of the institute, formulation of policies, prudent management of resources including financial and human resources. The office also ensures implementation of the Board of Management decisions and enhancing the corporate image of the Institute.

To execute its mandate effectively the Institute is structured from the Office of the Director General into various Directorates as set in the current organogram (Figure 1). These Directorates include the following:

3) Directorates



a) Oceans and Coastal Systems and Blue Economy (OCS & BE) Research

The Directorate of OCS & BE consists of the following five (5) Departments:

- i. Marine and Coastal Fisheries Research
- ii. Oceanography and Hydrography Research
- iii. Research Centres
- iv. Laboratory Services
- v. Maritime Services



b) Freshwater Systems (FWS) Research

The Directorate carries out research in freshwater systems in Kenya's lakes, rivers, and wetlands to generate knowledge for the sustainable management and development of the Blue Economy resources for enhanced socio-economic benefits to Kenyans.

The Directorate of Freshwater Systems research consists of the following five (5) Departments:

- i. Freshwater Fisheries Research
- ii. Limnology Research
- iii. Research Centres
- iv. Laboratory Services
- v. Maritime Services



c) Aquaculture Research

The Directorate carries out research in freshwater and marine aquaculture within six thematic areas:

- (1) Innovative culture production systems and technologies including hatcheries, bio floc technologies, ponds, cages, aquaponics, recirculating aquaculture systems, in-pond raceways, Integrated Multi Trophic Aquaculture (IMTA) systems;
- (2) Fish seed production through novel breeding and genetic techniques for cultured species and aquatic plants e.g. seaweeds.
- (3) Fish feed production and nutrition.
- (4) Fish disease control and biosecurity.
- (5) Fish marketing, post-harvest preservation and value addition technologies.
- (6) Cross-cutting socio-economic issues in aquaculture including aquaculture economics, environmental impact assessment, gender mainstreaming and social inclusion.

The Aquaculture Directorate consists of the following five (5) Departments:

- i. Freshwater Aquaculture Research
- ii. Mariculture Research
- iii. Research Centres
- iv. Aquaculture Laboratories
- v. Maritime Research





d) Socioeconomics Research

The Directorate undertakes socioeconomics research to promote sustainable use of BE resources including marine and freshwater fisheries, aquaculture, and other living and non-living aquatic resources for sustainable development and community empowerment. The Directorate is responsible for socioeconomic assessment and monitoring, economic valuation, benefit sharing and marketing, economic analysis and community development, and conflict resolution to address cross-cutting issues that influence the management of aquatic resources and environment.

The Directorate of Socioeconomics consists of the following three (3) Departments:

- i. Socioeconomic Assessment and Monitoring
- ii. Economic Valuation and Marketing
- iii. Economic Analysis and Community Development



e) Corporate Services

The Directorate is responsible for formulating and coordinating the implementation of sound Financial, Human Resource & Administration, Engineering & Maintenance, Information Science and Corporate Communication policies and strategies for effective management of the Institute resources and enhancement of the Institute image.

The Directorate of Corporate Services comprise of the following Departments:

- i) Finance and Accounting
- ii) Human Resource Management and Administration.

iii) Information Science

iv) Engineering and Maintenance

v) Corporate Communication and Public Relations



f) Strategy, Partnerships, and Resource Mobilization Directorate

The Directorate is responsible for developing strategy and business plan for the Institute, coordinating risk management and quality assurance, monitoring and evaluation of programs and projects, performance management, mobilizing resources and developing partnerships to support the activities of the Institute and ensuring that KMFRI leverages in technology for delivery of efficient and effective services.

The Directorate of Strategy & Planning, Compliance, Partnership Development and Resource Mobilization comprise of the following departments:

- i. Strategy and Planning
- ii. Performance Management, Monitoring and Evaluation
- iii. Information Communication Technology (ICT)
- iv. Partnership Development and Resource Mobilization
- v. Technical Capacity Building
- vi. Quality Assurance and Compliance
- vii. Business Development



The departments of Partnership Development and Resource Mobilization and Technical Capacity Building will be responsible for operationalization of the KMFRI Graduate School. The school shall be headed by the Deputy Director Technical Capacity Building who will be appointed competitively through external advertisement.



g) Corporation Secretary and Directorate of Legal Services

The office is responsible for professionalizing the services of the Board of Management in accordance with the law by giving guidance to the Board on their duties and responsibilities and on matters of governance, coordinating timely preparation and circulation of Board and Committee papers and ensuring that Board Members are aware of all relevant laws affecting the Institute. The office will also be responsible for all the institute legal matters.



h) Internal Audit

The Directorate provides the Institute with independent, objective assurance and consulting services to add value to and improve operations. The Directorate also helps the institute to accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of its risk management, control, and governance processes.



i) Supply Chain Management Department

The Department of Supply Chain Management is to offer advice to the Director - General on matters pertaining to Procurement by developing and guiding the implementation of policies for supply chain management function in line with the Constitution of Kenya 2010, Public Finance Management Act 2012, Public Procurement and Asset Disposal Act No. 33 of 2015 and the Public Procurement and Asset Disposal Regulation of 2020 to support marine and fisheries research activities by proper acquisition of required goods, works and services at the Institute.

3.1.3.2 Internal Business Processes

KMFRI is guided by policies, laws and regulations issued regionally, nationally and internationally. The Institute applies the Government human resource policies and manuals, regulations and guidelines issued by the government while dealing with the Human resource management.

On matters, Financial management, KMFRI is guided by the Public Finance and Management Regulations and Public Procurement and Disposal Act for the matters of procurement in addition to advisory services provided by the Public Procurement Oversight Authority.

The processes and procedures are enhanced through the standardization brought forward by implementing the ISO 9001:2015 Quality Management Systems and ISO/IEC 17025:2017 for standardization of the laboratory processes.



3.1.3.3 Resources and Capabilities

Resources

a) Tangible Resources

The Institute has enhanced its tangible resources through its ongoing modernization of research infrastructure and development of new research centres in different regions of the country. The Institute acquired additional ICT infrastructure including a dedicated internet bandwidth to support research and the digitized services. Investment in ICT has not been adequate due to the high cost of ICT hardware and software.

The Institute has experienced inadequate funding over the years and is fully dependent on the exchequer to fund its operations. Some functional units have inadequate skills compromising service quality. Investment in ICT infrastructure is inadequate to support the full automation and digitization of processes and records, creating inefficiency.

b) Intangible Resources

Efficiency and Automation: Leveraging technology as an intangible asset can significantly improve the efficiency of service delivery. Through digital platforms, online portals, and automation, the Institute is enlarging its scope of coverage and reaching out to more customers.

Brand Equity: The Institute prides itself on a strong equity that is trusted by the public based on implementation of its mandate. As a state corporation established under an Act of parliament, it gives it legitimacy. The re-branding of the new KMFRI logo

in July 2023 brought about some challenges in its visibility. The Institute has embarked on a brand awareness campaign to ensure all its services are known to the public.

Culture: The Institute demonstrates effective decision-making processes, collaborative networks, and an innovative culture. The Institute's culture is undergoing metamorphosis and has experienced the following challenges, but not limited to communication, teamwork, time management, and reward and sanction framework. This has been achieved through the enhanced performance management framework and continuous capacity building and change management forums.

Staff Technical Skills: The Institute has unique technical skills that make it a comparative advantage, enabling it to deliver its mandate. The Institute has continuously conducted employee satisfaction surveys to understand the satisfaction levels, workload, participation in decision making, and remuneration and benefits. The latest staff satisfaction survey findings stand at 71.6% (FY 2022/2023). However, the Institute's staff gap remains high at 32.4% of the approved establishment, with many gaps in the technical staff of grade KMFRI 2-6 due to inadequate funding.

Capabilities

KMFRI's capability to offer its services on an online platform end-to-end makes the services accessible from any location with internet connection. The unique skills in Blue Economy research are valuable in enhancing service delivery, collaboration, and partnership.

3.1.4 Summary of Strengths and Weaknesses

Based on the analysis of the internal environment, a summary of strengths and/or weaknesses are presented in Table 3.3.

Table 3.3: Summary of Strengths and Weaknesses

Factor	Strengths	Weaknesses
Governance and Administrative Structures	<ul style="list-style-type: none"> • Existence of fully constituted board with diverse skills and competence • Existence of Internal policies approved by the board 	<ul style="list-style-type: none"> • Weak staff establishment scheme and succession management structure • Inadequate funding to fully implement the approved staff establishment
Internal Business Processes	<ul style="list-style-type: none"> • Unique mandate to conduct research on Blue Economy resources • Clearly defined research programmes with good research facilities • Automated business process enabling online service delivery 	<ul style="list-style-type: none"> • Inadequate outreach and dissemination of KMFRI research outputs • Fragmented database and information systems • Lack of historical data and information
Resources and Capabilities	<ul style="list-style-type: none"> • Well trained and experienced research and technical staff • Availability of oceanographic research vessel (RV Mtafiti), and RV Uvumbuzi, and other research vessels • Strong network of national, regional and international collaborators and partners • Significant role of KMFRI researchers in developing Kenya's Blue Economy blueprint • Improved work environment 	<ul style="list-style-type: none"> • Insufficient staff to address institutional needs • Low brand visibility • Organizational culture • Inadequate ICT infrastructure and capacity • Ageing laboratory infrastructure

3.1.5 Analysis of Past Performance

The Strategic plan 2018-2022 had five (5) strategic objectives. These strategic objectives addressed four (4) Key Result Areas (KRAs) centred on research and innovation; knowledge management and dissemination; resource mobilization and Institutional capacity building; and collaborations and partnerships. These targets were monitored through defined output indicators.

3.1.5.1 Key Achievements

During implementation of the Strategic Plan of 2018-2022, KMFRI recorded key achievements in specific milestones as follows:

KRA 1: Research and Innovation

For improved management and development of aquatic resources for enhanced wellbeing of the citizenry, all the targeted strategies and activities were implemented.

a) Strategic Objective 1: To conduct innovative research for the Blue Economy

The achievements under the milestone on sustained diversification and commercialisation of aquaculture species included:

- i. Five (5) hatcheries established in Mombasa, Shimoni, Sagana, Sangoro and Kegati.
- ii. Culture studies of high value species (seaweeds, sea cucumber, prawns, mud crabs and ornamental fish) conducted.
- iii. Developed standards for certification of three (3) fish feed standards for tilapia, catfish and trout and one (1) fish seed standard for tilapia.
- iv. National aquaculture suitability mapping undertaken for both cage culture and pond systems.
- v. Provided information and data for stocking and restocking of the Kenyan small water bodies in fifteen (15) counties from western and central regions.
- vi. Undertook research and established conservation of indigenous species through multiplication under aquaculture in catchment area in natural water bodies (Lake Jipe – Tilapia jipe, Lake Baringo – Baringo tilapia (*Oreochromis baringoensis*) and Lake Victoria – Ningu (*Labeo victorinus*), Victoria tilapia (*Oreochromis variabilis*) and Singida tilapia (*Oreochromis esculantus*).
- vii. Seaweed models up-scaled from Kwale County to other coastal counties (Kilifi, Mombasa and Lamu).
- viii. Successful multi trophic aquaculture (MTA) and eco-tourism implemented and replicated in Gazi (Kwale), Kibokoni and Dabaso (Kilifi), and Majaoni (Mombasa) at the Kenyan coast.

- ix. Increased value-added products from seaweeds, fish, and fish by-products (e.g., carrageenan, fish oil, gelatin, fish sausage, skewers, fish pie and pot stickers) and patent applications.
- x. Increased fish production from KMFRI Aquaculture Centres from 1.2 million to 7 million fingerlings.
- xi. Generated documents with information to guide the Aquaculture sector in the country (e.g., State of Aquaculture in Kenya 2021; Fish feeds Standards; Aquaculture tool kit 2020; Good aquaculture practices book; Aquaculture curricula on feeds, hatchery management and general fish farming guides; Guide on current capacity of small water bodies in western and central Kenyan regions; and community-based cage and dam frameworks).

The achievements under the milestone on low cost, effective fish feed formulated and tested included:

- i. Developed and validated three (3) KMFRI standardised fish feed formula for marine and freshwater species.
- ii. Live feeds culture protocols developed and tested for rotifers, artemia, daphnia spp.
- iii. Utilization of Black Soldier Fly Larvae (BSFL) incorporated in fish feed as an alternative low-cost animal protein source in fish feed formulation.
- iv. Use of bio-floc technology established at Sangoro station and tested in Busia aquaparks as a protein source in pond fish farming operations.

The achievements under the milestone on Technologies, Innovations, and Management Practices (TIMPS) developed included:

- i. Climate smart technologies innovations and management practises developed and tested at community level in Busia, Kakamega, Siaya, Kirinyaga, Machakos, Meru, Embu, Tharaka- Nithi, Nakuru, Baringo, Turkana, Kilifi, Kwale and Mombasa (Aquaponics, solar heaters and dryers, modified recirculating aquaculture systems, improved smoking kilns and improved mama karanga boxes).
- ii. Several management practises and innovations developed e.g., Sea water greenhouse in Malindi, constructed wetlands at Shimo la Tewa and automated chlorophyll sonde apparatus in Mfangano (Lake Victoria).
- iii. Innovative software and applications to support conservation and management of aquatic systems developed e.g., Taka-connect App (for plastics monitoring and circular economy).

The achievements under the milestone on sustained fisheries and food security included:

- i. Ten (10) catch assessment surveys conducted to document gear impacts and population dynamics of exploited species.

- ii. Eight (8) cruise surveys for fish stock biomass, biology and ecology, oceanography and limnology, and genetics assessments in marine and freshwater conducted.
- iii. Four (4) technical staff trained on quantitative fisheries and stock assessment methods.
- iv. Thirty-four (34) fish breeding and nursery grounds surveyed and mapped in lakes Victoria, Baringo, Turkana and Naivasha.
- v. Data and information generated for the development of ornamental and recreational, social economic, cultural and religious values, anthropogenic impacts, climate change, geology, fish diseases and fish kills and by product development.

The main achievements under the milestone on developed capacity for artisanal fishers to enhance food security and livelihoods were:

- i. Fishers' representatives trained on sustainable resource utilisation, monitoring and data collection; and
- ii. Eight hundred and eighty (880) fishery crew trained on deep sea fishing practises.

The main achievement under the milestone on fishery Information Systems was:

- i. The establishment of a multi-stakeholder information platform for both captured and cultured fish (electronic fish market information system app – EFMIS App., and the Aquaculture market information system – AQUAMIS App.).



KRA 2: Knowledge Management and Dissemination

The Institute enhanced knowledge management disseminated and uptake of innovation in all the strategies that were set except in the strengthening of KMFRI's corporate image which involved rebranding through the review of her logo and letterhead, which is ongoing.

a) Strategic Objective 2: To transfer knowledge and innovation technologies to communities and stakeholders

The achievements under the milestone on enhanced knowledge management, dissemination, and uptake of innovations included:

- i. Strategic communication and public relations office established for increased KMFRI visibility.
- ii. Established an elaborate knowledge management system (that involves assembling, archiving and management of all new knowledge generated in the institute) and staff involved in it were capacity-built.
- iii. Three (3) demonstration facilities for aquaculture technologies, innovations and management practices established (Busia aquaparks, Dabaso ecotourism, and Gazi mangroves conservations units).
- iv. Information, education and communication (IEC) materials generated: 5 annual tide schedules, videos, brochures, posters, and pamphlets, books and book chapters, and training manuals.
- v. Outreach activities for uptake of technologies undertaken inform of KMFRI open days, Customer feedback fora, World Fisheries Day, World Ocean Day, ASK Shows, Conferences (e.g., Great Lakes of the World-9 and Aquatic Resources and Blue Economy Conference (ARBEC - 2022)), Workshops and seminars.
- vi. One policy each for KMFRI Research and Intellectual Property Rights 2022 reviewed, approved, and actioned.
- vii. Publicly accessible institutional documents repository developed and uploaded on the KMFRI website.

- viii. Ocean/aquatic literacy activities through short term trainings (e.g., toolkits) undertaken.
- ix. Kenya Aquatica journal, blue book, and other related publications published and disseminated.
- x. Two hundred and eighty-seven (287) ISI-indexed journal publications undertaken during the review period.

The main achievements under the milestone on Improved scientific data archiving and dissemination included:

- i. Fisheries Management Information Systems developed that included EFMIS App, AQUAMIS App, and Observer database.
- ii. Databases to inform blue economy investments in fisheries and aquatic resources developed inform of Kenya Moja database, aquaculture input and resources databases incorporating authenticated hatcheries, feed producers, traders among others.

The achievements under the milestone on strengthening KMFRI's corporate image included:

- i. KMFRI's infrastructure and assets rebranded inform of KMFRI letterhead, website, and vibrancy in mainstream and social media.



- ii. Outreach activities conducted to enhance KMFRI visibility and image including two (2) KMFRI open days, annual customer feedback fora, World Fisheries Day, World Ocean Day, and ASK shows.
- iii. Two (2) scientific KMFRI organized and hosted conferences held (Great Lakes of the World – GLOW 9, 2019 and Aquatic Resources and Blue Economy of Conference (ARBEC 2022).
- iv. KMFRI Service Charter reviewed and customized into user friendly formats including braille and sign language interpretations.
- v. Marine and Fisheries aquaria, museum and training centres set up and operationalized in Mombasa and Kisumu Centres.
- vi. Communication policy and knowledge dissemination strategy 2021 developed, approved, and operationalized.

- iii. Technical staff capacity-built by Kenya Industrial Property Institute (KIPI) staff on patentable technologies for Blue Economy, and through the development of Intellectual Property Rights Policy 2022.
- iv. Lobbied Government for increased budgetary allocation to KShs. 1.4 billion.
- v. Increased generation of funds through innovative and competitive proposals from approximately KShs. 60 million to more than KShs. 150 million annually.
- vi. Increased partnerships and collaborations with Public and Private sectors in form of Memorandum of Understanding (Turkana University – December 2020; Kenya Shipyard Limited – February 2022); and collaborative frameworks (IOC-UNESCO – May 2022).
- vii. Increased internally generated revenue through sale of products and services from KShs. 2.7 million to more than KShs. 13 million.

KRA 3: Resource Mobilisation and Institutional Capacity Building

KMFRI targeted to have increased funding and human resource capacity. However, the Institute has not fully translated all the job groups to the current approved Human resource instruments. Additionally, the Institute has had improved service delivery, visibility, and institutional infrastructure.

a) Strategic Objective 3: To Mobilise and Manage Financial and Human Resources

The achievements under the milestone on financial resources mobilisation and management included:

- i. Resource Mobilisation Strategy developed and operationalised through proposal writing and sourcing of funds from donors and development partners.
- ii. Enterprise Resource Programme (ERP) procured and implemented as an integrated financial and human resource management system.

The achievements under the milestone on promoted human resource planning and development included:

- i. A proportion of staff recruited to fill some of the approved staff positions and to strengthen specialities in Blue Economy research: Heads of Directorates (4), Legal Assistant (1), Corporate Communication staff (2), Geologist (1), Chemical Oceanography (1), Marine Biologist (1), Fish Pathologist (1), Procurement Staff (1), Aquaculture Engineering (1).
- ii. Improved staff remuneration under the Salary and Remuneration Commission (SRC) framework that involved approved job evaluation and grading structure.

- iii. Developed and approved the Human Resource (HR) Instruments i.e., human resource policy and procedure manual, career progression guidelines, staff establishment and organogram.
- iv. Progressive implementation of the Human Resource Instruments.
- v. Supported the KMFRI Staff Retirement and Benefits Scheme through remittance of pension deductions and appointment of Sponsor nominated Board Trustees.
- vi. Operationalised the KMFRI Staff Training Committee as guided by the Training Policy 2021.
- vii. Developed and approved the KMFRI Succession Planning Policy 2021

b) Strategic Objective 4: To Strengthen Institutional Structure and Capacity

The key achievements under the milestone on institutional structure and capacity strengthening included:

- i. Achieved partial implementation of the approved organogram: Heads of Directorates (4), Legal Assistant (1), Corporate Communication staff (2), Geologist (1), Chemical Oceanography (1), Marine Biologist (1), Fish Pathologist (1), Procurement Staff (1), and Aquaculture Engineering (1).
- ii. Developed and operationalized evidence-based staff performance appraisal system through the Balanced scorecard (BSC) tool.
- iii. The Institute achieved International Organisation for Standardisation (ISO 9001:2015) certification in 2019.
- iv. Developed and implemented a framework for management of organisation assets and infrastructure through Performance Contracting and quarterly reporting to the National Treasury.
- v. The Institute acquired title deeds for land in Laikipia (Rumuruti), Kisii (Kenya), Sangoro and Shimoni. New research Centers in Shimoni (NAMARET) and Tharaka Nithi (Mutonga) established.
- vii. The Institute acquired additional land for fisheries research in Kisii (Kenya), Busia, Laikipia (Rumuruti), Tharaka Nithi (Mutonga) and Uasin Gishu (Moiben).

- viii. Monitoring and evaluation strategy developed and implemented.
- ix. Acquired five (5) small vessels to support Blue Economy research: Naivasha (1), Baringo (1), Turkana (1) and Mombasa (2).
- x. Acquired state-of-the-art scientific equipment for Mombasa, Kisumu, Naivasha and Baringo, and fifteen (15) vehicles for research.

The main achievements under the milestone on research facilities in existing centres and stations upgrading included:

- i. Upgraded infrastructure in Kisumu, Naivasha, Mombasa and Turkana research centres and stations.
- ii. Undertook repairs and renovations of RV Mtafiti and RV Uvumbuzi to support offshore research.
- iii. Established and operationalised Mombasa Centre molecular and genetics laboratory.
- iv. Upgraded Kisumu Nile perch repository and aquarium to support fisheries ecotourism and education.



KRA 4: Collaboration and Partnerships

KMFRI has made tremendous steps to have increased collaborations and partnerships in research and development. However, her footsteps towards collaboration with county governments is still taking shape.

a) Strategic Objective 5: To promote local and international collaborations and partnerships

The key achievements under the milestone on enhanced collaboration and implementation of frameworks and standards included:

- i. Developed and operationalised shared-access-regime to research infrastructure in collaboration with partners.
- ii. Established and maintained collaborations and partnerships in research and development with partners and county governments.
- iii. Promoted communication with partners through official correspondences, targeted meetings and workshops, conferences, and media platforms (print and electronic).
- iv. Established and operationalised a Research Ethics Committee to vet and approve human related research activities.
- v. Memoranda of Understanding were signed with eight (8) international organizations and four (4) national institutions

3.1.5.2 Challenges

- a) Inadequate staff in some specialities e.g., finance and accounting, gear technology, marine engineering and bio-prospecting;
- b) Inadequate infrastructure for conducting research;
- c) Limited financial resources due to inadequate allocation and unexpected budget cuts which affects the implementation of the planned projects;
- d) Some projects priorities are tailored towards donors' needs and may lack flexibility;
- e) Weak linkages with related development plans at county, national, international levels;
- f) Low uptake of research findings by key stakeholders for cascading to end-users;
- g) High work-load in some department technical knowhow and skills to accomplish tasks with precision;
- h) Increased litigations and court cases;
- i) Natural disasters and calamities (floods that occurred in all major lakes affecting fisheries and research operations and interventions); and
- j) COVID 19 pandemic that hindered smooth flow of fisheries operations including movement restrictions that affected the implementation of research activities and collaborations.

¹ At international level, MoUs were signed with: Shinan County, Jeonnam, South Korea MoU signed on 24/8/2018 (2018/2019); Research Centre for Environmental Economics, Heidelberg University MoU signed 25/1/18 (2017/18); Educators without borders of South Korea signed on 2/11/2018; World Vision Kenya, Homa Bay Area Programme, signed in May 2019; Centre of Ecology and Hydrology (CEH) of UK signed on 25/4/2018; Research Centre for Environmental Economics, Heidelberg university, signed 27/11/2018; Cornell University, USA, signed 31/1/2019; ICIPE signed 4/4/2019. At national level, MoUs signed with Jomo Kenyatta University; Kisii University; Maseno University; Pwani University; and Technical University of Mombasa.

3.1.5.3 Lessons Learnt

- a) Staff management and succession planning needs to be strengthened and managed professionally to fill existing gaps in the establishment;
- b) Need to strengthen and cascade the M&E unit to continuously monitor the implementation of the strategic plan;
- c) Upon completion, the strategic plan needs to be communicated to all staff and key stakeholders to enhance its ownership and implementation;
- d) Continuous lobbying for increased funding; and
- e) The Institute should enhance the diversification of her income to support research and development.

3.2 Stakeholder Analysis

The stakeholders' analysis was undertaken to identify the internal and external stakeholders that KMFRI collaborates or interacts with for the efficient and effective delivery of services. Table 3.4 provides the key stakeholders, their expectations, and their potential contribution as well as KMFRI's expectations in the implementation of this Strategic Plan.

Table 3.4: Stakeholder Analysis

S/No	Stakeholder	Role	Expectations of the Stakeholder	Expectation of KMFRI
1.	Legislative Assemblies: Senate, National and County Assemblies	<ul style="list-style-type: none"> • Legislation and Policy Development • Oversight and Accountability • Budget Approval and Resource Allocation 	<ul style="list-style-type: none"> • Compliance with the Constitution, relevant policies, laws and regulations • Provision of reliable and timely information/ reports required from time to time (responses on parliamentary questions, and financial and non- financial reports) 	<ul style="list-style-type: none"> • Enactment of laws and by-laws • Allocation of research funds • Approval of budgets • Oversight authority
2.	The National Treasury and Economic Planning	<ul style="list-style-type: none"> • Guidance on overall economic policy and public finance management 	<ul style="list-style-type: none"> • Investment information for contribution to GDP and socioeconomic development 	<ul style="list-style-type: none"> • Resource mobilization, adequate and timely funding

S/No	Stakeholder	Role	Expectations of the Stakeholder	Expectation of KMFRI
		<ul style="list-style-type: none"> • Development and enforcement of financial governance standards and oversight • National and sectoral development planning and monitoring of economic trends 	<ul style="list-style-type: none"> • Prudent management of resources 	<ul style="list-style-type: none"> and budget approval • Public Financial Policy Guidelines
3.	Ministry of Mining, Blue Economy and Maritime Affairs	<ul style="list-style-type: none"> • Policy Direction • Resource Mobilization 	<ul style="list-style-type: none"> • High standards of professional ethics by KMFRI staff • Accountability and transparency in provision of services • Compliance to statutory obligations • Provision of quality research information to guide policy decisions 	<ul style="list-style-type: none"> • Support funding requests • Timely communication • Lobby for additional funding on behalf of KMFRI • Clear definition of mandates • Policy formulation
4.	State Department for the Blue Economy and Fisheries	<ul style="list-style-type: none"> • Policy Direction • Resource mobilization 	<ul style="list-style-type: none"> • High standards of professional ethics by KMFRI staff • Accountability and transparency in provision of services • Effectiveness, efficiency and economic use of resources • Provision of data to guide resource management 	<ul style="list-style-type: none"> • Utilization of research findings for resource management • Policy formulation and fisheries management guidelines • Resource management, enforcement and extension services

S/No.	Stakeholder	Role	Expectations of the Stakeholder	Expectation of KMFRI
				Provision of catch and export data <ul style="list-style-type: none"> • Clear information and data requirements
5.	National Commission for Science, Technology, and Innovations (NACOSTI) and National Research Fund (NRF)	Research funding and infrastructural support <ul style="list-style-type: none"> • 	Partnership and collaboration on research matters <ul style="list-style-type: none"> • High quality research output • Demand driven research • Prudent utilization of research funds 	Overall coordination and advisory role in science and technology development <ul style="list-style-type: none"> • Research funding • Facilitation with research permits where necessary
6.	Ministries, Departments and Government Agencies (MDA's)	Policy, project, and programs development and implementation <ul style="list-style-type: none"> • Provide services 	<ul style="list-style-type: none"> • Collaboration in development and implementation of Blue Economy activities. 	<ul style="list-style-type: none"> • Collaboration in program development, resource mobilization and law enforcement
7.	Universities (international and national), tertiary training institutions and basic education units	Training and Skill Development <ul style="list-style-type: none"> • Research and Development • Consultancy Services • 	Joint research <ul style="list-style-type: none"> • Collaboration in curriculum development, • Collaboration in training, research programmes and projects (including student attachment and internships). • Mentorship for basic education units • 	Capacity building in support of Blue Economy <ul style="list-style-type: none"> • Collaboration in program development and implementation • Production of quality graduates • Develop quality and relevant academic programmes and curricula

S/No.	Stakeholder	Role	Expectations of the Stakeholder	Expectation of KMFRI
8.	The State Law Office	<ul style="list-style-type: none"> The Government's principal legal advisor, responsible for representing the national Government in court or any other legal proceedings to which the national Government is a party. Provides policy, coordination, and oversight regarding various legal sector institutions 	<ul style="list-style-type: none"> Compliance with the law and legal issues Provide them with the threats we have Provide them with the relevant Bill 	<ul style="list-style-type: none"> Representation and advice on matters of the law
9.	Law enforcement agencies	<ul style="list-style-type: none"> To investigate and present a variety of crimes and abuses. To maintain law and order 	<ul style="list-style-type: none"> Cooperation and compliance on relevant laws and regulations 	<ul style="list-style-type: none"> Safety and security
10.	County Governments	<ul style="list-style-type: none"> Implementation of devolved functions 	<ul style="list-style-type: none"> Provision of technical support and capacity building Support and co-operation when required on matters relating to the BE and other marine resources Dissemination of research output to the communities 	<ul style="list-style-type: none"> Provision of land for establishment of stations Provision of funds for commissioned research to address specific needs Sharing of county policies, plans and programmes pertaining to utilization of

S/No.	Stakeholder	Role	Expectations of the Stakeholder	Expectation of KMFRI
				aquatic resources Upscale developed <ul style="list-style-type: none"> • research technologies Issuance of permits and <ul style="list-style-type: none"> • other relevant documents
11.	Development partners and financial institutions	Provision of financial and infrastructural support <ul style="list-style-type: none"> • Technical assistance and training 	Prudent management of funds and other resources <ul style="list-style-type: none"> • Transparency and accountability • Timely provision of required products, information and reports Generation of data and information to support informed management of BE resources <ul style="list-style-type: none"> • 	Technical support, capacity development, funding of research projects <ul style="list-style-type: none"> • Cooperation in research in Blue Economy sectors • Regional research • coordination • Resource mobilization • International lobbying • Data and Information exchange
12.	Local and international Non-Governmental Organizations	Policy advocacy <ul style="list-style-type: none"> • Development and implementation of projects and programs 	Support the implementation of <ul style="list-style-type: none"> • Regional and International Organizations initiatives 	Mobilization of resources <ul style="list-style-type: none"> • Community mobilization and sensitization • Up-scaling technologies • Advocacy, networking, and lobbying

S/No.	Stakeholder	Role	Expectations of the Stakeholder	Expectation of KMFRI
13.	Community-based organizations (CBOs), Fisheries organizations, Beach Management Units (BMUs)	<ul style="list-style-type: none"> • Implementation of projects and programs • Policy advocacy 	<ul style="list-style-type: none"> • Technical and logistical support • Efficiency in delivery of services • High standards of professional ethics • Accountability and Transparency in provision of services 	<ul style="list-style-type: none"> • Resource management • Community empowerment • Awareness creation • Capacity building • Resource mobilization • Advocacy, networking and lobbying • Partnership in research • Marketing groups • Transfer of indigenous knowledge • Technology adoption • Goodwill • Compliance with management regulations • Information and data sharing
14.	Private sector such as fish processors, feed companies, traders	<ul style="list-style-type: none"> • Advocacy and Public Policy Engagement • Stakeholder Representation • Capacity Building and Awareness creation • Research and Knowledge Sharing 	<ul style="list-style-type: none"> • Provide research output that will address their challenges • Technical support • High standards of professional ethics • Accountability and Transparency in provision of services • Spur growth of blue economy cottage industry 	<ul style="list-style-type: none"> • Partnership in research • Funding of research, • Adoption of technologies • Compliance with fisheries and other relevant quality assurance regulations

S/No.	Stakeholder	Role	Expectations of the Stakeholder	Expectation of KMFRI
15.	Regulatory bodies: KeFS, KEBS, KRA, NACOSTI, RBA	<ul style="list-style-type: none"> Enforce compliance of policies and regulations 	<ul style="list-style-type: none"> Collaboration in setting standards and compliance with the set standards 	<ul style="list-style-type: none"> Setting standards Utilization of research data Provision of advisory and regulatory services Enforcement of relevant laws and regulations
16.	Media platforms i.e., Internet Service Providers (ISPs), Media Houses, printing firms	<ul style="list-style-type: none"> Provide Feedback and Opinions. Disseminate Information Influence Public Opinions and Create Public Awareness 	<ul style="list-style-type: none"> Receive timely information Access facts/information Provide relevant info on BE 	<ul style="list-style-type: none"> Information Technology (IT) services Packaging and timely dissemination of information Awareness creation Effective coverage and accurate reporting on KMFRI's activities
17.	Maritime Agencies, KPA, KMA, Bandari College, KPA, Kenya Coast Guard Service	<ul style="list-style-type: none"> Promote the Blue Economy Sector in Kenya 	<ul style="list-style-type: none"> Compliance with maritime regulations Collaboration/Guidance on environmental issues Provision of reliable and timely information/ reports required from time to time for development of Blue Economy 	<ul style="list-style-type: none"> Provision of maritime standards Capacity building

S/No.	Stakeholder	Role	Expectations of the Stakeholder	Expectation of KMFRI
18.	Office of the Auditor General	<ul style="list-style-type: none"> • Audit and report on the use and management of public resources 	<ul style="list-style-type: none"> • Compliance with financial and audit regulations • Provision of reliable and timely information 	<ul style="list-style-type: none"> • Provision of audit guidelines • Conducting regular audits and issuance of opinions and certificates
19.	Labour relations stakeholders	<ul style="list-style-type: none"> • Presents the ethical or moral perspective of industrial relations 	<ul style="list-style-type: none"> • Support employee welfare • Meet employer obligations 	<ul style="list-style-type: none"> • High productivity of staff • Mediation for conflict resolution
20.	Employees	<ul style="list-style-type: none"> • Execution of KMFRI Mandate • Service delivery to customers 	<ul style="list-style-type: none"> • Provision of tools for trade • Conducive work environment • Favorable terms and conditions of service 	<ul style="list-style-type: none"> • Commitment to service delivery • Observance of work ethics

This chapter entails the strategic issues, strategic goals and key result areas (KRAs) derived from the situational and stakeholders' analyses.

4.1 Strategic Issues

Strategic issues herein below indicate fundamental policy choices, critical challenges/gaps or opportunities that must be addressed or toppled for KMFRI to achieve its vision and mission.

a) Investment in the Blue Economy:

The Kenyan Blue Economy Strategy provide an increasing opportunity for demand driven research for investment and sustainable socioeconomic development. This gives room for an emerging gap towards generation of data and information to support blue economy initiatives and investments in data paucity sectors such as marine energy provision (wind and water currents energy, oil and gas), mineralogy, hydrocarbons, bioprospecting, and ecotourism, among others.

Unexplored resources in Kenyan Exclusive Economic Zone (EEZ) and underutilization of small water bodies will provide a research platform for generation of data and information to boost policy decisions and productivity for increased contribution of the Blue Economy to GDP from wind and water currents energy, oil and gas, minerals, fisheries, and offshore tourism.

Kenya is at the forefront on championing BE agenda. This begun with the first Global Blue Economy Conference held in Nairobi in November 2018. This has enabled the need for data and information on BE to be prioritized, which anchors KMFRI as a BE research hub.

b) Responsiveness to the changing environment:

KMFRI has highly skilled staff up to the postgraduate level that can be taped to improve BE literacy and awareness through Institutionalization of training and a Graduate School to enhance and provide shared platforms for emerging scientists, scholars, young graduates and the community in order to boost their potential and efficiency.

Its technical staff are involved in strategic and global institutions as ocean science advisors, editors in reputable international journals, leadership in professional scientific institutions such as the Ocean Decade Advisory Group, the Ecosystem Restoration Task Force, the African Ocean Decade Task Force and WIOMSA, among others.

This involvement continues to give KMFRI deliberate strategic, transformational importance and visibility in the global arena during the formulation of BE policies.

KMFRI will link research to practice and industry by providing evidence-based solutions for sustainable BE development. This is achieved through various research platforms such as RV Mtafiti and RV Uvumbuzi and other notable infrastructure such as the National Mariculture Research and Training Centre (NAMARET) in Shimoni, and KMFRI research laboratories.

As the authority in the Blue Economy research, KMFRI shall continue to mobilize resources to improve capacity to address the changing demands in the Blue Economy space.

c) Dynamic customer needs and stakeholder expectations:

The expanded functions of the Institute is to provide information and data on Blue Economy investments and initiatives requires a legislation framework to anchor KMFRI's mandate in the Sector through her own Act that will clearly spell out her role, functionalities, and capacities in the coordination and management of research. KMFRI is strategically placed to provide the science, data, and information to support Blue Economy interventions under the United Nations Decade of Ocean Science for Sustainable Development (2021-2030) through continuous collaboration and partnership with other stakeholders. This has propelled the institute to the national and global decision-making fora to add value to Blue Economy policies at the apex of sustainable development.

4.2 Strategic Goals

The strategic goals are the actual desired outcomes that will be realised in addressing the strategic issues identified in table 4.

4.3 Key Result Areas

- i. Research and Innovation: KMFRI supports basic and applied innovative research for improved management and development of sustainable Blue Economy and fisheries. The outputs of research are geared towards enhancing food production, livelihood support, and provide information for policy development to drive sustainable transformation and diversification of the Blue Economy.
- ii. Knowledge Management and Dissemination: There is an increasing need for data and information for the different facets of the Blue Economy. Transfer of knowledge and information is the backbone for key decision-making to support policy development and uptake of research, innovation, and development.
- iii. Resource mobilization and institutional capacity building: Funding and human resource capacity are critical facets of our operations as they ensure the achievement of our mandate.
- iv. Collaboration and Partnerships: KMFRI will continue to build on the existing expertise through national, regional, and international strategic collaborations to promote economic development.
- v. Community and Private Sector Engagement: KMFRI is committed to co-designing research and innovations and increasing the participation of women and youth, local communities and the private sector in sustainable Blue Economy.

Table 4: Strategic Issues, Goals and KRA

Strategic Issue	Goal	KRAs
Investment in the Blue Economy	Promote Blue Economy Research	Research and Innovation
	Optimize value of data through knowledge management and dissemination	Knowledge Management and Dissemination
Responsiveness to the changing environment	Enhance institutional capacity	Resource mobilization and Institutional Capacity building
Dynamic customer needs and stakeholder expectations	Enhance service delivery through collaborations and partnerships	Collaboration and Partnerships
		Community and Private Sector Engagement

This chapter outlines the strategic objectives and strategies, which are based on strategic goals and Key Result Areas (KRAs), and the Institute’s aspirations over the medium term (2023-2027). Strategic objectives were formulated based on the strategic issues identified in Chapter 4 for each KRA as well as strategies that will be pursued for the attainment and realization of the Vision and Mission of the Institute.

5.1 Strategic Objectives

The strategic objectives of the Institute are listed below and their 5 year projections set out in table 5.1:

-  To promote research and innovation to drive transformation of Blue Economy (BE) towards sustainable development;
-  To transfer knowledge and information to support policy development and uptake of research findings and innovations;
-  To mobilize and manage human and financial resources to strengthen institutional capacity;
-  To strengthen national, regional, and international collaboration and partnerships; and
-  To strengthen community participation and integration of indigenous knowledge in research development.

Table 5.1: Outcomes Annual Projections

KRA 1: Research and Innovation							
Strategic Objective	Outcome	Outcome indicator	Projections				
			Year 1	Year 2	Year 3	Year 4	Year 5
SO1: To promote research and innovation to drive transformation of Blue Economy towards sustainable development	Improved management and development of aquatic resources for enhanced wellbeing	Management tools (management plans including co-management plans) ³	1	1	1	1	1
		Number of new technologies adopted ⁴	3	3	4	5	6
KRA 2: Knowledge management and dissemination							
SO2: To transfer knowledge and information to support policy development and	Enhanced knowledge management, dissemination, and	Knowledge and data management system with publicly accessible institutional	1	1	1	1	1

³ Prawn fishery management plan; Naivasha management plan; Lake Victoria management plan; and Lake Turkana management plan

⁴ Pond farming; Fin fish; Cage farming; Crab farming; Seaweed farming; Feed production; Seed production technology; Integrated Multitrophic Aquaculture Technology (IMTA); Post-harvest technologies; Solar drying; Improved smoking; Mama karanga box

uptake of research findings and innovations	uptake of innovations	document repository ⁵					
		Number of dissemination and feedback activities realized ⁶	2	2	2	2	2
		Number of Research Publications	41	43	45	47	49
KRA 3: Resource mobilization and institutional capacity building							
SO3: To mobilize and manage human and financial resources to strengthen institutional capacity	Increased funding, human resource, and infrastructural capacity	Level of funding from GoK	Kshs. 1.578b	Kshs. 1.541b	Kshs. 1.674b	Kshs. 1.811b	Kshs.2.09b
		Level of funding from development partners	Kshs. 250m	Kshs. 260m	Kshs. 280m	Kshs. 300m	Kshs. 350m
		Number of qualified staff engaged	554	580	610	640	700
		Number of upgraded research infrastructure in KMFRI Centres and Stations	2	2	2	2	2
KRA 4: Collaboration and Partnerships							
SO4: To strengthen national, regional and international collaboration and partnerships	Increased collaborations and partnerships in in research and development	Number of collaborations and partnerships in research and development	6	7	8	9	10
KRA 5: Community and Private Sector Engagement							
SO5: To strengthen community participation and integration of indigenous knowledge in research development	Enhanced local participation and investment in the Blue Economy	Number of communities that have taken up blue economy research innovations and technical advice	3	4	4	5	5

⁵ KMFRI Metadata system

⁶ Baseline-number of dissemination and feedback during the last strategic plan period; Level of funding baseline; Funding from GOK and development partners; Number of communities that have taken up aquaculture, post-harvest, fish market information, environmental management information and conservation technology; Number of investments in blue economy baseline in number of investments in fish value chain, aquaculture investment.

5.2 Strategic Choices

The Institute made choices of the Key Results Areas (KRAs), strategic objectives and strategies that she will deliver the 2023-2027 strategic plan as outlined in Table 5.2.

Table 5.2: Strategic Objectives and Strategies

Key Result Areas	Strategic Objectives	Strategies
Research and Innovation	i. To promote research and innovation to drive transformation of Blue Economy towards sustainable development.	<ul style="list-style-type: none"> i. Adoption of innovative technologies for Blue Economy development ii. Fisheries and value addition research iii. Sustainable diversification of culture species and systems, and cost-effective fish feeds for commercialization of aquaculture iv. Oceanographic and limnological research for blue growth v. Socio-economic assessments and economic valuation to inform management of aquatic resources and development of blue economy
Knowledge Management and Dissemination:	ii. To transfer knowledge and information to support policy development and uptake of research findings and innovations.	<ul style="list-style-type: none"> i. Strengthen research data management. ii. Improve corporate branding. iii. Strengthen research communication.
Resource mobilization and institutional capacity building	iii. To mobilize and manage human and financial resources to strengthen institutional capacity.	<ul style="list-style-type: none"> i. Deepen Blue Economy research ecosystem. ii. Enhance Human and Institutional capacity. iii. Map out capacity needs for targeted stakeholders. iv. Establish policy framework for capacity building programmes. v. Strengthen human resource planning.

Key Result Areas	Strategic Objectives	Strategies
		<ul style="list-style-type: none"> vi. Enhance operational efficiency. vii. Strengthen monitoring, reporting and evaluations.
Collaboration and Partnerships	<ul style="list-style-type: none"> iv. To strengthen national, regional and international collaboration and partnerships. 	<ul style="list-style-type: none"> i. Strengthen and sustain partnerships. ii. Deepen capacity development partnerships with National and County Government. iii. Establish a KMFRI mentorship programme.
Community and Private Sector Engagement	<ul style="list-style-type: none"> v. To strengthen community participation and integration of indigenous knowledge in research development. 	<ul style="list-style-type: none"> i. Enhance stakeholder involvement. ii. Foster partnerships and collaborations.



This Chapter highlights how the strategic plan will be implemented. Implementation will involve the operationalization of the implementation plan, action plan, annual work plans and budgeting and performance contracting. It also highlights the coordination framework, institutional framework, staff establishment, skills set and competence development, systems and procedures and Risk management framework.

6.1 Implementation Plan

This describes how the Strategic Plan will be operationalized. This will be through the development of an elaborate action plan. The action plan gives the strategic objectives of each Key Result Area with well-defined Annual Targets, Annual Budgets and Responsibility for execution of those activities. The concept of Performance Contracting will also be deployed in operationalizing of the Strategic Plan.

6.1.1 Action Plan

The action plan is represented as an implementation matrix that contains the strategic issues, strategic goals, key result areas, outcomes, strategic objectives, strategies, key activities, expected outputs, output indicators, annual targets, annual budgets and responsibility for execution of the activities. The implementation matrix is presented as Annex 2.

6.1.2 Annual Work Plan and Budget

The Annual Work Plans will be extracted from the Action Plan. Activity-based costing will be adopted in the development of the Annual Budgets. The Institute will develop Annual Workplan for each Financial Year of Implementation Matrix of the Strategic Plan period. This will further be cascaded to departmental and individual workplans. The Workplans will be costed based on corresponding activities and available budget - See Annex 3: costed annual work plan.

6.1.3 Performance Contracting

The Institute will operationalize the strategic plan through the performance contracting initiative in line with guidelines issued by the Government. Focus will be on ensuring continuous improvement in service delivery and accountability for results.

The Institute will develop Performance Contract for each Financial Year of the Plan period as a key accountability tool to ensure efficient service delivery.

6.2 Coordination Framework

This section covers the institutional framework, staff establishment, skills set and competence development, leadership, and systems and procedures.

6.2.1 Institutional Framework

The Institute has an existing organizational structure, policies, laws and regulations that support the implementation of the strategic initiatives. Effective coordination of the implementation of this plan requires implementation of the structures, rules and regulations during the plan period.

For effective and efficient delivery of the plan, KMFRI organization structure is as provided below in figure 1.

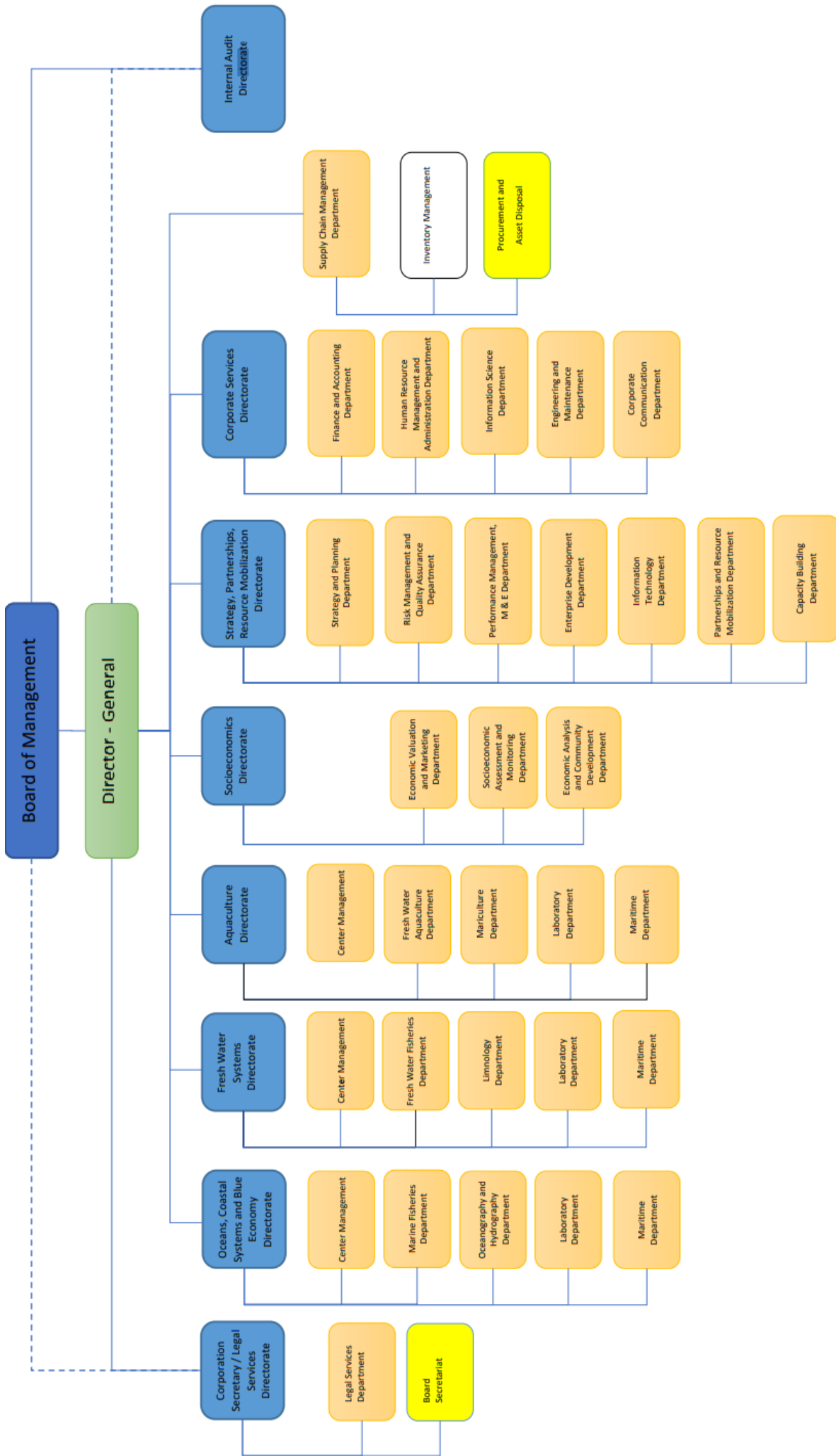


Figure 1: KMFRI Organizational Structure

6.2.2 Staff Establishment, Skills Set and Competence Development.

The existing staffing levels, skills set and competences and the optimal staff levels, relevance and appropriateness of the skills and competences required to support for effective and efficient implementation of the strategic plan. The proposed KMFRI staffing levels, skills set, and competence development are as provided in Annex 1 and Table 6.1 respectively.

Staff Establishment

Authorised and In-Post Establishment

The Institute's staff establishment is as set out in Annex 1. The current in-post establishment is 554 against a staff establishment of 820 due to natural attrition and retirement and for which the Institute will undertake recruitment of staff who have exited in accordance with the authorized establishment to support implementation of this plan.

Human Resource Development Strategies

KMFRI will continue to invest in development of her human resource through:

- i. Implementation of the Institute Human Resource Master Plan;
- ii. Implementation of the Institute Human Resource Policy Instruments;
- iii. Recruitment and retention of talented staff;
- iv. Offering competitive remuneration and benefits;
- v. Training and capacity building;
- vi. Recognition of innovation and creativity;
- vii. Implementation of effective Staff Performance Appraisal System;
- viii. Providing a conducive working environment;
- ix. Providing a platform for apprenticeship to develop the national capacity in the Blue Economy Sector, through platforms such as KMFRI Graduate school, Internal Research Grants (IRGs); and
- x. Providing mentorship and coaching programmes.

Table 6.1: Skills Set and Competence Development

Job Level	Skills Set	Skills Gap	Competence Development Plan
Senior Management	<ul style="list-style-type: none"> ✓ Conceptual skills ✓ Strategic Leadership ✓ Strategic Planning ✓ Management skills ✓ Decision-Making ✓ Change Management ✓ Stakeholder Management ✓ Financial management ✓ Problem solving skills ✓ Negotiation skills ✓ People management skills 	<ul style="list-style-type: none"> ✓ Ability to mobilize resources. ✓ Strategic planning skills ✓ Stakeholder management ✓ Conceptual skills ✓ Ability to delegate ✓ Performance management 	<ul style="list-style-type: none"> ✓ Training ✓ Mentorship

Job Level	Skills Set	Skills Gap	Competence Development Plan
		✓ Corporate Governance	
Middle Management	<ul style="list-style-type: none"> ✓ Management skills ✓ Project Management ✓ Problem-Solving ✓ Performance Management ✓ Project management skills ✓ Communication skills ✓ Conflict resolution skills ✓ Analytical skills ✓ Risk management skills ✓ People management skills 	<ul style="list-style-type: none"> ✓ Management skills ✓ Strategic planning ✓ Change management. ✓ Risk management skills ✓ People management skills 	<ul style="list-style-type: none"> ✓ Training ✓ Coaching ✓ Mentorship
Operation Level	<ul style="list-style-type: none"> ✓ Supervisory skills ✓ Technical Expertise ✓ Problem Diagnosis and Resolution ✓ Innovation and Creativity ✓ Collaboration ✓ Risk management skills ✓ Report writing skills ✓ Communication skills ✓ Administrative Efficiency ✓ Customer Service ✓ Resource Management ✓ Interpersonal skills 	<ul style="list-style-type: none"> ✓ Supervisory skills ✓ Ability to collaborate with other functional areas. ✓ Interpersonal skills ✓ Communication skills ✓ Resources management ✓ Risk management skills ✓ Report writing skills 	<ul style="list-style-type: none"> ✓ Recruitment ✓ Training ✓ Mentorship ✓ Coaching

6.2.3 Leadership

Execution of the strategic plan will be managed through strategic theme teams identified based on skills required to execute planned activities as outlined. The strategic theme teams will be aligned to the strategic issues for purposes of responsibility and accountability in leading and coordinating the execution of strategic activities relevant to the Key Result Areas (KRAs). The strategic theme teams are presented in Table 6.2.

Table 6.2: Strategic Theme Teams and Terms of Reference

Strategic Issue	Key Result Area	Strategic Theme Team	
		Lead	Support
Investment in the Blue Economy	Research and Innovation	Director Research	Director Corporate Services
	Knowledge Management and Dissemination	Director Research	Director Corporate Services
Responsiveness to the changing environment	Resource mobilization and Institutional Capacity building	Director Corporate Services	Director Research
Dynamic customer needs and stakeholder expectations	Collaboration and Partnerships	Director Research	Director Corporate Services & Corporation Secretary & Director Legal Services
	Community and Private Sector Engagement	Director Research	Director Corporate Services & Corporation Secretary & Director Legal Services

To ensure effective and focused functioning, the strategic theme teams will be guided by the following terms of reference, which are in the form of questions to which the teams will be expected to address themselves in executing their mandate.

- a) Are strategies and objectives being achieved or not? If they are, then acknowledge, reward and communicate the progress. If not, then consider other issues.
- b) Are the objectives being achieved according to the timelines specified in the plan? If not, then why?
- c) Should the deadlines for completion be changed? (Be careful about making these changes -- know why efforts are behind schedule before times are changed)
- d) Do personnel have adequate resources (money, equipment, facilities, training, etc.) and technical skills to achieve the objectives?
- e) Are the strategies and objectives still realistic?
- f) Should priorities be changed to put more focus on achieving the objectives?
- g) What can be learned from monitoring in order to improve future planning activities and also to improve future monitoring efforts?

6.2.4 Systems and Procedures

The Institute has established and connected her quality objectives at relevant Departments and processes. These quality objectives are measurable and consistent with the quality policy and the strategic direction of the Institute. In particular, the Institute has connected her quality objectives to processes for research, annual budget, procurement, and risk planning and management.

The integration also applies to processes for Strategic Planning, Performance Contracting and Performance Evaluation and management.

This cross-referencing demonstrates a key requirement of Quality Management Systems (QMS) which is to ensure its integration into the organization’s business processes. In this roadmap, QMS targets to consider applicable requirements, and Key Performance Indicators (KPIs) are captured in the implementation matrix. The Institute maintains documented information on the set QMS quality objectives. The corporate and departmental quality objectives are reviewed annually.

The Institute has been certified to ISO 9001: 2015 and all departmental processes are aligned to quality and risk management guidelines of the international standards that will be required to be decentralized. Plans are underway to accredit the KMFRI Mombasa laboratories to ISO/IEC 17025:2017 and Kisumu, Sagana, Sangoro and Kegati Centres to ISO 9001:2015 Quality Management Systems during the implementation period.

6.3 Risk Management Framework

KMFRI’s Risk Management Strategy (RMS) provides a structured and coherent approach for the identification, assessment, and management of unforeseen threats identified in the SWOT analysis. KMFRI shall employ the RMS to mitigate risks associated with the implementation of this plan as indicated in Table 6.3.

Table 6.3: Risk Management Framework

S/No.	Risk	Risk Likelihood (L/M/H)	Severity (L/M/H)	Overall Risk Level (L/M/H)	Mitigation Measure(s)
1.	Poor visibility	M	M	M	Enhancement of institute visibility activities Branding
2.	Inefficient Corporate structure	M	M	M	Fully operationalize the corporate structure
3.	Poor succession management	H	H	H	Succession Management Policy Replacement of existing staff Human Resource Plan Develop mentorship programs for leadership roles
4.	Staff capacity risk	H	H	H	Targeted training Mentorship and coaching

S/No.	Risk	Risk Likelihood (L/M/H)	Severity (L/M/H)	Overall Risk Level (L/M/H)	Mitigation Measure(s)
5.	High staff turnover which reduce the technical capacity	H	H	H	Competitive remuneration Structured motivation Good working environment
6.	Frequent placements of the fisheries sector to different ministries	L	L	L	Creation of Ministry of Fisheries and Blue Economy
7.	Industrial unrest	M	M	M	Grievances redress and disciplinary mechanism Building capacity for alternative dispute resolution Signing of a collective bargain agreement
8.	Limited and outdated research infrastructure	M	M	M	Upgrade research infrastructure
9.	Lack of ownership documents for Institute land	H	H	H	Engage relevant ministries to secure the Institute's land ownership documents
10.	Loss of mandate to other institutions e.g. Universities	M	M	M	Seek legal interpretation from Attorney General Office
11.	Poor Work environment and risky environment	H	H	H	Contingency Planning for Safety Accident Insurance
12.	Plagiarism and copyright infringement	H	H	H	Copyright and patenting
13.	Fake research calls	H	H	H	Conduct frequent reviews of grant opportunities and donor requirements
14.	Publication in predatory journals	H	H	H	Publish in ISI Index journal Awareness creation Capacity building in publications
15.	Misappropriation of funds	L	L	L	Implementation of ERP

S/No.	Risk	Risk Likelihood (L/M/H)	Severity (L/M/H)	Overall Risk Level (L/M/H)	Mitigation Measure(s)
					Tight internal control Capacity building officers Fidelity Insurance
16.	Debts/unpaid bills	L	L	L	Scheduling procurements to match the cash flows
17.	Cyber security	H	H	H	Firewall Antivirus Back up of information
18.	System Failure	M	M	M	Contingency Planning Back up of information Scheduled maintenance
19.	Lack of public support on adoption of research findings in line with emerging development	L	L	L	Developing programmes that are in sync with emerging issues
20.	Low economic growth	L	M	M	Seek for more grants from regional and international partners Institute austerity measures

RESOURCE REQUIREMENTS AND MOBILIZATION STRATEGIES

This chapter gives a summary of the financial resource requirements for implementing the activities earmarked in the Strategic Plan 2023-2027, Resource gaps, Resource Mobilization and Resource Management strategies.

7.1 Financial Requirements

To implement the Strategic Plan and KRAs highlighted there in, the financial resources required by the Institute is estimated to be Kshs. 42,233 million. A summary of the resource requirements for the FYs 2023/2024 - 2027/2028 is provided in Table 7.1.

Table 7.1: Financial Requirements for Implementing the Strategic Plan

Cost Item	Projected Resource Requirements (KShs. Million)					
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
KRA 1	1,865	2,475	2,417	2,654	2,572	11,983
KRA 2	362	555	713	332	346	2,308
KRA 3	1,948	3,038	4,143	7,429	8,386	24,944
KRA 4	52	69	80	93	103	397
KRA 5	53	119	236	89	93	590
Administrative Cost	214	313	379	530	575	2,011
Total	4,494	6,569	7,968	11,127	12,075	42,233

Resource Gap

Table 7.2 sets out a summary of the variance between resource requirement and estimated resource allocation over the five-year period.

Table 7.2: Resource Gap

Financial Year	Estimated Financial Requirements (Kshs. Mn)	Estimated Allocation (Kshs. Mn)	Variance (Kshs. Mn)
Year 1	4,494	1,578	2,916
Year 2	6,569	1,541	5,028
Year 3	7,968	1,674	6,294

Financial Year	Estimated Financial Requirements (Kshs. Mn)	Estimated Allocation (Kshs. Mn)	Variance (Kshs. Mn)
Year 4	11,127	1,811	9,316
Year 5	12,075	2,090	9,985
Total	42,233	8,694	33,539

7.2 Resource Mobilization Strategies

The Institute's main source of funding is the Government through the exchequer. Strategies have also been put in place to mobilize funding from development partners. This involves:

- i. Leveraging the Institute's strategic advantage with world-renowned research scientists and well-developed infrastructure to secure research grants and collaboration agreements;
- ii. Accreditation of the Institute's well equipped Laboratories;
- iii. Formulation and development of project proposals for funding;
- iv. Investments in high quality training of its human resource in order to attract funding and manage resources effectively;
- v. Promotion of technical and consultancy services;
- vi. Focusing on market driven research to attract private sector support;
- vii. Lobbying for increased resource mobilization to support research and KMFRI's publicity;
- viii. Enhancement of the production units e.g., Conference Facilities, fish hatcheries; and
- ix. Commercialization of the research innovations and outputs through the Enterprise Development Services and Private Partnerships.

7.3 Resource Management

The Institute will endeavour to allocate resources to achieve the best organizational value. The overall expenditure incurred shall be within the approved budget, statutes and guidelines issued by The National Treasury and Economic Planning and other government Ministries Departments and Agencies.

To ensure optimum resource management, the Institute will deploy its financial resource in conformity with the Public Finance Management Act, 2012, Public Procurement and Assets Disposal Act, 2015 and the Approved KMFRI Finance Manual. The Institute will also enhance cost control measures to ensure efficient utilization of allocated resources while eliminating wastage.

This chapter details how KMFRI will monitor, evaluate, and report on the implementation of the Strategic Plan. Successful implementation of the plan requires sourcing and deploying the requisite resources and putting in place an adequate monitoring, evaluation, and reporting framework among others.

8.1 Monitoring Framework

The monitoring framework will involve preparation and implementation of annual performance contracts for KMFRI with annual work plans and budgets based on and justified by this Plan. The work plans will be linked to the Key Results Areas (KRAs) and expected output/targets as well as indicators as elaborated in the Implementation Matrix in Annex 2 which will also form the Monitoring and Evaluation Plan. Monitoring will involve regular and systematic collection of data on specified indicators and analysis to track progress and achievement of the strategic plan objectives.

To ensure effective data collection, information sources will be identified and selected in advance, and data collection tool and procedure developed. Field visits will be conducted, and the results will be reported periodically through regular meetings with stakeholders. Outputs in the implementation matrix will be tracked on a regular basis. Towards tracking progress in the implementation of this strategic plan,

- i. Key performance indicators that have been objectively determined in the implementation matrix for tracking the outputs and outcomes will be used;
- ii. Baseline data on indicators to be monitored will be established; and
- iii. Plan for continuous improvement on the targeted results for efficiency and effectiveness will be adopted.

Monitoring the implementation of the plan will be tied to the key activities and output indicators based on the expected output in the implementation matrix on a continuous basis, through quarterly information and data collection and analysis. This will be towards ensuring the plan is implemented as scheduled and if there are any deviations, appropriate and timely actions are taken. The M&E system for KMFRI over the plan period will be guided by the Monitoring and Evaluation Policy and reporting flow chart is as set out in figure 2.

The targets will be transferred into KMFRI's Annual Work Plans, Performance Contracts and Staff Performance Appraisal System (Balanced Score Card) where relevant. The information collected through the reports will be used to establish the status towards the completion of planned activities against the set timelines and planned target outputs, and compliance with the set policies, procedures, and standards.

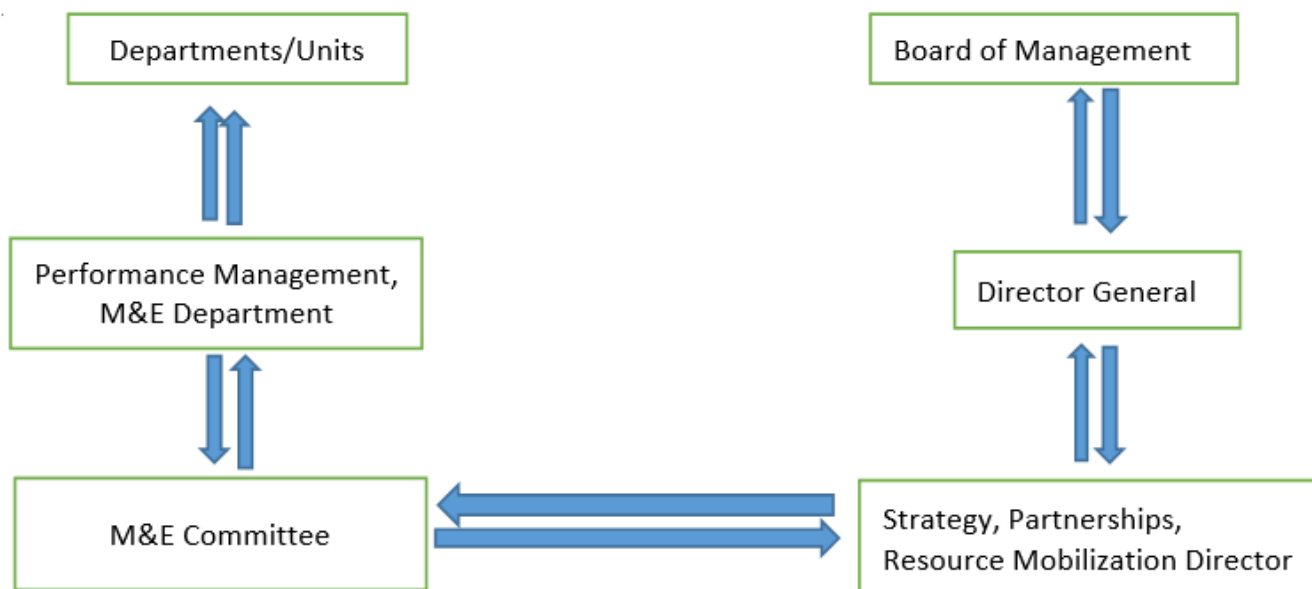


Figure 2: Monitoring and Evaluation Flow Chart

8.2 Performance Standards

The monitoring and evaluation system is based on internationally accepted norms and standards including relevance, efficiency, effectiveness, success, and sustainability. The standards for tracking performance for the strategic plan will include defining the Key Performance Indicators identified at outcome, output, and efficiency level. The Strategic Theme Teams, through the coordination of the Director General at KMFRI will be responsible for data collection for the respective KRAs.

8.3 Evaluation Framework

Evaluation of the Strategic Plan will be undertaken at least mid-term and end-term to test its feasibility and likelihood of its ability to produce the desired results. This will be on account of relevance, cost-effectiveness, efficiency, and sustainability. In this respect, efficiency will assess the extent to which the intended outputs are attained relative to annually generated targets. Sustainability will address whether there exists capacity to follow-up implementation of the strategies. Evaluation of strategies will inform whether the strategies formulated translate into benefits and growth. Finally, impact assessment will confirm whether the outcomes have been realized. The annual reports will serve as the basis for annual evaluation. Table 8.1 provides a summary of the outcome performance indicators, baselines values and Mid - Term and End - Term targets.

Table 8.1: Outcome Performance Matrix

	Key Result Areas	Outcomes	Key Performance Indicators	Baseline		Target	
				Value	Year	Mid-term period Target	End-term period Target
1	Research and Innovation	Improved management and	i. Management tools (managemen	4	2023	5	

	Key Result Areas	Outcomes	Key Performance Indicators	Baseline		Target	
				Value	Year	Mid-term period Target	End-term period Target
		development of aquatic resources for enhanced wellbeing	i. t plans including co-management plans) ⁷				
			ii. Number of new technologies adopted ⁸	11	2023	14	18
2	Knowledge Management and Dissemination	Enhanced knowledge management, dissemination, and uptake of innovations	i. Knowledge and data management system with publicly accessible institutional document repository ⁹	1	2023	1	2
			ii. Number of dissemination and feedback activities realized ¹⁰	X (No. of activities during the last SP period)	2023	X+10%	X+ 20%
			iii. Number of Research Publications	67	2023	84	225
3	Resource mobilization and institutional capacity building	Increased funding, human resource, and infrastructural capacity	Level of funding from GoK	KShs.1.394 b	2023	KShs. 3.119 b	KShs. 8.694 b
			Level of funding from development partners	KShs.249.8 m	2023	510 m	1,440 m
			Number of qualified staff	554	2023	640	700
			Number of upgraded research infrastructure in KMFRI Centres and Stations	10	2023	11	12
4	Collaboration and Partnerships	Increased collaborations and partnerships in research and development	Number of collaborations and partnerships in research and development	X	2023	X+3	X+2
5	Community and Private	Enhanced local participation	Number of communities that have taken up blue economy	X	2023	X+10 %	X+20 %

⁷ Prawn fishery management plan; Naivasha management plan; Lake Victoria management plan; and Lake Turkana management plan

⁸ Pond farming; Fin fish; Cage farming; Crab farming; Seaweed farming; Feed production; Seed production technology; Integrated Multitrophic Aquaculture Technology (IMTA); Post-harvest technologies; Solar drying; Improved smoking; Mama karanga box

⁹ KMFRI Metadata system

¹⁰ Baseline-number of dissemination and feedback during the last strategic plan period; Level of funding baseline; Funding from GOK and development partners; Number of communities that have taken up aquaculture, post-harvest, fish market information, environmental management information and conservation technology; Number of investments in blue economy baseline in number of investments in fish value chain, aquaculture investment.

	Key Result Areas	Outcomes	Key Performance Indicators	Baseline		Target	
				Value	Year	Mid-term period Target	End-term period Target
	Sector Engagement	and investment in the Blue Economy	research innovations and technical advice Number of new investments in blue economy	X	2023	X+10	X+20

8.3.1 Mid-Term Evaluation

The mid-term evaluation will be undertaken in the 2025/2026 FY. The Mid-Term Evaluation will quantify progress and generate information for the possible review of activities and by extension the strategies towards achieving the set targets and expected outcomes. This will be coordinated by the Director General and will involve the strategic theme teams and all the relevant Directorates/Departments.

8.3.2 End-Term Evaluation

The End-Term evaluation will be undertaken by the end of the plan period (2027/2028 FY) to assess the implementation performance in terms of outcomes of the Strategic Plan. In addition, the evaluation will provide the challenges, lessons learnt and recommendations that will inform the next cycle of the strategic planning process of the Institute.

8.4 Reporting Framework and Feedback Mechanism

All Directorates in the Institute will be involved in monitoring and reporting on the progress of achievement of results and objectives based on indicators agreed upon in this Strategic Plan. This will be achieved by ensuring collection and provision of timely and accurate data during the plan period. The directorates will be expected to generate Monitoring and Evaluation reports on quarterly, bi-annual, and annual basis to serve as documentation of best practices which will be disseminated to senior management for learning and decision-making purposes.

The Institute will ensure that lessons learnt are captured and fed into a continual adjustment and improvement of the necessary corrective interventions in the strategy. The monitoring reports will be shared with stakeholders as a feedback mechanism from within and without to facilitate informed decision making.

The Institute will prepare quarterly, annual and evaluation reports using the prescribed format as provided in Tables 8.2, 8.3 and 8.4 respectively.

Table 8.2: Quarterly Progress Reporting Template

Kenya Marine and Fisheries Research Institute

Quarterly Progress Report

Quarter Ending.....

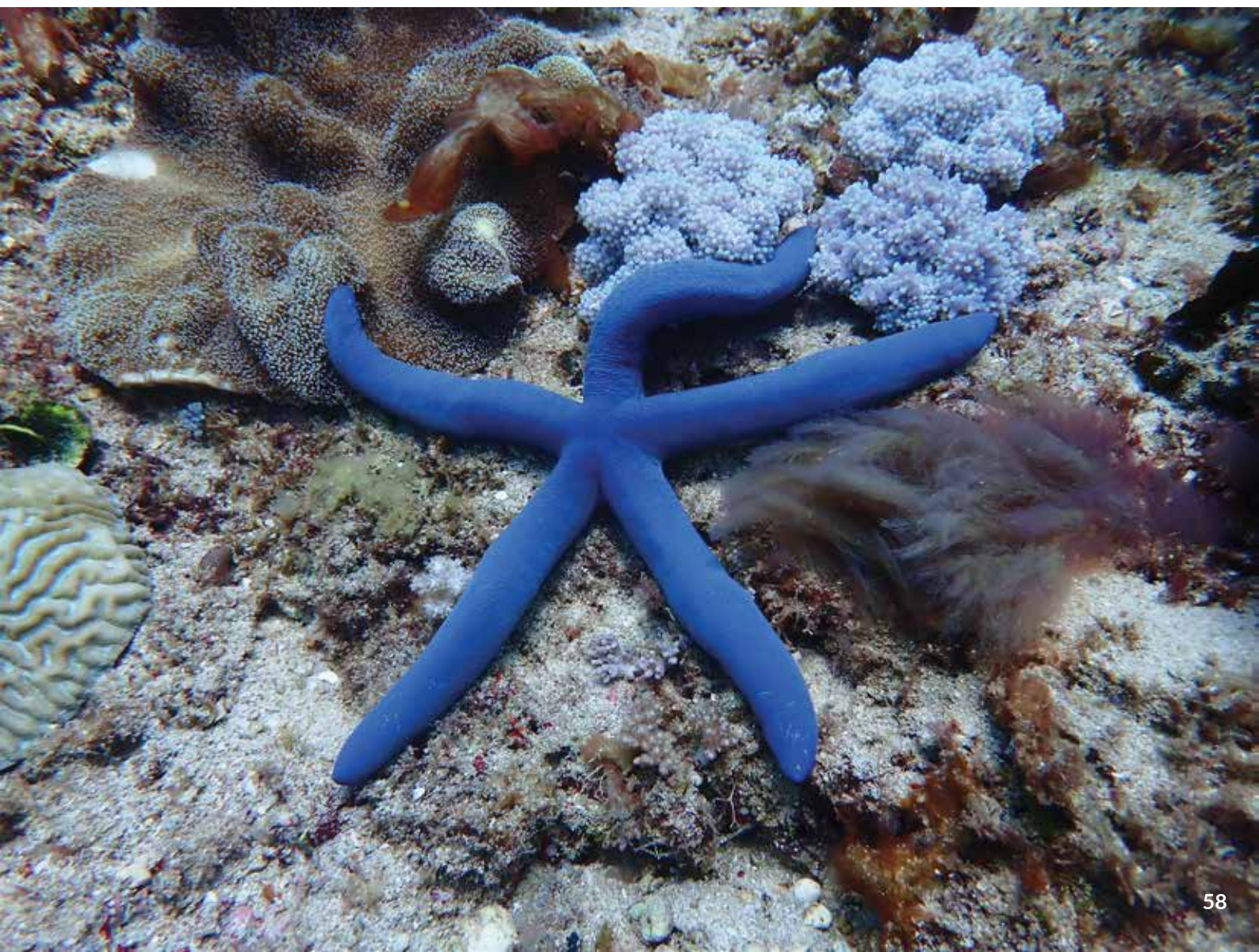
Expected Output	Output Indicator	Annual Target (A)	Quarter for Year			Cumulative to Date			Remarks
			Target	Actual (C)	Variance (C-B)	Target (E)	Actual (E)	Variance (F-E)	

Table 8.3: Annual Progress Reporting Template
Kenya Marine and Fisheries Research Institute
Annual Progress Report
Year Ending

Expected Output	Output Indicator	Achievement for Year.....			Cumulative to Date (Years)			Remarks
		(A)	(B)	Variance (B-C)	Target (D)	Actual (E)	Variance (E - D)	

Table 8.4: Evaluation Reporting Template

Key Result Area	Outcome	Key Performance Indicator	Baseline		Mid-Term Evaluation		End of Plan Period Evaluation		Remarks
			Value	Year	Target	Achievement	Target	Achievement	
KRA1									
KRA2									
KRA3									
.....									



KMFRI Staff Establishment

Annex 2: Implementation Matrix

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 years	Target					Budget (KSh. Mn)					Responsibility	
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support
Strategic Issue: Investment in the Blue Economy																
Strategic Goal: Promote focus on Blue Economy Research																
KRA: Research and Innovation																
Outcome: Improved management and development of aquatic resources for enhanced wellbeing																
Strategic Objective: To promote research and innovation to drive transformation of Blue Economy towards sustainable development																
(i) Adoption of innovative technologies for Blue Economy development	Cruise surveys to estimate the abundance and distribution of key commercial BE stocks	10 cruise surveys to estimate the abundance and distribution of key commercial BE stocks	Number of cruise surveys to estimate the abundance and distribution of key commercial BE stocks	10	2	2	2	2	2	250	255	260	265	270	CEO	Director OCS
	Conduct water quality assessments from major/commercial aquaculture farms	10 water quality assessments of major/commercial aquaculture farms done	Number of water quality assessments of major/commercial aquaculture farms done	10	2	2	2	2	2	50	53	56	58	60	CEO	Director OCS
	Produce superior tide tables	5 superior tide tables produced	Number of superior tide tables produced	5	1	1	1	1	1	10	12	14	16	18	CEO	Director OCS
	Conduct mapping to establish characteristics of unique geological features	Unique geological features mapped	Number of unique geological features mapped	3	1	1	1	1	1	50	-	60	-	65	CEO	Director OCS
	Conduct antifouling bioactive compounds from sponges research	Antifouling bioactive compounds from sponges research conducted	Number of reports on antifouling bioactive compounds from sponges produced	2	1	1	1	1	1	10	-	15	-	-	CEO	Director OCS
Develop seawater greenhouse	3 Seawater greenhouse developed	Number of seawater	3	1	1	1	1	1	1	5	7	10	10	CEO	Director OCS	

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 years	Target					Budget (KSh. Mn)					Responsibility			
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support		
	technology to support blue economy investments		greenhouse developed															
	Develop innovative BE resource harvesting technologies	2 BE resource harvesting technologies developed	Number of BE resource harvesting technologies developed	2	1													Director OCS
	Conduct catch assessment surveys	10 catch assessment surveys done	Number of catch assessment surveys done	10	2	2	2	2	2	450	455	460	465	470				Director FWS
	Conduct marine fish stock assessment surveys	10 marine fish stock assessment surveys conducted	Bi-annual marine fish stock assessment surveys conducted	10	2	2	2	2	2	525	530	532	535	538				Director OCS
	Conduct freshwater stock assessment surveys	10 freshwater fish stock assessment surveys conducted bi-annually	Bi-annual of freshwater fish stock assessment surveys conducted	10	2	2	2	2	2	100	105	110	112	115				Director FWS
ii. Fisheries and value addition research	Deploy BE observers on commercial vessels	30 observer deployments done for BE observers on commercial vessels	Number of observer deployment on commercial vessels	30	6	6	6	6	6	50	60	65	68	70				Director OCS
	Conduct post-harvest loss assessment	Appropriate post-harvest technologies developed	Number of post-harvest technologies developed	2	1						30	-	60	-				Director Aqua
	Establish a Centre for BE resource quality assurance and surveillance	A centre for BE resource quality assurance and surveillance established	Level of completion of BE resource quality assurance and surveillance centre	100%							100	137	164	190				CD-Mombasa
iii. Sustainable diversification of culture species and systems, and	Conduct trials to domesticate high value species for aquaculture	3 high value species trialled for domestication	Number of species on trial for domestication	3	1						15	18	20					Director OCS

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 years	Target						Budget (KSh. Mn)						Responsibility		
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support			
cost-effective fish feeds for commercialization of aquaculture	Establish hatcheries for fish breeding	1 hatchery for fish breeding established	Number of hatcheries established	1		1												CEO	Director Aqua
	Conduct genetic profiling of aquatic species	200 aquatic species genetically profiled	Number of genetically profiled aquatic species	200	40	40	40	40	40	50	52	54	56	58				CEO	Director Aqua
	Develop standards for seed certification	2 Certification standards for seed produced	Number of certification standard developed for two seed species	2		1	1	1	1		15		20					CEO	Director Aqua
	Develop KMIFRI standardized Feed formulae	2 standardized feed formulae developed	Number of standardized feed formulae	2		1	1	1	1		30		40					CEO	Director Aqua
	Develop and test climate smart aquaculture technologies	2 Climate smart aquaculture technologies developed and tested	Number of climate smart aquaculture technologies developed and tested	2			1	1	1						120			CEO	Directors Research
	Produce aquaculture suitability maps	2 aquaculture suitability maps produced	Number of aquaculture suitability maps produced	2		1	1	1	1		50		60					CEO	Director Aqua
	Develop value added products from BE resources and other aquatic resources	5 Value added products from BE resources and other aquatic resources	Number of value-added products from BE resources and other aquatic resources	5	1	1	1	1	1	50	55	58	60	65				CEO	Director Aqua
	Commercial aquaculture effluent treatment	Acceptable waste water quality discharged from commercial aquaculture	Data on commercial aquaculture effluent quality	1			1	1	1				5					CEO	Director Aqua
	Disease surveillance	Identification of common fish diseases in aquaculture systems	Database of existing fish diseases in Kenya	1		1						5						CEO	Director Aqua

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 years	Target					Budget (KSh. Mn)					Responsibility	
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support
iv. Oceanographic and limnological research for blue growth	Conduct surveys to assess vulnerability of BE ecosystems to global warming	10 surveys to assess vulnerability of BE ecosystems to global warming conducted	Number of surveys to assess impacts of global warming to BE ecosystems	10	2	2	2	2	2	100	118	120	122	120	CEO	Director OCS
	Pilot ecological restoration of different BE ecosystems	3 restoration initiatives piloted in aquatic habitats	Number of aquatic habitat restoration research initiatives piloted	3		1	1	1	1	-	100	-	105	112	CEO	Directors Research
	Conduct surveys to monitor environmental changes in critical fish habitats	3 environmental surveys conducted in marine and freshwater systems	Number of surveys on environmental changes established in marine and freshwater systems monitored	3		1	1	1	1	-	60	-	63	66	CEO	Director OCS & Director FWS
v. Socio-economic assessments and economic valuation to inform management of aquatic resources and development	Assess the biology and ecology of key commercial species	3 biological and ecological surveys done of key commercial species	Number of biological and ecological surveys conducted in key commercial species	3		1	1	1	1	-	50	-	60	80	CEO	Director FWS
	Develop resource maps to support marine and inland spatial plans with other key stakeholders	A resource map to support marine and inland spatial plan developed	Number of resource maps developed to support marine and inland spatial plans	2		1	1	1	1	-	100	-	110	-	CEO	Director OCS, Director FWS & Director Aqua
v. Socio-economic assessments and economic valuation to inform management of aquatic resources and development	Assess gender dynamics and vulnerable communities in the Blue Economy space	5 communities assessed on gender and vulnerable communities in Blue Economy space	Number of communities assessed	5	1	1	1	1	1	20	22	24	26	30	CEO	Director Socio
	Assess ecological and socioeconomic	5 priority assessments on BE resources done	Number of priority assessments on	5	1	1	1	1	1	42	58	62	65	70	CEO	Director Socio

Strategy of blue economy	Key Activities	Expected Output	Output Indicators	Target for 5 years	Target					Budget (KSh. Mn)					Responsibility		
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support	
	impacts on resources		BE resources done														
	Conduct livelihood studies for community empowerment	2 livelihood studies for community empowerment conducted	Number of livelihood studies for community empowerment conducted	2	1		1				10		15			CEO	Director Socio
	Conduct economic feasibility studies and value chain analysis to support investment in Blue Economy	2 economic feasibility studies and value chain analysis to support investment in Blue Economy conducted	Number of economic feasibility studies and value chain analysis to support investment in Blue Economy conducted	2	1		1				15				20	CEO	Director Socio
	Conduct economic valuation of marine and coastal resources	2 economic valuation studies	Number of economic valuation studies	2		1					-				5	CEO	Director Socio
	Conduct value-chain analyses of fish and fisheries products	2 value chain analyses	Number of value chain analyses	2	1		1				4		4		-	CEO	Director Socio
	Conduct research on indigenous knowledge to inform sustainable development of Blue Economy	Indigenous knowledge research conducted in 3 water bodies	Number of water bodies covered	3	1		1			8			6		-	CEO	Director Socio
	Develop mobile applications to support research and development	Mobile application developed	Number of mobile applications developed	3	1	1	1				1		1			CEO	Director OCS, Director FWS & Director Aqua, Director Socio
Sub Total										1,865	2,475	2,417	2,654	2,572			
Strategic Issue: Investment in the Blue Economy																	

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 years	Target					Budget (KSh. Mn)					Responsibility								
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support							
Strategic Goal: Optimize value of data through knowledge management and dissemination																							
KRA: Knowledge Management and Dissemination																							
Outcome: Enhanced knowledge management, dissemination, and uptake of innovations																							
Strategic Objective: To transfer knowledge and information to support policy development and uptake of research findings and innovations																							
(i) Strengthen research data management	Develop and implement a knowledge and data management strategy	A knowledge and data management strategy developed	Knowledge and data management strategy	1			1									100	-	-			CEO	Director Socio	
	Training of officers on bioinformatics	5 officers trained on bioinformatics	Number of officers trained on bioinformatics	5	1	1	1	1	1	1	1	1	1	1	1	30	32	34	38			CEO	DCS
(ii) Improve corporate branding	Build capacity on BE and stock assessment	Trained 20 officers in BE and stock assessment	Number of officers trained in quantitative stock assessment	20	4	4	4	4	4	4	4	4	4	4	20	25	30	35			CEO	DCS	
	Establish infrastructure for KMFRI TV and Aquatica Journal	Aquatica Journal and KMFRI TV	Level of operationalization of KMFRI TV and Aquatica Journal	100%	20	20	20	20	20	20	20	20	20	20	4	5	5	5			CEO	DCS	
iii) Strengthen research communication	Develop institutional fishery and environment data information system	A fishery and environmental data information system developed	Number of fishery and environmental data information system developed	1			1															CEO	Director FWS
	Update the publicly accessible institutional document repository	The publicly accessible institutional document repository updated	Level of updating the publicly accessible institutional document repository	100%	20	20	20	20	20	20	20	20	20	20	15	20	25	30			CEO	DCS	
	Disseminate research findings in peer reviewed scientific journals	225 manuscripts published	Number of research publications done	225	41	43	45	47	49	50	50	50	50	65	70	85	85			CEO		Director's Research	

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 years	Target					Budget (KSh. Mn)					Responsibility		
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support	
	Update the KMFRI website	KMFRI website updated annually	Number of website updates done	100%	70	10	10	10	10	10	10	12	14	16	-	CEO	DCS
	Leverage on media platforms	Media platforms leveraged	Level of media platforms leveraged	100%	30	30	30	10	10	10	12	15	10	-	CEO	DCS	
	Adopt arts and cultural approach to branding	Arts and culture branding developed	Level of arts and culture branding adopted	100%	10	20	40	15	15	15	46	65	15	20	CEO	DCS	
	Designate KMFRI brand ambassador to promote KMFRI's image	KMFRI brand ambassador designated	Number of KMFRI brand ambassadors designated	5	1	1	1	1	1	1	3	5	7	8	CEO	DCS	
	Re-design and adopt KMFRI logo	Logo re-designed and adopted	Level of adoption of re-designed KMFRI Logo	100%	60	20	20				3	5	-	-	CEO	DCS	
	Disseminate research findings to national and international stakeholders	Research findings disseminated to stakeholders in local meetings and international fora	Number of dissemination meetings and conferences held	5	1	1	1	1	1	1	15	20	25	30	CEO	Directors Research	
	Establish an intellectual property office at KMFRI	KMFRI Intellectual property office established	Level of completion of KMFRI intellectual property office	100%	20	20	20	20	20	20	110	115	30	35	CEO	DCS	
	Develop a technology and innovation service centre at KMFRI	Technology and innovation service centre established	Level of completion of technology and innovation service centre	100%	20	20	20	20	20	20	120	122	50	60	CEO	DCS	
Sub Total											362	555	713	332	346		
Strategic Issue: Responsiveness to the changing environment																	
Strategic Goal: Enhance institutional capacity																	
KRA: Resource mobilization and Institutional Capacity building																	
Outcome: Increased funding, human resource, and infrastructural capacity																	
Strategic Objective: To mobilize and manage human and financial resources to strengthen institutional capacity																	

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 years	Target						Budget (KSh. Mn)					Responsibility	
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support	
(i) Deepen Blue Economy research ecosystem	Develop a KMFRI Act incorporating Blue Economy mandate and research	KMFRI Act developed	Level of completion of the KMFRI Act	100%	10	20	40	30		50	100	20	20	-	CEO	CS&DLS	
	Conduct governance and legal audit	Legal and governance audit	Report on governance and legal audit	5	1	1	1	1	1	2	2	2	2	2	CEO	CS&DLS	
(ii) Enhance Human and Institutional capacity	Implement approved human resource policy instruments	KMFRI human resource policy instruments implemented	Level of implementation of KMFRI human resource policy instruments and organogram	100%	40	20	20	20		200	100	50	50	-	CEO	DCS	
	Increase the number of funded research proposals and policy briefs	Funded research proposals and policy briefs developed	Number of funded research proposals and policy briefs produced	100	21	23	25	27	30	50	60	70	80	90	CEO	Directors Research	
(iii) Map out capacity needs for targeted stakeholders	Upscale ISO scope	ISO Scope upscaled to inland stations	Number of stations upscaled with QMS certification	4	1	1	1	1	1	10	12	14	18	20	CEO	MR	
	Upscale Risk Management	Risk management certified	Certificate on Risk management	1	1					-	50	-	-	-	CEO	MR	
(iv) Establish policy framework for capacity building programmes	Enhanced business continuity	Business continuity and disaster recovery plan	Approved business continuity and disaster recovery plan	2	2	0	0	0	0	1	1	1	1	1	CEO	DCS	
	Conduct skills gap and workload analysis of KMFRI staff	Skills gap and workload analysis	Number of skills gap and workload analysis done	5	1	1	1	1	1	50	58	65	70	85	CEO	DCS	
(v) Strengthen human resource planning	Implement productivity improvement and measurement programme	Productivity index	Annual Productivity reports	5	1	1	1	1	1	3	3	3	3	3	CEO	DCS	

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 years	Target					Budget (KSh. Mn)					Responsibility	
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support
(vi) Enhance operational efficiency	Institutionalize data protection	Data protection policy	Approved data protection policy	1	1	0	0	0	0	2	2	2	2	2	CEO	DCS
	Optimize the ERP system	Operational modules of ERP system	Level of ERP operational	100%	90	10	10	10	10	8	8	8	8	8	CEO	DCS
	Institutionalize succession planning	Succession plan	Annual succession plan	5	1	1	1	1	1	1	1	1	1	1	CEO	DDHRA
(vii) Strengthen monitoring, reporting and evaluation process	Update the M&E framework	M&E Framework	M&E framework updated	1	1	0	0	0	0	2	2	2	2	2	CEO	DCS
	Monitor implementation of strategic plan	Strategic plan monitored	Number of monitoring reports	5	1	1	1	1	1	2	2	2	2	2	CEO	DCS
	Conduct evaluation of the mandate of the Institute	Evaluation of Institute mandate	Number of evaluation reports	5	1	1	1	1	1	2	2	2	2	2	CEO	DCS
	Strengthen Balance scorecard to enhance (BSC) performance management and measurement to inform rewards and sanctions	BSC performance enhanced	Level of BSC performance achieved	100%	40	20	20	20	20	10	12	15	18	-	CEO	DDHRA
	Develop and implement a culture change programme	Culture change activities and audits	No. of culture change activities and audits conducted	5	1	1	1	1	1	5	5	5	5	5	CEO	DDHRA
	Generate revenue through products and services	Revenue generated from products and services	Amount of revenue generated through sale of KMFRRI products and services	50	10	10	10	10	10	3	3	4	3	3	CEO	DCS

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 years	Target					Budget (KSh. Mn)					Responsibility	
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support
	Conduct infrastructure and equipment needs assessment for all stations and centres	Infrastructure and equipment need assessment done for stations and centres	Number of infrastructure and equipment needs assessment done for stations and centres	1	-	-	-	-	20	-	-	-	-	-	CEO	DCS
	Enhance KMFRI laboratory infrastructure and process to conform to ISO/IEC 17025 on calibration and testing	Infrastructure and processes enhanced to conform to ISO/IEC 17025 on calibration and testing	Level of certification of KMFRI laboratory under ISO/IEC 17025	100%	20	20	40		250	250	250				CEO	MIR
	Acquire a deep-sea research vessel to facilitate exploration of Kenya's EEZ resources	Deep sea research vessel procured	Deep sea research vessel acquired	100%	10	10	30	30	700	700	1,500	1,000	1,000	1,000	CEO	DCS
	Equip KMFRI centres and stations with priority infrastructure and equipment	KMFRI Centres and stations equipped with priority infrastructure and equipment	Number of KMFRI Centres and stations equipped with priority infrastructure and equipment and landscaping	10	2	2	2	2	50	55	60	65	70		CEO	DCS
	Establish new KMFRI centres	KMFRI Centres and stations established	Number of new KMFRI centres established	3					-	-	500	500	500		CEO	CEO
	Operationalization of KMFRI graduate school	KMFRI Graduate School established	KMFRI Graduate School operationalized with governance and office structures	100%	-	20	40	20	-	30	30	30	30		CEO	AD Technical Capacity Building
	Implement National Government car and mortgage scheme	National Government car and mortgage scheme implemented	Level of implementation of National Government car and mortgage scheme	100%	-	5	15	40	40	522	1,467	5,472	6,472		CEO	DCS

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 years	Target					Budget (KSh. Mn)					Responsibility		
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support	
			mortgage scheme														
	Develop and implement resource mobilization strategy	Resource mobilization strategy developed	Number of strategies	1%	1												Resource Mobilization Office
	Establish KMFRI Research Fund and Internal Research Grants (IRGs)	KMFRI Research Fund and Internal Research Grants established	KMFRI Research Fund and Internal Research Grants operationalized, and office structure established	100%	20	40	20	20									Resource Mobilization Office
	Increased collaborations with donor partners	Institutional funding	Number of new partnerships with donors	100	10	10	10	10	10	5	8	10	15	18			DCS
Sub Total										1,948	3,038	4,143	7,429	8,386			
Strategic Issue: Dynamic customer needs and stakeholder expectations																	
Strategic Goal: Enhance service delivery through collaborations and partnerships																	
KRA: Collaboration and Partnerships																	
Outcome: Increased collaborations and partnerships in research and development																	
Strategic Objective: To strengthen national, regional, and international collaboration and partnerships																	
(i) Strengthen and sustain partnerships		Collaboration, grant, and partnership agreements completed and endorsed	Number of collaborations, grant and partnership agreements completed and endorsed	5													
(ii) Deepen capacity development partnerships with National and County Government	Develop collaborations, grant, and partnership agreements	Collaboration, grant, and partnership agreements completed and endorsed	Number of collaborations, grant and partnership agreements completed and endorsed	5	1	1	1	1	1	20	25	30	35	40		CEO	CS&DLS

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 years	Target					Budget (KSh. Min)					Responsibility	
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support
(iii) Establish a KMFRI mentorship programme	Strengthen Inland and coastal county collaborations through partnership and advise during development of CIDP	Collaborations and County CIDPs strengthened	Number of County collaborations done	5	1	1	1	1	1	30	40	45	50	53	CEO	CS&DLS
	Collaborate and partner with institutions of higher learning through KMFRI Graduate School	Collaborations and partnerships on KMFRI Graduate School implemented	Number of collaborations on KMFRI Graduate School implementation	5	1	1	1	1	1	2	4	5	8	10	CEO	AD Technical Capacity Building
Sub Total																
Strategic Issue: Dynamic customer needs and stakeholder expectations																
Strategic Goal: Enhance service delivery through collaborations and partnerships																
KRA: Collaboration and Partnerships																
Outcome: Enhanced local participation and investment in the Blue Economy																
Strategic Objective: To strengthen community participation and integration of indigenous knowledge in research development																
(i) Enhance stakeholder involvement	Facilitate transfer of technologies to communities	5 communities trialling transferred technologies	Number of community-based ventures trialling transferred technologies	5	1	1	1	1	1	40	44	48	50	55	CEO	Director Socio
	Disseminate blue economy research findings	Hold annual targeted feedback meetings to disseminate research findings to communities	Number of community feedback meetings held	5	1	1	1	1	1	10	12	18	20	22	CEO	Director Socio
(ii) Foster Partnerships and collaborations	Develop a community and private sector engagement plan	Community and private sector engagement plan developed	Community and private sector engagement plan	1			1			-	-	100	-	-	CEO	Director Socio

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 years	Target					Budget (KSh. Mn)					Responsibility		
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support	
	Development of community based blue carbon projects	2 blue carbon projects developed and implemented	Number of blue carbons developed and implemented	2	1	1						50	50	-	-	CEO	Director OCS
	Incorporation of indigenous knowledge in research and development	Indigenous knowledge incorporated in research and development	Number of indigenous knowledge incorporated in research and development	10	2	2	2	2	2	3	4	6	8	9	CEO	Director Socio	
	Promote co-management of BE resources	Co-management of BE resources done	Number of co-managements done	4	1	2	1				4	6	5		CEO	Director Socio	
	Infuse and tap private and entrepreneurship skills in BE	Infusion of skills done	Number of skills taped in BE	5	1	2	1	1			5	8	6	7	CEO	Director Socio	
Sub Total									53	119	236	89	93				
Administrative Costs for implementing the Strategic Plan																	
Total									214	313	379	530	575			Total	42,233
									4,494	6,569	7,968	11,127	12,075			Total	42,233

Annex 3: Costed Annual Work Plan for the FY 2023/24

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 years	Target	Budget (KSh. Mn)	Timeline (Quarterly)				Responsibility	
							Q1	Q2	Q3	Q4		Lead
Strategic Issue: Investment in the Blue Economy												
Strategic Goal: Promote focus on Blue Economy Research												
KRA: Research and Innovation												
Outcome: Improved management and development of aquatic resources for enhanced wellbeing												
Strategic Objective: To promote research and innovation to drive transformation of Blue Economy towards sustainable development												
Conduct oceanographic and limnological research	Cruise surveys to estimate the abundance and distribution of key commercial BE stocks	10 cruise surveys to estimate the abundance and distribution of key commercial BE stocks	Number of cruise surveys to estimate the abundance and distribution of key commercial BE stocks	10	2	250					CEO	Director OCS
	Conduct water quality assessments from major/commercial aquaculture farms done	10 water quality assessments of major/commercial aquaculture farms done	Number of water quality assessments of major/commercial aquaculture farms done	10	2	50					CEO	Director OCS
	Produce superior tide tables	5 superior tide tables produced	Number of superior tide tables produced	5	1	10					CEO	Director OCS
	Conduct mapping to establish characteristics of unique geological features	Unique geological features mapped	Number of unique geological features mapped	3	1	50					CEO	Director OCS
	Conduct research on antifouling bioactive compounds from sponges	Antifouling bioactive compounds from sponges research conducted	Number of reports on antifouling bioactive compounds from sponges produced	2	1	10					CEO	Director OCS
Conducted catch assessment surveys to inform stock assessment of priority fisheries	Conduct catch assessment surveys	10 catch assessment surveys done	Number of catch assessment surveys done	10	2	450					CEO	Director FWS

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 years	Target		Timeline (Quarterly)				Budget (KSh. Mn)		Responsibility	
					Y1		Y1	Q1	Q2	Q3	Q4	Lead	Support	
Undertake BE and stock assessments and carrying capacities of water bodies to improve management of priority areas	Conduct marine fish stock assessment surveys	10 marine fish stock assessment surveys conducted	Bi-annual marine fish stock assessment surveys conducted	10	2							525	CEO	Director OCS
	Conduct freshwater stock assessment surveys	10 freshwater fish stock assessment surveys conducted bi-annually	Bi-annual of freshwater fish stock assessment surveys conducted	10	2							100	CEO	Director FWS
	Deploy BE observers on commercial vessels	30 observer deployments done for BE observers on commercial vessels	Number of observer deployment on commercial vessels	30	6							50	CEO	Director OCS
Provide scientific information to support BE quality assurance and consumption strategies	Establish a Centre for BE resource quality assurance and surveillance	A centre for BE resource quality assurance and surveillance established	Level of completion of BE resource quality assurance and surveillance centre	100%	20							100	CEO	CD-Mombasa
Improve food production through promotion of diversification and commercialization of underutilized BE resources and other aquatic biodiversity products	Conduct genetic profiling of aquatic species	200 aquatic species genetically profiled	Number of genetically profiled aquatic species	200	40							50	CEO	Director Aqua
	Develop value added products from BE resources and other aquatic resources	5 Value added products from BE resources and other aquatic resources	Number of value-added products from BE resources and other aquatic resources	5	1							50	CEO	Director Aqua
Assess and monitor drivers and effects of climate change on BE ecosystems	Conduct surveys to assess vulnerability of BE ecosystems to global warming	10 surveys to assess vulnerability of BE ecosystems to global warming conducted	Number of surveys to assess impacts of global warming to BE ecosystems	10	2							100	CEO	Director OCS
Conduct socioeconomic assessments and economic valuation of marine and coastal resources to inform Blue Economy sector	Assess gender dynamics and vulnerable communities in the Blue Economy space	5 communities assessed on gender and vulnerable communities in Blue Economy space	Number of communities assessed	5	1							20	CEO	Director Sodio
	Assess ecological and socioeconomic impacts on resources	5 priority assessments on BE resources done	Number of priority assessments on BE resources done	5	1							50	CEO	Director Sodio
Sub Total												1,865		

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 years	Target	Budget (KSh. Mn)	Timeline (Quarterly)				Responsibility	
							Q1	Q2	Q3	Q4		
Strategic Issue: Investment in the Blue Economy												
Strategic Goal: Optimize value of data through knowledge management and dissemination												
KRA: Knowledge Management and Dissemination												
Outcome: Enhanced knowledge management, dissemination, and uptake of innovations												
Strategic Objective: To transfer knowledge and information to support policy development and uptake of research findings and innovations												
Build capacity on knowledge management and science communication	Training of officers on bioinformatics	5 officers trained on bioinformatics	Number of officers trained on bioinformatics	5	1	20					CEO	DCS
	Build capacity on BE and stock assessment	Trained 20 officers in BE and stock assessment	Number of officers trained in quantitative stock assessment	20	4	15					CEO	DCS
Update the publicly accessible institutional document repository	Update the publicly accessible institutional document repository	The publicly accessible institutional document repository updated	Level of updating the publicly accessible institutional document repository	100%	20	10					CEO	DCS
	Disseminate research findings in peer reviewed scientific journals	225 manuscripts published	Number of research publications done	225	41	50					CEO	Directors Research
Strengthen KMFRI's corporate image through strategic result sharing and branding by mainstreaming art and culture in outreach	Update the KMFRI website	KMFRI website updated annually	Number of website updates done	100%	70	10					CEO	DCS
	Leverage on media platforms	Media platforms leveraged	Level of media platforms leveraged	100%	30	10					CEO	DCS
	Adopt arts and cultural approach to branding	Arts and culture branding developed	Level of arts and culture branding adopted	100%	10	30					CEO	DCS
	Designate KMFRI brand ambassador to promote KMFRI's image	KMFRI brand ambassador designated	Number of KMFRI brand ambassadors designated	5	1	2					CEO	DCS
	Re-design and adopt KMFRI logo	Logo re-designed and adopted	Level of adoption of re-designed KMFRI Logo	100%	60	5					CEO	DCS

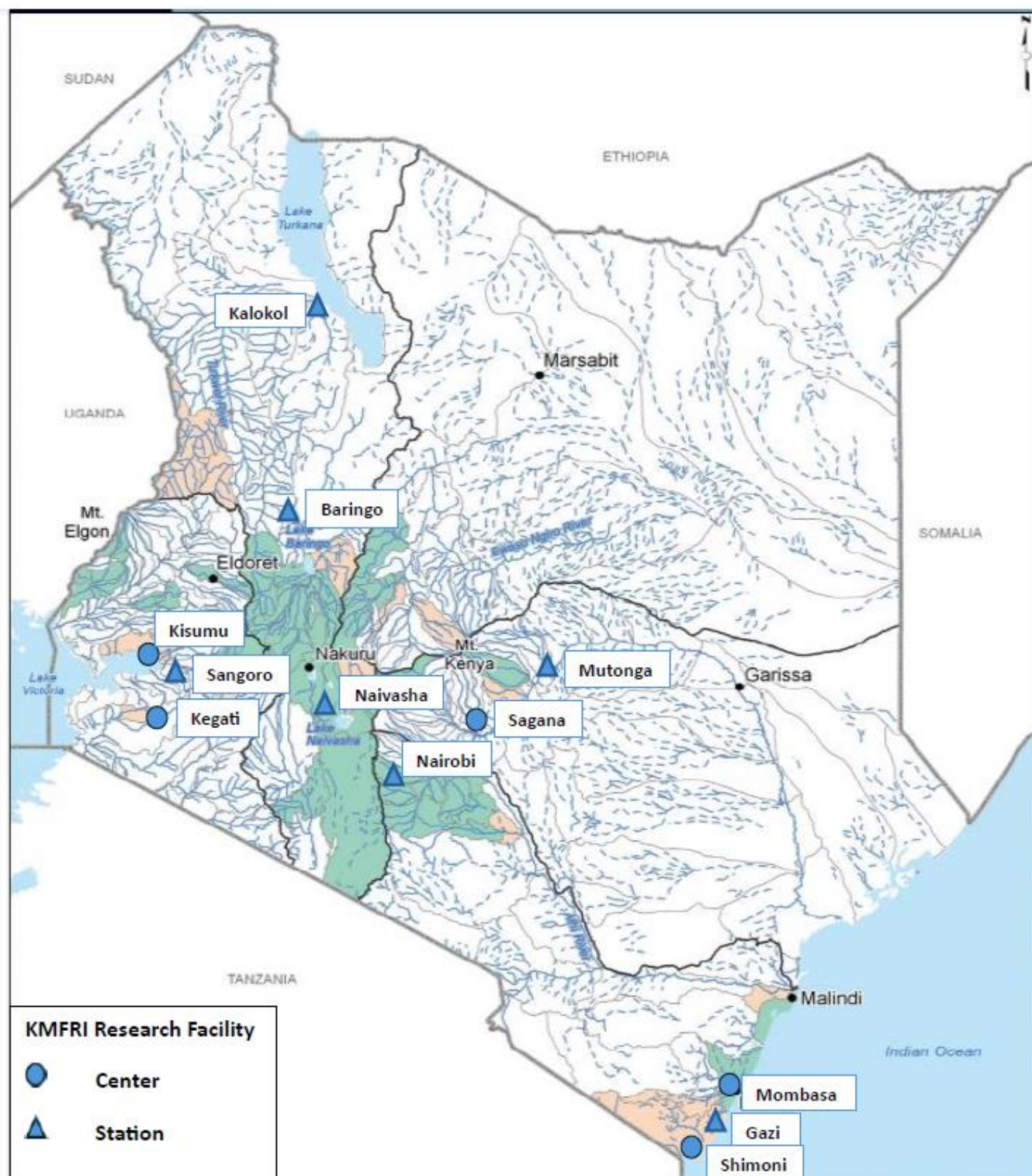
Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 years	Target	Budget (KSh. Mn)	Timeline (Quarterly)				Responsibility			
							Q1	Q2	Q3	Q4				
Dissemination of research findings to stakeholders	Disseminate research findings to national and international stakeholders	Research findings disseminated to stakeholders in local meetings and international fora	Number of dissemination meetings and conferences held	5	1	10					CEOs	Directors Research		
	Strengthen intellectual property management	KMFRI Intellectual property office established	Level of completion of KMFRI intellectual property office	100%	20	100					CEOs	DCS		
	Develop a technology and innovation service centre at KMFRI	Technology and innovation service centre established	Level of completion of technology and innovation service centre	100%	20	100					CEOs	DCS		
						362								
Strategic Issue: Responsiveness to the changing environment														
Strategic Goal: Enhance institutional capacity														
KRA: Resource mobilization and Institutional Capacity building														
Outcome: Increased funding, human resource, and infrastructural capacity														
Strategic Objective: To mobilize and manage human and financial resources to strengthen institutional capacity														
Develop legislation to anchor KMFRI mandate under Blue Economy	Develop a KMFRI Act incorporating Blue Economy mandate and research	KMFRI Act developed	Level of completion of the KMFRI Act	100%	10	50						CEOs	CS&DLS	
	Strengthen internal human resource capacity to enhance resource mobilization through implementation of statutory approved human resource policy instruments	KMFRI human resource policy instruments implemented	Level of implementation of KMFRI human resource policy instruments and organogram	100%	40	200							CEOs	DCS
	Increase the number of funded research proposals and policy briefs	Funded research proposals and policy briefs developed	Number of funded research proposals and policy briefs produced	100	21	50							CEOs	Directors Research

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 years	Target	Budget (KSh. Mn)	Timeline (Quarterly)				Responsibility		
							Y1	Q1	Q2	Q3		Q4	Lead
Strengthen internally generated revenue through products and services	Upscale ISO scope	ISO Scope upscaled to inland stations	Number of stations upscaled with QIMS certification	4		10					CEO	IMR	
	Conduct skills gap and training needs assessment of KMFRI staff	Skills gap and training needs assessment	Number of skills gap and training needs assessment done	5	1	50					CEO	DCS	
	Strengthen Balance scorecard to enhance (BSC) performance management and measurement to inform rewards and sanctions	BSC performance enhanced	Level of BSC performance achieved	100%	40	10	3					CEO	ADHR
	Generate revenue through products and services	Revenue generated from products and services	Amount of revenue generated through sale of KMFRI products and services	50	10							CEO	DCS
Upgrade research infrastructure in KMFRI Centres and Stations	Conduct infrastructure and equipment needs assessment for all stations and centres	Infrastructure and equipment need assessment done for stations and centres	Number of infrastructure and equipment needs assessment done for stations and centres	1	1	20					CEO	DCS	
	Enhance KMFRI laboratory infrastructure and process to conform to ISO/IEC 17025 on calibration and testing	Infrastructure and processes enhanced to conform to ISO/IEC 17025 on calibration and testing	Level of certification of KMFRI laboratory under ISO/IEC 17025	100%	20	1,000					CEO	MR	
	Acquire a deep sea research vessel to facilitate exploration of Kenya's EEZ resources	Deep sea research vessel procured	Deep sea research vessel acquired	100%	10	500					CEO	DCS	
	Equip KMFRI centers and stations with priority infrastructure and equipment	KMFRI Centres and stations equipped with priority infrastructure and equipment	Number of KMFRI Centres and stations equipped with priority infrastructure and	10	2	50					CEO	DCS	

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 years	Target	Budget (KSh. Mn)	Timeline (Quarterly)				Responsibility		
							Q1	Q2	Q3	Q4		Lead	Support
			equipment and landscaping		Y1	Y1							
Lobby for increased resource mobilization to support research and KMFRI's publicity	Increased lobbying for enhanced funding	Increased lobbying for enhanced funding done	Level of lobbying and engagement undertaken	100%	20	5						CEO	DCS
Sub Total						1,948							
Strategic Issue: Dynamic customer needs and stakeholder expectations													
Strategic Goal: Enhance service delivery through collaborations and partnerships													
KRA: Collaboration and Partnerships													
Outcome: Increased collaborations and partnerships in in research and development													
Strategic Objective: To strengthen national, regional and international collaboration and partnerships													
Develop and implement collaboration, grant and partnership agreements	Develop collaborations, grant and partnership agreements	Collaboration, grant and partnership agreements completed and endorsed	Number of collaborations, grant and partnership agreements completed and endorsed	5	1	20						CEO	CS&DLS
Strengthen Inland and Coastal County collaborations through partnership and advise during development of Blue Economy research	Strengthen Inland and coastal county collaborations through partnership and advise during development of CIDP	Collaborations and County CIDPs strengthened	Number of County collaborations done	5	1	30						CEO	CS&DLS
Collaborate and partner with institutions of higher learning and potential donors to operationalize KMFRI Graduate School	Collaborate and partner with institutions of higher learning through KMFRI Graduate School	Collaborations and partnerships on KMFRI Graduate School implemented	Number of collaboration on KMFRI Graduate School implementation	5	1	2						CEO	AD Technical Capacity Building
Sub Total						52							
Strategic Issue: Dynamic customer needs and stakeholder expectations													
Strategic Goal: Enhance service delivery through collaborations and partnerships													

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 years	Target	Budget (KSh. Mn)	Timeline (Quarterly)				Responsibility	
							Y1	Q1	Q2	Q3		Q4
KRA: Collaboration and Partnerships												
Outcome: Enhanced local participation and investment in the Blue Economy												
Strategic Objective: To strengthen community participation and integration of indigenous knowledge in research development												
Engage communities in demand driven research to solve societal problems	Facilitate transfer of technologies to communities	5 communities trialing transferred technologies	Number of community-based ventures trialing transferred technologies	5	1	40					CEO	Director Socio
	Disseminate blue economy research findings	Hold annual targeted feedback meetings to disseminate research findings to communities	Number of community feedback meetings held	5	1	10					CEO	Director Socio
Incorporate indigenous knowledge in research and development to support sustainable utilization of BE resources	Incorporation of indigenous knowledge in research and development	Indigenous knowledge incorporated in research and development	Number of indigenous knowledge incorporated in research and development	10	2	3					CEO	Director Socio
Sub Total						53						
Total						4,280						

Annex 5: Map of Kenya Showing the Location of KMFRI Centre's





KENYA MARINE AND FISHERIES RESEARCH INSTITUTE

-  P.O. Box 81651- 80100 Mombasa Kenya
-  Ludwig Von Krapf Road, English Point, Mkomani Mombasa Kenya
-  +254 20 8021560/1, +254 712 003 853
-  director@kmfri.go.ke
-  www.kmfri.go.ke
-  Kenya Marine and Fisheries Research Institute
-  @KmfriResearch
-  Kenya Marine and Fisheries Research Institute (KMfri) OFFICIAL
-  YouTube - KMFRI-TV