



NATIONAL BIOSAFETY AUTHORITY

Championing for a Biosafe Nation

REVISED STRATEGIC PLAN

2020 – 2025

Bottom-Up Economic Transformation
Agenda for Inclusive Growth

Publication of the National Biosafety Authority



Table of Contents

FOREWORD	i
ACKNOWLEDGEMENT	ii
CONCEPTS AND TERMINOLOGIES	iii
ACRONYMS AND ABBREVIATIONS	iv
EXECUTIVE SUMMARY	v
CHAPTER ONE INTRODUCTION	1
1.1 STRATEGY AS AN IMPERATIVE FOR ORGANISATION SUCCESS	1
1.2 THE CONTEXT OF STRATEGIC PLANNING	2
1.2.1 United Nations 2030 Agenda for Sustainable Development	2
1.2.2 African Union’s Agenda 2063	4
1.2.3 East Africa Community Vision 2050.....	5
1.2.4 Constitution of Kenya.....	5
1.2.5 Kenya Vision 2030, Bottom- Up Economic Transformation Agenda and Fourth Medium Term Plan.....	6
1.2.6 Sector Policies and Laws	7
1.3 HISTORY OF NBA	8
1.4 METHODOLOGY OF REVISING THE STRATEGIC PLAN	8
CHAPTER TWO STRATEGIC DIRECTION	10
2.1 MANDATE	10
2.2 VISION STATEMENT	11
2.3 MISSION STATEMENT	11
2.4 CORE VALUES	11
2.4.1 Good governance and integrity.....	11
2.4.2 Professionalism	11
2.4.3 Customer focus.....	11
2.4.4 Inclusiveness	11
2.4.5 Accountability	12
2.5 QUALITY POLICY STATEMENT	12
CHAPTER THREE	13
SITUATIONAL AND STAKEHOLDER ANALYSES	13
3.1 SITUATIONAL ANALYSIS	13
3.1.1 External Environment.....	13
3.1.1.1Macro Environment.....	13
3.1.1.2Micro Environment.....	14
3.1.2 Summary of Opportunities and Threats.....	15
Table 3.1: Summary of Opportunities and Threats	15
3.1.3 Internal Environment	16
3.1.3.2Internal Business Processes.....	17

3.1.3.3Resources and Capabilities	19
3.1.4 Summary of Strengths and Weaknesses	19
3.1.5 Analysis of Past Performance	20
3.1.5.3Lessons Learnt	23
3.2 STAKEHOLDER ANALYSIS	25
CHAPTER FOUR.....	29
STRATEGIC ISSUES, GOALS, AND KEY RESULT AREAS.....	29
4.1 STRATEGIC ISSUES.....	29
4.2 STRATEGIC GOALS	30
4.3 KEY RESULT AREAS	30
CHAPTER FIVE.....	32
STRATEGIC OBJECTIVES AND STRATEGIC CHOICES	32
5.1 STRATEGIC OBJECTIVES	32
5.2 STRATEGIC CHOICES.....	34
CHAPTER SIX.....	36
IMPLEMENTATION AND COORDINATION FRAMEWORK.....	36
6.1 IMPLEMENTATION PLAN.....	36
6.1.1 Action Plan.....	36
6.1.2 Annual Work plan and Budget.....	62
6.1.3 Performance Contracting	62
6.2 COORDINATION FRAMEWORK.....	62
6.2.1 Institutional Framework	63
1. Office of the Chief Executive Officer	63
2. Directorate of Biosafety Research & Compliance	64
3. Biosafety & Biotechnology Development Directorate	65
4. Corporate Services Directorate.....	66
5. Corporation Secretary and Legal Services.....	66
6. Strategy and Planning	67
7. Internal Audit Directorate	68
6.2.2 Staff Establishment, Skills Set and Competence Development	69
6.2.3 Leadership	72
6.2.4 Systems and Procedures	72
6.3 RISK MANAGEMENT FRAMEWORK.....	74
CHAPTER SEVEN.....	77
RESOURCE REQUIREMENTS AND MOBILIZATION STRATEGIES	77
7.1 FINANCIAL REQUIREMENTS	77
7.2 RESOURCE MOBILIZATION STRATEGIES	78
7.3 RESOURCE MANAGEMENT	79
CHAPTER EIGHT.....	80
MONITORING, EVALUATION AND REPORTING FRAMEWORK.....	80
8.1 MONITORING FRAMEWORK.....	80
8.2 PERFORMANCE STANDARDS.....	80

8.3	EVALUATION FRAMEWORK	81
8.3.1	End-Term Evaluation	81
8.4	REPORTING FRAMEWORK AND FEEDBACK MECHANISM	85
ANNEXES		79
ANNEX I: NBA ORGANIZATION STRUCTURE		79
ANNEX II: STRATEGIC THEME TEAMS		80

LIST OF TABLES

Table 3.1:	Summary of Opportunities and Threats	14
Table 3.2:	Summary of Strengths and Weaknesses	19
Table 3.3:	Stakeholders Analysis	25
Table 4.1:	Strategic Issues, Goals and KRAs	30
Table 5.1:	Outcomes Annual Projections	32
Table 5.2:	Strategic Objectives and Strategies	34
Table 6.1:	Implementation Matrix	36
Table 6.2:	Staff Establishment	61
Table 6.3:	Skill Set and Competence Development	62
Table 6.4:	Risk matrix	66
Table 6.5:	Risk Management Framework	67
Table 7.1:	Financial Requirements for Implementing the Strategic Plan	69
Table 7.2:	Resource Gaps	69
Table 8.1:	Outcome Performance Matrix	74
Table 8.2:	Quarterly Progress Reporting Template	78
Table 8.3:	Annual Progress Reporting Template	78
Table 8.4:	Evaluation Reporting Template	78

LIST OF FIGURES

Figure 3.1:	NBA's value chain	18
-------------	-------------------	----

FOREWORD

Among the many challenges the world faces, food security stands out as a persistent concern, heightened by the ever-growing global population. On account of a rapidly growing population and the quest for sustainable solutions to feed a hungry world, the paths of scientific exploration and agriculture converged, as scientists delved into innovative methods to enhance agricultural productivity. Enter the era of Modern Biotechnology, where the genetic makeup of organisms could be altered through genetic engineering, ushering in a new wave of possibilities.

However, amidst the promises of increased food production and scientific breakthroughs, concerns arose regarding the safety of these genetically modified organisms (GMOs). The manipulation of genetic material through biotechnological procedures brought forth questions about potential risks to human health, animal health and the environment. Recognizing the need for a regulator in this landscape, the National Biosafety Authority (NBA) was established by the Parliament of Kenya through the Biosafety Act No. 2 of 2009.

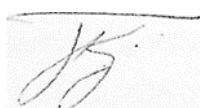
Under the provisions of the establishing Act, NBA exists to exercise general supervision and control over the transfer, handling and use of genetically modified organisms with a view of ensuring the safety of human and animal health, and provision of adequate level of protection of the environment. This is a mandate the Authority is committed to carry out.

The review of NBA's Strategic Plan (2020-2025) is an assertion of our commitment to meeting our mandate. This revision was also a strategic necessity to align our endeavours with pertinent and current policies, including global, regional and national development agendas, ensuring alignment with the Government's Bottom-Up Economic Transformation Agenda for Inclusive Growth.

As we navigate the remaining two years of the implementation timeline, this Strategic Plan will serve as our guide, providing direction and focus to the implementation of NBA's endeavours. By relying on this roadmap, we position ourselves to anticipate, adapt, and effectively address emerging challenges in the biosafety domain.

The Board of Directors is committed to supporting management in the implementation of this Strategic Plan. In doing so, the Board will work with all relevant parties including the Ministry of Agriculture and other departments to ensure successful implementation. Within the Authority, the Board will establish a supportive institutional framework empowering the staff to carry out their responsibilities effectively for the successful implementation of the plan.

I call upon everyone involved in the implementation process to step forward in ensuring the success of the Strategic Plan in the remaining phase.



Prof. Jenesio I. Kinyamario, Ph. D, MEIK, OGW, FWIF.

Chairperson, Board of Directors

ACKNOWLEDGEMENT

We would like to express our sincere gratitude to the Ministry of Agriculture, our Board of Directors, the University of Nairobi, the Program for Biosafety System (PBS), staff and other stakeholders for their input in the development of this strategic plan.

We would also like to express our gratitude to our hardworking team of specialists, whose knowledge, enthusiasm, and dedication were invaluable in creating this thorough roadmap. Their unwavering work and spirit of cooperation have made sure that our strategic plan is in line with the Government's Bottom-Up Economic Transformation Agenda, and our goal of championing for a biosafe nation.

We are indebted to all our collaborators, partners, and stakeholders for their invaluable suggestions, encouragement, and insights that have enhanced this document. Their participation and collaboration have been crucial in developing strategies to meet the changing opportunities and challenges in biosafety.

We also want to express our gratitude to the community's members; whose faith and confidence encourage us to aim for perfection in everything we do. Their opinions and contributions have been crucial in forming our vision for a more secure and healthful future.

Finally, but just as importantly, we would want to thank everyone who has helped to advance biosafety around the globe. Your commitment to research, invention, and international cooperation is crucial to our shared goal of building a safe and resilient bioeconomy.

In order to accomplish our common objectives and have a beneficial influence on society, we are dedicated to working together to implement this strategic plan with dedication, integrity, and responsibility.



Dr. Roy B. Mugiira, Ph. D, MRSB. Chief

Executive Officer

CONCEPTS AND TERMINOLOGIES

Applicant: a person submitting an application pursuant to the provisions of Biosafety Act, 2009

Authority: The National Biosafety Authority

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

Biosafety: the avoidance of risk to human health and safety, and the conservation of the environment, as a result of the use of genetically modified organisms

Contained use: any activity undertaken within a facility, installation or other physical structure which involves genetically modified organisms that are controlled by specific measures

Genetically modified organism (GMOs): any organism that possesses a novel combination of genetic material obtained through the use of modern biotechnology techniques

Indicator: a means for measuring progress/change that results from an intervention. It measures a change in a situation or condition and confirms progress towards achievement

Key Performance Indicator (KPI): a measurement that evaluates the success of an organization or of a particular activity in which it engages

Key Result Area (KRA): key areas in which an organization must excel in order to achieve its mission and vision, and deliver value to customers

Modern Biotechnology: includes the application of—in-vitro nucleic acid techniques including the use of recombinant deoxyribonucleic acid (DNA) and direct injection of nucleic acid into cells or organelles; or fusion of cells beyond the taxonomic family, that overcome natural physiological, reproductive and recombination barriers and which are not techniques used in traditional breeding and selection

Outcome: intermediate results generated relative to the objective of the intervention. It describes the actual change in conditions/situation as a result of an intervention

Strategic Issues: fundamental policy choices, critical challenges/gaps or opportunities that must be addressed or tapped for the organization to achieve its vision. They are the foundation upon which strategies are developed

Strategic Objective: specifies what an organization expects to fulfil within a given period

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

AATF	African Agricultural Technology Foundation
A-I-A	Appropriations in Aid
AU	African Union
AUDA-NEPAD	African Union Development Agency
BCH	Biosafety Clearing House
BeTA	Bottom-up Economic Transformation Agenda
CSR	Corporate social responsibility
EDMS	Electronic Document Management System
EMCA	Environmental Management and Coordination Act
ERP	Enterprise resource planning
FAQ	Frequently Asked Question
GMOs	Genetically Modified Organisms
HODs	Heads of Directorates/Departments
IBCs	Institutional Biosafety Committees
ICIPE	International Centre of Insect Physiology and Ecology
ILRI	International Livestock Research Institute
ISAAA	Acquisition of Agri-biotech Applications
ISO	International Organization for Standardization
JKUAT	Jomo Kenyatta University of Agriculture and Technology
KALRO	Kenya Agricultural and Livestock Research Organization
KEPHIS	Kenya Plant Health Inspectorate Service
KPIs	Key Performance Indicators
KRA	Key Result Area
LLP	Low-Level Presence
MEL	Monitoring, Evaluation, Learning
MOP	Meeting of the Parties
MTEF	Medium-Term Expenditure Framework
MTP	Medium-Term Plan
NBA	National Biosafety Authority
NRF	National Research Fund
PESTELE	Political, Economic, Social, Technological, Ecological, Legal and Ethical
QMS	Quality Management System
R&D	Research and Development
SCAC	State Corporations Advisory Committee
SDGs	Sustainable Development Goals
SOPs	Standard Operating Procedures
USAID	United States Agency for International Development

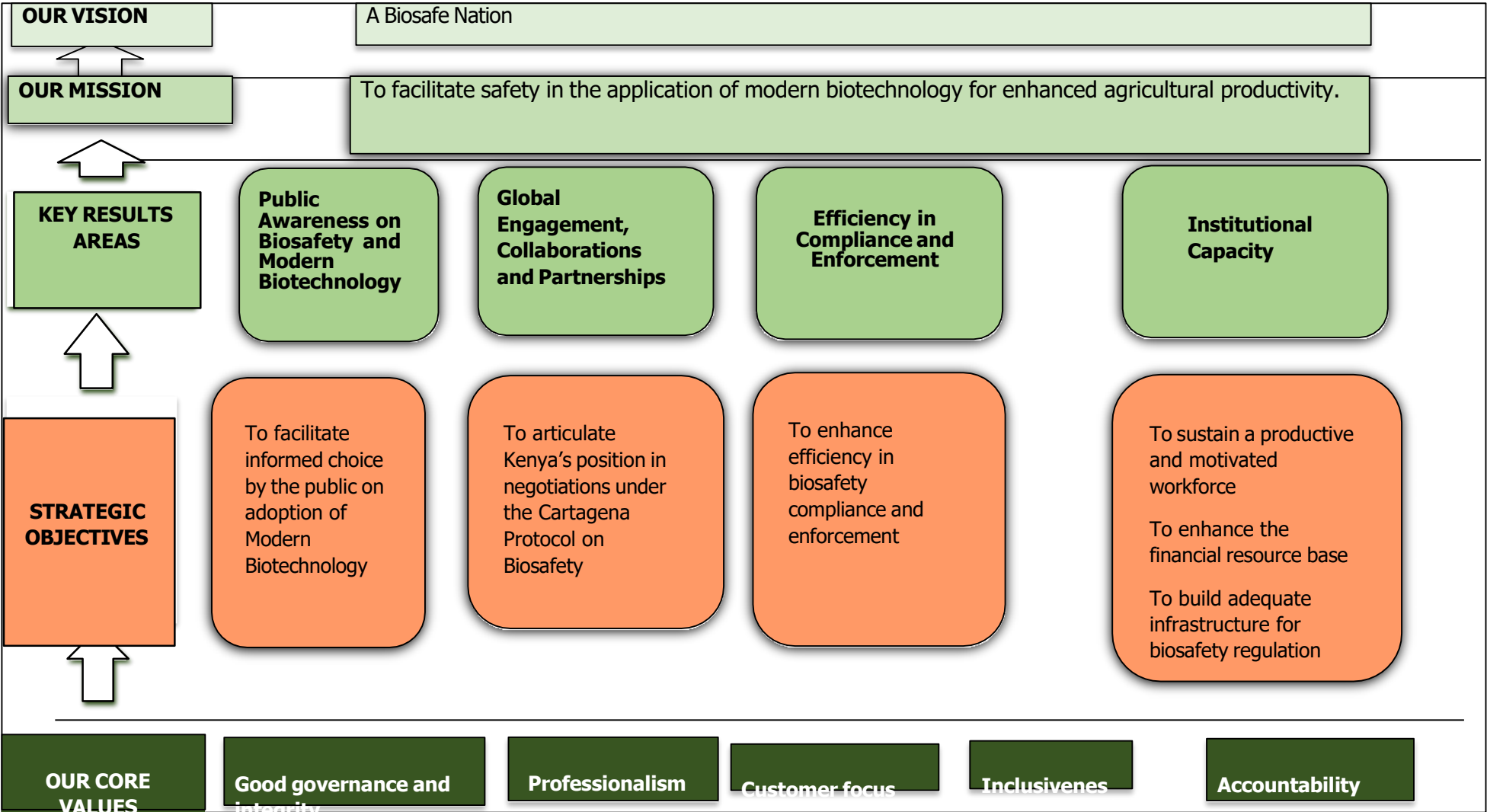
EXECUTIVE SUMMARY

The National Biosafety Authority (NBA) was established by the Biosafety Act No. 2 of 2009. The overall mandate of Authority is to exercise general supervision and control over the development, transfer, handling, and use of genetically modified organisms (GMOs) to ensure the safety of human and animal health and provide adequate protection of the environment. This includes all activities of GMO for food, feed, industrial, research, or any other use. To achieve this objective, the Authority has established a transparent science-based and predictable process to guide decision making on applications for approval of research and commercial activities involving GMOs.

The mid-term review of the 2020-2025 strategic plan was conducted to assess the level of implementation as at 2023, identify challenges and achievements. In addition, the revised Strategic Plan was guided by the revised guidelines for the preparation of fifth-generation strategic plans, 2023 to 2027. The Revised Strategic Plan (2020-2025) has been aligned with the UN Sustainable Development Goals (SDGs), Cartagena Protocol on Biosafety ratified in 2003, the African Union's Agenda 2063, East African Community Vision 2050, Kenya Vision 2030 and The Fourth Medium Term Plan (MTP IV), Bottom- Up Economic Transformation Agenda (BETA), The Constitution 2010 and sector policies and laws.

In developing this Revised Strategic Plan, a review of the vision, mission and core values was undertaken and situational analysis was carried out, which entailed an evaluation of past performance and an environmental scan of NBA's internal and external operating environments. Out of this analysis and in line with NBA's mandate, four key result areas were identified namely: public awareness on biosafety and Modern Biotechnology; Global engagement, Collaborations and Partnerships; Efficiency in Compliance and Enforcement; and institutional capacity building. The identified strategic key result areas formed the basis of setting the objectives and developing a strategic map for NBA as presented in Figure 1.

NATIONAL BIOSAFETY AUTHORITY STRATEGIC MAP



CHAPTER ONE

INTRODUCTION

This chapter contains an overview of the importance of strategy for organizational success. It explores the national development priorities, regional and international development frameworks that align with National Biosafety Authority (NBA) mandate, and how the Strategic Plan will actively contribute to the achievement of these priorities. Additionally, the chapter outlines the background of the institution and the methodology employed in the development of this Revised Strategic Plan.

1.1 STRATEGY AS AN IMPERATIVE FOR ORGANISATION SUCCESS

The National Biosafety Authority is a State Corporation established by the Biosafety Act No. 2 of 2009 to exercise general supervision and control over the transfer, handling and use of genetically modified organisms (GMOs) in Kenya. The Authority regulates research and commercial activities involving GMOs with a view of ensuring safety of human and animal health and provision of an adequate level of protection of the environment.

The Government of Kenya approved the National Biotechnology policy in 2006 and enacted the Biosafety Act in 2009. The Biosafety Act has been operationalized by the following regulations; the Biosafety (Contained use) Regulations, 2011; the Biosafety (Environmental Release) Regulations, 2011; the Biosafety (Import, Export, and Transit) Regulations, 2011; and the Biosafety (Labelling) Regulations, 2012. Additionally, the Biosafety Act was revised in 2018.

The Authority has identified Key Result Areas namely: Public Awareness on Biosafety and Modern Biotechnology, to address visibility of the organization and the science of modern biotechnology, as well as raise positive public perception in adoption of biotechnology; Global engagement, Collaborations and Partnerships, to articulate Kenya's position in negotiation's under the Cartagena Protocol on Biosafety; Efficiency in compliance and enforcement to ensure approved and safe GMO and their derived products on the market and legally compliant, research projects and all other dealings in GMO; Institutional Capacity Building to facilitate development and applications of

safe biotechnologies through enhanced staff and financial capacities as well as partnerships and collaborations.

This Strategic Plan is anchored on the Bottom-up Economic Transformation Agenda (BeTA) as the current National Development agenda, the Executive Order No.1 of 2023 and safe use of GMOs in Kenya. The Strategic Plan has also factored in the challenges identified and lessons learnt during the mid-term review process. The implementation of this plan will guide the Authority towards realizing the desired strategic direction in the next phase, 2023-2025. The Strategic Plan review underscores the Authority's commitment towards sustainable agriculture and value addition.

1.2 THE CONTEXT OF STRATEGIC PLANNING

This Revised Strategic Plan has been aligned with the following global, regional and national development priorities

1.2.1 United Nations 2030 Agenda for Sustainable Development

The Authority is committed to support the Government to implement the United Nations' 2030 Agenda for Sustainable Development, including the Sustainable Development Goals (SDGs) adopted by the UN General Assembly on 25 September 2015. The Authority will contribute towards the achievement of the following relevant SDGs;

S/No	SDGs	Target	Initiatives/Actions
Goal 1	No Poverty	End poverty in all its forms everywhere	Timely review and making of decisions of modern biotechnology applications that address various agricultural constraints and increase productivity per unit area. Creation of employment opportunities in Bt cotton and other GM crops value chain
Goal 2	Zero Hunger	End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	Timely review and making of decisions of modern biotechnology applications that address agricultural constraints and increase productivity Approval of in-built pest resistance ensure less usage of

			pesticide chemicals and promote sustainable agriculture
Goal 3	Good Health and Well-being	Ensure healthy lives and promote wellbeing for all at all ages	Putting up robust regulatory systems that ensures only safe and approved modern biotechnologies, that meet both international and national standards of food and environmental safety, are released to farmers and consumers
Goal 8	Decent Work and Economic Growth	Promote sustained, inclusive and sustainable economic growth, full and productive employment, decent work for all	Creation of employment opportunities for women, youthful population and local communities in Bt cotton and other GM crops value chain Streamline terms of employment as per approved HR instruments with decent remuneration and proper working conditions to attract and retain staff across different cadres.
Goal 15	Life on Land	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation, and halt biodiversity loss	Establish a transparent and science-based risk assessment, socio-economic impact assessment, public participation, monitoring, market surveillance and testing system of genetically modified organisms and related activities that ensures and assures safety of humans, animals and protection of the environment, comparable to existing technologies

The Authority will contribute to these SDGs through putting up of regulatory systems that ensures only safe and approved biotechnologies, that meet both international and national standards of food and environmental safety, are released to farmers and

consumers. NBA has established a transparent and science-based risk assessment, socio-economic impact assessment, public participation, monitoring, market surveillance and testing system of genetically modified organisms and related activities that ensures and assures safety of humans, animals and protection of the environment, comparable to existing technologies.

1.2.2 African Union's Agenda 2063

The African Union (AU) Agenda 2063 lays down a master-plan for transforming Africa into a global powerhouse. It outlines the path on how the continent can achieve the Pan African vision of an integrated, prosperous, and peaceful Africa, driven by its citizens, representing a dynamic force in the international arena. The Authority will contribute to the following Agendas of the African Union:

i. Agricultural Transformation: Agenda 2063 recognizes agriculture as a key driver of economic growth, food security, and poverty reduction. It emphasizes the importance of modernizing agricultural practices, improving productivity, promoting sustainable farming techniques, and enhancing value chains across the continent.

ii. Climate Change Resilience: Agenda 2063 highlights the importance of adapting to and mitigating climate change in agriculture and ensuring the resilience of food systems.

iii. Enhancing Seed Systems: The Agenda envisions Africa to be without any form of food or nutrition insecurity and hunger by 2025. Measures will be adopted that lead to food sovereignty by supporting women's capacity to produce safe, nutritious and culturally acceptable foods, promoting research in local seeds systems and farming methods, protection of indigenous seeds and knowledge technologies, establishment of local seed banks and ensuring access to natural resources by women farmers.

iv. Strengthening Agricultural Research and Innovation: Agenda 2063 emphasizes the importance of investing in agricultural research and innovation which includes research on seed breeding, crop improvement, and the development of innovative farming techniques suited to local conditions.

The Authority will play its role in providing efficient and effective regulatory oversight during research and development, transfer, use and deployment of modern

biotechnologies such as genetically modified crops, animals and microbes and products developed through new and emerging technologies such as genome editing. These crops, animals and microbes have been improved to be resistant to pests and diseases and adaptable to drought and other abiotic stresses, and NBA will facilitate their assessment and approval.

1.2.3 East Africa Community Vision 2050

Agriculture, Food Security and Rural Development is the second pillar of the Vision 2050. The overarching goal of the pillar is increased investment and enhanced agricultural productivity for food security and a transformation of the rural economy. Specific targets relevant to NBA's mandate include:

- i. Modernizing Agriculture:** Partner States will continue to increase investment for transformation of agriculture through mechanization, irrigation, improved seeds and use of fertilizers among others in order to ensure increased productivity for food security as well as economic prosperity for the citizenry.
- ii. Food Security and Nutrition:** Strengthening policies and frameworks are imperative for improving food security. The region is committed to spending at least 10 percent of national budgets on agriculture development pursuant to Maputo Declaration on Food Security and Agriculture as well as the Malabo Declaration on accelerated agricultural growth and transformation.

NBA will contribute in the above targets through development and implementation of facilitative policies and enabling laws on modern technologies that ensure sustained supply of improved GM seeds and other planting materials contributing to food security and nutrition; as well as economic prosperity for the citizenry.

1.2.4 Constitution of Kenya

A number of provisions in the Constitution of Kenya 2010 recognize the role of science and technology in development as well as protection of fundamental rights and freedoms of Kenyans against violations in areas some of which are pertinent to the mandate of the National Biosafety Act. The constitutional provisions include Article 11 (2) which obligates the government to recognize and promote the role of science and technology in the development of the nation including the ownership of indigenous

seeds and plant varieties and their genetic and diverse characteristics. Article 42 guarantees every Kenyan the right to a clean and healthy environment while Article 43 requires the government to devise mechanisms that assure Kenyans of freedom from hunger and provision of adequate food of acceptable quality. Article 46 is designed to ensure programmes that guarantee protection of the health, safety and economic interest of Kenyans while Article 69 confers a number of obligations on the government to ensure sustainable utilization and sharing of biodiversity and elimination of processes and activities that are likely to endanger the environment, among others. The National Biosafety Authority is a statutory body bound under Article 2 and 3 to respect and uphold the Constitution and therefore execute its mandate of supervision and control over the transfer, handling and use of genetically modified organisms with a view to ensuring safety of human and animal health and provision of an adequate level of protection of the environment.

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

Vision 2030 is Kenya's long-term development blueprint aimed at transforming the country into a globally competitive and prosperous nation by the year 2030. NBA plays a vital role in contributing to the realization of Vision 2030 by focusing on biosafety, biotechnology, and sustainable agricultural practices. The Authority plays a crucial role in fostering responsible biotechnology and biosafety practices, which have the potential to contribute significantly to various aspects of Vision 2030, including economic growth, food security, healthcare, environmental sustainability, and technological advancement. Its efforts are essential in aligning the country's development goals with the responsible use of biotechnology for the benefit of Kenya's citizens and its long-term vision for the future.

The National Biosafety Authority in Kenya will contribute to the Bottom-Up Economic Transformation Agenda in several ways by fostering sustainable economic growth and development at the grassroots level. BeTA is an initiative aimed at empowering local communities, promoting entrepreneurship, and reducing poverty through various economic activities. The Authority shall contribute to the Bottom-Up Economic Transformation Agenda in Kenya by fostering innovation, supporting local

communities, promoting agricultural transformation, enhancing food security, and attracting investment in biotechnology. By ensuring safe and responsible biotech practices, the NBA can facilitate economic growth while safeguarding the environment and public health.

The National Biosafety Authority in Kenya plays a significant role in contributing to the realization of the Medium-Term Plan IV (MTP IV), which is part of Kenya's long-term development agenda. The Authority's role in regulating biosafety, biotechnology, and GMOs aligns with several key pillars and objectives of Kenya's Medium-Term Plan IV, including agriculture transformation, environmental sustainability, economic growth, food security, healthcare, innovation, and international collaboration. By promoting responsible and safe use of biotechnology, the NBA contributes to Kenya's sustainable development goals outlined in MTP IV.

1.2.6 Sector Policies and Laws

In line with the Constitution, the Cartagena Protocol on Biosafety and the National Policy on Science and Technology, the Biosafety Act, No.2 of 2009 was enacted to establish the National Biosafety Authority to exercise general supervision and control over the development, transfer, handling and use of Genetically Modified organisms to ensure safety of human and animal health and provide adequate protection of the environment.

Biosafety Act, No.2 of 2009 outlines the operational jurisdiction of the Authority and identifies Regulatory Agencies that the Authority is required to maintain a consultative relationship with in matters of biosafety such as environmental protection, standards development, pest control, plant health and public health. To achieve this, the Authority recognizes other legislation as being key. These include the Standards Act, the Seeds and Varieties Act, Industrial Property Act, Environmental Management and Co-ordination Act, Public Health Act and Wildlife Conservation and Management Act.

The Cartagena Protocol was ratified by the government in 2003 and domesticated into the Kenyan legislative framework on biosafety in 2009. The Strategic Plan thus is aligned with the legislative framework on biosafety framework and the provisions are consistent with the Cartagena Protocol and the Biosafety Act, 2009.

1.3 HISTORY OF NBA

The National Biosafety Authority was established by the Biosafety Act No. 2 of 2009 to exercise general supervision and control over the transfer, handling and use of genetically modified organisms (GMOs). GMOs are products of modern biotechnology that involve the manipulation of the genetic material of organisms through genetic engineering procedures.

Kenya is a signatory to the Cartagena Protocol on Biosafety having signed in the year 2000 followed by ratification in 2003. The government of Kenya approved the National Biotechnology Policy in 2006 which provided policy direction in the safe application of biotechnology in the country. The Authority also serves as the focal point to the Cartagena Protocol on Biosafety.

Under the Biosafety Act the following regulations have been developed; The Biosafety (contained use) Regulations, 2011; the biosafety (Environmental Release) Regulations, 2011; the Biosafety (Import, export, and Transit) Regulations, 2011; and the Biosafety (Labelling) Regulations, 2012. National Biosafety Authority is housed in the Ministry of Agriculture and Livestock Development under the State Department for Agriculture as per Executive Order No.1 of 2023.

1.4 METHODOLOGY OF REVISING THE STRATEGIC PLAN

In reviewing this Strategic Plan, NBA was guided by the revised guidelines for the preparation of fifth-generation strategic plans, 2023 to 2027. The review of the Strategic Plan (2020-2025) was necessitated by the need to comply with the revised guidelines and evaluation of the progress made in the implementation of the Strategic Plan, to identify challenges and lessons learnt. The revised Strategic Plan will cover the period 2023 to 2025. The rationale and scope were documented as terms of reference that guided the process and a technical committee. The technical committee developed a costed roadmap and/action plan for review of the Strategic Plan. A strategic framework to guide the preparation of the revised Strategic Plan was developed and a consultant engaged to assist in the process. The review process entailed aligning the Strategic Plan (2020 to 2025) with the guidelines and incorporating changes in NBA's operating environment.

The context of the revised Strategic Plan was defined by undertaking a comprehensive analysis of the UN Sustainable Development Goals (SDGs), Cartagena Protocol on Biosafety ratified in 2003, the African Union's Agenda 2063, East African Community Vision 2050, Kenya Vision 2030 and The Fourth Medium Term Plan (MTP IV), Bottom-Up Economic Transformation Agenda, The Constitution 2010 and sector policies and laws. A clear demonstration of the NBA's contribution towards the realization of the aspirations of the identified frameworks and their linkage with the National Development priorities has been incorporated.

The Strategic Plan review was conducted through an extensive participatory process involving the Board, management team, staff and other key stakeholders. A participatory process was used to ensure ownership and to enhance effectiveness and efficiency in the implementation of the plan.

The draft revised Strategic Plan (2023 to 2025) was subjected to public participation and validation by various stakeholders to ensure its comprehensiveness.

CHAPTER TWO

STRATEGIC DIRECTION

This chapter provides an overview of National Biosafety Authority, covering its mandate, vision, mission, strategic goals, core values, and quality policy statement.

2.1 MANDATE

The mandate of the National Biosafety Authority is to exercise general supervision and control over the transfer, handling and use of genetically modified organisms with a view to ensuring safety of human and animal health and provision of an adequate level of protection of the environment. The functions of NBA as contained in the Act, 2009 are as follows:

- i.** Consider and determine applications for approval for the development, transfer, handling and use of genetically modified organisms, and related activities in accordance with the provisions of the Biosafety Act;
- ii.** Co-ordinate, monitor and assess activities relating to the safe development, transfer, handling and use of genetically modified organisms in order to ensure that such activities do not have adverse effect on human health and the environment;
- iii.** Co-ordinate research and surveys in matters relating to the safe development, transfer, handling and use of genetically modified organisms, and to collect, collate and disseminate information about the findings of such research, investigation or survey;
- iv.** Identify national requirements for manpower development and capacity building in biosafety;
- v.** Advise the Government on legislative and other measures relating to the safe development, transfer, handling and use of genetically modified organisms;
- vi.** Promote awareness and education among the general public in matters relating to biosafety; and
- vii.** Establish and maintain a biosafety clearing house (BCH) to serve as a means through which information is made available to facilitate exchange of scientific,

technical, environmental and legal information on, and experience with, living modified organisms;

- viii. Perform any other function which is incidental to the performance of any of the foregoing functions.

2.2 VISION STATEMENT

A Biosafe Nation.

2.3 MISSION STATEMENT

To facilitate safety in the application of modern biotechnology for enhanced agricultural productivity.

2.4 CORE VALUES

2.4.1 Good governance and integrity

The Authority embraces and practices good corporate governance. The Authority shall ensure that all processes and procedures are carried out with efficiency, effectiveness, and are morally sound and ethical.

2.4.2 Professionalism

NBA prioritises building and maintaining a highly-skilled, diverse, and compassionate workforce.

2.4.3 Customer focus

NBA is committed to serving its constituents by delivering programs that address their diverse needs.

2.4.4 Inclusiveness

The Authority embraces corporate social responsibility and shall ensure that all decisions and actions are marked by human dignity, equity, social justice, inclusiveness, equality, human rights, non-discrimination, and protection of the marginalized. The Authority shall also embrace environmental sustainability through the sustainable utilization of natural resources.

2.4.5 Accountability

NBA takes responsibility and is answerable for their actions and decision.

2.5 QUALITY POLICY STATEMENT

NBA is committed to being a world-class biosafety agency that meets and exceeds expectations of its clients and other stakeholders to ensure and assure safety of human and animal health as well as the provision of adequate level of protection to the environment. The Authority shall comply with Quality Management System (QMS) based on ISO 9001:2015 Standard and other requirements. To deliver on its mandate, the Authority shall ensure that:

- i.** An effective Quality Management System is established, implemented and continually improved;
- ii.** A level of quality that enhances its image is maintained; and
- iii.** Relevant statutory, regulatory requirements and best practices are complied with.

The Authority shall ensure that quality objectives associated with this policy are established and reviewed periodically for continued suitability, taking into account changes in the Quality Management System and other relevant practice

CHAPTER THREE

SITUATIONAL AND STAKEHOLDER ANALYSES

This chapter provides an overview of the current landscape and key stakeholders of NBA. It entails analysis of the current operating environment of NBA and identifies the key stakeholders who will be affected by the Revised Strategic Plan. The analysis will help NBA isolate its strengths and weaknesses, the opportunities and threats in the environment, and the needs of its stakeholders.

3.1 SITUATIONAL ANALYSIS

There exist factors in the external and internal environments that affect the operations of NBA. In the external environment there are macro and micro factors including political, economic, social, technological, ecological and legal factors which determine how operations at NBA are undertaken. This necessitates an analysis of strengths and weaknesses in the governance and administrative structures, internal business processes, resources, and capabilities. It also requires an analysis of past performance to identify the key achievements, challenges and lessons learnt in order to improve the delivery of services by NBA.

3.1.1 External Environment

A broad Political, Economic, Social, Technological, Ecological, Legal and Ethical (PESTEL) scan was undertaken to describe the circumstances under which NBA operates to be able to appreciate the factors that will either support or impede the process of implementing the Strategic Plan. The factors have been grouped into two, micro and macro environment as discussed in the section that follow.

3.1.1.1 Macro Environment

Regarding political factors, the change in Government from one administration to another presents threats of policy reviews and orientations that necessitates realignment of programs. The political stability witnessed in the recent past allows NBA to operate in all targeted areas. Government has also demonstrated goodwill by lifting the ban on GMOs and provision of budget to support NBA operations.

Economically, the Kenyan economy is projected to grow following interventions such as the introduction of farm inputs subsidies and the relaxation of COVID-19 measures. However, inadequate funding by the government and low A-I-A collections have led to the scaling down of various programs, such as public awareness, monitoring, and GMO market surveillance. Socially, the high rate of population growth, largely comprising of young people, presents opportunities for the quick adoption of new technologies in farming. However, rapid rural-urban migration and misinformation about GMOs pose threats to the adoption of modern biotechnologies, which are largely agricultural and rural-based.

Technologically, the rapid emergence of modern biotechnologies offers opportunities for oversight through regulatory systems. The digitization of government services through the E-Citizen platform also offers opportunities for increasing the efficiency of offering NBA services as well as increasing A-I-A. Social media platforms such as Facebook, Twitter, and Instagram have also offered opportunities for disseminating biosafety information in real time, although these platforms have also been misused to spread misinformation by various groups.

Ecologically, the effects of climate change and the rapid emergence of new plant and animal pests and diseases have led to the need for research and development of adaptable technologies that require effective regulations that are environmentally friendly and safe.

3.1.1.2 Micro Environment

Kenya has a well-educated and trained workforce, which provides a good pool of skilled labour in biotechnologies and other disciplines. The high inflation rates has had negative impact on supplies of various goods and services due to increased costs than earlier budgeted for.

Due to overlapping laws on GMOs which are implemented by various Agencies, the decision-making processes are un-predictable to GMO Applicants and increases regulatory costs on deployment of biotechnologies. Further, following the lifting of the ban on GMOs in October 2022, there has been numerous petitions in Court with conservatory orders already issued suspending the cabinet decision. This has affected the implementation of the Biosafety Act by NBA. However, the fact that NBA was created by an Act of Parliament and the Government's goodwill to align laws present opportunities to address the legal threats.

3.1.2 Summary of Opportunities and Threats

Based on the analysis of external environment, NBA summary of opportunities and threats are as shown in Table 3.1.

Table 3.1: Summary of Opportunities and Threats

Environmental Factor	Opportunities	Threats
Political	<ul style="list-style-type: none"> • Goodwill from Government • Political stability 	<ul style="list-style-type: none"> • Change in Political regimes causing policy re-orientation
Economic	<ul style="list-style-type: none"> • Positive long-term outlook of economic growth • Availability of skilled and well-trained human resource • Increased demand for innovative technologies 	<ul style="list-style-type: none"> • High cost of doing business • Fluctuations in inflation and exchange rates • Budget cuts due to austerity measures adopted by the Government
Social	<ul style="list-style-type: none"> • High rate of population growth • Youthful population 	<ul style="list-style-type: none"> • Rural urban migration • Misinformation of the public on GMOs
Technological	<ul style="list-style-type: none"> • Rapid evolution of modern biotechnologies • Digitization of Government services • Evolution of social media for mass communication 	<ul style="list-style-type: none"> • Increased appreciation of new biotechnologies and innovations • Cyber security threats leading to loss of data, hacking of systems. • False information through social media platforms
Legal	<ul style="list-style-type: none"> • NBA created by an Act of Parliament • Goodwill of the government to support review of Biosafety Act 	<ul style="list-style-type: none"> • Conflicting and overlapping legal provisions and mandates on GMOs • Litigations
Ecological	<ul style="list-style-type: none"> • Climate change that demand require adaptable technologies • Increased awareness on environmental rights 	<ul style="list-style-type: none"> • Emergence of new pests and diseases in the tropics • Adverse climatic changes

3.1.3 Internal Environment

3.1.3.1 Governance and Administrative Structures

The Board of Directors is the top organ that provides the overall oversight over the management of the Authority. The Board provides strategic direction, exercises control and remains accountable through effective leadership, enterprise, integrity and good judgment. It is diverse in its composition, independent but flexible, pragmatic, objective and focused on balanced and sustainable performance of the Authority. The Board is composed of nine members who include four independent members, four institutional members and the Chief Executive Officer as an ex-officio member. The Board is structured into committees that closely examine various aspects of the Authority's operations and provide regular reports to the full Board. These committees are: the Audit Committee whose primary focus is on oversight and is responsible for reviewing the activities of the Authority's Management to ensure they align with the Authority's policies, government directives and legal provisions; the Finance and Administration Committee which scrutinizes the activities of the Authority's Management to ensure they adhere to principles of financial prudence and administrative efficiency and the Technical Committee which assesses the Authority's Management activities related to the implementation of the Authority's core mandate. It ensures that these activities align with the provisions of the Biosafety Act and relevant international conventions and protocols on Biosafety matters.

The Management of the Authority is headed by the Chief Executive Officer, who ensures effective and efficient management of the Authority's day-to-day operations. The Chief Executive Office is assisted by six Directorates which report to him: The Directorate of Corporate Services, Legal Services/Corporation Secretary, Internal Audit and Risk Assurance, Corporate Strategy and Planning, Biosafety and Biotechnology Development and Biosafety Research and Compliance. However, the Corporation Secretary and Internal Audit and Risk Assurance functions have a dual reporting mandate, functionally to the Board and administratively to the Chief Executive Officer.

The Authority has various policies that govern its internal management affairs. These include Mwongozo the Code of Governance for State Corporations, a 'critical building

block in entrenching principles and values of public service and best practices in corporate governance' and the Human Resource Policy and Procedures Manual which constitute policies and procedures covering practically all aspects of human resources and employment regulations to support service delivery, commitments and obligations of the Authority.

3.1.3.2 Internal Business Processes

The National Biosafety Authority has put in place systems that guide the implementation of its core mandate. The Authority conducts its operations as stipulated in the Biosafety Act, 2009. The Authority transitioned from being ISO certified 9001:2008 to 9001:2015. The Authority developed various policies and procedures as well as manuals for various departments that have continued to provide a road map for day to day operations. Additionally, NBA ensures compliance with laws and regulations, give guidance for decision making and streamline internal processes. All the departments have approved standard operating procedures that provide the policies, processes and standards needed for the organization to succeed.

The Authority has developed and implemented internal processes to ensure that the organization complies with all relevant national and international biosafety regulations, such as the Cartagena Protocol on Biosafety and the Biosafety Act of Kenya. The Authority has further established protocols for conducting risk assessments on GMOs and other biotechnology products, developed procedures for mitigating and managing potential risks associated with biosafety activities.

To help NBA on the management of research and development, the Authority has outlined processes for research and development activities related to biosafety, including the development of new biosafety technologies, testing methods, and risk assessment tools. The licensing and permitting of licenses by the Authority is guided by processes of obtaining and renewing licenses and permits for handling and transporting GMOs. This will ensure that all necessary documentation is collected and submitted in a timely manner.

For the training and capacity building, the Authority has developed a training program for staff involved in biosafety activities. This will ensure that employees receive

appropriate training on biosafety protocols, risk assessment, and emergency response procedures. The Authority further established procedures for maintaining safe laboratory environments when working with GMOs and biotechnology material and has implemented regular safety inspections and audits.

The Authority has defined processes for engaging with the public and stakeholders on biosafety matters. Further, NBA has developed strategies for communicating the organization's activities and addressing concerns. The Authority has developed data management systems guidelines for tracking and documenting biosafety-related information, including risk assessments, permits, and incident reports. The Authority has also identified processes for collaborating with other government agencies, research institutions, and international organizations to enhance biosafety efforts through information sharing and joint projects.

On the budgeting and financial management, the Authority developed processes for budgeting and financial management specific to biosafety activities. This will ensure that funds are allocated appropriately to support biosafety initiatives. Further, the Authority has established key performance indicators (KPIs) to measure the effectiveness of biosafety programs and initiatives. This will help in regularly reviewing and evaluating the organization's performance in achieving biosafety goals. For continuous improvement, the Authority has implemented processes for continuous improvement, including regular reviews of biosafety protocols and procedures to incorporate lessons learned and emerging best practices. Figure 3.1 depicts NBA's value chain.

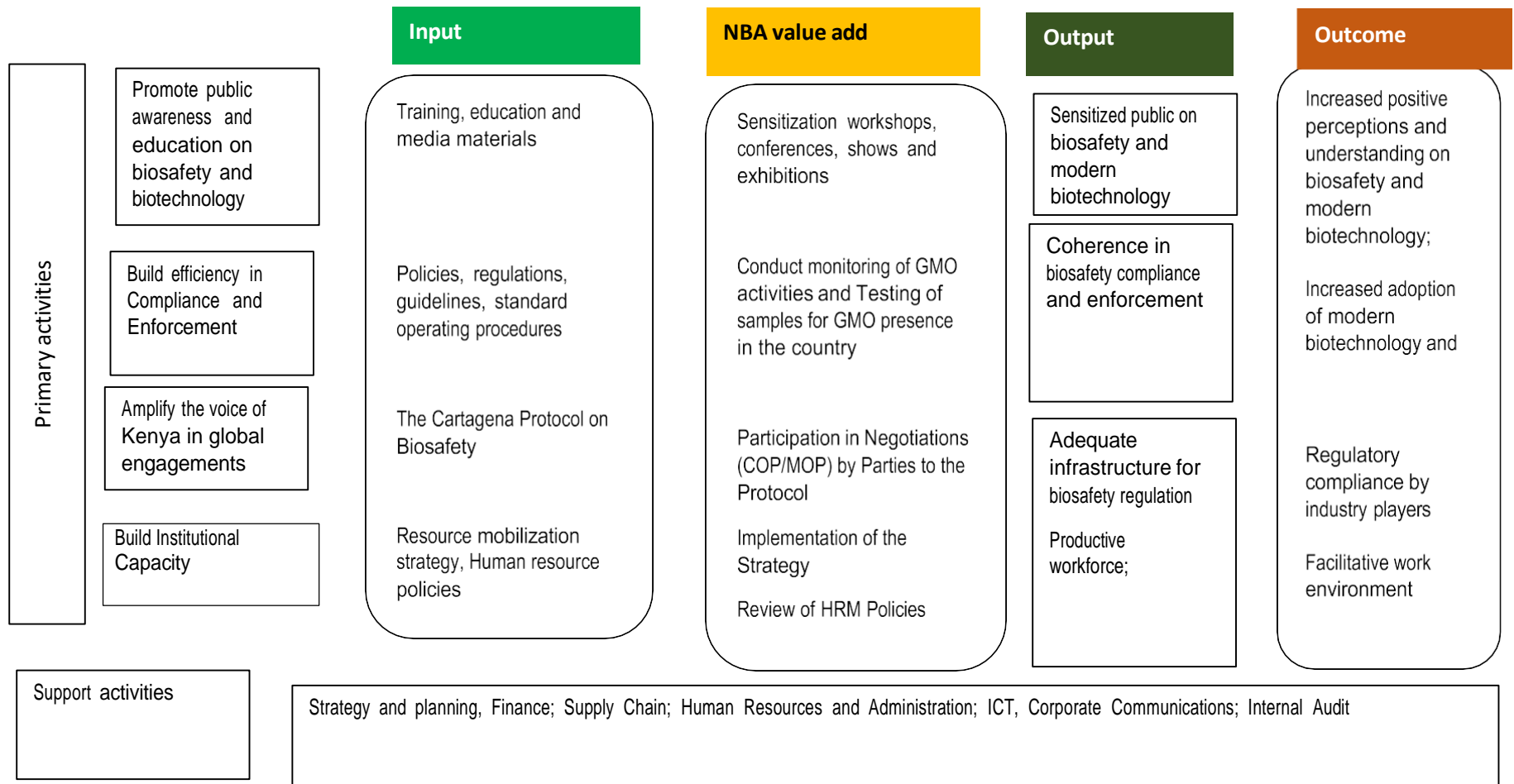


Figure 3.1: NBA's Value Chain

3.1.3.3 Resources and Capabilities

NBA resources include not only monetary, but also people, goods and services. The two categories for consideration are the financial resources and human resources. Human resources are people with appropriate set of skills and know how to carry out the diverse specific tasks within the Authority. While financial resources are the sources such as government funds, grants from international development partners and collections of AIA among others. The Authority has in addition developed strong internal controls on financial management.

The Authority has continued to bid for more resources during the MTEF budget process as well as well as registered an enhanced AIA collection following automation of GMO services.

3.1.4 Summary of Strengths and Weaknesses

Table 3.2 shows the summary of strengths and weaknesses, based on the analysis of internal environment.

Table 3.2: Summary of Strengths and Weaknesses

Factor	Strengths	Weaknesses
Governance and administrative structures	<ul style="list-style-type: none"> • Lean Board of Directors (9) • Approved organizational structure by State Corporations Advisory Committee (SCAC) • Effective regulatory framework in Kenya i.e. National Biotechnology Development Policy, Biosafety Act, Regulations • Stand-alone biosafety agency as the Competent National Authority on GMO Matters • Goodwill from government and government partners in biotechnology • Strong research and development (R&D) infrastructure • Approved Human Resource Instruments • Established Operational NBA structures 	<ul style="list-style-type: none"> • Placement of CBD, Cartagena Protocol and Nagoya protocol on Access and Benefit Sharing in different Ministries limit access to biodiversity funds • Overlapping laws on biosafety (Biosafety Act, Environmental Management and Coordination Act (EMCA) Act, Kenya P l a n t H e a l t h Inspectorate Service (KEPHIS) Act, Public Health Act • Top heavy organizational structure compared to approved staff establishment • Non-competitive remuneration structure

Factor	Strengths	Weaknesses
Internal business processes	<ul style="list-style-type: none"> • Molecular lab in place • Competent trained research personnel • Development of various policies and procedures 	<ul style="list-style-type: none"> • Office space limited • Automation of key services e.g. Electronic Document Management System (EDMS), upgrade of Enterprise resource planning (ERP) • Decentralization of NBA offices to key entry points • Inadequate use of technology (poor integration of the systems in place) • Inadequate data management system (Outdated ERP system) • Lack of an effective performance management system (rewards& sanctions) • Inadequate monitoring and evaluation of the Strategic Plan • Inadequate use of technology • Delays in production of statutory reports
Resources and capabilities	<ul style="list-style-type: none"> • Government grants • A-I-A increasing with automation of NBA services • Development of policies and procedures • Strong Internal Controls on Financial Management • Qualified and Committed staff • Good Working relationship with key stakeholders 	<ul style="list-style-type: none"> • Inadequate funding to support • Inadequate staff capacity and staff development

3.1.5 Analysis of Past Performance

The following section presents an assessment of key achievements and challenges.

3.1.5.1 Key Achievements

During the reporting period the Authority held two public engagement forums, and approved the Food/Feed Safety Assessment Guidelines, Environmental Risk Assessment Guidelines and also harmonized Guidelines for Low Level Presence and

Co-existence. 100% of GMO Applications received during the reporting period were screened, risk assessment conducted and decisions made and communicated in a timely manner to the applicants. 100% of ongoing GMO Projects were monitored while five GMO facilities were inspected including Kenyatta University, International Livestock Research Institute (ILRI), Kenya Agricultural and Livestock Research Organization (KALRO), International Centre of Insect Physiology and Ecology (ICIPE) and Jomo Kenyatta University of Agriculture and Technology (JKUAT).

Post commercialization monitoring was conducted in 19 counties including Kisumu, Homabay, Machakos, Embu, Mombasa growing Bt cotton varieties, surveillance was carried out in 36 Counties including Nairobi, Kiambu, Machakos, Kakamega, Mombasa, Garissa, Uasin Gishu, 50 samples were tested for GMO Presence, three Institutional Biosafety Committees (IBCs) were registered (ILRI, UON, ICIPE), acquisition of Land to establish a Regional Molecular lab commenced, GMO testing lab was operationalized and is awaiting commissioning to a Centre of Excellence, the national BCH was established and areas of possible review of the Biosafety Act were identified including the emerging biotechnologies, membership of the Board of directors, Regulations on Labelling and Transport, Storage and Packaging.

Government advisory briefs were given on, the gazettelement of Biosafety Inspectors as required by the Biosafety Act, lifting of the ban on GM food imports, low-Level Presence (LLP) situations of GMO products in imported consignments, import of raw materials for Animal feeds. Levies, fees and charges by the National Biosafety Authority for harmonization by the East African Community and the draft Food and Feed Safety Control Coordination Bill, 2023. The Biosafety Communication Strategy was developed and is awaiting validation by stakeholders, high-Level policy makers, lawyers and CEOs of Regulatory Agencies were sensitized on Biosafety Regulatory Framework.

The Authority held the 11th Annual Biosafety Conference, participated in various ASK trade fairs, developed and distributed biosafety brochures and FAQs on GMOs to stakeholders, held county awareness fora on biosafety matters in counties including Nakuru, Busia, Mombasa, Kisumu, Garissa, Embu, Trans Nzoia and Kajiado, several Corporate social responsibility (CSR) activities were held including tree planting

initiatives and cleaning of the environment. The Authority negotiated and partnered with various organizations including U.S. Agency for International Development (USAID), African Union Development Agency (AUDA-NEPAD), Alliance for Science, Acquisition of Agri-biotech Applications (ISAAA), Agricultural Technology Foundation (AATF) and National Research Fund (NRF).

The Authority participated in the 15th Conference of the Parties (COP)- Meeting of the Parties (MOP) in Montreal, Canada, all the relevant biosafety information was published in the BCH, HR instruments were developed and operationalized, the car loan and mortgage scheme were operationalized, the succession management policy was developed, seventeen funding proposals were developed and submitted to various development partners.

3.1.5.2 Challenges

Ensuring that the public is aware of and understands the importance of biosafety poses a significant challenge. Recruitment and retaining qualified personnel are challenge, particularly in light of the rapid advancements in biosafety. Furthermore, insufficient financial support has constrained the NBA's ability to effectively carry out its mandate. Ensuring that biosafety research and development institutions comply with biosafety regulations demands resources and expertise for monitoring and enforcing compliance.

Ensuring that Kenya's regulations align with international norms while safeguarding national interests is a delicate balancing act, conducting thorough risk assessments for new biotechnological products and ensuring they are safe for human health and the environment is time-consuming and technically demanding. Engaging with various stakeholders, including scientists, farmers, NGOs, and the private sector, is crucial for developing effective biosafety regulations. Balancing the interests and concerns of these diverse groups is challenging, enforcing biosafety regulations and monitoring compliance is resource-intensive.

Developing effective monitoring mechanisms and ensuring timely enforcement of penalties for non-compliance can be challenging. In addition, keeping up with emerging biotechnologies, such as genome editing and synthetic biology, and adapting regulations to address new challenges and risks is an ongoing process,

changes in government policies and political priorities can impact the implementation of biosafety regulations. Ensuring continuity and commitment to biosafety measures can be challenging. Public perception and acceptance of biotechnology and biosafety measures influences the political will during implementation and enforcement of regulations. Establishing robust data management systems can be a challenge, and ensuring that the legal framework supporting biosafety regulation is clear, comprehensive, and up-to-date can be a complex legal and legislative process.

3.1.5.3 Lessons Learnt

It is crucial to invest in comprehensive public awareness and education campaigns to ensure that the general public understands the importance of biosafety. These campaigns should aim to dispel misconceptions and build trust in biosafety measures, given the rapid advancements in biosafety, the NBA should prioritize ongoing training and professional development for its staff to keep them updated with the latest developments in the field. This can help in retaining qualified personnel, securing sufficient financial support is essential for the effective functioning of the NBA. The Authority should explore various funding sources and advocacy efforts to increase its financial resources, to support and enforcement.

Collaborative efforts with other relevant agencies can also be beneficial, balancing international obligations, such as those under the Cartagena Protocol, with national interests is challenging but essential. NBA should recognize the importance of engaging various stakeholders in diplomatic efforts. Collaboration and alignment of interests are crucial for effective biosafety regulation. Building relationships with stakeholders while safeguarding Kenya's interests should be a top priority. NBA appreciate that conducting thorough risk assessments in biotechnology is a time-consuming and demanding process. Balancing efficiency and safety in assessment procedures is essential. There is need to continuously streamline processes. Effective engagement with scientists, farmers, NGOs, and the private sector is critical. There is need to strengthen stakeholder engagement while developing/revising relevant regulations.

Developing robust mechanisms for monitoring compliance and enforcing regulations is resource-intensive. There is need for NBA to strengthen enforcement and ensure

penalties for non-compliance are enforced promptly to maintain biosafety standards. In addition, NBA needs to ensure that the regulatory framework is reviewed to address new biotechnological challenges. Building bipartisan support can help mitigate the impact of political shifts. NBA should continue efforts to engage the public and build trust in biosafety measures through transparent and timely and science-based communication, developing robust data management systems is essential for effective regulation. NBA should invest in technology and infrastructure to collect, store, and analyse data efficiently and ensuring that the legal framework supporting biosafety regulation is clear, comprehensive, and up-to-date is an ongoing process. Regular reviews and collaborations with legal experts can help in this regard.

3.2 STAKEHOLDER ANALYSIS

NBA's stakeholders' mapping matrix showing the stakeholder, their role, expectation of the stakeholder and expectation of NBA is depicted in Tables 3.3.

Table 3.3: Stakeholders Analysis

No	Stakeholder	Role	Expectation of the Stakeholder	Expectation of NBA
1.	NBA Board and Staff	Technical and non-technical support Governance and oversight	<ul style="list-style-type: none"> • Conducive working environment • Competence and skills development 	<ul style="list-style-type: none"> • Commitment and professionalism • Achievement of targets • Transparency in all activities
2.	Government	Allocation of budgetary funds	<ul style="list-style-type: none"> • Set ethical standards, enforcing rules of conduct and policy-making • Partnerships in terms of regulating GMO • Identify national requirements for manpower development and capacity building on biosafety. 	<ul style="list-style-type: none"> • To comply with NBA regulations and decisions. • To efficiently and effectively utilize resources. • Provide prompt, effective, and efficient services to citizens
3.	Parent Ministry- Ministry of Agriculture and Livestock Development	Link between NBA and other relevant stakeholders	<ul style="list-style-type: none"> • Disseminate budget preparation and implementation reporting guidelines, circulars and other guidelines • Timely disbursement of funds to NBA • Provide feedback to NBA on performance of their mandate. 	<ul style="list-style-type: none"> • Timely requests for funds • Timely provision of accurate statutory information • Adherence to budget implementation guidelines and compliance with the law
4.	Parliament	Legislation and oversight	<ul style="list-style-type: none"> • Allocate adequate funds for the NBA's 	<ul style="list-style-type: none"> • Make budgetary provisions for

No	Stakeholder	Role	Expectation of the Stakeholder	Expectation of NBA
			<p>operations</p> <ul style="list-style-type: none"> • Enforcement of regulations • Accountability and transparency in NBA operations and decision-making 	<p>funding NBA mandates</p> <ul style="list-style-type: none"> • Enactment and or review of Biosafety laws regularly to ensure that they conform to required standards • Provide general oversight mandate.
5.	National Treasury	Financial oversight and provision of budget	<ul style="list-style-type: none"> • Enforce use of financial management system for reporting • Disseminate budget information and data • Implementation of policies and guidelines 	<ul style="list-style-type: none"> • Timely and adequate disbursement of resources to NBA • Share information and data on preparation and implementation of budget • Develop Clear policies and procedures on public finance management
6.	Academic, Training, and Research Institutions	Engage in research on GMOs and produce skilled professionals	<ul style="list-style-type: none"> • Provide linkage between the academia and other bodies handling GMOs • Partner in applied research, policy formulation, and policy advocacy • Make timely decisions on GMO applications 	<ul style="list-style-type: none"> • Timely submission of reports • Partnerships and collaboration matters • Compliance with biosafety regulations
7.	Media	Mass dissemination of biosafety information to the public	<ul style="list-style-type: none"> • Transparency, and ease of access to biosafety information • Respect and protection of the freedom of the press 	<ul style="list-style-type: none"> • Accurate, balanced reporting on Biosafety related matters. • Wider coverage on GMO matters
8.	Seed industry and private sector/business	Avail approved biotechnology products	<ul style="list-style-type: none"> • Predictable and facilitative laws • Structured Public Private Partnership initiative 	<ul style="list-style-type: none"> • compliance to existing laws • compliance to approval conditions • timely delivery of goods and services

No	Stakeholder	Role	Expectation of the Stakeholder	Expectation of NBA
	community	Implement responsible stewardship programme	<ul style="list-style-type: none"> Fair distribution of available business opportunities Uphold the values and principles in Biosafety Act, 2009 	
9.	Civil Society Organizations & NGOs	Advocacy, watchdog function and consumer protection	<ul style="list-style-type: none"> Publish and publicize information on the discharge of the NBA's mandate Prudent management of public resources Compliance with the national values and principles of governance; and values and principles of NBA 	<ul style="list-style-type: none"> Participation in policy-making processes. Prompt submission of information. Regular consultations and engagements.
10.	Development Partners	Financial support, knowledge-sharing and technical expertise	<ul style="list-style-type: none"> Prudent management of public resources Ethical conduct Transparency and accountability Provide timely and accurate reports/information 	<ul style="list-style-type: none"> Cooperation and partnerships Financial support for NBA's programmes and projects Technical assistance in programmes Sharing of information and knowledge
11.	Judiciary	Handle litigations	<ul style="list-style-type: none"> Implement court decisions Adherence to provisions of relevant legislation Transparency in NBA's processes and decision-making 	<ul style="list-style-type: none"> Expedite the hearing and disposal of cases in courts Interpretation of Laws Provide a platform for sensitization on GMO matters
12.	General Public	Recipient of NBA services	<ul style="list-style-type: none"> Assurance of the safety of released GMOs Efficient and effective services and information-sharing Good governance 	<ul style="list-style-type: none"> Comply with the regulations and guidelines of the Authority Receive objective feedback
13.	Suppliers	Provision of goods,	<ul style="list-style-type: none"> Timely payments of goods and services 	<ul style="list-style-type: none"> Supply of quality and competitive

No	Stakeholder	Role	Expectation of the Stakeholder	Expectation of NBA
.		works and services	<ul style="list-style-type: none"> • Transparency and fairness in the procurement processes • Compliance with the procurement laws 	goods and services <ul style="list-style-type: none"> • Compliance with the procurement laws • Adherence to provisions of the contract

CHAPTER FOUR

STRATEGIC ISSUES, GOALS, AND KEY RESULT AREAS

This chapter outlines the strategic issues facing NBA, the goals that have been set and the key result areas.

4.1 STRATEGIC ISSUES

The Authority has identified four strategic issues relevant to its operations. These include; limited public understanding and engagement with Modern Biotechnology; public demand for an efficient biosafety management system, enforcement, and compliance to biosafety regulatory framework; Progressive global negotiations under the Cartagena Protocol on Biosafety; and inadequate financial and non-financial resources.

i. Limited public understanding of and engagement with Modern

Biotechnology: The level of understanding of modern biotechnology in Kenya is currently very low largely attributed to misinformation on the science and its regulations. This has resulted in negative publicity of GMOs, the principal products of modern biotechnology among the general public.

ii. Public demand for an efficient biosafety management system, enforcement, and compliance to biosafety regulatory framework:

Both product developers and consumers place a great premium on an efficient and effective biosafety regulatory framework that is responsive to advances in modern biotechnology, predictable and science based. A framework that is facilitative of innovation while ensuring the safety of the Kenyan people in the development, handling, transfer and use of GMOs, the principal products of modern biotechnology.

iii. Progressive global negotiations under the Cartagena Protocol on

Biosafety: The NBA is Kenya's National Focal Point and Competent Authority for the implementation of the Cartagena Protocol on Biosafety (CPB) under the Convention on Biological Diversity (CBD). In this capacity, the Authority provides leadership to Kenyan delegations in the global negotiations within the context of Conference of Parties (COP) that serves as the Meeting of Parties (MOP) for the CBD and CPB

respectively. The Authority therefore bears the responsibility of articulating Kenya’s position in these engagements within the context of the African Group of Negotiators under the African Union.

iv. Inadequate financial and non-financial resources

Inadequate financial and non-financial resources within NBA can pose significant challenges to its ability to fulfil its mandate effectively. It is therefore important for the Authority to mobilize adequate financial resources and continuously build capacity of staff and adapt to technology.

4.2 STRATEGIC GOALS

This Revised Strategic Plan sets forth six key goals which NBA aims to achieve. These are:

- i.** Increased public confidence in the safety of modern biotechnology;
- ii.** A robust enforcement of the national biosafety regulatory framework;
- iii.** Effective engagement in the global discourse on biosafety and modern biotechnology;
- iv.** A sustainable, motivated, and productive workforce;
- v.** Enhanced financial resource base; and
- vi.** Adequate infrastructure for biosafety regulation (labs, office)

4.3 KEY RESULT AREAS

Table 4.1 shows strategic issues, goals, and respective key result areas.

Table 4.1: Strategic Issues, Goals and KRAs

Strategic issue	Goals	KRAs
Limited public understanding of and engagement with modern biotechnology	Increased public confidence in the safety of modern biotechnology	KRA 1: Public Awareness on Biosafety and Modern biotechnology
Public demand for an efficient biosafety management system, enforcement and	A Robust enforcement of the national biosafety regulatory framework	KRA 2: Efficiency in Compliance and Enforcement

Strategic issue	Goals	KRAs
compliance to the biosafety framework		
Progressive global negotiations under the Cartagena Protocol on Biosafety	Effective engagement in the global discourse on biosafety and modern biotechnology	KRA 3: Global engagement, Collaborations, and Partnerships
Inadequate financial and non-financial resources	<p>A sustainable, motivated, and productive workforce</p> <p>Enhanced financial resource base</p> <p>Adequate infrastructure for biosafety regulation (labs, office)</p>	KRA 4: Institutional capacity

CHAPTER FIVE

STRATEGIC OBJECTIVES AND STRATEGIC CHOICES

This chapter discusses the strategic objectives and strategic choices. Strategic objectives are the specific results that NBA aims to achieve in order to fulfil its mission and vision. Strategic choices are the decisions that NBA makes about how it will achieve its strategic objectives.

5.1 STRATEGIC OBJECTIVES

This section contains NBA strategic objectives for which annual outcome indicators projections for the next two years are identified as shown in Table 5.1.

Table 5.1: Outcomes Annual Projections

Strategic objectives	Outcome	Outcome indicator	Projections 2023/24	2024/25
KRA 1: Public Awareness on Biosafety and Modern Biotechnology				
1. Increased public confidence in the safety of modern biotechnology	Attraction of investment and partnerships in the biosafety sector	Level of public awareness	100%	100%
KRA 2: Efficiency in Compliance and Enforcement				
2. Robust enforcement of biosafety regulatory framework	GMOs that are approved by NBA are safe to humans, animals, and environment	% of Applications received and approved based on safety	100	100
	Adherence to GMO legal and regulatory framework by GMO dealers	Level of compliance (%)	100	100
	GMO research processes and their products are safe and ethical	Level of compliance (%)	100	100
KRA 3: Global engagement, Collaborations and Partnerships				

Strategic objectives	Outcome	Outcome indicator	Projections	
			2023/24	2024/25
3. Effective engagement in the global discourse on biosafety and modern biotechnology	Amplify Kenya's voice and safeguard national interest in global engagements	Level of compliance (%)	100	100
	Enhanced knowledge and information sharing	Level of compliance (%)	100	100
	Increased partnerships and collaborations regionally and internationally on biosafety matters	No. Collaborations and partnerships	10	12
KRA 4: Institutional Capacity Building				
4. A sustainable, productive, and motivated workforce	Improved staff performance	Employee satisfaction level	1	1
	Staff retention		100%	100%
5. Enhanced financial resource base	Timely and effective discharge of NBA mandate	Budget estimates	1	1
		Activities funded by development partners/ other stakeholders	20%	30%
6. Adequate infrastructure for biosafety regulation	Enhanced Biosafety infrastructure	Regional reference laboratory	1	1
			26	26

Strategic objectives	Outcome	Outcome indicator	Projections	
			2023/24	2024/25
	Adequate office space	Proportion of additional office space acquired		

5.2 STRATEGIC CHOICES

The strategic objectives and the respective strategies under each of the key result areas are captured in Table 5.2.

Table 5.2: Strategic Objectives and Strategies

KRA	Strategic Objectives	Strategies
KRA 1: Public Awareness on Biosafety and Modern biotechnology	1. To increased public confidence in the safety of modern biotechnology	i. Enhance partnerships with relevant stakeholders, including County governments, NGOs, academic institutions, and the media, to amplify biosafety messages
		ii. Enhanced multimedia outreach campaign that includes TV and radio broadcasts, social media, webinars, workshops, and educational materials, to reach a wide audience
KRA 2: Efficiency in Compliance and Enforcement	2. To have robust enforcement of biosafety regulatory framework	i. Assessment of GMOs for safety to humans, animals, and the environment
		ii. Automation of biosafety management processes
		iii. Enforce compliance with biosafety legislative framework for dealers in GMO in partnership with counties and relevant regulatory agencies
		iv. Develop and enhance capacity for biosafety inspectors to carry out monitoring and surveillance activities

		v. Develop a framework for certifying and licensing of facilities involved in GMO research
		vi. Enhance capacities of Institutional Biosafety Committees (IBCs)
KRA 3: Global engagement, Collaborations and Partnerships	3. To effectively engage in the global discourse on biosafety and modern biotechnology	i. Provide leadership to Kenyan delegations on global negotiations of biosafety and modern biotechnology

KRA	Strategic Objectives	Strategies
		ii. Continuously update the Biosafety Clearing House (BCH)
		iii. Enter into partnerships and collaborations
KRA Institutional capacity building	4: 4. To continue having a sustainable, productive, and motivated workforce	i. Revamp staff performance management system
		ii. Enhance staff welfare and wellness programmes
		iii. Enhance human resource capacity
	5. To enhance financial resource base	i. Diversify sources of resource mobilization
		ii. Ensure prudent utilization of resources through enhanced financial management
	6. To acquire adequate infrastructure for biosafety regulation	i. Establish a regional reference laboratory for GMO detection
ii. Enhance physical infrastructure		

CHAPTER SIX

IMPLEMENTATION AND COORDINATION FRAMEWORK

This chapter discusses the implementation and coordination framework for the Strategic Plan. The implementation framework outlines the steps that will be taken to implement the revised Strategic Plan, and the coordination framework outlines how different stakeholders will work together to ensure the successful implementation of the plan.

6.1 IMPLEMENTATION PLAN

This section contains NBA’s action plan, the annual work plan, and a commitment to have the performance contract delivered from the annual work plans.

6.1.1 Action Plan

Table 6.1 is the implementation plan which covers the strategic goals, strategic issues, KRAs, strategic objectives, strategies, proposed activities, expected outputs, output indicators, targets, budget for each activity and implementing actors.

Table 6.1: Implementation Matrix

Strategy	Key Activities	Expected Output	Output Indicators	Target for 2-years	Target		Budget (Kshs. Millions)			Responsibility	
					Y1	Y2	Y1	Y2	Total	Lead	Support
Strategic issue: Limited public understanding of and engagement with Modern Biotechnology											
Strategic goal: Increased public confidence in the safety of modern biotechnology											
KRA 1: Public Awareness on Biosafety and Modern Biotechnology											
Outcomes:											
i. Increase public confidence											
ii. Updated biosafety legal system											

Strategy	Key Activities	Expected Output	Output Indicators	Target for 2-years	Target		Budget (Kshs. Millions)			Responsibility	
					Y1	Y2	Y1	Y2	Total	Lead	Support
Objective 1 To Increase public confidence in safety of modern biotechnology;											
Strategy 1: Enhance partnerships with relevant stakeholders, including County governments, NGOs, academic institutions, and the media, to amplify biosafety messages	Activity 1: Collaborate with the partners to create informative and engaging television and radio programs or segments focusing on biosafety and its importance.	Programs created	Number of programs created	10	5	5	10	10	20	DBR&C	CEO
	Activity 2: Conduct trainings related to biosafety with academic institutions promoting biosafety awareness.	Training report	Number of trainings conducted	10	5	5	10	10	20	DBR&C	CEO

Strategy	Key Activities	Expected Output	Output Indicators	Target for 2-years	Target		Budget (Kshs. Millions)			Responsibility	
					Y1	Y2	Y1	Y2	Total	Lead	Support
	Activity 3: Conduct baseline survey on level of biosafety awareness	Baseline survey conducted	No of surveys conducted	1	1	0	1	0	1	DBRC	HOD, Communication
Strategy 2: Enhanced multimedia outreach campaign that includes TV and radio broadcasts, social media, webinars, workshops, and educational materials, to reach a wide audience.	Activity 1: Develop and disseminate content on biosafety materials through appropriate channels including TV, radio, social media, webinars, Workshop and educational materials.	Number of content material created and disseminated	Number of contents created and disseminated	5	3	2	1	1	2	DBR&C	CEO
	Activity 2: Carry out sensitization	Farmers, stakeholders	No. of farmers/	100	50	50	2	2	4	DBR&C	HOD, Communication

Strategy	Key Activities	Expected Output	Output Indicators	Target for 2-years	Target		Budget (Kshs. Millions)			Responsibility	
					Y1	Y2	Y1	Y2	Total	Lead	Support
	programs for farmers, stakeholders and institutions dealing with GMOs	and institutions sensitized	institutions sensitized								

Strategy	Key Activities	Expected Output	Output Indicators	Target for 2-years	Target		Budget (Kshs. Millions)			Responsibility	
					Y1	Y2	Y1	Y2	Total	Lead	Support
Strategic issue: Public demand for an efficient biosafety management system, enforcement and compliance to the biosafety framework											
Strategic goal: A Robust enforcement of biosafety regulatory framework											
KRA 2: Efficiency in Compliance and Enforcement											
Outcomes 1: GMOs that are approved by NBA are safe to humans, animals and environment											
Objective 1: To have Robust enforcement of the national biosafety regulatory framework											
Strategy 1: Assessment of GMOs for safety to humans, animals and the environment	Activity 1: Develop/review guidelines on safety assessment and clearance procedures of GMOs	Developed/reviewed guidelines	No. of guidelines developed/reviewed	4	2	2	1.6	1.6	3.2	DBR&C	
	Activity 2: Training of Assessors (Biosafety Officers, Biosafety expert reviewers, Biosafety Desk Officers) on safety assessment and socio-economic impact assessment	Training reports	No. of trained assessors	40	20	20	1	1	2	DBR&C	

Strategy	Key Activities	Expected Output	Output Indicators	Target for 2-years	Target		Budget (Kshs. Millions)			Responsibility	
					Y1	Y2	Y1	Y2	Total	Lead	Support
	Activity 3: Conduct review and safety assessment of Applications on GMOs and other emerging biotechnologies	Risk assessment reports Socio-economic impact assessment reports Public participation reports Applications decisions	% of applications processed and decisions communicated	100%	100	100	1.5	2	3.5	DBR&C	
	Activity 4: Review Application requests for GMO-Free Certificates and No Objection letters	Reviewed application request	% of GMO free certificates and No objection	100%	100	100	0.1	0.1	0.2	DBR&C	

			letters processed								
--	--	--	----------------------	--	--	--	--	--	--	--	--

Strategy	Key Activities	Expected Output	Output Indicators	Target for 2-years	Target		Budget (Kshs. Millions)			Responsibility	
					Y1	Y2	Y1	Y2	Total	Lead	Support
Strategy 2: Automation of biosafety management processes	Activity 1: Map-out the services to be automated	Mapping report	No. of mapping reports	1	1	0	1	-	1	DBR&C	DCS HOD ICT
	Activity 2: Develop work flows	Work flows developed	% of developed workflow	100%	100%	0	1	-	1	DBR&C	DCS HOD ICT
	Activity 3: Automate the services	Automated services	% of automated services	100%	100%	0	1	-	1	DBR&C	DCS HOD ICT
	Activity 4: Monitor performance of automation	Monitoring reports	No. of complaints received	2	1	1	0.3	0.3	0.6	DBR&C	DCS HOD ICT
Outcome 2: Adherence to GMO legal and regulatory framework by GMO dealers											
Objective 2: To have a robust enforcement of biosafety regulatory framework											
Strategy 1: Enforce compliance with biosafety legislative framework for	Activity 1: Facilitate online clearance of		% of cargo cleared	100	100	100	1.5	1.5	3	DBR&C	

	cargo											
--	-------	--	--	--	--	--	--	--	--	--	--	--

Strategy	Key Activities	Expected Output	Output Indicators	Target for 2-years	Target		Budget (Kshs. Millions)			Responsibility	
					Y1	Y2	Y1	Y2	Total	Lead	Support
dealers in GMO in partnership with counties and relevant regulatory agencies											
	Activity 2: Carry out routine surveillance and monitoring in partnership with counties	Surveillance and monitoring conducted	No. of counties surveyed and monitored	60	30	30	1.5	1.5	3	DBR&C	HOD communication, Head of Planning
	Activity 3: Conduct GMO detection/testing	GMOs samples analysed	No. of samples analysed.	200	100	100	5	5	10	DBR&C	
	Activity 4: Partner with relevant regulatory agencies for joint monitoring of GMOs	Regulatory agencies partnered with	No. of Regulatory agencies partnered with	6	3	3	1	1	2	DBR&C	HOD communication
Strategy 2: Develop and enhance	Activity 1: Develop a training program for biosafety	Training program developed	No. of Training programs	1	0	1		1	1	DBR&C	HOD Records, CS&DL

	inspectors on GMO											
--	----------------------	--	--	--	--	--	--	--	--	--	--	--

Strategy	Key Activities	Expected Output	Output Indicators	Target for 2-years	Target		Budget (Kshs. Millions)			Responsibility	
					Y1	Y2	Y1	Y2	Total	Lead	Support
capacity for biosafety inspectors to carry out monitoring and surveillance activities	legal framework and their mandate		developed								
	Activity 2: Develop a framework for appointment and gazettelement of Biosafety Inspectors	A developed framework	No. of Developed frameworks	1	0	1	-	1	1	DBR&C	CS&DL
	Activity 3: Nominate and recommend gazettelement of biosafety inspectors	Nominated & recommended biosafety inspectors	No. of nominated Biosafety Inspectors	5	5	0	0.1	-	0.1	DBR&C	CS&DL

	Activity 4: Review of Biosafety (Labelling) Regulations	Regulations reviewed	% progress of review	100	40	60	1.5	1.5	3.0	CS&DL	DBR&C
	Activity 5: Develop Regulations on	Regulations developed	% progress	100	40	60	1.5	1.5	3.0	CS&DL	DBR&C

Strategy	Key Activities	Expected Output	Output Indicators	Target for 2-years	Target		Budget (Kshs. Millions)			Responsibility	
					Y1	Y2	Y1	Y2	Total	Lead	Support
	storage, packaging, handling, and transport of GMOs		of development								
Outcome 3: GMO research processes and their products are safe and ethical											
Objective 3: To have a robust enforcement of biosafety regulatory framework											
Strategy 1: Develop a framework for certifying and licensing of facilities involved in GMO research	Activity 1: Carry out licensing, certification and impromptu inspections on GMO research institutions	Licensed, certified and inspected GMO research institutions	No. of licensed, certified and inspected research institutions	8	4	4	0.5	0.5	1	DBR&C	CS&DL
	Activity 2: Devise and hold periodical joint forums with the research institutions for information sharing on legal, safe and ethical research on GMOs	Forums held with research institutions	No. of forums held	2	1	1	1	1	2	DBR&C	CS&DL, HOD ICT

	Activity 3: Review compliance of research institutions	Compliance with the set	Number of Institutions	8	4	4	0.5	0.5	1	DBR&C	CS&DL
--	--	----------------------------	---------------------------	---	---	---	-----	-----	---	-------	-------

Strategy	Key Activities	Expected Output	Output Indicators	Target for 2-years	Target		Budget (Kshs. Millions)			Responsibility	
					Y1	Y2	Y1	Y2	Total	Lead	Support
	with set conditions for licensing and certification	conditions for licensing and certification	compliant with set conditions								
Strategy 2: Ensure establishment and strengthening of institutional biosafety committees	Activity 1: Carry out registration of Institutional Biosafety Committees (IBCs)	Registered Institutional Biosafety committees	No. of registered institutional biosafety committees	8	4	4	0.1	0.1	0.2	DBR&C	
	Activity 2: Train the Institutional biosafety committees	Trained Institutional Biosafety Committees	No, of Trained Institutional Committees	5	3	2	1	1	2	DBR&C	HOD ICT

Strategy	Key Activities	Expected Output	Output Indicators	Target for 2-years	Target		Budget (Kshs. Millions)			Responsibility	
					Y1	Y2	Y1	Y2	Total	Lead	Support
Strategic issue: Progressive global negotiations under the Cartagena Protocol on Biosafety											
Strategic goal: Effective engagement in the global discourse on biosafety and modern biotechnology											
KRA 3: Global engagement, Collaborations and Partnerships											
I. Amplify Kenya's voice and safeguard national interest in global engagements											
Objective 1: To effectively engage in the global discourse on biosafety and modern biotechnology											
Strategy 1: Provide leadership to Kenyan delegations on global negotiations of biosafety and modern biotechnology	Activity 1: Carry out global negotiations under the Cartagena Protocol on Biosafety	Compliance to the Cartagena Protocol	% Level of compliance	100	100	100	-	-	-	DBR&C	HOD communication
Strategy 2: Continuously update the Biosafety Clearing House (BCH)	Activity 1: Conduct an assessment of the existing information in the BCH.	Assessment report	Number of reports	2	1	1	0.5	0.5	1	DBR&C	CEO
	Activity 2: Sensitize	Sensitization report	Number of sensitizations	8	4	4	0.5	0.5	1	DBR&C	CEO

	stakeholders on the											
--	------------------------	--	--	--	--	--	--	--	--	--	--	--

Strategy	Key Activities	Expected Output	Output Indicators	Target for 2-years	Target		Budget (Kshs. Millions)			Responsibility	
					Y1	Y2	Y1	Y2	Total	Lead	Support
	use and operations of the BCH		workshop								
	Activity 3: 3: Periodically update biosafety information in the BCH.	Report on updates	Number of updates	2	1	1	0.1	0.1	0.2	DBR&C	CEO
Strategy 3: Partnerships and collaborations	Activity 1: Identify and collaborate with development partners to fund NBA activities	Partners/collaborators identified and engaged	No. of partners identified and engaged	4	2	2	0.1	0.1	0.2	DBR&C	HOD, Planning

Strategy	Key Activities	Expected Output	Output Indicators	Target for 2-years	Target		Budget (Kshs. Millions)			Responsibility	
					Y1	Y2	Y1	Y2	Total	Lead	Support
Strategic issue: Inadequate financial and non-financial resources											
Strategic goal: A motivated and productive workforce, Enhanced financial resource base and Adequate infrastructure for biosafety (lab, office)											
KRA 4: Institutional capacity building											
Outcomes: i Improved staff performance ii Staff retention											
Objective 1: A sustainable, productive and motivated workforce											
Strategy 1: Revamp staff performance management system	Activity 1: Review the performance management system and train staff on the revised system	Reviewed Performance Management System	No. of staff trained	53	42	53	2	2	4	DCS	DDHRO, HOD ICT
	Activity 2: Deploy the performance management system	Performance appraisal reports	No. of staff	53	42	53	0	0	0	DCS	DDHRO
Strategy 2: Enhance staff welfare and wellness programmes	Activity 1: 1: Implement staff benefits	Staff benefits programs	Annual report on the program	2	1	1	2	2	4	DCS	DDHRO

	programs e. g car loan, mortgage scheme										
	Activity 2: Institute, design and	Staff welfare program	Annual report on	2	1	1	4	4	8	DCS	DDHRO

Strategy	Key Activities	Expected Output	Output Indicators	Target for 2-years	Target		Budget (Kshs. Millions)			Responsibility	
					Y1	Y2	Y1	Y2	Total	Lead	Support
	Implement staff wellness/welfare programs e.g. welfare policy and team building		the program								
Strategy 3: Enhance human resource capacity	Activity 1: Conduct a staff skills gap analysis and capacity development	Staff skills Gap analysis report	Annual report	2	1	1	0	0	0	DCS	DDHRO
	Activity 2: Prepare and implement the training plan	Executed Training plan	No. of people trained	53	42	53	5	7	12	DCS	DDHRO
	Activity 3: Recruit and retain staff	New recruits	No. of staff recruited	11	6	5	3	2	5	DCS	DDHRO
	Activity 4: Review and implement HR related policies	Reviewed and implemented HR policies	No. of reviewed HR policies	1	-	1	-	2	2	DCS	DDHRO
Outcomes: i Timely and effective discharge of NBA mandate											

Strategy	Key Activities	Expected Output	Output Indicators	Target for 2-years	Target		Budget (Kshs. Millions)			Responsibility	
					Y1	Y2	Y1	Y2	Total	Lead	Support
Objective 2: To enhance financial resource base											
Strategy 1: Diversify sources of resource mobilization	Activity 1: Enhance A-I-A collections	Enhanced generated A-I-A	Amount of A-I-A	21 million	9 million	12 million	1	-	1	DCS	PFO, DBR&C
	Activity 2: Develop Project Proposals and Concept Notes	Secured Funding from Development partners	Amount of funds	20 million	9 million	11 million	0	0	0	DBR&C / DCS	DDTS
Strategy 2: Ensure prudent utilization of resources through enhanced financial management	Activity 1: Identify and implement cost savings measures	Cost saving measures identified and implemented	No. of cost savings measures identified and implemented	5	3	2	0	0	0	DCS	PFO/SCMO
	Activity 2: Monitor and report on budget implementation	Reports on budget implementation	No. of budget implementation reports	8	4	4	0	0	0	DCS	PFO
Outcomes: i Enhanced Biosafety infrastructure											

Strategy	Key Activities	Expected Output	Output Indicators	Target for 2-years	Target		Budget (Kshs. Millions)			Responsibility	
					Y1	Y2	Y1	Y2	Total	Lead	Support
ii Adequate office space											
Objective 3: Adequate infrastructure for biosafety regulation											
Strategy 1: Establish a regional reference laboratory for GMO detection	Activity 1: 1: Development of concept note for establishment of GMO testing Lab	Concept note developed	No. of concept note developed	2	1	1	2	2	4	DBR&C	DCS
	Activity 2: Initiate the establishment of the lab (consultancy and fees, site access, fencing, preparation and utility)	Computed capital costs of the activities	% completion rate of the initial activities	15%	5%	10%	10	20	30	DBR&C	DCS
Strategy 2: Enhance physical infrastructure	Activity 1: Acquire and enhance office space	Increased office space	Additional square metre of office space acquired	3690 square ft	3690 square ft	-	4	4	8	DCS	PFO/SCMO
	Activity 2: Acquire	Procure d assets	% of Acquisition of	60%	30%	30%	15	15	30	DCS	SCMO, HOD ICT,

necessary assets (ICT equipment, software, motor		assets									HOD Admin
--	--	--------	--	--	--	--	--	--	--	--	--------------

Strategy	Key Activities	Expected Output	Output Indicators	Target for 2-years	Target		Budget (Kshs. Millions)			Responsibility	
					Y1	Y2	Y1	Y2	Total	Lead	Support
	vehicles, furniture etc.)										

6.1.2 Annual Work plan and Budget

NBA has costed its Revised Strategic Plan for the remaining two years. The Authority has a documented and approved annual operational work plan and budget for the financial year 2023/2024.

6.1.3 Performance Contracting

The Government of Kenya is committed to ensuring that public offices are well managed and they are effective in delivering quality service to the public in line with the provisions of the Constitution of Kenya. NBA's Performance Contract is developed annually to establish the basis for ensuring that efficient and effective services are delivered to Kenyans in line with the provisions of the NBA Act, 2009. NBA is required to adopt systems that enable innovativeness and adaptability of public services to the needs of users by according special attention to strategies and initiatives that will fast track Post COVID – 19 Recovery Strategies and Plans. NBA Contract therefore represents the basis for continuous performance improvement that meets the needs and expectations of the Kenyan people.

6.2 COORDINATION FRAMEWORK

The National Biosafety Authority will coordinate and implement the Strategic Plan within its organizational structure and with the involvement and participation of donor partners and other stakeholders at different stages and levels. The coordination framework also requires the full involvement, effort, commitment and leadership from the Board and staff. The Board will play the critical task of guiding, overseeing and mobilizing appropriate budgetary resources in order to support the effective implementation of this Plan.

The overall responsibility of implementing the Strategic Plan will rest with the Chief Executive Officer who shall prepare and submit programmes necessary for the achievement of the mandate of the Authority. In addition, the Chief Executive Officer will assign duties and supervise staff to ensure successful implementation of the Strategic Plan. The management on the other hand will implement the programmes and projects outlined in the Plan in line with the Biosafety Act, 2009, Human Resource Policy and Procedures Manual and other legislations.

Therefore, the Authority will integrate coordination of all stakeholders that will then guarantee efficient and effective implementation of the Plan.

6.2.1 Institutional Framework

The current organizational structure of the Authority will provide both institutional and functional framework for implementation of the Strategic Plan. The Authority will adopt the current organizational structure (Annex I) in implementing the Plan.

The current structure of the Authority provides for the Office of the Chief Executive Officer and six functional directorates namely: -

1. Biosafety Research & Compliance;
2. Biosafety & Biotechnology Development;
3. Corporate Services;
4. Corporation Secretary and Legal Services;
5. Strategy and Planning; and
6. Internal Audit and Risk Assurance.

The functional areas are discussed in the sections that follow:

1. Office of the Chief Executive Officer

The office is established under Section 12 of the Biosafety Act, 2009 and is responsible for the overall implementation of the Board's decisions. The functions include:

- i.** Responsible for the day-to-day operations of the Authority;
- ii.** Provide strategic leadership to the Authority;
- iii.** Ensure implementation of the Provision of the Biosafety Act, 2009;
- iv.** Ensure the maintenance of efficiency and discipline by all staff of the Authority;
- v.** Manage the budget of the Authority to ensure its funds are properly expended and accounted for;
- vi.** Establish effective management processes, systems and structure including succession plans and change management;
- vii.** Responsible for the execution and communication of the Board's strategies, decisions and policies;
- viii.** Responsible for stakeholder management and the enhancement of the corporate image as well as being the spokesperson of the Authority;
- ix.** Ensure compliance with the relevant laws and statutory obligations.;

- x.** Responsible for the coordination and reporting to the Secretariat of the Convention of Biological Diversity (CBD) as the National Focal Point to the Cartagena Protocol on Biosafety; Foster a culture that promotes ethical practices and good corporate governance;
- xi.** Ensure the Authority leverages on technology to deliver efficient and effective services;
- xii.** Guide in the development and implementation of relevant policies and procedures that give the Authority positive perception and competitive advantage;
- xiii.** Facilitate the preparation and implementation of the Authority's strategic and annual work plans; and
- xiv.** Develop networks and partnerships with development partners and spearhead donor collaboration, fundraising, and project development within the Authority's area of jurisdiction.

2. Directorate of Biosafety Research & Compliance

The Directorate exists pursuant to the provision of Section 7(2)(b), (c) & (g) of Biosafety Act, 2009 to exercise general supervision and control over the transfer, handling and use of genetically modified organisms, ensuring safety of human and animal health. The functions include:

- i.** Formulate, review and implement policies, procedures, strategies and activities in relation to biosafety research and compliance;
- ii.** Process GMO approval documents and maintain a database of approved GMOs;
- iii.** Coordinate the management of the Biosafety Clearing House (BCH);
- iv.** Ensure compliance to international obligations on biosafety;
- v.** Coordinate development of project proposals and concept notes on biosafety programs;
- vi.** Coordinate training of Institutional Biosafety Committees engaged in GMO research related activities, regulatory agencies, expert reviewers and biosafety professionals;
- vii.** Facilitate trade through digitization of processes, timely consignment clearance and issuance of permits and certificates;

- viii. Coordinate the processing and issuance of GMO-Free certificates for non-GMO export commodities;
- ix. Ensure proper labelling and traceability of approved GM foods, feeds, seeds and other commodities;
- x. Coordinate the monitoring of approved GMO research projects in containment and confinement facilities;
- xi. Coordinate post release monitoring of commercialized genetically modified plants, animals and microorganisms; and
- xii. Coordinate border posts and entry/exit points activities and conduct surveys, research to inform the Board and Management on topical matters and overall biosafety issues.

3. Biosafety & Biotechnology Development Directorate

The Directorate is responsible for biosafety safety assessment, biosafety awareness, education and capacity building and GMO Facility Certification and Laboratory Services.

The functions include:

- i. Formulate, review and implement policies, procedures, strategies and activities in relation to, plant, animal and microbial biosafety including categorization, approval and certification of biosafety facilities;
- ii. Consider and determine applications for approval for the transfer, handling and use of genetically modified organisms, and related activities;
- iii. Maintain a GMO Applications' Register;
- iv. Maintain a roster of biosafety experts and coordinate the engagement of biosafety experts and consultation of relevant regulatory agencies on biosafety matters;
- v. Prepare relevant technical papers, reports and other submissions for consideration by the Board;
- vi. Establish and manage administrative mechanisms to ensure confidential handling and storage of documents and data in connection to the processing of applications and other matters covered by the Biosafety Act, 2009;
- vii. Develop checklists for inspection, classification and certification of GMO containment facilities;
- viii. Develop GMO sampling, detection and analysis protocols;

- ix. Facilitate timely analysis of GMO samples and other analytical tests; and
- x. Enhance biosafety awareness and education by organizing forums for public participation and awareness creation.

4. Corporate Services Directorate

The mandate of the directorate is to provide strategic leadership and coordination of the Finance and Accounts, Human Resource and Administration, ICT and Corporate Communication. The functions include:

- i. Formulate, review and implement policies, plans and strategies in the functional areas of Finance and Accounting, Human Resource and Administration, Information Communications Technology and Corporate Communication;
- ii. Oversee the development and implementation of financial regulations, strategies, internal controls and plans for effective and efficient use of resources;
- iii. Coordinate Budget preparation and implementation;
- iv. Coordinate the development of resource mobilization strategies;
- v. Prepare and submit the financial reports, financial statements to relevant institutions;
- vi. Coordinate the design and review of administrative structure of the Organization, direction and control for effective organizational performance;
- vii. Coordinate the Authority's human capital affairs, ensuring that the Authority has the right staff and skills to meet its objectives;
- viii. Oversee Human Resources development and succession plan;
- ix. Coordinate the Authority's Management Information Systems and security;
- x. Coordinate the development of appropriate public communication strategies; preparing public education materials and communication plans for awareness creation;
- xi. Develop comprehensive Records and Knowledge Management systems for the preservation of corporate memory and dissemination of information resources; and
- xii. Ensure custody of all Authority assets, controlling and monitoring of the location and movement of equipment.

5. Corporation Secretary and Legal Services

The Directorate is derived from Section 14 of the Biosafety Act of 2009 which empowers the Authority to employ a Corporation Secretary and other officers who include legal officers. The functions include:

- i. Provide advice on legal and corporate governance matters;
- ii. Provide guidance to the Board on their duties and responsibilities and on matters of governance;
- iii. Provide Board secretarial services and assist the Board in carrying out Board induction, training, updating the Board and Committee charters, preparation of Board work plans, Board evaluation, Governance audit and implementation of Mwongozo and the code of conduct and Ethics;
- iv. Develop and review relevant regulatory Legal framework for the Authority;
- v. Manage the litigation functions;
- vi. Draft and review legal documents including contracts, Service Level Agreements, Memorandum of Understanding, leases and other legal documents for the Authority;
- vii. Liaise with the office of the Attorney General and other government agencies on legal matter; Formulate, draft and facilitate gazettelement of Legal Notices issued by the Authority; and
- viii. Be the custodian of the Authority's seal, title documents and other legal instruments.

6. Strategy and Planning

Strategy and Planning Directorate is established to ensure that NBA adopts and implements effective strategies in planning, resource mobilization, performance management, monitoring and evaluation, Quality assurance and risk management as well as ensuring adherence to regulatory requirements. The functions include:

- i. Initiate the development of policies and strategies relating to planning, resource mobilization, performance management, quality assurance and risk management;
- ii. Oversee the development and reviewing of the Authority's Master plan, strategic and business plans;
- iii. Prepare the annual work plan for development activities as per the Strategic Plan;

- iv.** Identify and mobilize strategic partners for resource mobilization;
- v.** Oversee the preparation and implementation of the Authority's performance contract;
- vi.** Co-ordinate the risk management activities in all directorates, departments and divisions;
- vii.** Prepare and implement the Authority's Quality Management System through quality assurance programmes;
- viii.** Promote innovations within NBA and initiate business reengineering processes
- ix.** Monitor and evaluate the Authority's projects including donor funded projects;
- x.** Coordinate the Authority's Quality Management system to ensure continuous improvement;
- xi.** Develop and implement the M&E tools; and
- xii.** Monitor implementation of the Strategic Plan.

7. Internal Audit Directorate

The Directorate is responsible for providing assurance on the Authority's internal control systems and the governance structure. It is established pursuant to the Section 14 of the Biosafety Act 2009 and Public Finance Act Gazette Notice number 2690 dated 15th April ,2016. The functions include:

- i.** Evaluate and assess risk management, control and governance in the Authority;
- ii.** Conduct regular audits to ascertain effectiveness and efficiency of operations, compliance with policies, procedures, statutory laws and the industry best practices;
- iii.** Periodically asses Authority's accounts and financial control systems to evaluate and advise on the reliability and integrity of financial information and the efficient and effective use of resources;
- iv.** Provide recommendations and advice on improvements to the Authority's system and procedures;
- v.** Facilitate systems and financial audit by external auditors and follow up to ensure implementation of the recommendations;
- vi.** Undertake special audits/investigations;
- vii.** Prepare, review and implement the internal audit charter;

- viii. Prepare quarterly reports on the status of implementation of the internal audit annual work plan for submission to the Audit Committee;
- ix. Plan and undertake audits to assess controls, operational and technical efficiencies and compliance with policies, procedures and regulations; and
- x. Review and submission of audit reports to the Chief Executive Officer and the Board.

6.2.2 Staff Establishment, Skills Set and Competence Development

The Authority has an approved staff establishment of fifty-three (53) with a current in-post of 42 as presented in Table 6.2.

Table 6.2: Staff Establishment

S/No.	Cadre	Approved Establishment (A)	Optimal Staffing Levels (B)	In-Post (C)	Variance D=B-C
1.	CEO	1	1	1	0
2.	Director(s)	6	6	3	3
3.	Deputy Director(s)	11	11	2	9
4.	Principal Officer(s)	11	19	5	14
5.	Senior Officer(s)	7	26	13	13
6.	Officer(s)	8	26	10	16
7.	Senior Assistant/ Technologist	1	5	0	5
8.	Assistants/ Drivers	8	12	8	4
	Total	53	106	42	64

Based on the determination of the optimal staffing levels as identified in Table 6.2, NBA reviewed the extent, relevance and appropriateness of the skills and competencies required for the execution of the Revised Strategic Plan. By systematically addressing the skills gap within the framework of the National Biosafety Authority 2-year Strategic Plan, the Authority will build a workforce that is not only equipped with the right skills but is also agile, innovative, and aligned with the Authority's long-term goals.

The analysis undertaken identified the NBA’s skills gaps and made proposals, as per the respective career progression guidelines on how to bridge them through competency development programs and activities.

The skills-sets, skills gaps and competence development activities to mitigate gaps identified are highlighted in Table 6.3.

Table 6.3: Skill Set and Competence Development

Cadre	Skills Set	Skills Gap	Competence Development
Chief Executive Officer	<ul style="list-style-type: none"> • Leadership and analytical skills • Excellent organizational, interpersonal and communication skills • Visionary, transformative and result-oriented strategic thinker 	<ul style="list-style-type: none"> • Transformative leadership • Risk Analysis • Resource mobilization 	Individual training/ seminar
Directors	<ul style="list-style-type: none"> • Leadership and analytical skills • Strategic thinker and result oriented • Communication, Proposal and Report writing skills • Teamwork 	<ul style="list-style-type: none"> • Transformative leadership • Analytical Skills • Resource Mobilization • Proposal and report writing skills 	Group/ Individual training
Biosafety	<ul style="list-style-type: none"> • GMO Food Safety • Communication & Report writing • Research Techniques • Abreast with Emerging trends 	<ul style="list-style-type: none"> • GMO Food Safety Assessment • Report writing • Research Techniques • Emerging Trends 	Individual/ Group training
Finance	<ul style="list-style-type: none"> • Supervisory and management skills • Public Finance • Risk Controls and Assessment 	<ul style="list-style-type: none"> • Senior Management • Public Finance and Budget • Risk Analysis 	Individual/ Group training
Human Resource	<ul style="list-style-type: none"> • Supervisory Skills • Report writing & Analytical skills • Productivity Improvement • Problem solving skills • Conversant with Labour laws • HRIS • Good communication and Interpersonal Skills 	<ul style="list-style-type: none"> • Senior Management Course • Report writing skills • Analytical skills • Productivity Improvement course • Labour Laws 	Individual/ Group seminar

Cadre	Skills Set	Skills Gap	Competence Development
	<ul style="list-style-type: none"> Basic Finance skills 	<ul style="list-style-type: none"> HRIS Finance skills 	
Accountants	<ul style="list-style-type: none"> Professional Accounting Analytical Skills Negotiation Skills Financial Strategic Management Risk analysis and controls 	<ul style="list-style-type: none"> Negotiation Skills Supervisory skills Public Finance Risk Analysis CPA Course 	Individual/ group training
Planning	<ul style="list-style-type: none"> Team building; Report writing Resource mobilization Presentation 	<ul style="list-style-type: none"> Resource Mobilization Proposal and report writing skills Presentation Skills 	Individual/ group training
Communication	<ul style="list-style-type: none"> Team work; Report writing Data Protection Presentation Leadership 	<ul style="list-style-type: none"> Presentation Skills Data Protection Supervisory Skills Team building Report writing 	Individual/ group training
ICT	<ul style="list-style-type: none"> Team building; Data Protection Cyber Security 	<ul style="list-style-type: none"> Team building; Data Protection Cyber Security 	Individual/ group training
Records Management	<ul style="list-style-type: none"> Data Protection Knowledge management Report writing & Communication Teamwork 	<ul style="list-style-type: none"> Data Protection Knowledge management Report writing skills 	Individual/ group training
Auditors	<ul style="list-style-type: none"> Team work; Report writing Risk analysis Presentation Leadership 	<ul style="list-style-type: none"> Risk management Report writing and Presentation Leadership skills Team building 	Individual/ group training
Administrators	<ul style="list-style-type: none"> Time Management Good interpersonal skills Team work Organizational skills 	<ul style="list-style-type: none"> Public relations & customer care Team building 	Individual/ group training
Assistants/Drivers	<ul style="list-style-type: none"> Time Management Good interpersonal skills Knowledge of Government vehicle management Defensive driving 	<ul style="list-style-type: none"> Public relations & customer care Refresher Course for Drivers Team building 	Individual/ group training

6.2.3 Leadership

The NBA's Board will play a pivotal role in ensuring the effective implementation of the Revised Strategic Plan. The management team, with the Board's guidance, will put the new plan into action to help Kenya reach its development goals efficiently, while also focusing on what's important for the NBA.

To establish a clear framework of responsibilities and accountability for guiding and overseeing the implementation of strategic activities tied to each Key Result Area, NBA has established Strategic Theme Teams. These teams are aligned with the identified Strategic Issues and have been provided with specific Terms of Reference as presented in Annex II.

6.2.4 Systems and Procedures

To effectively and efficiently implement the Revised Strategic Plan, the NBA shall establish and evaluate internal systems, processes, and Standard Operating Procedures (SOPs) while also adopting quality standards, digitization, and a value chain execution framework. The Authority will maintain a robust regulatory framework and ensure compliance with relevant national and international biosafety laws. NBA will define roles and responsibilities for employees and efficiently allocate resources to support the strategy's execution. Additionally, the Authority will periodically assess and adjust resource allocation based on changing needs, identify and engage with relevant stakeholders, and develop communication channels to keep stakeholders informed about biosafety matters.

Furthermore, the Authority will implement a comprehensive risk assessment and management system to proactively identify and mitigate potential risks. This will involve developing and executing tailored risk mitigation measures while concurrently offering capacity-building programs for both employees and stakeholders. The Authority will also establish a robust biosafety information management system, digitalize processes to enhance overall efficiency, and embrace internationally recognized quality standards for biosafety management. To ensure ongoing adherence to these standards, regular quality audits will be conducted. Additionally, the Authority will maintain a consistent monitoring and evaluation process to assess the plan's implementation and make necessary adjustments.

NBA will actively seek feedback from stakeholders and utilize this valuable input to refine internal systems, processes, and Standard Operating Procedures as needed. This process will include a comprehensive evaluation of existing internal systems, processes, and SOPs, with a focus on assessing their alignment with the strategic plan's objectives. The Authority will develop a comprehensive action plan aimed at either updating or establishing new internal systems and processes where deemed necessary. This approach ensures that these systems play a pivotal role in facilitating the successful execution of the Strategic Plan.

6.3 RISK MANAGEMENT FRAMEWORK

The National Biosafety Authority recognizes the importance of effective risk management to ensure the safe and responsible handling of genetically modified organisms and related activities. Implementation of this Plan is prone to various risks including operational, financial, strategic or technological. In the Strategic Plan period, risk management activities shall be embedded within the processes and systems of the National Biosafety Authority. NBA’s current risks originate both internally and externally. For each risk, appropriate mitigation measures have been identified which have subsequently informed the Strategy formulation. Heads of Directorates will play a crucial role in developing and maintaining risk registers for their respective directorates. The risk matrix and framework are presented in Tables 6.4 and 6.5 respectively.

Table 6.4: Risk Matrix

Risk Assessment Matrix				
		IMPACT/CONSEQUENCE		
		3	2	1
LIKELIHOOD		High	Medium	Low
3	High	High (9)	Medium (6)	Medium (3)
2	Medium	Medium (6)	Medium (4)	Low (2)
1	Low	Medium (3)	Low (2)	Low (1)
Risk rating	Score			
High	7-9			
Medium	3-6			
Low	1-2			

Table 6.5: Risk Management Framework

S/No	Risks	Risk Likelihood L/M/H	Severity L/M/H	Overall Risk Level L/M/H	Mitigation Measures
1	Budgetary constraints	M (2)	M (2)	M (4)	<ul style="list-style-type: none"> Optimize the use of available resources Diversify funding sources. Negotiate for enhanced budgetary allocation
2	Loss of critical manual and electronic records	M (2)	M (2)	M (4)	<ul style="list-style-type: none"> Develop and implement an institutional Disaster Recovery system Establish and implement an Information Security Management System (ISMS)
3	Overlapping mandate among regulatory agencies	L (1)	M (2)	L (2)	<ul style="list-style-type: none"> Review and harmonize the biosafety regulatory framework
4	Loss of key personnel	M (2)	H (3)	M (6)	<ul style="list-style-type: none"> Implement the existing succession plan. Improve staff retention strategies
5	Extensive porous borders	M (2)	M (2)	M (4)	<ul style="list-style-type: none"> Negotiation with neighbouring countries on the need for securing the borders Sensitize communities along the borders Increase collaboration with partner institutions operating at the borders Enhance regional harmonization and capacity building Strengthen penalties for unauthorized GMO releases
6	Stakeholder perception that the Authority promotes GMOs	L (1)	L (2)	L (2)	<ul style="list-style-type: none"> Carry out vigorous awareness campaign on the Authority's mandate

S/No	Risks	Risk Likelihood L/M/H	Severity L/M/H	Overall Risk Level L/M/H	Mitigation Measures
7	Low Corporate visibility	L (1)	M (2)	L (2)	<ul style="list-style-type: none"> • Upscale public awareness • Engage in frequent CSR activities • Carry out corporate rebranding
8	Cybersecurity threats	M (2)	M (2)	M (4)	<ul style="list-style-type: none"> • Enhance cybersecurity measures. • Regularly update and test security protocols.
9	Litigations	M (2)	M (2)	M (4)	Ensure compliance with national and international laws.
10	Intellectual property disputes	M (2)	M (2)	M (4)	<ul style="list-style-type: none"> • Clearly define intellectual property rights in GMO agreements. • Seek legal mediation when disputes arise.

CHAPTER SEVEN

RESOURCE REQUIREMENTS AND MOBILIZATION STRATEGIES

This chapter entails the resource requirements by the Authority for the implementation of the Strategic Plan based on the prioritized key results areas and approved programmes and activities for the next two years.

7.1 FINANCIAL REQUIREMENTS

The total financial requirements for the implementation of this Strategic Plan are derived from the budget column of the implementation matrix. NBA will require an estimated total of Kshs.588.7 million for the two-year budget which will be distributed across the two years to implement the planned activities in the Strategic Plan as presented in Table 7.1 for the financial requirements for implementing the strategic plan.

Table 7.1: Financial Requirements for Implementing the Strategic Plan

Cost Item	Projected Resource Requirements (Kshs. Mn)		
	Year 1	Year 2	Total
KRA 1: Public Awareness on Biosafety and Modern biotechnology	22.1	22.1	44.2
KRA 2: Efficiency in Compliance and Enforcement	7.5	5	12.5
KRA 3: Global engagement, Collaborations and Partnerships	14.2	16.1	30.3
KRA 4: Institutional Capacity Building	49	61	110
Administrative Costs	170.3	221.4	391.7
Total	263.1	325.6	588.7

Table 7.2: Resource Gaps

Financial Year	Estimated Requirements (Kshs. Mn)	Financial Estimated Allocations (Kshs. Mn)	Variance (Kshs. Mn)
Year 1	263.1	206.9	56.2
Year 2	325.6	211.9	113.7
Total	588.7	418.8	169.9

7.2 RESOURCE MOBILIZATION STRATEGIES

- i. Developing fundable grant proposals:** The Authority shall develop competitive proposals for grants to strategic development partners interested in biosafety programmes. The proposals will include funding for public awareness and training. The development partners support for the financial year 2022/2023 was Kshs.9.7 million compared to Kshs.8.1 million in the financial year 2021/2022. The Authority projects to mobilize Kshs.20 million from the development partners during the two years of the implementation of the Strategic Plan.
- ii. Fees and levies for services:** The Authority shall raise funds from allowable fees and levies charged for services rendered in its normal course of business/operations and advertisements. Fees from GMO services from the Authority is a major source of revenue for the Authority. It is projected that with the planned review of the Biosafety Act 2009, this source of income will be boosted significantly. The review will open more revenue streams by creating more chargeable services rendered by the Authority. During the financial year 2022/2023, the Authority received Kshs.7.3 million compared to Kshs.1.6 million in the financial year 2021/2022. The Authority projects to collect Kshs.29 million from the A-I-A collections after the review of the rates charged for GMO services.
- iii. Conference Charges:** The Authority shall continue to hold Biosafety conferences alongside other engagements around the country to create awareness on Biosafety while also mobilizing resources. During the financial 2022/2023, the Authority collected Kshs.4.1 million from the conference fees charged during the 11th Biosafety conference as compared to Kshs.2.3 million collected during the financial year 2021/2022. The Authority projects to collect Kshs.6.0 million from the conference fees charged.
- iv. Laboratory charges:** The Authority established a GMO testing laboratory at the head quarter which has already been operationalized. The Authority will

generate income through testing of GMO's from private samples from research institutions and private sector e.g. seed industry.

7.3 RESOURCE MANAGEMENT

NBA shall allocate resources prioritizing BETA programs in optimizing agricultural production and food security which have been aligned to the key result areas in the strategic plan. To ensure prudent financial management, the Authority will deploy its financial resources in accordance to the Public Finance Management Act, 2012 and the Public Procurement and Disposal Act, 2015. Additionally, the Authority shall employ effective cost saving measures which will be implemented in all the functional areas. Further, NBA is committed to automate its services where necessary as well as upgrading its integrated ERP.

CHAPTER EIGHT

MONITORING, EVALUATION AND REPORTING FRAMEWORK

This chapter covers the systematic approach employed by NBA to monitor their activities, evaluate their effectiveness, and report on their achievements. A monitoring, evaluation, learning (MEL) framework has been prepared as detailed in this chapter.

8.1 MONITORING FRAMEWORK

Monitoring will help determine whether the implementation of the revised Strategic Plan is on-track and establish the need for any adjustment. This will involve routine data collection and analysis on the progress of the revised Strategic Plan implementation. The results of the analysis shall then be used to inform decision-making, including taking corrective action where deviations in implementation are noted. The department of planning will coordinate the collection of data, analysing and reporting.

The monitoring of financial and other resources will constitute part of the monitoring, evaluation and reporting system to ensure that all the resources are utilized in accordance with the approved work plans, budgets, financial management guidelines and regulations to construe accountability.

The monitoring and reporting process will involve preparation of annual work plans by each directorate/department. The work plans will be linked to the objectives, strategies and activities as documented in the implementation matrix. In addition, directorate/departmental work plans will be cascaded to individual employees' work plans which will then be linked to NBA's performance management system. The strategic plan will be monitored on a quarterly and annual basis.

8.2 PERFORMANCE STANDARDS

NBA's monitoring and evaluation framework that will be utilized to assess the performance is based on relevance, efficiency, effectiveness, success, and sustainability. NBA has aligned its strategic objectives and activities with the identified needs and priorities of the target customers. For efficiency, the revised strategic plan optimizes resource utilization by enhancing NBA's operational efficiency. In addition, evaluations will be undertaken to determine success and assess whether the outcomes

contribute to positive and lasting changes. Further, to enhance sustainability, NBA will strengthen the capacity of the Board and ensure sustainable resourcing. The Strategic Theme Teams have been identified and their respective TORs drawn to ensure accountability, the teams are as shown in Annex II.

8.3 EVALUATION FRAMEWORK

Evaluation will help examine how effectively the plan was implemented and whether there are gaps between the planned and achieved results. It will also establish the extent to which the planned objectives have been achieved. In addition, evaluation will determine whether there are changes in the organizational performance as a result of the initiatives being undertaken.

The Revised Strategic Plan will be evaluated during and after implementation to gauge the extent of achievement of the intended results. The Plan will be evaluated quarterly and annually against the activities identified within the annual work plans and the KPIs. The output of the quarterly monitoring will be a Strategic Plan review report while the output of the annual review shall be an annual report for the period.

8.3.1 End-Term Evaluation

NBA will conduct an end-term evaluation in the FY 2024/2025 to assess the success rate in the implementation of the Revised Strategic Plan as well as the impact of the implemented strategic initiatives. An end-term evaluation report will highlight key milestones/achievements, challenges experienced, lessons learnt and recommendations for improvement. End-term evaluation will entail data collection, data analysis, preparation and presentation of reports, and drafting of the management response. The findings will inform the formulation of the next Strategic Plan.

Table 8.1 shows outcomes performance matrix which details strategic objectives, outcome, outcome indicator, baseline and target.

Table 8.1: Outcome Performance Matrix

Strategic objectives	Outcome	Outcome indicator	Baseline Value	Target		
				2022/23	2023/24	2024/25
KRA 1: Public Awareness on Biosafety and Modern biotechnology						
1. To Increase public confidence in the safety of modern biotechnology	Attraction of investment and partnerships in the biosafety sector.	Level of public awareness	Percentage	100%	100%	100%
KRA 2: Efficiency in Compliance and Enforcement						
2. To have Robust enforcement of biosafety regulatory framework	GMOs that are approved by NBA are safe to humans, animals and environment	% of Applications received and approved based on safety	%	100	100	100
	Adherence to GMO legal and regulatory framework by GMO dealers	Level of compliance	100	100	Adherence to GMO legal and regulatory framework by GMO dealers	Level of compliance
	GMO research processes and their products are safe and ethical	Level of compliance (%)	100	100	GMO research processes and their products are safe and ethical	Level of compliance (%)
KRA 3: Global engagement, Collaborations and Partnerships						
3. To effectively engage in the global discourse on biosafety	Amplify Kenya's voice and safeguard	Level of compliance	%	100	100	100

Strategic objectives	Outcome	Outcome indicator	Baseline Value	Target		
				2022/23	2023/24	2024/25
and modern biotechnology;	national interest in global engagements					
	Enhanced knowledge and information sharing	Level of compliance (%)	100	100	Enhanced knowledge and information sharing	Level of compliance (%)
	Increased partnerships and collaborations regionally and internationally on biosafety matters	No. Collaborations and partnerships	10	12	Increased partnerships and collaborations regionally and internationally on biosafety matters	No. Collaborations and partnerships
KRA 4: Institutional capacity building						
4. A sustainable, productive and motivated workforce	Improved staff performance	Employee satisfaction level	Number of reports	1	1	1
	Staff retention		Percentage of staff retained	100%	100%	100%
5. To enhance financial resource base	Timely and effective	Budget estimates	Budget variance	1	1	1

Strategic objectives	Outcome	Outcome indicator	Baseline Value	Target		
				2022/23	2023/24	2024/25
	discharge of NBA mandate	Activities funded by development partners/ other stakeholders	Percentage of activities funded by development partners/ other stakeholders	10%	20%	30%
6.Adequate infrastructure for biosafety regulation	Enhanced Biosafety infrastructure	Regional reference laboratory	Number	0	1	1
	Adequate office space	Proportion of additional office space acquired	Number of additional offices acquired	21	26	26

8.4 REPORTING FRAMEWORK AND FEEDBACK MECHANISM

The heads of Directorates/Departments (HODs) shall prepare quarterly reports for their respective Directorates/Departments on the implementation of the Revised Strategic Plan and submit them to the head of planning for compilation. The C.E.O and HODs will hold a quarterly management review to review the status of the Revised Strategic Plan implementation. The CEO shall on a quarterly basis table a report on the implementation of the Revised Strategic Plan to the Board. The head of strategy will on a quarterly basis further prepare an implementation scorecard of the strategic plan and submit it to the CEO for tabling before the Board. In addition, the Board will conduct an end-term review of the Revised Strategic Plan to assess the effectiveness of the strategic initiatives, challenges and lessons that should be considered in the preparation a strategic plan for the next period.

During the implementation of the Strategic Plan, the quarterly, annual and end term and evaluations will be undertaken using the templates documented as Tables 8.1 to 8.3.

Table 8.2: Quarterly Progress Reporting Template

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

Table 8.3: Annual Progress Reporting Template

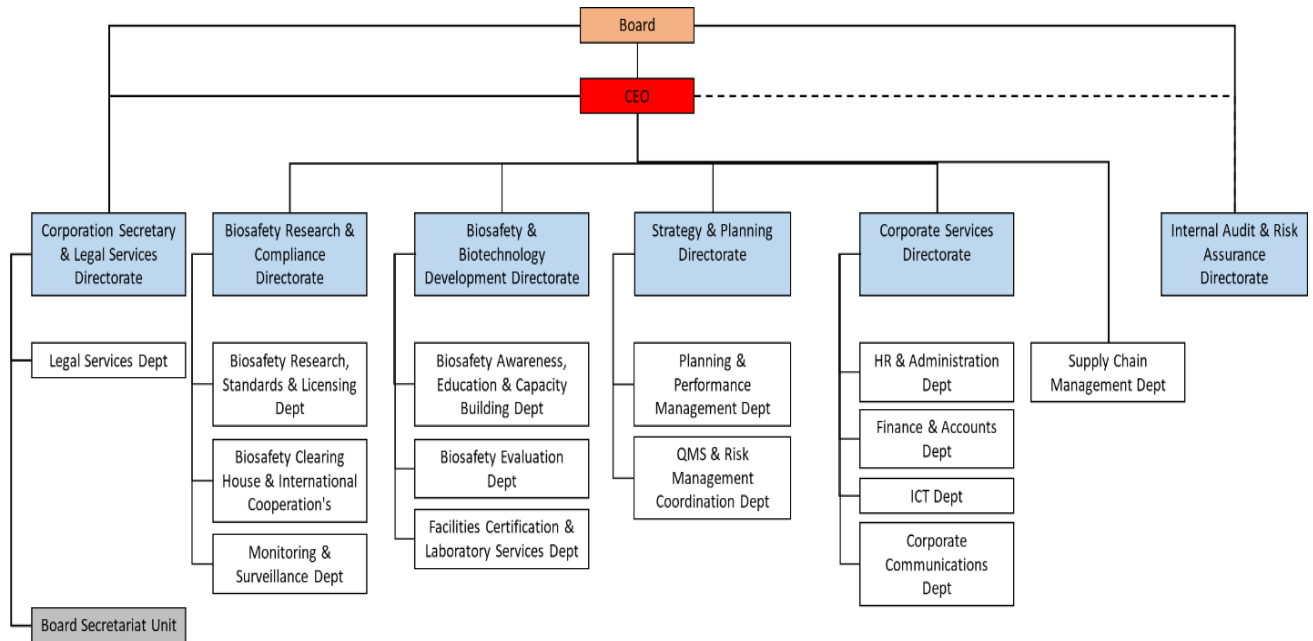
Expected Output	Output Indicator	Achievement for year ...			Cumulative to date			Remarks	Corrective Intervention
		Target (A)	Actual (B)	Variance (B-A)	Target (D)	Actual (E)	Variance (E-D)		

Table 8.4: Evaluation Reporting Template

Key Result Area	Outcome	Output Indicator	Baseline		Mid-Term Evaluation		End of Plan Period Evaluation		Remarks	Corrective Intervention
			Value	Year	Target	Achievement	Target	Achievement		

ANNEXES

ANNEX I: NBA ORGANIZATION STRUCTURE



ANNEX II: STRATEGIC THEME TEAMS

KRA 1: Public Awareness on Biosafety Matters

Strategic Theme Teams: Biosafety Evaluation, Biosafety Awareness, Education and Capacity Building, Facility Certification and Laboratory Services.

The team shall:

- i.** Conduct biosafety safety assessment;
- ii.** Conduct biosafety awareness;
- iii.** Carry out education and capacity building;
- iv.** Conduct GMO Facility Certification;
- v.** Carry out Laboratory Services.;
- vi.** Management of Biosafety Clearing House (BCH) and international biosafety obligations;
- vii.** Monitoring and surveillance programs; and
- viii.** Biosafety Research, Standards and Licensing.

KRA 2: GMO Safety Assurance

Strategic Theme Teams: Biosafety Evaluation and Biosafety Research and Standards and Licensing Department

The team shall:

- i.** To initiate the formulation, review and implement policies, procedures, strategies and activities in relation biosafety risk assessment of GMO Applications including emerging biotechnologies.
- ii.** Ensure implementation of the Biosafety Act and Regulations.
- iii.** Develop operational guidelines and manuals necessary for effective implementation of departmental mandates.
- iv.** Consider and determine applications for approval for the transfer, handling and use of genetically modified organisms, and related activities.
- v.** Maintain a GMO Applications' Register.
- vi.** To initiate the formulation, review and implement policies, procedures, strategies and activities in relation to biosafety research, standards and licensing.
- vii.** Preparation and issuance of approval documents on GMO applications and related activities after NBA Board decision.
- viii.** Coordinate the processing and issuance of GMO-Free certificates for non-GMO export commodities.
- ix.** Maintain a register of all GMO approvals, GMO Free Certificates issued by the Authority
- x.** Ensure proper labelling and traceability of approved GM foods, feeds, seeds and other commodities.
- xi.** Coordinate the development and domestication of relevant standards on biosafety.
- xii.** Conduct surveys, research to inform the Board and Management on topical matters and overall biosafety issues.
- xiii.** Maintain a roster of biosafety experts and coordinate the engagement of biosafety experts and consultation of relevant regulatory agencies on biosafety matters.

- xiv.** Prepare relevant technical papers, reports and other submissions for consideration by the Board.
- xv.** Establish and manage administrative mechanisms to ensure confidential handling and storage of documents and data in connection to the processing of applications and other matters covered by the Biosafety Act, 2009.

KRA 3: Compliance and Enforcement

Strategic Theme Team: Led by Directorate of Biosafety and Biotechnology Development Directorate (Department of Facility Certification and Laboratory Services) and Biosafety Research and Compliance Directorate (Department of Monitoring and Surveillance) and supported by all other Directorates.

Facility Certification and Laboratory Services Department

Functions:

- i.** To initiate the formulation, review and implement policies, procedures, strategies and activities in relation to, plant, animal and microbial biosafety including categorization, approval and certification of biosafety facilities and laboratory services;
- ii.** Ensure implementation of the Biosafety Act and Regulations to achieve Authority's mandate;
- iii.** Develop operational guidelines and manuals necessary for effective implementation of Department's mandates.
- iv.** Prepare relevant technical papers, reports and other submissions for consideration by the Board.
- v.** Develop checklists for inspection, classification and certification of GMO containment facilities.
- vi.** Register and strengthen Institutional Biosafety Committees (IBCs) in research and academic institutions engaged in GMO research-related activities.
- vii.** Develop GMO sampling, detection and analysis protocols.
- viii.** Facilitate timely analysis of GMO samples and other analytical tests.
- ix.** Ensure and maintain relevant accreditation of the GMO Molecular laboratory.

Monitoring and Surveillance and Biosafety Research Department

Functions:

- i.** To initiate the formulation, review and implement policies, procedures, strategies and activities in relation to monitoring of approved GMO projects and surveillance programs.
- ii.** Facilitate trade through digitization of border post and entry points.
- iii.** Inspection and clearance of consignments at entry and exit points.
- iv.** Coordinate the monitoring of approved GMO research projects in containment and confinement facilities
- v.** Coordinate post release monitoring of commercialized genetically modified plants, animals and microorganisms.
- vi.** Review post market data submitted by applicants, Regulatory agencies and any other stakeholder for regulatory decisions.
- vii.** Conduct market surveillance activities nationally and at counties for purposes of testing.

viii. Coordinate regional offices and/or border posts and entry/exit points

KRA 4: Institutional capacity building and resource mobilization

Strategic Theme Team: Corporate Services Directorate, Biosafety Research and Compliance Directorate, Biosafety and Biotechnology Development Directorate, Supply Chain Department. The team shall:

- i.** Coordinate the Authority's human capital affairs, ensuring that the Authority has the right and sufficient human resources to meet its objectives.
- ii.** Develop and implement Human Resource plans, policies and strategies.
- iii.** Develop, review and coordinate the implementation of the performance management system.
- iv.** Develop, coordinate and implement staff benefit schemes, welfare, reward systems and pension management.
- v.** Manage and coordinate staff training and development.
- vi.** Manage the recruitment process, coordinate induction program for new staff, and provide a full briefing to staff on human resource policy guidelines and benefits.
- vii.** Oversee the development and implementation of financial regulations, strategies, internal controls and plans for effective and efficient use of resources.
- viii.** Oversee Budget preparation and implementation.
- ix.** Coordinate the development of resource mobilization strategies.
- x.** Coordinate preparation of the financial reports, financial statements and submission to relevant institutions.
- xi.** Initiate the formulation, review and implement policies, procedures, strategies and activities in relation to, plant, animal and microbial biosafety including categorization, approval and certification of biosafety facilities and laboratory services
- xii.** Coordinate the development of project proposals and concept notes on biosafety programs.
- xiii.** Coordinate and facilitate the procurement process within Authority in liaison with respective departments.