

NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN NBSAP 2025-2035 THE GAMBIA



REPUBLIC OF THE GAMBIA

President
Adama Barrow

Vice President
Muhammad B. S. Jallow

Ministry of Environment, Climate Change, and Natural Resources

Minister
Rohey John Manjang

Permanent Secretary
Ebrima Jawara

Department of Parks and Wildlife Management

Director
Mohamed Lamin Kassama

CBD Focal Person
Kawsu Jammeh

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Acknowledgements

National Biodiversity Strategy and Action Plan (NBSAP) 2025–2035

On behalf of the Government of the Republic of The Gambia, the Ministry of Environment, Climate Change and Natural Resources conveys its profound appreciation and sincere gratitude to all institutions, partners, and individuals who contributed to the development, validation, and finalization of the National Biodiversity Strategy and Action Plan 2025–2035.

This strategic document represents a landmark national achievement and a shared commitment to safeguarding The Gambia's rich biological diversity. It provides a comprehensive framework for the conservation, restoration, and sustainable use of biodiversity and ecosystem services over the next decade. Importantly, it reflects the country's alignment with national development priorities, including sustainable economic growth, food security, climate resilience, and poverty reduction, as well as its international obligations under the Convention on Biological Diversity and related global environmental agreements.

The Government recognizes that the successful preparation of this National Biodiversity Strategy and Action Plan aligned with Kunming-Montreal Biodiversity Framework was made possible through a broad-based, inclusive, and participatory process involving a wide range of stakeholders at national, subnational (National Administration Regions and Municipalities), and community levels. The development of this strategic plan has been characterized by strong collaboration, technical rigor, and a shared vision for a more sustainable and resilient future for The Gambia.

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departments, and agencies whose active participation enriched the development of this strategy. These include institutions responsible for agriculture, fisheries, forestry, water resources, local government, land use planning, education, energy, and finance. Their technical inputs ensured that biodiversity considerations were effectively mainstreamed across key development sectors, thereby strengthening the policy coherence and implementation relevance of the National Biodiversity Strategy and Action Plan 2025–2035.

Their engagement demonstrates the Government's recognition that biodiversity conservation is not the responsibility of a single institution, but a shared mandate requiring coordinated action across all sectors of the economy and governance system.

Contributions of Local Governance and Traditional Institutions

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The active participation of rural communities, including women, youth groups, farmers, fishers, and forest-dependent populations, has been particularly instrumental in ensuring that the National Biodiversity Strategy and Action Plan reflects the lived experiences of those most directly dependent on natural ecosystems. Their engagement reaffirms the central role of communities as primary custodians of biodiversity and as key actors in its protection and sustainable use.

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These partnerships have played a vital role in strengthening national capacity, enhancing technical expertise, and ensuring that the National Biodiversity Strategy and Action Plan 2025–2035 is fully aligned with global biodiversity frameworks, including the Kunming-Montreal Global Biodiversity Framework and other relevant international commitments.

The Government also recognizes the broader community of bilateral and multilateral partners who continue to support The Gambia's environmental and climate change agenda. Their sustained collaboration reflects a shared global responsibility to address biodiversity loss, climate change, and environmental degradation.

Role of Civil Society, Academia, and the Private Sector

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Civil society organizations, in particular, have been instrumental in facilitating community engagement, raising awareness, and advocating for inclusive and equitable biodiversity governance. Their continued engagement ensures that conservation efforts remain participatory and grounded in local realities.

Academic and research institutions contributed valuable scientific knowledge, biodiversity assessments, and policy-relevant research, helping to ensure that the strategy is evidence-based and forward-looking.

The private sector is also acknowledged for its emerging role in biodiversity conservation and sustainable natural resource use. Through investments in sustainable agriculture, eco-tourism, fisheries, and green innovation, the private sector continues to demonstrate that economic development and environmental stewardship can be mutually reinforcing.

National Consultative Process and Individual Contributions

The Government extends its deepest appreciation to all individuals who participated in the

national and sub-national consultations, technical workshops, validation meetings, and stakeholder dialogues held throughout the country. These engagements provided critical platforms for dialogue, knowledge exchange, and consensus-building.

The inputs received from these consultations were instrumental in shaping the priorities, strategies, and actions contained in the National Biodiversity Strategy and Action Plan 2025–2035. They ensured that the final document is not only technically sound, but also socially inclusive and nationally owned.

The Government particularly recognizes the dedication of consultants, technical experts, facilitators, rapporteurs, and support staff who worked diligently throughout the process to ensure its success.

A Shared National Vision for Biodiversity and Sustainable Development

The development of the National Biodiversity Strategy and Action Plan 2025–2035 represents more than a policy exercise; it is a reflection of The Gambia's collective vision for a sustainable future. It demonstrates the country's commitment to halting biodiversity loss, restoring degraded ecosystems, and ensuring the sustainable use of natural resources for the benefit of present and future generations.

This strategy reinforces the understanding that biodiversity is the foundation of national development, underpinning agriculture, fisheries, water security, health, climate resilience, and economic prosperity. It further recognizes that protecting ecosystems is essential for safeguarding livelihoods and enhancing national well-being.

Conclusion

In conclusion, the Government of the Republic of The Gambia reiterates its profound appreciation to all stakeholders whose efforts, dedication, and collaboration made the development of the National Biodiversity Strategy and Action Plan 2025–2035 possible. The success of this process stands as a testament to what can be achieved through partnership, inclusivity, and shared responsibility.

As the country moves into the implementation phase, the Government calls for continued collaboration among all stakeholders to ensure that the commitments outlined in this strategy are fully realized. Together, we can build a more resilient, biodiverse, and sustainable Gambia, one that preserves its natural heritage while advancing national development and human prosperity.

Her Excellency Rohey John Manjang

Minister of Environment, Climate Change and Natural Resources

The Republic of The Gambia



Acronyms

AEWA	=	African Eurasian Waterbird Agreement
AfDB	=	African Development Bank
&	=	and
ANR	=	Abuko Nature Reserve
ANR	=	Agriculture and Natural Resources
ANR-WG	=	Agriculture and Natural Resources Working Group
BC	=	Banjul City
BCC	=	Banjul City Council
BWR	=	Baobolong Wetlands Reserve
CBD	=	Convention on Biological Di CBD
CBOs	=	Community Base Organization
CEPA	=	Communication, Education, Participation, Awareness
CFCs	=	Community Forest Committees
CFs	=	Community Forests
CFMA	=	Community Forest Management Agreement
CITES	=	Convention on International Trade on Endangered Species
CMS	=	Convention on migratory species
CNEA	=	Communication, Education, and Public Awareness
CO_2e	=	Carbon dioxide energy
CPUE	=	catch-per-unit-effort
CRR	=	Central River Region
CSOs	=	Civil Society Organizations
CSR	=	Corporate Social Responsibility
CSA	=	Climate-Smart Agriculture
DDPs	=	District Development Plans
GEF	=	Global Environment Facility
DoE	=	Department of Energy
DoF	=	Department of Forestry
DPWM	=	Department of Parks and Wildlife Management
ESIAs	=	Environment and Social Impact Assessments
EBA	=	Ecosystem-based Adaptation
EU	=	European Union
FAO	=	Food and Agriculture Organization
FPIC	=	Free, Prior, and Informed Consent
GBF	=	Global Biodiversity Framework
GBoS	=	Gambia Bureau of Statistics
GCF	=	Green Climate Fund
GDP	=	Gross Domestic Product
GEF	=	Global Environment Facility
g/ha	=	Grams per hecter
GIS	=	Geographic Information System
GoTG	=	Government of The Gambia
GPS	=	Global Positioning System
Ha	=	Hecters

IMBC	=	Inter-Ministerial Biodiversity Committee
IAS	=	Invasive Alien Species
ICCAs	=	Indigenous and Community Conserved Areas
ICT	=	Information and Communication Technology
IEC	=	Independent Electoral Commission
IMBC	=	Inter-Ministerial Biodiversity Committee IMBC
IPM	=	Integrated Pest Management
IUCN	=	International Union for the Conservation of Nature
IWT	=	Illegal Wildlife Trade
JNP	=	Jokadu National Park
KETP	=	Kanifing Environmental Transformation Program
KM	=	Kanifing Municipality
KMC	=	Kanifing Municipal Council
km^2	=	Kilometer Square
KWNP	=	Kiang West National Park KWNP
LDN	=	Land Degradation Neutrality
LGAs	=	Decentralization and Local Government Authorities LGAs
LRR	=	Lower River Region
LSCs	=	Local Sea Committees
MEA	=	Multi-Environmental Agreement
M&E	=	Monitoring and Evaluation
MEL	=	Monitoring, Evaluation, and Learning
METT	=	Management Effectiveness Tracking Tool
mm	=	millimeters
MoBSE	=	Ministry of Basic and Secondary Education
MoF	=	Ministry of Finance
MoLG	=	Ministry of Local Government
MoT	=	Ministry of Tourism
MRV	=	Monitoring, Reporting, Verification
$MtCO_2e$	=	*Megatons Carbon Dioxide Energy*
NARI	=	National Agricultural Research Institute
NBP	=	National Biodiversity Policy
NBR	=	North Bank Region
NbS	=	Nature-based Solutions
NBSAP	=	National Biodiversity Strategy and Action Plan
NEA	=	National Environment Agency
NGO	=	Non-governmental Organization
NNP	=	Niumi National Park
NTFPs	=	Non-Timber Forest Products
OECMs	=	Other Effective Conservation Measures
°C	=	Degree Celsius
°N	=	Degrees North
Pas	=	Protected Areas
PES	=	Payment for Ecosystem Services
%	=	Percentage
PPP	=	Public Private Partnership

RLI	=	Red List Index
RSC	=	Regional Steering Committee
SBSAP	=	Sub-National Biodiversity Strategies and Action Plans
SECP	=	Stakeholder Engagement and Communication Pla
SMART	=	Specific, Measurable, Achievable, Relevant, and Time-bound
SOPs	=	Standard Operating Procedures
T	=	*Target*
TAC	=	Technical Advisory Committees
TWGs	=	Technical Working Groups
UNDP	=	United Nations Development Programme
UNEP	=	United Nations Environment Programme
UNESCO	=	United Nations Educational, Scientific and Cultural Organization
UNIDO	=	United Nations Industrial Development Organization
URR	=	Upper River Region
$	=	USD
USD	=	United States Dollar
VDCs	=	Village Development Committees
WABSA	=	West African Birds Association
WB	=	World Bank
WCR	=	West Coast Region
WDCs	=	Ward Development Committees



Foreword

This National Biodiversity Strategy and Action Plan (NBSAP) defines The Gambia's long-term strategic vision for the conservation and sustainable use of biodiversity for now and posterity, and to ensure the resilience of the social and economic systems.

The focus of the past two NBSAPs has been more sectoral; thus, the current strategy shifts to a consolidated management approach, with tools that focus on the conservation and sustainable use of biodiversity and ecosystems. The Strategy is aligned to the Gambia's green and recovery-focused National Development Plan for (2023-2028), and it further outlines a transformational vision for wildlife conservation and sustainable use by 2035, and identifies a clear set of ten (10) year priority goals and strategies around four key pillars: resilient ecosystems, Engagement by all Gambians, Evidence based decision making and sustainability, and Governance. In addition to these targets, the strategy establishes an implementation framework to enhance communication, coordination, and collaboration to inspire engagement and participation and catalyze conservation actions with all stakeholders.

The present strategy builds on past and present policies, best practices, and reviews historical conservation successes and bottlenecks, starting with the Banjul Declaration of 1977 It highlights opportunities and innovative approaches to addressing emerging challenges facing wildlife as a land use option in The Gambia while ensuring that benefits accrue to millions of Gambians who coexist with wildlife on their land. Further, the strategy made use of extensive consultative dialogues with stakeholders, particularly civil society, to come up with the strategic vision that ensures that economic, social, and ecological development are not only interlinked and mutually supportive, but also includes the following key elements:

(i) the definition of new national targets for the current cycle through the participatory process;
(ii) the formulation of multi-sectoral contributions for the National Action Plan for the Conservation and Sustainable Use of Biodiversity;
(iii) the creation of the Gambian committees on Biodiversity;
(iv) the definition of indicators for the national targets and strengthening of the NBSAP; and
(v) the structuring of the NBSAP and the process for its development.

The strategy calls on all Gambians to put all hands-on deck in realizing our collective goal of securing our wildlife heritage for the benefit of all, for now and posterity, for this has the potential to drive our National Development Blueprint, as well as underpin our national aspirations and our sustainable development goals and strategies. Thus, one of the objectives of this effort was to consolidate processes and mechanisms for communication, coordination, and cooperation involving a plethora of actors in sustainable biodiversity management. In tandem, the NBSAP seeks to provide directives to harmonize and integrate actions targeting sustainable management of biodiversity, as planned and implemented by the various sectors of society. Thus, the NBSAP represents a means to interconnect subnational and national efforts and initiatives, organized and presented under the Convention on Biological Diversity.

The Gambia is rich in terms of biodiversity. As a developing economy, majority of the population depends on biodiversity for their livelihoods. The benefits of plant, animal, water resources and microbial biodiversity to the people of The Gambia are enormous. These range from economic (source of rural and urban income, export earnings), social (as sources of food and food security, medicine for health maintenance and cure of diseases and ailments), religious and cultural (avenue for spiritual inspiration), aesthetic and recreational to ecological (watershed and catchment area protection, wind/storm break, forest regeneration, soil fertility maintenance, etc.) and environmental (maintenance of atmospheric carbon levels, absorption of pollutants, etc.). Therefore, there is an urgent responsibility on our generation to pay particular attention to biodiversity conservation. We need to conserve and manage biodiversity to ensure continuous and equitable distribution of the associated benefits. Biodiversity must therefore be managed in the context of ensuring equitable benefits to people – both current and future generations.

Biodiversity is our heritage, a valuable asset for ecological integrity and economic transformation. If managed intelligently, biodiversity can catalyze development and be a conduit for poverty alleviation. We must put our hands on the deck to conserve biodiversity in the spirit of sustainable development. Mainstreaming biodiversity into our developmental efforts should not be by default. It requires careful planning and strategies that will keep our commitments under the Convention on Biological Diversity alive.

The Gambia has updated and reformulated the National Biodiversity Strategy and Action Plan (NBSAP) with the view to mainstreaming biodiversity in national development and protecting and conserving our valuable biological resources in all the ecological zones. The NBSAP seeks to conserve and manage terrestrial and aquatic biodiversity to ensure sustainable and equitable benefits to all Gambians now and in the future. The plan puts strong emphasis on developing systems and technologies that will protect threatened species while promoting sustainable management of the endangered natural environments. The innovative aspects of the plan are measures to safeguard parts of the deep marine environment that are particularly rich in biodiversity. The plan seeks to create marine protected areas in light of existing protection mechanisms.

The era has come for Gambia to tread on the path of humanist ecology. We need to integrate, in our quest for economic and human progress, an awareness of our duties to nature and our responsibilities to future generations. We need to develop good scientific information and understanding; strong institutional capacity and commitment; strategic cross-sectoral and public-private partnerships; and biodiversity-friendly policies for socio-economic transformation. Better coordination between the different agencies responsible for managing the natural environment will create a veritable force to conserve and sustainably utilize our natural resource base, upon which we ultimately depend for our basic needs, survival, and development. We have the responsibility to ensure that Gambia becomes and remains the beacon of hope for biodiversity conservation globally. In all these, our communities must stand as the custodians of conservation and the guarantors of biological diversity.

Hon. Minister
Ministry of Environment, Climate Change and Natural Resources



Remarks from The Director

The Gambia's unique geographic location, distinct topography and associated climatic conditions make the country home to a unique diversity of fauna and flora that forms the wealth of species, particularly avifauna, that contribute to the well-being of Gambians, while attracting visitors to the country and contributing to economic growth. Despite many decades of wanton ecosystem and environmental degradation. The Gambia still harbors a rich biodiversity that deserves national and international attention.

Though modern/conventional biodiversity conservation and sustainable use is relatively new (Banjul Declaration of 1977), the practice of setting aside and protection of cultural, secrete and ecologically sensitive sites has been going on from time immemorial.

With the popularization of the Banjul Declaration in 1977, the Gambia Government officially declared its commitment to the sustainable management of the country's wildlife resources as a land use option, so as to contribute to the development of the country and enhance the livelihoods of our people. The strategy encapsulates this commitment. The concerned sectors retained their wider assigned duties and responsibilities and continued playing a pivotal role in the protection of the nation's biodiversity, including through proposing and supporting laws and policies for the environment, and complying with commitments made by the country to international conventions on biodiversity and the environment in light of The Gambia's peculiarities.

The National Wildlife Management and Conservation Strategy 2025-2035 has also re-engineered and redesigned the institutional architecture of the wildlife sector to ensure effective coordination, collaboration, and synergy amongst the multiple state and non-state actors who have different mandates, roles, capacities, and resources

Among the important policy documents related to the protection of natural heritage is the National Biodiversity Strategy and Action Plan (NBSAP), whose revision was initiated in 2025 and which was completed in 2026 under the coordination and technical leadership of DPWM and with financial support from UNEP/GEF

The revised NBSAP articulates conservation priorities and actions for the period 2026-2036 in The Gambia. This comprehensive document has several objectives, including providing clear and updated strategies that will guide the development of its future biodiversity conservation and management; communicating The Gambia's biodiversity conservation priorities to the Convention on Biological Diversity (CBD); and defining the role of other governmental and non-governmental organizations and development partners in the conservation of biodiversity in The Gambia. Additionally, this strategic document aligns The Gambia's conservation programs and priorities with global needs and commitments.

DPWM management thanks UNEP and GEF for funding this project, as well as the steering Committee for providing technical support from initiation to completion of the project. DPWM also appreciates the various contributions to the process by partners and stakeholders, especially the consultants. DPWM leadership remains committed to ensuring that all actions and approaches articulated in the NBSAP are implemented and looks forward to seeing all relevant partners and

supporters take serious steps to achieve the biodiversity conservation targets outlined in this national document.

The Director
Department of Parks and Wildlife Management



Executive Summary

As a legal framework, The Gambia's National Biodiversity Strategy and Action Plan (NBSAP) provides an enabling environment for collaboration between government, Civil Society, international partners, the private sector and communities in managing the country's biodiversity resources.

The Gambia is blessed with a rich biodiversity which through the decades has catered to the needs of the population through the provision of a wide range of goods and services providing the foundation for the country's sustainable development aspirations. Despite its significance, biodiversity in the country is under severe stress resulting from a combination of human activities and climate change factors leading to a plethora of economic, social, environmental and cultural challenges.

Responding to these challenges, the current NBSAP (2025 – 2035) was developed against the backdrop of calls for urgent actions to reverse the alarming trend of biodiversity loss. By providing a structured framework, the NBSAP enables The Gambia to set priorities, establish measurable targets, and monitor progress in biodiversity conservation and sustainable resource management.

Going further, the new NBSAP (2025 – 2035) aligns with the Global Biodiversity Framework (GBF), whose targets and indicators are aimed at halting biodiversity loss, promoting ecosystem restoration, and ensuring that biodiversity contributes to human well-being and sustainable development. Key goals and targets of the GBF aim to achieve measurable biodiversity outcomes by 2030. The GBF aims to create pathways for countries like The Gambia to halt and reverse biodiversity loss by 2030 and achieve the long-term vision of "living in harmony with nature" by 2050.

The Gambia's new NBSAP builds upon the achievements and lessons learned from previous NBSAPs, while addressing contemporary issues such as climate change, habitat degradation, invasive species, over-exploitation of resources, and other emerging threats to biodiversity.

The development process for the strategy adopted an inclusive approach to ensure that it reflects national priorities, scientific and traditional knowledge with a view to engender stakeholder ownership and commitment to implementation.

The NBSAP will be implemented using a decentralized approach through Subnational Biodiversity Strategy and Action Plan (SBSAP) with all the 7 Administrative Regions/Municipalities implementing their respective plan. This approach ensures that each administrative region/municipality focuses on the unique biodiversity challenges and that adapts the plans to suit their local conditions.

The implementation of The Gambia's NBSAP (2025–2035) is expected to generate measurable outcomes and long-term impacts that collectively contribute to biodiversity conservation, sustainable development, and climate resilience. Specifically, the long-term outputs and outcomes will include the following:

1. Improved Biodiversity Status – crucial for the protection and restoration of critical habitats.
2. Enhanced Ecosystem Services - Healthy and well-managed ecosystems will continue to provide essential services
3. Increased Community Resilience to Environmental Changes - By promoting sustainable livelihoods, participatory conservation, and awareness-raising programs, local communities will be better equipped to adapt to environmental shocks.
4. Sustainable Economic Development through Biodiversity Utilization - The NBSAP encourages responsible use of natural resources, linking conservation with economic opportunities while maintaining ecological integrity, contributing to poverty reduction and equitable benefit-sharing.
5. Strengthened National and Local Capacities for Biodiversity Governance - Improved institutional coordination, legal frameworks, technical expertise, and monitoring systems will enhance the capacity of all stakeholders to manage biodiversity effectively.

In combination, these outcomes and impacts create a pathway toward a resilient and biodiversity-rich Gambia, where ecosystems sustain livelihoods, support climate adaptation, and contribute to national development goals while fulfilling international biodiversity commitments.



Introduction

The Gambia's prosperity and well-being are highly dependent on its biodiversity. Consequently, biodiversity must be treated more seriously as a national and global resource to be used and preserved. Three circumstances conspire to give this matter an unprecedented urgency. First, exploding human populations are degrading the environment at an alarming rate, especially in tropical countries like the Gambia. Second, science is discovering new uses for biodiversity in ways that can relieve both human suffering and environmental destruction. Third, much of the diversity is being irreversibly lost through extinction driven by habitat destruction. Biodiversity is the source of many ecosystem goods and services. The benefits in the form of goods and services include, but are not limited to, provisioning services like food & fibre, fuelwood, freshwater, biochemicals, and genetic resources. Regulating Services: climate regulation, disease regulation, water regulation & purification, erosion control, storm protection, pollination, etc, Cultural Services: spiritual & religious, recreation, Aesthetic, inspirational, educational, cultural heritage, etc, and Supporting Services such as soil formation, nutrient cycling, and primary production.

The variety of all living species, including plants, animals, bacteria, and fungi, is collectively referred to as biodiversity. A broad range of species act together to provide and sustain everything in nature needed to sustain life. However, humans are now utilising these living resources faster than they can be renewed, leading to the loss of species and the disruption of the delicate balance of nature.

Recognising the alarming loss of species and the resulting erosion of ecological integrity, the Convention on Biological Diversity (CBD) was negotiated from 1989, opened for signature in June 1992, and entered into force on 29th December 1993. to provide global leadership and promote cooperation in the conservation of biodiversity and the sustainable use of its components. The Gambia became a signatory and party to the CBD in 1996. Article 6 of the CBD commits parties to developing National Biodiversity Strategies, Action plans or programmes (NBSAPs) for the conservation and sustainable use of biological diversity.

NBSAP sets out an integrated, coherent national strategy for the conservation, management, and sustainable use of biodiversity and specifically outlines how contracting parties will fulfil the objectives of the Convention. NBSAP also provides a framework for integrating biodiversity considerations into other sectoral plans and strategies, and, as such, is an important mainstreaming tool.

The Gambia developed its first NBSAP in 1999, in implementing Article 6 of the Convention on Biological Diversity. Gambia's first NBSAP included sectoral studies by competent experts, which provided the first comprehensive national assessment of the status and trends of biodiversity at the ecosystem level across terrestrial, freshwater, estuarine and marine ecosystems. Using systematic biodiversity planning, NBSAP provided biodiversity targets, priorities, and indicators that can be fed into a wide range of other national-level environmental reports and plans.

With the adoption of a revised and updated Strategic Plan for Biodiversity for 2011-2020, including the Aichi Biodiversity Targets, at the tenth Conference of the Parties of the CBD held in Nagoya, Japan, parties agreed to revise and update their national biodiversity strategies and action

plans in terms of this overarching framework. This document represents The Gambia's 2nd revised NBSAP. The first National Biodiversity Strategy and Action Plan (NBSAP) was revised in 2015 based on the Aichi Targets approved by the CBD COP in 2011.

In December 2022, 196 countries came together to address global biodiversity challenges at the 15th Conference of the Parties (COP-15) to the UN Convention on Biological Diversity (CBD) in Montreal. The agreements they reached have been incorporated into the Global Biodiversity Framework (GBF), endorsed by The Gambia.[1].

In Montreal, the Parties also agreed that each Party would prepare a National Biodiversity Strategy & Action Plan (NBSAP, hereafter 'the biodiversity plan'). The Parties have agreed to align these biodiversity plans with the GBF targets and to include how their plans will contribute to the global targets. Thus, the international agreements are also implemented at the national level. The sum of these national biodiversity plans is intended to ensure that international ambitions are achieved. In the GBF, the Parties also agreed to prepare their biodiversity plans in collaboration with various government agencies, businesses, and civil society organisations. Finally, the Parties agreed to submit national reports in 2026 and 2029, based, amongst other things, on the agreed indicators.[2], showing the extent to which the targets have been met, and thus providing an indication of global progress.

The current document is the revised and aligned NBSAP of the Republic of The Gambia. This strategy describes how The Gambia will contribute to the 23 global targets agreed in Montreal. The country has drawn up this biodiversity blueprint with technical support from DPWM and under the policy guidance of the Ministry of Environment, Climate Change and Natural Resources (MECCNAR). In line with the agreements in the GBF for participatory process, all stakeholders, including Government sectors, Regional Administrations, business sector, financial and knowledge institutions, interest groups, private consultants, women and youth organisations, opinion leaders, and local communities, participated in the development of this strategy. Effectively, the key elements of the strategy formulation process are centred around participation, inclusivity, transparency, accountability, and evidence-based (2023-2026),

The elaboration of the current NBSAP was informed by the reports, as highlighted below:

1. Seven (7) Subnational Biodiversity Strategies and Action Plans (SBSAP)
2. Thirteen (13) thematic strategies and action plans prepared by competent consultants, which are the main ingredients for this Revised NBSAP. The 13 strategies and action plans already finalised are:
    - Knowledge Management Strategy and Action Plan;
    - Capacity Building Strategy and Action Plan;
    - Biodiversity Monitoring and Reporting Strategy and Action Plan;
    - Wildlife Conservation Strategy and Action Plan
    - Technology Transfer Strategy and Action Plan

[1] Convention on Biological Diversity (2022) Kunming-Montreal Global Biodiversity Framework
[2] UN-WCMC (n.d.) Indicators for the Kunming – Montreal Global Biodiversity Framework

- Invasive Species strategy and Action plan
- Gender and Biodiversity Strategy and Action Plan
- Protected Area and OECM Strategy and Action Plan
- Community Engagement Strategy and Action Plan
- CEPA Strategy and Action Plan
- Biodiversity Resource Mobilisation Strategy and Action Plan
- Wetland Strategy and Action Plan
- Biosafety Strategy and Action Plan

3. How Gambia's NBSAP is situated in relation to the CBD and the biodiversity-related national policy framework.
4. The process undertaken in the revision of the NBSAP, including the lessons learnt since the NBSAP 2015 and the stakeholder engagement processes.
5. A summarised account of the policy, legislative, and institutional context for biodiversity.
6. A summary of the state of The Gambia's biodiversity assets and ecological infrastructure and the pressures on biodiversity, drawing on the fifth National Report to the CBD.

Against this background, the revised NBSAP is presented as a strategically important document for biodiversity and development, outlining how it will be implemented. The document sets out the structures for institutional coordination and communication of the NBSAP, as well as its monitoring and evaluation.

NBSAP Revision Process of First NBSAP 1999

In ensuring compliance with national commitments to global conventions, the scope of the NBSAP goes beyond the CBD as it seeks to ensure synergy with the Rio Conventions, and other related Conventions and Agreements including: Convention on migratory species (CMS), Convention on International Trade on Endangered Species (CITES), African Eurasian Waterbird Agreement (AEWA), Algiers Convention and other biodiversity related Conventions and Agreements. The present document provides orientation for the subsequent development of the above RBSAP and the 13 thematic strategies and plans.

The methodology for the revision and updating of both the 1999 NBSAP and its successor, NBSAP 2015, documents through participatory processes includes:

- Include various stakeholders, including, amongst others, indigenous and local communities
- Include relevant sectors that are impacted by and benefit from the use of biodiversity and its related ecosystem services;
- Develop flexible targets considering national priorities and capacities,
- Use revised NBSAPs for integration of biodiversity into national development planning processes and accounts, and
- Monitor NBSAPs using indicators.

The Department of Parks and Wildlife Management (DPWM), as the focal and coordinating Institution of the Convention on Biological Diversity (CBD), has the institutional mandate to lead the revision processes. Given the cross-sectoral nature of biodiversity, an intersectoral group of experts, referred to as the Agriculture and Natural Resources Working Group (ANR-WG), was tasked with guiding the process technically and policy-wise through specialised committees, such as the Steering Committee. The Steering Committee met twice during the process to provide guidance and technical input on all studies undertaken and to ensure that the reports presented met the required standards. The Permanent Secretary (Ministry of Environment) was selected as the chairperson of this committee, while the NBSAP Project Manager served as the Secretary.

NBSAP Revision AND ALIGNMENT Process Second NPSAP 2015

Eight regional or Local Administration Areas and six national consultation workshops were conducted between June 2025 and April 2026 for the NBSAP revision. Stakeholders from the provinces gathered at regional central centres (Basse, Jangjangbureh, Kuntaur, Mansakonko, Kerewan, Brikama, Karnifing, and Banjul) to share their thoughts and opinions. These regional cities, as strategic urban centres, were selected to host the consultation workshop where participants from neighbouring provinces come together and represent their provinces. A 'Whole of Society Approach' that ensured inclusiveness was used to identify stakeholder organisations, including national, provincial, and municipal government offices, law enforcement authorities, universities, environmental NGOs, and Provincial Assembly representatives.

In its Fifth National Report to the CBD, The Gambia undertook an analysis of progress against the NBSAP 2015. A short synopsis of this review, including lessons learned, is included below. The revision of the NBSAP drew on this analysis, noting where work still needs to be done to address certain priorities, recognising where progress has been made that lays the foundations for deeper work in these areas, and identifying priorities that have emerged more recently.

The second revised NBSAP was thus derived from the development of provincial, local, and thematic biodiversity strategies and plans, as well as protected area expansion strategies. It was developed over several years, led by DPWM in partnership with a range of organisations, involving wide participation from stakeholders, scientists, and biodiversity management experts throughout the country. The 2015 NBSAP was taken a step further with the requirement that the relevant Biodiversity Policies, legislations, and plans be aligned with the Global Biodiversity Framework (GBF) and the Aichi Targets. The aligned NBSAP 2026 is therefore built on the outcomes of NBSAP 2015 and thus serves as the medium-term and long-range national strategic plan, in line with the CBD's Strategic Plan for Biodiversity 2026-2035. The new plan focuses on providing priorities to strengthen the current endeavours to bring about an accelerated development that is sustainable and minimises the loss of biodiversity.

The process of conducting country studies and stocktaking exercises for the revision and alignment involved several desk reviews and assessments, carried out in a highly public, consultative, and participatory manner, with key stakeholders at various levels countrywide. Several desk studies established the institutional map of biodiversity in the country to assist in identifying key stakeholders' roles and responsibilities.

It is important to highlight that the gap analysis, substantially drawn from previous national initiatives, was carried out by selected consultants to address cross-cutting issues in the various sectoral entities of government, Civil Society Organisations, local communities, and authorities. Various consultants, with support from a team of experts, mainly from DPWM, compiled the NBSAP document from the pile of information made available during the sectoral, cross-sectoral, and thematic area studies.

Lessons learned from an analysis of the implementation of the 2015 NBSAP

NBSAP 2015 is structured around five Strategic Objectives, each with a series of outcomes and activities. To assess the implementation of the NBSAP 2015 for the Fifth National Report to the CBD, an analysis of progress at the activity level was undertaken. Progress towards implementation for each of the activities was rated as a means of lessons learned

Based on this analysis, the highest proportion of activities achieved and substantially achieved is for Strategic Objectives, which deal with park management and institutional effectiveness. However, this does not necessarily reflect the areas of greatest progress in implementing the NBSAP in practice, as several activities undertaken since the NBSAP was not finalised in 2015 could not have been foreseen at that stage and were thus not included. Moreover, the revised NBSAP, though it considers the Aichi targets, must also be aligned with the GBF.

Firstly, the need for a bold and transformative agenda must be balanced with what is achievable in the NBSAP timeframe, particularly for mainstreaming activities. Since 2015, Gambia has developed considerable experience in biodiversity mainstreaming. This experience has highlighted that the time required for mainstreaming processes is longer than anticipated, as mainstreaming that affects systemic change, which is often enduring, takes longer to achieve.

Secondly, as highlighted by the activities that fell away, being very specific about policy and institutional activities is challenged by the fact that these activities are usually beyond direct control of the relevant institution. Where policy-related activities are within a line function and thus more directly controlled, there is still a degree of flux that makes policy processes difficult to control, such as the enactment of relevant bills.

A third lesson, taking a broader view, is that the work in the biodiversity sector has evolved substantially over the past 15 years, with a range of strategies developed to address various aspects of natural resource management and socio-economic development. These include the Man and Biosphere Reserve Strategy, amongst others. Not all of these are strategies developed by the environment or biodiversity sectors, but they are important for biodiversity. The revised NBSAP seeks to be aligned with these, not replace or repeat them.

These lessons have been core to the revision and alignment of the NBSAP. Efforts have been made to ensure that the NBSAP supports the government's transformative agenda while recognising that timeframes and other parameters need to be set according to the nature of different types of activities.

For the revised NBSAP, all issues that prevented the full implementation of the previous NBSAP have been analysed objectively, with full stakeholder participation. This approach has enabled the

acceptance and adoption of the concept of sectoral mainstreaming of issues of biodiversity and ecosystem services for human well-being into national and local plans, policies, and programmes.

However, there have been several challenges, and many of these stem from a basic misunderstanding of conservation and the sustainable use of Biodiversity. Inadequate use of cost-benefit analysis to make a case for biodiversity has often led to low national budgetary allocations and its relegation to a less important Department compared to Agriculture, Education, or Health, which is not in the best interest of biodiversity conservation. Monitoring and evaluation were not taken seriously to ascertain compliance. The subsequent recommendations can contribute to the removal of these cited obstacles:

- Need for the enactment of the biodiversity-related pending Bills
- Reintroduction of Endangered, Rare, and Threatened Wildlife Species like Lions, Leopards, Antelopes, etc
- Increased awareness and wide publicity on the revised NBSAP and its strategy.

Country Background

The Gambia is a small Sahelian country, almost surrounded by Senegal, extending along the Western Coast of Africa between 13° and 14° N. It has a total land area of approximately 10,689 sq. km. According to the 2024 National Population and Housing Census, The Gambia's population is estimated at 2.42 million people with a population growth rate of 2.5% per annum (Preliminary 2024 Census report),

The socio-economic environment

The human development index (HDI), N, Agriculture and Natural Resources Working Group (ANR-WG) of The Gambia, which is the index used by the United Nations to measure the progress of a country, was The Human Development Index (HDI) for The Gambia in 2025 was 0.524. This score places The Gambia in the low human development category, ranking it 170th out of 193 countries and territories surveyed. In comparison, the country's HDI has grown, rising from 0.495 in 2022 to 0.524. However, it remains below the world average HDI of 0.744[3]. As of 2025, the nominal GDP per capita for The Gambia was estimated to be approximately $890 to $960[4], a 4.8% increase from 2024, well below the 2025 income per capita in Sub-Saharan Africa, which was projected to be approximately $2,190 in current US dollars[5]. The Gambia's poverty rate has climbed to 53.4 per cent based on the 2024 Population and Housing census reports. Below the line - the proportion receiving less than $1 per day in income (purchasing power parity) was 59.3% in 2000[6].

Agriculture and natural resources in the economy

[3] UNDP The Gambia 2025 Global Human Development Report, June 2025
[4] World Economic Outlook, IMF, 2025; Worldometer, 2025
[5] World Economic Outlook, IMF, October 2025
[6] Data from the most recent available studies between the period 1983 and 2000 from Nation Master 2023.

The Gambian economy is predominantly agrarian, with agriculture accounting for nearly 24.8% of GDP (GBoS) and providing direct employment for about 63% of the country's population, primarily through smallholder subsistence agriculture. Agriculture is the main source of income for about 72%[7] of the extremely poor rural households. However, agricultural production is highly seasonal and rain-fed. Rainfall in The Gambia is for only three months. Although endowed with adequate surface and underground water, the percentage of arable land under irrigation has been estimated at only between 3% and 6%[8]. Agriculture is largely dependent on climate-sensitive resources and activities, including crop and livestock production, fisheries, energy, and water. Domestic crop production provides only 50% [9]Of the country's annual cereal needs, the remainder, particularly rice, is supplied through commercial imports. Agricultural production and productivity are generally low, attributed to rapidly declining soil fertility, poor environmental conditions, and the lack of appropriate technologies, especially for women.

Deforestation, biodiversity loss, and habitat loss are exacerbated by climate change and, when coupled with low investment in agriculture, compound the numerous constraints farmers face. Consequently, the food produced by most smallholder farmers lasts no more than six months, leaving them in a state of food insecurity for the remainder of the year. All these factors pose serious challenges to achieving sustainable agriculture in The Gambia. The Agriculture and Natural Resources sector employs 75% of the population and contributes about 25% to the GDP[10]. However, the sector's productivity is not fully utilised, owing to the ongoing depletion of the natural resource base, largely driven by human activities. Access to and ownership of land, especially by women, constitute key challenges. Furthermore, the unclear and sometimes conflicting tenure systems and frameworks hinder women from investing in land for the future. The farming system remains largely conventional, based on rain-fed subsistence production and heavily reliant on external inputs, thereby compromising the population's resilience. Low levels of knowledge, poor technology used (labour and time-saving technologies), poor incentives, and limited public investment in the sector hinder youth participation and engagement in the sector.

The Gambian Ecosystems in brief

The Gambia has a Sudano-Sahelian climate, with a short rainy season from June to October and a long dry season from November to May. The average annual rainfall is about 900 mm.[11]. There has been an average reduction of 27% in the annual average rainfall since 1951[12]. The mean temperature is 25 °C. The Gambia has four major landscapes: the floodplain, colluvial slopes, lower plateau, and upper plateau, each with distinct soil types. The natural drainage is centred on the River Gambia and its tributaries. The River Gambia, which covers 1,130 km, originates from the Fouta Djallon highlands in the Republic of Guinea.

With its characteristic Sudan Savanna woodland vegetation, The Gambia has the following main ecosystem types: forest ecosystems (closed and open woodland), agricultural ecosystems (arable

[7] GBoS, 2024
[8] GNAIP-II, 2019-26
[9] African Development Bank, The Gambia Country Food and Agricultural Delivery Impact, 2019 - 2026
[10] African Development Bank, The Gambia Country Food and Agricultural Delivery Impact, 2019 - 2026
[11] DWR, 2015
[12] UNCCD NAP The Gambia, 2015

and rangeland), marine and coastal ecosystems including mangroves, inland water ecosystems (wetlands), and terrestrial ecosystems (tree/shrub savanna). The Gambia is endowed with a high diversity of plant and animal species. The components of biodiversity include wild fauna and flora and associated ecosystems, as well as domestic species, including plant varieties and landraces of domestic animals bred and domesticated by farmers for thousands of years, as well as species dependent on agricultural systems.

The Gambia National Biodiversity Framework Process

The Gambia elaborated the first NBSAP in 1999 based on Article 6 of the Convention and the guidance of the Conference of the Parties (COP) of the Convention on Biological Diversity in Decision IX/8. The Gambia's first NBSAP included sectoral studies by competent experts, which provided the first comprehensive national assessment, through a participatory process, of the status of biodiversity at the ecosystem level across terrestrial, freshwater, estuarine, and marine ecosystems.

The Gambia's National Biodiversity Framework (2015-2020) states that by 2020, 50% of ecosystems under agriculture, aquaculture and forestry should be managed sustainably, ensuring conservation of biodiversity. It was recognised that losses of biological diversity can only be slowed by addressing the underlying causes, including bushfires, population distribution and density, poverty, levels of resource consumption, market factors, policies, and ignorance about the livelihood and ecosystem benefits of ecosystems in general and biodiversity in particular. Therefore, it was realised that an integrated, rather than sectoral, approach is essential for the success of any conservation programme. A key ingredient for effective long-term action was considered to be capacity building at all levels, with particular attention to community, field, policy, and decision-making levels.

The first National Biodiversity Strategy and Action Plan (NBSAP) was revised in 2015 based on the Aichi Targets approved by the CBD in 2011. This Plan is thus an updated version of the 2015 NBSAP for the years 2026 – 2036 based on the Global Biodiversity Framework (GBF) targets agreed upon, approved and adopted by the Kunming-Montreal CBD CoP-15 in December 2022. It reflects the realities of biodiversity conservation, including funding limitations and recent changes in government structures, institutions, and priorities, in line with country-specific policies and priorities. The revision and alignment of the 2015 NBSAP was taken a step further with the requirement that the relevant Biodiversity Policies, legislations, and plans be aligned with the Global Biodiversity Framework (GBF) and the Aichi Targets.

The present revised and aligned NBSAP to GBF include processes deduced from the development of provincial and local biodiversity plans and protected area expansion strategies. It has been developed over several years, led by DPWM in partnership with a range of organisations, and involving wider participation from stakeholders, scientists and biodiversity management experts throughout the country. It focuses attention on the top priority actions and targets for biodiversity management and conservation for the period 2026 – 2035. This aligned NBSAP form the medium-term and long-range strategic plan in line with the CBD's Strategic Plan for Biodiversity 2011-2020 and Target 17 of the Aichi Biodiversity Targets. It also synthesises key aspects of Gambia's

biodiversity science, making it available in a useful form to policymakers, decision-makers and practitioners in a range of sectors.

The Gambia Biodiversity National Targets will serve as the guideline for future implementation of the convention. Biodiversity Targets are aligned with the Strategic Goals of the Global Strategic Plan. The indicators and actions for the Gambian Biodiversity Targets are presented in this action plan. Special attention is given to reducing poverty, including rural poverty, through biodiversity conservation, thereby significantly reducing pressure on natural resources. There is an increased recognition of the value of indigenous knowledge, as well as women's and men's roles as innovators regarding biodiversity conservation and farming techniques. Experience has shown the need to build on such knowledge and to ensure the participation of local women and men to improve tools and techniques. NBSAP aims to develop through global targets and provide an appropriate national orientation for an effective response to the increasing loss of biodiversity, land degradation and climate change. Involving rural communities in biodiversity conservation, resource management, and decision-making regarding environmentally sound practices and techniques is a powerful way to mitigate the conditions, trends, and impacts of biodiversity degradation. Provisions for alternative livelihoods, including jobs, alternative energy sources, and the use of energy-efficient technologies, are improved for local communities.

Chapter 1. Introduction to Biological Diversity (Biodiversity)

Biodiversity and ecosystems are closely related concepts. Biodiversity is the variability among living organisms from all sources, including terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are part. This includes diversity within species, between species and of ecosystems. On the other hand, an ecosystem means a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit. The concept of an ecosystem provides a valuable framework for analysing and acting on the linkages between people and the environment. Humans are part of the ecosystem. Biodiversity is a key component of an ecosystem. Consequently, habitat modification, invasion, and many other factors can lead to changes in biodiversity across many taxa within most ecosystems. For this exercise, biodiversity and ecosystem concepts and services are interlinked and mutually supportive.

1.1 Significance of Biodiversity in The Gambia

With its characteristic Sudan Savanna woodland vegetation, The Gambia has the following main ecosystem types: forest ecosystems (closed and open woodland), agricultural ecosystems (arable and rangeland), marine and coastal ecosystems including mangroves, inland water ecosystems (wetlands), and terrestrial ecosystems (tree/shrub savanna). The Gambia is endowed with a high diversity of plant and animal species.[13]. The components of biodiversity include wild fauna and flora and associated ecosystems, as well as domestic species, including plant varieties and landraces of domestic animals bred and domesticated by farmers for thousands of years, as well as species dependent on agricultural systems. The four main ecosystem types are briefly considered below with relevance to biodiversity.

1.1.1 Coastal and Beach Ecosystems

Coastal and beach ecosystems form one of the most dynamic and ecologically important landscapes in The Gambia. These ecosystems are diverse and characterised by a mix of sandy beaches, coastal dunes, intertidal zones, and nearshore marine waters that collectively support a wide range of biodiversity while providing essential ecosystem services. Despite the country's relatively short Atlantic coastline, these habitats play a critical role in supporting marine life, protecting coastal communities, and sustaining nature-based tourism among others.

Sandy beaches along the Atlantic coast serve as important nesting habitats for several species of marine turtles, particularly the Green sea turtle and the Olive Ridley sea turtle. Female turtles return to these beaches during nesting seasons to lay eggs in the sand above the high tide line. Successful nesting depends on relatively undisturbed beaches with stable sand conditions and minimal artificial lighting. These nesting areas are therefore extremely sensitive to human

[13] NBSAP of The Gambia, March 2015,

disturbance, coastal development, and beach erosion. In addition to sea turtles, coastal beaches and adjacent mudflats provide important resting and feeding sites for migratory and resident shorebirds that travel along the East Atlantic Flyway.

The nearshore waters adjacent to these beaches also function as important feeding and nursery grounds for juvenile fish and other marine organisms. Shallow coastal waters offer protection from larger predators and contain abundant plankton and organic matter that support early life stages of many fish species. As a result, healthy beach and nearshore ecosystems directly sustain fisheries productivity, which is vital for local livelihoods and national food security.

Coastal dunes and beach vegetation play an equally important ecological role. Dunes act as natural barriers that stabilise the coastline and protect inland areas from wind erosion and storm surges. Vegetation such as grasses and shrubs helps bind sand together, reducing the risk of coastal erosion and maintaining the natural structure of beach ecosystems. During periods of strong storms or high tides, these natural barriers help absorb wave energy and reduce the impacts of coastal flooding on nearby communities and infrastructure.

Beyond their ecological importance, coastal ecosystems also hold significant economic and recreational value. The beaches of The Gambia attract tourists seeking scenic coastal landscapes, wildlife viewing opportunities, and recreational activities such as swimming, birdwatching/ornithology, and nature-based tourism. Tourism related to beaches and marine wildlife contributes significantly to the national economy and provides employment opportunities for surrounding communities. Marine turtle nesting sites, in particular, have increasing potential for conservation-based ecotourism initiatives that promote both environmental awareness and local income generation.

Overall, coastal and beach ecosystems represent a vital component of the country's natural capital. Protecting these habitats from degradation and unsustainable development is essential for conserving marine biodiversity, maintaining coastal protection functions, and sustaining tourism and fisheries that support the livelihoods of many Gambians.

1.1.2 Mangroves and Brackish Swamps

Mangrove forests and brackish swamp ecosystems are among the most productive and ecologically valuable habitats in The Gambia. These ecosystems occur primarily along estuaries, tidal creeks, and the lower reaches of the Gambia River, where freshwater from inland areas mixes with saline ocean water. The resulting brackish conditions support dense mangrove forests that form a unique transition zone between marine and terrestrial environments. These habitats play a critical role in maintaining biodiversity, supporting fisheries, and protecting coastal landscapes.

The mangrove ecosystems covering about 5.8%[14] of the land area of The Gambia are dominated by several key mangrove tree species, including Avicennia germinans, Rhizophora racemosa, Laguncularia racemosa, and Conocarpus erectus. These species have evolved specialised root systems and salt-tolerance mechanisms that allow them to thrive in waterlogged and saline soils.

[14] UNESCO, Mangrove Ecosystems of Gambia, 2022

Their complex root structures trap sediments and organic matter, creating nutrient-rich environments that support a wide range of organisms, including fish, crabs, molluscs, and microorganisms.

Mangrove forests function as important nursery habitats for many commercially valuable fish and crustacean species. Juvenile fish often use the sheltered waters among mangrove roots as safe feeding and breeding grounds where they are protected from larger predators. As these fish mature, they migrate to coastal waters and offshore fishing grounds, contributing to the productivity of artisanal and commercial fisheries. This ecological role makes mangroves essential for sustaining fish stocks and supporting the livelihoods of fishing communities.

In addition to supporting aquatic life, mangroves provide critical habitat for numerous bird species. The dense canopy and intertidal mudflats associated with mangrove systems serve as roosting, nesting, and feeding sites for resident and migratory waterbirds. These areas are particularly important for species travelling along the East Atlantic migratory flyway, offering resting and feeding opportunities during long-distance migrations. As a result, mangrove ecosystems contribute significantly to the country's rich bird diversity and support birdwatching tourism.

Mangrove ecosystems are also increasingly recognised for their role in climate change mitigation through the storage of "blue carbon", about an average of 103 tCO^2e per hectare per year.[15]. Mangrove trees capture carbon dioxide from the atmosphere and store large amounts of carbon in their biomass and soils, often for centuries. Because mangrove soils accumulate organic material in waterlogged conditions where decomposition is slow, they can store more carbon per hectare than many terrestrial forests. Protecting and restoring mangrove ecosystems therefore contributes significantly to reducing greenhouse gas emissions and supporting climate mitigation efforts.

Beyond their ecological functions, mangroves provide vital coastal protection services. The dense root systems of mangrove trees stabilise shorelines by trapping sediments and reducing the impact of waves and tidal currents. This natural barrier helps prevent coastal erosion and protects nearby communities and agricultural lands from storm surges and flooding. Mangroves also play an important role in limiting saltwater intrusion into freshwater systems and agricultural areas, helping maintain soil fertility and freshwater availability.

Overall, mangroves and brackish swamp ecosystems represent a critical component of The Gambia's natural infrastructure. Their role in supporting fisheries, conserving biodiversity, storing carbon, and protecting coastlines makes them essential for both environmental sustainability and community resilience. Ensuring their long-term protection and sustainable management is therefore a key priority for biodiversity conservation and climate adaptation efforts in the country.

1.1.3 Riverine Ecosystems (The Gambia River)

Riverine ecosystems, approximately 8.6% of The Gambia's total land area[16], are among the most important ecological systems in The Gambia, with the Gambia River serving as the country's

[15] DPWM, Benefit Sharing Mechanism for the Conservation of the mangrove ecosystems in The Gambia through the REDD+ mechanism, June 2022
[16] Gambia SDG 6 Data 2000 - 2019

central ecological and hydrological artery. Flowing from the highlands of Guinea through Senegal and into The Gambia before emptying into the Atlantic Ocean, the river forms a complex network of freshwater, estuarine, and floodplain habitats. This river corridor sustains a rich diversity of aquatic and terrestrial species while supporting vital ecosystem functions that underpin local livelihoods, agriculture, and fisheries.

The River Gambia and its tributaries cover approximately 10%17 of the country's surface area. During the flood season (wet season), the river can extend over 1,965 square kilometres, covering roughly 18% of the country's total land area.[18]. The river and its tributaries provide essential habitat for a wide variety of freshwater and estuarine fish species, many of which are important for subsistence and commercial fisheries. Seasonal changes in water flow and salinity create a dynamic ecological environment that supports fish breeding and migration. Many species move along the river corridor at different stages of their life cycle, using upstream freshwater areas for spawning and downstream estuarine zones for feeding and growth. This connectivity between inland and coastal ecosystems is critical for maintaining healthy fish populations and sustaining fisheries productivity.

Riverine habitats also support amphibians, aquatic invertebrates, and diverse riparian vegetation that thrive in the moist conditions along riverbanks and floodplains. Vegetation such as reeds, grasses, and gallery forests stabilises riverbanks, reduces soil erosion, and filters sediments and nutrients from surface runoff before they enter the river. These natural processes help maintain water quality and regulate the hydrological balance of the river basin.

Approximately 20% of The Gambia's total land area is covered by floodplains and swampy areas. Floodplain ecosystems associated with the river are particularly important for biodiversity. During the rainy season, rising water levels inundate surrounding floodplains, creating temporary wetlands that support breeding fish, waterbirds, and other wildlife. These seasonal floodplains act as highly productive habitats that provide abundant food resources and shelter for many species. They also play a key role in nutrient cycling by depositing nutrient-rich sediments onto surrounding lands, which supports both natural vegetation and agricultural productivity.

Gallery forests, also known as evergreen forests, found in valleys and hydromorphic areas, make up a small percentage of The Gambia's total forest cover, covering approximately 7,000 hectares. Gallery forests that occur along certain sections of the river corridor provide additional ecological value. These forested strips of vegetation serve as important habitat for mammals, birds, reptiles, and insects. They also act as ecological corridors that facilitate wildlife movement between different habitats across the landscape. Migratory birds travelling across West Africa rely on these riparian habitats for resting and feeding during their journeys.

The ecological connectivity provided by the river corridor links inland ecosystems with coastal and marine environments. Nutrients, sediments, and organic materials transported by the river contribute to the productivity of downstream mangrove and coastal ecosystems. Similarly, many

[17] IOM Environmental Portal, Nature-based Solutions to Address Hydro-met Hazards and Human Mobility in The Gambia, January 2024

[18] IOM Environmental Portal, Nature-based Solutions to Address Hydro-met Hazards and Human Mobility in The Gambia, January 2024

fish and aquatic species depend on this connection to complete their life cycles through seasonal migrations between freshwater and estuarine habitats.

Overall, the riverine ecosystems associated with the Gambia River are essential for maintaining biodiversity, supporting fisheries, regulating water resources, and sustaining ecological connectivity across the country. Protecting the health of this river system through sustainable land and water management is therefore critical for ensuring long-term environmental stability and the well-being of communities that depend on its resources.

1.1.4 Savannah and Woodland

In The Gambia, forest and woodland ecosystems (which include various forms of savannah) cover approximately 43% to 46%[19] of the total land area. The vast majority of this vegetation is classified as savannah or open woodland, as true closed forests have declined significantly over the last several decades. According to Global Forest Watch, as of 2020, natural forests (including these savannah and woodland types) extended over approximately 23%[20] of the total land area when using stricter canopy density metrics. Savannah and woodland ecosystems thus cover large portions of the terrestrial landscape of The Gambia and form an essential component of the country's natural environment. These ecosystems are characteristic of the Sudanian–Sahelian ecological transition zone of West Africa, where climatic conditions support a mosaic of open grasslands, scattered trees, shrublands, and woodland patches. Together, these landscapes support a wide range of biodiversity while also sustaining many of the traditional livelihoods and land-use practices practised by rural communities.

The vegetation of these ecosystems typically consists of drought-tolerant grasses interspersed with native trees and shrub species that are adapted to seasonal rainfall and periodic dry conditions. These trees provide shade, food, and habitat for a wide variety of wildlife while helping maintain soil fertility and microclimatic conditions that support surrounding vegetation. Grass dominates the ground layer and serves as important forage for livestock and wild herbivores, particularly during the rainy season when plant growth is most abundant.

Savannah and woodland ecosystems support a diverse array of fauna, including mammals, birds, reptiles, and insects. Mammal species range from small rodents and antelopes to medium-sized herbivores and carnivores that depend on woodland cover and grassland habitats for feeding and shelter. These landscapes also provide habitat for numerous pollinators such as bees, butterflies, and other insects that play a critical role in plant reproduction and agricultural productivity. In addition, a rich community of soil organisms, including microbes, fungi, and invertebrates, contributes to nutrient cycling and the maintenance of healthy soils.

Beyond their biodiversity value, savannah and woodland landscapes play an important role in supporting rural livelihoods and traditional land-use systems. Many communities rely on these ecosystems for grazing livestock, collecting fuelwood, harvesting wild fruits and medicinal plants, and practising rain-fed agriculture within agroforestry systems. Traditional agroecosystems often

[19] Columbia University 2008; FOSA Country Report, FAO
[20] Gambia Deforestation Rates & Statistics, Global Forest Watch, 2020

integrate crops, livestock, and trees in ways that allow communities to benefit from multiple ecosystem services while maintaining ecological balance.

These ecosystems also contribute to climate regulation and carbon storage. Trees and woody vegetation store carbon in their biomass, while grassland soils can accumulate significant amounts of organic carbon over time. As a result, savannah and woodland landscapes represent an important component of terrestrial carbon stocks in the country. Protecting these ecosystems from excessive deforestation, land degradation, and unsustainable land use therefore contributes not only to biodiversity conservation but also to climate change mitigation.

In addition, savannah and woodland habitats play an important role in maintaining landscape connectivity between protected areas and other natural habitats. They allow wildlife to move across the landscape in search of food, water, and breeding sites, thereby supporting ecological resilience and genetic diversity. Maintaining these ecosystems is therefore essential for sustaining biodiversity across the broader landscape.

Overall, the savannah and woodland ecosystems of The Gambia provide a foundation for both ecological stability and rural livelihoods. Their biodiversity, ecosystem services, and cultural importance make them a key component of the country's natural heritage. Sustainable management and restoration of these landscapes are therefore critical for ensuring long-term environmental resilience, supporting community livelihoods, and maintaining the ecological balance of the nation's terrestrial ecosystems.

1.2 Key Ecosystem Services

The diverse ecosystems of The Gambia provide a wide range of ecosystem services that are vital for the country's economy, food security, climate resilience, and cultural heritage. These services support the livelihoods of rural and coastal communities while also contributing to national development through fisheries, tourism, and environmental protection.

One of the most important ecosystem services in the country is the provision of fisheries and food security. Coastal waters, mangrove forests, and riverine ecosystems serve as critical breeding and nursery habitats for many fish and shellfish species. The productivity of these ecosystems supports artisanal and small-scale fisheries that provide a primary source of protein and income for many households. The estuarine and freshwater systems associated with the Gambia River are particularly important for sustaining fish populations, while mangrove channels and coastal lagoons provide sheltered environments where juvenile fish can grow and mature before moving into open waters. Maintaining the health of these ecosystems is therefore essential for ensuring long-term food security and sustaining fisheries-based livelihoods.

Coastal ecosystems also play a crucial role in protecting communities and infrastructure from natural hazards. Mangrove forests, coastal dunes, and wetland vegetation act as natural buffers that reduce the impact of storm surges, strong winds, and coastal erosion. By stabilising shorelines and trapping sediments, these ecosystems help maintain the integrity of beaches and coastal landscapes. In the Gambia, with a low-lying coastline, the protective role of mangroves and dunes is

particularly important for reducing the risks associated with sea-level rise and extreme weather events linked to climate change.

Another critical ecosystem service provided by natural habitats is carbon storage and climate regulation. Mangrove forests are among the most efficient carbon sinks in the world, storing large amounts of carbon in both their biomass and underlying soils. Similarly, savannah woodlands and grassland soils across the country store significant quantities of carbon, contributing to climate change mitigation. Protecting and restoring these ecosystems not only helps conserve biodiversity but also supports national and global efforts to reduce greenhouse gas emissions.

Riverine and wetland ecosystems also contribute significantly to water regulation and sediment control. Vegetation along rivers, floodplains, and wetlands helps regulate water flows by absorbing and slowly releasing water during rainfall events. This natural regulation reduces flooding, maintains groundwater recharge, and stabilises local hydrological cycles. At the same time, vegetation traps sediments and nutrients that would otherwise be washed away, helping to maintain soil fertility and water quality. These processes are essential for sustaining agriculture and maintaining healthy aquatic ecosystems throughout the river basin.

In addition to their ecological and economic functions, natural ecosystems in the country provide important cultural, recreational, and ecotourism benefits. The country is internationally recognised as a destination for birdwatching due to its rich avifauna and diverse habitats. Protected areas such as Abuko Nature Reserve (ANR) and Kiang West National Park (KWNP) attract visitors interested in wildlife observation, nature photography, and environmental education. Coastal areas also host marine turtle nesting sites that are increasingly valued for education/scientific research and conservation-based tourism. These nature-based tourism activities generate income for local communities and contribute positively to national tourism revenue while promoting awareness of biodiversity conservation.

Overall, the ecosystems of The Gambia provide a foundation for sustainable livelihoods, climate resilience, and cultural identity. Protecting these ecosystem services through effective conservation and sustainable resource management is therefore essential for ensuring long-term environmental sustainability and socio-economic well-being.

1.3 Main Threats to Biodiversity and Ecosystems in The Gambia

The primary cause of the decay of organic diversity is not direct human exploitation or malevolence, as generally believed, but the habitat destruction that inevitably results from the expansion of human populations and human activities.

Specifically, biodiversity and ecosystems of The Gambia face increasing pressures from a combination of human activities, environmental degradation, and climate change. These threats affect critical habitats such as coastal zones, wetlands, forests, and riverine systems that support both wildlife and local livelihoods. Addressing these challenges is essential for maintaining ecological integrity and ensuring sustainable development.

One of the most visible threats occurs along the country's coastal areas, where rapid coastal development, sand mining, and human disturbance are degrading critical habitats. Tourism

infrastructure development, settlement expansion, and road construction have altered natural shorelines and increased pressure on fragile coastal ecosystems. These activities disrupt important nesting sites for marine turtles along the Atlantic coast, reducing nesting success and threatening already vulnerable populations. Sand mining accelerates coastal erosion and destabilises beaches, further compromising turtle nesting habitats and the natural protective functions of coastal ecosystems.

Mangrove ecosystems, which are among the most productive and ecologically important habitats in the country, are also under significant threat. Mangroves provide breeding grounds for fish, protect shorelines from erosion, and store large amounts of carbon. However, large areas of mangrove forests have been cleared for fuelwood production, small-scale aquaculture, and agricultural expansion. Unsustainable harvesting of mangrove wood for fuel and construction materials remains common in many coastal and estuarine communities. As mangrove cover declines, the loss of these ecosystems reduces fish nursery habitats, weakens coastal protection, and diminishes the climate resilience of local communities.

The health of aquatic ecosystems is further threatened by overfishing and destructive fishing practices in both marine and inland waters. Excessive fishing pressure, including the use of illegal fishing gear and unsustainable harvesting techniques, has contributed to declining fish stocks. In addition, the ecological condition of the Gambia River and its tributaries is increasingly affected by pollution, sedimentation, and habitat degradation. Agricultural runoff, poor waste management/disposal, and erosion from upstream contribute to declining water quality and reduced aquatic biodiversity. These pressures threaten the sustainability of fisheries that many rural communities depend on for food security and income.

Across the country, land conversion and unsustainable land-use practices continue to drive habitat loss and fragmentation. Natural forests, savannah woodlands, and wetlands are often cleared for agriculture, road construction, infrastructure, and settlement expansion. Overgrazing by livestock in some areas contributes to soil degradation, reduced vegetation cover, and desertification processes. Invasive species also pose a growing challenge by outcompeting native plants and altering ecosystem structure and function. These ecological pressures are further intensified by climate change, which is altering rainfall patterns, increasing drought frequency, and accelerating sea-level rise in coastal areas. Such climate-driven changes threaten wetlands, mangroves, and low-lying coastal habitats that are essential for biodiversity and human livelihoods.

Institutional and governance challenges also contribute to the persistence of these threats. Limited enforcement capacity for the overall effective management of biodiversity allows illegal activities such as logging, wildlife poaching, and illegal fishing to continue. In some regions, unclear land tenure arrangements and conflicts over resource use complicate conservation efforts and undermine sustainable land management. At the same time, financial resources allocated for biodiversity conservation and protected area management remain insufficient to meet growing conservation needs. Without adequate funding, staffing, and technical support, it is difficult for institutions to effectively monitor ecosystems, enforce regulations, and support community-based conservation initiatives.

Overall, these interconnected threats place increasing pressure on the ecosystems of The Gambia. If not addressed through stronger governance, sustainable resource management, and increased investment in conservation, they may lead to further biodiversity loss and reduced ecosystem services that are vital for national development and community resilience. Strengthening conservation policies, empowering local communities, and integrating climate adaptation into ecosystem management will therefore be critical to safeguarding the country's natural heritage.

1.4 Overview of National Environmental Problems

The Gambia faces both real challenges and opportunities for climate resilience, the preservation of natural resources, and sustainable development. The citizens of the country depend mainly on agriculture for food security and derive various benefits from natural resources, both of which are, in most parts, heavily degraded.

1.4.1 Land Degradation

It is undisputed that the nation's resources are at risk of irreversible degradation if current land management and land use practices continue. The Gambia, in addition to vegetation loss, is confronted with the familiar set of problems associated with agriculture, livestock, fisheries, health, biodiversity loss, and environmental degradation. Such problems include salt water intrusion into the fresh water zone of the river system, salt water seepage into the upper aquifer of the fresh water system in the coastal areas, soil salinisation and erosion, decreasing fertility of the arable land, migration, etc.

One of the major anthropogenic factors contributing to accelerating the land degradation process in The Gambia is bushfires. Rampant bushfires during the long dry season of November to May have been the major cause of degradation of the vegetative cover, destruction of wildlife habitats, pests, and their natural enemies. Soil erosion and siltation are important processes in habitat loss and fragmentation in The Gambia. Annual soil erosion is estimated at 12.5 tons per hectare for frequently cultivated soils having a 2% slope.[21]. The eroded materials are deposited in the lowlands of the river basin, causing sedimentation in the rice-growing ecologies. In addition to their soil-impoverishing effect, these processes also have an adverse impact on aquatic life.

In addition to the indications above, land degradation represents one of the most significant environmental challenges affecting ecosystems and livelihoods in The Gambia. The productivity of land resources is increasingly threatened by unsustainable land-use practices, growing population pressure, and climate variability. Because the country's economy and rural livelihoods depend heavily on agriculture, exploitation of forest biodiversity, and natural resources, the degradation of land has far-reaching consequences for food security, biodiversity conservation, and climate resilience.

Several interrelated drivers contribute to land degradation across the country. Unsustainable agricultural practices are among the most prominent causes. Traditional slash-and-burn land clearing, continuous monocropping, and expansion of farmland into fragile ecosystems such as marginal woodlands and wetlands place significant stress on soils. When land is cultivated without

[21] Ministry of Agriculture (2010) Gambia *National Agricultural Investment Plan (GNAIP).* Government of The Gambia

sufficient fallow periods or soil restoration measures, soil nutrients are gradually depleted, reducing long-term agricultural productivity. In addition, poor soil management techniques, such as inadequate use of organic matter or soil conservation practices, further accelerate soil exhaustion.

Overgrazing by livestock also contributes to land degradation, particularly in semi-arid areas where vegetation regeneration is slow. When grazing pressure exceeds the natural carrying capacity of the land, grass and ground vegetation become depleted, exposing soils to erosion by wind and rain. This process leads to the gradual loss of fertile topsoil, which is critical for plant growth and agricultural productivity.

Deforestation for fuelwood and charcoal production is another major driver of land degradation. Many rural households depend on fuelwood as a primary source of energy for cooking and heating. As demand increases, trees and shrubs are often harvested faster than they can regenerate. The removal of tree cover weakens soil stability, reduces organic matter input, and disrupts natural nutrient cycles. Without vegetation to protect the soil surface, landscapes become increasingly vulnerable to erosion and degradation.

Sand mining, particularly in coastal and riverine areas, also contributes to environmental degradation. The extraction of sand for construction materials can destabilise soils, alter natural drainage patterns, and damage surrounding vegetation. Over time, these activities may leave landscapes more exposed to erosion and reduce their capacity to support plant growth.

The impacts of land degradation are wide-ranging and affect both ecosystems and human communities. Declining soil fertility and nutrient loss reduce agricultural yields, making it more difficult for farmers to produce sufficient crops. Soil erosion removes the most fertile layer of soil, further diminishing productivity and increasing vulnerability to drought. These processes can undermine food security, particularly for rural communities that rely heavily on subsistence farming.

Land degradation also contributes to the gradual expansion of desertification processes, especially in the northern and eastern regions of the country where rainfall is lower and ecosystems are more fragile. As vegetation cover declines, landscapes become increasingly dry and less capable of supporting crops, livestock, and wildlife. Habitat degradation and fragmentation also reduce biodiversity and limit the availability of resources for wild species.

From a climate perspective, land degradation reduces the ability of ecosystems to store carbon in vegetation and soils. Healthy soils and vegetation act as natural carbon sinks, helping to regulate greenhouse gas concentrations in the atmosphere. When land is degraded and vegetation cover is lost, carbon stored in soils and plants can be released back into the atmosphere, contributing to climate change. At the same time, degraded lands are less resilient to climate shocks such as droughts, floods, and extreme temperatures.

Addressing land degradation is therefore essential for strengthening climate resilience, protecting biodiversity, and sustaining agricultural productivity. Sustainable land management practices, including soil conservation, agroforestry, improved grazing management, and ecosystem

restoration, can help restore degraded lands while enhancing their capacity to support both human livelihoods and environmental stability.

1.4.2 Overfishing and Marine Resource Depletion

Overfishing and the depletion of marine resources represent major environmental and socio-economic challenges in The Gambia. Despite the economic importance of fishing—which accounts for more than 10% of the country's GDP—weak regulation and corruption have allowed illegal practices to flourish[22]. Overfishing in The Gambia is a critical issue driven by the activities of foreign industrial trawlers and local fishmeal factories, leading to the depletion of marine resources and threatening the livelihoods of artisanal fishing communities. Illegal, Unreported, and Unregulated (IUU) fishing constitutes a significant portion of this activity, with industrial vessels often operating illegally close to the shore, destroying local fishing gear and reducing available catch for small-scale fishermen.

The country's coastal waters and estuarine systems, particularly those linked to the Gambia River, support highly productive fisheries that provide food, employment, and income for thousands of people. Fish and other marine products form a critical component of the national diet and contribute significantly to the livelihoods of coastal and riverine communities. However, increasing pressure on these resources has raised concerns about the long-term sustainability of fish stocks and the health of marine ecosystems.

One of the primary drivers of marine resource depletion is the high level of fishing pressure exerted by both artisanal and industrial fleets. Average annual official landings are estimated at 65,000 tons, with artisanal marine captures making up roughly 65% of this total.[23]. The sub-sector directly and indirectly employs between 25,000 and 30,000 people.[24]. Artisanal fisheries, which employ large numbers of local fishers using small boats and traditional gear, operate extensively along the coast and within estuarine areas. At the same time, industrial fishing vessels, often targeting high-value species, operate in offshore waters and sometimes encroach on zones designated for small-scale fisheries. The combined pressure from these two sectors can exceed the natural reproductive capacity of many fish populations, leading to declining stocks.

Another significant factor contributing to overfishing is the use of destructive or unsustainable fishing gear. Fine-mesh nets and other non-selective fishing methods capture juvenile fish before they have the opportunity to mature and reproduce. This practice disrupts the natural life cycles of fish species and gradually reduces the overall size and productivity of fish populations. Destructive fishing techniques can also damage critical habitats such as seagrass beds, mangrove channels, and shallow coastal nursery grounds that are essential for the survival of young fish and invertebrates.

In addition to excessive harvesting, weak enforcement of fisheries regulations contributes to the problem. Limited monitoring capacity and insufficient resources for patrol and surveillance can make it difficult for authorities to effectively control Illegal, Unreported, and Unregulated (IUU)

[22] Dyami Security Intelligence, September 2025
[23] Coalition for Fair Fisheries Arrangement, The Gambia-EU Sustainable Fisheries Partnership Agreement negotiations, September 2024
[24] Commission Sous-Regionale des Peches, September 2008

fishing activities. As a result, unsustainable practices may continue in both coastal and offshore areas, undermining national fisheries management efforts.

The impacts of overfishing and marine resource depletion are far-reaching. Declining fish stocks directly threaten food security in The Gambia, where fish provide an estimated half of the animal protein consumed by the population. Reduced availability of fish can lead to higher prices and decreased access to affordable protein, particularly for low-income households that depend heavily on fish as a staple food source.

Ecologically, the depletion of fish populations can disrupt the balance of marine and estuarine ecosystems. Many fish species play key roles in food webs, helping regulate populations of smaller organisms and maintaining ecosystem stability. Overfishing can therefore trigger cascading ecological effects that alter species composition and reduce overall biodiversity. The loss or degradation of juvenile fish nursery habitats, often associated with mangrove forests and estuarine environments, further compounds these impacts by limiting the capacity of fish populations to recover.

The economic consequences are equally significant. Fisheries are a cornerstone of the coastal economy, supporting employment in fishing, fish processing, transportation, and trade. Declining catches can reduce incomes for fishing households, increase economic vulnerability, and contribute to poverty in coastal communities. Because fisheries also support export markets and local value chains, resource depletion can have broader implications for national economic development.

Given the central role of fisheries in food security and economic livelihoods, sustainable fisheries management is essential for the long-term well-being of the country. Strengthening fisheries governance, improving enforcement of regulations, promoting responsible fishing practices, and protecting critical habitats such as mangroves and estuaries can help restore fish stocks and ensure that marine resources continue to support both ecosystems and communities in the future.

1.4.3 Climate Change and Variability

The Gambia is highly vulnerable to climate change and climate variability due to its low-lying topography, with nearly 50% of its land area situated less than 20 meters above mean sea level. Over the past six decades, the average temperature has risen by 1.0°C (average rate of 0.19°C per decade), and the country has experienced a persistent negative trend in rainfall since the late 1960s. These changes have placed significant pressure on natural resources, particularly impacting agriculture, water resources, and coastal ecosystems.

Climate change and increasing climate variability pose growing challenges to ecosystems, livelihoods, and development in The Gambia. As a low-lying coastal country located within the Sahelian–Sudanian climatic transition zone, The Gambia is particularly vulnerable to climate-related changes. Global climate trends are increasingly manifested locally through rising temperatures, erratic rainfall patterns, sea-level rise, and a greater frequency of extreme weather events such as droughts, storms, and floods. These changes are placing additional stress on already fragile ecosystems and natural resource systems across the country.

One of the most visible impacts of climate change is occurring along the Atlantic coastline and estuarine areas. Rising sea levels and stronger storm surges are accelerating coastal erosion, which threatens beaches, infrastructure, and coastal settlements. The intrusion of saltwater into agricultural lands and freshwater systems is also becoming more common, particularly in low-lying rice-growing areas along the lower reaches of the Gambia River. Saltwater intrusion can damage rice paddies, reduce soil fertility, and make it increasingly difficult for farmers to sustain traditional rice cultivation practices that many communities depend on for food and income.

Climate change is also affecting rainfall patterns across the country. Increasing variability in rainfall, characterised by delayed onset of the rainy season, shorter rainfall periods, or intense but irregular storms, creates uncertainty for farmers who rely on rain-fed agriculture. Prolonged dry spells can reduce crop yields and increase the risk of drought, while intense rainfall events may cause flooding and soil erosion. These changes place additional pressure on water resources and agricultural systems, particularly in rural areas where access to irrigation infrastructure is limited.

Riverine ecosystems are also vulnerable to the impacts of climate variability. Changes in rainfall and upstream hydrological conditions influence water flows, salinity levels, and sediment transport in the Gambia River basin. Reduced freshwater inflows during dry periods may allow saline water from the ocean to penetrate further upstream, altering estuarine conditions and affecting fish populations, wetlands, and mangrove ecosystems that depend on balanced salinity levels.

The impacts of climate change extend beyond ecological systems to affect human communities directly. Rural households that depend heavily on agriculture, fisheries, and natural resources are particularly vulnerable to climate shocks. Reduced crop productivity, declining fish stocks, and environmental degradation can undermine household income and food security. As climate conditions become more unpredictable, communities may face increased difficulty in maintaining traditional livelihood strategies. Wildlife populations migrate to more favourable environments/locations for access to food and for protection.

Coastal wetlands and mangrove ecosystems are also at risk from climate-related changes. Rising sea levels, increased sedimentation, and changing salinity conditions can alter the structure and distribution of these ecosystems. In some areas, mangroves may migrate inland if suitable habitat is available, but where development or land-use constraints prevent this movement, valuable habitats may be lost. The degradation of coastal wetlands and mangroves reduces their ability to protect shorelines, support fisheries, and store carbon.

Overall, climate change acts as a multiplier of existing environmental challenges in The Gambia. It intensifies land degradation, increases pressure on water resources, exacerbates coastal erosion, and threatens biodiversity and ecosystem services. Addressing climate change, therefore, requires integrated approaches that combine ecosystem conservation, climate adaptation and mitigation strategies, and sustainable resource management. Strengthening ecosystem resilience through actions such as mangrove restoration, sustainable land management, and climate-resilient agriculture will be essential for safeguarding both natural systems and human well-being in the face of a changing climate.

1.4.4 Pollution and Waste Management

The Gambia faces significant challenges regarding pollution and waste management, characterised by limited infrastructure, low collection rates, and heavy reliance on open dumping and burning. While formal systems are largely ineffective, leaving many residents to manage refuse independently, the government needs to promulgate a National Action Plan to reduce pollution, especially plastic pollution, as a matter of urgency.

Pollution and inadequate waste management are emerging environmental challenges in The Gambia, particularly as urbanisation, population growth, and economic activities expand. Rapid development in urban and peri-urban areas has increased the volume of solid waste, wastewater, and pollutants entering the environment. However, waste management systems and infrastructure have not always kept pace with this growth, resulting in increasing pressure on ecosystems, public health, and urban environmental quality. In the Greater Banjul Area (GBA), which generates approximately 1,000 tons of waste daily, the average waste collection rate is only 28%.

One of the primary drivers of pollution is the expansion of urban settlements without adequate planning, including planning for waste collection and disposal systems. As towns and cities grow, larger quantities of household waste are generated, including plastics, organic waste, and other non-biodegradable materials. In many areas, waste is disposed of in open dumpsites, drainage channels, or vacant land due to limited waste collection services. During heavy rains, these wastes can be washed into nearby waterways, wetlands, and coastal areas, contributing to environmental contamination and marine litter.

Improper waste disposal also affects aquatic ecosystems connected to the Gambia River and other wetlands. Plastics, organic waste, and chemical contaminants entering water bodies can harm fish, aquatic plants, and other organisms that depend on clean water conditions. Polluted waterways may also affect communities that rely on these water sources for domestic use, fishing, and agriculture. Over time, contamination can degrade aquatic habitats and reduce biodiversity within these ecosystems.

Industrial and commercial activities represent another source of pollution when waste and effluents are not adequately treated before discharge. Small-scale processing industries, workshops, and urban businesses sometimes release untreated wastewater containing chemicals, oils, and other pollutants into drainage systems or nearby waterways. These pollutants can accumulate in sediments and aquatic organisms, potentially affecting ecosystem health and food safety.

Agricultural practices can also contribute to environmental pollution. The use of chemical fertilisers, herbicides, and pesticides in farming may result in runoff into rivers, wetlands, and groundwater systems, particularly during periods of heavy rainfall. Excess nutrients from fertilisers can lead to eutrophication in water bodies, causing algal blooms and reducing oxygen levels needed by aquatic organisms.

In addition to water pollution, air pollution is also a concern in some urban areas due to the open burning of waste. Burning plastics and other materials releases harmful pollutants and particulate matter into the atmosphere, which can pose risks to human health and contribute to poor air quality.

Open burning is often used as an informal waste disposal method in areas where formal waste collection services are limited.

The environmental and social impacts of pollution extend beyond ecological damage. Waste accumulation and polluted landscapes can reduce the aesthetic and recreational value of urban areas and natural habitats. In coastal tourism zones, litter and poorly managed waste can negatively affect visitors' experiences and the image of the country as a clean and attractive destination.

Addressing pollution and waste management challenges requires improvements in infrastructure, governance, and public awareness. Strengthening waste collection systems, promoting recycling and waste reduction, improving wastewater treatment, and enforcing environmental regulations are essential steps toward reducing pollution. At the same time, community participation and environmental education can play an important role in encouraging responsible waste management practices.

As urban populations continue to grow, the need for effective and sustainable waste management systems will become increasingly important. Strengthening institutional capacity, mobilising financial resources, and integrating environmental considerations into urban planning will be critical for reducing pollution and protecting ecosystems and public health in The Gambia.

1.4.5 Cross-Cutting Concerns

In addition to specific environmental threats, several cross-cutting concerns influence the state of ecosystems and natural resources in The Gambia. These overarching challenges exacerbate the impacts of land degradation, overfishing, climate change, pollution, and other pressures, making integrated management and policy interventions essential for sustainable development.

One of the most significant cross-cutting issues is the presence of institutional gaps. Enforcement capacity within environmental, fisheries, forestry, wildlife, and land management agencies is often limited by insufficient staffing, inadequate technical resources, and weak monitoring systems. Coordination among different agencies responsible for environmental management can be fragmented, leading to overlaps, inefficiencies, and inconsistencies in policy implementation. These institutional constraints hinder the country's ability to prevent illegal resource extraction, enforce regulations, and support sustainable ecosystem management.

Population pressure is another critical concern. With a growing population, the demand for land, food, water, and other natural resources continues to rise. Expansion of agriculture, settlements, and infrastructure places increasing stress on fragile ecosystems such as wetlands, mangroves, and savannahs. Overexploitation of fisheries, forests, and grazing lands is often linked to the need to support expanding rural and urban populations. Without effective planning and sustainable resource use, these pressures can lead to accelerated habitat loss and reduced ecosystem resilience.

Poverty linkages can further amplify environmental vulnerabilities. Rural and coastal communities often rely directly on natural resources for food, energy, and income. Degradation of land, forests, fisheries, and water resources disproportionately affects these communities, undermining livelihoods and increasing socio-economic vulnerability. Environmental shocks, such as coastal erosion, declining fish stocks, or crop failures due to soil degradation or climate variability, can

push already marginalised households into deeper poverty. Conversely, strengthening ecosystem management can provide opportunities to improve food security, livelihoods, and resilience for these populations.

Finally, the importance of biodiversity cuts across all aspects of environmental management. Biodiversity underpins fisheries, agriculture, tourism, and cultural practices, providing critical ecosystem services that sustain communities and the national economy. Healthy, functioning ecosystems are essential for nutrient cycling, soil fertility, water regulation, and climate mitigation. Loss of biodiversity compromises these functions and reduces the capacity of ecosystems to support human well-being, particularly in a country like The Gambia, where natural resources are tightly linked to socio-economic and cultural life.

Together, these cross-cutting concerns highlight the need for integrated, multi-sectoral approaches to conservation and development. Addressing institutional weaknesses, managing population pressures, reducing poverty-environment vulnerabilities, and protecting biodiversity are essential for ensuring the long-term sustainability of natural resources and the resilience of communities across The Gambia. These factors serve as critical context for understanding and responding to the specific environmental threats described in previous sections.

1.5 Conservation and Planning Priorities

Effective conservation and strategic planning are essential for maintaining the ecological integrity and sustainability of The Gambia's diverse ecosystems. Building on the understanding of key habitats, ecosystem services, and environmental threats, the country must prioritise actions that protect critical biodiversity, restore degraded landscapes, and strengthen the resilience of both natural systems and communities. These priorities integrate habitat conservation, sustainable resource management, and community-based approaches to ensure long-term environmental and socio-economic benefits.

The top priority is the protection and restoration of mangrove ecosystems, which provide critical nursery habitats for fish, act as carbon sinks, and buffer coastlines from erosion and saltwater intrusion. Community forestry programs and restoration initiatives using native mangrove species can enhance ecosystem resilience while providing sustainable livelihood opportunities, such as managed fuelwood collection or ecotourism. Active reforestation and conservation of existing mangrove areas will also support fisheries productivity and coastal protection.

Safeguarding marine turtle nesting beaches is another key priority. Measures such as seasonal beach protection during nesting periods, community-based guardianship, and the implementation of tourism management practices can reduce human disturbance and predation, enhancing the reproductive success of green and olive ridley turtles. Integrating conservation with eco-tourism initiatives offers opportunities to engage local communities while generating alternative income streams, reinforcing both ecological and socio-economic goals.

Riverine corridors, particularly along the Gambia River, require strengthened protection and enhanced management through the restoration of riparian buffers, maintenance of natural water flows, and prevention of upstream pollution. Healthy riparian zones not only stabilise riverbanks and prevent erosion but also support biodiversity by connecting aquatic and terrestrial habitats.

Protecting these corridors is critical for sustaining fish migrations, nutrient flows, and wetland functions, which underpin both fisheries and agricultural systems.

The sustainable management of the uplands will enhance the conservation needed for the lowlands. One of the major anthropogenic factors contributing to accelerating the land and natural resources degradation process of the uplands in The Gambia is bushfire. Rampant bushfires during the long dry season from November to May have been the major cause of the denudation of the vegetative cover. Bushfires also indiscriminately eliminate wildlife habitats, pests, and their natural enemies. The consequences of this in terms of environmental disequilibrium are phenomenal. The best approach to managing the wanton bushfire can best be fulfilled through regional fire management and Community plans.

At the landscape scale, conservation planning should aim to integrate savannah, riverine, and coastal habitats into connected ecological networks. Regional-scale planning allows for the maintenance of habitat connectivity, facilitates wildlife movement, and ensures ecological processes across the broader landscape. This approach supports biodiversity, enhances ecosystem resilience to climate change, and reduces the impacts of habitat fragmentation.

Sustainable fisheries management is essential to prevent overexploitation and support the livelihoods of coastal communities. Strategies include establishing no-take zones, implementing gear restrictions to prevent capture of juvenile fish, and promoting co-management arrangements that involve fishers in decision-making. These measures help maintain fish stocks, protect critical nursery habitats, and ensure the long-term viability of artisanal and small-scale fisheries.

Community engagement and capacity building underpin the success of all conservation initiatives. By providing training, alternative livelihood opportunities, and participatory decision-making, communities are empowered to take an active role in resource stewardship. Such engagement strengthens local ownership, reduces pressures on sensitive habitats, and enhances resilience to environmental and climate-related shocks.

Monitoring and evaluation are essential components of effective conservation planning. Indicators such as mangrove area, turtle nesting counts, fish catch per unit effort, and tree cover provide measurable metrics to assess the effectiveness of interventions. Regular monitoring enables adaptive management, allowing conservation strategies to be refined over time based on observed outcomes.

Overall, these conservation and planning priorities provide a roadmap for safeguarding The Gambia's natural capital. By integrating ecosystem protection, sustainable resource use, and community-based approaches, the country can maintain biodiversity, support livelihoods, and enhance resilience to environmental and climatic pressures, ensuring that its rich natural heritage continues to benefit both present and future generations.

1.6 Livelihoods and Food Security

1.6.1 Fisheries

Fisheries are a cornerstone of livelihoods and food security in The Gambia. Both marine and riverine ecosystems provide critical resources that sustain human communities and contribute substantially to the national diet. Fish and other aquatic species supply an estimated 50–60%[25] of the country's animal protein intake and contributes significantly to the GDP (roughly 2.5% to 6.2%) and provides livelihoods for over 200,000 people[26], making fisheries essential for nutritional security, particularly for rural and coastal populations.

Artisanal fisheries form the backbone of the sector, employing tens of thousands of fishers who operate small boats and traditional gear along the coast, estuaries, and riverine systems. Beyond the fishers themselves, a wider network of livelihoods depends on fisheries, including those involved in fish processing, marketing, transport, and equipment supply. These interconnected economic activities support household incomes, stimulate local economies, and contribute to poverty reduction in coastal and riverine communities.

Healthy mangroves, estuaries, and coastal wetlands are fundamental to sustaining productive fisheries. These habitats serve as nurseries and feeding grounds for commercially important species such as shrimp, bonga (Ethmalosa fimbriata), catfish, and barracuda. Juvenile fish find shelter among mangrove roots and estuarine vegetation, protected from predators and strong currents, which allows them to grow and mature before migrating to open waters. Maintaining these nursery habitats is therefore essential for the long-term sustainability of fish stocks.

The ecological productivity of riverine systems, particularly the Gambia River and its tributaries, also underpins fisheries. Seasonal flooding replenishes nutrients and supports the reproductive cycles of freshwater and estuarine species. The connectivity between inland and coastal habitats enables fish migrations, ensuring that populations can complete their life cycles and continue to support local livelihoods.

However, fisheries face multiple pressures, including overfishing, habitat degradation, and climate variability, which can compromise both food security and economic stability. Sustainable management, such as co-management approaches with fishers, gear restrictions, and protection of nursery habitats, is therefore critical. These strategies help maintain fish populations, protect ecosystems, and ensure that fisheries continue to provide vital nutrition and income for communities across the country.

By safeguarding fish stocks and their supporting habitats, The Gambia can strengthen food security, sustain livelihoods, and maintain the ecological foundations of its fisheries sector for future generations.

[25] Fisheries and aquaculture specialist, Overview of the Fisheries Sector in the Gambia, 2014
[26] Fishery Country Profile, Food and Agriculture Organization of the United Nations (FAO), 2007

1.6.2 Agriculture

Agriculture in The Gambia is closely intertwined with biodiversity, which underpins both crop production and food security. Soils enriched with organic matter, native pollinators, and diverse agroecosystems provide essential ecosystem services that sustain productivity, maintain soil fertility, and support resilient farming practices. The health and diversity of these ecological components are critical for ensuring stable and nutritious food supplies for rural communities.

Traditional mixed-farming systems are the backbone of rural agriculture, combining crops, livestock, and trees in ways that optimise resource use and resilience. Indigenous tree species provide shade, fodder, and nutrient cycling benefits, while wild plants and native livestock breeds are well-adapted to local environmental conditions, including seasonal droughts and soil variability. These integrated systems enhance productivity while preserving biodiversity and maintaining ecosystem functions within farmlands.

Wild foods, including edible plants, fruits, nuts, tubers, and bushmeat, play an important role as nutritional safety nets during lean seasons or periods of crop failure. For many rural households, access to these resources helps bridge gaps in food availability, supplementing diets with essential vitamins and proteins. The presence of wild biodiversity in and around farmland also contributes to cultural practices and traditional knowledge, reinforcing the link between local communities and their natural environment.

Maintaining soil fertility, promoting pollinator health, and preserving diverse agroecosystems are therefore essential for sustaining agricultural productivity and resilience. Practices such as agroforestry, intercropping, crop rotation, and conservation of wild species within farming landscapes can enhance yields, reduce vulnerability to climate shocks, and protect ecosystem services. By safeguarding the biodiversity that supports agriculture, The Gambia can strengthen food security, promote sustainable livelihoods, and ensure the long-term resilience of its rural communities.

1.6.3 Wildlife, Biodiversity and Ecosystems

The Gambia's wildlife and wildlife habitats are an extremely important economic asset. They are central to our Tourism industry that attracts over 206,000 tourists (Gambia Tourism Board 2023) to the Gambia every year. Our network of Protected Areas (PAs), approximately 80 km long coastal sandy beaches, the navigable river Gambia and its tributaries, and the riverine mangrove forest, supports a diversity of wildlife, including a unique and impressive avifauna, and also provides a rich array of natural resources and ecosystem services that are at the centre of people's livelihoods and sustainable development.

The Gambia's economy is primarily nature-based and channelled through plants and animals, which are the engine of our farming and livelihood. The ecological services biodiversity provides daily capture rainfall, regulate river flows, supply nutrients for crops, fodder for livestock, control erosion, and clean the air, water, and soils we pollute. These services come free of charge and add substantial economic resources to our local and national economic output. However, increasing human population pressure and poverty, habitat loss, rapid development in key pristine wildlife areas, poaching, insecurity, and overutilization of resources have accelerated the decline of wildlife

populations and habitats. Further, all these factors undermine sustainable development. There is therefore an urgent need to address these threats and emerging challenges to maintain the Gambia's role as an important ornithological tourism destination. Gambians must jealously guard the irreplaceably valuable natural resources on which the country's sustainable development depends. Consequently, the country must take urgent steps to elaborate and implement a Wildlife Conservation & Management Strategy and Action Plan to provide an overarching framework that prioritises, coordinates, and inspires citizens' participation for the transformation of the wildlife sector in the Gambia. The strategy will prescribe principles, objectives, standards, indicators, procedures, and incentives for the protection, conservation, and management of wildlife resources.

1.6.4 Culture and Traditional Knowledge

Cultural heritage and traditional knowledge are deeply intertwined with the natural environment in The Gambia. Across the country, ecosystems and biodiversity are not only sources of livelihood materials but also foundational elements of spiritual, medicinal, and social practices that have guided communities for generations. These cultural connections support conservation, sustainable use of resources, and the maintenance of ecological balance.

Sacred forests, groves, and specific tree species, such as the Baobab and Silk-cotton tree, hold spiritual and ceremonial significance and are traditionally protected by local communities. These areas often act as informal conservation zones, preserving native vegetation and wildlife habitats within otherwise heavily used landscapes.

Medicinal plants constitute another vital component of traditional knowledge. For many rural and peri-urban communities, locally available herbs and plant extracts provide primary healthcare solutions, treating common ailments and complementing modern medical services. Knowledge of plant properties, harvesting techniques, and seasonal cycles has been passed down through generations and remains an important part of daily life.

Cultural expressions, including songs, folklore, and festivals, are often closely tied to natural cycles, wildlife behaviour, and landscape features. Seasonal celebrations related to harvests, river flooding, or migratory bird arrivals reinforce community connections to nature while promoting sustainable practices. These cultural norms and beliefs have historically contributed to the conservation of ecosystems, guiding when and how resources are used.

However, modern pressures, including urbanisation, changing livelihoods, and globalisation, are eroding some traditional practices and knowledge systems. Loss of traditional stewardship can weaken informal conservation mechanisms and reduce local awareness of biodiversity values. Supporting the documentation, revitalisation, and integration of traditional knowledge into formal conservation strategies can strengthen both cultural heritage and environmental stewardship.

In essence, the interplay between culture, tradition, and biodiversity provides a unique avenue for sustainable resource management. Recognising and reinforcing these connections helps ensure that The Gambia's natural landscapes continue to provide spiritual, medicinal, and socio-economic benefits while supporting community-led conservation practices.

1.6.5 Economy and Employment

Natural resources and biodiversity play a central role in the economy and employment landscape of The Gambia, as indicated in section 1.6.1. Fisheries, agriculture, and nature-based tourism are key sectors that provide livelihoods for most of the population, generate foreign exchange, and contribute significantly to national GDP. Sustainable management of ecosystems is therefore essential not only for environmental health but also for socio-economic development and poverty reduction.

Fisheries are a major economic driver, supplying both domestic and international markets. Artisanal and small-scale commercial fisheries support tens of thousands of fishers and associated supply chains, including processing, transport, and trade. Fish exports provide critical foreign exchange, while locally caught fish constitute a primary source of affordable protein for Gambians. The productivity of fisheries depends heavily on healthy coastal, estuarine, and riverine ecosystems, particularly mangroves and wetlands, which serve as nurseries for commercially important species such as shrimp, bonga, catfish, and barracuda.

Agriculture underpins the livelihoods of approximately 70% of the population.[27]. Biodiversity within soils, crops, livestock, and pollinators contributes to resilience against pests, diseases, and climate shocks, ensuring consistent production. Traditional mixed-farming systems that integrate native trees, wild plants, and livestock breeds adapted to local conditions help sustain food security and generate income, while also maintaining ecosystem services such as nutrient cycling and soil fertility. Wild foods, including fruits, edible plants, and bushmeat, provide important safety nets during lean seasons, reducing vulnerability for rural households.

Tourism, particularly nature-based tourism, is an increasingly important source of employment and income. International and domestic visitors are drawn to The Gambia's rich biodiversity, including over 560 bird species, river dolphins, hippos, crocodiles, and forest reserves such as Abuko Nature Reserve and Kiang West National Park. Birdwatching, wildlife viewing, eco-lodges, and guided tours create direct employment opportunities for guides, lodge staff, and local entrepreneurs while stimulating secondary economic activities such as transport, handicrafts, and hospitality services. By connecting conservation with income generation, tourism provides incentives for the protection of natural habitats and cultural heritage.

In summary, the economy and employment of The Gambia are tightly linked to the health and productivity of its ecosystems. Fisheries, agriculture, and nature-based tourism collectively support livelihoods, reduce poverty, and generate national revenue. Maintaining biodiversity and ecosystem services is therefore not only an environmental imperative but also a cornerstone of sustainable economic development, climate resilience, and social well-being across the country.

1.6.6 Ecosystem Services and Human Well-being

There have been many formulations and definitions of human well-being. However, most commentators would agree that it includes basic material needs for a good life, the experience of

[27] Resilience of Organizations for Transformative Smallholder Agriculture Project (ROOTS), empowering Smallholder Farmers: The Backbone of Gambia's Agriculture, June 2024

freedom, health, personal security, and good social relations. Together, these provide the conditions for physical, social, psychological, and spiritual fulfilment.

Biodiversity and healthy ecosystems in The Gambia provide a wide array of ecosystem services that are fundamental to human well-being. These services can be categorised into regulating, provisioning, and cultural benefits as portrayed in box 1, each of which supports livelihoods, sustains communities, and contributes to national development and resilience.

Box 1: Ecosystem goods and services in the Gambia*

SUPPORTING

Nutrient cycling: Natural processes, especially water, serve as agents for nutrient cycling; plants capture and store nutrients temporarily

Soil formation: Ecosystem processes generate and preserve soils and renew their fertility
Primary production: Forests, wetlands and mangroves serve as the basis of the food chain

Provisioning	Regulating	Culture
Food: Small-scale agricultural land, forests, wetlands and estuarine areas provide food directly or indirectly by providing forage for other species which in turn serve as food for humans; insects serve as honey producers and crop pollinators.	**Flood regulation:** Vegetative land cover soaks up rainwater and mitigates flood events and run-off and storm surge protection for coastal communities.	**Aesthetic**: Forests, the coastal fringe, wetlands and other natural ecosystems provide a pleasing and appealing environment
Fresh water: Water provides life support, habitat, transport system	**Water purification:** Riparian vegetation filters nutrients and other impurities from run-off water, providing waste management and detoxification	**Spiritual:** Natural landscapes are mystical and inspirational. Places sacred in the traditional, spiritual, religious, ritual or mythological sense
Wood and fibre: Forests (including mangroves), carefully managed for sustainability, provide wood and other traditional materials	**Climate regulation**: Forests and other vegetation sequester CO_2, moderate weather extremes and impacts, and contribute to climate stability	**Educational:** Natural ecosystems serve as outdoor teaching laboratories; they provide for intellectual development
Medicine: Forests provide traditional medicinal herbs and remedies	**Erosion control:** Forests and other vegetation bind soil and prevent erosion and play major roles in ground water recharge.	**Recreational and tourism:** The forests and various land formations provide opportunities for swimming, hiking and other outdoor pursuits. The natural environment attracts visitors (tourists)
Habitat: Forests, wetlands and estuaries provide habitat for mammals, birds, insects and reptile species	**Pest control:** Birds control insect pests; some plants inhibit plant pests; natural systems regulate disease carrying organisms	
Biodiversity: natural ecosystems maintain the viability of gene-pools, and biological diversity; natural agents disperse seeds		

*Based on Biodiversity Policy, 2025

Regulating services play a critical role in maintaining environmental stability. Wetlands, mangroves, and riparian forests help control flooding by absorbing excess water during heavy rains and reducing the risk of erosion along rivers and coastlines. Vegetation and soil systems filter pollutants, purifying water for domestic, agricultural, and industrial uses. Carbon storage in mangroves, savannahs, and soils contributes to climate regulation by sequestering greenhouse gases, helping mitigate the impacts of climate change while supporting long-term ecosystem resilience.

Provisioning services provide essential material resources directly used by communities. Fuelwood, construction timber, fruits, honey, wildmeat/bushmeat) Medicinal plants are harvested sustainably from forests, woodlands, and agroforestry systems, supporting daily subsistence needs and local economies. Wild plants and livestock adapted to local conditions supplement food security, while fisheries and riverine resources provide critical protein and income for coastal and rural populations. These provisioning services are especially important for rural and vulnerable households, offering safety nets during periods of scarcity.

Cultural services reflect the spiritual, recreational, and educational value of nature. Sacred groves, festivals tied to natural cycles, birdwatching, eco-tourism, and traditional folklore provide inspiration, recreational opportunities, and spiritual enrichment. These cultural connections strengthen the social fabric, reinforce conservation ethics, and foster appreciation for natural landscapes.

In summary, biodiversity underpins virtually all aspects of life in The Gambia. It supports food security, sustains livelihoods, contributes to the economy, preserves cultural identity, and enhances climate resilience. Safeguarding these ecosystems ensures that natural capital continues to provide essential services, reduces poverty, and strengthens the well-being of current and future generations, highlighting the intrinsic link between human development and environmental stewardship.

1.7 CBD, GBF Alignment and NBSAP Role

The Gambia ratified the Convention on Biological Diversity (CBD) in 1994, committing to the global framework for conserving biodiversity, ensuring its sustainable use, and promoting the fair and equitable sharing of benefits arising from genetic resources. This commitment establishes both an international obligation and a strategic pathway for integrating biodiversity considerations into national development planning.

The core objectives of the CBD provide the foundation for The Gambia's biodiversity strategies;

- First, the conservation of biological diversity emphasises the protection of species, ecosystems, and genetic resources critical to ecological integrity, livelihoods, and climate resilience,
- Second, the sustainable use of biodiversity ensures that natural resources, such as fisheries, forests, and agricultural species, are managed to meet current needs without compromising their availability for future generations, and
- Third, the equitable sharing of benefits arising from the use of genetic resources recognises the value of local and traditional knowledge and supports socio-economic benefits for communities involved in biodiversity stewardship.

In line with these obligations, Parties to the CBD are required to prepare National Biodiversity Strategies and Action Plans (NBSAPs). NBSAP serves as the primary national instrument for translating CBD objectives into concrete policies, programs, and actions. It guides the integration of biodiversity considerations into sectoral and cross-sectoral planning, including agriculture, fisheries, forestry, tourism, and climate adaptation. By providing a structured framework, the NBSAP enables The Gambia to set priorities, establish measurable targets, and monitor progress in biodiversity conservation and sustainable resource management.

Furthermore, the NBSAP aligns with the Global Biodiversity Framework (GBF), particularly its targets and indicators aimed at halting biodiversity loss, promoting ecosystem restoration, and ensuring that biodiversity contributes to human well-being and sustainable development.

Through this alignment, The Gambia can leverage international guidance, technical support, and financing mechanisms to enhance national conservation outcomes while fulfilling global commitments. In essence, the CBD ratification, GBF alignment, and the implementation of the NBSAP collectively provide The Gambia with a coherent legal, policy, and strategic framework for biodiversity management. They ensure that the country's natural resources are conserved, used sustainably, and managed in ways that generate benefits for communities, strengthen livelihoods, and contribute to national development and climate resilience.

1.8 Kunming–Montreal Global Biodiversity Framework (GBF)

The Kunming–Montreal Global Biodiversity Framework (GBF) was adopted at COP15 as the post-2020 strategic framework of the Convention on Biological Diversity (CBD). It provides a comprehensive global roadmap to halt and reverse biodiversity loss, guide ecosystem restoration, and ensure that nature continues to support human well-being and sustainable development. The framework emphasises the urgent need to safeguard biodiversity while integrating it into national and sectoral planning.

Key goals and targets of the GBF aim to achieve measurable biodiversity outcomes by 2030. These include protecting at least 35% of terrestrial and marine areas, restoring degraded ecosystems, reducing pollution, controlling invasive species, and minimising the risk of species extinctions. The framework also calls for the sustainable management of agriculture, fisheries, and forestry sectors, recognising that these activities are both major drivers of biodiversity loss and essential for livelihoods and food security.

The GBF emphasises the mobilisation of financial resources, technology transfer, capacity building, and equitable benefit-sharing as critical enablers for effective implementation. Integrating biodiversity considerations into broader development planning ensures that economic growth, infrastructure development, and sectoral policies do not compromise ecological integrity.

By providing a global blueprint, the GBF aims to create pathways for countries like The Gambia to halt and reverse biodiversity loss by 2030 and achieve the long-term vision of "living in harmony with nature" by 2050. It aligns closely with national strategies, such as the NBSAP, providing targets, indicators, and policy guidance to strengthen conservation, promote sustainable use, and enhance the resilience of ecosystems and communities.

1.9 Role of the NBSAP in The Gambia

The National Biodiversity Strategy and Action Plan (NBSAP) serve as the principal instrument through which The Gambia translates its international biodiversity commitments, including those under the Convention on Biological Diversity (CBD) and the Kunming–Montreal Global Biodiversity Framework (GBF), into concrete national targets, actions, and monitoring systems. NBSAP provides a structured framework that guides decision-making, prioritises interventions, and facilitates coordination across sectors and levels of government.

NBSAP performs multiple key functions. Strategically, it ensures alignment between international goals and national policies, translating global biodiversity objectives into actionable priorities for The Gambia. It also supports mainstreaming biodiversity into critical sectors such as agriculture,

fisheries, forestry, tourism, and urban planning, ensuring that development initiatives account for ecosystem services, conservation needs, and sustainability considerations. Furthermore, NBSAP provides detailed guidance for implementation, including recommended interventions, capacity-building measures, and institutional arrangements, while outlining potential financing mechanisms to support conservation and sustainable use activities. Monitoring and reporting are integral components, enabling the tracking of progress toward national and international targets, identifying gaps, and informing adaptive management.

The strategic importance of the NBSAP lies in its ability to strengthen The Gambia's environmental, social, and economic resilience. By aligning with the GBF, NBSAP positions the country to access international finance, technical assistance, and capacity-building support. It also enhances climate resilience by promoting ecosystem-based adaptation measures, safeguards biodiversity's contribution to livelihoods and economic development, and reinforces the sustainable use of natural resources. Finally, the NBSAP ensures that The Gambia fulfils its international obligations, demonstrating accountability and commitment to global biodiversity goals while fostering national development that is both ecologically sustainable and socially inclusive.

In essence, the NBSAP acts as the bridge between global biodiversity commitments and practical, on-the-ground action in The Gambia, ensuring that ecosystems, communities, and the national economy benefit from coordinated, strategic, and sustainable management of natural resources.

Chapter 2: Biodiversity Status and Trends

The Gambia possesses a rich, yet highly threatened, biodiversity with over 3,339 recorded species, including 1,005 flowering plants, 126 mammals, and 566 bird species. Coastal and forest ecosystems are experiencing rapid degradation due to anthropogenic pressures, including agriculture, mining, and overfishing. Key trends indicate significant wetland bird declines, mangrove loss, and human-wildlife conflict due to habitat reduction.[28].

2.1 Ecosystems Status and Trends

The Gambia is a small Sahelian country, almost surrounded by Senegal and extending to the Western Coast of Africa between 13° and 14° N. It has a total land area of approximately 1,130,000 ha (11,300 km^2). The Gambia has a short rainy season commencing from June to October and a long dry season lasting from November to May. The average annual rainfall is 900 mm. The country has four major landscapes, namely, the floodplain, colluvial slopes, the lower plateau and the upper plateau, with different soil types. With characteristic Sudan savanna woodland vegetation, The Gambia has the following ecosystem types: Forest ecosystem (close and open woodlands), agricultural ecosystems (arable and rangeland ecosystems), marine and coastal ecosystems, inland water ecosystems (wetlands) and terrestrial ecosystems (tree/shrub savanna). According to the 2024 National Population and Housing Census, The Gambia's population is estimated at 2.42 million people with a population growth rate of 2.5% per annum (Preliminary 2024 Census report),

Currently, there are 29 Protected Areas in the Gambia, spread across the country's seven administrative regions. The national Protected Area (PA) coverage, excluding Other Effective Conservation Measures (OECMs) but including all ecosystem types, is 110,926.47 ha, representing 9.82% of the land area. It should be noted that, administratively, this figure may not sum to the national total, as some administrative areas overlap within a PA, as is the case with BCC and KMC in Tanbi Wetland National Park (DPWM Report, 2026). As regards forestry, a total of 66 forest parks were identified, demarcated and gazetted between 1950 and 1954, covering an area of 34,027 ha. However, after a resurvey in 1986, 2,068 ha were lost due to encroachment, and in 2023 another resurvey revealed a further loss of 1,292.2 ha to other forms of land use. Notwithstanding, there are currently 645 community forest areas demarcated nationwide, involving over 715 communities and covering 28,628.7 ha of forest land, of which 3,758.76 ha are in the start-up phase: 9,313.24 ha under the Participatory Community Forest Management

[28] CBD, Country Profiles // Main Details

Agreement (PCFMA) and 24,488.26 ha under the Community Forest Management Agreement (CFMA) (Forestry Department Report, 2025).

2.1.1 Overview of Terrestrial Ecosystems (Woodlands, Savannahs, Farmland Mosaics)

Despite its small geographical size, The Gambia harbours a remarkable diversity of terrestrial ecosystems that are fundamental to biodiversity, ecosystem services, and human well-being. The country's woodlands, savannahs, and farmland mosaics have developed under the influence of tropical climate, seasonal rainfall patterns, and centuries of traditional human use. Together, these ecosystems provide critical habitats for a wide array of plant and animal species, regulate water cycles, maintain soil fertility, store carbon, and supply resources essential for health and livelihoods, including fuelwood, timber, grazing, wild foods, and medicinal plants.

Woodlands are scattered across the Central River Region (CRR), Upper River Region (URR), and areas such as Kiang West. Dominant tree species include Parkia biglobosa, Prosopis africana, Afzelia africana, Cordyla africana, Pterocarpus erinaceus, and Daniellia oliveri. These forests serve as habitats for mammals such as monkeys, antelopes, and bushbucks, as well as reptiles and birds. Woodlands are also important carbon sinks, contribute to climate mitigation, and protect watersheds while maintaining soil fertility. However, over the past decades, woodland coverage has declined due to logging and conversion to farmland. High-value species are increasingly degraded, altering forest structure, though community forestry initiatives have begun to yield localised conservation successes.

Savannahs, dominant in the interior regions, consist of open grasslands with scattered trees such as Adansonia digitata, Vitellaria paradoxa, Terminalia macroptera, and Anogeissus leiocarpus. These ecosystems provide grazing for livestock and wild ungulates, offer wild fruits, fodder, and medicinal plants, and are shaped by fire-adapted vegetation dynamics. Savannahs face pressures from overgrazing, bushfires, habitat fragmentation, and encroachment by agricultural expansion, resulting in declines in wild grazer populations and degradation of natural vegetation.

Farmland mosaics integrate crops with fallows, village woodlots, and scattered trees and are concentrated in the western and central regions of The Gambia. Key agroforestry species include Faidherbia albida, Mangifera indica, Citrus spp., and Eucalyptus. These landscapes demonstrate the coexistence of biodiversity with agriculture, as trees enhance soil fertility, provide shade, fodder, and fruits, and contribute to climate resilience. Yet, shortened fallow periods and the adoption of modern monocultures have reduced agro-biodiversity, though targeted tree-planting programs show promising positive outcomes.

Overall Trends in Terrestrial Ecosystems indicate a decline in natural habitats and increasing fragmentation, which heightens vulnerability to climate stressors such as droughts and erratic rainfall. Wildlife plays an important role in maintaining the structure and functioning of terrestrial ecosystems. Herbivores influence vegetation composition and regeneration, predators regulate prey populations and maintain trophic balance, and many birds, mammals and insects contribute to seed dispersal and pollination. Soil fauna and invertebrates further support decomposition and nutrient cycling processes that sustain soil fertility and vegetation productivity. Furthermore, degraded habitats and wildlife population stress can increase zoonotic contact rates and pathogen

transmission; thus, a balanced predator-prey dynamic and healthy wildlife populations reduce the risk of disease spillover to humans and livestock, safeguarding health and livelihoods.

These terrestrial ecosystems remain essential for maintaining The Gambia's ecological integrity, supporting rural economies, and providing resilience in the face of climate variability, underscoring the importance of continued conservation, restoration, and sustainable management. Nevertheless, positive interventions, including community forestry, reforestation, and agroforestry programs, have begun to restore ecosystem functions and biodiversity in key areas, demonstrating the potential for sustainable management practices to mitigate ongoing environmental pressures while supporting livelihoods.

2.1.2 Overview of Freshwater Ecosystems (Gambia River, Wetlands, Riparian Forests)

Freshwater ecosystems form the lifeblood of The Gambia, playing a central role in the country's ecology, economy, and cultural identity. Key freshwater habitats include the main river channel and tributaries such as bolongs, creeks, and seasonal streams; permanent and seasonal wetlands and floodplains, including internationally recognised Ramsar sites like the Tanbi Wetland Complex and Bao Bolong; and riparian forests lining riverbanks and lowland depressions. The 1,130 km Gambia River, along with its tributaries, wetlands, and riparian forests, supports a wealth of biodiversity while sustaining water supplies, agriculture, fisheries, and traditional livelihoods.

The Gambia River system is ecologically rich, providing habitat for over 70 freshwater and estuarine fish species, while supporting mammals like hippopotamuses, Nile crocodiles, and numerous aquatic birds. The river serves as a critical migration and spawning corridor for fish, underpinning both artisanal and commercial fisheries, and it provides irrigation and water supplies essential for agriculture. Current trends indicate overfishing and declining fish stocks, deterioration in water quality due to pollution, and erosion caused by deforestation and sand mining, all of which threaten the ecological integrity of the river system.

Freshwater biodiversity contributes to ecosystem functioning through processes such as nutrient transport, food-web regulation, and sediment dynamics. Fish, aquatic invertebrates, reptiles, birds, and mammals support ecological interactions that help maintain water quality, sustain fisheries productivity, and promote the resilience of wetlands and river systems to environmental shocks such as flooding and drought.

Wetlands serve multiple ecological and socio-economic functions. They provide habitats for migratory waterbirds, carbon storage and sequestration for climate mitigation, regulate floods, filter sediments and pollutants, and support livelihoods through fishing, oyster harvesting, and rice cultivation. However, wetlands face pressures from agricultural encroachment, settlement expansion, and pollution, particularly in peri-urban areas. These pressures have contributed to declines in waterbird populations and invertebrate diversity, signalling a deterioration of ecosystem health.

Riparian forests are essential for biodiversity and ecosystem stability. They provide nesting and feeding sites for primates, antelopes, and birds, act as buffers against soil erosion, maintain water quality, carbon storage and sequestration for climate mitigation, and supply timber, medicinal plants, and other non-timber forest products. Trends indicate fragmentation and loss of keystone

species, such as Khaya senegalensis, though localized restoration projects are demonstrating the potential for recovery and sustainable management.

Overall Trends in Freshwater Ecosystems show a decline in ecological health, increasing vulnerability to climate change, and pressures from human activity. At the same time, there is growing recognition of their importance through Ramsar commitments and national strategies, and community-driven restoration initiatives are helping to enhance sustainability. Maintaining the health of freshwater ecosystems is critical not only for biodiversity but also for securing water resources, sustaining livelihoods, and promoting resilience in the face of climate variability.

2.1.3 Overview Coastal and Marine Ecosystems (Mangroves, Estuaries, Seagrass, Beaches)

The Gambia's 80 km coastline hosts a complex mosaic of coastal and marine habitats, including mangroves, estuaries, seagrass beds, dunes, and sandy beaches. These ecosystems provide critical support for fisheries, protect shorelines from erosion, store carbon, and sustain high levels of biodiversity, while also underpinning cultural and economic activities such as tourism, oyster harvesting, and honey production. Despite their ecological and socio-economic importance, these habitats are increasingly threatened by human activity and climate change.

Mangrove Ecosystems cover approximately 66,000 hectares, representing one of the largest continuous mangrove stretches in West Africa. Dominant species include Rhizophora racemosa, R. mangle, Avicennia africana, and Laguncularia racemosa. Mangroves serve as nursery grounds for fish and crustaceans, habitat for birds, reptiles, and primates, and natural buffers against shoreline erosion. They also store significant amounts of carbon, contributing to climate mitigation, while supporting livelihoods through oyster harvesting, honey production, and fuelwood collection. Trends indicate ongoing degradation due to unsustainable harvesting, but restoration projects have shown promising local gains. Climate change, particularly sea-level rise, poses additional risks to mangrove stability and ecosystem services.

Estuaries and lagoons form dynamic interfaces between freshwater and saltwater systems such as Bintang, Tanbi, and Allahein. These areas are highly productive, supporting fisheries (shrimp, mullet, bonga), providing habitat for migratory waterbirds, and maintaining nutrient-rich zones that enhance overall ecosystem productivity. However, estuaries are under pressure from overfishing, habitat alteration, and pollution, threatening both biodiversity and the livelihoods of coastal communities.

Seagrass beds, including Zostera noltii and Halodule wrightii, provide critical shelter and feeding grounds for juvenile fish, manatees, and green turtles. They also contribute to carbon storage and sequestration and water filtration. Data on seagrass health are limited, but threats from sedimentation and trawling are recognised, highlighting the need for integration into national monitoring and conservation programs.

Beaches and dunes, at key sites such as Cape Point, Kololi, Kotu, and Kartong, provide essential nesting grounds for sea turtles, stabilise sediments, support vegetation growth, and offer

recreational and cultural value. Trends indicate coastal erosion, declines in turtle nesting, and increasing pressures from tourism and development.

Coastal and marine wildlife contributes to ecosystem productivity and resilience. Fish, crustaceans, turtles, birds, and marine mammals play roles in nutrient movement, trophic regulation, and the maintenance of nursery habitats in mangroves, estuaries, and seagrass areas. Maintaining these ecological interactions is important for sustaining fisheries, coastal protection, and the ecological integrity of marine ecosystems. Overall Trends in Coastal & Marine Ecosystems reveal that, while these habitats remain highly productive and biologically rich, they face mounting threats from human activities and climate change. Fisheries are declining, coastal habitats are being lost, and ecological integrity is under stress. Nonetheless, targeted conservation interventions, including mangrove restoration, Ramsar site management, and sea turtle protection, demonstrate that proactive measures can maintain and even enhance the resilience of these critical coastal ecosystems, securing both biodiversity and livelihoods for the future.

2.2 Species Status and Trends of Fauna Species

The biodiversity of The Gambia reflects its position within the Sahel–Sudanian transition zone, supporting a range of species across terrestrial, freshwater, and coastal ecosystems. Despite the country's small size, its fauna plays critical ecological roles, underpins livelihoods, and contributes to cultural identity. The main categories and status of fauna with relevance to biodiversity are discussed in the next paragraphs.

1. **Mammals** in The Gambia are modest in diversity but ecologically significant. Forests, riparian corridors, and protected areas harbour species such as the West African manatee (Trichechus senegalensis, Vulnerable), hippopotamus (Hippopotamus amphibius), vervet and patas monkeys, baboons, duiker, and bushbuck. These mammals face threats from bycatch, hunting, habitat loss, and weak enforcement of wildlife regulations. Conservation efforts include protected areas, targeted manatee awareness campaigns, and community-based wetland management, all of which have shown localised successes in maintaining populations.
2. **Birds** represent one of the most dynamic components of Gambia's biodiversity. The country is a key stopover and wintering site for Palearctic and intra-African migratory species. Threatened birds include the African white-backed vulture and other Gyps species, which are impacted by habitat loss, poisoning, human disturbance, and reductions in carcass availability. Conservation interventions include Ramsar site management, community-led bird monitoring, and participation in international flyway initiatives, helping to protect migratory routes and critical habitats.
3. **Amphibians and reptiles** reflect the Sahel–Sudanian gradient, with frogs and toads thriving in wetlands and seasonal ponds, and reptiles such as snakes, lizards, and crocodiles occupying terrestrial and aquatic habitats. These groups face pressures from wetland conversion, overexploitation, and aquatic pollution, which threaten population stability and ecosystem functions.
4. **Fish**, both freshwater and estuarine, are highly diverse, with over 100 species recorded. Many depend on estuarine and mangrove nursery habitats for reproduction and growth. Key threats include overfishing, use of illegal or destructive gear, habitat degradation, and pollution.

Conservation measures focus on fisheries co-management, habitat protection, and enforcement of fishing regulations to ensure sustainable harvests and maintain ecological balance.

5. **Threatened species** in The Gambia include the manatee (small, fragmented populations), the hippopotamus (localised populations), vulture species experiencing steep regional declines, and selected fish and shorebirds affected by habitat loss and overharvesting.

Cross-cutting threats affect multiple taxa and ecosystems simultaneously. These include overexploitation (through fisheries and bushmeat hunting), habitat loss and degradation (wetlands, mangroves, coastal areas), emerging zoonotic/infectious diseases, pollution and declining water quality, climate change impacts (temperature increases, sea-level rise), and weak governance or enforcement capacity.

In addition to their conservation importance, many species contribute to ecosystem functioning through roles such as seed dispersal, grazing, predation, pollination, and nutrient cycling. Declines in wildlife populations may therefore affect ecosystem processes, reduce the ability of ecosystems to store and sequester carbon, and affect the overall health and resilience of these ecosystems.

Conservation priorities emphasise the need to strengthen species monitoring and reporting, protect and restore critical habitats such as riparian corridors, mangroves, and wetlands, reform and enforce fisheries management, develop targeted species recovery plans for key taxa (manatees, vultures, hippopotamuses), and enhance community engagement through alternative livelihoods. Also, recognise and maintain wildlife populations as functional components of ecosystems that support carbon storage and sequestration, fisheries productivity, water regulation, pollination, ecosystem resilience, and mitigation of zoonotic risks. Together, these measures aim to maintain biodiversity, secure ecosystem services, and ensure that species continue to contribute to The Gambia's ecological resilience, cultural heritage, and economic well-being.

Chapter 3: The Gambia's Global Commitments

The Gambia is party to several global and regional environmental frameworks, including the Convention on Biological Diversity, United Nations Framework Convention on Climate Change, United Nations Convention to Combat Desertification, Basel Convention, Ramsar Convention, Convention on Migratory Species, and Convention on International Trade in Endangered Species of Wild Fauna and Flora. Complementary regional and thematic protocols such as the Agreement on the Conservation of African-Eurasian Migratory Waterbirds, the Regional Network of Marine Protected Areas in West Africa, the Algiers Convention, and the Abidjan Convention further reinforce this framework.

At the national level, the Department of Parks and Wildlife Management (DPWM) serves as the focal institution for several key conventions, including the CBD, Ramsar, CMS, AEWA, as well as the Nagoya Protocol on Access and Benefit Sharing and the Cartagena Protocol on Biosafety. This institutional arrangement has facilitated the integration of MEA objectives into national planning instruments and sectoral strategies. Notably, synergies are evident in the design and implementation of priority frameworks such as the Wildlife Conservation Strategy and Action Plan, the Protected Area Management Strategy and Action Plan, and the Gambia's 30x30 Strategy and Action Plan, which collectively align biodiversity conservation, climate resilience, and sustainable land management goals.

In addition, the Agriculture and Natural Resources (ANR) Working Group, coordinated by the National Environment Agency, plays a central role in fostering cross-sectoral coordination. This multi-stakeholder platform promotes coherence among programmes, projects, and activities linked to MEA implementation, ensuring that efforts under different conventions are mutually reinforced rather than fragmented. The ANR Working Group supports integrated planning, joint monitoring, and shared reporting mechanisms across sectors such as forestry, agriculture, fisheries, and wildlife.

At the sub-national level, these synergies are operationalised through decentralised governance structures within administrative regions. Integrated management approaches are reflected in site-specific planning tools, including protected area management plans and the Niumi Biosphere Reserve candidature dossier submitted to UNESCO. These frameworks incorporate biodiversity conservation, ecosystem restoration, climate adaptation, and community livelihoods into a unified territorial approach.

Overall, strengthening MEA synergies in The Gambia enhances policy coherence, optimises resource use, reduces duplication of efforts, and improves the country's capacity to meet its national and global environmental commitments. It also provides a strong foundation for mobilising international climate and biodiversity finance, particularly under mechanisms such as the Global Environment Facility (GEF) and the Green Climate Fund (GCF), while supporting sustainable development at both national and local levels.

3.1 National Biodiversity Strategy and Action Plans (NBSAP)

The National Biodiversity Strategy and Action Plan (NBSAP) is a comprehensive national policy framework designed to guide the conservation, sustainable use, and equitable benefit-sharing of biodiversity. NBSAPs are prepared by countries that are Parties to the Convention on Biological Diversity and serve as the principal instrument through which nations implement the objectives of the convention domestically. In accordance with Article 6 of the CBD, each contracting party is required to develop national strategies, plans, or programmes that integrate biodiversity considerations into relevant sectoral and cross-sectoral policies, thereby ensuring that biodiversity is mainstreamed across development planning.

The NBSAP process provides a structured approach for assessing the status of biodiversity, identifying major threats, setting national biodiversity targets, and establishing priority actions for conservation. Beyond its policy and strategic functions, the NBSAP serves as a tool for mainstreaming biodiversity considerations into national development planning, natural resource management, and sectoral policies. Participation is central to the NBSAP framework, involving government institutions, local communities, civil society organisations, and the private sector. This collaborative approach promotes national ownership, strengthens governance, and facilitates the implementation of effective conservation initiatives.

At the global level, NBSAPs are aligned with international biodiversity frameworks adopted under the CBD, including the Strategic Plan for Biodiversity, the Aichi Biodiversity Targets, and the Kunming–Montreal Global Biodiversity Framework. These international frameworks guide countries in developing measurable targets, monitoring biodiversity trends, and reporting progress toward global conservation goals. Consequently, NBSAPs serve a dual role, functioning both nationally and internationally, linking local biodiversity management efforts with global commitments to halt and reverse biodiversity loss.

3.2 Historical Development of The Gambia's NBSAP

3.2.1 Early Environmental Policy Foundations

The development of biodiversity policy in The Gambia predates the formal establishment of NBSAPs. Early environmental initiatives focused on integrated natural resource management and sustainable development. Notably, the Gambia Environmental Action Plan (GEAP), developed in the early 1990s, provided one of the first national policy frameworks for environmental management.

Wildlife and habitat conservation have long been a priority for the country. The establishment of the Department of Parks and Wildlife Management (DPWM) and the creation of protected areas represented early government efforts to safeguard biodiversity. Today, DPWM manages a network of protected areas covering the country's key terrestrial, freshwater, and coastal ecosystems. The Gambia further strengthened its environmental commitments when it ratified the CBD in 1994, formalising obligations to conserve biodiversity and sustainably use biological resources.

3.2.2 The First National Biodiversity Strategy and Action Plan (1999)

In 1999, in response to its obligations under the CBD, The Gambia developed its first NBSAP. This pioneering plan provided a national framework for biodiversity conservation and sustainable resource management. It identified priority areas for action, key threats to ecosystems and species, and strategies to mitigate biodiversity loss.

The development of the 1999 NBSAP was highly participatory, involving government agencies, researchers, civil society organizations, and local communities. Emphasis was placed on integrating biodiversity considerations into sectoral activities such as agriculture, forestry, fisheries, and tourism. Recognizing that rural livelihoods are closely linked to natural resources, the strategy highlighted the role of local communities in conservation efforts. Awareness raising, community participation, and local stewardship were central to the plan, fostering a sense of ownership and responsibility for biodiversity management.

3.2.3 Revision of the NBSAP (2015–2020)

After more than two decades of implementation, the first NBSAP was revised to reflect emerging environmental challenges and global biodiversity commitments. The revision process, conducted between 2013 and 2015, involved nationwide consultations and stakeholder engagement, ensuring that the updated strategy was inclusive and contextually relevant.

The revised NBSAP (2015–2020) aligned The Gambia's biodiversity priorities with the global Strategic Plan for Biodiversity 2011–2020 and incorporated the Aichi Biodiversity Targets. The plan outlined five strategic goals to guide conservation and sustainable use of natural resources:

1. Address underlying causes of biodiversity loss by mainstreaming biodiversity considerations across government policies, planning, and society.
2. Reduce direct pressures on biodiversity through sustainable management of ecosystems and natural resources.
3. Improve the status of biodiversity by safeguarding critical ecosystems, species, and genetic diversity.
4. Enhance benefits derived from biodiversity and ecosystem services, supporting livelihoods, food security, and climate resilience.
5. Strengthen implementation capacity through participatory planning, knowledge management, monitoring, and capacity building.

The revised NBSAP emphasized governance improvements, inter-ministerial coordination, monitoring and evaluation mechanisms, and biodiversity financing frameworks. Its implementation involved a broad range of stakeholders, including government institutions, civil society, research organizations, and local communities, ensuring collaborative and effective action for the conservation of The Gambia's rich biodiversity.

This evolution of The Gambia's NBSAP, from early environmental frameworks to the first NBSAP and its subsequent revision, demonstrates a clear trajectory of increasing sophistication, participatory governance, and alignment with global biodiversity objectives, laying the foundation for future strategies that integrate national priorities with international commitments.

3.3. Development of the New NBSAP (2025–2035)

In response to evolving environmental challenges and global biodiversity commitments, The Gambia has developed its new National Biodiversity Strategy and Action Plan (NBSAP) covering the period 2025–2035. This strategy builds upon the achievements and lessons learned from previous NBSAPs, while addressing contemporary issues such as climate change, habitat degradation, invasive species, overexploitation of resources, and other emerging threats to biodiversity. It represents a forward-looking framework to guide national biodiversity governance, conservation, and sustainable use over the next decade.

Key elements of the strategy formulation process are participation, inclusivity, transparency, accountability, and evidence-based (2022-2025). The development process of the 2025–2035 NBSAP has been highly participatory and evidence-based. Extensive consultations with government agencies, conservation organizations, researchers, local communities, and development partners, combined with technical assessments of the current biodiversity status, have shaped the strategy. This inclusive approach ensures that the plan reflects national priorities, scientific knowledge, and local perspectives, fostering ownership and commitment to implementation.

A central objective of the new NBSAP is alignment with the Kunming–Montreal Global Biodiversity Framework, which sets global biodiversity targets up to 2030. By anchoring national priorities in this global framework, The Gambia aims to strengthen biodiversity governance, enhance monitoring systems, and improve resource mobilization for conservation initiatives. This alignment ensures that national actions contribute meaningfully to global biodiversity conservation goals while addressing local ecological, social, and economic realities.

The 2025–2035 NBSAP emphasizes ecosystem restoration, sustainable land and water management, and mainstreaming biodiversity considerations across development sectors. In particular, it seeks to integrate biodiversity into national development planning, climate adaptation strategies, and sectoral policies, ensuring that conservation objectives complement broader development and resilience goals. Local communities are positioned as central actors in conservation efforts, reflecting the recognition that community engagement and traditional knowledge are critical for effective biodiversity management.

A distinctive feature of this NBSAP is its structured implementation framework, which guides action across multiple governance levels. It includes a dedicated chapter on Sub-National Biodiversity Strategies and Action Plans (SBSAPs), recognizing the importance of decentralizing biodiversity management and empowering regional, local, and ecosystem-level stakeholders. These subnational strategies are designed to align local actions with national conservation priorities, thereby enhancing coherence, accountability, and implementation effectiveness.

In addition, the NBSAP adopts a structured, hierarchical planning framework that links subnational priorities to national biodiversity objectives. The strategy comprises six Sub-National Biodiversity Strategies and Action Plans (SBSAPs) that identify key biodiversity priorities and strategic interventions across different regions of the country. From these subnational strategies, subnational strategic priorities were formulated to reflect each subregion's specific ecological and conservation

needs. These priorities subsequently informed the development of 13 thematic areas, which represent the major focus areas for biodiversity conservation and sustainable resource management at the national level. This NBSAP establishes 25 national biodiversity targets, derived from subnational priorities and organised into 13 thematic areas. Together, these targets provide a clear and actionable roadmap for achieving national biodiversity conservation goals while ensuring coherence between local priorities and national commitments under the Convention on Biological Diversity.

Building on these thematic areas, 13 component strategies and action plans, which are elaborated in detail in volume two of the strategy and action plan, were developed, each containing specific strategic objectives designed to address the identified thematic priorities.

Once finalised, the NBSAP 2025–2035 will serve as The Gambia's principal national framework for guiding biodiversity conservation, sustainable resource use, and ecosystem management. It sets a strategic direction for the coming decade, linking national action with global conservation imperatives and ensuring that biodiversity continues to support livelihoods, ecosystem services, and climate resilience across the country.

Chapter 4. Methodology for developing the National Biodiversity Strategy and Action Plan (NBSAP)

4.1 Methodology for developing the National Biodiversity Strategy and Action Plan (NBSAP)

The methodology for developing the National Biodiversity Strategy and Action Plan (NBSAP) was multi-layered and participatory. It began with a broad stakeholder consultation workshop. This workshop served as the formal introduction to NBSAP. It gathered all key institutional leaders, including governors, representatives from major government ministries, PLWD, Traditional Leaders, women's groups, CBOs, and large NGOs. The primary goal was to orient these top-level stakeholders to NBSAP's purpose, scope, and objectives. Through presentations and discussions, participants gained a foundational understanding of the strategy's goals. This buy-in at the top level was crucial, as it established a shared vision and ensured that subsequent, more technical workshops would have strong institutional support.

After the initial high-level stakeholder workshop, the next step was a more focused technical stakeholder engagement. In this second workshop, key actors directly involved in biodiversity work, government technicians, local CBOs and NGOs, and regional experts were convened. The objective here was to collaboratively draft the key thematic areas of the NBSAP. It started with a preliminary set of thematic areas drafted by the NBSAP team from the Department of Parks and Wildlife Management. During this workshop, all stakeholders reviewed, discussed, and refined these thematic areas. After deliberation, we arrived at thirteen solid thematic priorities, which became the backbone of the strategy. This process ensured that the thematic areas were both nationally relevant and regionally nuanced, laying a strong foundation for the next steps.

From these thematic areas, we then defined 25 national biodiversity targets. These 25 national targets became the foundation for all subsequent planning. Each sub-national biodiversity strategy

and each component strategy prioritised actions that directly reflected these national targets. Thus, the subnational priorities and component actions were anchored in these national goals.

Once the thirteen thematic areas were achieved, sub-national biodiversity strategies and action plans were developed. Each region of the country was assigned its own strategy, tailored to its unique ecological, economic, and social context. After drafting each sub-national plan, we took them to their respective regions. In these regional meetings, all local stakeholders, local authorities, village development committees, local NGOs, and government offices gathered to review and/or revise the drafts. Together, each priority was assessed and adjusted to reflect the regional realities, and baseline data was collected. This iterative regional feedback ensured that each plan was not only aligned with the thematic focus but also grounded in local needs and aspirations. Once this regional consultation was completed, all revised plans were gathered for the next stage of refinement.

After the regional revisions, a select team from each region's governor's office, known as the Technical Advisory Committee (TAC), conducted an in-depth review of each subnational strategy. They meticulously checked the drafts to ensure alignment with the regional inputs and that no details had been missed. Once this targeted review was completed, we returned to the regions for a broad validation. In this second regional forum, all initial stakeholders reconvened, ensuring that every participant had a final chance to confirm that the priorities, targets, and actions were accurate and truly representative of the region's needs.

After finalising the regional strategies, the team moved on to developing the component strategies and action plans. Each component focused on a distinct sector of biodiversity, such as Biodiversity Education and Public Awareness, Biodiversity Knowledge Management, Biosafety Strategy, Capacity Building, Community Engagement, Gender and Biodiversity, Invasive Species Management, Landscape Restoration, Protected Area, Resource Mobilisation, Technology Transfer, Wetland Management, and Wildlife Management strategies and action plans. We hired specialised consultants for each component, who rigorously reviewed the drafts, added data, and ensured all evidence was robust. After this expert enhancement, the refined component strategies were presented at a larger multi-stakeholder forum.

Before the development of the component strategies and action plans, the project team conducted benchmarking and learning visits to Kenya and Senegal to better understand how biodiversity conservation can be effectively integrated with sustainable development and local livelihoods. These visits provided an opportunity to engage with institutions, conservation practitioners, and community-based initiatives that had successfully incorporated biodiversity management into national and local development frameworks. Attention was given to approaches that promoted community participation, sustainable resource utilisation, ecosystem restoration, biodiversity financing, and livelihood improvement through conservation-oriented interventions.

The lessons and best practices gathered from both countries significantly informed the drafting and refinement of the component strategies and action plans under the NBSAP process. Insights from the visits helped the project team strengthen the alignment between biodiversity conservation objectives and socio-economic development priorities within The Gambia. The experiences from Kenya and Senegal also guided the incorporation of practical implementation approaches,

stakeholder coordination mechanisms, and community-driven conservation models into the strategy, ensuring that the final NBSAP was both context-specific and implementation-oriented.

In this forum, all key stakeholders, those from different sectors and institutions, came together to validate each component strategy. Every sector representative reviewed the plans to ensure they aligned with their institutional priorities. This cross-sector validation was vital to ensure that all component strategies worked cohesively, with each sector owning its piece of implementation. Once validated, these component strategies were ready for integration into the overarching NBSAP.

Once all component strategies were finalised, the entire NBSAP was compiled into a single, unified document. A specialised consultant was engaged to oversee this integration, ensuring that the entire plan was consistent, aligned with the global biodiversity framework, and supported by a clear implementation budget. Crucially, as part of this final stage, the project team visited Kenya and Senegal to benchmark best practices. These international visits provided valuable insights, allowing us to adapt the NBSAP to better integrate biodiversity with sustainable livelihoods in Gambia. Once all revisions were made, the final NBSAP stood as a comprehensive, actionable roadmap, linking national ambitions, regional plans, and sector-specific actions for biodiversity conservation.

Chapter 5. New NBSAP Targets Aligned with National Biodiversity Strategy and Action Plan for The Gambia

The NBSAP 2015 – 2020 and National Biodiversity Policy (NBP) 2025 – 203529 All recognise the CBD Strategic Plan for Biodiversity 2011-2020 and its Aichi Targets adopted in October 2010 (Decision X/2)30 as an ambitious new plan that provides an overarching framework for all the biodiversity–related conventions and biodiversity issues at the national level. Through a participatory process in setting the National Biodiversity vision, the strategic goals, and the General Targets, the aligned NBP 2025 - 2035 provides an appropriate national orientation for effective response to the increasing loss of biodiversity, land degradation and climate change. The 5 strategic goals reproduced below are the goals of NBSAP 2011 – 2020, which is the revised aligned NBSAP.

Strategic Goal A: *Address the underlying causes of biodiversity loss by mainstreaming biodiversity across Government and society*

Strategic Goal B: *Reduce the direct pressures on biodiversity and promote sustainable use*

Strategic Goal C: *Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity*

Strategic Goal D: *Enhance the benefits to all from biodiversity and ecosystem services*

Strategic Goal E: *Enhance implementation through participatory planning, knowledge sharing, management and capacity building*

In translating the provisions to national realities, the National Biodiversity Policy 2025 – 2035 has identified two policy objectives and six strategies that are aligned with national targets and were derived through country-wide consultations.

[29] World Agroforestry Center (ICRAF), 2018
[30] October 2010 (Decision X/2)

5.1 GBF Targets

5.1.1 Thematic Area 1: Protected areas and OECMs (Other Effective area-based Conservation Measures)

T1.1 Protect and effectively manage 35% of The Gambia's terrestrial and marine ecosystems through a mix of protected areas and OECMs by 2035.

Indicator: % of national territory under PA/OECM with documented management effectiveness.
Responsible: Department of Parks & Wildlife / DoF/Subnational actors.

GBF Alignment:

- Contribution to the Global Goals
  - GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained
- Alignment with global targets
  - GBF-T03. 35% of areas are effectively conserved

T1.2 Achieve *50% of PA management effectiveness of 10 important PAs* by *2035*.

Indicator: % PAs meeting minimum Integrated Management Effectiveness Tool (IMET) score.
Responsible: DPWMs, PA Committees, NGOs.

GBF Alignment:

- Contribution to the Global Goals
  - GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained
- Alignment with global targets
  - GBF-T14. The multiple values of biodiversity are integrated into decision-making at all levels

5.1.2 Thematic Area 2: Coastal and marine (mangroves, turtle nesting, beaches)

T2.1 Restore and increase Gambian mangrove cover by 10% (area) from the 2025 baseline by 2035, prioritising natural regeneration and community-based planting.

Indicator: hectares of mangrove restored/expanded; canopy cover change.
Responsible: DPWM, Forestry Dept., Fisheries Department, NGOs, coastal communities (Subnational actors).

GBF Alignment:

- Contribution to the Global Goals
  - GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained

- Alignment with global targets
  - GBF-T14. The multiple values of biodiversity are integrated into

T2.2 Reduce disturbance at key turtle nesting sites so that documented nesting success increases by 40% by 2035 (relative to baseline).

Indicator: number of nests, hatching success rate, beach disturbance incidents.
Responsible: DPWM, NGOs, local communities, tourism authorities.

GBF Alignment:

- Contribution to the Global Goals
  - GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained
- Alignment with global targets
  - GBF-T01. All areas are planned or managed to bring the loss of areas of high biodiversity close to zero

5.1.3 Thematic Area 3: Fisheries & sustainable aquaculture

T3.1 Increase the proportion of fish stocks assessed as sustainable (within safe biological limits) to 70% by 2035.

Indicator: % of commercially important stocks with sustainable status and bycatch reduction measures in no-take zones.
Responsible: Fisheries Dept., DPWM, research institutes, Fisherfolk Committees.

GBF Alignment:

- Contribution to the Global Goals
  - GBF-G-B. Biodiversity is sustainably used, and its contributions to people are maintained, enhanced, or restored
- Alignment with global targets
  - GBF-T03. 35% of areas are effectively conserved

T3.2 Establish and operationalise community-managed no-take zones/nurseries covering at least 15% of key estuary/mangrove nursery areas by 2035.

Indicator: hectares under no-take, compliance records, catch-per-unit-effort (CPUE) change.
Responsible: DPWM, Department of Fisheries, Local Communities, Subnational Actors

GBF Alignment:

- Contribution to the Global Goals
  - GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained
- Alignment with global targets
  - GBF-T03. 35% of areas are effectively conserved

5.1.4 Thematic Area 4: Wetlands and riverine systems

T4.1 Maintain or improve the ecological condition of 80% of mapped high-value riverine wetlands by 2035 (condition index).

Indicator: wetland condition index (hydrology, vegetation, species).
Responsible: Water Resources, DPWM, Forestry, local governments, NGOs.

GBF Alignment:

- Contribution to the Global Goals
  - GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained
  - GBF-G-B. Biodiversity is sustainably used, and its contributions to people are maintained, enhanced, or restored
- Alignment with global targets
  - GBF-T02. 35% of degraded areas are under effective restoration

T4.2 Restore 5,000 ha of degraded riparian buffer by 2035 to reduce sediment load and support fish migration.

Indicator: hectares restored, sediment measurements, fish passage indicators.
Responsible: DPWM, Dept. Of Forestry, NGOs, Local Government, and local actors

GBF Alignment:

- Contribution to the Global Goals
  - GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained
  - GBF-G-B. Biodiversity is sustainably used, and its contributions to people are maintained, enhanced, or restored
- Alignment with global targets
  - GBF-T14. The multiple values of biodiversity are integrated into decision-making at all levels

5.1.5 Thematic Area 5: Forests & landscape restoration (incl. agroforestry)

T5.1 Restore 10,000 ha of degraded forest and agro-landscape by 2035 through planting of native species, economically important species and assisted natural regeneration.

Indicator: hectares restored, tree survival rate, species diversity in plantings.
Responsible: DPWM, Dept of Agriculture, Forestry Dept., Subnational actors, local communities.

GBF Alignment:

- Contribution to the Global Goals
  - GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained
  - GBF-G-B. Biodiversity is sustainably used, and its contributions to people are maintained, enhanced, or restored

- Alignment with global targets
  - GBF-T14. The multiple values of biodiversity are integrated into

T5.2 Increase area under climate-smart agroforestry by 35% in priority rural districts by 2035.

Indicator: hectares, number of farmers adopting.
Responsibility:

GBF Alignment:

- Contribution to the Global Goals
  - GBF-G-B. Biodiversity is sustainably used, and its contributions to people are maintained, enhanced, or restored
- Alignment with global targets
  - GBF-T14. The multiple values of biodiversity are integrated into decision-making at all levels

5.1.6 Thematic Area 6: Supports priorities: Food security, land degradation

T6.1 Conserve and promote 10 priority local crop/seed varieties and 5 local livestock breeds with community seed banks and in-situ conservation by 2035.

Indicator: number of varieties/breeds under active conservation; seed bank functionality.
Responsible: Dept of Agriculture (Livestock), Subnational actors, Research and Training Centres.

GBF Alignment:

- Contribution to the Global Goals
  - GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained
  - GBF-G-C. Benefits from the use of genetic resources are shared and substantially increased
- Alignment with global targets
  - GBF-T19. Financial resources increased to $200 billion per year, including $30 billion through international finance

T6.2 Reduce chemical pesticide use in smallholder systems by 25% by 2035 through Integrated Pest Management (IPM) and extension services.

Indicator: national pesticide import/use metrics; IPM adoption rates.
Responsible: NEA, Department of Agriculture, and GRA

GBF Alignment:

- Contribution to the Global Goals
  - GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained
  - GBF-G-B. Biodiversity is sustainably used, and its contributions to people are maintained, enhanced, or restored
- Alignment with global targets

- GBF-T07. Pollution reduced, halving nutrient loss and pesticide risk

5.1.7 Thematic Area 7: Invasive Species Management

T7.1 Develop and implement a national IAS strategy and achieve early detection & rapid response capacity in all coastal and riverine districts by 2027.

Indicator: IAS strategy adoption; number of districts with response teams.
Responsible: DPWM, NEA.

GBF Alignment:

- Contribution to the Global Goals
  - GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained
  - GBF-G-D. The biodiversity funding gap of 700 billion USD is progressively closed by ensuring adequate means of implementation are available.
- Alignment with global targets
  - GBF-T06. Reduce rates of introduction and establishment of invasive alien species by 50%.

T7.2 Reduce spread of the 3 highest-priority IAS by 60% (extent or incidence) in targeted landscapes by 2035.

Indicator: area/occurrence change per priority species.
Responsible: NARI, DPWM, Agriculture

GBF Alignment:

- Contribution to the Global Goals
  - GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained
- Alignment with global targets
  - GBF-T06. Reduce rates of introduction and establishment of invasive alien species by 50%.

5.1.8 Thematic Area 8: Pollution, waste & marine litter

T8.1 Reduce plastic and solid-waste inputs to the Gambia River and coastal waters by 50% from the 2025 baseline by 2035 through municipal waste improvements and bans/incentives.

Indicator: tons of waste entering waterways; beach litter surveys.
Responsible: NEA, Local Government, Subnational actors, NGOs.

GBF Alignment:

- Contribution to the Global Goals
  - GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained

        - GBF-G-B. Biodiversity is sustainably used, and its contributions to people are maintained, enhanced, or restored
    - Alignment with global targets
        - GBF-T07. Pollution reduced, halving nutrient loss and pesticide

T8.2 Ensure 100% of industrial dischargers in priority zones meet national effluent standards by 2035.

Indicator: % of dischargers compliant; incidents of illegal discharge.
Responsibility: NAWEC, City Council,

GBF Alignment:

- Contribution to the Global Goals
    - GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained
- Alignment with global targets
    - GBF-T07. Pollution reduced, halving nutrient loss and pesticide risk

5.1.9 Thematic Area 9: Climate Change Adaptation & Ecosystem-based Adaptation (EbA)

T9.1 Implement EbA measures in 100 coastal and flood-prone communities, reducing vulnerability scores by 35% by 2035.

Indicator: number of communities with EbA plans; change in vulnerability/resilience index.
Responsible: DPWM, Climate Change Secretariat, Forestry, local councils.

GBF Alignment:

- Contribution to the Global Goals
    - GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained
    - GBF-G-B. Biodiversity is sustainably used, and its contributions to people are maintained, enhanced, or restored
- Alignment with global targets
    - GBF-T08. Minimise impacts of climate change and ocean acidification, including through nature-based solutions and/or ecosystem-based solutions

T9.2 Quantify and increase blue/green carbon sequestration in restored landscapes by X $MtCO_2e$ (target to be defined by national carbon accounting) by 2035.

Indicator: tons of CO_2e sequestered; area restored.
Response: Carbon Trading Entities, DPWM, Forestry, and

GBF Alignment:

- Contribution to the Global Goals

- GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained
- GBF-G-B. Biodiversity is sustainably used, and its contributions to people are maintained, enhanced, or restored

5.1.10 Species Conservation (Threatened / Endemic Species)

T10.1 Improve conservation status of 10 nationally threatened species (terrestrial, freshwater, coastal) so that at least 5 show measurable population increases by 2035.

Indicator: population estimates, IUCN national red list trends.
Responsible: DPWM, universities, NGOs.

GBF Alignment:

- Contribution to the Global Goals
  - GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained
- Alignment with global targets
  - GBF-T04. Threatened species are recovering, genetic diversity is being maintained, and human-wildlife conflict is being managed

T10.2 Secure long-term community-based conservation agreements for *all key migratory bird staging sites* by *2035*.

Indicator: number of agreements, site condition.
Responsible: DPWM, Birdlife, Illegal Wildlife Trade (IWT), WIA, NGOs

GBF Alignment:

- Contribution to the Global Goals
  - GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained
  - GBF-G-D. The biodiversity funding gap of 700 billion USD is progressively closed by ensuring adequate means of implementation are available
- Alignment with global targets
  - GBF-T05. Use, harvesting, and trade of wild species are sustainable, safe, and legal

5.1.11 Thematic Area 11: Sustainable finance, governance & livelihoods

T11.1 Mobilise and secure an incremental $50 million per year (public + private + donor) for biodiversity actions by 2026 (baseline to be set) and consolidate the national biodiversity trust fund by 2035.

Indicator: annual finance flows to biodiversity; trust fund operational.

Responsible: Ministry of Finance, Environment, DPWM, Agriculture, Fisheries

GBF Alignment:

- Contribution to the Global Goals
  - GBF-G-D. The biodiversity funding gap of 700 billion USD is progressively closed by ensuring adequate means of implementation are available.
- Alignment with global targets
  - GBF-T19. Financial resources increased to $200 billion per year, including $ 30 billion through international finance.

T11.2 Ensure 50% of communities adjacent to Pas/OECMs have alternative livelihood programs (eco-enterprises, village banking, sustainable fisheries/agroforestry) benefiting at least 25,000 households by 2035.

Indicator: households participating and % income from sustainable sources.
Responsibility: DPWM, Agriculture, Local government, NGOs,

GBF Alignment:

- Contribution to the Global Goals
  - GBF-G-D. The biodiversity funding gap of 700 billion USD is progressively closed by ensuring adequate means of implementation are available.
- Alignment with global targets
  - GBF-T21. Data, information, and knowledge for decision-making are available

5.1.12 Thematic Area 12: Knowledge, monitoring, capacity building, and CNEA

T12.1 Establish a national biodiversity monitoring system with baseline data for *all major ecosystems* (coastal, mangrove, riverine, savannah) completed by *2026*, and annual reporting thereafter.

Indicator: datasets established; annual report produced.
Responsible: National Statistics Office, Environment Agency, universities.

GBF Alignment:

- Contribution to the Global Goals
  - GBF-G-B. Biodiversity is sustainably used, and its contributions to people are maintained, enhanced, or restored
  - GBF-G-D. The biodiversity funding gap of 700 billion USD is progressively closed by ensuring adequate means of implementation are available.
- Alignment with global targets
  - GBF-T10. Areas under agriculture, aquaculture, fisheries, and forestry

T12.2 Train *2,000 community rangers/extension agents* in biodiversity monitoring, sustainable resource management and enforcement by *2035*.

Indicator: number trained, retention, field deployments.
Responsibility:

GBF Alignment:

- Contribution to the Global Goals
  - GBF-G-D. The biodiversity funding gap of 700 billion USD is progressively closed by ensuring adequate means of implementation are available.
- Alignment with global targets
  - GBF-T20. Capacity-building and development, technology transfer, and technical and scientific cooperation for implementation are strengthened.

5.2 Mapping Targets to GBF & Gambian Priorities

The Gambia Biodiversity National Targets, derived from the Aichi targets and aligned with GBF was the guideline for actions of NBSAP 2026 – 2035 and for the future implementation of the convention in The Gambia. Biodiversity Targets are outlined under the 5 Strategic Goals of the Global Strategic Plan.

The reproduction of the aligned national prioritised biodiversity targets based on both the global and the national targets can be grouped into four main categories listed below and fully itemised in Table 1.

1. **Area-based protection & management targets (T1.x):** Feed into GBF's "30x30" global ambition and national PA priorities.
2. **Restoration, EbA & carbon targets (T2.1, T5.1, T9.2):** Align with GBF restoration, carbon, and resilience goals; support mangrove/forest priorities.
3. **Fisheries, pollution & livelihood targets (T3.x, T8.x, T11.2):** Address sustainable use, pollution reduction, and socio-economic GBF elements.
4. **Species, IAS, monitoring & finance targets (T7.x, T10.x, T12.x, T11.1):** Align with GBF goals on extinction risk reduction, preventing harmful species, knowledge/monitoring, and financial resource mobilisation.

Table 1: Mapping Aligned National Biodiversity Targets

National Targets	Contribution to the Global Goals	Alignment with global targets
Target 1.1: Protect and effectively manage 35% of The Gambia's terrestrial and marine ecosystems through a mix of protected areas and OECMs by 2035.	GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained	GBF-T03. 30% of areas are effectively conserved
Target 1.2: Achieve 50% of PA management effectiveness of 10 important PAs by 2035.	GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained	GBF-T14. The multiple values of biodiversity are integrated into decision-making at all levels

	GBF-G-D. The biodiversity funding gap of 700 billion USD is progressively closed by ensuring adequate means of implementation are available.	
Target 2.1: Restore and increase Gambian mangrove cover by 10% (area) from the 2025 baseline by 2035. Prioritising natural regeneration and community-based planting.	GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained through planting. GBF-G-B. Biodiversity is sustainably used, and its contributions to people are maintained, enhanced or restored	GBF-T14. The multiple values of biodiversity are integrated into decision-making at all levels
Target 2.2: Reduce disturbance at key turtle nesting sites so that documented nesting success increases by 40% by 2035 (relative to baseline).	GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained	GBF-T01. All areas are planned or managed to bring the loss of areas of high biodiversity importance close to zero
Target 3.1: Increase the proportion of fish stocks assessed as sustainable (within safe biological limits) to 70% by 2035.	GBF-G-B. Biodiversity is sustainably used, and its contributions to people are maintained, enhanced or restored	GBF-T03. 30% of areas are effectively conserved
Target 3.2: Establish and operationalise community-managed no-take zones/nurseries covering at least 15% of key estuary/mangrove nursery areas by 2035.	GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained GBF-G-B. Biodiversity is sustainably used, and its contributions to people are maintained, enhanced or restored	GBF-T03. 30% of areas are effectively conserved
Target 4.1: Maintain or improve the ecological condition of 80% of mapped high-value riverine wetlands by 2035 (condition index).	GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained GBF-G-B. Biodiversity is sustainably used, and its contributions to people are maintained, enhanced or restored	GBF-T02. 30% of degraded areas are under effective restoration
Target 4.2: Restore 5,000 ha of degraded riparian buffer by 2035 to reduce sediment load and support fish migration.	GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained GBF-G-B. Biodiversity is sustainably used, and its contributions to people are maintained, enhanced or restored	GBF-T14. The multiple values of biodiversity are integrated into decision-making at all levels
Target 5.1: Restore 10,000 ha of degraded forest and agro-landscape by 2030 through planting of native species, economically important species and assisted natural regeneration.	GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained	GBF-T14. The multiple values of biodiversity are integrated into decision-making at all levels
Target 5.2: Increase area under climate-smart agroforestry by 30% in priority rural districts by 2030.	GBF-G-B. Biodiversity is sustainably used, and its contributions to people are maintained, enhanced or restored	GBF-T14. The multiple values of biodiversity are integrated into decision-making at all levels
Target 6.1: Conserve and promote 10 priority local crop/seed varieties and 5 local livestock breeds with community seed banks and in-situ conservation by 2030	GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained GBF-G-C. Benefits from the use of genetic resources are shared and substantially increased	GBF-T19. Financial resources increased to $200 billion per year, including $30 billion through international finance

Target 6.2: Reduce chemical pesticide use in smallholder systems by 25% by 2035 through IPM and extension services	GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained GBF-G-B. Biodiversity is sustainably used, and its contributions to people are maintained, enhanced or restored	GBF-T07. Pollution reduced, halving nutrient loss and pesticide risk
Target 7.1: Develop and implement a national IAS strategy and achieve early detection & rapid response capacity in all coastal and riverine districts by 2035	GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained GBF-G-D. The biodiversity funding gap of 700 billion USD is progressively closed by ensuring adequate means of implementation are available	GBF-T06. Reduce rates of introduction and establishment of invasive alien species by 50%
Target 7.2: Reduce spread of the 3 highest-priority IAS by 60% (extent or incidence) in targeted landscapes by 2035	GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained GBF-T06. Reduce rates of introduction and establishment of invasive alien species by 50%	Target 8.1: Reduce plastic and solid-waste inputs to the Gambia River and coastal waters by 50% from the 2025 baseline by 2035 through municipal waste improvements and bans/incentives.
Target 8.1: Reduce plastic and solid-waste inputs to the Gambia River and coastal waters by 50% from the 2025 baseline by 2035 through municipal waste improvements and bans/incentives.	GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained GBF-G-B. Biodiversity is sustainably used, and its contributions to people are maintained, enhanced or restored	GBF-T07. Pollution reduced, halving nutrient loss and pesticide risk
Target 8.2: Ensure 100% of industrial dischargers in priority zones meet national effluent standards by 2035	GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained	GBF-T07. Pollution reduced, halving nutrient loss and pesticide risk
Target 9.1: Implement EbA measures in 100 coastal and flood-prone communities, reducing vulnerability scores by 30% by 2035.	GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained GBF-G-B. Biodiversity is sustainably used, and its contributions to people are maintained, enhanced or restored	GBF-T08. Minimise impacts of climate change and ocean acidification, including through nature-based solutions and/or ecosystem-based
Target 9.2: Quantify and increase blue/terrestrial carbon sequestration in restored landscapes by X $MtCO_2e$ (target to be defined by national carbon accounting) by 2035.	GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained GBF-G-B. Biodiversity is sustainably used, and its contributions to people are maintained, enhanced or restored	GBF-T08. Minimise impacts of climate change and ocean acidification, including through nature-based solutions and/or ecosystem-based approaches
Target 10.1: Improve conservation status of 10 nationally threatened species (terrestrial, freshwater, coastal) so that at least 5 show measurable population increases by 2035.	GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained	GBF-T04. Threatened species are recovering, genetic diversity is being maintained, and human-wildlife conflict is being managed
Target 10.2: Secure long-term community-based conservation agreements for all key migratory bird staging sites by 2035	GBF-G-A. Ecosystems are conserved, extinctions are halted, and genetic diversity is maintained GBF-G-D. The biodiversity funding gap of 700 billion USD is progressively closed by ensuring adequate means of implementation are available	GBF-T05. Use, harvesting and trade of wild species is sustainable, safe and legal

Target 11.1: Mobilise and secure an incremental $X million per year (public + private + donor) for biodiversity actions by 2026 (baseline to be set) and establish at least one national biodiversity trust fund by 2035	GBF-G-D. The biodiversity funding gap of 700 billion USD is progressively closed by ensuring adequate means of implementation are available.	GBF-T19. Financial resources increased to $200 billion per year, including $30 billion through international finance
Target 11.2: Ensure 50% of communities adjacent to PAs have alternative livelihood programmes (eco-enterprises, sustainable fisheries/agroforestry) benefiting at least 25,000 households by 2035.	GBF-G-B. Biodiversity is sustainably used, and its contributions to people are maintained, enhanced or restored GBF-G-D. The biodiversity funding gap of 700 billion USD is progressively closed by ensuring adequate means of implementation are available.	GBF-T10. Areas under agriculture, aquaculture, fisheries and forestry are managed sustainably
Target 12.1: Establish a national biodiversity monitoring system with baseline data for all major ecosystems (coastal, mangrove, riverine, savannah) completed by 2035, and annual reporting thereafter	GBF-G-D. The biodiversity funding gap of 700 billion USD is progressively closed by ensuring adequate means of implementation are available	GBF-T21. Data, information and knowledge for decision-making are available
Target 12.2: Train 2,000 community rangers/extension agents in biodiversity monitoring, sustainable resource management and enforcement by 2035.	GBF-G-D. The biodiversity funding gap of 700 billion USD is progressively closed by ensuring adequate means of implementation are available	GBF-T20. Capacity-building and development, technology transfer, and technical and scientific cooperation for implementation are strengthened

5.3 Implementation, Monitoring, and Reporting

The monitoring of NBSAP will be the responsibility of DPWM. For progress to be monitored and for an easier means to aggregate and compare outcomes from individual Ministries and projects, the following attributes will be measured at least three times during the lifespan of the project:

- changes in land use and forest cover, which can be measured on two key attributes:
    - greenness (use of NDVI for land cover changes) as a proxy indicator of biodiversity richness;
    - improved livelihoods of the forest fringe communities, measured through child nutrition surveys (QBS) as a proxy indicator for better livelihoods at household levels that can be attributable to improved land productivity; and
- Investments in the forestry and fishery sectors as indicated by amounts of co-financing that come into the sectors through other sources.

Broadly, the socio-ecological productive landscapes (agricultural, rangelands, and forests) with a vegetative cover greater than 10% of the land area are considered acceptable. This would be supported by increasing/expanding vegetation under effective landscape management practices, which can be measured through the number of natural regeneration areas established, hectares under Pas in a broad sense that aims at improved forest cover and biodiversity conservation. To help keep track of the changes in the biodiversity status of the country, an overall framework for the plan has been prepared to be used by DPWM to monitor changes.

The National Biodiversity Coordination Secretariat (NBCS) will be responsible for the coordination of all projects and activities under the NBSAP and will monitor the implementation through regular reporting by sector agencies, field visits, and peer review workshops. Each sector agency will supervise its own work plan, monitor performance, whether by project inputs and outputs or policy measures, and will report on progress and problems every quarter during project coordination meetings, either online or during project visits. The reporting format would be developed by NBCS for the sector agencies. The NBCS will analyse and consolidate the reports as a routine function and provide feedback to the sector agencies and partners annually.

Overall Monitoring Results Framework

In order to ensure effective monitoring and reporting on the NBSAP, the overall results framework has been developed. The framework gives clear guidance on the indicators, which can be used to monitor the implementation of the programme and to review the plan. The general results framework for the plan is summarised in Table 2.

Table 2: General results framework for the NBSAP

Thematic Area (TA)	National Targets	Key Indicators	Baseline	Means of Verification	Timeframe	Indicative Budget	Lead Agency & Partners
TA1: Protected areas & OECMs (Other Effective area-based Conservation Measures)	Target 1.1: Protect and effectively manage 35% of The Gambia's terrestrial and marine ecosystems through a mix of protected areas and OECMs by 2035.	% of national territory under PA/OECM with documented management effectiveness		Gazettes, Reports	2026 - 2035		Department of Parks & Wildlife / DoF / Subnational actors
	Target 1.2: Achieve 50% of PA management effectiveness of 10 important PAs by 2035.	% PAs meeting minimum IMET score		Management plans, Reports	2026 - 2035		DPWMs, PA Committees, NGOs
TA 2: Coastal & marine (mangroves, turtle nesting, beaches	Target 2.1: Restore and increase Gambian mangrove cover by 10% (area) from the 2025 baseline by 2035. Prioritising natural regeneration and community-based planting.	hectares of mangrove restored/expanded; canopy cover change.		Reports	2026 - 2035		DPWM, Forestry Dept., Fisheries Department, NGOs, coastal communities
	Target 2.2: Reduce disturbance at key turtle nesting sites so that documented nesting success increases by 40% by	number of nests, hatching success rate, beach disturbance incidents		Reports	2026 - 2035		DPWM, NGOs, local communities, tourism authorities

	2035 (relative to baseline).						
Thematic Area 3: Fisheries & sustainable aquaculture	Target 3.1: Increase the proportion of fish stocks assessed as sustainable (within safe biological limits) to 70% by 2035.	% of commercially important stocks with sustainable status and bycatch reduction measures in no-take zones.		Reports	2026 - 2035		Fisheries Dept., DPWM, research institutes, Fisherfolk Committees
	Target 3.2: Establish and operationalise community-managed no-take zones/nurseries covering at least 15% of key estuary/mangrove nursery areas by 2035.	hectares under no-take, compliance records, catch-per-unit-effort (CPUE) change		Plans, Reports	2026 - 2035		DPWM, Department of Fisheries, Local Communities , Subnational Actors
Thematic Area 4: Wetlands & riverine systems	Target 4.1: Maintain or improve the ecological condition of 80% of mapped high-value riverine wetlands by 2035 (condition index).	wetland condition index (hydrology, vegetation, species)		Plans, Reports	2026 - 2035		Water Resources, DPWM, Forestry, local governments, NGOs
	Target 4.2: Restore 5,000 ha of degraded riparian buffer by 2035 to reduce sediment load and support fish migration.	hectares restored, sediment measurements, fish passage indicators		Reports	2026 - 2035		DPWM, Dept. Of Forestry, NGOs, Local Government, and local actors
Thematic Area 5: Forests & landscape restoration (incl. agroforestry)	Target 5.1: Restore 10,000 ha of degraded forest and agro-landscape by 2030 through planting of native species, economically important species, and assisted natural regeneration.	hectares restored, tree survival rate, species diversity in plantings		Reports	2026 – 2030		DPWM, Dept of Agriculture, Forestry Dept., Subnational actors, local communities
	Target 5.2: Increase area under climate-smart agroforestry by 30% in priority rural districts by 2030.	hectares, number of farmers adopting		Reports	2026 - 2030		
Thematic Area 6: Supports priorities: Food	Target 6.1: Conserve and promote 10 priority local crop/seed varieties and 5 local livestock	number of varieties/breeds under active conservation;		Reports	2026 - 2035		Dept of Agriculture (Livestock), Subnational

security, land degradation	breeds with community seed banks and in situ conservation by 2035	seed bank functionality					actors, Research and Training Centres.
	Target 6.2: Reduce chemical pesticide use in smallholder systems by 25% by 2035 through IPM and extension services	national pesticide import/use metrics; IPM adoption rates		Reports	2026 - 2035		NEA, Department of Agriculture, and GRA
Thematic Area 7: Invasive Species Management	Target 7.1: Develop and implement a national IAS strategy and achieve early detection & rapid response capacity in all coastal and riverine districts by 2035	IAS strategy adoption; number of districts with response teams		Reports	2026 - 2035		DPWM, NEA
	Target 7.2: Reduce spread of the 3 highest-priority IAS by 60% (extent or incidence) in targeted landscapes by 2035	: area/occurrence change per priority species.		Reports	2026 - 2035		NARI, DPWM, Agriculture
Thematic Area 8: Pollution, waste & marine litter	Target 8.1: Reduce plastic and solid-waste inputs to the Gambia River and coastal waters by 50% from the 2025 baseline by 2035 through municipal waste improvements and bans/incentives.	: tons of waste entering waterways; beach litter surveys		Reports	2026 - 2035		NEA, Local Government, Subnational actors, NGOs
	Target 8.2: Ensure 100% of industrial dischargers in priority zones meet national effluent standards by 2035	% of dischargers complain; incidents of illegal discharge		Reports	2026 - 2035		NAWEC, City Council
Thematic Area 9: Climate Change Adaptation & Ecosystem-based	Target 9.1: Implement EbA measures in 100 coastal and flood-prone communities, reducing vulnerability scores by 30% by 2035.	Number of communities with EbA plans; change in vulnerability/resilience index.		Plans, Reports	2026 – 2035		DPWM, Climate Change Secretariat, Forestry, local councils

Adaptation (EbA)	Target 9.2: Quantify and increase blue/terrestrial carbon sequestration in restored landscapes by X $MtCO_2e$ (target to be defined by national carbon accounting) by 2035.	tons CO_2e sequestered; area restored		Reports	2026 - 2035		tons CO_2e sequestered; area restored
TA: Species Conservation (Threatened / Endemic Species)	Target 10.1: Improve conservation status of 10 nationally threatened species (terrestrial, freshwater, coastal) so that at least 5 show measurable population increases by 2035.	population estimates, IUCN national red list trends		Reports	2026 - 2035		DPWM, universities, NGOs
	Target 10.2: Secure long-term community-based conservation agreements for all key migratory bird staging sites by 2035	number of agreements, site condition		Agreements, Reports	2026 - 2035		DPWM, Birdlife, IWT, WIA, NGOs
Thematic Area 11: Sustainable finance, governance & livelihoods	Target 11.1: Mobilise and secure an incremental $X million per year (public + private + donor) for biodiversity actions by 2026 (baseline to be set) and establish at least one national biodiversity trust fund by 2035	annual finance flows to biodiversity; trust fund operational		Reports	2026 - 2035		Ministry of Finance, Environment, DPWM, Agriculture, Fisheries
	Target 11.2: Ensure 50% of communities adjacent to PAs have alternative livelihood programmes (eco-enterprises, sustainable fisheries/agroforestry) benefiting at least 25,000 households by 2035.	households participating and % income from sustainable sources		Reports	2026 - 2035		DPWM, Agriculture, Local government, NGOs
Thematic Area 12: Knowledge, monitoring, capacity	Target 12.1: Establish a national biodiversity monitoring system with baseline data for all major ecosystems (coastal, mangrove,	datasets established; annual report produced		Reports	2026 - 2035		National Statistics Office, Environment Agency, universities

building & CNEA	riverine, savannah) completed by 2035, and annual reporting thereafter						
	Target 12.2: Train 2,000 community rangers/extension agents in biodiversity monitoring, sustainable resource management and enforcement by 2035.	number trained, retention, field deployments		Reports	2026 - 2035		National Statistics Office, Environment Agency, universities

Chapter 6: Objectives of the NBSAP (2025-2035)

This Strategy and Action Plan (2025-2035) is a roadmap to addressing The Gambia's wildlife management and Conservation needs. Building broad consultations, including with regions, local communities, academia, youth, and the private sector, the Strategy highlights a set of five (5) key goals for conservation and natural resource management success. These goals, and their associated strategies, inputs, and activities, are designed to catalyse and consolidate our collective efforts to move us from our current state and downward trajectory to our desired state where wildlife and biodiversity are healthy, resilient, and valued by all.

The Theory of Change (ToC) for The Gambia's National Biodiversity Strategy and Action Plan (2025–2035) establishes a structured framework that connects strategic interventions to desired long-term biodiversity outcomes. By outlining the causal pathways from inputs and activities to outputs, outcomes, and ultimate impact, the ToC ensures that actions taken across ecosystems, species, and governance levels lead to measurable, tangible results in biodiversity conservation and sustainable development.

6.1 Strategic Objectives

To find solutions to improve biodiversity management in The Gambia as well as to ensure the sustainability of ecological integrity of ecosystems and ecosystem resources, the NBSAP must be committed to the attainment of the following five strategic objectives with corresponding six actions, both discussed below.

1. Mainstreaming Biodiversity

Mainstreaming biodiversity involves integrating its values and conservation priorities into national policies, development planning, and sectoral strategies such as agriculture, fisheries, forestry, tourism, and infrastructure. By embedding biodiversity considerations into decision-making processes, The Gambia can reduce unintended negative impacts on ecosystems, promote cross-sectoral coordination, and enhance the sustainability of development interventions.

2. Conservation and Restoration

This objective focuses on enhancing the protection and restoration of critical ecosystems, species, and genetic diversity and includes wildlife populations and ecological interactions that support ecosystem functioning, climate mitigation, and resilience. Key activities include establishing and strengthening protected areas, restoring degraded habitats (mangroves, wetlands, savannahs, and

riverine corridors), and implementing targeted species recovery programmes. These efforts aim to halt biodiversity loss, improve ecosystem resilience, and maintain ecological functions that underpin livelihoods and climate adaptation.

3. Sustainable Use

Sustainable use emphasises responsible management of natural resources to ensure that harvesting, fishing, grazing, and forestry practices do not compromise the long-term viability of ecosystems or species populations. Measures include community-based resource management, adoption of sustainable agricultural and fishing techniques, and promotion of alternative livelihoods that reduce pressure on biodiversity resources, applying the One Health implications.

4. Equitable Benefit Sharing

Equitable benefit sharing seeks to ensure that the benefits derived from biodiversity contribute directly to poverty reduction, social inclusion, and community well-being. This includes access to ecosystem services, revenue from eco-tourism, sustainable fisheries, forest products, and participation in decision-making. By linking conservation with livelihoods, the NBSAP strengthens incentives for local communities to protect biodiversity.

5. Capacity Building and Awareness

This objective targets the enhancement of institutional, technical, and human capacity across national and local levels. Activities include training for government agencies, local authorities, and community organisations, development of monitoring and reporting systems, public awareness campaigns, and knowledge-sharing platforms. Strengthening institutional and societal capacity ensures that governance frameworks are effective, adaptive, and capable of supporting long-term biodiversity goals.

6.2 Actions

In summary, the ToC provides a roadmap in which strategic objectives are operationalised through targeted interventions, producing outputs and outcomes that collectively achieve the overarching goal: resilient ecosystems, thriving species populations, sustainable use of resources, and inclusive benefits for all Gambians. This framework ensures that the NBSAP is not only a policy document but also a practical guide for measurable impact on biodiversity and human well-being.

The Gambia's NBSAP 2025–2035 translates strategic objectives into concrete interventions and activities designed to generate measurable outcomes for biodiversity conservation, sustainable use, and community well-being. These actions are structured to address threats, strengthen governance, and ensure the long-term resilience of ecosystems and species.

1. Implement Policies and Regulations Promoting Biodiversity

Developing and operationalising policies across sectors ensures that biodiversity considerations are integrated into national and local decision-making. Activities include mainstreaming biodiversity into agriculture, fisheries, forestry, infrastructure, and urban planning, as well as providing guidance to public and private stakeholders on environmentally sustainable practices.

2. Develop and Enforce Legal Frameworks for Biodiversity Protection

Strong legal instruments are critical for effective conservation. This includes updating wildlife protection laws, regulating habitat use, enforcing environmental impact assessments, and establishing mechanisms to prevent illegal exploitation of natural resources. Enforcement is complemented by capacity building for relevant agencies and public awareness campaigns to enhance compliance.

3. Establish and Manage Protected Areas and Corridors

Protected areas and ecological corridors are essential for maintaining biodiversity and ecosystem services. Activities include the designation of new reserves, restoration of degraded sites, strengthening management effectiveness of existing protected areas, and creating connectivity between habitats to support species migration, genetic flow, and ecosystem resilience.

4. Promote Community-Based Conservation and Sustainable Livelihoods

Local communities are central to successful conservation. Initiatives focus on participatory management of forests, wetlands, and fisheries; development of alternative livelihoods (eco-tourism, sustainable aquaculture, agroforestry); and benefit-sharing schemes that incentivise conservation while supporting poverty reduction.

5. Enhance Biodiversity Monitoring and Data Systems

Reliable data is fundamental for adaptive management. Activities include establishing standardised monitoring protocols, implementing national biodiversity databases, conducting population and habitat assessments, and tracking progress toward national and global biodiversity targets. Integrating traditional ecological knowledge alongside scientific monitoring strengthens the evidence base for decision-making.

6. Foster Partnerships with NGOs, the Private Sector, and International Organisations

Collaboration expands technical, financial, and institutional capacity. Partnerships with non-governmental organisations, private enterprises, regional bodies, and international conservation programmes facilitate knowledge exchange, co-financing of projects, innovation in sustainable resource use, and alignment with global biodiversity frameworks.

Together, these interventions provide a comprehensive approach that links policy, legal frameworks, community engagement, ecosystem management, and partnerships. They form the

operational backbone of The Gambia's NBSAP 2025–2035, ensuring that strategic objectives translate into tangible, measurable improvements in biodiversity conservation and sustainable development.

6.3 Assumptions and Risks

The successful implementation of The Gambia's NBSAP 2025–2035 depends on several key assumptions and is influenced by potential risks that could affect outcomes. Understanding these factors is essential for adaptive management and ensuring that strategic objectives are achievable.

1. Political Commitment and Continuity in Governance

Sustained political will and policy continuity are critical for long-term biodiversity initiatives. Changes in government priorities or political instability could undermine conservation programmes, weaken enforcement of regulations, and disrupt implementation of the NBSAP.

2. Availability of Financial Resources

Adequate funding from national budgets, donor support, and private sector contributions is assumed for effective implementation. Insufficient financial resources could limit the establishment and management of protected areas, restoration projects, monitoring systems, and community engagement initiatives.

3. Effective Coordination among Stakeholders

The NBSAP relies on coordinated efforts among government agencies, local authorities, civil society, researchers, and international partners. Weak inter-agency collaboration or lack of alignment in priorities could reduce efficiency, create overlaps, or leave critical gaps in conservation action.

4. Public Participation in Conservation Efforts

Community engagement and public support are foundational to sustainable biodiversity management. Limited awareness, low participation, or resistance from local communities could reduce the effectiveness of protected area management, sustainable livelihood programmes, and habitat restoration initiatives.

5. Mitigation of Conflicts between Development and Biodiversity Conservation

Biodiversity objectives may occasionally conflict with infrastructure, agricultural, or urban development projects. The NBSAP assumes that environmental impact assessments, planning regulations, and stakeholder negotiations will effectively mitigate such conflicts. Failure to balance development and conservation could result in habitat loss, species declines, and social tensions.

In summary, the NBSAP's success depends on a combination of enabling conditions, including political will, financing, stakeholder coordination, and public engagement, while carefully managing risks associated with development pressures and resource constraints. Recognising these assumptions and risks allows for proactive measures to ensure the plan's objectives are achievable and sustainable over the 2025–2035 period.

6.4 Outcomes and Impacts

The implementation of The Gambia's NBSAP 2025–2035 is expected to generate measurable outcomes and long-term impacts that collectively contribute to biodiversity conservation, sustainable development, and climate resilience.

1. Improved Biodiversity Status

Through the protection and restoration of critical habitats, effective management of species, and reduction of direct threats, populations of threatened and endemic species are expected to recover. Ecosystems such as mangroves, wetlands, savannahs, and riverine corridors will be rehabilitated, enhancing ecological integrity and supporting long-term resilience against environmental pressures.

2. Enhanced Ecosystem Services

Healthy and well-managed ecosystems will continue to provide essential services, including water purification, soil fertility, flood regulation, carbon storage, and climate moderation. These services underpin agriculture, fisheries, and overall human well-being, ensuring that ecosystems remain productive and resilient in the face of climate variability.

3. Increased Community Resilience to Environmental Changes

By promoting sustainable livelihoods, participatory conservation, and awareness-raising programmes, local communities will be better equipped to adapt to environmental shocks, such as droughts, flooding, and coastal erosion. Communities will have diversified income sources linked to biodiversity-friendly activities, reducing vulnerability and dependence on overexploited natural resources.

4. Sustainable Economic Development through Biodiversity Utilisation

NBSAP encourages responsible use of natural resources, linking conservation with economic opportunities. Sustainable fisheries, eco-tourism, agroforestry, and non-timber forest product enterprises will generate income while maintaining ecological integrity, contributing to poverty reduction and equitable benefit-sharing.

5. Strengthened National and Local Capacities for Biodiversity Governance

Improved institutional coordination, legal frameworks, technical expertise, and monitoring systems will enhance the capacity of government agencies, local authorities, and community

organisations to manage biodiversity effectively. Strengthened governance ensures adaptive management, accountability, and integration of biodiversity considerations into sectoral and national development planning.

In combination, these outcomes and impacts create a pathway toward a resilient and thriving biodiversity in The Gambia, where ecosystems sustain livelihoods, support climate adaptation, and contribute to national development goals while fulfilling international biodiversity commitments.

Chapter 7: Policy, Legal, and Institutional Framework

The Gambia has developed a relatively comprehensive framework of policies, laws, and institutions to support biodiversity conservation, sustainable resource management, and environmental protection. These frameworks encompass sectors such as forestry, fisheries, wildlife, wetlands, agriculture, climate change, and pollution control, and are further reinforced by regional and international commitments. Collectively, they provide the structural and regulatory basis for implementing the National Biodiversity Strategy and Action Plan (NBSAP) 2025–2035.

1. Policy Frameworks

The Gambia's environmental policies set national priorities for biodiversity conservation, sustainable resource use, and ecosystem restoration. Key policies address forest management, fisheries sustainability, wetland protection, climate adaptation, and pollution control. These policies serve as guiding instruments for integrating biodiversity considerations into sectoral planning, development programmes, and local governance.

2. Legal Frameworks

A range of legislation underpins biodiversity governance in The Gambia. Wildlife, forest, fisheries, and environmental protection acts provide authority for habitat protection, species conservation, and natural resource regulation. Environmental impact assessments and land-use regulations guide development projects to minimise ecological degradation. Legal instruments also define the establishment and management of protected areas, community forests, and ecological corridors.

3. Institutional Arrangements

Implementation of biodiversity policies and laws is coordinated across multiple institutions. Key agencies include the Department of Parks and Wildlife Management (DPWM), the Forestry Department, the Fisheries Department, the Department of Agriculture, and local government structures. These institutions collaborate with civil society organisations, research institutions, and development partners to deliver conservation programmes, enforce regulations, and promote community engagement. Inter-agency coordination mechanisms aim to ensure alignment of strategies and avoid overlaps in management responsibilities.

4. Regional and International Commitments

The Gambia is party to several multilateral environmental agreements, including the Convention on Biological Diversity (CBD) and the two other sister conventions, the Ramsar Convention on Wetlands, the Convention on International Trade in Endangered Species of Wild Fauna and Flora

(CITES), and regional frameworks such as the West African Biodiversity and Climate Change initiatives. These commitments guide national biodiversity priorities, provide access to technical and financial support, and reinforce compliance with global conservation standards.

Key Challenges to Policy Implementation

Despite a strong policy and legal foundation, implementation is constrained by enforcement gaps, limited financial resources, weak institutional capacity, and insufficient coordination among agencies. These challenges hinder effective protection of ecosystems, sustainable resource use, and integration of biodiversity into development planning. Addressing these constraints is essential to achieving the objectives of NBSAP and ensuring long-term ecological and socio-economic benefits.

7.1 National Policies

In summary, The Gambia's policy, legal, and institutional frameworks provide a solid foundation for biodiversity governance. Strengthening enforcement, improving coordination, and mobilising resources are critical to translating these frameworks into tangible conservation outcomes, ecosystem restoration, and sustainable development.

7.1.1 Environment and Biodiversity

The Gambia has established key national policies that provide the backbone for environmental governance, biodiversity conservation, and sustainable development. These policies create legal and strategic guidance for managing natural resources, integrating biodiversity into sectoral planning, and promoting climate resilience.

National Environment Management Act (NEMA, 1994)

The NEMA serves as the primary legal foundation for environmental governance in The Gambia. It outlines the responsibilities of government institutions in managing natural resources, regulating environmental impacts, and enforcing compliance. Key provisions include the requirement for Environmental Impact Assessments (EIAs) for development projects, pollution control measures, and mechanisms for public participation in environmental decision-making. By setting clear legal obligations, NEMA establishes the framework for sustainable resource management and biodiversity protection.

National Environment Policy (NEP, 2017–2025)

The NEP provides a strategic roadmap for achieving sustainable development and environmental stewardship. It emphasises sustainable land use, conservation of biological diversity, and integration of climate resilience into national planning. The policy prioritises the protection of forests, wetlands, coastal zones, and riverine ecosystems, and promotes ecosystem restoration, sustainable agriculture, and community-based natural resource management. By guiding sectoral policies and development planning, the NEP supports the implementation of The Gambia's NBSAP and aligns national efforts with global environmental commitments.

Together, NEMA and the NEP form a strong policy foundation for environmental governance and biodiversity conservation in The Gambia. They ensure that ecosystem protection, sustainable resource use, and climate adaptation are systematically integrated into planning, enforcement, and development initiatives across the country.

7.1.2 Wildlife and Forestry

The Gambia's wildlife and forestry policies form a critical component of its biodiversity governance framework, providing legal and strategic guidance for the protection, sustainable management, and restoration of terrestrial and forest ecosystems. These policies regulate species conservation, habitat protection, and community-based resource management, while aligning national priorities with international conventions.

Biodiversity Wildlife Act (1977, amended 2003)

The Biodiversity and Wildlife Act is the cornerstone of wildlife conservation in The Gambia. It establishes the legal basis for creating and managing protected areas, regulating hunting, and conserving threatened species. The Act has been amended to align with international conventions, including the Convention on Biological Diversity (CBD) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). By providing clear mechanisms for enforcement and penalties, the Act supports the sustainable use and protection of the country's rich wildlife resources.

Forest Act (1998, amended 2018)

The Forestry Act governs the management, conservation, and utilisation of forest resources in The Gambia. It regulates sustainable utilisation, reforestation, afforestation, and the development of community forests. The Act promotes participatory forest management, enabling local communities to benefit from forest resources while ensuring ecosystem integrity. It also establishes frameworks for protecting high-value tree species, maintaining carbon stocks, and enhancing ecosystem services such as watershed protection and soil fertility.

Land Use Policy (2010, under revision)

The Land Use Policy guides the allocation and management of land for various purposes, including agriculture, forestry, urban development, and conservation. Its objective is to promote sustainable land use, reduce conflicts between development and biodiversity conservation, and support ecosystem restoration initiatives. Currently under revision, the policy aims to strengthen integration between land management, biodiversity protection, and climate adaptation strategies.

Together, the above policies create a comprehensive framework for wildlife and forest management in The Gambia. They enable the protection of biodiversity, the sustainable use of natural resources, and the involvement of local communities in conservation, which are all critical to achieving the objectives of the 2025–2035 NBSAP.

7.1.3 Fisheries and Coastal Management

The Gambia's fisheries and coastal management framework is a vital component of its biodiversity governance, reflecting the country's reliance on aquatic and marine resources for food security, livelihoods, and economic development. Policies and legal instruments in this sector aim to ensure sustainable use of fisheries, protect coastal ecosystems, and enhance resilience to climate change and human pressures.

Fisheries Act (2007) & Regulations (2008)

The Fisheries Act provides the legal basis for regulating marine, estuarine, and freshwater fisheries in The Gambia. It establishes licensing systems, enforcement mechanisms, and penalties for illegal fishing practices. The accompanying regulations of 2008 further detail measures to promote sustainable fisheries, including gear restrictions, seasonal closures, and monitoring of fish stocks. Together, these instruments aim to balance resource use with conservation objectives, preventing overexploitation and protecting critical nursery habitats in rivers, estuaries, and coastal zones.

National Fisheries Policy (2012–2020)

The National Fisheries Policy outlines strategic priorities for sustainable fisheries management, livelihoods enhancement, and aquaculture development. It emphasizes the importance of participatory management, particularly the engagement of artisanal fishers, women, and local communities. The policy promotes value addition in the fisheries sector, supports income diversification, and encourages sustainable aquaculture practices to reduce pressure on wild stocks. By aligning with national development objectives, the policy strengthens the role of fisheries in food security and poverty alleviation.

Integrated Coastal and Marine Resources Management Strategy (2010)

This strategy provides a holistic approach to managing The Gambia's 80 km coastline and associated marine ecosystems. It addresses coastal erosion, mangrove degradation, estuarine health, and habitat conservation while integrating climate adaptation measures. The strategy emphasizes ecosystem-based management, combining conservation, sustainable livelihoods, and climate resilience to maintain the ecological integrity of coastal and marine resources.

Collectively, these policies and strategies establish a comprehensive governance framework for fisheries and coastal management in The Gambia. They support sustainable resource use, protect biodiversity-rich habitats such as mangroves, estuaries, and seagrass beds, and promote socio-economic benefits for coastal communities, thereby reinforcing the objectives of the 2025–2035 NBSAP.

7.1.4 Climate Change and Resilience

The Gambia has developed a comprehensive policy and strategic framework to address climate change and enhance resilience, recognizing the interconnections between climate impacts, biodiversity, and sustainable development. These instruments integrate mitigation, adaptation, and

ecosystem-based approaches to strengthen the country's ability to cope with current and future climate challenges.

National Climate Change Policy (2016) & Climate Change Strategy & Action Plan (2017–2030)

The National Climate Change Policy provides overarching guidance for climate action in The Gambia, outlining priorities for both adaptation and mitigation. It emphasises the use of ecosystem-based solutions, including wetland and mangrove conservation, reforestation, and sustainable land management, as key strategies for climate resilience. The Climate Change Strategy and Action Plan operationalises the policy, setting sector-specific targets, implementation measures, and timelines for reducing vulnerability, enhancing adaptive capacity, and integrating climate considerations into national development planning.

Nationally Determined Contribution (NDC, 2021)

The Gambia's updated NDC (NDC II) highlights the country's commitment to global climate action under the Paris Agreement. It emphasises forest and mangrove restoration, sustainable agriculture practices, and the expansion of renewable energy as key mitigation and adaptation measures. These actions directly support biodiversity conservation by maintaining habitat integrity, enhancing carbon sequestration, and reducing ecosystem degradation, while also contributing to national development goals such as food security, energy access, and poverty reduction.

Together, the frameworks demonstrate The Gambia's integrated approach to climate change and resilience, linking environmental conservation with socio-economic development. By embedding ecosystem-based strategies within climate action, the country strengthens both biodiversity protection and community resilience, aligning national climate objectives with the strategic goals of the 2025–2035 NBSAP.

7.1.5 Agriculture and Land Use

Agriculture and land use policies in The Gambia play a pivotal role in shaping the country's biodiversity outcomes, as the majority of the population depends on farming and natural resources for livelihoods. Recognising the impacts of land degradation, unsustainable farming practices, and climate variability, the government has established policies and plans that integrate conservation, productivity, and resilience objectives.

Agriculture and Natural Resources (ANR) Policy (2017–2026)

The ANR Policy provides a strategic framework for sustainable agriculture, emphasising agroforestry, conservation agriculture, and the sustainable management of soil, water, and forest resources. By promoting the integration of trees into croplands and livestock systems, the policy enhances soil fertility, reduces erosion, provides habitat for wildlife, and contributes to carbon sequestration. Conservation agriculture techniques, including minimum tillage, crop rotation, and organic fertilisation, are encouraged to improve land productivity while maintaining ecological integrity.

National Action Plan to Combat Desertification (2015–2025)

Aligned with the United Nations Convention to Combat Desertification (UNCCD), this action plan targets land degradation and the process of desertification, particularly in the northern and eastern regions prone to erosion and declining fertility. It advocates for climate-smart agricultural practices, reforestation, and sustainable grazing management to restore degraded lands and protect biodiversity. The plan also integrates community participation and capacity building, ensuring that local farmers adopt sustainable practices that simultaneously enhance livelihoods and safeguard ecosystems.

Together, the agricultural and land use frameworks link sustainable resource management with biodiversity conservation. By embedding environmental stewardship within farming and land management practices, The Gambia aims to maintain productive landscapes, reduce habitat loss, and contribute to the broader objectives of the 2025–2035 NBSAP.

7.1.6 Waste and Pollution

Effective waste and pollution management is critical for protecting The Gambia's terrestrial, freshwater, and coastal ecosystems. Recognising the growing pressures from urbanisation, industrial activities, and agricultural intensification, the government has developed regulatory frameworks to prevent environmental contamination, safeguard human health, and maintain ecosystem integrity.

National Waste Management Bill (Draft 2020)

The National Waste Management Bill provides the legal foundation for managing solid waste, promoting recycling, and controlling marine litter. It establishes responsibilities for waste collection, treatment, and disposal, and encourages sustainable practices such as segregation, composting, and reuse. The bill also addresses the growing threat of plastics and marine debris, which negatively affect coastal habitats, fisheries, and tourism. By providing a comprehensive framework for waste management, the bill supports biodiversity protection and environmental sustainability.

Chemicals and Pesticides Policy

The Chemicals and Pesticides Policy regulates the use, storage, and disposal of agrochemicals and industrial pollutants. It seeks to minimise contamination of soils, rivers, and wetlands from toxic substances, ensuring that agricultural productivity does not come at the expense of ecosystem health. The policy also promotes safer alternatives and integrated pest management approaches, thereby reducing chemical dependency and protecting both biodiversity and human health.

Together, these frameworks aim to reduce the environmental footprint of waste and chemicals while supporting sustainable development. By controlling pollution and promoting responsible waste management, The Gambia will strengthen the resilience of its ecosystems and align with the objectives of the 2025–2035 NBSAP.

7.1.7 Cross-cutting

Biodiversity conservation in The Gambia is further reinforced through cross-cutting policies that integrate environmental considerations into broader development and economic planning. These policies recognise that sustainable development, tourism, and economic growth are interdependent with healthy ecosystems.

National Development Plan (NDP) (2018–2021)

The National Development Plan (NDP) provides a holistic framework for socio-economic growth while emphasising environmental sustainability. It integrates biodiversity conservation into national and sectoral development strategies, ensuring that infrastructure, agriculture, and industrial expansion do not compromise critical ecosystems. By embedding environmental considerations into planning and investment decisions, the plan promotes climate resilience, sustainable land use, and the protection of natural resources that underpin livelihoods.

Tourism Policy & Master Plan (2020–2030)

The Tourism Policy and Master Plan recognises the potential of eco-tourism as both a driver of economic development and a tool for biodiversity conservation. By promoting nature-based tourism, community participation, and sustainable management of protected areas, the plan incentivises the preservation of forests, wetlands, mangroves, and wildlife. Tourism revenue is leveraged to support conservation programs, enhance local livelihoods, and raise public awareness about the value of biodiversity.

Together, the cross-cutting policies ensure that biodiversity is mainstreamed across development sectors. They create synergies between conservation, economic growth, and social well-being, supporting the objectives of the 2025–2035 NBSAP and fostering a sustainable, biodiversity-inclusive national development trajectory.

7.2 Regional & Global Commitments

The Gambia's biodiversity and environmental governance are strongly anchored in its participation in international and regional agreements, which provide guidance, standards, and frameworks for conservation, sustainable use, and climate action. The commitments ensure that national policies are aligned with global environmental priorities and facilitate access to technical and financial support.

Convention on Biological Diversity (CBD, 1994)

As a signatory to the CBD, The Gambia is obligated to develop and implement a National Biodiversity Strategy and Action Plan (NBSAP), establish and manage protected areas, promote sustainable use of biological resources, and ensure the fair and equitable sharing of benefits derived from genetic resources. The commitment underpins all national biodiversity planning and informs sectoral policies on agriculture, forestry, fisheries, and tourism.

United Nations Framework Convention on Climate Change (UNFCCC, 1994)

Through the UNFCCC, The Gambia participates in global climate action, including the formulation of Nationally Determined Contributions (NDCs) and strategies for greenhouse gas reduction, climate adaptation, and resilience-building. Integrating climate considerations into biodiversity management ensures that ecosystem-based adaptation approaches protect both livelihoods and ecological integrity.

Ramsar Convention on Wetlands (1996)

The Gambia's designation of key wetlands, including the Tanbi Wetland Complex and Bao Bolong, under the Ramsar Convention highlights its commitment to the conservation and sustainable use of wetland ecosystems. Ramsar guidance informs national wetland management, biodiversity monitoring, and sustainable resource use practices.

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES, 1977)

Through CITES, the Gambia regulates the international trade of endangered species, ensuring that trade does not threaten the survival of wild populations. This framework supports wildlife conservation, particularly for species vulnerable to overexploitation and illegal trade.

Convention on the Conservation of Migratory Species of Wild Animals (CMS, 1998)

CMS membership emphasises the protection of migratory species and fosters regional cooperation across West Africa. This is particularly relevant for the management of birds, marine turtles, and aquatic mammals that cross national boundaries, ensuring coordinated conservation measures and habitat protection across the species' migratory ranges.

Collectively, the regional and global commitments provide a foundation for The Gambia's biodiversity and climate policies, guiding legal frameworks, management practices, and strategic planning. They also enhance national capacity to meet international obligations, attract technical and financial support, and promote transboundary cooperation for the sustainable use and conservation of biodiversity.

7.3 Institutional Framework

The Gambia's biodiversity governance relies on a network of institutions with complementary roles across policy, regulation, management, and community engagement. These institutions collectively implement national biodiversity priorities, coordinate conservation initiatives, and ensure compliance with national and international commitments.

Department of Parks and Wildlife Management (DPWM)

As the lead national agency for biodiversity, DPWM serves as the focal point for the CBD and other international conventions. Its responsibilities include the management of protected areas, species conservation programs, wildlife monitoring, and enforcement of regulations. DPWM also coordinates research, capacity-building initiatives, and public awareness campaigns to strengthen biodiversity governance at all levels.

Fisheries Department

The Fisheries Department oversees sustainable management of marine and freshwater fisheries, ensuring compliance with national regulations and regional agreements. It monitors fish stocks, regulates fishing activities, promotes community-based co-management, and supports aquaculture development. The Department also engages in regional cooperation on transboundary fishery resources, aligning local practices with broader conservation and sustainability goals.

Forestry Department

The Forestry Department manages state forests, community forestry programs, and afforestation/reforestation initiatives. It implements REDD+ strategies, monitors forest carbon stocks, and promotes sustainable timber and non-timber forest product utilisation. The Department plays a critical role in integrating forest conservation with climate change mitigation and rural livelihoods development.

National Environment Agency (NEA)

The NEA provides overarching environmental governance, including enforcement of the National Environment Management Act (NEMA), oversight of Environmental Impact Assessments (EIAs), and regulation of pollution and waste management. It coordinates inter-sectoral environmental planning, ensuring that biodiversity considerations are integrated into development projects and policies.

Local Government Authorities

Municipal and district authorities are responsible for integrating biodiversity and environmental management into local development planning. They facilitate community participation, support local enforcement of environmental regulations, and promote sustainable land and resource use practices.

Civil Society Organisations (CSOs) and Community-Based Organisations (CBOs)

CSOs and CBOs are key partners in implementing conservation initiatives on the ground. They support habitat restoration, species monitoring, environmental education, and alternative livelihoods programmes. These organisations bridge the gap between government policies and community needs, fostering participatory governance and local stewardship of biodiversity resources.

Together, the institutional framework forms a multi-level governance system, combining national leadership, sectoral management, and community participation. Effective coordination among these actors is essential for achieving The Gambia's biodiversity targets, enforcing legal provisions, and sustaining ecosystem services critical to livelihoods, food security, and climate resilience.

7.4 Governance Challenges and Opportunities

7.4.1 Challenges

The Gambia faces several governance challenges that constrain effective biodiversity conservation and sustainable natural resource management.

Limited Technical and Financial Capacity

Many institutions responsible for biodiversity management, including DPWM, Forestry, and Fisheries, operate with limited staff, technical expertise, and financial resources. This constrains their ability to implement monitoring programmes, enforce regulations, conduct research, and support community-based initiatives. Insufficient funding often leads to reliance on external donors, which may result in fragmented or short-term interventions.

Weak Law Enforcement and Infrastructure

Enforcement of environmental and biodiversity legislation is hampered by limited infrastructure, inadequate patrolling, and insufficient legal deterrents. Protected areas, mangroves, and fisheries often experience illegal activities such as poaching, overfishing, and unsustainable harvesting due to weak surveillance and judicial follow-up. This undermines the effectiveness of policy instruments and erodes community trust in conservation regulations.

Fragmented Sectoral Coordination

Biodiversity management requires multi-sectoral collaboration across environment, forestry, fisheries, agriculture, and local governance. However, coordination among agencies is often fragmented, leading to overlaps, gaps, and inefficiencies. The lack of integrated planning limits the ability to address cross-cutting issues such as habitat connectivity, climate adaptation, and sustainable livelihoods.

The above governance challenges collectively hinder the full realisation of national and international biodiversity commitments. Addressing them is critical for effective implementation of the NBSAP, safeguarding ecosystems, and ensuring that biodiversity contributes meaningfully to socio-economic development.

7.4.2 Opportunities

Despite the governance challenges, The Gambia has multiple opportunities to strengthen biodiversity management and conservation outcomes.

Decentralisation and Local Government Authorities (LGAs)

The ongoing decentralisation process empowers LGAs to play a greater role in planning and implementing conservation actions at the community and regional levels. This creates opportunities for locally adapted interventions, improved accountability, and stronger alignment between national strategies and subnational priorities.

Community-Based Conservation

Local communities are increasingly recognised as essential stewards of natural resources. Community-based conservation initiatives, including community ownership transfer, co-management of protected areas, sustainable fisheries committees, and mangrove restoration projects, offer scalable models for linking conservation with livelihoods and social inclusion.

International Frameworks and Support

As a Party to the CBD, Ramsar, UNFCCC, CITES, and other conventions, The Gambia can leverage technical assistance, funding mechanisms, and capacity-building programmes. These frameworks provide structured guidance for biodiversity planning, reporting, and achieving global targets.

CSO and Private Sector Engagement

Civil society organisations and private sector actors can be more active in biodiversity conservation, eco-tourism, research, and sustainable resource management. Partnerships with these stakeholders can thus enhance technical capacity, mobilise resources, and increase public awareness of biodiversity issues.

Digital Monitoring and Knowledge Platforms

Advances in digital technologies, including GIS mapping, remote sensing, drones, and regional knowledge-sharing platforms, enable real-time monitoring of ecosystems, wildlife populations, and habitat changes. These tools support evidence-based decision-making, early warning systems, and regional collaboration on transboundary biodiversity challenges.

Collectively, the above opportunities provide a strong foundation for enhancing governance, improving conservation outcomes, and integrating biodiversity management into broader development planning in The Gambia.

Chapter 8: Subnational Strategies and Action Plans

8.1 Banjul City (BC)

8.1.1 Background & Rationale

Banjul's population, estimated at 26,461[31] Residents (GBoS, 2024) are relatively small but densely concentrated within an area of approximately 12 square kilometres. Overcrowding exerts significant pressure on housing, public services, and infrastructure. Banjul City (BC) is a central administrative (capital City) and ecological entity in The Gambia, encompassing a region of remarkable ecological diversity and socio-economic activity. Strategically located along the Atlantic coast, the BC jurisdiction spans a mosaic of ecosystems, including mangrove forests, tidal wetlands, coastal dunes, woodland patches, productive farmlands, and rapidly expanding urban settlements. The combination of natural and human-modified landscapes creates a unique interface where biodiversity conservation and economic development intersect.

Ecologically, BC is home to a rich array of species and habitats. The mangroves along the coastal and estuarine zones are particularly significant, acting as breeding grounds for instance fish and oysters, providing nesting and feeding habitats for waterbirds, and serving as natural buffers against coastal erosion and storm surges, bearing in mind that over 70% of Banjul City is below sea-level.[32]. The inland wetlands, seasonal floodplains, and patches of woodland support diverse flora and fauna, including several endemic and migratory species. These ecosystems not only maintain ecological balance but also contribute to climate resilience by storing carbon and regulating hydrological cycles.

Economically and socially, the BC region is a vital hub for livelihoods. Thousands of households rely directly on agriculture, small-scale fishing, livestock rearing, and forestry-related activities. The fertile lands support small-scale horticulture, while the coastal areas sustain artisanal fisheries that feed both local populations and urban markets. Additionally, BC's urban centres act as critical nodes for trade, services, and tourism, further linking the natural resource base to economic growth.

However, this dynamic interface of urban expansion and natural habitats also creates significant challenges. Rapid population growth, infrastructure development, unsustainable resource extraction, and pollution are increasingly threatening the ecological integrity of the region. Mangrove degradation, wetland encroachment, and overfishing are notable pressures that jeopardise both biodiversity and the livelihoods that depend on these ecosystems. Moreover,

[31] GBoS. (2024). The Gambia Population and Housing Census 2024 Preliminary Report. Gambia Bureau of Statistics, Banjul

[32] Banjul Baseline Assessments of Climate Vulnerability and Risk Assessments, Energy Access and Waste Management for Regional Climate Action Planning in The Gambia, Banjul City, January 2026

climate change impacts, including sea-level rise, saltwater intrusion, and extreme weather events, exacerbate these vulnerabilities, posing risks to food security, water supply, and economic stability.

Recognising these challenges, the rationale for focused governance and conservation interventions within BC is compelling. Effective management of natural resources is essential not only for protecting biodiversity but also for safeguarding the socio-economic well-being of the communities that depend on these ecosystems. Integrating ecological conservation with urban planning, sustainable livelihood support, and climate adaptation strategies can transform BC into a model of resilient urban-ecological governance.[33]. By leveraging its ecological assets and socio-economic potential, BC can play a pivotal role in national strategies for biodiversity conservation, climate resilience, and sustainable development, serving as both a conservation priority and a testing ground for innovative management approaches.

In summary, Banjul City represents a microcosm of The Gambia's broader environmental and developmental dynamics. Its diverse ecosystems, coupled with dense human settlements and economic activity, highlight the urgent need for integrated, multi-sectoral approaches that balance conservation with development. Prioritising BC as a focus area ensures that interventions can generate measurable ecological, social, and economic impacts, reinforcing the city's role as a central player in the nation's sustainable future.

Main Threats

Banjul City (BC), despite its ecological richness and socio-economic significance, faces a suite of pressing environmental threats that challenge both biodiversity conservation and sustainable development. One of the most immediate pressures is rapid urbanisation and infrastructure expansion. As the population grows and economic activity intensifies, previously natural or semi-natural areas, such as wetlands, coastal dunes, and woodland patches, are being converted into residential, commercial, and industrial zones. This urban sprawl fragments habitats, reduces ecosystem connectivity, and increases the risk of species displacement.

Unsustainable agricultural practices and overgrazing further exacerbate environmental pressures. Intensive farming, often without soil conservation measures, and uncontrolled livestock grazing degrade soil quality, diminish vegetation cover, and contribute to erosion. Such practices can compromise the productivity of farmlands, reduce carbon sequestration capacity, and threaten the resilience of surrounding ecosystems.

The region is also vulnerable to deforestation and illegal logging, particularly in areas where woodland resources are used for fuel, timber, or construction. This not only diminishes forest cover and biodiversity but also contributes to land degradation and altered hydrological cycles. Complementing these pressures are sand mining, waste mismanagement, and pollution, which have increasingly degraded riverbanks, wetlands, and urban waterways. Improper disposal of solid waste and untreated effluents contaminates soil and water bodies, impacting both human health and aquatic life.

[33] RCAP Banjul, January 2026

Coastal ecosystems in BC face the dual threats of mangrove degradation and saltwater intrusion. Mangroves, vital for shoreline stabilisation, fisheries support, and carbon storage, are being cleared for fuelwood, construction, and aquaculture expansion. Saltwater intrusion, intensified by climate change and upstream hydrological changes, further compromises freshwater availability and agricultural productivity.

Climate change impacts, including flooding, coastal erosion, and extreme weather events, magnify these vulnerabilities. Rising sea levels threaten low-lying settlements and critical wetlands, while changing rainfall patterns disrupt agricultural cycles and exacerbate erosion. These compounded threats highlight the urgent need for integrated biodiversity management, climate adaptation, and sustainable urban development planning in the BC region.

In response to these challenges, the BC Subnational Biodiversity Strategy and Action Plan (SBSAP) has been designed to mainstream biodiversity considerations into local development planning. The strategy emphasises ecological restoration, sustainable resource use, and community engagement, aiming to protect and enhance the natural capital while supporting livelihoods. By aligning with The Gambia's National Biodiversity Strategy and Action Plan (NBSAP 2025–2035) and the Kunming–Montreal Global Biodiversity Framework (GBF), the BC SBSAP ensures coherence with national and international biodiversity commitments. This integrated approach positions BC as a model for local-level conservation planning, demonstrating how ecological stewardship can coexist with socio-economic growth in rapidly urbanising regions.

Vision

A resilient, green, and biodiverse Banjul where wetlands, mangroves, and urban ecosystems are effectively conserved; where residents enjoy a healthy, safe, and climate-resilient environment; where biodiversity supports sustainable livelihoods and strengthens local adaptation to climate change; and where city planning systematically integrates nature-based solutions in every development initiative. This vision emphasises the coexistence of vibrant human communities and thriving ecosystems, recognising that long-term urban resilience depends on safeguarding Banjul's natural heritage.

Goal

The overarching goal of the Banjul City Subnational Biodiversity Strategy and Action Plan (BC SBSAP) is to enhance the conservation and sustainable management of biodiversity and ecosystems within Banjul's urban, peri-urban, and coastal landscapes, while simultaneously promoting sustainable livelihoods, climate adaptation, and ecosystem-based urban planning. This goal provides a clear, action-oriented framework to guide policy, planning, and implementation across sectors, ensuring that ecological integrity, social well-being, and economic development are mutually reinforced.

8.1.2 Priority Areas and Strategic Actions

To achieve its vision of a resilient, biodiverse, and climate-adaptive city, Banjul City (BC) has identified four priority areas for intervention. These priorities integrate ecological conservation, sustainable urban development, climate resilience, and community engagement, aligning closely with The Gambia's National Biodiversity Strategy and Action Plan (NBSAP 2025–2035) and the Kunming–Montreal Global Biodiversity Framework (GBF).

Priority 1: Wetland and Mangrove Conservation and Ecosystem Restoration

Objective: Safeguard and restore the Tanbi Wetland Complex and other coastal, mangrove, and wetland systems; prevent further degradation and encroachment; and restore ecological functionality.

The Tanbi Wetland Complex, along with surrounding mangrove and tidal creek ecosystems, is a cornerstone of Banjul's biodiversity and climate resilience. These habitats provide critical breeding grounds for fish and birds, buffer coastal erosion, and sequester carbon. To protect these areas, BC will undertake updated mapping and condition assessments to determine mangrove coverage, tidal creek connectivity, and existing threats such as encroachment, pollution, and illegal land allocations. Legal reinforcement, boundary demarcation, and incorporation of wetlands into local zoning plans will ensure long-term protection.

Restoration efforts will include replanting mangroves in degraded areas, supporting natural regeneration, promoting species diversity, and monitoring survival rates. Efforts will also focus on reconnecting degraded or blocked tidal channels to maintain hydrological function and enhance ecosystem services. Buffer zones and green belts will be established between urban developments and wetlands to prevent future degradation while providing additional ecological benefits. This priority aligns closely with GBF Targets 2 (restoration), 10 (ecosystem services), and 14 (resilience).

Priority 2: Urban Green Spaces and Tree Canopy Expansion

Objective: Increase green spaces, street trees, parks, and school gardens to enhance urban biodiversity, mitigate heat, improve air quality, and absorb stormwater.

Urban greening is central to creating a healthy and climate-resilient Banjul. The BC will identify and prioritise locations across neighbourhoods, streets, schools, and public spaces for tree planting and greening interventions. Existing school greening programmes, currently active in 14 schools, will be expanded to include fruit, flowering, and native trees, engaging students and teachers in hands-on conservation activities.

Development and rehabilitation of public parks and pocket green spaces will provide urban dwellers with accessible natural areas, while street trees and roadside green corridors will help mitigate the urban heat island effect. Rooftop gardens, vertical greening, and community-managed gardens will be promoted as additional tools to increase urban biodiversity and provide ecosystem

services. These actions support GBF Targets 3 (protected areas), 4 (species conservation), and 8 (ecosystem services).

Priority 3: Pollution, Waste, and Water Quality Management

Objective: Improve solid waste management, reduce plastic and litter pollution, manage stormwater drainage, improve wastewater and runoff quality, and reduce pollutant loads.

BC faces increasing pressure from urban pollution, which threatens both public health and aquatic ecosystems. Solid waste management will be strengthened through increased waste collection points, regular collection schedules, and enforcement against illegal dumping. Waste reduction, recycling, and composting initiatives will reduce landfill burden and promote circular resource use.

Community clean-ups and anti-littering campaigns in markets, beaches, and ferry terminals will complement infrastructure improvements. BC will enhance stormwater drainage to reduce flood risk and prevent pollutant-laden runoff from entering wetlands and coastal waters. Regular monitoring of water quality in wetland inflows and coastal areas will ensure timely identification and mitigation of contamination. These interventions align with GBF Targets 8 (climate resilience), 10 (ecosystem adaptation), and 15 (nature-based solutions).

Priority 4: Climate Resilience, Governance, Awareness, and Sustainable Financing

Objective: Build BC's capacity to integrate biodiversity and climate considerations into planning; develop nature-based adaptation measures; raise awareness; secure sustainable finance; and enforce policies and laws for biodiversity protection.

To enhance resilience, BC will conduct comprehensive climate risk assessments, mapping threats such as sea-level rise, storm surges, erosion, and urban flooding, and identifying vulnerable communities. Nature-based adaptation interventions will include mangrove belt restoration, floodplain rehabilitation, beach stabilisation, and green infrastructure to absorb runoff and reduce flood risks.

Governance interventions will focus on updating municipal by-laws and planning regulations to require environmental impact assessments, enforce wetland protection, and integrate biodiversity into city master plans. Capacity building for BC staff, local communities, and schools will enhance technical knowledge and stewardship of biodiversity.

Public awareness campaigns will educate residents on the value of wetlands, urban biodiversity, invasive species management, and pollution prevention. Sustainable financing mechanisms will be developed, including the establishment of a Banjul Biodiversity and Resilience Fund, exploration of payment for ecosystem services (PES), promotion of blue carbon credits, public-private partnerships for green infrastructure, and dedicated municipal budget allocations. These measures support GBF Targets 19 (capacity building), 20 (resource mobilisation), and 22 (inclusive governance).

8.1.3 Priority Actions & SMART Indicators Table (BC)

Table 3: Priority Actions and SMART Indicators for Banjul City (BC)

Strategic Objective	Priority Actions	Indicators	Baseline (2025)	Target (2030)	Target (2035)	Means of Verification	Responsible Institutions
Conserve urban biodiversity and coastal ecosystems	Restore degraded mangroves and coastal habitats	Hectares of mangroves restored	~50 ha	120 ha	200 ha	Satellite imagery, field reports	BC, DPWM, NEA
	Establish urban green spaces and biodiversity corridors	Number of green spaces established	5	12	20	Municipal records	BC
Reduce pollution and improve waste management	Improve solid waste collection and recycling systems	% of waste collected and properly managed	60%	80%	95%	Waste audits	BC, NEA
	Promote plastic waste reduction initiatives	% reduction in plastic waste	10%	40%	70%	Environmental reports	NEA, NGOs
Strengthen climate resilience	Enhance flood control and drainage systems	Number of flood-prone areas mitigated	3	8	15	Infrastructure reports	BC, Ministry of Works
	Promote nature-based solutions (NbS)	Number of NbS projects implemented	2	10	18	Project reports	MECCNAR, BC
Promote sustainable livelihoods	Support urban agriculture and fisheries	Number of beneficiaries	200	800	1500	Program reports	BC, Ministry of Agriculture
	Develop eco-tourism initiatives	Number of eco-tourism sites	1	5	10	Tourism records	BC, GTBoard
Strengthen governance and awareness	Conduct environmental education campaigns	Number of campaigns conducted annually	3	10	20	Reports, media	BC, NGOs
	Strengthen policy enforcement	Number of enforcement actions	Low	Moderate	High	Enforcement records	NEA, BC

Table 4: Results Matrix 2025–2030 for BC

Hierarchy	Expected Results	Indicators	Baseline (2025)	Target (2035)	Means of Verification	GBF Link
Impact	Sustainable ecosystems and improved livelihoods	Forest cover, pollution levels, and biodiversity index	Declining	+15% forest cover, 50% pollution reduction	Monitoring reports	Goals A–D
Outcome 1	Degraded lands & mangroves restored	Hectares restored	<500 ha	15,000 ha	GIS mapping, Forestry reports	T2, T14
Outcome 2	Biodiversity conservation improved	# CFs, ICCAs, wetlands under co-management	Few active	+10 new CFs, 5 wetlands co-managed	DPWM reports	T3, T4
Outcome 3	Waste & pollution controlled	% waste segregated, # awareness events	<5% segregation	50% segregation	BC & NEA reports	T7, T16
Outcome 4	Climate resilience strengthened	# EbA projects, households supported	Minimal	10 EbA sites, 5,000 households	Climate & BC reports	T8, T15
Outcome 5	Governance & livelihoods improved	# people trained, # enterprises supported	Low	2,000 trained, 300 enterprises	Training records	T19, T22

8.1.4 Theory of Change (ToC)

Problem Statement

Banjul City faces increasing biodiversity degradation and ecosystem loss driven by unsustainable use of natural resources, weak governance, urban expansion, and limited adaptive capacity to climate change. Critical habitats, including mangroves, wetlands, tidal creeks, and urban green spaces, are under pressure from pollution, encroachment, deforestation, and climate-induced hazards such as coastal erosion and flooding. These environmental pressures threaten not only ecological integrity but also the livelihoods, health, and well-being of Banjul's residents.

Assumptions

The effectiveness of interventions under this ToC rests on several key assumptions:

1. Community participation and ownership will ensure the sustainability of conservation and restoration initiatives.
2. Strong partnerships and adequate funding from government, NGOs, the private sector, and international donors will enable effective implementation.

3. Integration of traditional knowledge with scientific approaches will enhance the design and relevance of biodiversity management actions.

Input

The successful execution of this ToC depends on mobilising a combination of resources and capacities:

- Financial resources: from national budget allocations, climate funds, international donors, and private sector partnerships.
- Human capacity: trained municipal staff, community facilitators, and youth volunteers.
- Traditional knowledge: local ecological knowledge to complement scientific data in ecosystem management.
- Policy and regulatory frameworks: enabling legislation, municipal by-laws, and environmental regulations.
- Partnerships: collaboration with NGOs, academia, private sector actors, and international donor agencies.

Activities

BC will implement a set of targeted actions to address the identified challenges:

- Restoration and reforestation: mangrove planting, wetland restoration, and urban tree planting.
- Ecosystem-based adaptation (EbA): interventions to enhance flood control, shoreline protection, and natural habitat resilience.
- Biodiversity monitoring: species and habitat surveys, water quality monitoring, and GIS-based ecosystem mapping.
- Livelihood diversification: support for biodiversity-friendly enterprises, school gardens, and urban greening initiatives.
- Policy enforcement: strengthening municipal by-laws, zoning, and land-use planning to prevent encroachment and degradation.

Outputs

The activities are expected to produce measurable outputs, including:

- Restoration of 10,000 hectares of degraded habitats (wetlands, mangroves, urban green spaces).
- Establishment of stronger co-management structures between communities and municipal authorities.
- Enhanced capacity of local stakeholders in biodiversity conservation, monitoring, and sustainable livelihoods.
- Growth in biodiversity-friendly livelihood enterprises supporting urban and peri-urban communities.

Outcomes

The intermediate results of these outputs will include:

- Enhanced ecosystem health and resilience, improving the capacity of wetlands, mangroves, and urban green spaces to withstand environmental stressors.
- Reduced biodiversity loss, with stabilised populations of key species and restored ecological functions.
- Empowered and environmentally conscious communities, with increased awareness, skills, and incentives to manage local resources sustainably.

Impact

The long-term impact of the BC SBSAP is a healthy and resilient city where biodiversity underpins livelihoods, strengthens climate adaptation, and contributes to national development goals. Banjul will serve as a model of urban biodiversity stewardship and integrated ecosystem management, balancing ecological integrity with human well-being.

Cross-Cutting Themes

The ToC emphasises several cross-cutting principles:

- Gender Equality: actively empower women in resource management, restoration activities, and biodiversity-linked enterprises.
- Youth Engagement: foster youth-led conservation initiatives and green entrepreneurship.
- Knowledge and Data: strengthen biodiversity data collection, monitoring, and information sharing to guide evidence-based decision-making.
- Climate Action: integrate biodiversity conservation into local climate adaptation planning.
- Partnerships: promote multi-stakeholder collaboration with NGOs, academia, and private sector actors.

Implementation Framework

- **Lead Institution**: Banjul City (Environment and Natural Resources Unit).
- **Key Partners**: NEA, DPWM, Forestry, Fisheries, Agriculture, Water Resources, NGOs such as Sahel Wetlands Concern, Gambia Mangrove REDD+, WABSA, Green-Up Gambia, ActionAid, and donor agencies.
- **Community Actors**: Village Development Committees (VDCs), Community Forest Committees, Protected Area Committees, youth groups, women's associations, and schools.
- **Phased Implementation:**
    - ***Phase 1 (2025–2026)****:* Baseline assessments, capacity building, and awareness creation.

- ***Phase 2 (2027–2029)****:* Restoration projects, urban greening, waste management rollout, and livelihood programs.
- ***Phase 3 (2030–2035)****:* Scaling up, replication, sustainability measures, and comprehensive monitoring.

8.1.5 Monitoring, Evaluation & Reporting (M&E)

BC will employ a robust M&E framework to ensure adaptive management:

- **Baseline studies:** maps of wetlands and mangroves, tree cover, water quality, pollution hotspots, and community awareness.
- **Indicator framework:** aligned with GBF targets and local biodiversity objectives.
- **Data collection methods:** remote sensing, GIS, field surveys, citizen science, and water sampling.
- **Reporting schedule:** quarterly internal implementation reports, annual public reports, mid-term evaluation (Years 2–3), and final evaluation (Year 5).
- **Adaptive management:** interventions will be adjusted based on monitoring results to scale up successes and modify or discontinue ineffective actions.

8.1.6 Stakeholder Engagement and Governance

- **Steering Structures**: BC Biodiversity Steering Committee, technical working groups under each priority area, community advisory bodies, and youth engagement platforms.
- **National Partners**: Department of Parks & Wildlife Management (DPWM), Ministry of Environment, Climate Change & Natural Resources, Environmental Protection Agency (NEA).
- **Civil Society & NGOs**: WABSA, Sahel Wetlands Concern, local environmental groups, and community associations.
- **Academic and Research Institutions**: support for mapping, species and ecosystem studies, and monitoring.
- **International and Donor Partners**: EU (Future Proof Banjul, City Link Oostende), GEF, UNEP, UNDP.
- **Private Sector**: contractors, developers (for green infrastructure), and tourism stakeholders.

8.1.7 Budget and Resource Mobilisation (Indicative)

Key budget lines include:

- Mapping, assessment, and baseline studies
- Habitat restoration and mangrove planting
- Urban greening and tree planting initiatives
- Waste management infrastructure and services

- Drainage improvements and green infrastructure
- Capacity building, training, and awareness campaigns
- Monitoring, evaluation, and reporting systems
- Staffing, coordination, and governance costs
- Seed funding for a dedicated BC Biodiversity and Resilience Fund

Potential Funding Sources: national government budget, international donors (EU, GEF, UNDP), climate and adaptation funds (GCF), private sector partnerships, and community-based contributions.

Table 5: Indicative Budget (USD) for Banjul

Strategic Area	Estimated Cost (USD)	Notes
Ecosystem restoration (mangroves, green spaces)	1,200,000	Includes planting, maintenance
Waste management systems	125,000,000	Infrastructure + logistics
Climate resilience (drainage, flood control)	3,500,000	Capital intensive
Sustainable livelihoods programs	800,000	Training, inputs
Eco-tourism development	600,000	Site development, marketing
Awareness and education	300,000	Campaigns, materials
Governance and enforcement	400,000	Capacity building
Total Estimated Budget	**131,000,000 USD**	

Table 6: Co-Financing (USD) for Banjul

Source	Type	Estimated Contribution (USD)
Government of The Gambia	Public	45,000,000
Municipal Budget (BC)	Public	35,200,000
Development Partners (UNDP, GEF, EU)	Grant	48,500,000
NGOs & Civil Society	In-kind	1,500,000
Private Sector	PPP	1,600,000
Total Co-financing		131,800,000

8.1.8 Risks and Mitigation

Table 7: Risks and Mitigations for Banjul SBSAP

Risk	Mitigation
Continued or renewed encroachment or land allocation in wetlands	Strengthen legal protections; transparent land use plans; strong enforcement; community monitoring; public advocacy.
Poor survival of plantings (trees/mangroves)	Use native, appropriate species; good site selection; proper maintenance/aftercare; community engagement.
Inadequate funding or budget delays	Diverse funding sources; phased implementation; local contributions; cost sharing; seed funds to leverage more investment.
Pollution sources beyond city control	Coordinate with national agencies; catchment management; upstream interventions; enforce regulations.
Climate shocks (storms, sea surges) undermine restoration works	Incorporate resilient design; choose tolerant species; buffer zones; plan for disasters; insurance or contingency budget.
Low community participation/awareness	Early engagement; visible benefits; youth & school programs; awareness campaigns; incentives.

8.1.9 Expected Outcomes by 2035

By 2035, the Banjul City Subnational Biodiversity Strategy and Action Plan (BC SBSAP) aims to deliver measurable ecological, social, and economic outcomes that reflect both biodiversity conservation and sustainable urban development. A primary ecological target is to establish Banjul as a Ramsar City, safeguarding the city and enhancing the functionality of critical ecosystems surrounding it, including Tanbi Wetland Complex and coastal mangrove belts.

To enhance community-based stewardship, a Wetland and Recreation Centre will be established and co-managed by residents in partnership with municipal authorities. These arrangements will empower communities, strengthen local governance, and provide tangible incentives for sustainable resource management.

On the urban management front, the strategy anticipates achieving 50% waste segregation and a measurable reduction in pollution across Banjul's neighbourhoods, markets, and public spaces. Improved waste management and pollution control will directly enhance public health, water quality, and ecosystem integrity, while supporting green infrastructure initiatives such as urban parks and stormwater absorption systems.

A voluntary group of youth and fishermen will be established to ensure policing, surveillance and patrol to prevent illegal fishing, manatee hunting and encroachment into spawning areas. Such an endeavour would require the provision of speed boats, uniforms, and safety gear.

The strategy also prioritises sustainable economic development by establishing 300 biodiversity-friendly enterprises. These ventures, spanning eco-tourism, urban agriculture, restoration services, and green businesses, will provide livelihoods while incentivising biodiversity conservation. Women and youth are expected to play leading roles, ensuring that marginalised groups are actively engaged in urban biodiversity stewardship and green economy initiatives.

Collectively, these outcomes will contribute to improved ecosystem services, enhanced local resilience, and strengthened livelihoods, positioning Banjul as a model for integrating biodiversity conservation into urban development and climate adaptation. By 2035, the city will demonstrate that sustainable urban planning, community engagement, and ecosystem restoration can coexist to produce tangible ecological, social, and economic benefits.

Conclusion

The Banjul City Subnational Biodiversity Strategy and Action Plan provides a comprehensive and forward-looking framework for addressing the unique environmental challenges of an urban coastal setting. With increasing pressure from population density, waste generation, coastal erosion, and climate-related flooding, Banjul requires integrated and practical solutions that balance environmental sustainability with socio-economic development.

The proposed strategic actions, ranging from mangrove restoration and urban greening to improved waste management and nature-based solutions, are designed to enhance ecosystem resilience while improving the quality of life for residents. By promoting sustainable livelihoods such as urban agriculture and eco-tourism, the plan also recognises the importance of linking biodiversity conservation with economic opportunities.

Successful implementation of this strategy will depend on strong institutional coordination, sustained financing, and active participation from communities, civil society, and the private sector. The emphasis on awareness creation and policy enforcement further ensures that behavioural change and governance structures support long-term sustainability.

Ultimately, this plan aligns with national priorities and global biodiversity targets, positioning Banjul as a model for urban environmental management in The Gambia. If effectively implemented, it will contribute significantly to biodiversity conservation, climate resilience, and sustainable urban development over the 2025–2035 period.

8.2 Kanifing Municipality (KM)

8.2.1 Background & Rationale

The region has a population of 379,348, which is 15.7% of the country's total population and 20.7% of all households[34]. Kanifing Municipality represents the most urbanised and densely populated

[34] GBoS. (2024). The Gambia Population and Housing Census 2024 Preliminary Report. Gambia Bureau of Statistics, Banjul

area of The Gambia, encompassing neighbourhoods such as Bakau, Kotu, Fajara, Serekunda, and Bundung. Despite its urban character, KM hosts important biodiversity and ecological assets, including wetlands, coastal dune systems, urban tree cover, mangrove forests, and recreational green spaces. These ecosystems provide a range of ecosystem services that are vital to urban life, such as flood regulation, carbon storage, temperature moderation, recreational spaces, and cultural benefits.

However, KM faces significant environmental challenges due to rapid urbanisation and demographic pressures. Urban and peri-urban expansion, driven by population growth, infrastructure development, and rural-to-urban migration, has increased pressure on natural habitats. These pressures are compounded by pollution and inadequate waste management, which degrade soils, waterways, and wetlands.

Several environmental initiatives are underway in KM. The Kanifing Environmental Transformation Program (KETP) has been instrumental in promoting urban sustainability. Key interventions include the "one bin per household" program to improve waste segregation, organic waste conversion projects, reforestation of approximately 190,000 trees, and the distribution of waste bins to enhance integrated waste management planning. These initiatives provide a foundation upon which the KM SBSAP can build, strengthening urban ecosystem management and biodiversity conservation.

Despite these efforts, biodiversity continues to face acute threats. Urban development encroaches on critical wetlands, such as Kotu Wetland and the Old Cycle Track Wetland, while the loss of green spaces and urban tree cover reduces habitat connectivity and ecological resilience. Pollution from dumpsites, solid waste, and untreated runoff further exacerbates ecosystem degradation. Invasive species, such as certain crocodiles or alien flora, may also threaten urban ecosystems in localised areas.

The KM SBSAP is strategically aligned with the National Biodiversity Strategy and Action Plan (NBSAP 2025–2035) and the Kunming–Montreal Global Biodiversity Framework (GBF). Urban interventions in KM directly contribute to strategic goals B (reducing direct pressures on biodiversity), C (safeguarding ecosystems and species), D (enhancing benefits for all), and E (participatory planning and capacity building). By integrating biodiversity into municipal planning and promoting ecosystem-based urban management, KM can enhance ecosystem services, urban climate resilience, and the well-being of local communities.

Vision and Goal

Vision: A healthy, resilient, and biodiverse Kanifing Municipality where ecosystems, green spaces, and wetlands thrive; communities benefit equitably; urban development proceeds in harmony with nature; and KM contributes actively to national and global biodiversity targets.

Goal

By 2035, KM will achieve sustainable urban biodiversity management through the restoration of degraded areas, effective waste and pollution control, and enhanced community participation in

conservation. This goal reflects a commitment to integrating ecological sustainability into the urban development agenda, ensuring that KM remains both livable and ecologically functional as The Gambia continues to urbanise.

8.2.2 Strategic Objectives and Priority Areas

The Kanifing Municipality Council (KM) faces the challenge of harmonising rapid urban development with biodiversity conservation and ecosystem service provision. To address these challenges, KM has defined four strategic priority areas aimed at restoring urban ecosystems, reducing pollution, enhancing climate resilience, and strengthening community participation and governance. These priorities are directly aligned with the Kunming–Montreal Global Biodiversity Framework (GBF) targets and the national NBSAP, ensuring that local actions contribute meaningfully to broader national and global biodiversity objectives.

Priority 1: Urban Green Spaces, Trees, and Ecosystem Restoration

GBF Targets: 2, 12, 14

The objective of this priority is to increase and restore green cover and biodiversity across urban landscapes, enhancing ecological functionality, urban cooling, and aesthetic value. Key GBF links include Target 2 on ecosystem restoration, Target 12 on urban green spaces, and Target 14 on ecosystem resilience. Strategies focus on the creation and rehabilitation of urban ecological infrastructure. Green corridors and buffer zones will be restored and expanded in urban centres to connect fragmented habitats and support urban wildlife. By 2035, 200,000 urban trees will be planted along roads, schools, open spaces, and public areas to improve air quality, shade, and carbon sequestration. Public parks, urban forests, and coastal dunes will be developed and rehabilitated, while sensitive ecosystems such as the Tanbi Wetlands and mangrove belts will be protected from encroachment. Innovative urban greening practices, including rooftop and vertical gardens, will be promoted to maximise green space within dense urban areas.

Table 8: Priority Objectives and SMART Indicators for Urban Green Spaces, Trees, and Ecosystem Restoration for KM

Objective	Indicators (SMART)	Baseline (2024)	Targets (2030/2035)	Means of Verification	Assumptions/Risks
Restore and expand urban green and blue spaces	% increase in green/blue space under protection/restoration	Est. <15% functional green space coverage	+30% by 2030; +50% by 2035	GIS mapping, satellite imagery, municipal land-use records	Urban land pressure and competing infrastructure needs
Increase urban tree cover.	Number of trees planted and survival rate	~190,000 trees planted (KETP), survival rate unknown	150,000 additional trees by 2030; 200,000 total with ⩾70%	KM Council reports, field audits, remote sensing	Poor maintenance, drought stress, vandalism

			survival by 2035		
Protect and rehabilitate wetlands and mangroves	Area (ha) of wetlands/mangroves restored or protected	Est. <20 ha actively managed	30 ha by 2030; 50 ha by 2035	NEA/DPWM reports, GIS monitoring	Encroachment, pollution, weak enforcement
Develop urban ecological infrastructure	Number of parks, green corridors, and urban forests established/rehabilitated	<5 functional green public spaces	10 by 2030; 20 by 2035	Municipal planning records, site inspections	Limited land availability, funding constraints

Priority 2: Sustainable Waste Management and Pollution Control

GBF Targets: 7, 10, 16

Minimising pollution impacts on both biodiversity and human health is central to this priority. The key GBF links include Target 7 on pollution, Target 10 on ecosystem health, and Target 16 on sustainable consumption. KM will implement solid waste segregation and recycling programs at the household and market levels, ensuring proper disposal and resource recovery. Enforcement mechanisms will strengthen collection, transport, and final disposal of waste, while biodegradable waste processing and composting centres will convert organic waste into valuable soil amendments. Community engagement will be essential, with regular clean-up exercises conducted in collaboration with schools, youth, and women's groups. Environmental compliance will be reinforced by banning illegal dumping and strengthening municipal bylaws on sanitation. Additionally, improving drainage management will reduce flooding, mitigate pollution transport into wetlands, and enhance urban resilience.

Table 9: Priority Objectives and SMART Indicators for Sustainable Waste Management and Pollution Control for KM

Objective	Indicators (SMART)	Baseline (2024)	Targets (2030/2035)	Means of Verification	Assumptions/Risks
Reduce solid waste pollution and illegal dumping	% reduction in illegal dumpsites	High (widespread dumping in urban/peri-urban areas)	60% reduction by 2030; 80% by 2035	KM sanitation reports, field inspections	Weak enforcement, rapid population growth
Improve household waste collection coverage.	% households with regular waste collection & bin access	Est. 60–70% coverage	90% by 2030; ~100% by 2035	KM Council records, GBoS surveys	Financial and logistical constraints
Promote waste segregation and recycling	% of waste segregated/recycled	<10%	40% by 2030; 60% by 2035	Waste audits, recycling facility reports	Low public compliance, limited infrastructure
Develop composting and circular economy systems	Number of composting/recycling facilities operational	A few pilot initiatives	5 facilities by 2030; 10 by 2035	Project reports, municipal data	Market demand for compost, technical capacity

Priority 3: Climate Change Adaptation and Urban Resilience

GBF Targets: 19, 21, 22

Urban areas are increasingly vulnerable to flooding, heat stress, and coastal erosion, necessitating proactive resilience-building measures. This priority aligns with GBF Target 8 on climate resilience, Target 10 on ecosystem services, and Target 15 on nature-based solutions. KM will adopt ecosystem-based adaptation (EbA) measures in coastal and flood-prone areas, leveraging mangroves, dunes, and wetlands to buffer extreme events. Sustainable drainage systems incorporating green infrastructure will be constructed to manage stormwater while supporting biodiversity. Coastal dunes and mangroves will be protected and rehabilitated as natural defences against erosion. Climate resilience considerations will also be mainstreamed into urban planning and infrastructure projects, and the use of renewable energy will be encouraged across municipal facilities and within local communities to reduce greenhouse gas emissions.

Table 10: Priority Objectives and SMART Indicators for Climate Change Adaptation and Urban Resilience for KM

Objective	Indicators (SMART)	Baseline (2024)	Targets (2030/2035)	Means of Verification	Assumptions/Risks
Promote biodiversity-friendly urban livelihoods	Number of households engaged in green and blue enterprises	<1,000 households	25,000 by 2030; 75,000 by 2035	Household surveys, NGO reports	Market access and financing availability
Strengthen environmental awareness and CEPA	% of the population participating in environmental initiatives	Est. <30%	60% by 2030; 80% by 2035	Surveys, program reports	Public engagement consistency
Support the adoption of nature-based solutions	Number of NbS interventions (urban farming, green roofs, etc.)	Minimal uptake	100 projects by 2030; 300 by 2035	Municipal records, project monitoring	Technical knowledge gaps
Empower youth and women in biodiversity programs	Number of beneficiaries trained	<500 individuals	5,000 by 2030; 15,000 by 2035	Training reports, gender audits	Inclusion barriers

Priority 4: Community Participation, Awareness, and Governance

GBF Targets: 8, 15, 22, 23

The sustainability of urban biodiversity management relies on public participation, environmental education, and effective governance. Key GBF links include Target 19 on capacity building, Target 21 on knowledge sharing, and Target 22 on inclusive governance. KM will conduct awareness campaigns and school programs to educate citizens about urban biodiversity, ecosystem services, and proper waste management. A dedicated Biodiversity and Environmental Unit will be established within KM to coordinate municipal conservation efforts, while local environment committees will be strengthened in wards and neighbourhoods to facilitate community engagement. Partnerships with universities and NGOs will support research, monitoring, and youth volunteer programs, creating opportunities for local innovation and capacity development. Enforcement of the Environmental Management Act will be supported through community policing initiatives and trained environmental inspectors, ensuring compliance and fostering a culture of urban ecological stewardship.

Together, these four strategic priorities provide a comprehensive framework for urban biodiversity management in KM. By combining ecological restoration, pollution reduction, climate resilience, and participatory governance, KM aims to transform its urban landscape into a **resilient,**

biodiverse, and livable municipality, contributing directly to The Gambia's NBSAP goals and the global biodiversity agenda.

Table 11: Priority Objectives and SMART Indicators for Community Participation, Awareness, and Governance for KM

Objective	Indicators (SMART)	Baseline (2024)	Targets (2030/2035)	Means of Verification	Assumptions/Risks
Strengthen biodiversity governance structures.	Functional biodiversity unit established	None	Unit established by 2030; fully operational by 2035	KM administrative records	Institutional delays
Improve policy and planning integration	% municipal plans integrating biodiversity	<20%	80% by 2030; 100% by 2035	Planning documents, council reports	Political turnover
Enhance climate resilience through NBS	% reduction in flood-prone areas	High flood incidence	40% reduction by 2030; 70% by 2035	Disaster management reports, GIS data	Extreme climate events
Build institutional and technical capacity	Number of staff trained and systems operational	Limited capacity	200 staff trained by 2030; full M&E system by 2035	Training reports, MEL system records	Funding and retention issues

Table 12: Summary notes on the priority areas for KM

Priority Area	Objective
1. Urban Green Spaces, Wetlands & Habitat Protection	Conserve, restore and manage green and blue spaces (wetlands, mangroves, urban forests, recreational parks and centres) to maintain ecosystem functions (flood mitigation, habitat for species, recreation).
2. Pollution, Waste Management & Circular Economy	Reduce pollution (solid waste, plastic, waste water), improve waste management systems, promote circular economy (reuse, compost, biomass), reduce negative impacts on biodiversity.
3. Community Livelihoods, Awareness & Nature-Based Solutions	Empower communities (especially marginalised groups) with livelihood opportunities that conserve biodiversity; increase awareness and engagement; promote nature-based solutions (e.g. urban tree planting, green infrastructure).
4. Governance, Policy, Capacity & Climate Resilience	Strengthen local governance, policies, planning, and institutional capacity to integrate biodiversity; build resilience to climate change (heat, flooding, sea-level rise) through planning and adaptation; secure sustainable financing.

8.2.3 Results Matrix / Logframe

Some SMART-type targets that could guide implementation over 10 years:

Table 13: SMART-type targets to guide implementation of SBSAP for KM

Indicator	Target by 2035 (10-year period)

% increase in green/blue space area under protection/restoration in KM	e.g. +30-50% over baseline
Number of trees planted, and survival rate after 5-10 years	e.g. 200,000 trees planted; ≥70% survival after 2 years
Reduction in illegal dumpsites/waste leakage in KM	e.g. 80% reduction in visible illegal dumping spots
% households with regular waste collection service & 1 bin per household	100% (or high proportion) in KM
Number of community green livelihoods established, number of beneficiaries (youth, women)	e.g. 60,000 households/persons engaged in green livelihoods
Wetland(s) (e.g. Kotu) area under legal protection; encroachment cases reduced to zero in protected buffer zones	100% of key wetlands (e.g. Kotu) legally protected; ≥95% reduction in encroachment; zero encroachment within designated buffer zones
Populations (or observed species richness/abundance) of key species (birds, wetland fauna) in KM wetlands are maintained or increased	20–30% increase in species abundance and richness; no net loss of key indicator species
Number of policies/bylaws developed/updated to integrate biodiversity & wetland protection	5–10 policies/bylaws developed, revised, and fully enforced
Municipal capacity metrics: staff trained; monitoring systems operational; budget allocations for biodiversity & green infrastructure	200 staff trained; functional biodiversity monitoring system established; ≥10–15% annual municipal budget allocation to biodiversity and green infrastructure

8.2.4 Theory of Change (ToC) – Kanifing Municipal Council (KM)

Kanifing Municipality is one of the most densely populated and rapidly urbanising areas in The Gambia. As urban expansion accelerates, natural ecosystems within the municipality, such as wetlands, mangrove fringes, urban tree corridors, and community green spaces, are increasingly under pressure. The Theory of Change (ToC) for the Kanifing Municipal Council (KM) Strategic Biodiversity Strategy and Action Plan (SBSAP) provides a structured framework that explains how targeted investments, coordinated governance, and community participation can transform the municipality into a greener, more resilient urban landscape.

Problem Context

The municipality faces a complex set of environmental challenges driven largely by rapid population growth, unplanned urban development, and inadequate environmental infrastructure. Wetlands are being encroached upon for housing and commercial activities, reducing their capacity to regulate floods and maintain biodiversity. Green spaces that once provided cooling, recreation, and ecological habitat are shrinking as land is converted for urban use. Waste management systems struggle to keep pace with increasing volumes of household and commercial waste, resulting in pollution of drainage systems, wetlands, and coastal areas.

These pressures are compounded by climate change. Rising temperatures are intensifying urban heat island effects, while heavier rainfall events are increasing the risk of urban flooding. Coastal ecosystems, including mangroves and dune systems, face erosion and degradation, weakening their natural role as buffers against storm surges and sea-level rise.

If these trends continue unchecked, the ecological integrity of the municipality will deteriorate further. This would reduce the delivery of critical ecosystem services such as flood regulation, air purification, temperature moderation, and biodiversity conservation. Ultimately, the quality of life for residents would decline, and the municipality's ability to adapt to climate change would be severely compromised.

Assumptions Underpinning the Theory of Change

The KM Theory of Change is built upon several key assumptions that guide the pathway toward sustainable urban biodiversity management. First, it assumes that political commitment at the municipal and national levels will remain strong and supportive of environmental governance and urban biodiversity conservation. Continued policy support and institutional engagement are essential to implement long-term ecological strategies.

Second, the to assumes that local communities will actively participate in conservation initiatives when they recognise clear benefits for livelihoods, health, and environmental quality. Community participation is therefore seen as a cornerstone of sustainable urban ecosystem management.

Third, the strategy assumes that adequate financial and technical resources will be mobilised through partnerships with national government institutions, civil society organisations, development partners, and the private sector. Urban biodiversity restoration requires investments in infrastructure, training, and monitoring systems that cannot be supported by municipal resources alone.

Finally, it is assumed that environmental awareness among residents, businesses, and institutions will increase over time. Through education campaigns and community engagement programs, residents will develop stronger practices related to waste segregation, climate adaptation, and biodiversity conservation.

Inputs for Implementation

The implementation of the KM SBSAP relies on a diverse set of inputs that combine financial resources, institutional expertise, and community participation. Municipal funding and technical capacity will form the backbone of the program, particularly through the Environmental and Planning Departments of the council. These municipal efforts will be complemented by partnerships with national agencies, academic institutions, civil society organisations, and international development partners.

Community labour and local stewardship will also serve as critical inputs, particularly for urban greening initiatives such as tree planting, park restoration, and wetland conservation activities. In addition, technical expertise from universities and research institutions will support ecosystem mapping, biodiversity monitoring, and environmental planning.

Development partners and environmental funds will contribute financial resources and technical assistance, enabling the municipality to implement large-scale restoration projects and climate adaptation measures.

Table 14: Gantt Chart (Implementation Timeline, 2025–2035) for KM

Action Area	2025–2027	2028–2030	2031–2033	2034–2035
Priority 1: Urban Green Spaces	Baseline mapping; pilot greening; wetland protection begins	Scale tree planting; restore 25 ha wetlands; expand parks	Full urban green network; ecological corridors established	Maintenance, monitoring, long-term protection
Priority 2: Waste & Pollution	Strengthen waste systems; pilot segregation; awareness campaigns	Expand recycling; 40% waste segregation achieved	Advanced circular economy systems operational	Near-zero illegal dumping; optimised systems
Priority 3: Livelihoods & Awareness	Launch CEPA programs; 5,000 beneficiaries engaged	Scale to 20,000 households; expand green enterprises	Full participation and NbS adoption	Consolidation; sustainability ensured
Priority 4: Governance & Resilience	Establish biodiversity unit; baseline M&E	Policy integration; climate adaptation scaling	Advanced governance systems; resilience infrastructure	Institutional sustainability secured
Cross-cutting (M&E, Finance)	Baseline + resource mobilization	Mid-term review	Scaling finance and partnerships	Final evaluation

Strategic Activities

Under this Theory of Change, several strategic activities will be implemented to address the environmental challenges facing the municipality. One of the most visible interventions will be the expansion and restoration of urban green spaces. Tree planting programs will be implemented along roadsides, in schools, parks, and degraded urban areas to increase canopy cover and improve ecological connectivity across the municipality.

Wetland and coastal ecosystem restoration will also be a major focus. Mangrove habitats and urban wetlands, particularly those around the Bakau area, will be protected and rehabilitated to restore their ecological functions and enhance their capacity to regulate flooding and support biodiversity.

Waste management reforms represent another key activity area. These reforms will include the introduction of household waste segregation systems, expansion of recycling programs, development of composting facilities, and improvements to municipal waste collection infrastructure. These measures will reduce pollution and promote a circular economy approach to urban waste.

Education and awareness campaigns will be implemented to encourage behavioural change among residents, businesses, and schools. These campaigns will focus on biodiversity conservation, waste management practices, and climate adaptation strategies.

Finally, climate-resilient urban infrastructure will be introduced to address flooding and heat stress. Sustainable drainage systems, rain gardens, permeable pavements, and urban green buffers will help manage stormwater while simultaneously improving urban environmental quality.

Immediate Outputs

The implementation of these activities will generate several tangible outputs. By 2035, the municipality aims to plant approximately 200,000 trees across urban landscapes, significantly increasing green cover and improving habitat connectivity.

Urban wetlands and drainage systems will experience reduced levels of pollution due to improved waste management practices and stronger environmental regulation. Additionally, community environmental committees will be established and strengthened, providing platforms for local participation in environmental governance, monitoring, and stewardship.

These outputs represent the immediate results of the investments made through the SBSAP and form the foundation for broader ecological and social outcomes.

Medium-Term Outcomes

Over time, these outputs are expected to generate transformative outcomes for the municipality. Urban biodiversity will improve as restored habitats support bird species, pollinators, and other wildlife within the city landscape. Ecological connectivity between green spaces will enhance the resilience of urban ecosystems.

The municipality will also become less vulnerable to climate-related hazards. Increased tree cover and restored wetlands will reduce the impacts of flooding, heat stress, and coastal erosion, strengthening the city's climate resilience.

Equally important, environmental awareness and community participation will increase. Residents will become active partners in maintaining green spaces, managing waste responsibly, and protecting local ecosystems.

Long-Term Impact

The ultimate impact envisioned by this Theory of Change is the transformation of Kanifing Municipality into a greener, healthier, and climate-resilient urban environment. Biodiversity considerations will be fully integrated into urban planning and development processes, ensuring that economic growth does not come at the expense of ecological sustainability.

Ecosystem services such as flood regulation, air purification, urban cooling, and recreational spaces will be restored and maintained for the benefit of residents. In turn, communities will enjoy improved health, well-being, and environmental quality.

This transformation will also contribute to national biodiversity and climate goals under the Convention on Biological Diversity and the United Nations Framework Convention on Climate Change, demonstrating how local actions can support global environmental commitments.

8.2.5 Stakeholder Engagement and Governance

The success of the KM SBSAP depends on strong, inclusive, and coordinated governance. The Kanifing Municipal Council will serve as the lead implementing institution, particularly through its Environmental and Planning Departments. Technical collaboration will also involve national agencies such as the Department of Parks and Wildlife Management and the National Environment Agency.

Civil society organisations will play an important role in community mobilisation and environmental advocacy. Groups such as The Association of Non-Governmental Organisations and the Coalition of Gambia Environmental Organisations will help strengthen community participation and environmental awareness.

Academic and research institutions will contribute technical expertise in biodiversity monitoring, GIS mapping, and ecological research. The private sector will also be engaged in areas such as recycling, landscaping, green infrastructure development, and eco-friendly construction.

To coordinate these diverse actors, a KM Biodiversity Steering Committee will be established. This committee will bring together municipal departments, national agencies, civil society organisations, and community representatives. Specialised working groups under each strategic priority area will coordinate implementation, track progress, and ensure transparency and accountability.

8.2.6 Financing and Budget Considerations

The successful implementation of the SBSAP requires sustainable and diversified financing. Key investment areas include ecological mapping and baseline assessments, urban greening initiatives, wetland restoration, waste management infrastructure, training and capacity building, and environmental monitoring systems.

Additional funding will support policy development, urban planning reforms, and climate resilience infrastructure such as rain gardens, permeable pavements, and flood mitigation systems.

Potential financing sources include municipal budget allocations, national government environmental funding, and grants from international environmental and climate funds. Programs supported by the European Union, such as the Kanifing Environmental Transformation Program, can provide important financial backing. Additional resources may be mobilised from global funding mechanisms such as the Global Environment Facility and the Green Climate Fund.

Private sector partnerships and corporate social responsibility initiatives will also contribute to urban greening and waste management investments. Community contributions through volunteer labour and local stewardship initiatives will further strengthen implementation.

Indicative Budget (USD) – Kanifing Municipality SBSAP (2025–2035)

Table 15: Indicative Budget (USD) of KM priority areas by sum and proportion

Priority Area	Estimated Budget (USD)	% of Total
Priority 1: Urban Green Spaces & Restoration	$7,500,000	4.39%
Priority 2: Waste Management & Pollution Control	$150,000,000	87.84%
Priority 3: Livelihoods & Awareness	$8,500,000	4.90%
Priority 4: Governance & Climate Resilience	$3,750,000	2.20%
Cross-cutting (M&E, Coordination)	$1,000,000	0.01%
Total	**170,750,000**	**100%**

Table 16: Detailed Budget (USFD) by Category

Category	Estimated Cost (USD)	Notes
Personnel & Technical Assistance	$2,800,000	Urban planners, environmental officers
Training & Capacity Building	$1,800,000	CEPA, youth/women training
Urban Greening & Restoration	$3,500,000	Tree planting, parks, wetlands
Waste Management Infrastructure	$4,000,000	Collection, recycling, composting
Climate Resilience Infrastructure	$2,500,000	Drainage, green infrastructure
Livelihood Support	$1,800,000	Green enterprises
Equipment & Materials	$1,200,000	Bins, tools, monitoring equipment
Policy & Governance Support	$800,000	Planning integration
Monitoring & Evaluation	$1,000,000	GIS, surveys
Project Management	$2,100,000	Coordination, audits
Total	**$21,500,000***	Includes contingency

Table 17: Co-financing / Resource Mobilisation (USD) for KM

Source	Type	Amount (USD)	Notes
Government of The Gambia	Budget + in-kind	$3,000,000	Staff, infrastructure
Kanifing Municipal Council	Budget	$2,000,000	Waste systems, planning
Communities	In-kind	$1,000,000	Labor, stewardship
NGOs/CSOs	Co-financing	$1,500,000	CEPA, conservation
Donors (GEF, EU, GCF, IKI)	Grants	$12,000,000	Core funding
Private Sector	Co-financing	$2,000,000	Recycling, green business
Total		**$21,500,000**	Balanced

8.2.7 Monitoring, Evaluation, and Learning

A robust monitoring, evaluation, and learning (MEL) framework will ensure that the strategy remains effective and adaptive over time. During the first year of implementation, a comprehensive baseline assessment will map urban green cover, wetlands, biodiversity indicators, and waste management performance across the municipality.

Regular monitoring, conducted annually or biannually, will track changes in green cover, ecosystem health, and biodiversity status. These assessments will combine remote sensing technologies, field surveys, and citizen science initiatives.

Annual progress reports will be submitted to municipal leadership and integrated into national biodiversity reporting processes under the National Biodiversity Strategy and Action Plan. A mid-term evaluation after three years will assess implementation progress, identify challenges, and recommend adjustments to improve effectiveness.

To strengthen transparency and public accountability, community feedback mechanisms will also be established. Participatory scorecards, public consultations, and community meetings will allow residents to evaluate environmental programs and contribute to decision-making processes.

Conclusion

Through this integrated Theory of Change, the Kanifing Municipal Council establishes a clear pathway toward sustainable urban environmental management. By combining ecological restoration, improved waste management, climate-resilient infrastructure, and participatory governance, the municipality can reverse environmental degradation and build a resilient urban ecosystem.

Ultimately, the strategy envisions a future in which Kanifing becomes a model green municipality, demonstrating how cities in West Africa can integrate biodiversity conservation, climate adaptation, and sustainable development to enhance the well-being of both people and nature.

8.2.8 Risks and Mitigation

Table 18: Risks & and Mitigation for SBSAP implementation in KM

Risk	Mitigation Strategies
Encroachment & illegal land-use in wetlands due to development pressure	Strengthen planning controls, enforce bylaws, community surveillance, and legal protection of wetlands.
Insufficient funding or delay in resources	Seek diverse funding; phase implementation; prioritise high-impact low-cost actions early; in-kind contributions.
Low community participation/ownership	Early stakeholder engagement; inclusive planning; visible local benefits; awareness programmes.
Tree planting failures (low survival) / invasive species	Use native species; ensure proper site preparation; maintenance plans; monitoring; avoid introducing invasives.
Pollution sources beyond municipal control (upstream, drains, etc.)	Collaborate with neighbouring municipalities or national bodies; integrated catchment or watershed planning; regulatory enforcement.
Institutional capacity constraints	Training; provide staffing and resources; partnerships with academia / NGOs; technical assistance.

By 2035, the implementation of KM's Strategic Biodiversity and Sustainability Action Plan (SBSAP) is expected to deliver tangible ecological, social, and economic impacts across the municipality.

In terms of ecological restoration, KM aims to plant 200,000 trees and restore 50 hectares of urban green space, strengthening ecological connectivity, enhancing urban cooling, and increasing carbon sequestration. These interventions will also protect sensitive habitats, including wetlands, mangroves, and coastal dunes, while improving aesthetic and recreational value for residents.

On the waste management front, at least 60% of municipal waste is projected to be segregated and recycled, reducing pollution in waterways, drainage systems, and wetlands. The reduction of solid waste in public areas and improved composting will also support soil fertility and urban agriculture initiatives.

Regarding climate adaptation and resilience, flooding incidents are expected to decrease by 70%, thanks to the integration of ecosystem-based adaptation measures, sustainable drainage systems, and green infrastructure interventions such as permeable pavements and rain gardens. These measures will protect communities from extreme rainfall events and urban runoff, enhancing the municipality's resilience to climate variability.

Community engagement is a central outcome, with 80% of residents actively participating in environmental initiatives, including tree planting, waste management, ecological monitoring, and awareness campaigns. This level of engagement will foster a culture of stewardship, inclusivity, and shared responsibility for KM's urban environment.

In terms of economic and livelihood benefits, there will be a 50% increase in biodiversity-friendly enterprises, including eco-tourism, green landscaping, urban forestry services, waste recycling

businesses, and climate-smart urban agriculture. These enterprises will not only provide income opportunities but also incentivise sustainable practices and biodiversity conservation.

Overall, the successful implementation of these interventions will position KM as a national model for urban biodiversity management in The Gambia, demonstrating how urban development and ecological sustainability can be harmonised. The municipality will serve as a replicable example of integrating biodiversity, climate resilience, and community participation into municipal planning, contributing directly to national NBSAP goals and Global Biodiversity Framework (GBF) targets.

8.3 West Coast Region (WCR)

8.3.1 Background & Context

The West Coast Region (WCR) is one of the most socio-economically dynamic and ecologically diverse regions in The Gambia. Located along the Atlantic coastline and extending inland, the region comprises a complex mosaic of coastal ecosystems, wetlands, mangrove forests, forest parks, agricultural landscapes, and rapidly expanding urban settlements. This ecological diversity supports a wide range of biodiversity while underpinning key economic sectors such as tourism, agriculture, fisheries, and trade.

The coastal zone of the West Coast Region is particularly significant, hosting sandy beaches, dune systems, and mangrove-lined estuaries that provide critical habitats for marine and coastal species. Wetland systems such as Tanji Bird Reserve and other coastal lagoons serve as important stopover sites for migratory birds along the East Atlantic Flyway. Forest parks and community forests across the region also support terrestrial biodiversity, including primates, reptiles, and bird species.

However, the West Coast Region faces intense environmental pressures driven by rapid population growth, urbanisation, and economic development. According to data from the Gambia Bureau of Statistics, the region has experienced a significant population increase, placing strain on land, water, and natural resources.

Urban expansion and infrastructure development have led to habitat fragmentation and loss of green spaces. Coastal erosion and sand mining threaten shoreline stability, while pollution from solid waste and wastewater affects both terrestrial and marine ecosystems. Unsustainable agricultural practices and deforestation further contribute to land degradation and biodiversity decline.

Climate change exacerbates these challenges through sea-level rise, increased flooding, and changing rainfall patterns, which threaten both ecosystems and livelihoods. Coastal communities are particularly vulnerable to storm surges and saltwater intrusion, while inland areas face declining soil fertility and water availability.

Recognising these challenges, the West Coast Region Subnational Biodiversity Strategy and Action Plan aligns with the National Biodiversity Strategy and Action Plan (2025–2035) and contributes to the global commitments under the Kunming-Montreal Global Biodiversity

Framework. It provides a roadmap for integrating biodiversity conservation into regional development while enhancing climate resilience and sustainable livelihoods.

Vision

The vision for the West Coast Region is to achieve a resilient and sustainably managed landscape where biodiversity is conserved, ecosystems are restored, and communities thrive through inclusive and climate-resilient development.

Goal

The overarching goal of the WCR SBSAP is to conserve biodiversity, restore degraded ecosystems, and promote sustainable livelihoods while strengthening resilience to climate change and environmental pressures.

8.3.2 Strategic Objectives & Regional Priorities

Priority 1 – Coastal & Urban Ecosystem Restoration

This priority focuses on restoring degraded coastal and urban ecosystems that are under pressure from rapid development and environmental degradation.

Key interventions will include mangrove restoration, coastal dune stabilisation, and urban greening initiatives such as tree planting and green corridors. Nature-based solutions will be promoted to address flooding and erosion, including wetland restoration and the creation of buffer zones.

Urban planning processes will integrate biodiversity considerations to ensure that green spaces are protected and expanded.

Priority 2 – Biodiversity Conservation & Protected Areas

This priority aims to strengthen the conservation and management of key biodiversity areas across the region.

Efforts will focus on improving the management effectiveness of protected areas such as Tanji Bird Reserve and forest parks. Biodiversity monitoring systems will be enhanced to track species populations and ecosystem health.

Community-managed conservation areas will be promoted to complement formal protected areas, while enforcement mechanisms will be strengthened to reduce illegal activities such as poaching and habitat encroachment.

Priority 3 – Sustainable Livelihoods & Green Economy

Recognising the strong link between livelihoods and biodiversity, this priority promotes sustainable economic activities that reduce pressure on natural resources.

The strategy will support eco-tourism, sustainable fisheries, urban agriculture, and green enterprises such as recycling and waste management businesses. Skills development and access to finance will enable communities, particularly women and youth, to participate in biodiversity-friendly economic activities.

Priority 4 – Climate Change Adaptation & Resilience

This priority focuses on enhancing the resilience of ecosystems and communities to climate change impacts.

Ecosystem-based adaptation approaches will be implemented, including mangrove restoration, wetland conservation, and sustainable land management practices. Renewable energy solutions and climate-smart technologies will also be promoted to reduce environmental pressure.

Early warning systems and disaster risk management strategies will strengthen community preparedness for climate-related hazards.

8.3.3 Results Framework Matrix – WCR SBSAP Project Proposal

Table 19: Results Framework Matrix – WCR SBSAP

Level	Results Statement	Indicators (SMART)	Baseline (2025)	Targets (2030/2035)	Means of Verification	Assumptions/Risks
Impact / Goal	By 2035, WCR ecosystems are conserved, restored, and sustainably managed, ensuring biodiversity protection, climate resilience, and sustainable livelihoods.	- % increase in forest/mangrove cover - % of biodiversity-rich habitats under protection/restoration - % of households benefiting from biodiversity-friendly livelihoods	Forest cover declining; <10% mangrove areas restored; low livelihood diversification	+20% forest/mangrove cover restored; 30% of degraded ecosystems restored; 40% of households engaged in sustainable livelihoods	Remote sensing data; National Biodiversity Monitoring Reports; Household surveys	Continued political commitment; Climate change impacts remain within adaptation capacity
Outcome 1	Reduced ecosystem degradation and improved habitat restoration in WCR	- Hectares of mangroves/forests restored - # of community-based ecosystem restoration initiatives	Fragmented restoration activities, <500 ha restored	5,000 ha restored (mangrove + forest); 20 community-led initiatives	Project reports; NEA/DPWM monitoring; Satellite imagery	Community willingness to participate; No large-scale land grabs
Outcome 2	Sustainable fisheries and aquatic biodiversity management adopted in WCR	- % reduction in illegal/unsustainable fishing practices - # of community-managed fisheries zones - Fish stock recovery trends	High pressure on fish stocks; No functional community fisheries zones	5 functional community fisheries zones; +15% recovery in key fish stocks	Fisheries Dept. reports; Landing site monitoring; Local bylaws	Fisherfolk cooperation; Enforcement of fisheries regulations
Outcome 3	Pollution and waste threats reduced in urban and peri-urban WCR	- % reduction in plastic waste leakage into rivers/coastal areas - # of community recycling and waste	Poor waste management; >70% of urban waste is unmanaged	50% reduction in plastic waste leakage; 10 recycling hubs; 60% of	NEA reports, Municipal waste data, Field surveys	Municipal councils cooperate; the market for recycled products is sustained

		initiatives - % of urban households with improved waste management		households covered		
Outcome 4	Strengthened governance, institutional capacity, and community participation in biodiversity conservation	- # of local bylaws adopted and enforced - # of people (esp. women/youth) trained on biodiversity-friendly practices - Biodiversity integrated into regional land-use plans	Weak enforcement; <10% women/youth involved; No biodiversity in land-use planning	5 bylaws adopted/enforced; 5,000 women/youth trained; Biodiversity mainstreamed in all WCR land-use plans	Project reports; Regional council records; Training evaluations	Political will remains; Traditional authorities are supportive
Output 1.1	Mangrove, forest and wetland restoration initiatives implemented	- # of hectares restored annually - # of nurseries established	<200 ha/year	1,000 ha/year restored; 10 nurseries functional	Field verification; Satellite imagery	Seedling supply and technical expertise available
Output 2.1	Community fisheries co-management structures established	- # of co-management committees - # of bylaws on fisheries enforcement	No structures	5 co-management committees functional; 5 bylaws adopted	Fisheries Dept. records; Local gov't reports	Fisherfolk's willingness; Effective law enforcement
Output 3.1	Waste management and recycling systems strengthened	- # of community waste groups - Tons of waste recycled annually	Informal collection only	15 groups; 2,000 tons/year recycled	NEA reports; Municipal records	Community and private sector involvement
Output 4.1	Local institutions and communities are capacitated on SBSAP implementation	- # of trainings conducted - # of biodiversity monitoring reports published	Ad hoc training; weak monitoring	50 trainings; Annual biodiversity reports	Training reports; NEA monitoring unit data	Adequate funding for training & monitoring

8.3.4 Theory of Change (ToC)

Problem Statement

The West Coast Region faces increasing biodiversity loss, ecosystem degradation, and climate vulnerability driven by rapid urbanisation, population growth, and unsustainable resource use.

Assumptions

The Theory of Change assumes that:

- Communities will adopt sustainable practices if viable economic alternatives are provided
- Strong institutional coordination will enhance implementation effectiveness
- Partnerships with NGOs and development partners will provide technical and financial support

Pathway of Change

Investments in ecosystem restoration, conservation, and sustainable livelihoods will generate outputs such as restored habitats, improved governance systems, and increased community engagement.

These outputs will lead to improved ecosystem health, reduced biodiversity loss, and enhanced socio-economic resilience.

Long-Term Impact

By 2035, the West Coast Region aims to achieve:

- Significant restoration of degraded ecosystems
- Improved biodiversity conservation outcomes
- Increased adoption of sustainable livelihoods
- Enhanced resilience to climate change

8.3.5 Logframe with GBF Mapping

Table 20: GBF Mapping logframe, WCR

Hierarchy	Expected Results	Indicators	Baseline (2025)	Target (2035)	Means of Verification	GBF Link
Impact	Improved ecosystems & livelihoods	Ecosystem health index	Degraded	+30% improvement	NEA reports	Goals A–D
Outcome 1	Restored coastal ecosystems	Hectares restored	<100 ha	2,000 ha	GIS, reports	T2, T8
Outcome 2	Protected biodiversity areas	% land protected	~10%	25%	DPWM reports	T3
Outcome 3	Sustainable livelihoods	# beneficiaries	<500	5,000	Surveys	T19
Outcome 4	Climate resilience improved	# EbA projects	Low	15 projects	TAC reports	T15

Table 21: Action Area Gantt Chart (2025–2035) for WCR

Action Area	2025–2027	2028–2030	2031–2033	2034–2035
Ecosystem Restoration	Baseline studies; pilot mangrove restoration; urban greening pilots	Scale restoration to coastal zones; expand urban greening	Full restoration programs; monitoring systems operational	Consolidation and long-term maintenance
Biodiversity Conservation	Strengthen PA management; baseline surveys	Expand conservation areas; species monitoring	Full enforcement and monitoring systems	Long-term conservation sustainability

Livelihoods	Pilot green enterprises; training programs	Scale to 2,000 beneficiaries	Expand to 4,000 beneficiaries	Achieve 5,000 beneficiaries
Climate Adaptation	Pilot EbA projects; awareness campaigns	Scale EbA initiatives	Integrate into planning systems	Long-term resilience systems
Cross-cutting	Establish M&E system	Mid-term review	Resource mobilization	Final evaluation

8.3.6 Budget / Resource Requirements

Below is an indicative budget for a 5-year implementation. Final figures will depend on detailed costing during Year 1.

Table 22: Financial Requirement for the implementation of the priority areas for WCR

Component	Estimated Budget (USD) over 5 years
Priority 1: Habitat protection & restoration	9,200,000 – 10,800,000
Priority 2: Fisheries & alternative livelihoods	15,000,000 – 20,000,000
Priority 3: Pollution, waste & invasive species control	2,000,000 – 3,000,000
Priority 4: Climate resilience, governance & financing	2,000,000 – 3,000,000
M&E, baseline & mapping, and MRV	300,000 – 500,000
Capacity building, stakeholder engagement, awareness raising	1,000,000 – 1,500,000
Project management, staffing, administration	250,000 – 400,000

8.3.7 Risk Analysis and Mitigation Strategies

Table 23: Risk Analysis and Mitigation Strategies for SBSAP WCR

Risk	Likelihood	Impact	Mitigation Measures
Insufficient or delayed funding	Medium-High	High – delays, scale-down of activities	Early donor engagement; prepare high-quality proposals; phased implementation; diversified funding sources; seed funds/gaps bridging; securing co-financing in commitments.
Community opposition or non-participation	Medium	High – projects may fail, conflict	Stakeholder engagement from the earliest stages; participatory planning; ensure benefit sharing; cultural considerations; transparency; conflict resolution mechanisms.
Weak enforcement / illegal activities (logging, unauthorised conversion, illegal fishing)	Medium	High	Strengthen capacity of DPWM/local enforcement; community monitors; legal tools; incentives for compliance; awareness campaigns.
Climate events / natural disasters undermining restoration (storms, sea level rise)	Medium	Medium-High	Choose resilient species and sites; design of restoration with expected sea level rise; insurance/flexibility; adaptive monitoring.
Institutional / governance bottlenecks (overlaps, weak capacities)	Medium	Medium	Clearly defined roles; capacity building; institutional agreements; coordination mechanisms (Steering Committee, TWGs).
Market / economic risks for alternative livelihood ventures	Medium	Medium	Market assessments; pilot first; support business planning; link to buyers; ensure training in business/value chain; risk sharing.

8.3.8 Cross-Cutting Themes

Gender Equality

Women will be empowered through green enterprises, governance participation, and access to resources.

Youth Empowerment

Youth engagement in conservation, eco-business, and innovation will be prioritised.

Traditional Knowledge

Local knowledge systems will be integrated into biodiversity management.

Partnerships

Strong collaboration between government, NGOs, and the private sector.

Policy Integration

Biodiversity will be mainstreamed into regional development planning.

8.3.9 Implementation Framework

Implementation will be coordinated by the Regional Governor's Office with support from:

- Department of Forestry
- National Environment Agency
- Department of Parks and Wildlife Management
- Local councils and community institutions

Implementation Timeline

A high-level Gantt-style timeline for the 5 years

Table 24: Gantt-style implementation timeline

Year	Key Activities / Milestones
Year 1 (2026)	Establish governance structures (Steering Committee, TWGs); hire core staff; baseline mapping & assessments; community consultation; designation of priority zones; pilot restoration sites; begin CBO/NGO partnerships; begin awareness campaigns; fundraising & seed capital for biodiversity fund.
Year 2	Scale up restoration; start fisheries management pilots; begin alternative livelihoods programs; set up pollution/waste pilots; EBA design in selected communities; begin legal / policy reviews; secure fund capitalisation; baseline monitoring.
Year 3	Expand interventions; refine pilot successes; launch blue carbon / PES pilot; enforce protection/zones; deeper community involvement; mid-term evaluation; adjust program as needed.
Year 4	Full implementation of most interventions; consolidation; national alignment/reporting; strengthen markets; scale up EBA; ensure institutionalisation of policies/bylaws; fund well established.
Year 5 (2030)	Final roll-out; measure outcomes against targets; final evaluation; prepare handover/sustainability plans; document lessons; ensure integration into regional and national planning beyond project life; reporting to national/GBF bodies.

Expected Impacts

By 2035:

- Coastal and urban ecosystems significantly restored
- 25% of land under effective conservation
- 5,000 households benefiting from green livelihoods
- Increased climate resilience across communities

The West Coast Region will emerge as a model for balancing urban development with biodiversity conservation in The Gambia.

8.4 North Bank Region (NBR)

8.4.1 Background & Context

The North Bank Region (NBR) is one of the most ecologically important landscapes in The Gambia. Stretching along the northern banks of the Gambia River, the region encompasses a mosaic of wetlands, mangrove forests, riverine ecosystems, savanna woodlands, and agricultural lands that sustain both biodiversity and rural livelihoods. These ecosystems play a crucial role in maintaining ecological balance while supporting economic activities such as farming, fishing, livestock rearing, and small-scale forest product harvesting.

Among the most significant ecological assets of the region is the Bao Bolong Wetland Reserve, a Ramsar-listed wetland complex recognised for its rich biodiversity and ecological importance. The reserve supports large populations of migratory birds, fish species, and aquatic mammals while providing essential ecosystem services such as water purification, flood regulation, and carbon storage. In addition to Bao Bolong, other important conservation areas in the region include Niumi National Park and Jinack Island National Park, both of which protect critical coastal and marine ecosystems.

Despite this ecological richness, the North Bank Region faces several environmental pressures that threaten the long-term sustainability of its natural resources. One of the most significant challenges is land degradation caused by unsustainable agricultural practices, overgrazing, and soil erosion. Many farmers rely on traditional farming systems that are increasingly unable to cope with changing climatic conditions and declining soil fertility.

Habitat loss is another major concern. Agricultural expansion, population growth, and settlement development have led to the clearing of forests and wetlands, reducing habitat availability for wildlife and disrupting ecological processes. As natural habitats shrink, biodiversity declines and ecosystem services become increasingly compromised.

Climate change further intensifies these challenges. Rising sea levels, flooding, and saltwater intrusion threaten coastal ecosystems and agricultural lands, particularly in low-lying areas near the river and coastal zones. Increasing temperatures and irregular rainfall patterns also affect crop productivity, water availability, and wildlife habitats.

Socio-economic pressures add another layer of complexity. Many communities in the region depend heavily on natural resources for survival, which can lead to the overexploitation of forests, fisheries, and wetlands. Without sustainable alternatives and improved governance systems, these pressures may continue to degrade ecosystems and undermine livelihoods.

Recognising these challenges, this Regional Action Plan aligns with the national biodiversity policy framework outlined in the National Biodiversity Strategy and Action Plan for 2025–2035. It also supports global biodiversity commitments under the Kunming-Montreal Global Biodiversity Framework, ensuring that conservation actions in the North Bank Region contribute

to broader national and international goals related to biodiversity protection, climate resilience, and sustainable development.

Vision

The long-term vision for the North Bank Region is to create a resilient landscape where biodiversity, ecosystems, and communities coexist in harmony. In this vision, natural resources are managed sustainably, ecosystems continue to provide essential services, and communities benefit from diversified and climate-resilient livelihoods. Through effective governance, community participation, and strategic investments in conservation, the region will contribute significantly to implementing national biodiversity priorities and achieving global biodiversity targets.

Goal

The overarching goal of the North Bank Region SBSAP is to restore degraded ecosystems, conserve biodiversity, and enhance sustainable livelihoods while strengthening climate resilience. This goal is fully aligned with the national priorities set out in the National Biodiversity Strategy and Action Plan (2025–2035) and the global commitments outlined in the Kunming-Montreal Global Biodiversity Framework.

8.4.2 Strategic Objectives and Regional Priorities

To achieve this vision and goal, the North Bank Region SBSAP identifies four strategic priority areas that address ecosystem restoration, biodiversity conservation, community livelihoods, and climate resilience.

Priority 1 – Landscape Restoration & Sustainable Land Management

The priority focuses on restoring degraded landscapes and promoting sustainable land-use practices that balance environmental protection with agricultural productivity. Many areas in the region suffer from soil degradation, deforestation, and declining vegetation cover. These problems reduce agricultural productivity and increase vulnerability to climate impacts.

Under this priority, community-led reforestation and agroforestry initiatives will restore approximately 12,000 hectares of degraded land. Agroforestry systems will integrate trees into farming landscapes, improving soil fertility, increasing carbon sequestration, and providing additional income sources through fruit trees, timber, and non-timber forest products.

Climate-smart agriculture practices will also be promoted to enhance productivity while reducing environmental impacts. Farmers will receive training in soil conservation, water management, crop diversification, and sustainable grazing practices. Community woodlots and tree nurseries will be established to provide seedlings for restoration efforts and support local forestry enterprises.

These actions directly support international biodiversity targets related to ecosystem restoration and ecosystem service protection under the Kunming-Montreal Global Biodiversity Framework.

Priority 2 – Biodiversity Conservation & Protected Areas

The second strategic priority focuses on strengthening biodiversity conservation and improving the management of protected areas and key biodiversity habitats. The region's wetlands, forests, and coastal ecosystems provide critical habitat for many species, including migratory birds and threatened aquatic mammals.

Efforts under this priority will strengthen co-management systems for community forests and wetland areas, ensuring that local communities participate actively in conservation efforts. Biodiversity research and monitoring programs will be expanded, particularly in the Bao Bolong Wetland Reserve and surrounding habitats.

Special attention will be given to protecting endangered species such as the West African manatee and Hippopotamus, as well as migratory bird populations that rely on the region's wetlands.

Community conserved areas and Indigenous and Community Conserved Areas (ICCAs) will be promoted to expand conservation coverage beyond formal protected areas. Ecotourism initiatives linked to wetlands, forests, and cultural heritage sites will also be developed to create economic incentives for conservation.

Priority 3 – Community Livelihoods, Knowledge & Governance

This priority recognises that biodiversity conservation cannot succeed without improving the livelihoods and governance capacity of local communities. Many households depend on natural resources for income, and unsustainable resource use often results from limited economic alternatives.

The SBSAP will therefore promote biodiversity-friendly livelihood opportunities such as beekeeping, oyster farming, handicraft production, and eco-tourism services. These enterprises provide alternative income streams while encouraging sustainable management of natural resources.

Capacity-building programs will strengthen the governance roles of Village Development Committees, Community Forest Committees, and youth organisations. These institutions will receive training in resource management, financial management, and participatory decision-making.

In addition, biodiversity conservation principles will be integrated into district and regional development plans to ensure that environmental sustainability becomes a core component of planning and policy processes. Education and awareness programs will also be conducted in schools and communities to promote environmental stewardship among younger generations.

Priority 4 – Climate Change Adaptation and Resilience

Climate change presents one of the most significant long-term threats to ecosystems and livelihoods in the North Bank Region. Rising sea levels, flooding, and drought conditions threaten both natural habitats and agricultural productivity.

To address these risks, the SBSAP will promote ecosystem-based adaptation approaches that harness the protective functions of natural ecosystems. Mangrove restoration, wetland conservation, and sustainable fisheries management will strengthen coastal resilience and reduce the impacts of storms and flooding.

Communities will also be supported in adopting renewable energy technologies such as solar power and energy-efficient cookstoves, which help reduce pressure on forests and lower greenhouse gas emissions.

Early warning systems and community-based disaster management mechanisms will be established to improve preparedness for climate-related hazards.

8.4.3 Theory of Change (ToC)

The Theory of Change for the North Bank Region SBSAP provides a framework explaining how investments in ecosystem restoration, biodiversity conservation, and community empowerment can generate long-term environmental and socio-economic benefits.

Problem Statement

The North Bank Region faces increasing ecosystem degradation, biodiversity loss, and limited institutional capacity for natural resource management. These challenges weaken the resilience of both ecosystems and communities, making them more vulnerable to climate change and environmental shocks.

Assumptions

The Theory of Change is based on several key assumptions. It assumes that communities and local authorities will support biodiversity conservation initiatives when they see clear economic and environmental benefits. It also assumes that strong partnerships with NGOs, government agencies, and development partners will provide the technical and financial support necessary for successful implementation. Furthermore, the strategy recognises that traditional ecological knowledge held by local communities can complement scientific approaches to biodiversity conservation.

Pathway of Change

The pathway of change begins with strategic investments in ecosystem restoration, biodiversity protection, and community capacity building. Restoration activities will rehabilitate mangroves, forests, and agricultural lands, while strengthened protected area management will safeguard key habitats and species.

Training programs and awareness campaigns will empower communities, particularly women and youth, to participate actively in conservation and green enterprises. At the same time, biodiversity considerations will be integrated into local governance systems and development planning processes.

These activities will generate outputs such as restored ecosystems, strengthened protected areas, increased community engagement, and improved governance systems. Over time, these outputs will lead to outcomes including improved ecological integrity of wetlands and forests, reduced species decline, and increased livelihood opportunities based on sustainable resource use.

Long-Term Impact

By 2035, the strategy envisions a transformed North Bank Region in which biodiversity is effectively conserved and ecosystems are managed sustainably. The region aims to place **approximately 35 per cent of its land area under effective conservation and sustainable management**, ensuring that natural ecosystems continue to provide essential services such as climate regulation, food production, and water management.

Through this integrated approach, the North Bank Region will become a model landscape demonstrating how biodiversity conservation, climate resilience, and sustainable development can be achieved simultaneously in West Africa.

8.4.4 Logframe with GBF Mapping

Table 25: GBF Mapping logframe NBR

Hierarchy	Expected Results	Indicators	Baseline (2025)	Target (2035)	Means of Verification	GBF Link
Impact	Restored ecosystems and improved livelihoods	% forest cover, ecosystem integrity index	Degraded	+15% forest cover, +35% biodiversity index	NEA reports, GIS maps	Goals A–D
Outcome 1	Land and forests restored	Hectares restored	<200 ha	12,000 ha restored	Forestry reports	T2, T10
Outcome 2	Biodiversity areas effectively managed	# co-managed sites, species populations	Limited protection	10 new co-managed sites	DPWM reports	T3, T4
Outcome 3	Alternative livelihoods promoted	# of enterprises supported	<50	500 enterprises	NGO and council records	T14, T19
Outcome 4	Climate resilience improved	# EbA initiatives, flood reduction	Low adaptation	10 EbA projects	TAC and NEA reports	T8, T15

Priority 1: Landscape Restoration & Sustainable Land Management

GBF Targets: 2, 8, 10

Table 26: Priority Objectives & SMART Indicators for Landscape Restoration and Sustainable Land Management, NBR

Objective	Indicators (SMART)	Baseline (2024)	Targets (2030/2035)	Means of Verification	Assumptions/Risks
Restore degraded lands and riverine ecosystems	% of degraded farmland restored	10% restored	35% restored by 2030; 50% by 2035	Remote sensing, reports	Sustained funding, farmer participation
Enhance soil & water management	Number of farms using climate-smart agriculture (CSA)	< 500 farms	5,000 farms by 2035	Extension services, FAO/GBoS surveys	Adoption dependent on training & incentives
Rehabilitate mangroves and floodplains	Hectares of mangroves restored	50 ha	300 ha by 2035	DoF/DoFisheries GIS monitoring	Storm surges & sea-level rise could offset gains
Promote agroforestry and woodlots	Number of community woodlots established	3 woodlots	30 woodlots by 2035	Forestry Dept. records, community reports	Risk of bushfires, overharvesting

Priority 2: Biodiversity Conservation & Protected Areas

GBF Targets: 3, 4, 12

Table 27: Priority Objectives & SMART Indicators for Biodiversity Conservation and Protected Areas, NBR

Objective	Indicators (SMART)	Baseline (2024)	Targets (2030/2035)	Means of Verification	Assumptions/Risks
Expand and strengthen protected area coverage	% of land under effective protection	14% (national) / ~8% NBR	20% by 2030; 35% by 2035	Protected area management effectiveness (METT), DPWM reports	Land tenure disputes, limited funding
Safeguard threatened species	Number of priority species with recovery/monitoring plans	2 (manatee, hippo)	6 species by 2035 (incl. migratory birds, primates)	Do Fisheries, BirdLife surveys, and IUCN updates	Poaching & climate change pressures

Promote community-managed reserves	# of community conserved areas legally recognised	0	5 by 2035	Local Gov. Act records, NGO reports	Local willingness & enforcement capacity
Reduce encroachment into habitats.	Rate of land conversion in PA buffer zones	High (est. 5% per year)	Reduced by 50% by 2030	GIS land cover analysis	Agricultural expansion pressure

Priority 3: Community Livelihoods, Knowledge & Governance

GBF Targets: 19, 20, 22, 23

Table 28: Priority Objectives & SMART Indicators for Community Livelihoods, Knowledge and Governance, NBR

Objective	Indicators (SMART)	Baseline (2024)	Targets (2030/2035)	Means of Verification	Assumptions/Risks
Strengthen biodiversity-friendly livelihoods	Number of households benefiting from green enterprises	< 200	2,000 by 2030; 5,000 by 2035	Household surveys, NGO reports	Markets and credit availability
Build local capacity & knowledge	Number of women/youth trained in biodiversity governance	< 50	1,000 by 2030; 3,000 by 2035	Training reports, gender audits	Women/youth participation willingness
Enhance community governance	Number of active community biodiversity committees	0	15 by 2030; 25 by 2035	District Dev. Plans, minutes	Local authority support
Integrate biodiversity into district planning	% of District Development Plans (DDPs) mainstreaming biodiversity	0%	100% by 2030	Council planning documents, MoLG records	Political turnover, competing priorities
Promote CNEA and TEK (Traditional Ecological Knowledge)	Number of schools and communities reached with CNEA programs	5 schools	50 schools & 100 communities by 2035	MoBSE reports, CNEA evaluations	Education policy alignment

3. Gantt Chart (Implementation Timeline, 2025–2035)

Table 29: Gantt Chart Implementation Timeline, 2025 - 2035

Action Area	2025–2027	2028–2030	2031–2033	2034–2035
Priority 1: Landscape Restoration	Baseline studies; Pilot CSA & agroforestry; Start mangrove restoration	Scale up CSA to 2,000 farms; Expand woodlots; 150 ha of mangroves restored	Full ecosystem restoration underway; Monitoring & adaptation	Consolidation; Long-term management structures
Priority 2: Biodiversity Conservation	Strengthen BWR, NNP, JNP, NBR management; Wildlife surveys; Establish 2 community reserves	Expand PA network; Recovery plans for 4 species	35% of the land in the PA network; Active enforcement	Long-term conservation monitoring
Priority 3: Livelihoods & Governance	Training programs for women & youth; 500 households in green enterprises	Scale up to 2,000 households; Establish 10 biodiversity committees	Full integration into District Development Plans; 4,000 households engaged	5,000 households; Institutional sustainability secured
Cross-cutting (Monitoring, Policy, Finance)	Establish M&E system; Secure co-financing	Mid-term evaluation: Adaptive management	Resource mobilization scaling	Final evaluation & reporting

8.4.5 Indicative Budget (USD) – North Bank Region NBSAP Action Plan (2025–2035)

(10-year implementation, donor + government + community co-financing)

a. Summary by Priority (Components)

Table 30: Indicative budget of priority areas for NBR

Priority Area	Estimated Budget (USD)	% of Total
Priority 1: Landscape Restoration & Sustainable Land Management	$6,500,000	40%
Priority 2: Biodiversity Conservation & Protected Areas	$4,875,000	35%
Priority 3: Community Livelihoods, Knowledge & Governance	$4,225,000	26%
Cross-cutting (M&E, Coordination, Policy Integration)	$650,000	4%
Total	**$16,250,000**	100%

b. Detailed Budget by Category

Table 31: Detailed Budget by Category for NBR

Category	Estimated Cost (USD)	Notes
Personnel & Technical Assistance	$2,500,000	Project staff, experts, extension officers
Training & Capacity Building	$1,750,000	Farmer field schools, women/youth training, CNEA
Ecosystem Restoration Works	$4,000,000	Mangroves, woodlots, agroforestry, soil/water conservation
Protected Area Management	$3,000,000	Infrastructure, monitoring, enforcement, community reserves
Livelihood Diversification	$2,500,000	Green enterprises (beekeeping, aquaculture, ecotourism)
Equipment & Materials	$1,250,000	Nurseries, patrol gear, monitoring equipment
Policy & Governance Support	$750,000	Integration into DDPs, community governance
Monitoring & Evaluation	$1,000,000	Baseline, mid-term, final evaluation, data systems
Project Management & Coordination	$1,500,000	Steering committee, admin costs, audits
Total	**$18,250,000***	*Includes 10% contingency

c. Co-financing / Resource Mobilisation (Indicative)

Table 32: Required Resource Mobilisation for NBR

Source	Type	Amount (USD)	Notes
Government of The Gambia	In-kind + budget allocation	$2,500,000	Staff salaries, infrastructure, policy support
Local Communities	In-kind	$750,000	Labour, land, community monitoring
NGOs/CSOs (BirdLife, Wetlands International, WWF)	Co-financing	$1,000,000	Technical & small grants
International Donors (GEF, IKI, Global EbA, GCF)	Grant	$12,000,000	Main donor funding
Private Sector / Carbon Finance	Co-financing	$2,000,000	Eco-enterprises, REDD+, mangrove carbon credits
Total Co-financing		**$18,250,000**	Balanced with the budget

8.4.6 Cross-Cutting Themes

The successful implementation of the North Bank Region (NBR) Subnational Biodiversity Strategy and Action Plan (SBSAP) requires addressing several cross-cutting themes that

strengthen social inclusion, knowledge integration, partnerships, and policy coherence. These themes cut across all strategic priorities and ensure that biodiversity conservation efforts generate equitable benefits while enhancing institutional effectiveness and long-term sustainability in The Gambia.

Gender Equality

Gender equality is a central pillar of the NBR SBSAP, recognising the vital role women play in natural resource management, household livelihoods, and community development. In many rural communities across the North Bank Region, women are actively involved in activities such as fuelwood collection, gardening, oyster harvesting, and small-scale trading. These roles position them as key stakeholders in biodiversity conservation and sustainable land management.

The SBSAP therefore promotes women's active participation in forest management, wetland conservation, and biodiversity-based enterprises. Women's groups will be supported to establish and manage tree nurseries, agroforestry systems, and eco-enterprises such as honey production, handicrafts, and ecotourism services. Leadership training and access to financial resources will further enable women to participate in local governance institutions such as Village Development Committees and Community Forest Committees.

Ensuring gender-responsive governance not only strengthens conservation outcomes but also improves household income, food security, and social equity.

Youth Empowerment

Young people represent a significant portion of the population in the North Bank Region and hold enormous potential to drive environmental stewardship and innovation. The SBSAP therefore prioritises youth empowerment as a cross-cutting strategy for biodiversity conservation and climate resilience.

Youth will be actively engaged in reforestation campaigns, environmental awareness programs, and biodiversity monitoring activities. Youth-led eco-clubs and environmental networks will promote conservation education in schools and communities. In addition, young people will participate in climate-smart agriculture demonstrations, digital mapping of ecosystems, and ranger patrols supporting conservation efforts in protected areas such as Bao Bolong Wetland Reserve.

By providing training, mentorship, and entrepreneurial support, the SBSAP will enable youth to establish green businesses linked to agroforestry, sustainable fisheries, and eco-tourism.

Traditional Knowledge

Traditional ecological knowledge has long guided the sustainable use of natural resources in communities across the North Bank Region. Indigenous practices related to fishing, farming, forest management, and wetland use have helped maintain ecological balance for generations.

The SBSAP recognises the importance of integrating this knowledge into modern biodiversity management approaches. Elders, traditional leaders, and experienced resource users will be consulted during participatory planning processes to document local conservation practices and customary rules governing natural resource use.

Combining traditional knowledge with scientific research will enhance ecosystem restoration strategies and ensure that conservation initiatives are culturally appropriate and locally accepted.

Partnerships and Collaboration

Achieving the ambitious goals of the NBR SBSAP requires strong collaboration among government agencies, civil society organisations, academic institutions, development partners, and private sector actors. Partnerships will facilitate knowledge sharing, resource mobilisation, and technical support for biodiversity conservation initiatives.

Government agencies responsible for forestry, wildlife, fisheries, agriculture, and environmental management will provide technical guidance and regulatory oversight. Non-governmental organisations and community-based organisations will support community mobilisation, capacity building, and implementation of field activities.

Academic and research institutions will contribute scientific expertise in biodiversity monitoring, ecosystem mapping, and climate adaptation strategies. Private sector actors will be encouraged to invest in biodiversity-friendly enterprises such as eco-tourism, sustainable fisheries processing, and agroforestry value chains.

Through collaborative partnerships, the SBSAP aims to leverage diverse expertise and financial resources to achieve long-term conservation outcomes.

Policy Integration

Another important cross-cutting priority is the integration of biodiversity considerations into broader development policies and planning frameworks. Biodiversity conservation cannot succeed if environmental concerns remain isolated from sectors such as agriculture, land management, and climate policy.

The NBR SBSAP therefore promotes alignment with national policies, including the National Biodiversity Strategy and Action Plan, and international commitments such as the Kunming-Montreal Global Biodiversity Framework. At the regional level, biodiversity objectives will be incorporated into district development plans, land-use planning processes, and climate adaptation strategies.

This policy integration ensures that conservation actions complement broader development goals while reducing potential conflicts between economic activities and environmental protection.

8.4.7 Implementation Framework

The implementation of the North Bank Region SBSAP will be guided by a structured institutional framework designed to coordinate stakeholders, mobilise resources, and ensure effective delivery of biodiversity conservation activities.

Lead Institution

The primary coordinating authority for the implementation of the strategy will be the North Bank Region Governor's Office, working in collaboration with the Regional Technical Advisory Committee (TAC). This committee will provide strategic oversight, technical guidance, and coordination among implementing partners.

Key Government Partners

Several government agencies will provide technical support and regulatory oversight during implementation. These include the Department of Forestry, the National Environment Agency, the Department of Parks and Wildlife Management, the Department of Agriculture, and the Department of Fisheries.

These institutions will contribute expertise in ecosystem restoration, biodiversity monitoring, climate-smart agriculture, fisheries management, and environmental policy implementation.

Civil Society and Development Partners

Civil society organisations and development partners will play an important role in supporting implementation at the community level. Organisations such as West Africa Sustainable Development Agency, ActionAid, Fauna & Flora International, and Green-Up Gambia will contribute technical expertise, community outreach, and project financing.

Community-Level Actors

Local institutions will serve as the foundation of implementation efforts. Village Development Committees will coordinate community participation in restoration activities, while Community Forest Committees will oversee forest management and enforce conservation bylaws.

Local women's associations and youth groups will lead many of the livelihood and environmental awareness initiatives. These grassroots organisations will play a key role in ensuring that biodiversity initiatives remain community-driven and locally sustainable.

Phased Implementation Approach

Implementation of the NBR SBSAP will follow a phased approach designed to gradually scale conservation efforts and strengthen institutional capacity over time.

Phase 1: Stakeholder Engagement and Baseline Development (2025–2026)

The first phase will focus on mobilising stakeholders, conducting baseline assessments, and raising awareness about biodiversity conservation. Community consultations and participatory planning processes will help identify priority ecosystems for restoration and protection.

Baseline data on ecosystems, species populations, and livelihood conditions will be collected to inform monitoring and evaluation systems. Awareness campaigns will also promote environmental education among schools, community groups, and local leaders.

Phase 2: Implementation of Restoration and Conservation Programs (2027–2029)

During the second phase, large-scale ecosystem restoration and biodiversity conservation activities will be implemented across the region. Reforestation programs, mangrove restoration initiatives, and sustainable agriculture projects will be expanded. Community enterprises linked to biodiversity conservation will also be established and supported.

Phase 3: Consolidation, Evaluation, and Upscaling (2030–2035)

The final phase will focus on consolidating achievements, evaluating program impacts, and scaling up successful interventions. Lessons learned will inform future conservation initiatives and policy development. Successful community enterprises and conservation models will be expanded to additional communities within the region.

Expected Impacts

By 2035, the implementation of the North Bank Region SBSAP is expected to produce significant ecological, social, and economic impacts that strengthen both biodiversity conservation and community resilience.

A major ecological impact will be the restoration of approximately 35 per cent of degraded ecosystems across the region by 2030. These restored landscapes will include forests, wetlands, mangrove ecosystems, and agricultural lands managed through sustainable practices.

In addition, 35 per cent of the North Bank Region will be placed under effective conservation management by 2035, including protected areas, community forests, and locally managed conservation zones linked to sites such as Niumi National Park and Bao Bolong Wetland Reserve.

The strategy will also deliver important socio-economic benefits. At least 5,000 households are expected to benefit from biodiversity-friendly enterprises, including agroforestry businesses, sustainable fisheries processing, eco-tourism ventures, and non-timber forest product value chains.

Women and youth will be fully mainstreamed into biodiversity governance systems, strengthening community participation and ensuring equitable access to economic opportunities. Local

governance institutions will also become more effective in integrating biodiversity priorities into district development planning processes.

Through these combined impacts, the North Bank Region will become a model for integrated biodiversity conservation and sustainable rural development in West Africa, demonstrating how ecosystem restoration and community empowerment can contribute to both environmental sustainability and economic resilience.

8.5 Lower River Region (LRR)

8.5.1 Background & Rationale

The Lower River Region (LRR) of The Gambia is endowed with diverse and productive ecosystems, including mangroves, riverine forests, grasslands, agricultural lands, and coastal wetlands. These ecosystems support a rich array of terrestrial and aquatic biodiversity while providing critical ecosystem services such as flood regulation, nutrient cycling, carbon storage, and water purification. LRR also serves as a backbone for rural livelihoods, with local communities depending heavily on fisheries, forestry products, agriculture, and livestock for income, food security, and cultural practices.

Despite its ecological and economic significance, biodiversity in LRR is increasingly under threat. Deforestation from fuelwood collection and charcoal production, agricultural expansion, overgrazing, bushfires, and soil erosion have led to land degradation and habitat loss. Unsustainable fishing practices and pollution from agricultural runoff and poor waste management further stress aquatic ecosystems. These pressures are compounded by weak enforcement of environmental laws and limited technical capacity among local institutions.

The LRR Subnational Biodiversity Strategy and Action Plan (SBSAP) is aligned with The Gambia's National Biodiversity Strategy and Action Plan (NBSAP 2025–2035) and the Kunming–Montreal Global Biodiversity Framework (GBF). It provides a roadmap for conserving biodiversity, restoring degraded ecosystems, and promoting sustainable livelihoods, ensuring that ecological integrity and community well-being are maintained in the face of ongoing environmental and socio-economic pressures.

Vision

A resilient Lower River Region where ecosystems and biodiversity are conserved and sustainably managed for the benefit of present and future generations.

Goal

By 2035, LRR's biodiversity and ecosystems will be protected, restored, and sustainably utilised through community participation, capacity building, and ecosystem-based management approaches, in alignment with national and global biodiversity targets.

8.5.2 Strategic Objectives and Priority Areas

The LRR SBSAP identifies four strategic priorities that integrate ecological restoration, biodiversity conservation, climate adaptation, and governance to achieve sustainable development outcomes.

Priority 1: Ecosystem Restoration and Land Management

Objective: Restore degraded lands and enhance sustainable land management practices. GBF Links: Target 2 (restoration), Target 10 (ecosystem health), Target 14 (resilience).

Key Strategies & Actions:

- Restore 100 hectares of degraded lands through reforestation and agroforestry interventions.
- Halt encroachment in wetland area/mangrove zones
- Promote sustainable soil and water conservation practices in farmlands to reduce erosion and salinisation and enhance productivity.
- Establish community woodlots to reduce reliance on natural forests for fuelwood.
- Develop and enforce land-use planning guidelines to balance agricultural expansion with ecosystem protection.
- Integrate climate-smart agriculture (CSA) practices into local farming systems.
- Rehabilitate abandoned rice fields and promote wetland management to enhance both productivity and ecological function.

Priority 2: Biodiversity Conservation and Protected Areas Management

Objective: Conserve biodiversity through effective management of forests, wetlands, and wildlife habitats.
GBF Links: Target 3 (protected areas), Target 4 (species conservation), Target 8 (ecosystem services).

Key Strategies & Actions:

- Strengthen co-management structures for forests, community parks, and marine areas.
- Protect mangrove ecosystems and regulate sustainable harvesting.
- Promote biodiversity monitoring and research to inform management decisions.
- Support alternative livelihoods such as beekeeping, oyster farming, vegetable farming and ecotourism to reduce pressure on natural resources.
- Promote tree planting in buffer zones and coastal belts to enhance habitat connectivity.
- Enforce environmental laws and community bylaws to curb illegal resource extraction.

Priority 3: Climate Change Adaptation and Resilience

Objective: Strengthen the resilience of communities and ecosystems to climate change impacts.
GBF Links: Target 8 (climate resilience), Target 10 (ecosystem adaptation), Target 15 (nature-based solutions).

Key Strategies & Actions:

- Promote ecosystem-based adaptation (EbA) measures in flood- and drought-prone areas.
- Support climate-resilient agriculture and diversification of livelihoods.
- Develop flood and drought management strategies.
- Raise community awareness on climate adaptation and disaster risk reduction.
- Integrate biodiversity considerations into regional climate policies and action plans.

Priority 4: Governance, Capacity Development, and Livelihoods

Objective: Strengthen institutional capacity, coordination, and community participation for biodiversity management.
GBF Links: Target 19 (capacity building), Target 20 (resource mobilisation), Target 22 (inclusive governance).

Key Strategies & Actions:

- Build the capacity of local institutions, women's groups, and youth associations in biodiversity management.
- Strengthen coordination between local authorities, government Departments, and NGOs.
- Support biodiversity-friendly enterprises and provide microfinance opportunities for women and youth.
- Enhance environmental education and awareness in schools and communities.
- Establish monitoring committees at ward and village levels to oversee biodiversity programs and ensure accountability.

8.5.3 Results Framework (Logframe Matrix)

Results Framework Matrix, LRR Subnational NBSAP (2025–2035)

Goal: By 2035, biodiversity and ecosystem services in the Lower River Region (LRR) are restored, sustainably managed, and equitably governed, contributing to climate resilience, food security, and livelihoods.

Priority 1: Ecosystem Restoration & Protection

Table 33: Ecosystem Restoration and Protection Results Framework Matrix LRR

Objective	Indicators	Baseline (2025)	Targets (2030)	Means of Verification	Responsible Actors
Restore and protect mangroves, wetlands, forests, and corridors	- Hectares of mangroves restored- # of community forests under management plans- # of firebreaks established	- <500 ha restored- 2 CFCs active- Limited firebreaks	- 3,000 ha restored- 6 CFCs with management plans- Firebreaks in all 6 wards	Project reports, GIS data, CFC reports, remote sensing	DoF, NEA, Forestry Dept, VDCs, CFCs, NGOs

Priority 2: Sustainable Livelihoods & Climate-Smart Agriculture

Table 34: Sustainable Livelihoods and Climate-Smart Agriculture Results Framework Matrix LRR

Objective	Indicators	Baseline (2025)	Targets (2030)	Means of Verification	Responsible Actors
Improve community livelihoods through CSA, agroforestry, and green enterprises	- # of women/youth-led enterprises supported- % households adopting CSA- Income increase from CSA/forestry products	- <5 enterprises- <10% households using CSA- Low income diversification	- 60 women/youth enterprises- 40% of households adopt CSA- 35% increase in household incomes	Household surveys, project reports, cooperative records	DoA, WDCs, Women's groups, Youth groups, NGOs

Priority 3: Fisheries & Coastal Resource Management

Table 35: Fisheries and Coastal Resource Management Results Framework Matrix LRR

Objective	Indicators	Baseline (2025)	Targets (2030)	Means of Verification	Responsible Actors
Promote sustainable fisheries and coastal resource management.	- # of functional Landing Site Committees (LSCs)- Catch per unit effort (CPUE)- % reduction in illegal/unsustainable fishing practices	- 2 LSCs active- Declining CPUE- High juvenile fish catch	- 6 LSCs operational- CPUE stabilized/increased- 70% reduction in illegal fishing	LSC records, DoFish reports, catch assessments, fisher logbooks	DoFish, LSCs, fisher associations, Women's oyster groups

Priority 4: Governance, Gender & Youth Empowerment

Table 36: Governance, Gender & Youth Empowerment Results Framework Matrix LRR

Objective	Indicators	Baseline (2025)	Targets (2030)	Means of Verification	Responsible Actors
Strengthen inclusive governance structures and leadership roles for women/youth	- % women in leadership roles in committees- % youth in governance/monitoring roles- # of bylaws developed and enforced	- <20% women- <15% youth- 1–2 bylaws	- ≥40% women- ≥35% youth- At least 6 bylaws enforced	Committee records, bylaws, training reports, MEL data	WDCs, VDCs, Women's groups, Youth groups, CSOs

8.5.4 Theory of Change (ToC) – Lower River Region (LRR)

The Lower River Region (LRR) represents one of the most ecologically significant landscapes in The Gambia. The region contains diverse ecosystems including mangrove forests, wetlands, savanna woodlands, riverine habitats, and agricultural landscapes that support both biodiversity conservation and rural livelihoods. These ecosystems are closely linked to the livelihoods of local communities who depend on fisheries, farming, forest resources, and wetlands for food security and income generation. However, these natural systems are increasingly under pressure from environmental degradation, climate change, and socio-economic challenges. The Theory of Change (ToC) for the Lower River Region Strategic Biodiversity Strategy and Action Plan (LRR SBSAP) outlines a pathway through which integrated ecosystem management, inclusive governance, and sustainable livelihood opportunities can restore ecological resilience and strengthen community well-being.

Problem Context

The Lower River Region faces multiple and interconnected environmental challenges that threaten both biodiversity and the livelihoods of local populations. Mangrove ecosystems along the riverine areas are being degraded due to overharvesting, fuelwood extraction, and unsustainable fishing practices. These mangrove forests play a critical ecological role by protecting shorelines, supporting fish breeding grounds, and maintaining water quality. Their degradation has far-reaching consequences for fisheries productivity and coastal stability.

Deforestation and land degradation within upland areas further exacerbate environmental pressures. Agricultural expansion, fuelwood collection, and unsustainable land management practices contribute to soil erosion, declining soil fertility, and reduced forest cover. At the same time, frequent bushfires, often linked to land clearing and uncontrolled burning, damage vegetation, wildlife habitats, and agricultural lands.

Overfishing and weak fisheries governance are also significant challenges. Unsustainable fishing practices reduce fish stocks and threaten aquatic biodiversity along the Gambia River and its surrounding wetlands. These pressures are compounded by poverty, limited livelihood options, and weak institutional capacity for environmental management.

Climate change intensifies these challenges. Increased temperatures, irregular rainfall patterns, flooding, and rising salinity levels threaten agricultural productivity, fisheries, and ecosystem stability. Without coordinated and strategic interventions, ecosystem services will continue to decline, undermining food security, income generation, and the long-term resilience of communities in the region.

Assumptions Underpinning the Theory of Change

The Theory of Change for the LRR SBSAP is built upon several foundational assumptions that shape the strategy for sustainable biodiversity management. First, it assumes that communities will actively participate in conservation and restoration initiatives when benefits are visible, equitable, and directly linked to livelihoods. Local ownership and participation are therefore central to achieving sustainable outcomes.

Second, the ToC assumes that strengthening local governance institutions will significantly improve the management of natural resources. Community structures such as Village Development Committees (VDCs), Ward Development Committees (WDCs), Community Forest Committees (CFCs), and Local Sea Committees (LSCs) play a crucial role in decision-making, enforcement of bylaws, and community-based resource management.

Third, the strategy assumes that women and youth possess the potential to become leaders in biodiversity conservation and green enterprises when they are provided with adequate training, access to finance, and institutional support. Empowering these groups is essential for promoting inclusive and sustainable development.

Finally, the ToC assumes that national institutions and development partners will continue to provide technical, financial, and policy support to the region. Alignment with national biodiversity and climate frameworks will ensure that local actions contribute to broader environmental goals.

Inputs Supporting Implementation

The successful implementation of the LRR SBSAP requires a combination of financial resources, technical expertise, local knowledge, and supportive policy frameworks. Funding will be mobilised through national government programs, development partners, and environmental financing mechanisms.

Technical expertise will be drawn from government agencies and research institutions specialising in ecosystem restoration, climate-smart agriculture, fisheries management, and wildfire prevention. These institutions will support the design and implementation of restoration activities, sustainable livelihood initiatives, and monitoring systems.

Equally important is the integration of local knowledge and traditional ecological practices. Communities in LRR have long managed natural resources through customary systems, and these practices provide valuable insights into sustainable resource use and ecosystem stewardship.

The strategy will also operate within national and international policy frameworks, including the Convention on Biological Diversity and the Global Biodiversity Framework, as well as the national biodiversity strategies and climate policies of The Gambia.

Strategic Activities

To address the complex environmental and socio-economic challenges facing the region, the LRR SBSAP proposes a set of integrated activities organised into five thematic areas.

The first thematic area focuses on ecosystem restoration and protection. Activities under this component include large-scale mangrove restoration, wetland conservation, and the strengthening of community forest management systems. Firebreaks will be established in vulnerable areas to reduce the incidence and spread of wildfires. These measures aim to restore degraded ecosystems while protecting critical biodiversity habitats.

The second thematic area addresses sustainable livelihoods. Climate-smart agriculture and agroforestry practices will be introduced to improve soil fertility, increase crop productivity, and enhance climate resilience. At the same time, the program will promote eco-enterprises such as beekeeping, sustainable fisheries processing, and nature-based tourism initiatives. Women, youth, and persons with disabilities will be supported through cooperatives and training programs to diversify income sources and reduce dependence on unsustainable resource extraction.

The third thematic area focuses on fisheries and coastal resource management. Community-based co-management systems will be strengthened through collaboration with local councils and fisheries committees. These efforts will include the enforcement of fisheries bylaws, improved monitoring of fishing activities, and better post-harvest handling techniques to reduce waste and increase value addition. Special attention will be given to supporting women involved in oyster harvesting and processing.

The fourth thematic area centres on governance and capacity building. Training programs will strengthen the capacity of local leaders, community institutions, and natural resource committees to manage ecosystems effectively. Participatory mapping of ecosystems and natural resources will support informed decision-making, while youth ranger programs will engage young people in conservation monitoring and environmental education.

The fifth thematic area promotes community engagement and social inclusion. Gender and youth action plans will ensure that conservation and development benefits are equitably distributed. Awareness campaigns and community dialogues will encourage participation in biodiversity conservation, while transparent benefit-sharing mechanisms will help build trust and accountability.

Immediate Outputs

The implementation of these activities will generate several tangible outputs across the region. Mangroves, wetlands, and forests will be restored and protected across significant areas of

degraded land. Community-led conservation initiatives will expand, supported by improved governance structures and local bylaws regulating natural resource use.

Women- and youth-led enterprises will be established and strengthened, creating new opportunities for sustainable income generation. Youth ranger programs and community environmental task forces will become operational in all six wards of the region, supporting environmental monitoring and awareness.

In addition, monitoring and benefit-sharing systems will be established to track biodiversity outcomes and ensure that communities receive tangible incentives for conservation efforts.

Expected Outcomes

These outputs are expected to lead to transformative outcomes for both ecosystems and communities in the Lower River Region. Restored ecosystems will become more resilient to climate impacts such as flooding, erosion, and increasing salinity levels. Healthy mangrove forests and wetlands will support fisheries productivity, protect shorelines, and maintain ecological balance.

Livelihood diversification and climate-smart agricultural practices will enhance food security and household income. As economic dependence on unsustainable resource extraction declines, pressures on ecosystems will decrease.

Improved governance systems will strengthen accountability and community ownership of natural resources. Inclusive participation, targeting at least 40 per cent women and 35 percent youth involvement, will ensure that decision-making processes reflect the needs and perspectives of diverse community groups.

At the same time, improved enforcement of resource management bylaws will reduce overfishing, illegal mangrove cutting, and the occurrence of wildfires across the region.

Long-Term Impact

By 2035, the LRR SBSAP aims to achieve a long-term transformation in the relationship between communities and their natural environment. Biodiversity will be safeguarded, and ecosystems will continue to provide essential services such as food production, climate regulation, and water purification.

Communities will become more resilient to climate change through diversified livelihoods and restored ecosystems that buffer environmental shocks. These improvements will contribute directly to national biodiversity and climate commitments, including the targets outlined in the Global Biodiversity Framework.

Ultimately, the region will experience more equitable and sustainable rural development, where biodiversity conservation and economic prosperity reinforce one another.

Cross-Cutting Results

Several cross-cutting themes will be integrated across all program components. Gender equality and social inclusion will ensure that women and youth participate equally in governance and benefit-sharing systems. Knowledge generation and innovation will be promoted through research partnerships, biodiversity monitoring programs, and data management systems.

Climate change considerations will be embedded in all interventions through ecosystem-based adaptation and mitigation strategies. Environmental education programs will be introduced in schools and community forums to build long-term environmental stewardship.

Technological innovations will also support implementation, including the adoption of clean energy technologies and digital monitoring tools for ecosystem management.

Implementation Framework (2025–2030)

The implementation of the LRR SBSAP will follow a phased approach designed to build strong institutional foundations and gradually scale interventions across the region. The Regional Governor's Office will serve as the lead coordinating institution, working closely with government agencies such as the Department of Parks and Wildlife Management, the Department of Fisheries, the Department of Agriculture, and the National Environment Agency.

Community structures, including VDCs, WDCs, CFCs, and LSCs, will serve as the primary local governance platforms responsible for implementing and monitoring activities. A multi-stakeholder Regional Steering Committee will provide oversight and ensure coordination among government agencies, civil society organisations, research institutions, and development partners.

The first phase of implementation will focus on foundation building. Awareness campaigns will be conducted across all wards to mobilise communities and promote understanding of biodiversity conservation. Baseline assessments will collect data on ecosystems, livelihoods, governance structures, and gender participation. Participatory mapping and free, prior, and informed consent consultations will identify priority conservation areas.

During the second phase, restoration and livelihood interventions will be scaled up across the region. Mangrove planting, forest corridor restoration, and firebreak establishment will be implemented alongside climate-smart agriculture demonstration plots and agroforestry programs. Women- and youth-led enterprises will receive start-up grants and technical training to support sustainable business development.

Through this integrated Theory of Change, the Lower River Region SBSAP establishes a clear pathway toward restoring ecosystems, strengthening livelihoods, and empowering communities to become long-term stewards of biodiversity. By aligning local actions with national and global biodiversity commitments, the strategy demonstrates how rural landscapes can play a central role in achieving sustainable development and climate resilience.

8.5.5 Indicative Budget and Financing Plan

Table 37: Priority areas indicative budget for LRR

Budget Category	Description of Activities	Estimated Cost (USD)
1. Biodiversity Conservation & Ecosystem Management	Protected area management, restoration of degraded landscapes, mangrove rehabilitation, wildlife monitoring, invasive species control	2,500,000
2. Sustainable Agriculture & Climate-Smart Practices	Training in climate-smart agriculture, agroforestry, soil conservation, and demonstration farms	1,200,000
3. Community Engagement & Capacity Building	Awareness campaigns, participatory planning, local stewardship programs, gender & youth training	800,000
4. Research, Monitoring & Evaluation	Baseline studies, biodiversity monitoring, socio-economic surveys, data management systems	500,000
5. Policy, Governance & Institutional Strengthening	Strengthening local institutions, policy harmonisation, and stakeholder coordination mechanisms	400,000
6. Project Management & Administration	Staff salaries, office costs, logistics, reporting, and audit	600,000
7. Contingency (10%)	Unexpected costs, currency fluctuations	550,000
Total Estimated Budget		**6,550,000**

Table 38: Financing Plan for SRBAP

Funding Source	Expected Contribution (USD)	Remarks
National Government	1,500,000	Allocation from environmental and agricultural budgets; integration with regional development plans
Green Climate Fund (GCF) / Adaptation Fund	2,000,000	Focused on climate-smart and ecosystem-based adaptation activities
Bilateral Donors (e.g., Germany, IKI, USAID, EU)	1,200,000	Co-financing for sustainable agriculture, community engagement, and capacity building
Private Sector & PPPs	500,000	Eco-tourism, sustainable fisheries, carbon finance opportunities
Local Communities & NGOs	350,000	In-kind contributions (labour, seedlings, monitoring support)
Contingency / Reserve	1,000,000	To be mobilised if gaps arise, including potential GCF scaling

Total Financing Pledged / Expected: 6,550,000 USD

Financing Strategy

Achieving the goals of the Lower River Region Strategic Biodiversity Strategy and Action Plan (LRR SBSAP) requires a robust, diversified, and transparent financing approach. The scale of ecosystem restoration, livelihood transformation, governance strengthening, and climate resilience

activities envisioned under the strategy cannot rely on a single funding source. Instead, the financing strategy is designed to mobilise resources from multiple streams while ensuring long-term sustainability, accountability, and alignment with national and international biodiversity commitments. By combining public funding, international climate finance, private sector participation, and community-based revenue mechanisms, the LRR SBSAP seeks to establish a resilient financial foundation capable of sustaining biodiversity conservation efforts through 2035 and beyond.

Blended Financing Approach

A central pillar of the financing strategy is the adoption of a blended financing model that combines public resources, international environmental funding, and private sector investment. Government budget allocations will provide the initial financial backbone for program coordination, institutional strengthening, and policy implementation. National environmental and development programs can support core activities such as community engagement, capacity building, and ecosystem monitoring.

International climate and biodiversity funds will play a critical role in scaling up restoration and resilience-building interventions. Global mechanisms such as the Green Climate Fund and the Global Environment Facility offer substantial financing opportunities for ecosystem restoration, climate adaptation, and community-based natural resource management initiatives. Development partners and international agencies will also provide technical assistance and grant funding to complement national investments.

Private sector participation will further strengthen the financing base. Businesses operating in sectors such as agriculture, fisheries, eco-tourism, and renewable energy can contribute through corporate social responsibility initiatives, environmental investment programs, and partnerships in sustainable value chains. These collaborations can support infrastructure development, sustainable production systems, and biodiversity-friendly enterprises.

Through this blended approach, the LRR SBSAP aims to reduce dependency on a single funding source while ensuring that conservation and development investments remain stable and predictable over time.

Phased Disbursement of Funds

To maximise efficiency and impact, financial resources will be disbursed according to a phased implementation schedule that aligns with the program's strategic priorities and operational timeline. During the initial phase of implementation, greater emphasis will be placed on community mobilisation, institutional strengthening, baseline assessments, and participatory planning processes. These early investments are essential for establishing strong governance structures and building trust among stakeholders.

The mid-term phase of implementation will focus on scaling up ecosystem restoration activities, livelihood diversification programs, and climate-smart agricultural interventions. This stage will require larger financial allocations for infrastructure, equipment, technical training, and ecosystem

rehabilitation initiatives such as mangrove planting, forest restoration, and wildfire prevention measures.

Throughout the entire implementation period, funding will be continuously allocated for monitoring, evaluation, and learning activities. Regular assessments will ensure that financial resources are used effectively and that project outcomes remain aligned with strategic goals. Phased disbursement will therefore allow the program to adapt funding flows to evolving implementation needs while maintaining financial discipline and accountability.

Leveraging Co-Financing Opportunities

Another critical element of the financing strategy is the mobilisation of co-financing from bilateral and multilateral development partners. The LRR SBSAP aligns closely with global biodiversity and climate priorities, particularly the objectives of the Kunming-Montreal Global Biodiversity Framework. This alignment increases the potential for securing financial support from international partners committed to biodiversity conservation and climate resilience.

Bilateral donors, international financial institutions, and development agencies can support specific components of the strategy, such as wetland restoration, sustainable fisheries management, climate-smart agriculture, or community-based conservation initiatives. By structuring projects that align with donor priorities, the program can attract targeted investments that complement national funding.

Co-financing arrangements also strengthen project sustainability by spreading financial risk across multiple partners. Such partnerships encourage long-term collaboration and allow the LRR SBSAP to leverage additional expertise, technology, and institutional capacity.

Revenue Generation and Sustainable Financing

While external funding sources are essential for initiating large-scale interventions, long-term sustainability will depend on the development of locally generated revenue streams linked to biodiversity conservation and sustainable resource management. The financing strategy therefore promotes the exploration of innovative financing mechanisms that generate income while protecting ecosystems.

Eco-tourism represents one such opportunity. The Lower River Region contains culturally and ecologically significant landscapes, including wetlands, forests, and riverine ecosystems along the Gambia River. Responsible tourism initiatives, such as community-managed nature trails, birdwatching activities, and cultural tourism experiences, can create employment opportunities while generating revenue for conservation.

Carbon financing mechanisms also offer significant potential. Mangrove forests and wetlands store large quantities of carbon, and their restoration can contribute to climate mitigation efforts. Participation in voluntary carbon markets or blue carbon initiatives could allow communities and conservation programs to generate financial returns from ecosystem restoration projects.

In addition, sustainable harvesting of non-timber forest products, value-added agricultural processing, and community-based fisheries enterprises can create additional income streams that support both livelihoods and conservation objectives. By linking economic incentives with sustainable resource management, these initiatives reinforce long-term environmental stewardship.

Financial Accountability and Monitoring

Ensuring transparency, accountability, and effective use of financial resources is fundamental to the success of the LRR SBSAP. A comprehensive financial monitoring system will therefore be established to track expenditures, assess value for money, and maintain the confidence of donors and stakeholders.

Annual financial audits will be conducted to review program expenditures and ensure compliance with established financial management standards. These audits will provide independent verification that funds are being used appropriately and efficiently.

In addition, mid-term financial reviews will evaluate the overall effectiveness of funding allocations and identify opportunities for improving financial performance. These reviews will help determine whether resources are being directed toward the most impactful interventions and whether adjustments are needed to improve cost-effectiveness.

Transparent financial reporting will also be integrated into the program's broader monitoring, evaluation, and learning framework. Regular reporting to stakeholders, including government agencies, donors, and community institutions, will promote accountability and strengthen trust among partners.

This financing framework ensures that conservation investments not only restore ecosystems but also strengthen livelihoods, empower communities, and contribute to national biodiversity targets in The Gambia. Ultimately, it provides a sustainable pathway for achieving both ecological integrity and inclusive rural development in the Lower River Region.

8.5.6 Stakeholder Engagement and Governance

Effective implementation of the Lower River Region (LRR) Subnational Biodiversity Strategy and Action Plan (SBSAP) requires an inclusive, transparent, and accountable governance system that brings together government institutions, local communities, civil society organisations, and private sector actors. Because biodiversity conservation and climate resilience in the region depend heavily on community-managed natural resources, the governance framework emphasises participatory decision-making, local ownership, and coordinated action across multiple administrative levels. The purpose of this stakeholder engagement and governance structure is therefore to ensure that all actors, especially women, youth, and resource-dependent communities, are actively involved in planning, implementing, and monitoring biodiversity initiatives.

Governance Structure

The governance architecture for the LRR SBSAP is organised around a multi-tiered structure that connects regional oversight bodies with ward-level coordination mechanisms and village-level management institutions. This structure ensures that decisions and actions are both technically informed and locally responsive.

At the regional level, the Regional Steering Committee (RSC) provides overall leadership and strategic direction for the implementation of biodiversity and climate resilience initiatives. Chaired by the Regional Governor, the committee brings together representatives from key government agencies, local councils, civil society organisations, academic institutions, the private sector, and community leaders, including representatives of women and youth groups. Government institutions represented in the RSC include technical agencies such as the Department of Parks and Wildlife Management, the Department of Fisheries, the Department of Forestry, and the National Environment Agency.

The primary role of the Regional Steering Committee is to provide oversight of the SBSAP, approve annual workplans, review implementation progress, and mobilise financial and technical resources. The committee also ensures that regional activities remain aligned with national biodiversity strategies and international commitments such as the Kunming-Montreal Global Biodiversity Framework.

At the grassroots level, implementation is carried out by village-level committees, which represent the frontline institutions responsible for managing natural resources and coordinating community participation. Village Development Committees (VDCs) coordinate biodiversity activities within individual communities, mobilise local labour and resources, and facilitate communication between villages and ward authorities.

In addition, specialised committees address sector-specific resource management responsibilities. Community Forest Committees (CFCs) oversee forest conservation activities, enforce community forestry bylaws, and organise wildfire prevention measures such as the creation of firebreaks. Landing Site Committees (LSCs), meanwhile, manage fisheries resources at local landing sites, enforce fishing regulations, and coordinate sanitation and resource management activities within fisheries communities.

Complementing these institutional structures are thematic working groups that focus on cross-cutting issues such as gender equality, youth engagement, and private sector participation. Women's platforms coordinate gender-responsive initiatives, support women's economic empowerment, and promote female leadership in natural resource governance. Youth networks engage young people in ranger patrols, climate-smart agriculture demonstrations, environmental education, and digital monitoring activities. A private sector forum connects conservation initiatives with eco-tourism operators, processing enterprises, financial institutions, and other businesses interested in biodiversity-compatible investments.

Stakeholder Engagement Strategy

The success of the LRR SBSAP depends on meaningful participation from communities and stakeholders at all levels. The stakeholder engagement strategy is therefore built upon a set of guiding principles designed to promote fairness, inclusivity, and accountability in decision-making processes.

A key principle is Free, Prior, and Informed Consent (FPIC), which ensures that communities have the right to participate in decisions affecting their lands and natural resources. FPIC processes enable communities to provide informed approval before projects are implemented, thereby strengthening local ownership and trust.

Gender equality and youth inclusion are also central principles of the engagement strategy. The SBSAP targets a minimum participation rate of 40 per cent of women and 35 per cent of youth in governance structures and decision-making processes. These targets recognise the critical role that women and young people play in natural resource management, household livelihoods, and community development.

Respect for traditional authority and local ecological knowledge is another cornerstone of the engagement framework. Many communities in LRR possess extensive knowledge of local ecosystems, fishing patterns, forest management practices, and agricultural systems. Integrating this knowledge into biodiversity planning enhances both cultural relevance and environmental sustainability.

Transparency and accountability further guide stakeholder engagement. Decision-making processes, financial allocations, and program results will be openly shared with stakeholders through regular consultations and reporting mechanisms.

To operationalise these principles, several engagement mechanisms will be implemented. An **Annual Biodiversity Forum** will bring together government agencies, community leaders, NGOs, and private sector actors to review progress, share lessons learned, and coordinate future actions. This forum will serve as an important platform for policy dialogue and knowledge exchange.

At the local level, community assemblies will be organised twice a year in all wards. These assemblies provide opportunities for residents to review program activities, validate monitoring results, and contribute feedback on implementation.

Participatory mapping exercises will also be conducted with communities to identify and document key ecosystems such as mangroves, wetlands, forests, and fisheries habitats. These maps will support spatial planning and monitoring while strengthening community awareness of biodiversity assets.

To ensure accountability, feedback and grievance redress mechanisms will allow communities to raise concerns or complaints regarding project activities. Village committees will record grievances and escalate unresolved issues to WDCs and the Regional Steering Committee.

Communication and outreach activities will further support stakeholder engagement. Information will be disseminated through community radio programs, social media platforms, printed materials, and culturally relevant communication methods such as community theatre and storytelling in local languages.

Roles and Responsibilities

Successful implementation of the LRR SBSAP requires clear delineation of responsibilities among stakeholders. The Regional Steering Committee provides strategic oversight, mobilises resources, and ensures alignment with national biodiversity targets and global frameworks. Local councils integrate biodiversity priorities into development plans and allocate financial resources to support environmental initiatives.

Technical government agencies, including forestry, fisheries, wildlife, and environmental authorities, provide technical expertise, monitoring support, and enforcement of natural resource regulations. Civil society organisations contribute by strengthening community capacity, advocating for sustainable policies, and mobilising grassroots participation.

Women's groups play a critical role in managing natural resource enterprises such as mangrove nurseries, agroforestry production, and fisheries processing. Youth groups support biodiversity conservation through ranger programs, ecological monitoring, environmental education, and climate-smart agriculture promotion.

Private sector actors contribute by investing in sustainable value chains, including fish processing, eco-tourism, agroforestry products, and renewable energy initiatives. Through partnerships with communities and development organisations, the private sector can support biodiversity-friendly business models that generate both economic and environmental benefits.

Capacity Development

Building institutional and community capacity is essential for the long-term success of the SBSAP. Training programs will therefore be provided to Ward Development Committees, Village Development Committees, and other community institutions on governance, financial management, and biodiversity monitoring.

Leadership development programs will empower women and youth to take active roles in environmental governance and community decision-making. Exchange visits between wards and with other regions of The Gambia will allow stakeholders to share experiences and learn from successful conservation initiatives.

Policy literacy programs will also help communities understand national environmental policies and legal frameworks, enabling them to participate more effectively in decision-making processes and advocate for their rights and interests.

Through these governance and engagement mechanisms, the LRR aims to establish by 2030 a strong and inclusive institutional system in which communities, government agencies, and private actors collaborate in the co-management of biodiversity and climate resilience initiatives.

8.5.7 Monitoring, Evaluation & Learning Plan (MEL Plan)

The Monitoring, Evaluation, and Learning (MEL) Plan provides a systematic framework for tracking the progress, results, and impacts of the Lower River Region Subnational NBSAP. Effective monitoring and evaluation are essential for ensuring accountability, improving program performance, and demonstrating contributions to national and global biodiversity targets.

The MEL system is designed not only to measure results but also to generate knowledge and lessons that can inform adaptive management. By integrating community participation, transparent reporting, and evidence-based decision-making, the MEL framework ensures that biodiversity initiatives remain responsive to local needs and environmental changes.

Guiding Principles

The MEL system is guided by several key principles that emphasise participation, transparency, and continuous learning. Community participation is fundamental, with residents, including women and youth, actively involved in data collection, monitoring activities, and validation of results.

Transparency is another core principle. Monitoring results, evaluation reports, and financial information will be shared openly at village, ward, and regional levels to promote accountability and trust among stakeholders.

The system is also designed to support adaptive management. Feedback loops between monitoring results and program implementation will allow stakeholders to adjust strategies and interventions when necessary.

Finally, the MEL framework is gender- and youth-responsive. All monitoring data will be disaggregated by sex and age, enabling stakeholders to track the equitable distribution of benefits and participation across different social groups.

Monitoring and Evaluation Structure

The monitoring system operates across multiple institutional levels. The Regional Steering Committee oversees the overall MEL framework, reviews progress reports, and ensures alignment with national biodiversity monitoring systems. Ward Development Committees compile data collected from village institutions and prepare ward-level reports.

At the community level, Village Development Committees, Community Forest Committees, and Landing Site Committees collect field data related to ecosystem restoration, fisheries management, and livelihood activities. Technical partners, including NGOs and research institutions, provide training and support for data collection, analysis, and reporting.

Monitoring results are linked to national reporting systems and contribute to biodiversity databases such as the national clearing-house mechanism under the Convention on Biological Diversity.

Key Monitoring Tools

A variety of monitoring tools will be used to capture environmental, social, and governance outcomes. Community scorecards will be used every six months to assess community perceptions of program performance and satisfaction with governance systems.

Annual biodiversity and ecosystem surveys will measure indicators such as mangrove cover, forest regeneration, and fish stock trends in ecosystems associated with the Gambia River.

Livelihood monitoring systems will track the performance of women- and youth-led enterprises, adoption rates of climate-smart agriculture practices, and changes in household income levels.

Governance audits will be conducted annually to assess participation, transparency, and benefit-sharing within community institutions. Digital monitoring platforms, including mobile applications used by youth ranger groups, will support real-time data collection and geographic mapping of restoration sites.

Key Indicators

The MEL framework tracks a range of indicators aligned with the SBSAP results framework. These include the number of hectares of mangrove and forest ecosystems restored, the proportion of households adopting climate-smart agricultural practices, and the number of women- and youth-led enterprises supported.

Additional indicators measure governance performance, such as the number of functional WDCs, VDCs, CFCs, and LSCs, and the number of natural resource bylaws developed and enforced. Environmental indicators track reductions in wildfire incidents and illegal resource extraction activities.

Social indicators assess the equitable distribution of benefits, including the percentage of livelihood benefits accruing to women and youth. Community satisfaction surveys will also measure perceptions of governance effectiveness and benefit-sharing arrangements.

Learning and Adaptive Management

The MEL system emphasises continuous learning and adaptive management. Lessons learned from monitoring activities will be documented and shared through annual review meetings, the Biodiversity Forum, and knowledge-sharing workshops.

These learning processes will allow stakeholders to refine strategies, replicate successful approaches, and address emerging challenges. Over time, this adaptive approach will strengthen the effectiveness of biodiversity conservation and climate resilience initiatives across the Lower River Region.

M&E Cycle

Table 39: LRR SRBAP M&E Cycle

Year	Key M&E Activities
2025	Establish M&E system; train committees in data collection; baseline studies (ecosystem, governance, livelihoods).
2026-2027	Annual biodiversity surveys; household CSA adoption tracking; semi-annual community scorecards; ward and regional reviews.
2030	Mid-term evaluation (independent review); adaptive management workshop; integration of lessons.
2031-2034	Continued monitoring; focus on governance effectiveness, benefit-sharing, and enterprise growth.
2035	Final evaluation (impact, sustainability, alignment with GBF targets); knowledge dissemination (policy briefs, community reports, media).

Expected Outcomes by 2035

By 2035, the implementation of the Lower River Region (LRR) Subnational Biodiversity Strategy and Action Plan (SBSAP) is expected to deliver transformative ecological, social, and economic outcomes. These outcomes represent the cumulative results of ecosystem restoration, sustainable livelihood development, strengthened governance systems, and enhanced community participation in biodiversity conservation. Collectively, they will contribute to long-term environmental sustainability and climate resilience in the Lower River Region while advancing national biodiversity commitments in The Gambia.

One of the most significant anticipated outcomes is the restoration of approximately 10,000 hectares of degraded land across the region. This restoration will include mangrove rehabilitation, reforestation of degraded woodlands, wetland conservation, and the establishment of agroforestry systems in agricultural landscapes. Restored ecosystems will improve soil fertility, increase carbon sequestration, enhance water regulation, and support the recovery of wildlife habitats. These interventions will also strengthen ecosystem resilience against climate impacts such as drought, flooding, and salinity intrusion, particularly in areas connected to the Gambia River and surrounding wetlands.

Another key outcome will be the expansion of community-based conservation areas. By 2035, at least 15 new community forests and 10 protected wetlands will be established and effectively managed by local communities. These conservation areas will serve as important refuges for biodiversity while also supporting sustainable use of forest and wetland resources. Community forest management committees and local environmental institutions will play a central role in protecting these ecosystems through locally developed bylaws, restoration programs, and monitoring activities.

The strategy will also significantly strengthen local knowledge and technical capacity for sustainable land and resource management. Through extensive training and capacity-building

programs, approximately 5,000 community members, including farmers, fisherfolk, women's groups, youth associations, and community leaders, will be trained in climate-smart agriculture and ecosystem-based adaptation techniques. These skills will help communities adopt sustainable farming practices, improve water management, reduce land degradation, and increase resilience to climate variability.

Economic diversification and sustainable livelihoods represent another critical outcome of the SBSAP. The strategy aims to support the creation of 200 biodiversity-friendly enterprises across the region. These enterprises may include agroforestry businesses, mangrove nurseries, beekeeping operations, eco-tourism initiatives, sustainable fisheries processing, and the production of non-timber forest products. By promoting green value chains and nature-based enterprises, the program will generate new income opportunities while reducing pressure on fragile ecosystems.

The SBSAP also seeks to promote inclusive participation in natural resource governance and economic opportunities. By 2035, the program aims to achieve at least a 50 per cent increase in the participation of women and youth in biodiversity-related decision-making processes, livelihood enterprises, and conservation initiatives. Empowering these groups is essential for ensuring equitable development and strengthening long-term environmental stewardship. Women's groups and youth networks will play particularly important roles in ecosystem restoration activities, environmental monitoring, and community enterprise development.

Finally, a major institutional outcome of the SBSAP will be the strengthening of governance systems and the integration of biodiversity considerations into regional and local development planning. Biodiversity conservation and climate resilience will be mainstreamed into ward and regional development plans, ensuring that environmental sustainability becomes a central component of economic and infrastructure planning. Local governance structures such as Ward Development Committees and Village Development Committees will become more effective in coordinating conservation activities and enforcing natural resource management bylaws.

Together, these outcomes will contribute to a more resilient and sustainable Lower River Region where ecosystems are restored, livelihoods are diversified, and communities play a leading role in protecting natural resources. In doing so, the region will contribute directly to national biodiversity objectives and international commitments under the Convention on Biological Diversity and the Kunming-Montreal Global Biodiversity Framework, demonstrating how community-driven conservation can support broader environmental and development goals.

8.6 Central River Region (CRR)

8.6.1 Central River Region (CRR) – Background & Rationale

The Central River Region (CRR) forms the ecological heart of The Gambia, representing a landscape of exceptional biodiversity and socio-economic significance. The region encompasses a mosaic of ecosystems, including gallery forests, riverine wetlands, savanna woodlands, and productive agricultural landscapes, all of which provide critical habitat for a variety of flora and fauna. CRR is home to several endangered and iconic species such as hippopotamuses, manatees,

primates, and migratory waterbirds, highlighting its national and international ecological importance.

Beyond its biodiversity, CRR sustains livelihoods for tens of thousands of residents. Communities engage in farming, fishing, forestry, ecotourism, and wildlife-based activities, deriving food security and income from natural resources. Riverine wetlands support small-scale fisheries, while gallery forests and savanna woodlands provide timber, non-timber forest products, and grazing lands for livestock. The potential for sustainable ecotourism, including wildlife viewing and cultural tourism, further underscores CRR's economic and ecological value.

Despite its richness, CRR faces mounting environmental pressures. Agricultural expansion and unsustainable farming practices are driving soil degradation, reducing fertility, and encroaching on natural habitats. Deforestation and charcoal production are diminishing forest cover, disrupting wildlife corridors and reducing ecosystem services such as carbon storage and water regulation. Climate change compounds these threats, with erratic rainfall, floods, droughts, salinisation, and occasional coastal impacts altering hydrological regimes and affecting both biodiversity and livelihoods.

Aquatic ecosystems are also under threat due to overfishing and loss of wetland habitats, which jeopardize fish stocks and the livelihoods of fishing communities. Invasive species in rice paddies reduce agricultural productivity, while transhumance and loss of grazing land limit livestock rearing and exacerbate conflicts over land use. Together, these pressures pose risks not only to biodiversity but also to food security, income, and the resilience of local communities.

The CRR Subnational Biodiversity Strategy and Action Plan (SBSAP) seeks to mainstream biodiversity conservation into regional development planning, integrating ecosystem management with climate adaptation and sustainable livelihood strategies. It is fully aligned with The Gambia's National Biodiversity Strategy and Action Plan (NBSAP 2025–2035) and the Kunming–Montreal Global Biodiversity Framework (GBF), ensuring that local interventions contribute to national and global biodiversity targets.

Vision

A resilient and biodiverse Central River Region where ecosystems sustain livelihoods, strengthen climate resilience, and contribute meaningfully to The Gambia's commitments under the GBF. This vision emphasizes the coexistence of vibrant communities and thriving ecosystems, where conservation and sustainable development reinforce each other.

Goal

By 2035, the CRR will safeguard its ecosystems through integrated biodiversity management, climate-smart and sustainable livelihoods, and active community participation. The region will achieve measurable improvements in habitat conservation, species protection, and ecosystem services, contributing to national and global biodiversity goals while ensuring the well-being and resilience of local populations.

8.6.2 Strategic Objectives and Priority Areas

The Central River Region (CRR) of The Gambia is a vital ecological heartland, supporting a rich diversity of forests, wetlands, savanna ecosystems, and agricultural landscapes. These ecosystems not only harbour endangered and endemic species but also provide critical services that underpin local livelihoods, including water regulation, soil fertility, food production, and carbon sequestration. However, CRR faces mounting pressures from deforestation, unsustainable agricultural practices, wetland degradation, and overexploitation of freshwater resources. In response, the strategic objectives for CRR focus on promoting sustainable land use, enhancing biodiversity-friendly agriculture, and safeguarding freshwater ecosystems, aligning closely with the global biodiversity framework (GBF) targets to restore ecosystems, conserve species, reduce pollution, and ensure ecosystem resilience.

Priority 1: Sustainable Land and Forest Management

The primary objective under this priority is to restore and protect CRR's forests, wetlands, and savanna ecosystems to secure biodiversity and maintain essential ecosystem services. This objective directly contributes to GBF Target 2 on ecosystem restoration, Target 5 on halting deforestation, Target 10 on safeguarding ecosystem services, and Target 14 on building ecological resilience.

To achieve this, a multifaceted approach is proposed. Reforestation of 15,000 hectares of degraded land will be undertaken, using a combination of native and carefully selected exotic tree species to accelerate ecological recovery while providing timber, fuelwood, and non-timber forest products. Complementing this, community and individual woodlots covering 5,000 hectares will be established to reduce pressure on natural forests and provide alternative sources of fuel and construction materials. To address energy-related deforestation, the project will promote sustainable fuel alternatives such as biogas, solar energy, and efficient cookstoves, thereby reducing reliance on firewood and charcoal. Capacity building is also central to this strategy, with 500 training programs targeted at local stakeholders to enhance skills in forest and protected area management, ecological monitoring, and enforcement of conservation laws. Strengthening law enforcement against illegal logging and charcoal production is a parallel strategy to curb forest degradation. Finally, the restoration of rice-growing wetlands will be prioritised through the management of invasive species and mitigation of permanent inundation, ensuring that wetland biodiversity and hydrological functions are maintained.

Priority 2: Biodiversity-Friendly Agriculture and Climate Resilience

Agriculture dominates the livelihoods of CRR communities, but conventional farming practices have often resulted in habitat loss, soil degradation, and biodiversity decline. The objective of this priority is to transition CRR's agriculture towards climate-smart and biodiversity-friendly systems, supporting GBF Target 10 on sustainable agriculture, Target 7 on pollution reduction, and Target 16 on sustainable consumption and production.

Key strategies include promoting agroforestry systems that integrate trees, crops, and livestock, thereby enhancing soil fertility, providing shade and fodder, and creating habitats for wildlife. The

introduction of drought-resistant and flood-tolerant crop varieties will help farmers adapt to climate variability while maintaining productivity. Knowledge transfer is essential, and Farmer Field Schools will be expanded to teach soil fertility management, organic farming, water harvesting, and other sustainable practices. Biodiversity conservation will also be mainstreamed into rice-growing wetlands, ensuring agricultural activities are aligned with ecosystem maintenance. Farmers will be incentivised through biodiversity stewardship schemes, including eco-certification and payment for ecosystem services (PES), to encourage adoption of sustainable practices. Additionally, the establishment of ranches and rangelands will support sustainable livestock management, while fencing rice-growing areas will prevent overgrazing and protect habitats for wildlife and aquatic species.

Priority 3: Freshwater Ecosystem Protection and Fisheries Management

The River Gambia and its associated wetlands are critical for biodiversity, fisheries, and community livelihoods. This priority aims to safeguard these freshwater ecosystems while supporting local food security and income generation. It contributes to GBF Target 3 on protected areas, Target 4 on species conservation, Target 7 on pollution reduction, and Target 19 on mobilising financial resources for biodiversity.

Strategies focus on both ecological restoration and participatory management. Protected wetlands, including RNP, EIWR, Dan ICCA, and ICCAs, will be expanded and co-managed with local communities. Fisheries co-management committees will be established and strengthened to regulate fishing gear, fishing effort, and seasonal closures, ensuring sustainable fisheries management. A Biosphere Reserve will be established in the CRR under the OECM framework, with two national parks designated as core areas to serve as biodiversity strongholds. Restoration of riparian vegetation will reduce soil erosion and sedimentation, while controlling agricultural runoff and pesticide pollution will maintain water quality for both human and ecological health. To promote sustainable livelihoods, community-based ecotourism initiatives will be developed, linking cultural heritage, wetland ecosystems, and wildlife observation. Finally, freshwater fish culture (aquaculture) will be promoted to enhance food security and reduce pressure on wild fish stocks.

In summary, the strategic objectives and priority areas for CRR integrate ecological restoration, sustainable land and agricultural management, and protection of freshwater systems to ensure biodiversity conservation, climate resilience, and sustainable livelihoods. By implementing these strategies, CRR will not only preserve its rich natural heritage but also serve as a model region for balancing development and conservation in The Gambia.

8.6.3

8.6.4 Results Matrix (2025–2030)

Table 40: Results Matrix (2025–2030) CRR SBSAP

Hierarchy of Results	Expected Results	Key Indicators	Baseline (2025)	Target (2035)	Means of Verification	GBF Link
Impact (Overall Goal)	A climate-resilient and biodiverse CRR contributing to Gambia's NBSAP & GBF targets	- Biodiversity intactness index - Ecosystem extent & integrity - Household resilience index	Declining biodiversity; Forest/farmland degradation	Biodiversity loss halted; ecosystem services enhanced	National biodiversity monitoring reports; CBD/GBF reporting	GBF Goals A–D
Outcome 1	Forests and savannas are sustainably managed	- % forest cover - Hectares restored	Forest cover declining, <10% under community mgmt	+15% forest cover; 25,000 ha restored	Remote sensing, Forestry Dept. Reports,	GBF Target 2, 5
Output 1.1	Reforestation & restoration implemented.	- Hectares reforested annually	<20 ha/year	2,500 ha/year	Project monitoring, GIS maps	Target 2
Output 1.2	Community forest management strengthened	- # of VDCs managing forests - # of woodlots established	Few VDCs are actively involved	650+ VDCs managing forests; 200 woodlots	Community reports, Forestry Dept.	Target 5, 19
Outcome 2	Agriculture is biodiversity-friendly and climate-smart	- % farmers adopting CSA - Fertilizer/pesticide reduction	< 10% CSA adoption	60% CSA adoption -10% fertilizer use	Agricultural surveys, farmer records	GBF Target 10, 16
Output 2.1	Farmers trained in CSA & agroforestry	- # of farmers trained - # of Farmer Field Schools	<500 trained	200,000 farmers trained; 50 FFS	Training reports, surveys	Target 10
Output 2.2	CSA practices mainstreamed in CRR rice wetlands	- % rice fields under CSA practices	<5%	35%	Agriculture Dept., FAO reports	Target 10, 14
Outcome 3	Freshwater ecosystems & fisheries protected	- Wetland area rehabilitated - Fish biomass index	Wetlands degraded; fish stocks declining	5,000 ha wetlands restored; +35% fish biomass	Fisheries surveys, DPWM reports	GBF Target 3, 4, 7

Output 3.1	Wetlands co-managed by communities	- # of wetlands under co-management agreements	Few community-led initiatives	50 wetlands co-managed	Community reports, DPWM	Target 3
Output 3.2	Fisheries co-management & sustainable practices	- # of committees functional - % reduction in illegal gear use	Weak compliance	100 committees strengthened; 75% reduction	Fisheries Dept. reports	Target 4, 7
Cross-Cutting Outcome	Strengthened governance, gender equity & financing for biodiversity	- # of women/youth/PWD in decision-making - $ mobilised for biodiversity	Low participation; <$1M mobilised	50% participation of women/youth; $10M mobilised	Project financial reports; donor reports	GBF Target 19, 22, 23

8.6.5 Theory of Change (ToC)

The successful implementation of the Central River Region (CRR) Strategic Biodiversity and Sustainability Action Plan (SBSAP) relies not only on sectoral interventions but also on addressing several cross-cutting issues that underpin ecological sustainability, community resilience, and equitable development. These issues form the backbone of the Theory of Change, ensuring that biodiversity conservation, climate adaptation, and socio-economic benefits are achieved in an integrated and sustainable manner.

Community Engagement and Traditional Knowledge

It is central to the ToC. Local governance structures, including village development committees (VDCs), traditional authorities, and women's associations, are critical actors in natural resource management. Empowering these groups to actively participate in decision-making ensures that conservation strategies are contextually appropriate, culturally sensitive, and socially acceptable. Incorporating indigenous knowledge, practices, and resource management systems strengthens ecosystem stewardship and enhances the sustainability of interventions.

Capacity Building

It is another cornerstone of the ToC. The plan targets a broad spectrum of stakeholders, including youth, technical advisory committees (TAC), the Ministry of Fisheries and the Department of Parks and Wildlife Management (PWD), community forest committees, and women, to enhance technical knowledge and practical skills. Training programs will focus on biodiversity monitoring, forest and wetland management, sustainable agriculture, fisheries co-management, and green jobs such as renewable energy, ecotourism, and sustainable aquaculture. By equipping local actors with skills and knowledge, the plan promotes community ownership, facilitates adaptive management, and strengthens institutional effectiveness.

Policy Integration

It ensures that the CRR SBSAP aligns seamlessly with national priorities, creating synergy and avoiding duplication. Strategies and interventions are designed to be consistent with The Gambia's National Biodiversity Strategy and Action Plan (NBSAP), National Climate Change Policy, and the broader National Development Plan. This alignment ensures that local biodiversity initiatives contribute to national-level targets, secure policy support, and attract coordinated funding and technical assistance.

Gender Equality

It is embedded throughout the ToC, recognising the critical role of women in agriculture, processing, fisheries, and natural resource management. The plan ensures that women farmers, processors, and fishers benefit equitably from capacity building, livelihood incentives, and decision-making processes. Gender-sensitive approaches also aim to reduce disparities in access to resources, technologies, and financial mechanisms, empowering women as agents of conservation and sustainable development.

Financing and Resource Mobilisation

It is a cross-cutting enabler of the ToC. Sustainable implementation requires diversified funding from multilateral and bilateral sources, private sector engagement, and innovative mechanisms. Potential sources include the European Union (EU), United Nations Development Programme (UNDP), African Development Bank (AfDB), Food and Agriculture Organization (FAO), World Bank (WB), United Nations Industrial Development Organization (UNIDO), United Nations Environment Programme (UNEP), Green Climate Fund (GCF), Global Environment Facility (GEF), Global EbA Fund, and REDD+ initiatives. Strategic engagement with these financiers ensures adequate resource availability to implement restoration, capacity building, and livelihood support interventions effectively.

In summary, these cross-cutting issues- community engagement, capacity building, policy integration, gender equality, and financing, form the enabling framework for the CRR SBSAP Theory of Change. By addressing these foundational elements, the plan ensures that ecological restoration, sustainable land and water management, and biodiversity conservation are achieved in a socially inclusive, economically viable, and environmentally resilient manner.

8.6.6 Logical Framework – CRR SBSAP Implementation (2025–2035)

Table 41: Logical Framework for CRR SBSAP Implementation

Intervention Logic	Indicators (SMART)	Baseline (2025)	Targets (2035)	Means of Verification	Assumptions / Risks
Impact / Overall Goal	A climate-resilient and biodiverse CRR contributing to	Biodiversity intactness index; ecosystem integrity score;	Declining biodiversity and resilience	Biodiversity loss halted; ecosystem integrity	National biodiversity monitoring reports; CBD/GBF

	Gambia's NBSAP & GBF targets	household resilience index		improved; household resilience increased.	reporting; household surveys
Outcome 1: Forests & savannas sustainably managed	% forest cover; hectares restored	Forest cover is declining, <10% community-managed	+15% forest cover; 5,000 ha restored	Remote sensing; Forestry Dept. reports	Communities willing to engage in forest management ensure that climate events do not destroy reforested areas.
Output 1.1 Reforestation & restoration implemented	Hectares reforested annually	<200 ha/year	1,000 ha/year	GIS maps; project monitoring	Seedlings and water supply available
Output 1.2: Community Forest management strengthened	# of VDCs managing forests; # of woodlots established	Few VDCs involved	20 VDCs; 50 woodlots	Community reports; Forestry Dept.	Communities accept responsibility; land tenure conflicts are resolved.
Outcome 2: Agriculture is biodiversity-friendly & climate-smart	% farmers adopting CSA; % reduction in fertilizer/pesticide use	<10% CSA adoption; high reliance on chemicals	40% CSA adoption; -35% chemical use	Agriculture surveys; farmer records	Farmers adopt new practices; markets are available for CSA products
Output 2.1: Farmers trained in CSA & agroforestry	# of farmers trained; # of Farmer Field Schools	<500 trained	5,000 farmers trained; 50 FFS	Training reports; surveys	Farmers willing to participate; extension services functional
Output 2.2 CSA mainstreamed in rice wetlands	% rice fields under CSA practices	<5%	35%	Agriculture Dept.; FAO reports	Farmers embrace wetlands CSA; climate shocks are manageable
Outcome 3: Freshwater ecosystems & fisheries protected	Wetland area rehabilitated; fish biomass index	Wetlands degraded; fish stocks declining	2,000 ha restored; +35% fish biomass	Fisheries surveys; DPWM reports	Fisher communities support co-management; enforcement is effective
Output 3.1 Wetlands co-	# of wetlands under co-management	Few initiatives	5 wetlands co-managed	Community reports; DPWM	Communities motivated; conflicts minimised

managed by communities					
Output 3.2 Fisheries co-management & sustainable practices	# of committees functional; % reduction in illegal gear	Weak compliance	10 committees active; 50% reduction in illegal gear	Fisheries Dept. reports	Enforcement agencies are cooperative; fishers comply
Cross-Cutting Outcome Governance, gender equity & financing strengthened	# of women/youth in decision-making; $ mobilised for biodiversity	Low participation; <$1M mobilised	50% women/youth participation; $10M mobilised	Project financial reports; donor reports	Gender inclusion is culturally accepted; donor funding is secured

Effective implementation of the Central River Region (CRR) Regional Biodiversity Strategy and Action Plan (SBSAP) requires a robust Monitoring and Evaluation (M&E) framework to track progress, ensure accountability, and guide adaptive management. The M&E framework is designed to measure the achievement of both ecological and socio-economic outcomes, aligning local-level actions with global biodiversity targets and national priorities.

a. Purpose of the M&E Framework

The primary purpose of the M&E framework is to provide a structured approach to tracking progress towards biodiversity and livelihood outcomes within CRR. By systematically measuring changes in forest cover, wetland health, species populations, and ecosystem services, the framework ensures that interventions are having the intended ecological impact.

The framework also promotes accountability to donors, government institutions, and local communities, providing clear evidence of how resources are being utilised and the outcomes being achieved. This accountability strengthens stakeholder confidence and encourages continued investment in biodiversity and climate-resilient initiatives.

Additionally, the framework facilitates adaptive management. By identifying challenges, gaps, or unintended impacts early, decision-makers can adjust strategies and activities to improve effectiveness and efficiency. This approach fosters a learning-oriented implementation process, ensuring interventions remain relevant in the face of changing environmental or socio-economic conditions.

Finally, the M&E framework ensures alignment with global and national monitoring standards. Indicators are designed to correspond with the Global Biodiversity Framework (GBF) and The Gambia's national biodiversity monitoring system, enabling reporting at both local and national levels and ensuring comparability of data across regions and timeframes.

b. M&E Structure

The M&E framework is built around a multi-tiered governance structure that ensures integration, participation, and accountability at all levels:

1. **Lead Agency**: The CRR Regional Council serves as the primary authority responsible for overall oversight, coordination, and reporting of NBSAP implementation in the region. Its mandate includes consolidating data from technical agencies, communities, and external evaluations to inform decision-making.
2. **Technical Support**: The Department of Forestry, Agriculture, Fisheries, and Parks & Wildlife provides specialised expertise for monitoring ecosystem health, species populations, agricultural practices, and fisheries management. Their role includes designing data collection protocols, providing training, and analysing trends to inform management.
3. **Community Role**: Village Development Committees (VDCs), women and youth groups, and co-management committees are actively engaged in participatory monitoring. This approach harnesses local knowledge, fosters ownership of conservation initiatives, and enhances the relevance and accuracy of collected data. Communities contribute to monitoring activities such as forest patrolling, wildlife sightings, water quality assessments, and agricultural practices.
4. **External Evaluators**: Independent evaluations will be conducted at mid-term (2027) and at the end of the implementation period (2030) to provide an objective assessment of progress, effectiveness, and impact. These evaluations will verify reported data, identify lessons learned, and provide recommendations for future NBSAP cycles.

Through this integrated structure, the M&E framework ensures that the CRR SBSAP is transparent, participatory, and results-oriented, while remaining adaptable to emerging challenges and opportunities. By linking community engagement, technical expertise, and independent verification, the framework provides a robust foundation for achieving biodiversity conservation, ecosystem restoration, and sustainable livelihood objectives in CRR over the 2025–2030 period.

Monitoring Plan

Table 42: Monitoring Plan for CRR SBSAP

Result Area	Indicators	Data Source / Collection Method	Frequency	Responsible Entity
Impact: Climate-resilient & biodiverse CRR	Biodiversity intactness index; ecosystem integrity score; household resilience index	National biodiversity reports; satellite imagery; household surveys	Baseline, mid-term (2027), final (2030)	NEA, DPWM, Statistics Bureau
Outcome 1: Sustainable forests	% forest cover; hectares restored	GIS mapping; Forestry Dept. reports	Annual	Dept. of Forestry + communities
Output 1.1: Reforestation	Hectares planted/restored per year	GIS mapping; project reports	Biannual	Forestry Dept., NGOs

Output 1.2: Community Forest mgmt.	# of VDCs managing forests; # of woodlots	Community reports; site visits	Quarterly	Forestry Dept., VDCs
Outcome 2: CSA adoption	% farmers adopting CSA; reduction in fertilizer use	Farmer surveys; Dept. of Agriculture reports	Annual	Dept. of Agriculture
Output 2.1: CSA training	# of farmers trained; # of Farmer Field Schools	Training records; surveys	Quarterly	Dept. of Agriculture; NGOs
Output 2.2: CSA wetlands	% rice fields under CSA	Agriculture Dept. reports	Annual	Agriculture Dept., FAO
Outcome 3: Freshwater ecosystems protected	Wetland area rehabilitated; fish biomass index	Fisheries & DPWM surveys; GIS	Annual	Fisheries Dept., DPWM
Output 3.1: Wetland co-management	# wetlands under co-management agreements	Signed agreements; monitoring visits	Biannual	DPWM, communities
Output 3.2: Fisheries co-management	# of committees functional; % illegal gear reduction	Fisheries Dept. records; patrol logs	Quarterly	Fisheries Dept., communities
Cross-Cutting: Governance & financing	% women/youth in decision-making; $ mobilised	Project financial reports; gender participation audits	Annual	NEA, NGOs, CRR Council

Implementation Framework

Lead Agency: CRR Regional Council with oversight from NEA.

Technical Partners: Departments of Forestry, Agriculture, Fisheries, and Parks & Wildlife. Community Role: Village and Ward Committees, women's and youth groups, and co-management bodies.

Implementation Phases

Phase 1 *(2025–2026):* Baseline surveys, stakeholder engagement, training.

Phase 2 *(2027–2029):* Scaling up restoration and CSA adoption.

Phase 3 *(2030–2035):* Consolidation, governance strengthening, and sustainability.

8.6.7 Indicative Budget and Financing Plan

Summary by Priority Area (2025–2035):

Table 43: Required Budget for the implementation of the Priority Area

Priority Area	Estimated Budget (USD)	% of Total
Sustainable Land & Forest Management	7,000,000	40%
Biodiversity-Friendly Agriculture	5,000,000	35%
Freshwater Ecosystem & Fisheries	4,000,000	25%
Cross-Cutting (M&E, Coordination)	1,000,000	5%
Total	17,000,000	100%

Financing Sources

Successful implementation of the CRR NBSAP relies on a diversified financing strategy that mobilises resources from public, private, and community-based actors. The Government of The Gambia provides in-kind contributions and budgetary support, ensuring alignment with national priorities and sustained institutional backing. Local communities contribute labour, co-financing, and traditional knowledge, strengthening ownership and long-term sustainability. A wide range of NGOs and international donors, including the Global Environment Facility (GEF), Green Climate Fund (GCF), Food and Agriculture Organisation (FAO), United Nations Development Programme (UNDP), and Global EbA Fund, provide technical and financial support for restoration, capacity building, and livelihood interventions. Additionally, private sector partnerships, including eco-enterprises and carbon finance initiatives, are leveraged to stimulate green investments, promote sustainable enterprises, and generate co-benefits for biodiversity and local livelihoods.

Evaluation Plan

To ensure accountability, adaptive management, and continuous learning, the CRR NBSAP adopts a multi-tiered evaluation approach. A Mid-Term Review in 2027 will provide an independent assessment of progress, identify bottlenecks, and propose recommendations for course correction. The Final Evaluation in 2030 will assess effectiveness, efficiency, impact, sustainability, and the contribution of interventions toward GBF-aligned targets. Complementing formal evaluations, annual learning workshops will bring together communities, technical agencies, and other stakeholders to reflect on progress, share lessons learned, and strengthen local capacity for adaptive management.

8.6.8 Stakeholder Engagement and Governance

CRR NBSAP implementation is grounded in principles of free, prior, and informed consent (FPIC), inclusivity, equity, and transparency. Governance structures include a Regional Steering Committee, District Development Committees, and Community Forest Committees, each playing

distinct but complementary roles. Communities are responsible for implementing and monitoring activities, ensuring local relevance and accountability. Women and youth groups are empowered to lead enterprises, awareness campaigns, and conservation initiatives, fostering social inclusion and equitable benefits. Technical agencies, including forestry, fisheries, and biodiversity Departments, provide capacity building, technical backstopping, and oversight to support sustainable outcomes.

Reporting and Knowledge Management

Information management is a critical component of the NBSAP. Quarterly progress reports capture technical and financial updates, while annual biodiversity monitoring reports are shared nationally and with the CBD/GBF secretariat to inform national and global reporting. The program also produces knowledge products, including policy briefs, case studies, and best practice guidelines, facilitating replication of successful interventions in other Gambian regions. Community feedback loops, such as participatory scorecards and local evaluation sessions, ensure transparency, accountability, and adaptive learning at the grassroots level.

8.6.9 Monitoring, Evaluation, and Learning (MEL)

The MEL framework is designed to track progress toward biodiversity and livelihood outcomes, ensure alignment with GBF indicators, and inform adaptive management. Key indicators include forest cover, wetlands restored, adoption of climate-smart agriculture (CSA), gender participation, and funding mobilisation. The NEA and CRR Regional Council lead the MEL process, supported by technical Departments, NGOs, and local communities. Assessments are conducted at multiple stages, including a baseline in 2025, a mid-term in 2030, and a final evaluation in 2035. Tools for monitoring include GIS-based mapping, participatory scorecards, biodiversity surveys, and household livelihood tracking, ensuring both ecological and socio-economic dimensions are captured.

Expected Outcomes by 2030

By the end of the implementation period, the CRR NBSAP aims to achieve:

1. Healthy ecosystems: Forests are restored, farmlands are climate-resilient, and wetlands thrive with enhanced biodiversity.
2. Improved livelihoods: Farmers, fishers, and community members benefit from sustainable practices, diversified incomes, and strengthened local enterprises.
3. Climate resilience: Communities experience reduced vulnerability to drought, flooding, and land degradation, supported by ecosystem-based adaptation measures.
4. Contribution to GBF: CRR emerges as a model subnational unit demonstrating effective implementation of Gambia's GBF-aligned NBSAP, providing lessons for scaling and replication nationwide.

Through integrated financing, governance, MEL, and knowledge management systems, the CRR NBSAP is designed to deliver measurable ecological, social, and economic impacts while fostering long-term sustainability and alignment with national and global biodiversity objectives.

8.7 Upper River Region (URR)

8.7.1 Background & Context

The Upper River Region (URR) lies in the easternmost part of The Gambia and represents one of the country's most important ecological and agricultural landscapes. The region stretches along the upper reaches of the Gambia River and includes a diverse mosaic of ecosystems consisting of riverine forests, savanna woodlands, grasslands, wetlands, and extensive agricultural lands.

These ecosystems support a wide variety of wildlife species and provide essential ecosystem services that sustain local communities. Wildlife commonly found in the region includes primates such as the Patas monkey and Green monkey, as well as large mammals like the Hippopotamus and various antelope species. The wetlands and riverbanks also serve as critical habitats for migratory birds travelling along the West African flyway.

Beyond their biodiversity value, the ecosystems of URR provide vital services such as soil fertility maintenance, water regulation, climate moderation, and the provision of timber and non-timber forest products. These ecosystem services form the backbone of rural livelihoods in the region.

Communities in URR depend heavily on natural resources for their livelihoods. Agriculture remains the dominant economic activity, with most households engaged in crop farming, livestock rearing, fishing, and the harvesting of forest products such as fuelwood, medicinal plants, and wild fruits. While these activities are essential for food security and income generation, increasing pressure on natural resources has begun to threaten ecosystem health and biodiversity.

Several environmental challenges currently undermine the sustainability of ecosystems and livelihoods in the region. One of the most significant threats is deforestation driven by charcoal production, fuelwood harvesting, and agricultural expansion. As demand for energy and farmland increases, natural vegetation cover continues to decline.

Land degradation is another major concern. Unsustainable farming practices, soil erosion, and nutrient depletion have reduced soil productivity in many areas. Overgrazing by livestock and uncontrolled bushfires further exacerbate land degradation, reducing vegetation cover and increasing vulnerability to desertification.

Unsustainable hunting and excessive wood harvesting also threaten wildlife populations and forest ecosystems. In some areas, weak enforcement of environmental regulations allows these activities to persist without adequate monitoring or control.

Climate change further compounds these pressures. Increasing temperatures, irregular rainfall patterns, prolonged droughts, and periodic flooding affect both ecosystems and agricultural productivity. These climate-related challenges increase the vulnerability of rural communities that rely heavily on natural resources for their survival.

Governance challenges also contribute to biodiversity loss in the region. Limited technical capacity, insufficient resources for environmental management, and weak enforcement of environmental laws make it difficult to effectively manage natural resources and protect biodiversity.

To address these challenges, this Subnational Biodiversity Strategy and Action Plan (SBSAP) aligns with the national framework outlined in the National Biodiversity Strategy and Action Plan (2025–2035). It also supports global biodiversity commitments under the Kunming–Montreal Global Biodiversity Framework, ensuring that regional conservation actions contribute to national and international biodiversity targets.

Vision

A resilient Upper River Region where biodiversity, ecosystems, and cultural heritage sustain community livelihoods, strengthen climate resilience, and maintain ecological integrity.

Goal

By 2035, ecosystems, biodiversity, and natural resources in the Upper River Region are conserved, restored, and sustainably managed, supporting human well-being and contributing to national and global biodiversity commitments under the Kunming–Montreal Global Biodiversity Framework.

8.7.2 Strategic Objectives and Priority Areas

The URR SBSAP identifies four strategic priorities that address ecosystem restoration, biodiversity conservation, sustainable livelihoods, and climate resilience. These priorities are aligned with global biodiversity targets and national conservation strategies.

Priority 1 – Sustainable Land Management and Restoration

Objective: Restore degraded lands and promote sustainable land-use practices to enhance long-term productivity, ecosystem resilience, and biodiversity recovery.

Large areas of agricultural land and grazing landscapes in the Upper River Region have experienced degradation due to unsustainable farming practices, overgrazing, and recurrent bushfires. Restoring these landscapes is essential to improving agricultural productivity while protecting biodiversity. Under this priority, approximately 15,000 hectares of degraded farmlands, grasslands, and wetlands will be restored through agroforestry, reforestation, and the use of native tree species. Agroforestry systems will integrate trees into farming landscapes, improving soil fertility, enhancing carbon sequestration, and providing additional sources of income for farmers.

Community-managed forests and woodlots will also be established to reduce pressure on natural forests and provide sustainable sources of fuelwood and timber. At least 30 community forests and woodlots will be developed and managed by local communities.

Climate-smart agriculture practices will be promoted to improve soil fertility and increase crop productivity under changing climatic conditions. These practices include conservation agriculture, crop rotation, composting, and improved water management.

In addition, bushfire prevention and control will be strengthened through the establishment of community fire brigades, awareness campaigns, and enforcement of local bylaws regulating burning practices.

These interventions contribute to biodiversity restoration targets under the Kunming–Montreal Global Biodiversity Framework, particularly those related to ecosystem restoration and ecosystem health.

Priority 2 – Conservation of Key Ecosystems and Species

Objective: Protect and manage critical ecosystems and species through community-led conservation and strengthened biodiversity monitoring.

The Upper River Region hosts several important biodiversity habitats, including wetlands, gallery forests, and savanna ecosystems that support wildlife populations and migratory birds. However, these habitats are increasingly threatened by human activities and environmental change.

To address this challenge, the SBSAP will identify and establish two new community conservation areas in key biodiversity zones. These areas will be managed through community-based conservation systems that empower local communities to protect natural resources while benefiting from sustainable livelihood opportunities.

Existing community forests and Indigenous and Community Conserved Areas (ICCAs) will also be strengthened through improved governance structures, technical support, and biodiversity monitoring programs.

Habitat protection measures will focus on key wildlife species such as the Hippopotamus, various monkey species, and migratory waterbirds that depend on wetlands and riverine habitats. Biodiversity monitoring systems will be developed in collaboration with the Department of Parks and Wildlife Management and local communities to track species populations, habitat conditions, and conservation outcomes.

To reduce pressure on natural ecosystems, alternative livelihood programs will also be promoted. These include beekeeping, ecotourism services, and sustainable fisheries activities that generate income while encouraging conservation.

Priority 3 – Community-Based Governance and Livelihoods

Objective: Strengthen local governance institutions and promote sustainable biodiversity-based livelihoods.

Strong local institutions are essential for effective biodiversity management and sustainable natural resource use. This priority therefore focuses on strengthening community governance systems and empowering local stakeholders. Village Development Committees, Community Forest Committees, and local councils will receive training in natural resource governance, financial management, and participatory planning. These institutions will play a central role in implementing conservation initiatives and managing community forests.

Biodiversity-based enterprises will be supported to diversify income sources and reduce dependence on unsustainable resource extraction. Examples include honey production, agroforestry enterprises, ecotourism services, and sustainable harvesting of non-timber forest products.

Special attention will be given to ensuring equitable benefit-sharing among women, youth, and vulnerable groups. Women's cooperatives and youth groups will be supported through training, financial access, and leadership development programs.

Environmental education and awareness programs will also be implemented in schools and communities to promote biodiversity conservation and sustainable resource management.

Priority 4 – Climate Change Adaptation and Resilience

Objective: Integrate ecosystem-based approaches to strengthen resilience against climate change impacts.

Climate change presents a growing threat to ecosystems and livelihoods in the Upper River Region. Increasing droughts, floods, and temperature extremes affect both agricultural productivity and biodiversity. To address these risks, the SBSAP promotes ecosystem-based adaptation (EbA) strategies that strengthen the resilience of both ecosystems and communities.

Degraded watersheds and riparian buffers along the Gambia River will be rehabilitated through reforestation and soil conservation measures. These actions will help regulate water flows, reduce erosion, and improve water quality.

Climate-resilient agricultural practices will also be introduced, including drought-resistant crop varieties, flood-tolerant crops, and improved irrigation techniques.

Community awareness programs will promote climate adaptation strategies and highlight the role of biodiversity restoration in enhancing resilience.

In addition, renewable energy technologies such as solar power and improved cookstoves will be promoted to reduce pressure on forests and lower greenhouse gas emissions.

Table 44: Implementation of aligned Strategic Objectives

Priority Area	Strategic Objective	Key Actions (URR)	GBF Targets Aligned
1. Sustainable Land Management & Restoration	SO1: Restore degraded lands and ensure sustainable agriculture.	- Restore 15,000 ha of degraded farmlands, wetlands, forests and grasslands with agroforestry by 2035. - Promote CSA practices in 60% of farms. - Control bushfires through community fire brigades (control burning, awareness) - Strengthen community-based fire management plan	T2 (restoration of ecosystems), T10 (sustainable agriculture), T11 (soil health)
2. Conservation of Key Ecosystems & Species	SO2: Protect and manage critical ecosystems.	- Establish at least 2 new co-managed conservation areas along the URR. - Monitor and protect endangered species (hippos, migratory birds). - Establish 10 ICCAs in URR - Establish and manage community ranch/rangelands of 2000ha - watershed	T3 (protected areas 30%), T4 (species recovery), T8 (ecosystem services)
3. Community-Based Governance & Livelihoods	SO3: Enhance local governance and biodiversity-based livelihoods.	- Strengthen village forest, PA, and fisheries committees. - Develop biodiversity enterprises: beekeeping, ecotourism, NTFPs, among. - Gender-responsive benefit-sharing and youth empowerment programs.	T9 (benefits from biodiversity), T14 (integration into planning), T18 (financial resources), T22 (participation)

8.7.3 Results Framework / Logframe

Table 45: SBSAP Results Framework for URR

Hierarchy	Expected Results	Indicators	Baseline (2025)	Target (2035)	Means of Verification	GBF Link
Impact	Sustainable biodiversity and livelihoods	Biodiversity index, forest cover, soil fertility index	Declining	+20% biodiversity index	National biodiversity reports	Goals A–D
Outcome 1	Degraded lands restored	Hectares restored	<500 ha	15,000 ha	Forestry & NEA reports	T2, T10
Outcome 2	Ecosystems and species are protected	# conservation sites, species populations	Few protected areas	2 new CCAs, 30 CFs active	DPWM & community reports	T3, T4
Outcome 3	Livelihoods diversified and equitable	# eco-enterprises, % women/youth involved	<50	400 enterprises; 50% female/youth	NGO & regional reports	T14, T19
Outcome 4	Climate resilience enhanced	# EbA sites, % CSA adoption	<10%	60% CSA adoption, 10 EbA sites	Agric. Dept. reports	T8, T15
Outcome 5	Resilient ecosystems and communities in URR where biodiversity is conserved, restored, and sustainably used.	% of ecosystems in good ecological condition; % households with improved climate-resilient livelihoods	<15% of ecosystems intact; >20% of households with biodiversity-based income	>50% of ecosystems in good condition; 60% of households with biodiversity-based income	National biodiversity monitoring, household surveys, URR scorecards	GBF Goals A–D

Cross-Cutting Themes

- Gender & Inclusion: Women and youth will be central in governance and livelihood programs.
- Climate Change Resilience: Ecosystem-based adaptation (EbA) mainstreamed across all priorities.
- Knowledge & Data: Strengthen biodiversity monitoring (species, land use, threats) using community rangers, schools, and local universities.

- Capacity Development: Build skills in CSA, ecosystem restoration, and biodiversity enterprises.

Implementation Framework

- Lead Institution: URR Governor's Office in partnership
- Local Partners: District Chiefs, Village Development Committees, Community Forest Committees, Farmer-Based Organizations, Women and Youth Associations.
- National Partners: Department of Parks & Wildlife, Forestry Department, NEA, NGOs (e.g., WASDA, ActionAid, Fauna & Flora).
- International Partners: UNEP, UNDP, UNIDO, FAO, GEF, GCF, Global EbA Fund.

Monitoring & Evaluation (M&E)

- Annual Biodiversity Scorecards at district level.
- Indicators:
    - % of degraded land restored.
    - % of farms adopting CSA.
    - Hectares of new community conservation areas.
    - Number of species with active conservation measures.
    - % of rice growing areas protected from hippo/livestock grazing
    - Number of community livestock ranch/rangelands established
    - Households benefiting from biodiversity-based livelihoods.
- Reporting: Integrated into The Gambia's NBSAP and GBF National Reports.

Financing Mechanisms

- Public financing (national budget allocations).
- Climate and biodiversity funds (GEF, GCF, Global EbA Fund, IKI).
- Payment for Ecosystem Services (PES) & carbon credits (REDD+).
- Partnerships with the private sector (agroforestry, ecotourism).

8.7.4 Indicative Budget and Financing Plan (URR)

Table 46: Indicative Budget and Finance Plan of Priority Areas for URR

Priority Area	Key Interventions	Estimated Cost (USD)	Timeframe	Potential Funding Sources
1. Sustainable Land Management & Restoration	- Restore 15,000 ha (agroforestry, ANR, reforestation)- Farmer field schools & CSA training- Community fire brigades & fire management- Soil and water conservation measures	4,500,000	2025–2035	Government of The Gambia, GEF, FAO, IFAD, GCF, NGOs
2. Conservation of Key Ecosystems & Species	- Establish 2 CCAs and 10 ICCAs- Wetland & riverine restoration (2,000 ha)- Wildlife monitoring systems- Community rangelands (2,000 ha)	3,200,000	2025–2035	DPWM, UNEP, IUCN, GEF, Global EbA Fund
3. Community-Based Governance & Livelihoods	- Biodiversity enterprises (beekeeping, ecotourism, NTFPs)- Capacity building for VDCs & committees- Women & youth empowerment programs- Value chain development	2,500,000	2025–2035	UNDP, ActionAid, WASDA, Private Sector, Microfinance
4. Climate Change Adaptation & Resilience	- Watershed restoration & riparian buffers- Climate-resilient agriculture- Renewable energy (solar, cookstoves)- Climate awareness programs	2,800,000	2025–2035	GCF, UNDP, UNEP, Global EbA Fund, IKI
5. Monitoring, Evaluation & Knowledge Management	- Biodiversity monitoring systems- Annual scorecards- GIS mapping & data systems- Research & documentation	1,200,000	2025–2035	NEA, GBoS, UNEP, Research Institutions
6. Institutional Strengthening & Coordination	- Policy integration & planning- Training of local authorities- Coordination platforms- Enforcement of environmental regulations	800,000	2025–2035	Government, UNDP, EU, NGOs
Total		10,500,000		

8.7.5 Theory of Change – URR Subnational SBSAP

Impact (Long-Term Vision, 2035)

A resilient Upper River Region where ecosystems and biodiversity are conserved, restored, and sustainably used, ensuring climate resilience, food security, and improved livelihoods, contributing to Gambia's NBSAP and the GBF 2050 Vision of *"Living in Harmony with Nature."*

Outcomes (By 2030, Aligned with GBF Targets)

1. Land & Ecosystem Restoration (GBF T2, T10, T11):
    - 15,000 ha of degraded farmland and rangelands restored using agroforestry and CSA.
    - Reduced soil erosion, improved soil fertility, and water retention.
2. Biodiversity Conservation (GBF T3, T4, T8):
    - Two new community-managed conservation areas established.
    - At least 2,000 ha of riverine and wetland habitats restored.
    - Threatened species monitored and protected.
3. Community Governance & Livelihoods (GBF T9, T14, T18, T22):
    - Strengthened community forest/fisheries committees managing natural resources sustainably.
    - 500 households benefit from biodiversity enterprises (beekeeping, ecotourism, NTFPs).
    - Women and youth gain leadership roles and equitable benefit sharing.

Outcomes and Outputs

Table 47: SBSAP action plan for URR

Outcomes (by 2030)	Indicators	Baseline (2025)	Target (2030)	Outputs	Means of Verification	GBF Targets
1. Land and ecosystems in URR are restored and managed sustainably.	Hectares restored through CSA and agroforestry; % farmers adopting CSA % of farmers/PA adopting ANR	0 ha restored; <15% farmers using CSA 200ha of ANR piloted in Limbambulu Yamadou	15,000 ha restored; 80% of farmers applying CSA 3000ha of ANR	1.1 Community restoration campaigns 1.2 Farmer field schools on CSA 1.3 Community-led fire management initiatives 1.4 allowing generation	GIS mapping, Forestry Dept reports, farmer surveys	T2, T10, T11
2. Key ecosystems and species are conserved.	# of community conservation areas; Hectares of forest/wetlands under protection; # threatened	1 ICCA being managed; <9 ha under management; <2 species monitored	11 ICCA to be established (10,000 ha); 6 endangered species monitored	2.1 Conservation area designation & management plans 2.2 Wildlife monitoring program 2.3 Riverine/wetland restoration (2,000 ha)	Protected area registry, DPWM reports, biodiversity monitoring	T3, T4, T8

	species with monitoring plans					
3. Communities benefit from biodiversity-based livelihoods and stronger governance.	# of households with biodiversity-based enterprises; % women/youth, PWD in governance committees	<5000 households; <20% women/youth in committees	⩾10,000 households; ⩾50% women/youth in committees	3.1 Biodiversity enterprise support (beekeeping, ecotourism, NTFPs) 3.2 Capacity building for women & youth 3.3 Strengthen forest/fisheries committees	Income surveys, training records, committee membership registers	T9, T14, T18, T22
4. Knowledge, capacity, and policy integration enhanced.	# of biodiversity scorecards produced annually; % of district plans integrating biodiversity	None; biodiversity is not integrated into plans	Annual scorecards in all 6 districts; Biodiversity mainstreamed into all URR district plans	4.1 Annual scorecards developed 4.2 Awareness & education in schools/communities 4.3 Policy integration workshops	District reports, scorecards, policy reviews	T14, T21, T22

Outputs (Deliverables by 2027)

- Community fire brigades are established and operational in all six URR districts.
- Biodiversity monitoring systems (community rangers + schools).
- District-level biodiversity scorecards produced annually.
- Farmers trained in CSA and agroforestry.
- Management plans for new conservation areas.

Village Development Committees with integrated biodiversity planning.

Activities (Core Interventions)

- Land Management: Agroforestry campaigns, farmer field schools, firebreaks, tree planting.
- Conservation: Designation of community-managed reserves, habitat restoration, wildlife monitoring.
- Livelihoods: Value chain development (honey, shea, eco-tourism), skills training for youth & women.
- Governance: Strengthen local bylaws, participatory land use planning, integration into URR development plans.
- Knowledge: Awareness programs in schools, biodiversity monitoring with GPS/ICT tools.

Inputs / Enablers

- Technical support (Forestry Department, DPWM, NGOs).

- Finance (national budget, GEF, GCF, Global EbA Fund, PES, REDD+).
- Traditional knowledge (elders, customary institutions).
- Policy alignment (NBSAP, GBF, National Development Plan).

8.7.6 Assumptions and Risks

- Assumptions: Communities remain committed; the national government provides enabling policies; donors finance restoration and livelihoods.
- Risks: Land pressure from population growth, bushfires, climate extremes (droughts/floods).

Mitigation: Community fire brigades, climate-smart agriculture, early warning systems, ecosystem-based adaptation.

Chapter 9: Thematic Strategies and Action Plan

9.1 Summary of the Thematic strategies and Action Plans

The National Biodiversity Strategy and Action Plan (NBSAP) of The Gambia outlines a comprehensive framework for conserving biodiversity, strengthening ecosystem resilience, and promoting sustainable natural resource management. The thirteen (13) strategic components presented in the strategy–thematic area alignment table below represent key intervention areas that collectively address the major ecological, institutional, and socio-economic challenges affecting biodiversity in the country. These strategies support multiple thematic areas, including protected area management, coastal and marine ecosystems, fisheries, wetlands, forests, climate change adaptation, species conservation, governance, and knowledge management. By aligning these components with national priorities and global commitments under the Kunming–Montreal Global Biodiversity Framework, the NBSAP provides a coordinated approach for safeguarding ecosystems while ensuring sustainable development and improved livelihoods.

Knowledge Management, Capacity Building, and Technology Transfer form the backbone of effective biodiversity conservation and management. Knowledge management initiatives aim to strengthen biodiversity data systems, research, and monitoring programs that support evidence-based decision-making. This includes the development of biodiversity databases, improved ecological monitoring protocols, and strengthened information-sharing mechanisms among institutions, researchers, and stakeholders. Reliable biodiversity data are essential for tracking species populations, ecosystem conditions, and conservation outcomes across wetlands, forests, and protected areas. Complementing this, capacity-building efforts focus on developing the technical skills and institutional capabilities required to implement conservation programs effectively. Training programs for park rangers, conservation practitioners, researchers, and community stakeholders enhance skills in species identification, ecological monitoring, enforcement, and sustainable resource management. Technology transfer further reinforces these efforts by promoting the use of modern tools such as Geographic Information Systems (GIS), remote sensing technologies, drones, and climate-smart monitoring systems. These technologies support mapping of ecosystems, monitoring land-use change, tracking wildlife populations, and assessing environmental threats such as habitat degradation and climate impacts. Together, these three strategies strengthen the scientific, institutional, and technological foundations needed for effective biodiversity governance.

Protected Area Management and Wildlife Conservation represent core pillars of biodiversity protection in The Gambia. Protected areas and Other Effective Area-Based Conservation Measures (OECMs) serve as critical refuges for biodiversity and provide essential ecosystem services such as carbon storage (including that delivered by wildlife), water regulation, and habitat protection. Strengthening protected area management involves improving management planning, enhancing

ranger capacity, strengthening enforcement mechanisms, and increasing ecological monitoring within conservation sites. These actions aim to improve the effectiveness of protected areas while expanding conservation coverage toward international targets. Wildlife conservation initiatives complement these efforts by focusing on the protection and sustainable management of species across terrestrial, freshwater, and marine ecosystems. This includes safeguarding threatened species, protecting migratory bird habitats along the river and coastal wetlands, and supporting sustainable fisheries and marine biodiversity management. Conservation actions also address threats such as illegal wildlife trade, habitat destruction, and unsustainable exploitation of natural resources. By integrating wildlife management into protected area systems and broader landscapes, these strategies contribute to maintaining ecological connectivity and preserving species diversity across the country.

Wetlands Conservation and Invasive Species Management focus on maintaining ecosystem health and restoring degraded habitats that are essential for biodiversity and human well-being. Wetlands, mangroves, and riverine ecosystems are among the most productive habitats in the country and play vital roles in fisheries productivity, climate regulation, water purification, and flood control. Conservation and restoration initiatives within these ecosystems aim to protect critical habitats, restore degraded wetlands, and promote sustainable management practices that maintain ecological integrity. Invasive species management complements these efforts by addressing the growing threat posed by invasive alien species to native biodiversity and ecosystem stability. Early detection, monitoring, and control programs are essential to prevent the spread of invasive species that can disrupt ecosystems, outcompete native species, and alter ecological processes. Through coordinated management actions across forests, wetlands, and aquatic ecosystems, these strategies support ecosystem resilience and reduce biodiversity loss caused by biological invasions.

Community Engagement, Gender and Biodiversity, and Biodiversity Education and Awareness highlight the importance of inclusive and participatory approaches to biodiversity conservation. Community engagement strategies promote the active involvement of local communities, including Indigenous Peoples and Local Communities (IPLCs), in conservation planning and natural resource management. Participatory governance structures allow communities to contribute to the management of protected areas, wetlands, fisheries, and forest resources while benefiting from sustainable livelihood opportunities such as ecotourism, sustainable harvesting, and ecosystem restoration initiatives. Integrating gender considerations into biodiversity programs ensures that women and marginalised groups have equitable access to resources, decision-making processes, and capacity-building opportunities. Gender-responsive conservation approaches recognise the important roles women play in natural resource management and strengthen their participation in environmental governance and livelihood initiatives. Biodiversity education and awareness programs complement these strategies by promoting environmental literacy among citizens, schools, and local institutions. Public awareness campaigns, environmental education programs, and community outreach initiatives help build a culture of conservation by increasing understanding of biodiversity values, ecosystem services, and sustainable resource use. Together, these strategies empower communities, strengthen social inclusion, and foster collective stewardship of natural resources.

Resource Mobilisation and Biosafety address the governance, regulatory, and financial dimensions necessary for implementing biodiversity conservation initiatives effectively. Resource mobilisation strategies focus on securing adequate financial support for conservation through diverse funding sources, including government allocations, international donor partnerships, public–private collaborations, and innovative financing mechanisms such as biodiversity trust funds and ecosystem service payments. Strengthening financial sustainability ensures that conservation programs can be implemented consistently and that protected areas and biodiversity initiatives receive the resources needed for long-term success. Biosafety measures, on the other hand, focus on regulating and managing risks associated with biotechnology, genetically modified organisms, and other biological innovations that may affect ecosystems and human health. Effective biosafety frameworks require strong regulatory systems, technical expertise, and monitoring mechanisms to assess potential environmental risks and ensure compliance with national and international standards. By addressing both financial and regulatory aspects of biodiversity management, these strategies strengthen institutional capacity and support the responsible management of biological resources.

Overall, the thirteen NBSAP strategies create an integrated and multi-dimensional framework for biodiversity conservation and sustainable development in The Gambia. By linking ecosystem protection, wildlife conservation, knowledge systems, community participation, governance reforms, and financial sustainability, the strategy ensures that conservation efforts are comprehensive, inclusive, and adaptive. The coordinated implementation of these strategies will enhance ecosystem resilience, protect threatened species, and support sustainable livelihoods for communities that depend on natural resources. At the same time, the alignment of these strategies with national priorities and global biodiversity commitments reinforces The Gambia's role in advancing international conservation goals while safeguarding its rich ecological heritage for present and future generations.

9.2 Thematic strategies aligned to The National Biodiversity Strategy and Action Plan (NBSAP) Thematic Areas

Table 48: Aligned thematic strategies

NBSAP Strategy / Action Plan	Aligned Thematic Area(s)	Rationale
Knowledge Management	Thematic Area 4: Wetlands & riverine systems; Thematic Area 10: Species conservation; Thematic Area 12: Knowledge, monitoring, capacity building & CNEA	Focus on biodiversity monitoring, databases, information sharing, and baseline data aligns directly with T4.1/T4.2, T10.1/T10.2, and T12.1/T12.2.
Invasive Species Management	Thematic Area 4: Wetlands & riverine systems; Thematic Area 5: Forests & landscape restoration; Thematic Area 7: Invasive Species Management; Thematic Area 10: Species conservation	Direct alignment with T4, T5, and T7 for IAS strategy, early detection, and control, also supporting species conservation (T10).

Community Engagement	Thematic Area 1: Protected areas & OECMs; Thematic Area 2: Coastal & marine; Thematic Area 3: Fisheries & sustainable aquaculture; Thematic Area 4: Wetlands & riverine systems; Thematic Area 10: Species conservation; Thematic Area 11: Sustainable finance, governance & livelihoods	Supports participatory management of PAs, coastal sites, fisheries no-take zones, wetlands, threatened species sites, and alternative livelihoods in communities.
Gender and Biodiversity	Thematic Area 11: Sustainable finance, governance & livelihoods; Thematic Area 12: Knowledge, monitoring, capacity building & CNEA	Enhances equitable participation in biodiversity programs and capacity-building initiatives (linked to T11.2 and T12.2).
Protected Area Management	Thematic Area 1: Protected areas & OECMs; Thematic Area 2: Coastal & marine; Thematic Area 10: Species conservation	Directly supports T1.1/T1.2 for PA/OECM coverage and management effectiveness, coastal/marine PAs, and species within PAs.
Resource Mobilization	Thematic Area 11: Sustainable finance, governance & livelihoods	Directly linked to T11.1/T11.2 for securing funds and alternative livelihoods.
Technology Transfer	Thematic Area 2: Coastal & marine; Thematic Area 3: Fisheries & sustainable aquaculture; Thematic Area 4: Wetlands & riverine systems; Thematic Area 5: Forests & landscape restoration; Thematic Area 9: Climate Change Adaptation & Ecosystem-based Adaptation; Thematic Area 12: Knowledge, monitoring, capacity building & CNEA	Supports adoption of monitoring, climate-smart technologies, and EbA measures, plus training and capacity-building (T9/T12).
Wetlands	Thematic Area 2: Coastal & marine; Thematic Area 3: Fisheries & sustainable aquaculture; Thematic Area 4: Wetlands & riverine systems; Thematic Area 5: Forests & landscape restoration; Thematic Area 9: Climate Change Adaptation & Ecosystem-based Adaptation	Directly supports T2.1, T3.2, T4.1/T4.2, T5.1, and T9.1/T9.2 on ecological condition, restoration, and climate adaptation.
Biosafety	Thematic Area 12: Knowledge, monitoring, capacity building & CNEA	Risk assessment, regulations, and capacity-building for biosafety align with T12.1/T12.2 on monitoring and training.
Capacity Building	Thematic Area 1: Protected areas & OECMs; Thematic Area 2: Coastal & marine; Thematic Area 3: Fisheries & sustainable aquaculture; Thematic Area 4: Wetlands & riverine systems; Thematic Area 5: Forests & landscape restoration; Thematic Area 9: Climate Change Adaptation & Ecosystem-based Adaptation; Thematic Area 10: Species conservation; Thematic	Directly supports training, skill development, and capacity-building for rangers, community stakeholders, and technical staff across ecosystems, species, and livelihoods.

	Area 11: Sustainable finance, governance & livelihoods; Thematic Area 12: Knowledge, monitoring, capacity building & CNEA	
Biodiversity Education & Awareness	Thematic Area 2: Coastal & marine; Thematic Area 10: Species conservation; Thematic Area 11: Sustainable finance, governance & livelihoods; Thematic Area 12: Knowledge, monitoring, capacity building & CNEA	CNEA-focused actions, public awareness, and formal education link directly to coastal/marine biodiversity, threatened species, livelihoods, and monitoring/training initiatives.
Wildlife Conservation	Thematic Area 1: Protected areas & OECMs; Thematic Area 2: Coastal & marine; Thematic Area 3: Fisheries & sustainable aquaculture; Thematic Area 4: Wetlands & riverine systems; Thematic Area 10: Species conservation	Supports T1–T4 and T10 for species protection, migratory bird sites, coastal/marine biodiversity, fisheries, wetlands, and management of species within PAs.

CHAPTER 10: Implementation Plan (Finance-integrated framework)

10.1 Overview

The implementation of The Gambia's National Biodiversity Strategy and Action Plan (NBSAP) (2026–2035) is designed as a fully costed, financing-linked roadmap, where strategic priorities are directly tied to a structured and decentralised budget architecture. Unlike conventional implementation plans, this framework explicitly connects what is to be done, where it will be done, who will implement it, and how it will be financed.

At the core of this approach is the integration of the thirteen (13) component strategies with a dual financing system:

1. National-level investments, which support policy, institutions, large-scale programs, and national systems; and
2. Sub-national financing envelopes, which are ring-fenced for community-led implementation across regions.

This structure ensures that biodiversity actions are not only technically sound but also financially executable and locally grounded. The implementation plan therefore moves beyond planning into a deployment strategy, where funding flows are aligned with ecological priorities, regional needs, and institutional mandates.

The plan adopts a phased approach to allow for progressive scaling of investments, beginning with foundational systems and advancing toward large-scale restoration and long-term sustainability. It also ensures biodiversity mainstreaming across key sectors such as agriculture, fisheries, tourism, and urban development, while maintaining strong alignment with the Kunming–Montreal Global Biodiversity Framework.

10.2 Phased Approach (2026–2035)

The implementation of the NBSAP is structured into three sequential phases, each directly aligned with budget allocation patterns, financing flows, and implementation responsibilities.

Phase 1: Foundation and Immediate Action (2026–2028)

The first phase prioritises the establishment of institutional, technical, and financial foundations, supported primarily through national-level budget allocations. During this stage, investments are directed toward governance systems, baseline data generation, and early interventions that require centralised coordination.

Key actions include strengthening biodiversity-related policies and legal frameworks, establishing coordination mechanisms among ministries, and developing national biodiversity monitoring systems. These activities are financed through the central NBSAP budget, reflecting their cross-cutting and nationwide relevance.

Simultaneously, initial disbursements are made to sub-national financing windows, enabling communities to begin pilot interventions. These include early-stage ecosystem restoration (e.g., mangroves, forests, wetlands), sustainable agriculture demonstrations, and invasive species control at localised scales.

Public awareness campaigns under Communication, Education, and Public Awareness (CNEA) programs are also rolled out nationally but implemented locally through partnerships with communities and civil society organisations.

By the end of this phase, the country will have established a functional biodiversity governance system, operational financing channels, and an initial portfolio of community-led projects demonstrating the effectiveness of decentralised implementation.

Phase 2: Expansion and Consolidation (2029–2031)

The second phase represents the largest financial investment period within the NBSAP, characterised by the scaling up of both national programs and community-level interventions.

At the national level, significant budget allocations are directed toward expanding protected area networks, strengthening ecological connectivity, and implementing large-scale restoration programs across forest, wetland, mangrove, and agricultural landscapes. These investments are distributed regionally based on needs assessments derived from GBoS data, ensuring that regions with higher ecological importance and vulnerability receive proportionately higher funding.

At the sub-national level, community financing envelopes are substantially increased, allowing Village Development Committees (VDCs), community-based organisations (CBOs), and local NGOs to implement larger and more complex projects. These include community forestry, sustainable fisheries management, eco-tourism enterprises, and landscape-level restoration initiatives.

Nature-based solutions become a major investment focus during this phase, with funding directed toward climate adaptation measures such as watershed restoration and coastal protection through mangrove rehabilitation.

Research, monitoring, and technology transfer programs are also strengthened through national budget allocations, supporting evidence-based decision-making and adaptive management.

By the end of Phase 2, the NBSAP will have achieved visible ecological and socio-economic impacts, including restored ecosystems, improved habitat connectivity, and widespread adoption of sustainable practices.

Phase 3: Sustainability and Global Alignment (2032–2035)

The final phase focuses on long-term sustainability, financial consolidation, and global reporting alignment. Budget allocations during this stage are increasingly directed toward maintaining gains achieved in earlier phases and institutionalising biodiversity conservation within national development systems.

A key feature of this phase is the strengthening of sustainable financing mechanisms, including biodiversity funds, payment for ecosystem services (PES), and public–private partnerships. These mechanisms are designed to gradually reduce dependence on external funding and ensure continuity of conservation efforts.

Community-based financing remains active, but with greater emphasis on self-sustaining livelihood models, such as eco-tourism, agroforestry enterprises, and sustainable fisheries value chains.

At the national level, investments focus on policy integration, monitoring systems, and international reporting, ensuring that The Gambia meets its obligations under global biodiversity frameworks.

By the end of this phase, biodiversity conservation will be fully embedded within national and local development systems, supported by stable financing and strong institutional frameworks.

10.3 Cross-Sectoral Mainstreaming (Budget-Linked Implementation)

The integration of biodiversity into key economic sectors is supported by targeted budget allocations within each component strategy, ensuring that sectoral actions are not standalone but financially embedded within the NBSAP framework.

10.3.1 Agriculture

Budget allocations within the NBSAP support the transition toward climate-smart and biodiversity-friendly agriculture, particularly in rural regions where dependence on natural resources is highest.

Funding supports agroforestry, soil conservation, organic farming, and the preservation of traditional crop varieties. A significant portion of these funds is channelled through community financing windows, enabling farmers and cooperatives to implement sustainable practices directly.

These investments improve productivity while maintaining ecosystem services such as soil fertility and pollination.

10.3.2 Fisheries

Sustainable fisheries management is financed through a combination of national regulatory investments and community-based resource management funding.

National funds support policy enforcement, monitoring systems, and habitat protection, while sub-national budgets empower fishing communities to manage local resources, enforce seasonal closures, and adopt sustainable practices.

This dual financing approach ensures both regulatory oversight and local ownership.

10.3.3 Tourism

Tourism-related investments focus on developing eco-tourism infrastructure and community-based tourism enterprises.

National-level funding supports planning, standards, and environmental safeguards, while community allocations enable local participation in eco-tourism activities, ensuring that economic benefits are retained at the local level.

10.3.4 Urban Development

Urban biodiversity interventions are financed primarily through national allocations, given their policy and infrastructure nature.

Investments support green infrastructure, waste management systems, and pollution control, particularly in urban centres such as Banjul and Kanifing Municipality.

These interventions enhance urban resilience while reducing environmental degradation.

10.4 Role of Local Governments and Communities (Financing Perspective)

The implementation framework assigns clear financial and operational roles to local governments and communities.

Local governments act as intermediaries between national institutions and communities, supporting planning, coordination, and monitoring. While they do not control the full budget, they facilitate access to sub-national financing envelopes and ensure alignment with regional priorities.

Communities, through VDCs and CBOs, are the primary implementers of decentralised funds. These funds are specifically designed to support community-led initiatives, ensuring that local actors have both the resources and authority to manage biodiversity interventions.

Participatory planning processes and incentive mechanisms, such as conservation grants and PES schemes, are embedded within the budget structure to encourage active engagement.

10.5 Capacity-Building (Embedded Financing Approach)

Capacity-building is not treated as a standalone activity but as a cross-cutting investment category embedded across all budget components.

National-level allocations support institutional strengthening, technical training, research systems, and policy development. At the same time, community-level funds include provisions for training in sustainable livelihoods, natural resource management, and environmental governance.

This integrated approach ensures that capacity development is continuous, context-specific, and directly linked to implementation activities.

10.6 Gender and Social Inclusion (Financing for Equity)

Gender and social inclusion are mainstreamed across the NBSAP through targeted financial allocations and inclusive funding mechanisms.

A portion of community-level financing is explicitly directed toward women, youth, people with disabilities, and other marginalised groups, supporting their participation in conservation and access to biodiversity-based economic opportunities.

Programs supporting women-led cooperatives, youth engagement in restoration activities, and inclusive governance structures are financed through both national and sub-national budgets.

This ensures that biodiversity conservation contributes not only to environmental outcomes but also to social equity and inclusive development.

10.7 Conclusion

The implementation plan of the NBSAP (2026–2035) is fundamentally designed as a budget-driven execution framework, where financing is fully aligned with strategy, geography, and institutional roles.

By integrating national investments with decentralised community financing, the plan ensures that biodiversity conservation is both strategically coordinated and locally implemented. The phased approach allows for progressive scaling, while cross-sectoral and inclusive financing ensures that conservation efforts deliver broad ecological and socio-economic benefits.

This integrated model positions The Gambia to effectively achieve its biodiversity targets while building a resilient, inclusive, and sustainable environmental future.

Chapter 11: Finance & Resource Allocation

11.1 Introduction

The successful implementation of The Gambia's National Biodiversity Strategy and Action Plan (NBSAP) 2025–2035 is contingent upon a well-structured, realistic, and inclusive financing framework. This chapter presents the consolidated national budget required to achieve the strategic objectives of the NBSAP, detailing the allocation of financial resources across component strategies, regions, and implementation levels.

The budget framework is designed to ensure strategic alignment with national biodiversity priorities, equitable regional distribution of resources, effective decentralisation of implementation, and strong accountability and transparency mechanisms. It reflects both top-down national investments and bottom-up community-driven financing, ensuring that biodiversity conservation and sustainable use are implemented at all levels of governance.

11.2 Overall Budget Envelope

The total estimated budget required to implement the NBSAP over the 10 years (2025–2035) is USD 1,232,310,000. This figure represents the aggregated cost of implementing the thirteen component strategies that collectively address ecosystem restoration, biodiversity conservation, sustainable use, governance, and climate resilience.

Included within this total envelope is an estimated USD 521,550,000 allocated to sub-national implementation, representing approximately 42.3% of the total budget. These funds are ring-fenced specifically for community-level interventions and are not absorbed into national-level expenditures, ensuring that local actors have direct access to financial resources for implementation.

11.3 Costing Methodology

The NBSAP budget has been developed using a combination of bottom-up costing and benchmark-based estimation approaches to ensure realism and credibility. Cost estimates were derived from

unit cost assumptions, national expenditure benchmarks, and comparable biodiversity programs within the region and globally.

Key assumptions include ecosystem restoration costs ranging between USD 800 and USD 1,500 per hectare, based on restoration models in West Africa. Protected area management costs were estimated based on the Department of Parks and Wildlife Management's existing operational expenditures, scaled to reflect expansion and improved management effectiveness. Community-level interventions were costed using community-based natural resource management (CBNRM) models that reflect local implementation realities and cost structures.

This blended costing approach ensures that the budget is both technically grounded and aligned with international financing standards.

11.4 Budget Structure

The NBSAP budget is structured as an integrated, multi-tiered financing framework designed to ensure coherence between national priorities, regional implementation needs, and community-level interventions. The overall budget architecture is composed of two interlinked financing windows:

(i) Component Strategy Budgets, which finance nationally coordinated interventions under the 13 NBSAP component strategies, and
(ii) Subnational Strategy and Action Plan (SBSAP) Allocations, which provide dedicated financing envelopes to regions for localised implementation.

The Component Strategy Budgets are derived directly from the detailed costed interventions presented in Annexes: NBSAP Component Strategies and Action Plans, where each strategy is disaggregated into specific activities, outputs, and implementation pathways. These national-level allocations ensure strategic coherence, policy alignment, and centralised oversight of high-impact interventions.

Complementing this, the SSAP allocations represent the aggregated share of resources devolved to regions to support context-specific implementation, as elaborated in Section 7.0: Subnational Strategies and Action Plans. These allocations are not arbitrary but are systematically derived from the spatial distribution of activities, ecological priorities, and socio-economic conditions across regions.

11.4.1 Sum of regional budgets for the implementation of NBSAP by communities

Table 49: Regional Budgets for the implementation of NBSAP by communities

Region	Subnational Budget (USD)
Banjul	131,000,000
KM	170,750,000
WCR	163,000,000
LRR	6,550,000
NBR	18,250,000
CRR	17,000,000
URR	15,000,000
Total	**521,550,000**

11.5 Regional Distribution of Resources

The regional distribution of NBSAP resources is guided by a transparent and evidence-based allocation framework that integrates ecological significance, demographic pressures, levels of environmental degradation, and regional development disparities. This approach ensures that financial resources are directed toward areas where they can generate the highest ecological and socio-economic returns.

Each region's allocation reflects its relative importance within the national biodiversity landscape, including factors such as the presence of critical habitats, protected areas, biodiversity hotspots, and ecosystem service provisioning zones. Additionally, socio-economic indicators, including population density, land-use intensity, and dependency on natural resources, are incorporated to ensure equitable and needs-based distribution.

The resulting allocation model ensures that regions with high ecological value and elevated anthropogenic pressures receive proportionally greater investment, while also safeguarding minimum financing thresholds for less-developed regions to promote balanced national implementation. The regional shares presented in Table 50 therefore represent a synthesis of ecological prioritisation and development equity principles, fully aligned with the spatial strategies detailed in Section 7.0.

At an aggregate level, the regional shares are indicated in Table 50

11.6 Regional shares across all component strategies

Table 50: Regional shares across component strategies

Region	Approx Share
West Coast Region (WCR)	19%
Central River Region (CRR)	16.8%
Kanifing Municipality (KM)	15.3%
Upper River Region (URR)	14.2%
North Bank Region (NBR)	12.9%
Lower River Region (LRR)	10.5%
Banjul	11.3%

As shown in Table 50, the West Coast Region and Central River Region receive the largest shares of the total allocation, reflecting a combination of high population pressure, ecological importance, and restoration needs. In contrast, urban regions such as Banjul and Kanifing Municipality receive comparatively lower allocations for ecosystem-based interventions but are prioritised under pollution control, waste management, and environmental governance investments.

Regions such as Central River Region and Upper River Region receive higher allocations due to their ecological importance, large land areas, and significant restoration needs. The West Coast Region receives substantial funding due to high population pressure and the presence of critical coastal ecosystems. Urban areas such as Kanifing Municipality and Banjul receive comparatively smaller shares for restoration activities but are prioritised for pollution control, waste management, environmental awareness, and institutional strengthening.

11.7 Component Strategy Budget Allocation

The allocation of financial resources across the 13 NBSAP component strategies is grounded in a rigorous costing methodology that links strategic objectives to measurable outputs and implementation requirements. Each component strategy has been costed based on detailed activity-level budgeting contained in the annexes, ensuring that all financial estimates are supported by clearly defined interventions, timelines, and delivery mechanisms.

To operationalise these strategies at the subnational level, each component budget has been further disaggregated across regions based on the geographic relevance and implementation footprint of the associated activities. This spatial disaggregation ensures that national strategies are translated into actionable, location-specific interventions, consistent with the priorities identified in the Subnational Strategies and Action Plans (Chapter 7.0).

The percentage distribution presented in Table 51 illustrates how each component strategy is allocated across regions, reflecting variations in ecological conditions, implementation capacity, and strategic importance. Table 52 further translates these percentages into absolute financial allocations, providing a comprehensive view of the resource envelope available for implementation in each region.

This dual presentation of percentage and absolute allocations enhances transparency, facilitates financial tracking, and strengthens alignment between planning and budgeting processes.

11.8 National component strategy regional shares

Table 51: Detailed regional shares across national components

Strategy	Banjul	KM	WCR	NBR	LRR	CRR	URR	TOTAL
1. Landscape Restoration	5%	7%	16%	18%	12%	22%	20%	100%
2. Protected Areas	7%	8%	25%	13%	10%	22%	15%	100%
3. Wildlife Management	6%	8%	20%	14%	12%	22%	18%	100%
4. Gender & Biodiversity	10%	10%	14%	16%	14%	18%	18%	100%
5. Biosafety	8%	18%	22%	14%	10%	15%	13%	100%
6. Awareness & Education	15%	22%	20%	12%	8%	13%	10%	100%
7. Knowledge Management	15%	25%	20%	10%	8%	12%	10%	100%
8. Community Engagement	8%	10%	14%	16%	14%	20%	18%	100%
9. Wetlands Management	5%	8%	30%	12%	20%	15%	10%	100%
10. Capacity Building	15%	25%	15%	12%	9%	12%	12%	100%
11. Technology Transfer	18%	28%	18%	8%	4%	12%	12%	100%
12. Invasive Species	5%	5%	18%	15%	10%	25%	22%	100%
13. Resource Mobilisation	30%	25%	15%	8%	5%	10%	7%	100%

11.9 National component strategy regional allocations

Table 52: Detailed regional budgets across national component strategies

#	Component Strategy	Total Budget (USD)	Banjul	KM	WCR	LRR	NBR	CRR	URR
1	Landscape Restoration	400,000,000	20,000,000	28,000,000	64,000,000	48,000,000	72,000,000	88,000,000	80,000,000
2	Protected Areas	75,000,000	5,250,000	6,000,000	18,750,000	7,500,000	9,750,000	16,500,000	11,250,000
3	Wildlife Management	25,000,000	1,500,000	2,000,000	5,000,000	3,000,000	3,500,000	5,500,000	4,500,000
4	Gender & Biodiversity	10,000,000	1,000,000	1,000,000	1,400,000	1,400,000	1,600,000	1,800,000	1,800,000
5	Biosafety	5,850,000	468,000	1,053,000	1,287,000	585,000	819,000	877,500	760,500
6	Awareness & Education	10,000,000	1,500,000	2,200,000	2,000,000	800,000	1,200,000	1,300,000	1,000,000
7	Knowledge Management	10,500,000	1,575,000	2,625,000	2,100,000	840,000	1,050,000	1,260,000	1,050,000
8	Community Engagement	16,500,000	1,320,000	1,650,000	2,310,000	2,310,000	2,640,000	3,300,000	2,970,000
9	Wetlands	2,850,000	142,5000	228,000	855,000	570,000	342,000	427,5000	285,000
10	Capacity Building	19,000,000	2,850,000	4,750,000	2,850,000	1,710,000	2,280,000	2,280,000	2,280,000
11	Technology Transfer	10,690,000	1,924,200	2,993,200	1,924,200	427,600	855,200	1,282,800	1,282,800
12	Invasive Species	3,200,000	160,000	160,000	576,000	320,000	480,000	800,000	704,000
13	Resource Mobilization	25,000,000	7,500,000	6,250,000	3,750,000	1,250,000	2,000,000	2,500,000	1,750,000
	Totals	**613,590,000**	**46,472,200**	**58,909,200**	**106,802,200**	**68,712,600**	**98,516,200**	**129,675,300**	**109,632,300**

11.9.1 Cross-Cutting National Investments

In addition to regionally distributed resources, the NBSAP budget includes dedicated allocations for cross-cutting national systems that are essential for effective implementation, coordination, and accountability. These include investments in governance frameworks, monitoring and evaluation (M&E) systems, knowledge management, policy development, and institutional capacity strengthening.

These cross-cutting investments are centrally managed to ensure standardization, efficiency, and national-level oversight, while simultaneously supporting regional and local implementation. Their inclusion reflects the recognition that successful biodiversity conservation requires not only field-level interventions but also robust enabling systems.

Table 53: Budget allocation to cross-cutting categories

Category	Estimated Budget
National Coordination & Governance	8,000,000
Monitoring, Evaluation & Reporting (NBIS, MEL)	12,000,000
Policy Integration Across Sectors	5,000,000
Total	**25,000,000**

11.10 Results-Based Budget Framework

The NBSAP budget is underpinned by a results-based financing approach that explicitly links financial inputs to outputs, outcomes, and long-term impacts. Each component strategy is associated with a defined results chain, enabling the tracking of progress from resource allocation through to biodiversity and socio-economic outcomes.

This approach ensures that all expenditures are justified in terms of their contribution to national biodiversity targets and international commitments, including the Kunming-Montreal Global Biodiversity Framework. It also facilitates performance monitoring, adaptive management, and accountability to stakeholders and financing partners.

The alignment between financial allocations and expected results is further reinforced through the integration of indicators, baselines, and targets within both the Component Strategies (Annexes 3 - 15) and the Subnational Strategies and Action Plans (Chapter 7). This integrated framework ensures that the NBSAP is not only strategically coherent but also implementation-ready and results-driven.

11.11 Financing Strategy

The financing of the NBSAP is based on a diversified resource mobilization strategy designed to enhance financial sustainability and leverage multiple funding streams. Public sector financing will be complemented by international climate and biodiversity funds, including the Global Environment Facility (GEF), as well as bilateral and multilateral development partners.

In parallel, the framework promotes private sector engagement through innovative financing mechanisms such as biodiversity offsets, payment for ecosystem services, and blended finance approaches. These mechanisms are intended to mobilize additional resources, incentivize sustainable practices, and reduce pressure on public financing.

11.12 Financial Risk and Mitigation

The implementation of the NBSAP financing framework is subject to financial, institutional, and environmental risks that may affect the timely and effective delivery of results. Key risks include potential funding gaps, delays in disbursement, limited institutional capacity, and climate-related uncertainties.

To mitigate these risks, the framework incorporates a diversified financing strategy, phased implementation planning, and targeted capacity-building interventions. In addition, adaptive management principles will be applied to allow for periodic adjustment of priorities and resource allocations based on performance monitoring and emerging challenges. Refined Contingency + Inflation Paragraphs.

To strengthen the financial resilience of the NBSAP, a dedicated contingency provision is established to address both systematic cost escalation (inflation) and unforeseen financial risks over the 2025–2035 implementation period. Given the long-term nature of the NBSAP, inflationary pressures—driven by global price trends, exchange rate fluctuations, and domestic economic conditions—are expected to significantly influence the real cost of implementation. In particular, key cost drivers such as restoration inputs, infrastructure development, logistics, and personnel are highly sensitive to inflation, which, if unaccounted for, could erode the real value of allocated resources and compromise delivery of planned outputs.

To address this, the NBSAP incorporates a combined inflation-adjusted contingency reserve equivalent to 5% of the total budget (USD 83,227,500). This reserve is designed to serve a dual function:

(i) to absorb gradual cost increases arising from projected annual inflation over the implementation period, and

(ii) to provide a flexible buffer for unforeseen financial shocks, including climate-related emergencies, implementation delays, and market volatility. The contingency will be centrally managed under strict financial governance frameworks and deployed based on periodic financial reviews, with priority given to safeguarding high-impact and time-sensitive interventions. Where necessary, mid-term budget revisions will be

undertaken to recalibrate allocations in line with observed inflation trends and macroeconomic conditions.

Table 54: Contingency Table from Results-Based Budget

Category	Base Budget (USD)	Inflation/ Contingency (%)	Allocation (USD)	Total	Purpose
Component Strategy Budgets	1,232,310,000	5%	61,615,500	1,293,925,500	Covers inflation in large-scale interventions (restoration, PA management, infrastructure)
Subnational (SSAP) Allocations	521,550,000	4%	20,822,000	542,372,000	Addresses local price increases, community-level cost variability
Cross-Cutting National Systems	25,000,000	3%	750,000	25,750,000	Maintains operational continuity under inflationary pressure
Total Inflation-Adjusted Contingency	1,778,860,000	5% Blended	83,227,500	1,862,047,500	Protects the real value of NBSAP financing over 10 years

11.13 Financing Principles

Collectively, these principles ensure that the NBSAP financing framework is equitable, efficient, and results-oriented. By aligning financial resources with ecological priorities, strengthening decentralisation, and promoting accountability, the framework provides a credible and investment-ready platform for achieving The Gambia's biodiversity and sustainable development objectives.

Chapter 12: Monitoring, Evaluation & Reporting

12.1 National Biodiversity Indicator Framework

The Gambia adopts 20 core indicators aligned with the GBF targets and national priorities:

Table 55: National Biodiversity Indicator framework

Thematic Area	Core Indicator	Description & Measurement	Alignment
Ecosystems & Habitats	Forest cover (%)	Total forest area (ha, % of national land)	T1, T2
	Mangrove cover & health	Extent (ha) and condition	T2, T8
	Wetlands extent	Area of wetlands (ha), incl. Ramsar sites	T2, T3
	Land degradation trends	% degraded land using LDN	T1, T10
Species & Genetic Diversity	Red List Index (RLI)	Status of key threatened species	T4
	Fish stock status	% of stocks within sustainable levels	T5
	Wildlife abundance trends	Populations of indicator species	T4, T12
	Agrobiodiversity	Number of local crop varieties & livestock breeds	T9
Protected & Conserved Areas	Protected area coverage	% terrestrial & marine area protected	T3, T4
	Protected area effectiveness	% of PAs with management plans implemented	T3
Sustainable Use & Livelihoods	Community forest management	% forests under community agreements	T1, T9
	Sustainable agriculture adoption	% farmland under climate-smart practices	T10
	Eco-tourism contribution	Revenue & employment from biodiversity tourism	T12
Pollution & Climate Drivers	Plastic pollution	Tons of plastic are entering ecosystems	T7
	Pesticide & fertilizer use	Volume used annually (kg/ha)	T7

	Carbon stock in ecosystems	tCO_2e stored in forests, mangroves, and soils	T8
Governance, Policy & Finance	Environmental law enforcement	Number of prosecutions/compliance cases	T14
	Biodiversity mainstreaming	# of sectoral policies integrating biodiversity	T14, T15
	Biodiversity finance mobilized	% of national budget & donor funds for biodiversity	T19
Knowledge, Awareness & CNEA	Public awareness index	% of the population aware of the importance of biodiversity	T20

12.2 Implementation Notes

Effective implementation of The Gambia's National Biodiversity Strategy and Action Plan (NBSAP 2025–2035) relies on robust, evidence-based monitoring and clearly defined benchmarks. The following notes guide establishing baselines, tracking progress, and measuring outcomes over time.

Baseline Data Sources

Accurate baseline data are essential for understanding current ecosystem conditions, species status, and socio-economic contexts. Key sources include:

- Forestry Department: Forest cover, tree species composition, community forest data, and mangrove extent.
- Fisheries Department: Fish stocks, landing site data, fisheries co-management reports, and aquatic habitat assessments.
- National Environment Agency (NEA) and Department of Energy (DoE): Pollution data, protected area management reports, and climate risk assessments.
- Gambia Bureau of Statistics (GBOS): Socio-economic and demographic data to assess livelihood dependencies and community engagement.
- Satellite Imagery and Remote Sensing: Land-use and land-cover mapping, deforestation monitoring, wetland change detection, and habitat fragmentation analysis.
- Household and Community Surveys: Local knowledge on resource use, participation in conservation initiatives, adoption of sustainable practices, and perception of ecosystem services.

By combining institutional datasets with remote sensing and community-level surveys, the NBSAP ensures comprehensive and contextually relevant monitoring.

Measurement Frequency

Monitoring efforts should balance precision with practical feasibility:

- **Annual Monitoring:**
  - Rapid assessments of forest cover, mangroves, wetlands, fisheries production, and community enterprise outcomes.
  - Review of governance and participation indicators at village, ward, and regional levels.
- **Biennial Monitoring:**
  - Detailed biodiversity surveys, species population studies, and ecosystem health assessments.
  - Socio-economic surveys assessing livelihood impacts and equitable benefit-sharing.
- **Long-Term Monitoring:**
  - Key habitats, rare and threatened species, and climate-sensitive ecosystems should be tracked over decades to capture trends and guide adaptive management.

This tiered approach ensures timely feedback for management while enabling evaluation of medium- and long-term outcomes.

Baseline and Targets

To facilitate accountability and adaptive management, baselines and performance targets should be established for each thematic area, aligned with the NBSAP's 2030 and 2035 milestones:

- **Ecosystem Restoration:** Hectares of forests, wetlands, and mangroves restored.
- **Biodiversity Conservation:** Species population trends, protected area coverage, and habitat integrity.
- **Community Livelihoods:** Number of households adopting sustainable practices and participating in biodiversity enterprises.
- **Governance and Inclusion:** Functioning committees, participation of women and youth, enforcement of bylaws.
- **Climate Resilience:** Implementation of nature-based adaptation measures, flood mitigation, and drought-resilient practices.

Setting baselines and clear targets allows managers to quantify progress, prioritise interventions, and adjust strategies to achieve NBSAP objectives effectively.

Summary

By systematically integrating multiple data sources, establishing regular measurement schedules, and defining clear baseline and target values, The Gambia ensures that implementation of the NBSAP is evidence-driven, adaptive, and results-oriented. This approach strengthens the country's ability to achieve its biodiversity, ecosystem restoration, and climate resilience goals by 2035 while enabling transparent reporting to national and global frameworks.

Examples of Targets

Table 56: National targets for the priority areas

Priority Area	Baseline 2025	Target 2030	Target 2035
Forest Conservation	43% forest cover	Halt net deforestation; restore 15,000 ha	Increase to 50%; restore 30,000 ha
Wetlands & Freshwater	Degraded rivers & wetlands	50% of Ramsar sites are effectively protected	100% Ramsar sites protected; restore 5,000 ha of wetlands
Mangroves & Coastal	67,000 ha declining	Halt net loss; restore 2,500 ha of mangroves	Net gain to 70,000 ha; seagrass recovery
Protected Areas	7.1% coverage	Expand PA to 15%; establish corridors	20% land & 10% marine under effective management

12.3 Reporting Cycles

Robust reporting mechanisms are critical for tracking progress, ensuring accountability, and facilitating adaptive management of The Gambia's NBSAP (2025–2035). Reporting occurs at multiple intervals and levels, providing insights for national decision-making and international compliance.

1. **Annual Reporting**

- Purpose: Monitor implementation of NBSAP actions, financial expenditures, and progress on key biodiversity indicators.
- Scope: Includes ecosystem restoration, species conservation, governance, community engagement, and climate adaptation activities.
- Audience: NBSAP Steering Committee, Ministry of Environment, local governments, and development partners.

2. **Mid-Term Reviews (every 3–4 years)**

- Purpose: Conduct a performance evaluation of ongoing initiatives, assess the effectiveness of strategies, and identify emerging challenges or opportunities.
- Activities: Analyse data trends, review governance and community participation, and make evidence-based recommendations for course corrections.
- Outcome: Adjusted workplans, reallocation of resources, and refinement of technical approaches to maximise impact.

3. **Full-Term Review (2035)**

- Purpose: Provide a comprehensive assessment of the NBSAP's outcomes, measuring progress against targets and objectives set for 2035.
- Focus: Evaluate ecosystem restoration, biodiversity conservation, livelihood improvements, governance effectiveness, and climate resilience impacts.
- Outcome: Inform the next national biodiversity strategy, policy updates, and lessons for scaling successful interventions.

4. **CBD National Reporting (International Level)**

- Compliance: Align with Convention on Biological Diversity (CBD) reporting obligations.
- Schedule:
  - National Report 8 (NR8) – 2026
  - National Report 9 (NR9) – 2030
  - National Report 10 (NR10) – 2035
- Purpose: Demonstrate The Gambia's contribution to the Kunming–Montreal Global Biodiversity Framework (GBF) and international commitments.

12.4 Adaptive Management & Learning

The NBSAP embraces adaptive management as a core principle, recognising that biodiversity conservation operates in dynamic ecological, social, and economic contexts.

Principles:

- Biodiversity management follows a continuous cycle of plan → implement → monitor → evaluate → adjust, ensuring strategies remain responsive to evolving conditions.
- Interventions are iterative, evidence-driven, and flexible to emerging challenges such as climate variability, invasive species, and socio-economic changes.

Mechanisms:

- Annual Reflection Meetings: Bring together stakeholders to review progress, share lessons, and propose immediate adjustments.
- Mid-Term Reviews: Provide structured evaluation and guidance for strategic reorientation or scaling successful pilots.
- Pilot-to-Scale Approaches: Test innovative practices in select sites before broader implementation to ensure effectiveness and efficiency.

Knowledge Management:

- National Biodiversity Information System (NBIS): Central repository for ecosystem, species, and socio-economic data.

- Communities of Practice: Platforms for sharing best practices among government agencies, NGOs, and academic institutions.
- Regional Exchanges: Foster cross-regional learning and collaboration.
- Integration of Traditional Knowledge: Ensures local practices and indigenous knowledge inform management strategies.

Feedback & Policy Integration:

- Evidence from monitoring and evaluation informs policy adjustments, budget reallocations, and capacity-building priorities.
- Encourages innovation uptake and mainstreaming of successful approaches into sectoral and regional planning.

By combining structured reporting cycles with adaptive learning mechanisms, The Gambia's NBSAP ensures that implementation is transparent, accountable, and responsive, enhancing biodiversity conservation outcomes while aligning with national and global commitments.

Chapter 13: Risk Management & Safeguards

13.1 Key Risks

Table 57: Description of key risks

Risk Type	Description	Impact	Mitigation
Financial	Insufficient/delayed funding	Failure to implement restoration, PAs	Diversify sources, establish a Biodiversity Trust Fund, and mainstream into budgets.
Enforcement & Governance	Weak law enforcement, illegal activities	Continued biodiversity loss	Strengthen agencies, community rangers, digital monitoring, and judicial training.
Climate Change	Droughts, floods, and coastal erosion	Loss of mangroves, fisheries, and productivity	Nature-based Solutions, early warning systems, climate-proof infrastructure
Land Conflicts	Conservation vs. farming/urban expansion	Encroachment, degradation	Land-use framework, community tenure rights, ESIAs, conflict resolution platforms
Invasive Species	Water hyacinth, invasive fish, neem	Reduced water quality, economic loss	IAS Strategy, quarantine, research, regional cooperation

13.2 Mitigation Strategies

The Gambia's National Biodiversity Strategy and Action Plan (NBSAP 2025–2035) recognises that effective biodiversity management requires integrated mitigation across financial, governance, climate, land, and invasive species dimensions. The strategies outlined below aim to reduce risks, enhance resilience, and ensure the sustainability of interventions.

Financial Mitigation

- Biodiversity Trust Fund: Establish a dedicated national fund to ensure predictable, long-term financing for conservation and restoration.
- Payments for Ecosystem Services (PES): Incentivise communities and private actors to maintain ecosystems that provide critical services such as water regulation and carbon sequestration.

- Eco-tourism Revenues: Generate sustainable income by linking biodiversity conservation to tourism, benefiting local communities and regional economies.
- **Green Bonds:** Mobilise private capital for nature-based investments and climate-smart projects.

Governance Mitigation

- Strengthen institutional capacity through targeted staffing and training at national and regional levels.
- Promote co-management structures involving communities, local councils, and government agencies to improve accountability.
- Integrate digital monitoring tools (GIS, remote sensing, mobile reporting) to track ecosystem health and compliance.

Climate Mitigation

- Apply Nature-based Solutions (NbS) to restore forests, wetlands, and coastal ecosystems for climate adaptation and mitigation.
- Implement climate-smart agriculture (CSA) to reduce land degradation, increase resilience, and maintain biodiversity.
- Establish early warning systems to anticipate and respond to climate-induced threats such as floods, droughts, and wildfires.

Land and Tenure Mitigation

- Develop integrated land-use plans and strengthen legal recognition of protected and community-managed areas.
- Conduct Environmental and Social Impact Assessments (ESIAs) and Strategic Environmental Assessments (SEAs) to ensure planned activities do not compromise ecosystems or social equity.

Invasive Alien Species (IAS) Mitigation

- Adopt a comprehensive approach including prevention, early detection, rapid response, and community engagement for monitoring and control.

13.3 Social & Environmental Safeguards

A central tenet of The Gambia's National Biodiversity Strategy and Action Plan (NBSAP) is ensuring that all biodiversity interventions are implemented responsibly, without causing harm to people, ecosystems, or the institutions that govern them. Recognising that conservation actions can have unintended social or ecological consequences, the NBSAP establishes a comprehensive safeguards framework that spans environmental, social, and institutional dimensions. These

safeguards are designed to promote sustainability, equity, transparency, and compliance with national laws and international commitments, including the Global Biodiversity Framework (GBF).

Guiding Principles

The safeguards framework is anchored in five guiding principles:

1. **Do No Harm:** All interventions must avoid negative impacts on ecosystems, species, and communities. Restoration, conservation, or livelihood initiatives are planned and monitored to ensure that they do not disrupt habitats or exacerbate social vulnerabilities.
2. **Equity & Inclusion:** Biodiversity actions actively prioritise participation and benefits for women, youth, and marginalised groups. This principle ensures that conservation does not perpetuate existing inequalities but rather contributes to inclusive and equitable outcomes.
3. **Transparency:** Open communication, reporting, and participatory decision-making are central to the safeguards approach. Stakeholders at all levels, from local communities to national agencies, receive timely information on project objectives, methods, and results.
4. **Sustainability:** Interventions are designed to deliver long-term ecological and socio-economic benefits, reinforcing both environmental integrity and community resilience.
5. **Compliance:** Activities are fully aligned with national legislation, policies, and international standards, including GBF obligations, ensuring that interventions meet both legal and ethical benchmarks.

Environmental Safeguards

Environmental safeguards focus on preserving ecosystem integrity and maintaining essential services. Key measures include:

- **Habitat Protection:** Critical habitats such as wetlands, mangroves, forests, and biodiversity hotspots are identified and protected to maintain ecological functions and connectivity.
- **Sustainable Resource Use:** Interventions promote responsible harvesting of natural resources, reduce overexploitation, and minimise pollution.
- **Climate Resilience:** Actions integrate climate adaptation and nature-based solutions to buffer ecosystems against flooding, droughts, and other climate impacts.
- **Invasive Species Management:** Prevention, early detection, and rapid response strategies are implemented to control invasive alien species that threaten biodiversity and livelihoods.

Social Safeguards

Social safeguards ensure that biodiversity interventions enhance human well-being, respect local cultures, and empower communities. Measures include:

- **Land Tenure and Livelihood Protection:** Projects respect property rights and customary land arrangements, preventing displacement or loss of access to resources.

- **Gender and Youth Engagement:** Women and young people are actively involved in planning, decision-making, and implementation, ensuring equitable benefits and capacity-building opportunities.
- **Cultural Heritage Preservation:** Traditional knowledge, cultural practices, and local identities are recognised and integrated into conservation strategies.
- **Grievance Mechanisms:** Clear, accessible systems are in place for communities to raise concerns, resolve conflicts, and provide feedback on project implementation.

Institutional Safeguards

Effective implementation of safeguards requires robust institutional arrangements. Responsibilities are clearly assigned to relevant agencies, including the National Environment Agency (NEA), the Ministry of Environment, Climate Change and Natural Resources (MECCNAR), line ministries, local governments, NGOs, and community structures. Key tools for oversight and compliance include:

- Screening checklists for environmental and social risks.
- Environmental and Social Impact Assessments (ESIAs) and management plans.
- Free, Prior, and Informed Consent (FPIC) procedures for community engagement.
- Annual monitoring and reporting systems to track compliance and outcomes.

Expected Outcomes

When effectively applied, social and environmental safeguards are expected to deliver multiple benefits:

- **Conflict Reduction:** Clear protections for land, resources, and livelihoods reduce disputes among stakeholders.
- **Community Trust and Participation:** Transparent processes and inclusive engagement strengthen confidence and local ownership of biodiversity interventions.
- **Equity and Inclusion:** Women, youth, and marginalised groups gain meaningful participation and benefits.
- **Sustainability and Environmental Responsibility:** Conservation actions are implemented responsibly, balancing ecological restoration with social well-being for long-term impact.

Through this integrated safeguards framework, the NBSAP ensures that biodiversity conservation in The Gambia contributes to ecological integrity, social justice, and sustainable development simultaneously, providing a model for responsible, inclusive, and effective environmental stewardship.

Chapter 14: Stakeholder Engagement and Communication Plan

14.1 Introduction

The conservation and sustainable management of biodiversity in The Gambia cannot be achieved by government agencies alone. Success depends on the active participation of a diverse range of stakeholders, including civil society organisations, local communities, private sector actors, and international partners. Recognising this, the Stakeholder Engagement and Communication Plan (SECP) for the National Biodiversity Strategy and Action Plan (NBSAP) 2025–2035 provides a structured approach to ensuring meaningful involvement, effective communication, and coordinated action across all levels.

The SECP aligns with **Target 20 of the Kunming–Montreal Global Biodiversity Framework (GBF)**, which emphasises the importance of raising awareness, strengthening capacity, and fostering stakeholder engagement in biodiversity governance. By establishing clear roles, responsibilities, and communication pathways, the plan seeks to facilitate inclusive decision-making, enhance transparency, and promote shared ownership of conservation outcomes across the country.

14.2 Objectives

The overarching aim of the SECP is to ensure that all stakeholders are informed, engaged, and empowered to contribute to biodiversity conservation in a coordinated and inclusive manner. Specifically, the plan seeks to:

1. **Inform stakeholders** about the goals, priorities, and actions of the NBSAP, ensuring a common understanding of biodiversity challenges and opportunities across sectors and communities.
2. **Facilitate participation** in planning, decision-making, and monitoring processes, enabling local communities, women, youth, and marginalised groups to contribute their knowledge and perspectives.
3. **Strengthen collaboration** among government institutions, non-governmental organisations (NGOs), community-based organisations, academic institutions, and the private sector to leverage resources, expertise, and innovation.
4. **Enhance public awareness** and promote behavioural change by communicating the social, economic, and environmental benefits of biodiversity conservation, emphasising the role of ecosystems in supporting livelihoods and resilience.

5. **Support adaptive management** by establishing feedback mechanisms and iterative consultation processes that allow strategies to be adjusted in response to new information, stakeholder input, and changing environmental conditions.

By pursuing these objectives, the SECP ensures that engagement is not a one-time exercise but a continuous process, fostering a culture of participation, transparency, and shared responsibility. This approach is essential to achieving the long-term conservation goals of the NBSAP, enhancing ecosystem resilience, and delivering equitable benefits to all segments of Gambian society.

14.3 Stakeholder Mapping

Table 58: Key Stakeholders and Roles

Stakeholder Group	Role in NBSAP	Engagement Method	Communication Channels
Government Agencies	Policy, regulation, coordination, financing	Workshops, inter-ministerial committees, joint planning sessions	Reports, circulars, official letters, meetings
Local Councils & Communities	Co-management, on-ground implementation	Community meetings, participatory planning, focus groups	Local radio, community forums, IEC materials
Civil Society & NGOs	Advocacy, capacity building, project implementation	Partnership agreements, joint monitoring, and training programs	Social media, newsletters, workshops
Private Sector (tourism, fisheries, agriculture, extractives)	Investment, CSR, sustainable practices	Consultations, PPPs, technical workshops	Emails, meetings, conferences
Academia & Research Institutions	Data collection, monitoring, innovation	Research collaboration, internships, joint studies	Scientific publications, workshops, and webinars
Media (TV, radio, newspapers, digital)	Awareness creation, reporting	Press releases, media briefings, story pitching	Social media, radio & TV programs, newspapers
Donors & Development Partners	Funding, technical support, oversight	Coordination meetings, reporting sessions	Reports, presentations, donor briefings
Traditional & Religious Leaders	Local advocacy, cultural guidance	Community dialogues, awareness campaigns	Community meetings, local radio

14.4 Engagement Strategies

Effective implementation of The Gambia's NBSAP requires coordinated engagement across multiple sectors, levels, and stakeholder groups. The SECP identifies tailored engagement strategies to ensure that all actors- government, communities, private sector, civil society, academia, media, donors, and traditional leaders, play active and complementary roles in biodiversity conservation and sustainable development.

14.4.1 Government Engagement

Government institutions form the backbone of biodiversity governance. To ensure coordination and alignment, the plan proposes the establishment of an Inter-Ministerial Biodiversity Committee (IMBC)**,** tasked with overseeing policy integration, cross-sectoral planning, and reporting on NBSAP progress. Quarterly planning and review sessions will enable ministries to share progress, identify bottlenecks, and coordinate resources effectively. The integration of NBSAP objectives into national, sectoral, and local development plans will institutionalise biodiversity considerations across agriculture, fisheries, forestry, tourism, and urban planning, ensuring that biodiversity conservation becomes a central element of policy-making and public investment.

14.4.2 Community Engagement

Communities are the primary stewards of local ecosystems, and their active participation is critical for the success of restoration, protected area management, and sustainable livelihoods. The SECP promotes participatory consultations to involve community members in planning and implementing conservation initiatives. Village-level biodiversity clubs and eco-cultural festivals will foster local ownership, while participatory monitoring programs will empower residents to track ecosystem health and the outcomes of biodiversity interventions. By embedding engagement at the village level, the NBSAP strengthens social cohesion and ensures that conservation activities align with local knowledge, traditions, and priorities.

14.4.3 Private Sector Engagement

The private sector offers significant potential for sustainable investments in biodiversity, including eco-tourism, agroforestry, and fisheries. The SECP encourages the development of public–private partnership (PPP) frameworks to facilitate joint investments and shared benefits. Corporations will be incentivised to support biodiversity initiatives through corporate social responsibility (CSR) programs, technical guidance, and market-based incentives for adopting sustainable practices. Through this engagement, the private sector not only contributes financing but also fosters innovation, efficiency, and long-term sustainability of conservation efforts.

14.4.4 Civil Society and NGOs

Civil society organisations and NGOs bring expertise, outreach capacity, and community trust essential for biodiversity implementation. The SECP promotes strategic partnerships where NGOs

support capacity building, advocacy, and field implementation. Additionally, NGOs will co-develop monitoring tools and reporting formats, ensuring standardised data collection and adaptive management. Volunteer mobilisation by NGOs for restoration, awareness campaigns, and community education strengthens grassroots engagement and fosters a culture of civic responsibility toward nature.

14.4.5 Academia and Research

Academic institutions and research organisations play a critical role in generating evidence to inform decision-making. The plan encourages integration of biodiversity monitoring into student projects, theses, and research programs, while workshops and knowledge-sharing seminars will disseminate findings to practitioners and policymakers. Academic partnerships will also support data management, GIS mapping, and trend analysis, providing robust scientific underpinnings for NBSAP interventions and adaptive management.

14.4.6 Media and Public Awareness

Raising public awareness is essential for building a culture of conservation. Mass media campaigns will focus on threatened species, habitat protection**,** and sustainable livelihoods, while annual events such as World Environment Day and International Biodiversity Day will mobilise communities and generate public interest. Social media platforms will be leveraged to engage youth and urban populations, ensuring widespread communication of NBSAP priorities and successes.

14.4.7 Donor and Development Partner Coordination

Effective resource mobilisation and technical support require close coordination with international partners. The SECP outlines mechanisms for annual donor briefings, progress reporting, and joint development of funding proposals**,** ensuring alignment of external support with national biodiversity priorities. Transparent reporting on fund utilisation and outcomes will strengthen donor confidence, enabling predictable and sustained financing for biodiversity initiatives.

14.4.8 Traditional and Religious Leaders

Cultural and spiritual leaders are key influencers in Gambian society, capable of shaping behaviours and attitudes toward nature. The SECP emphasises the integration of indigenous knowledge and cultural values into conservation messaging**.** Leaders will act as champions for biodiversity initiatives, promoting sustainable resource use, compliance with local regulations, and participation in restoration and protection programs. By incorporating cultural legitimacy, conservation efforts gain greater acceptance and long-term sustainability at the community level.

14.5 Communication Channels & Tools

Table 59: Channels and tools for communication

Channel	Target Audience	Purpose	Frequency
National TV & Radio	General public	Awareness, education	Monthly programs & campaigns
Social Media (FB, Twitter, Instagram)	Youth, urban communities	Awareness, reporting, behaviour change	Weekly updates
Newsletters & Reports	Government, donors, NGOs	Information dissemination, accountability	Quarterly
Community Meetings & Forums	Local communities	Consultation, feedback, participatory planning	Quarterly
Workshops & Seminars	Agencies, NGOs, research institutions	Capacity building, planning	Biannual
IEC Materials (posters, brochures, flyers)	Schools, communities	Awareness & behavior change	Continuous
National Biodiversity Portal & Mobile App	General public, researchers	Data access, reporting, citizen science	Continuous

14.6 Engagement Process & Timeline

Table 60: Stakeholder Engagement Timeline (2025–2035)

Activity	Stakeholder	Frequency	Lead Agency
Inter-ministerial biodiversity coordination meetings	Government	Quarterly	NEA
Community biodiversity consultations	Local communities	Annually	NEA, Local Councils
CNEA campaigns (media, events)	General public	Annual & ongoing	NEA, Media partners
Private sector PPP consultations	Business sector	Biannual	NEA, MoT, MoF,
Training workshops	NGOs, communities, government staff	Biannual	NEA, NGOs

Donor coordination & reporting	Donors & development partners	Annual	NEA
Research collaboration & knowledge sharing	Academia	Annual	NEA, Universities
Citizen science reporting & app engagement	Public	Continuous	NEA, Universities

14.7 Feedback and Adaptive Management

The dynamic nature of biodiversity management necessitates systems that can learn from experience, respond to emerging challenges, and adjust interventions to maximise impact. Feedback mechanisms form a critical component of the NBSAP Stakeholder Engagement and Communication Plan, ensuring that stakeholders at all levels, from communities to government agencies, can provide timely input on program design, implementation, and outcomes. Tools such as community suggestion boxes, online surveys, and citizen reporting via mobile applications enable residents to report concerns, successes, and opportunities for improvement in real time.

Adaptive planning is embedded within this feedback system, allowing the NBSAP to revise action plans, communication strategies, and stakeholder engagement approaches every two to three years. This iterative process ensures that interventions remain relevant, context-specific, and responsive to changing ecological, social, and economic conditions. Consolidation of stakeholder input is captured in annual NBSAP stakeholder engagement reports, which provide a structured overview of participation levels, feedback received, and adjustments made to programs. These reports also inform policy decisions, budget allocations, and project prioritisation, fostering evidence-based management at both local and national levels.

By institutionalising feedback and adaptive management, the NBSAP fosters a culture of continuous learning, accountability, and responsiveness, ensuring that biodiversity conservation is not only effective but also inclusive, participatory, and resilient to changing circumstances.

14.8 Expected Outcomes

The systematic engagement of stakeholders and integration of adaptive management is expected to yield multiple, tangible outcomes over the implementation period of the NBSAP:

1. **Strong Multi-Stakeholder Participation:** Government agencies, communities, NGOs, the private sector, and traditional leaders actively contribute to the planning, implementation, and monitoring of biodiversity initiatives, ensuring broad-based ownership and commitment.
2. **Increased Awareness and Behavioural Change:** Public education campaigns, participatory monitoring, and community events foster a deeper understanding of biodiversity issues, leading to sustainable practices and conservation-oriented behaviours among households and local institutions.

3. **Integration of Biodiversity into Planning:** Biodiversity considerations are systematically incorporated into government policies, private sector investments, and development plans, reinforcing the linkage between ecological sustainability and socio-economic development.
4. **Improved Accountability and Transparency:** Regular feedback, reporting mechanisms, and participatory governance strengthen oversight of NBSAP actions and the use of resources, enhancing trust among stakeholders and the public.
5. **Enhanced Local Ownership and Adaptive Management:** Communities, women, youth, and local institutions take on active roles in managing and monitoring biodiversity, enabling knowledge sharing, innovation, and adaptive decision-making that responds to ecological and social changes.

Collectively, these outcomes ensure that stakeholder engagement is not a one-time activity but a continuous, inclusive process that supports the long-term sustainability and effectiveness of The Gambia's NBSAP, in alignment with the Global Biodiversity Framework and national development goals.

Conclusion

The annexes of the NBSAP serve as practical thematic strategies, ready-to-use tools and resources designed to operationalise biodiversity conservation across sectors and administrative levels in The Gambia. They provide frameworks for evidence-based planning, monitoring and evaluation, stakeholder engagement, and adaptive management, ensuring that implementation is systematic, accountable, and results-oriented.

By offering guidance on baseline data, monitoring protocols, financial planning, community engagement, governance, and adaptive management, the annexes empower stakeholders to act in coordination, measure progress, and make informed decisions. Together, these tools align national biodiversity efforts with the Global Biodiversity Framework (GBF), national development priorities, and sustainable development objectives, ensuring that The Gambia can achieve its conservation, climate resilience, and livelihoods goals through a cohesive, inclusive, and well-resourced approach.

References

African Development Bank, The Gambia Country Food and Agricultural Delivery Impact, 2019 - 2026

Banjul Baseline Assessments of Climate Vulnerability and Risk Assessments, Energy Access and Waste Management, 2026

CBD, Country Profiles // Main Details

CBD, October 2010 (Decision X/2)

Coalition for Fair Fisheries Arrangement, The Gambia-EU Sustainable Fisheries Partnership Agreement, Columbia University 2008;

Commission Sous-Regionale des Peches, September 2008

Convention on Biological Diversity (2022) Kunming-Montreal Global Biodiversity Framework

Data from the most recent available studies between the period 1983 and 2000 from Nation Master 2023.

Development Bank, The Gambia Country Food and Agricultural Delivery Impact, 2019 - 2026

DPWM, Benefit Sharing Mechanism for the Conservation of the mangrove ecosystems in The Gambia through the DWR, 2015

Dyami Security Intelligence, September 2025

Fisheries and aquaculture specialist, Overview of the Fisheries Sector in the Gambia, 2014

Fishery Country Profile, Food and Agriculture Organisation of the United Nations (FAO), 2007

FOSA Country Report, FAO

Gambia Deforestation Rates & Statistics, Global Forest Watch, 2020

Gambia SDG 6 Data 2000 - 2019

GBoS. (2024). The Gambia Population and Housing Census 2024 Preliminary Report. Gambia Bureau of Statistics, Banjul

GNAIP-II, 2019-26

IOM Environmental Portal, Nature-based Solutions to Address Hydro-met Hazards and Human Mobility in The Gambia, January 2024

Management for Regional Climate Action Planning in The Gambia, Banjul City, January 2026

Ministry of Agriculture (2010) Gambia National Agricultural Investment Plan (GNAIP). Government of The Gambia

negotiations, September 2024

NBSAP of The Gambia, March 2015,

RCAP Banjul, January 2026

REDD+ mechanism, June 2022

Resilience of Organisations for Transformative Smallholder Agriculture Project (ROOTS), empowering Smallholder Farmers: The Backbone of Gambia's Agriculture, June 2024

World Agroforestry Centre (ICRAF), 2018

UNCCD NAP The Gambia, 2015

UNDP The Gambia 2025 Global Human Development Report, June 2025

UNESCO, Mangrove Ecosystems of Gambia, 2022

UN-WCMC (n.d.) Indicators for the Kunming – Montreal Global Biodiversity Framework

Worldometer, 2025

World Economic Outlook, IMF, October 2025

Annexes

Annex 1: NBSAP Implementation Readiness Checklist

The successful execution of The Gambia's NBSAP requires meticulous preparation across multiple dimensions, ensuring that policies, institutions, finances, data systems, and stakeholders are fully prepared for action. The implementation readiness checklist provides a structured framework to assess preparedness and guide capacity building before the start of full-scale operations.

Policy, Legal, and Institutional Readiness is the foundation of NBSAP implementation. The strategy is considered ready when the plan is formally adopted, aligned with the targets of the CBD Global Biodiversity Framework, and supported by updated policies and legal instruments. Institutional roles must be clearly defined, with operational coordination mechanisms in place to ensure effective inter-agency collaboration and decision-making.

Strategic and Planning Readiness ensures that the NBSAP is actionable and results-oriented. Readiness in this domain includes the finalisation of thematic areas and national priorities, the development of a results framework with clearly defined baselines and indicators, and completion of a fully costed action plan. Operational milestones, Gantt charts, and M&E templates must be established, accompanied by risk assessments and adaptive management plans to anticipate and respond to emerging challenges.

Financial Readiness guarantees that adequate and sustainable funding mechanisms support the plan. Key indicators of readiness include the establishment of a National Biodiversity Trust Fund, secured budget allocations, and a comprehensive financing strategy that incorporates co-financing opportunities and innovative mechanisms. Financial tracking systems must be operational to monitor resource flows, enhance transparency, and ensure accountability.

Data, Knowledge, and Spatial Readiness ensure evidence-based decision-making. Baseline biodiversity data should be compiled, and GIS layers and spatial maps should be made accessible through an organised repository. Monitoring protocols need to be defined, with formalised data-sharing agreements to facilitate collaboration among government agencies, NGOs, research institutions, and local communities.

Stakeholder and Communication, Education, and Public Awareness (CNEA) Readiness is critical to promote inclusive participation. The stakeholder engagement plan must be finalised, with clearly defined roles for government agencies, communities, private sector actors, and NGOs. Public awareness campaigns, CNEA strategies, and mechanisms for community participation should be operational, and training programs must be prepared to build capacity for active engagement.

Operational and Technical Readiness addresses the practical capacity to implement field activities. Implementation teams need to be identified, with standard operating procedures (SOPs) established for monitoring and restoration work. Necessary tools and equipment must be available,

and logistics and procurement plans must be prepared. Risk mitigation measures should also be in place to ensure operational resilience.

Reporting and Adaptive Management Readiness ensure that implementation is monitored, evaluated, and improved over time. A schedule for M&E aligned with national and CBD reporting requirements should be established, alongside a biodiversity scorecard template. Adaptive management mechanisms need to be operational, and systems for documenting lessons learned must be prepared to inform continuous improvement.

By meeting these readiness criteria across policy, planning, finance, data, stakeholder engagement, operational capacity, and adaptive management, The Gambia will be well-positioned to implement the NBSAP efficiently, effectively, and inclusively. This comprehensive approach ensures that the nation's biodiversity conservation goals are achieved while supporting sustainable development, climate resilience, and community well-being.

Overall Readiness Assessment

To ensure effective implementation of The Gambia's NBSAP, a comprehensive readiness assessment evaluates the preparedness of key sectors, institutions, and communities across multiple dimensions. Each area, policy and legal framework, strategic planning, financial capacity, data and knowledge systems, stakeholder engagement, operational capability, and adaptive management is assessed for levels of readiness: high, medium, or low.

High readiness indicates that policies, institutions, or systems are fully established and functioning effectively. Medium readiness highlights areas where structures or processes exist but require further capacity building, resourcing, or refinement. Low readiness identifies critical gaps that could hinder NBSAP implementation if unaddressed, such as insufficient budget allocations, lack of baseline data, limited community engagement mechanisms, or weak monitoring systems.

For each gap identified, the assessment provides clear next steps, including targeted capacity-building programs, policy reforms, institutional strengthening, financing strategies, and the development of technical tools. This structured approach ensures that all actors, from national ministries and local governments to communities and civil society, are prepared and capable of contributing effectively to biodiversity conservation and sustainable development goals.

Annex 2: Biodiversity Education and Public Awareness Strategy and Action Plan

https://drive.google.com/file/d/1p9aoGSAYTAOK4RGfaqsD1jQ4maUlRTds/view?usp=drive_link

Annex 3: Biodiversity Knowledge Management Strategy and Action Plan

https://drive.google.com/file/d/1kYtUgVxYiOCw1nyq9zA7F7irFo54U551/view?usp=drive_link

Annex 4: Biosafety Strategy and Action Plan

https://drive.google.com/file/d/1gPiEiIOZBC5D0nd_jjRJgc-RlJkOVSt0/view?usp=drive_link

Annex 5: Capacity Building Strategy and Action Plan

https://drive.google.com/file/d/1nXU-YwdAcEyxjEdfdzbc0mrXPiCmQ4Q4/view?usp=drive_link

Annex 6: Community Engagement Strategy and Action Plan
https://drive.google.com/file/d/1O_Oll6y-SyqGT5hiN9LkQuwvjI_WSNIb/view?usp=drive_link

Annex 7: Gender and Biodiversity Strategy and Action Plan
https://drive.google.com/file/d/1pt0jUjtBMy3T_GK7oY_FviVB3zjBmp5l/view?usp=drive_link

Annex 8: Invasive Species Management Strategy and Action Plan
https://drive.google.com/file/d/1n0ReJ3dhBc6V-o5vG_33H9rYUVyge1td/view?usp=drive_link

Annex 9: Landscape Restoration Strategy and Action Plan
https://drive.google.com/file/d/1v4c9KJNIKmCv_KsXYjxX3Z4viU5UOkRj/view?usp=drive_link

Annex 10: Protected Area Strategy and Action Plan
https://drive.google.com/file/d/1ATbn0NIRtaW1UbQp2tcFHfq3wRPxGZki/view?usp=drive_link

Annex 11: Resource Mobilisation Strategy and Action Plan
https://drive.google.com/file/d/1-t2X9PC4xbMjarodLZEc_KxblIhojxfB/view?usp=drive_link

Annex 12: Technology Transfer Strategy and Action Plan
https://drive.google.com/file/d/1Zh2KyRlIIAV6T5ox2AuF5OtkC8ISkxfg/view?usp=drive_link

Annex 13: Wetland Management Strategy and Action Plan
https://drive.google.com/file/d/1xH5xlQPixlGed-ga1KJ7AMFLsXjVsPWt/view?usp=drive_link

Annex 14: Wildlife Management Strategy and Action Plan
https://drive.google.com/file/d/1oZnsGKtHR6jZ5fwXxCLp8vQYZhdJrugi/view?usp=drive_link

Annex 15: Gambia's Biodiversity Outlook
https://gambiabiodiversity.gm