Gambia's National Biodiversity Strategy and Action Plan

Wetland Strategy and Action Plan (2025-2035)

Alpha Omar Jallow

Table of Contents

Context & alignment 6
Vision & Objectives 8
Vision 8
Strategic Objectives (to 2035): 8
1. Protect remaining high-value wetlands and their ecological integrity. 9
2. Restore degraded wetlands and strengthen their resilience. 9
3. Promote sustainable and inclusive use of wetlands to enhance livelihoods. 9
4. Integrate wetland management into sectoral policies and land-use planning. 10
5. Strengthen institutional, legal, and financial frameworks for wetland governance. 10
6. Raise awareness, build capacity, and promote stakeholder participation. 10
Strategic Priority Actions 11
Protect and Conserve Wetlands 11
Restore and Enhance Resilience 12
Sustainable Use and Livelihoods 13
Mainstreaming and Policy Integration 14
Institutional Strengthening, Monitoring, and Finance 15
Awareness, Stakeholder Engagement, and Governance 16
Alignment with NBSAP/GBF Targets 17
Alignment with National and Global Biodiversity Targets (NBSAP and GBF) 17
Implementation Framework & Timeline 19
Implementation Framework and Timeline (2025–2035) 19
Short-Term Phase (2025–2028): Foundations and Baseline Development 19
Medium-Term Phase (2029–2032): Expansion and Integration 21
Long-Term Phase (2033–2035): Consolidation and Sustainability 21
Governance & roles: 23
Governance Structure and Institutional Roles for Wetland Management 23
Lead Agency 23
Co-Lead Government Agencies 23
Community-Level Governance 24
Technical and Development Partners 24
Monitoring, Evaluation, and Adaptive Management 24
Resource Mobilisation and Financing for Wetland Conservation 25

Development of a National Wetland Finance Plan 25
Blue Carbon and Climate Finance Opportunities 26
Private Sector Engagement 26
Public Budget Allocation and Government Commitment 27
Integrated Financing Approach 27
Monitoring & indicators Monitoring Framework and Indicators for Wetland Management 27
Key Monitoring Indicators 28
1. Area of wetlands legally protected or under sustainable management 28
2. Area of degraded wetlands restored 28
3. Number of local communities engaged in wetland management 29
4. Number of sustainable livelihood initiatives linked to wetlands 29
5. Integration of wetlands into sectoral policies and plans 29
6. Level of funding mobilized for wetland conservation 29
7. Biodiversity status and ecosystem service indicators 30
Data Collection and Reporting 30
Risk Management and Enabling Conditions 31
Insufficient Funding and Political Commitment 31
Weak Enforcement of Regulations and Land-Use Pressures 31
Climate Change Impacts 32
Limited Capacity at Local and Community Levels 32
Conflicts of Interest Among Stakeholders 33
Data Gaps and Weak Monitoring Systems 33
Enabling Conditions for Successful Implementation 34
Strong Political Support and Institutional Mandate 34
Clear Legal Frameworks and Policy Alignment 35
Multi-Stakeholder Participation and Community Empowerment 35
Capacity Building and Continuous Training 36
Reliable Funding Streams and Sustainable Finance Mechanisms 36
Integration of Climate Adaptation and Biodiversity Conservation 36
Robust Data Systems and Adaptive Management 37
Action Plan and Budget Overview 37
Summary of Major Budget Assumptions 38
Exchange and Inflation Contingency 38
Estimated Annual Budget 38
Funding Sources 38

Responsible Agencies 39
Budget Allocation Principles 39
Implementation Approach 40
Action Plan Table (2025-2035) 40
Notes, Assumptions, and Rationale for Wetland Strategy Implementation 44
Incremental Budget Scaling 45
Restoration Targets 45
Phased Livelihood Programs 45
Financing Plan 45
Monitoring and Adaptive Management 46
Community Participation and Inclusivity 46
Restoration and Resilience Interventions 46
Responsible Agency Roles 47
Key Risks, Mitigation Measures, and Next Steps 50
Key Risks and Mitigation Measures 50
Weak Enforcement of Legal and Regulatory Frameworks 50
Low Community Buy-In or Weak Benefit Sharing 51
Climate Change Impacts Outpacing Restoration 51
Monitoring and Data Gaps Impair Adaptive Management 51
Next Steps 52
Annex 1: Theory of Change – Wetland Management in The Gambia (2025–2035) 53
Ultimate Impact (Long-term Goal) 53
Outcome Statements (By 2035) 53
Causal Pathway: From Inputs to Impact 54
A. Inputs & Enablers 54
B. Activities 54
C. Outputs 55
D. Intermediate Outcomes 55
E. Final Outcomes / Impacts 55
Assumptions 55
Risks and Mitigation Measures 56
Indicators (Examples) 56
Feedback and Adaptive Management 56
Stakeholder Engagement Plan 57
Purpose 57

Project / Strategy Overview 57
Stakeholder Identification 57
Stakeholder Analysis (Interest vs Influence) 59
Engagement Objectives 60
Engagement Strategies & Communication Methods 60
Engagement Activities & Timeline 62
Feedback & Grievance Mechanism 62
Monitoring & Evaluation of Engagement 62
Roles & Responsibilities 63
Results Framework: Wetlands Management Strategy (2025–2035) 63
Cross-Cutting Monitoring & Evaluation Indicators 66
Alignment with GBF & NBSAP Targets 67

Context & alignment

Wetlands represent some of the most productive and ecologically significant ecosystems in The Gambia, yet they remain among the most under-addressed in national environmental policy and management frameworks. The National Biodiversity Strategy and Action Plan (NBSAP) of The Gambia recognizes this gap and explicitly identifies wetlands as ecosystems requiring stronger policy attention, coordinated management, and long-term conservation planning. The NBSAP highlights the absence of a comprehensive national wetland policy and recommends the development of a strategic framework to guide sustainable use, conservation, and restoration of these critical ecosystems. Such a policy would strengthen institutional coordination, improve monitoring systems, and support the integration of wetland conservation into national development planning. Expanding attention to wetlands is therefore not only a national priority but also a necessary step to safeguard the ecological integrity and economic resilience of the country.

At the global level, wetland conservation aligns strongly with the objectives of the Kunming–Montreal Global Biodiversity Framework, which emphasizes the restoration and protection of ecosystems worldwide. In particular, Target 2 of the framework calls for the restoration of at least 30 percent of degraded terrestrial, inland water, coastal, and marine ecosystems by 2030, while Target 3 aims to ensure that at least 30 percent of these ecosystems are effectively conserved and managed through protected areas and other effective area-based conservation measures. Wetlands in The Gambia fall directly within these categories, particularly mangrove forests, floodplains, estuaries, and freshwater marshes. By strengthening wetland conservation and management, The Gambia would make significant progress toward implementing these global biodiversity commitments while simultaneously enhancing national climate resilience and ecosystem health.

The country is home to a number of internationally and nationally important wetland sites that play critical roles in biodiversity conservation and ecosystem functioning. Among these are the Tanbi Wetland Complex, a vast mangrove ecosystem located near the capital city that serves as a crucial breeding and feeding ground for fish, crustaceans, and migratory birds. The Bao Bolong Wetland Reserve represents one of the most significant estuarine wetland systems in the country,

supporting rich biodiversity and acting as an important refuge for waterbirds and aquatic species. Similarly, Jokadu National Park contains extensive mangrove habitats that support fisheries productivity and provide livelihoods for surrounding communities. Other areas of ecological importance include the proposed Bintang Bolong Conservation Area, the proposed Elephant Island Conservation Area, and several Indigenous and Community Conserved Areas (ICCAs) that contribute to locally managed biodiversity protection. In addition, the Niumi Biosphere Reserve provides an integrated landscape that includes mangroves, coastal wetlands, and terrestrial ecosystems, demonstrating the interconnected nature of wetland conservation within broader ecological systems.

Beyond their ecological significance, wetlands provide a wide range of ecosystem services that are vital to the socio-economic wellbeing of communities throughout The Gambia. These ecosystems act as natural buffers against flooding by absorbing excess water during heavy rainfall and river flooding events, thereby reducing damage to settlements and agricultural lands. Wetlands also function as critical nursery habitats for fish and shellfish species that sustain artisanal fisheries, which represent a major source of food security, employment, and income for coastal and riverine communities. Mangrove ecosystems, in particular, provide protection against coastal erosion and rising sea levels by stabilizing shorelines and dissipating wave energy. In addition, wetlands support biodiversity conservation by providing habitats for numerous species of birds, reptiles, mammals, and aquatic organisms, many of which are of regional or global conservation importance.

Despite these benefits, wetlands in The Gambia face increasing pressures from both natural and human-induced factors. Coastal erosion and sea level rise threaten mangrove systems and low-lying estuarine areas, while salinization of freshwater wetlands is becoming more prevalent due to climate change and upstream hydrological changes. Invasive species are also emerging as a significant challenge, particularly in freshwater wetlands where they can disrupt ecological balance, reduce water quality, and negatively affect fisheries and agriculture. Additionally, unsustainable resource extraction, land conversion, and inadequate management frameworks further exacerbate these pressures, placing many wetland ecosystems at risk of degradation.

Given these challenges and opportunities, the development of a comprehensive wetland strategy centered on the principle of "wise use" is both timely and necessary. The concept of wise use, widely promoted under the Ramsar Convention on Wetlands, emphasizes the sustainable utilization of wetlands in a manner that maintains their ecological character while supporting human livelihoods. Applying this approach in The Gambia would involve a balanced combination of conservation, ecosystem restoration, sustainable resource management, and policy mainstreaming across sectors such as agriculture, fisheries, tourism, and infrastructure development.

A national wetland strategy grounded in these principles would strengthen ecosystem resilience, enhance biodiversity conservation, and support climate adaptation efforts. At the same time, it would contribute to national development priorities by protecting fisheries productivity, sustaining community livelihoods, and preserving the natural capital that underpins many sectors of the Gambian economy. By aligning national policies with global biodiversity frameworks and reinforcing local conservation initiatives, The Gambia can position its wetlands as key assets for sustainable development and environmental stewardship in the decades ahead.

Vision & Objectives

Vision

"By 2035, The Gambia's wetlands are functioning, resilient, equitably managed and valued ecosystems that deliver biodiversity conservation, climate resilience and sustainable livelihoods for present and future generations."

Strategic Objectives (to 2035):

The strategic objectives outlined for wetland conservation and management in The Gambia aim to guide national efforts toward safeguarding wetland ecosystems while ensuring that they continue to support sustainable development and community livelihoods. These objectives are aligned with the national priorities articulated in the National Biodiversity Strategy and Action Plan (NBSAP) of The Gambia and the global targets established under the Kunming–Montreal Global Biodiversity Framework. Together, they provide a long-term vision that integrates conservation, restoration, sustainable use, and institutional strengthening.

1. Protect remaining high-value wetlands and their ecological integrity.

The first strategic objective focuses on safeguarding the remaining high-value wetlands in The Gambia that are critical for biodiversity conservation, ecosystem functioning, and climate resilience. Many of these wetlands, including the Tanbi Wetland Complex, Bao Bolong Wetland Reserve, and Jokadu National Park among others provide essential habitats for migratory birds, fish spawning grounds, and mangrove ecosystems that support fisheries and coastal protection. Protecting these sites requires strengthening conservation measures such as improved protected area management, enforcement of environmental regulations, and the expansion of conservation areas where necessary. Maintaining ecological integrity also involves preventing habitat degradation caused by unsustainable resource extraction, pollution, and land conversion.

2. Restore degraded wetlands and strengthen their resilience.

The second objective emphasizes the restoration of degraded wetlands and the enhancement of ecosystem resilience in the face of growing environmental pressures. Climate change impacts,including sea level rise, increased salinity, and changing rainfall patterns,pose significant risks to wetlands throughout the country. In addition, invasive species and unsustainable land use practices have contributed to the degradation of several wetland systems. Restoration initiatives may include mangrove reforestation, rehabilitation of freshwater wetlands, hydrological restoration, and the control of invasive species. By restoring degraded wetlands, The Gambia can improve ecosystem services such as flood regulation, water purification, and biodiversity conservation, while also strengthening the adaptive capacity of both ecosystems and communities.

3. Promote sustainable and inclusive use of wetlands to enhance livelihoods.

Wetlands support a wide range of livelihood activities in The Gambia, including fisheries, oyster harvesting, rice cultivation, and eco-tourism. The third strategic objective therefore focuses on promoting the sustainable and inclusive use of wetland resources in ways that enhance local livelihoods while maintaining ecosystem health. This involves developing community-based management systems, promoting sustainable harvesting practices, and supporting alternative income-generating activities that reduce pressure on wetland ecosystems. Particular attention will be given to ensuring that women, youth, and marginalized groups benefit equitably from wetland resources. For example, oyster harvesting communities within the Tanbi Wetland

Complex, Jokadu National Park and Niumi National Park demonstrate how community-led sustainable resource management can simultaneously support livelihoods and conservation goals.

4. Integrate wetland management into sectoral policies and land-use planning.
Wetlands are closely linked with several sectors of the national economy, including agriculture, fisheries, tourism, and coastal zone management. However, policies in these sectors often operate independently, sometimes leading to conflicting land-use decisions or environmental degradation. The fourth objective aims to strengthen policy coherence by integrating wetland conservation considerations into sectoral policies, development planning, and environmental impact assessments. For example, sustainable agricultural practices can reduce pollution and sedimentation in wetlands, while responsible tourism development can support conservation financing and local employment. Integrating wetland management into broader land-use planning frameworks will help ensure that development activities are compatible with ecosystem conservation and climate adaptation goals.

5. Strengthen institutional, legal, and financial frameworks for wetland governance.
Effective wetland management requires strong governance systems supported by appropriate legal frameworks, institutional coordination, and sustainable financing mechanisms. The fifth strategic objective focuses on strengthening these governance structures to support long-term wetland conservation. This includes the development of a comprehensive national wetland policy, improved coordination among government agencies responsible for biodiversity, fisheries, water resources, and land management, and the establishment of sustainable financing mechanisms for conservation. Monitoring systems will also be enhanced to track wetland health, biodiversity status, and ecosystem service delivery. These efforts will contribute directly to national biodiversity targets under the National Biodiversity Strategy and Action Plan (NBSAP) of The Gambia and support the implementation of the Kunming–Montreal Global Biodiversity Framework.

6. Raise awareness, build capacity, and promote stakeholder participation.
The long-term success of wetland conservation depends heavily on the knowledge, engagement, and participation of stakeholders at all levels. The final strategic objective focuses on increasing awareness about the importance of wetlands and building the capacity of government

institutions, local communities, and civil society organizations to manage these ecosystems effectively. Educational programs, training workshops, and public awareness campaigns will be implemented to promote understanding of wetland values and sustainable practices. Special emphasis will be placed on empowering local communities, women's groups, and youth to participate actively in wetland management and decision-making processes. Strengthening community participation not only improves conservation outcomes but also ensures that local knowledge and traditional practices are integrated into management approaches.

Together, these six strategic objectives provide a comprehensive framework for the conservation, restoration, and sustainable management of wetlands in The Gambia over the coming decade. By protecting critical ecosystems, restoring degraded habitats, supporting sustainable livelihoods, strengthening governance, and promoting inclusive participation, the country can ensure that wetlands continue to provide vital ecological and socio-economic benefits for present and future generations.

Strategic Priority Actions

Achieving the strategic objectives for wetland conservation and sustainable management in The Gambia requires a coordinated set of priority actions that address ecological protection, ecosystem restoration, sustainable livelihoods, policy integration, institutional strengthening, and stakeholder engagement. These actions reflect national priorities outlined in the National Biodiversity Strategy and Action Plan (NBSAP) of The Gambia and support the implementation of the Kunming–Montreal Global Biodiversity Framework, while also aligning with the principles of the Ramsar Convention on Wetlands, particularly the concept of the "wise use" of wetlands. The following strategic action clusters provide a comprehensive framework for implementation over the coming decade.

Protect and Conserve Wetlands

The conservation of wetlands in The Gambia requires immediate and sustained efforts to identify, secure, and effectively manage critical wetland ecosystems. A key priority is the comprehensive mapping and designation of all important wetlands across the country, including freshwater wetlands, estuarine systems, mangrove forests, and coastal wetlands. Once identified,

these areas should be legally recognized either as protected areas or as sites managed under sustainable “wise use” regimes that balance conservation with responsible resource utilization.

Existing protected wetlands such as the Tanbi Wetland Complex, Jokadu National Park, and Bao Bolong Wetland Reserve, Tanji Bird Reserve, Niumi National Park, Bolong Fenyo Community Conserved Area among others already serve as important biodiversity refuges and ecological buffers. However, strengthening their management is essential to maintain their ecological integrity. This includes updating management plans, improving enforcement of environmental regulations, establishing buffer zones to reduce external pressures, and implementing systematic ecological monitoring programs.

Another critical action involves the development and enforcement of regulations to prevent the conversion or degradation of wetlands. Rapid expansion of agriculture, aquaculture, infrastructure development, and urbanization can threaten wetland ecosystems if not properly regulated. Environmental planning tools such as Environmental Impact Assessments (EIA) should therefore be systematically applied to all development projects located within or adjacent to wetlands to ensure that potential impacts are identified and mitigated before implementation.

Particular attention must also be given to the protection of coastal wetlands and mangrove ecosystems, which serve as natural barriers against coastal erosion, storm surges, and saltwater intrusion. Strengthening coastal wetland protection will help maintain ecosystem services that support fisheries, biodiversity, and coastal community resilience.

In addition, The Gambia should pursue the designation of additional wetlands of international importance under the Ramsar Convention on Wetlands. Expanding the national network of Ramsar Sites would enhance global recognition of the country’s wetland resources and help mobilize technical and financial support for their conservation.

Restore and Enhance Resilience

Many wetlands in The Gambia have experienced varying degrees of degradation due to climate change, invasive species, hydrological alterations, and unsustainable resource use. Restoration

efforts are therefore essential to recover ecosystem functionality and strengthen resilience to environmental change.

Restoration activities may include mangrove replanting, rehabilitation of degraded freshwater wetlands, and the removal or control of invasive aquatic plant species such as Water Hyacinth, Typha, and Common Reed, which can obstruct water flow, reduce biodiversity, and negatively affect fisheries and agriculture.

Structural and hydrological interventions may also be required in certain areas to restore ecological balance. These may include the construction or rehabilitation of small dykes, bunds, spillways, and gully plugs designed to regulate water flow, control salinization, and maintain natural flooding regimes essential for wetland productivity.

Ecological engineering approaches can further support restoration by re-establishing natural hydrological systems. For example, drained wetlands can be re-wetted to restore ecological functions, while riparian vegetation corridors can be established to stabilize riverbanks, enhance biodiversity connectivity, and reduce sedimentation.

To address increasing climate risks, restoration efforts should incorporate ecosystem-based adaptation (EbA) approaches that enhance the capacity of wetlands to buffer communities from floods, droughts, and sea-level rise. Pilot demonstration sites can also be established where local communities actively participate in wetland restoration, biodiversity monitoring, and sustainable resource harvesting. These demonstration areas will serve as learning platforms that showcase effective community-based conservation models.

Sustainable Use and Livelihoods

Wetlands play a central role in supporting livelihoods in The Gambia, particularly for communities engaged in fisheries, agriculture, oyster harvesting, and small-scale tourism. Promoting sustainable use of wetland resources is therefore essential to balance conservation goals with socio-economic development.

One important action is the promotion of sustainable fisheries and aquaculture practices within wetland ecosystems. This may include the introduction of environmentally friendly fishing gear,

the establishment of seasonal fishing restrictions to protect spawning grounds, and the development of community-based fisheries management systems.

In areas surrounding wetlands, local communities can also be supported to adopt wetland-friendly agroecological practices. Activities such as organic vegetable gardening, fruit tree cultivation, beekeeping, and small-scale agroforestry can provide alternative income sources while reducing pressure on wetland ecosystems. Demonstration plots and training programs can help farmers transition to more sustainable production systems.

Nature-based tourism also presents a promising opportunity for wetland conservation and livelihood diversification. Wetlands rich in birdlife and scenic landscapes can support ecotourism activities such as bird watching, guided mangrove tours, and educational visits, generating revenue for local communities and conservation initiatives.

Another promising mechanism for sustainable financing is the development of payment for ecosystem services (PES) schemes linked to wetland conservation. For example, mangrove ecosystems can generate blue carbon credits through carbon sequestration, providing financial incentives for communities to protect and restore mangrove forests.

Ensuring equity in the distribution of benefits is crucial for long-term sustainability. Wetland management initiatives must actively engage women and youth, strengthen community land and resource tenure rights, and ensure that local populations receive tangible benefits from conservation efforts.

Mainstreaming and Policy Integration

Wetlands intersect with multiple sectors of the national economy, making policy integration a critical element of effective wetland governance. One of the key priorities is the development or updating of a comprehensive national wetland policy, as recommended in the National Biodiversity Strategy and Action Plan (NBSAP) of The Gambia. This policy should establish clear national goals, institutional responsibilities, and implementation mechanisms for wetland conservation and sustainable use.

Wetland considerations should also be systematically integrated into sectoral policies and planning processes, including agriculture, fisheries, aquaculture, tourism development, infrastructure planning, and coastal zone management. Such integration will help prevent conflicting land-use decisions and ensure that development activities support rather than undermine wetland ecosystems.

Legal frameworks governing water resources, fisheries, land use planning, and environmental protection should also be harmonized to ensure consistency in wetland management. Improved coordination between government institutions responsible for environment, fisheries, agriculture, tourism, and land management will be essential to achieve this integration.

Furthermore, national wetland targets should be aligned with international commitments under the Kunming–Montreal Global Biodiversity Framework. Developing measurable national indicators,such as the percentage of wetlands under conservation management, the extent of wetlands restored, and trends in wetland biodiversity,will support effective monitoring and reporting.

Institutional Strengthening, Monitoring, and Finance

Strong institutional arrangements and adequate financial resources are essential for effective wetland governance. Establishing a dedicated national wetland coordination mechanism,such as a wetland management unit or secretariat within the national environment authority,can improve coordination between agencies and facilitate implementation of wetland policies and programs.

A national wetland inventory and database should also be developed to provide a comprehensive baseline of wetland extent, ecological condition, biodiversity values, ecosystem services, and existing threats. Modern technologies such as geographic information systems (GIS) and remote sensing can support mapping and monitoring efforts.

A robust monitoring and evaluation framework should be established to track progress in wetland conservation and restoration. Indicators should measure changes in wetland area, ecosystem health, species diversity, ecosystem service provision, and community livelihoods.

Capacity-building programs will also be necessary to strengthen the skills of government staff, local authorities, and community organizations. Training topics may include wetland ecology, ecosystem restoration techniques, participatory management approaches, biodiversity monitoring, and spatial planning tools.

Finally, sustainable financing mechanisms must be developed to ensure long-term implementation of wetland conservation activities. These may include national budget allocations, international donor funding, private sector partnerships, and innovative financing mechanisms such as ecosystem service payments and conservation trust funds.

Awareness, Stakeholder Engagement, and Governance

The success of wetland conservation initiatives depends largely on public awareness and active stakeholder participation. Education and communication campaigns should therefore be developed to highlight the ecological and economic importance of wetlands, as well as their role in climate adaptation and biodiversity conservation.

Participatory governance mechanisms should be established to involve local communities, fisher groups, farmers, tourism operators, and local authorities in wetland management decisions. Community wetland committees and stakeholder forums can provide platforms for dialogue, collaborative management, and conflict resolution.

Transparent decision-making processes and equitable benefit-sharing arrangements are also essential to build trust and ensure long-term stakeholder commitment. Clear frameworks defining the rights and responsibilities of communities in wetland resource management should therefore be developed.

Traditional ecological knowledge and cultural practices associated with wetlands should also be recognized and integrated into management strategies. These local knowledge systems often contain valuable insights into sustainable resource management and ecosystem stewardship.

Finally, special emphasis should be placed on youth engagement and gender mainstreaming in wetland conservation initiatives. Empowering women and young people through training, leadership

opportunities, and access to livelihood programs can strengthen community ownership of conservation efforts and ensure that wetland management remains inclusive and sustainable over the long term.

Alignment with NBSAP/GBF Targets

Alignment with National and Global Biodiversity Targets (NBSAP and GBF)

The proposed wetland conservation and management strategy for The Gambia is closely aligned with both national biodiversity priorities and global biodiversity commitments. At the national level, it directly supports the objectives and recommendations of the National Biodiversity Strategy and Action Plan (NBSAP) of The Gambia, which identifies wetlands as critical ecosystems requiring stronger policy attention, improved management, and expanded protection. At the international level, the strategy contributes to the implementation of the Kunming–Montreal Global Biodiversity Framework, which establishes global goals and targets for biodiversity conservation, ecosystem restoration, and sustainable use by 2030 and beyond.

One of the key priorities outlined in the NBSAP is the designation and effective management of wetlands of national and international importance. The strategy responds directly to this priority by proposing systematic mapping and designation of wetlands across the country, including the potential recognition of additional wetlands under the Ramsar Convention on Wetlands. Expanding the number of Ramsar Sites in The Gambia would strengthen national conservation efforts while increasing international recognition and support for wetland protection. Furthermore, the strategy addresses the NBSAP's recommendation to develop a comprehensive national wetland policy, which would provide a clear institutional and regulatory framework for wetland conservation, sustainable use, and restoration.

The strategy also contributes significantly to the implementation of global biodiversity targets under the Global Biodiversity Framework. In particular, it supports Target 2, which calls for the restoration of at least 30 percent of degraded ecosystems globally. Many wetlands in The Gambia have been affected by pressures such as coastal erosion, salinization, hydrological changes, and invasive species. By prioritizing restoration activities such as mangrove reforestation, freshwater wetland rehabilitation, and ecological hydrology restoration, the strategy contributes directly to this global goal of ecosystem recovery and resilience.

Similarly, the strategy aligns with Target 3 of the Global Biodiversity Framework, which seeks to ensure that at least 30 percent of terrestrial, inland water, coastal, and marine areas are effectively conserved and managed through protected areas and other effective area-based conservation measures. Strengthening the management of existing protected wetlands,such as the Tanbi Wetland Complex, Bao Bolong Wetland Reserve, and Jokadu National Park,as well as identifying and protecting additional wetlands will contribute to expanding the national conservation network and improving ecosystem connectivity.

In addition to conservation and restoration targets, the strategy addresses broader elements of the Global Biodiversity Framework related to biodiversity mainstreaming and financial sustainability. The integration of wetland considerations into sectoral policies,such as agriculture, fisheries, tourism, infrastructure development, and coastal zone management,supports the GBF's emphasis on embedding biodiversity considerations across economic sectors. Such mainstreaming helps ensure that development activities are planned and implemented in ways that avoid or minimize negative impacts on wetland ecosystems.

The strategy also responds to the GBF's call for increased biodiversity financing and the mobilization of diverse funding sources. By proposing mechanisms such as public budget allocations, international donor support, payment for ecosystem services schemes, and innovative financing approaches such as blue carbon initiatives, the strategy seeks to establish sustainable financial mechanisms for wetland conservation and restoration. Strengthening financial sustainability will help ensure that wetland management initiatives can be implemented effectively over the long term.

Another important dimension of alignment with the Global Biodiversity Framework is the recognition of the role of nature in supporting human wellbeing. The strategy places strong emphasis on sustainable use of wetland resources and the enhancement of community livelihoods, reflecting the GBF's focus on nature's contributions to people and equitable benefit sharing. Wetlands in The Gambia support fisheries, agriculture, tourism, and other livelihood activities that are vital for local communities. By promoting sustainable resource management practices and ensuring fair distribution of benefits, the strategy contributes to poverty reduction, food security, and socio-economic resilience.

Furthermore, the strategy recognizes the importance of inclusive governance and community participation in biodiversity conservation. Engaging local communities, women, youth, and traditional resource users in wetland management aligns with the GBF's emphasis on equitable participation and respect for local knowledge systems. This participatory approach helps strengthen conservation outcomes while ensuring that wetland management reflects the needs and priorities of the people who depend on these ecosystems.

Overall, the proposed wetland strategy provides a practical framework through which The Gambia can translate its national biodiversity commitments into concrete actions. By linking conservation, restoration, sustainable use, and governance reforms, the strategy not only advances the objectives of the National Biodiversity Strategy and Action Plan (NBSAP) of The Gambia but also contributes meaningfully to the implementation of the Kunming–Montreal Global Biodiversity Framework and global wetland conservation efforts. In doing so, it positions wetlands as a central component of The Gambia's broader agenda for sustainable development, climate resilience, and biodiversity protection.

Implementation Framework & Timeline

Implementation Framework and Timeline (2025–2035)

The successful implementation of the national wetland strategy requires a phased approach that allows for gradual strengthening of institutions, knowledge systems, community engagement, and on-the-ground conservation actions. The implementation framework for the period 2025–2035 is structured into three main phases: short term, medium term, and long term. Each phase builds upon the achievements of the previous stage and ensures that wetland conservation and sustainable management are progressively integrated into national development planning. The framework supports national biodiversity priorities under the National Biodiversity Strategy and Action Plan (NBSAP) of The Gambia and contributes to global commitments under the Kunming–Montreal Global Biodiversity Framework and the Ramsar Convention on Wetlands.

Short-Term Phase (2025–2028): Foundations and Baseline Development

The short-term phase focuses on establishing the foundational systems required for effective wetland management across the country. A key priority during this period will be the development of a comprehensive national wetland inventory and mapping system. This will

involve identifying and documenting all major wetland types, including freshwater wetlands, estuarine systems, floodplains, mangrove forests, and coastal wetlands, using geographic information systems (GIS), remote sensing technologies, and field surveys. The mapping exercise will provide essential baseline information on wetland extent, ecological condition, biodiversity values, ecosystem services, and existing threats.

Institutional arrangements will also be strengthened during this phase. This may include the establishment of a national wetland coordination unit within the relevant environmental authority, along with clear mechanisms for coordination between government agencies responsible for environment, fisheries, agriculture, land use planning, and tourism. Strengthening these institutional frameworks will ensure that wetland management responsibilities are clearly defined and effectively implemented.

Another important priority will be the establishment of participatory stakeholder engagement platforms. Community wetland committees, local governance structures, and multi-stakeholder forums will be created to facilitate dialogue among government agencies, local communities, civil society organizations, and private sector actors. These platforms will promote inclusive decision-making and ensure that the interests of resource-dependent communities are incorporated into wetland management strategies.

The short-term phase will also initiate pilot restoration and conservation projects in selected wetland areas. Sites such as the Tanbi Wetland Complex, Bao Bolong Wetland Reserve, and Jokadu National Park may serve as demonstration areas where restoration activities, biodiversity monitoring, and sustainable resource management practices can be tested and refined.

In parallel, the legal designation and recognition of key wetlands will be pursued. This may involve expanding protected areas, recognizing community-managed wetlands, and preparing additional nominations for Ramsar Sites. Monitoring frameworks will also be developed during this phase, including indicators for wetland extent, ecological health, biodiversity status, and ecosystem service provision.

Public awareness campaigns will form another important component of the short-term phase. Educational programs, training workshops, and communication initiatives will raise awareness

among policymakers, communities, and the general public about the importance of wetlands for biodiversity conservation, climate resilience, and livelihoods.

Medium-Term Phase (2029–2032): Expansion and Integration

During the medium-term phase, the focus will shift from foundational activities to the scaling up of wetland conservation and sustainable use initiatives across the country. Building on the lessons learned from pilot projects, restoration activities will be expanded to additional degraded wetlands, including mangrove ecosystems, freshwater floodplains, and coastal wetlands. Restoration interventions may include mangrove reforestation, invasive species control, hydrological restoration, and the establishment of ecological buffer zones.

At the same time, sustainable livelihood initiatives associated with wetlands will be expanded to support community development while reducing pressure on wetland ecosystems. Programs promoting sustainable fisheries, agroecological farming practices, beekeeping, eco-tourism, and other nature-based enterprises will be implemented in collaboration with local communities.

The medium-term phase will also emphasize the integration of wetland considerations into national and sectoral policies. Wetland conservation principles will be incorporated into agricultural policies, fisheries management plans, tourism development strategies, coastal zone management frameworks, and land-use planning systems. This integration will ensure that development activities across sectors support rather than undermine wetland ecosystems.

Another key priority during this phase will be the operationalization of sustainable financing mechanisms for wetland conservation. These may include national budget allocations, international climate and biodiversity funding, payment for ecosystem services schemes, and innovative financing approaches such as blue carbon projects linked to mangrove conservation.

Monitoring and evaluation systems established during the initial phase will be fully operational by this stage. Data collected through ecological monitoring, biodiversity surveys, and socio-economic assessments will inform adaptive management practices, enabling policymakers and managers to adjust strategies based on evidence and changing environmental conditions.

Long-Term Phase (2033–2035): Consolidation and Sustainability

The final phase of the implementation framework focuses on consolidating the gains achieved during the earlier stages and ensuring the long-term sustainability of wetland conservation efforts. By this stage, all priority wetlands identified in the national inventory should be under effective management regimes, whether through formal protected area designation, community-based management systems, or other effective conservation mechanisms.

Efforts during this phase will emphasize improving ecosystem condition and demonstrating measurable improvements in wetland health and ecosystem services. Indicators such as increased mangrove cover, improved water quality, enhanced biodiversity, and strengthened fisheries productivity will be used to evaluate the success of conservation and restoration interventions.

Wetland governance will also be fully mainstreamed across national development planning and sectoral policies. Government agencies responsible for agriculture, fisheries, tourism, infrastructure, and land-use planning will incorporate wetland conservation considerations into their routine decision-making processes. This cross-sectoral integration will help ensure that wetlands are protected as valuable natural assets rather than treated as marginal lands.

Finally, the wetland strategy will undergo a comprehensive evaluation during the final phase of implementation. Lessons learned from the first decade of implementation will be used to update and refine the strategy, ensuring that it remains responsive to emerging environmental challenges, scientific knowledge, and national development priorities.

Through this phased implementation framework, The Gambia can progressively strengthen its capacity to conserve and sustainably manage wetlands while enhancing the ecological, economic, and social benefits that these ecosystems provide. The strategy thus provides a clear pathway toward achieving national biodiversity objectives and fulfilling international commitments under the National Biodiversity Strategy and Action Plan (NBSAP) of The Gambia and the Kunming–Montreal Global Biodiversity Framework.

Governance & roles:

Governance Structure and Institutional Roles for Wetland Management

Effective governance is essential for the successful implementation of the national wetland strategy. Wetland ecosystems are complex and cross-sectoral in nature, involving ecological, economic, and social dimensions that require coordinated action across multiple institutions and stakeholders. A clear governance structure that defines roles, responsibilities, and coordination mechanisms is therefore necessary to ensure efficient planning, implementation, monitoring, and adaptive management of wetland conservation and sustainable use initiatives. The governance framework proposed for The Gambia builds upon existing institutional mandates and supports the objectives of the National Biodiversity Strategy and Action Plan (NBSAP) of The Gambia, while also contributing to the implementation of the Kunming–Montreal Global Biodiversity Framework and obligations under the Ramsar Convention on Wetlands.

Lead Agency

The primary responsibility for coordinating wetland management at the national level would rest with the Department of Parks and Wildlife Management, which would serve as the national wetland focal point. As the government institution responsible for biodiversity conservation and protected area management, the department is well positioned to lead the development, implementation, and oversight of the national wetland strategy. Its core functions would include coordinating national wetland policy development, facilitating collaboration among relevant government institutions, overseeing conservation and restoration activities within protected wetlands, and ensuring compliance with national environmental regulations and international commitments.

In its role as lead agency, the department would also coordinate national reporting on wetland conservation progress, particularly in relation to biodiversity commitments under the national biodiversity strategy and international frameworks. Additionally, it would guide the development of management plans for key wetlands and ensure that conservation activities align with broader ecosystem management objectives.

Co-Lead Government Agencies

Given the multi-sectoral nature of wetlands, several other government institutions would play important co-lead roles in implementing the strategy. The Department of Fisheries would contribute expertise in sustainable fisheries management, particularly in wetlands that function as fish spawning and nursery grounds. This department would support initiatives related to sustainable fishing practices, protection of spawning habitats, and community-based fisheries management within wetland ecosystems.

Land-use planning and spatial development decisions affecting wetlands would involve the Department of Physical Planning and Housing, which is responsible for land use regulation and infrastructure planning. This institution would ensure that wetland conservation considerations are integrated into national and regional land-use plans, preventing unsustainable development in ecologically sensitive areas.

The Ministry of Agriculture would play an important role in promoting wetland-friendly agricultural practices in areas surrounding wetlands. Through extension services and policy guidance, the ministry could help reduce environmental pressures associated with unsustainable farming practices, including chemical runoff, land conversion, and water abstraction.
Similarly, the Ministry of Tourism and Culture would contribute to the development of ecotourism opportunities linked to wetlands. Wetland-based tourism activities such as bird watching, mangrove tours, and educational visits can generate income for local communities while promoting conservation awareness.

Community-Level Governance

Local communities are among the primary users and stewards of wetland ecosystems in The Gambia. Therefore, community-level governance structures are essential for effective wetland management. The strategy proposes the establishment or strengthening of Wetland Management Committees at the local level. These committees would include representatives from key stakeholder groups such as fishers, farmers, women's groups, youth organizations, and local traditional authorities.
The role of these committees would be to facilitate participatory decision-making, coordinate local conservation and restoration activities, and ensure compliance with agreed resource management rules. They would also play a role in monitoring wetland conditions, reporting environmental threats, and supporting community-based livelihood initiatives linked to wetlands. Strengthening local governance structures ensures that wetland management is grounded in local knowledge and reflects the needs and priorities of communities that depend on these ecosystems.

Technical and Development Partners

Implementation of the wetland strategy will also benefit from collaboration with technical partners and development organizations. Universities and research institutions can contribute scientific expertise in areas such as wetland ecology, hydrology, biodiversity monitoring, and climate adaptation. Their research can help generate data needed for informed decision-making and long-term ecosystem management.
Non-governmental organizations and civil society groups can provide valuable support in community mobilization, capacity building, restoration activities, and environmental education. Many NGOs have experience implementing conservation projects and working directly with local communities, making them important partners in scaling up wetland restoration and sustainable livelihood initiatives.
International development partners and donor agencies will also play a critical role by providing financial and technical support for major conservation and restoration initiatives. These partnerships can help mobilize resources, introduce innovative approaches, and facilitate knowledge exchange with other countries implementing similar wetland management strategies.

Monitoring, Evaluation, and Adaptive Management

A dedicated monitoring and evaluation (M&E) unit will be essential to track progress in implementing the wetland strategy. This unit would be responsible for collecting and analyzing data on wetland extent, ecological condition, biodiversity status, and ecosystem services. Annual reporting mechanisms would provide regular updates on the implementation of conservation and restoration activities, enabling policymakers and stakeholders to assess progress and identify emerging challenges.
Monitoring results should feed directly into an adaptive management process, where strategies and actions are periodically reviewed and adjusted based on evidence and lessons learned. This approach ensures that wetland management remains responsive to changing environmental conditions, new scientific knowledge, and evolving socio-economic contexts.

Overall, the governance framework combines strong national leadership with multi-sectoral collaboration and active community participation. By clearly defining roles across government institutions, local stakeholders, and development partners, The Gambia can establish an effective and inclusive system for wetland conservation that safeguards biodiversity while supporting sustainable livelihoods and national development objectives.

Resource Mobilisation and Financing for Wetland Conservation

The long-term sustainability of wetland conservation and management in The Gambia depends heavily on the availability of adequate and diversified financial resources. Wetlands provide essential ecosystem services, including fisheries productivity, flood regulation, climate resilience, and biodiversity conservation, but these benefits are often undervalued in traditional economic planning. Establishing a robust financing framework will therefore be critical to ensure that conservation, restoration, monitoring, and community livelihood initiatives can be implemented effectively over the long term. Resource mobilization efforts should align with the priorities identified in the National Biodiversity Strategy and Action Plan (NBSAP) of The Gambia and contribute to the biodiversity finance goals of the Kunming–Montreal Global Biodiversity Framework.

Development of a National Wetland Finance Plan

A key priority will be the development of a comprehensive Wetland Finance Plan that identifies funding sources, financing mechanisms, and long-term investment needs for wetland conservation and management. The finance plan should integrate multiple sources of funding, including national public budgets, international donor funding, private sector investments, and innovative financing mechanisms such as payments for ecosystem services (PES). This diversified approach will help reduce reliance on a single funding stream while ensuring that conservation initiatives remain financially sustainable over time.

Public sector financing will remain a cornerstone of wetland governance, particularly for core functions such as policy development, enforcement of environmental regulations, biodiversity monitoring, and management of protected wetlands. National budget allocations should therefore include dedicated funding for wetland conservation programs, ensuring that key government institutions responsible for biodiversity management have the resources necessary to carry out their mandates.

Blue Carbon and Climate Finance Opportunities

Mangrove wetlands in The Gambia offer significant potential for climate finance through blue carbon initiatives. Mangroves are among the most efficient natural ecosystems for carbon sequestration, storing large amounts of carbon in both biomass and sediment. By protecting and restoring mangrove ecosystems in areas such as the Tanbi Wetland Complex and the Bao Bolong Wetland Reserve, The Gambia could generate carbon credits that can be traded in voluntary carbon markets. Revenue generated from these credits could support conservation activities while also providing financial incentives for local communities to participate in mangrove restoration and protection.

In addition to blue carbon initiatives, wetland conservation could also be integrated into climate mitigation and adaptation financing mechanisms under programs such as REDD+, particularly where mangrove forests contribute to forest carbon stocks. Allocating a portion of REDD+ financing to the Department of Parks and Wildlife Management could strengthen institutional capacity for wetland conservation and support ecosystem restoration activities.

Private Sector Engagement

The private sector also has an important role to play in financing and supporting wetland conservation. Partnerships with responsible businesses can create opportunities for sustainable investment while promoting environmentally friendly economic activities. For example, eco-tourism enterprises operating in or near wetlands can contribute to conservation financing through visitor fees, conservation levies, or joint management arrangements with protected area authorities.

Similarly, the development of sustainable aquaculture initiatives can help reduce pressure on natural fish stocks while generating economic benefits for local communities. Private sector involvement in such initiatives should follow strict environmental standards to ensure that aquaculture activities do not damage sensitive wetland ecosystems.

Corporate social responsibility (CSR) programs from national and international companies operating in The Gambia may also provide funding for wetland restoration, conservation education, and community livelihood initiatives. Encouraging businesses to integrate

biodiversity conservation into their sustainability commitments can further expand the range of financial resources available for wetland management.

Public Budget Allocation and Government Commitment

Despite the importance of external funding sources, strong government commitment through national budgeting remains essential for the long-term sustainability of wetland governance. Allocating dedicated funding within national environmental and biodiversity budgets will ensure that core activities, such as policy implementation, enforcement of conservation regulations, and monitoring programs, are consistently supported.

Government funding also serves as a critical signal of national commitment to wetland conservation, which can help leverage additional funding from international donors and development partners. By demonstrating strong domestic investment in biodiversity conservation, The Gambia can strengthen its position when seeking support from global environmental financing mechanisms.

Integrated Financing Approach

Overall, resource mobilization for wetland conservation should adopt an integrated financing approach that combines public funding, international support, market-based mechanisms, and private sector investment. Such a diversified financial strategy will help ensure that wetland ecosystems are not only protected but also recognized as valuable natural assets that contribute to national development, climate resilience, and sustainable livelihoods.

By developing innovative financing mechanisms and strengthening partnerships across sectors, The Gambia can establish a sustainable financial foundation for the conservation and wise use of wetlands, ensuring that these vital ecosystems continue to support biodiversity and human wellbeing for generations to come.

Monitoring & indicators

Monitoring Framework and Indicators for Wetland Management

A robust monitoring and evaluation (M&E) system is essential for ensuring that the wetland strategy delivers measurable outcomes in conservation, ecosystem restoration, sustainable livelihoods, and governance. Monitoring provides the evidence base needed to assess progress, inform adaptive management, and demonstrate accountability to stakeholders, government authorities, and international partners. In the context of The Gambia, the monitoring framework should align with national biodiversity reporting requirements under the National Biodiversity Strategy and Action Plan (NBSAP) of The Gambia as well as global biodiversity commitments under the Kunming–Montreal Global Biodiversity Framework and the Ramsar Convention on Wetlands.

The monitoring system should track changes in wetland extent, ecological condition, biodiversity status, ecosystem services, and socio-economic benefits. It should combine ecological monitoring, socio-economic assessments, community-based observations, and remote sensing technologies such as geographic information systems (GIS) and satellite imagery. Data collected through monitoring activities will inform periodic reviews of management interventions and support adaptive decision-making to address emerging challenges such as climate change impacts, invasive species, or unsustainable resource use.

Key Monitoring Indicators

1. Area of wetlands legally protected or under sustainable management

One of the primary indicators of success is the total area of wetlands that are formally protected or managed under sustainable "wise use" frameworks. This includes wetlands designated as protected areas, community-managed wetlands, and sites recognized under international frameworks such as the Ramsar Convention on Wetlands. Tracking this indicator will help measure progress toward expanding conservation coverage and strengthening ecosystem protection across the country.

2. Area of degraded wetlands restored

Restoration efforts are a central component of the wetland strategy. Monitoring should therefore track the total area of wetlands that have been successfully restored through interventions such as mangrove replanting, invasive species removal, hydrological restoration, and re-establishment of riparian vegetation. This indicator will contribute directly to global ecosystem restoration goals

under the Kunming–Montreal Global Biodiversity Framework, particularly Target 2 on restoring degraded ecosystems.

3. Number of local communities engaged in wetland management

Community participation is a critical element of effective wetland governance. Monitoring should therefore record the number of communities actively participating in wetland management through local governance structures such as Wetland Management Committees. This indicator reflects progress in participatory governance, local stewardship, and the integration of traditional knowledge into conservation practices.

4. Number of sustainable livelihood initiatives linked to wetlands

Wetlands support numerous economic activities that contribute to food security and income generation. Monitoring should track the number of sustainable livelihood initiatives implemented in wetland areas, including activities such as sustainable fisheries management, agroecological farming, beekeeping, eco-tourism, and mangrove-based enterprises. Measuring these initiatives helps demonstrate how conservation efforts contribute to community wellbeing and poverty reduction.

5. Integration of wetlands into sectoral policies and plans

Another important indicator measures the extent to which wetland considerations are incorporated into national and sectoral policies, development plans, and regulatory frameworks. This may include agricultural policies promoting wetland-friendly farming practices, tourism strategies supporting eco-tourism development, or land-use planning guidelines that protect wetland ecosystems. Tracking this indicator will demonstrate progress in mainstreaming biodiversity and ecosystem conservation across sectors.

6. Level of funding mobilized for wetland conservation

Sustainable financing is essential for long-term wetland management. Monitoring should therefore measure the amount of funding mobilized from national budgets, international donors, private sector partnerships, and innovative financing mechanisms such as payment for ecosystem services or blue carbon initiatives. This indicator reflects the effectiveness of resource mobilization efforts and helps ensure financial sustainability.

7. Biodiversity status and ecosystem service indicators

Ecological monitoring should also track changes in biodiversity and ecosystem services associated with wetlands. This may include population trends of key species such as migratory waterbirds, fish species, and mangrove-dependent wildlife in important wetlands such as the Tanbi Wetland Complex and Bao Bolong Wetland Reserve. In addition, ecosystem service indicators may measure improvements in water quality, flood mitigation capacity, shoreline stabilization, and fisheries productivity.

Data Collection and Reporting

Monitoring data should be collected through a combination of government-led surveys, community-based monitoring systems, and partnerships with universities and research institutions. Community members can play an important role in tracking changes in fish catches, water levels, vegetation cover, and wildlife observations, thereby strengthening local ownership of conservation efforts.

Annual monitoring reports should be prepared by the responsible government agencies and shared with relevant ministries, local authorities, and development partners. These reports will provide an overview of progress toward national wetland conservation targets and identify areas where additional action may be needed.

Periodic evaluations, such as mid-term reviews and final assessments, should also be conducted to assess the overall effectiveness of the wetland strategy. Lessons learned from these evaluations can guide adjustments in policy, management approaches, and investment priorities.

Overall, the monitoring framework provides a structured approach for tracking the ecological, social, and economic outcomes of wetland conservation efforts in The Gambia. By combining scientific data, community knowledge, and policy indicators, the system will ensure that wetland management remains transparent, evidence-based, and responsive to changing environmental and development conditions.

Risk Management and Enabling Conditions

The successful implementation of the national wetland strategy requires proactive identification and management of potential risks that may hinder progress toward conservation, restoration, and sustainable use objectives. Wetlands are complex ecosystems that interact with multiple sectors of the economy, and their management often involves competing interests and uncertainties. Therefore, a structured risk management approach is essential to ensure that the strategy remains resilient and adaptable to changing environmental, institutional, and socio-economic conditions. Addressing these risks will also strengthen the enabling conditions necessary for effective implementation of wetland conservation priorities under the National Biodiversity Strategy and Action Plan (NBSAP) of The Gambia and the Kunming–Montreal Global Biodiversity Framework.

Insufficient Funding and Political Commitment

One of the most significant risks to the successful implementation of wetland conservation initiatives is insufficient financial resources and inconsistent political commitment. Wetland management requires sustained investment in activities such as ecosystem restoration, monitoring programs, community engagement, and enforcement of environmental regulations. If national budgets or external funding sources decline, key conservation actions may be delayed or scaled down.

To mitigate this risk, the strategy emphasizes the development of diversified financing mechanisms, including public sector allocations, international donor support, and innovative funding sources such as ecosystem service payments and blue carbon financing. Strong political commitment at the national level is equally important. Integrating wetland conservation into national development strategies, climate adaptation plans, and biodiversity policies will help ensure that wetlands remain a priority in government decision-making and resource allocation.

Weak Enforcement of Regulations and Land-Use Pressures

Another major risk is the weak enforcement of environmental regulations governing wetland protection. Rapid population growth, agricultural expansion, infrastructure development, and urbanization can place significant pressure on wetland ecosystems, particularly if land-use

regulations are poorly implemented or inadequately monitored. Illegal land conversion, overfishing, mangrove cutting, and unsustainable extraction of natural resources can degrade wetland ecosystems and undermine conservation efforts.

Strengthening enforcement mechanisms will therefore be essential. This includes improving coordination between regulatory agencies, increasing the capacity of environmental enforcement units, and ensuring that environmental impact assessments are effectively applied to development projects affecting wetlands. Enhancing community participation in monitoring and reporting environmental violations can also support enforcement efforts and strengthen local stewardship of wetland resources.

Climate Change Impacts

Climate change presents an additional and increasingly significant risk to wetland ecosystems in The Gambia. Rising sea levels, increased coastal erosion, saltwater intrusion into freshwater systems, and changes in rainfall patterns may alter hydrological regimes and threaten the ecological integrity of many wetlands. Coastal mangrove ecosystems, in particular, may be vulnerable to rising sea levels and storm surges, while freshwater wetlands may experience increased salinization and reduced water availability.

To address these risks, wetland management strategies must incorporate climate adaptation measures, including ecosystem-based adaptation (EbA) approaches. Restoration of mangroves, maintenance of natural hydrological flows, and protection of coastal buffers can enhance the resilience of wetlands to climate-related impacts. Integrating wetland conservation into broader national climate adaptation frameworks will also help ensure that ecosystems are recognized as critical components of climate resilience strategies.

Limited Capacity at Local and Community Levels

The effective management of wetlands often depends on the knowledge, skills, and resources available at the local level. However, many communities that depend on wetlands for their livelihoods may lack the technical capacity, organizational structures, or financial resources needed to participate fully in conservation and management activities. Without adequate

capacity-building support, community-based management initiatives may struggle to achieve long-term success.

To mitigate this risk, the strategy prioritizes training and capacity development for local communities, government staff, and community-based organizations. Programs focusing on wetland ecology, sustainable resource management, restoration techniques, and participatory governance can empower communities to take a more active role in conservation efforts. Strengthening local governance structures such as community wetland committees can also enhance local ownership and accountability.

Conflicts of Interest Among Stakeholders

Wetlands often serve multiple functions and support a variety of economic activities, including agriculture, fisheries, tourism, and infrastructure development. These competing interests can sometimes create conflicts among stakeholders, particularly when conservation measures are perceived to limit access to natural resources or restrict certain economic activities. For example, agricultural expansion into wetland areas may conflict with conservation objectives aimed at protecting biodiversity and ecosystem services.

Effective stakeholder engagement and participatory decision-making processes are essential for managing such conflicts. Establishing multi-stakeholder platforms and local wetland management committees can provide opportunities for dialogue, negotiation, and collaborative problem-solving. Transparent governance arrangements and equitable benefit-sharing mechanisms can also help build trust and ensure that conservation initiatives are socially acceptable and economically viable.

Data Gaps and Weak Monitoring Systems

Another potential risk relates to limited availability of reliable data on wetland extent, ecological condition, biodiversity status, and ecosystem services. Without accurate baseline information and consistent monitoring systems, it becomes difficult to evaluate the effectiveness of conservation actions or to make evidence-based management decisions.

Addressing this risk requires strengthening national monitoring systems, including the development of a comprehensive wetland inventory and database. Collaboration with research institutions, universities, and technical partners can help generate scientific data on wetland ecosystems, while community-based monitoring programs can provide valuable local observations. Integrating modern technologies such as satellite imagery, remote sensing, and geographic information systems will further enhance the quality and reliability of monitoring data.

Enabling Conditions for Successful Implementation

To effectively manage these risks, several enabling conditions must be established. These include strong political leadership, clear institutional mandates, adequate financial resources, and effective coordination among government agencies. Equally important are inclusive governance structures that empower local communities and recognize their role as key stakeholders in wetland conservation.

Strengthening legal frameworks, improving environmental enforcement, and integrating wetland considerations into national development policies will also create a supportive environment for implementing the wetland strategy. Furthermore, fostering partnerships with international organizations, research institutions, and civil society groups can provide technical expertise, financial support, and opportunities for knowledge exchange.

Overall, addressing risks proactively while strengthening enabling conditions will enhance the resilience and effectiveness of wetland conservation efforts in The Gambia. By anticipating challenges and implementing appropriate mitigation measures, the country can ensure that its wetlands continue to provide vital ecological, economic, and social benefits for present and future generations.

Strong Political Support and Institutional Mandate

One of the most critical enabling conditions is strong political commitment to wetland conservation and sustainable management. High-level government support ensures that wetlands are recognized as national environmental assets that contribute to biodiversity conservation, climate resilience, and sustainable development. This commitment should be reflected in

national development strategies, environmental policies, and budget allocations for conservation programs.

A clear institutional mandate for wetland governance is equally important. Government institutions responsible for biodiversity conservation, environmental regulation, fisheries management, agriculture, and land-use planning must have well-defined roles and responsibilities in wetland management. Effective coordination among these institutions helps avoid duplication of efforts and ensures that conservation actions are implemented efficiently.

Clear Legal Frameworks and Policy Alignment

An enabling legal environment is essential for protecting wetlands from unsustainable exploitation and land-use change. Comprehensive legislation and regulatory frameworks should clearly define the protection status of wetlands, establish guidelines for sustainable resource use, and provide mechanisms for enforcement of environmental regulations.

Policy alignment across sectors is also critical. Wetland conservation objectives must be integrated into policies related to agriculture, fisheries, infrastructure development, tourism, and land-use planning. When sectoral policies are aligned with biodiversity conservation goals, it becomes easier to prevent activities that could degrade wetland ecosystems and undermine conservation efforts.

Multi-Stakeholder Participation and Community Empowerment

Inclusive governance is a fundamental condition for sustainable wetland management. Wetlands often support the livelihoods of local communities who depend on fisheries, agriculture, or other ecosystem resources. Therefore, engaging these communities in decision-making processes ensures that conservation initiatives reflect local priorities and benefit those most directly affected.

Participatory governance structures, such as local wetland management committees, community conservation groups, and stakeholder forums, provide platforms for collaboration between government agencies, community representatives, civil society organizations, and private sector

actors. Empowering communities also encourages stewardship and enhances compliance with conservation regulations.

Capacity Building and Continuous Training

Effective wetland management requires technical expertise and practical skills at multiple levels of governance. Government staff, community leaders, local resource users, and environmental organizations must all have the knowledge necessary to implement conservation and restoration initiatives.

Capacity-building programs should therefore focus on strengthening skills in areas such as wetland ecology, biodiversity monitoring, restoration techniques, participatory governance, and sustainable resource management. Continuous training ensures that stakeholders remain informed about emerging environmental challenges, new scientific knowledge, and best practices in ecosystem management.

Reliable Funding Streams and Sustainable Finance Mechanisms

Sustained financial resources are essential for implementing wetland conservation activities such as ecosystem restoration, monitoring programs, community livelihood initiatives, and policy enforcement. An effective financing framework should combine multiple funding sources, including national government budgets, international development assistance, private sector investments, and innovative mechanisms such as payments for ecosystem services or blue carbon initiatives.

Establishing reliable funding streams ensures that conservation programs can continue beyond short-term project cycles and supports the long-term sustainability of wetland governance institutions.

Integration of Climate Adaptation and Biodiversity Conservation

Wetlands play a vital role in climate resilience by providing natural protection against floods, coastal erosion, and storm surges while also supporting carbon sequestration. Integrating climate

adaptation strategies into wetland management can therefore enhance both biodiversity conservation and community resilience to climate change.

Ecosystem-based adaptation approaches, such as mangrove restoration, floodplain protection, and hydrological restoration, can help maintain the ecological functions of wetlands while reducing climate-related risks to nearby communities. Integrating climate and biodiversity objectives also improves access to international climate and environmental financing mechanisms.

Robust Data Systems and Adaptive Management

Effective decision-making depends on reliable information about the condition and trends of wetland ecosystems. Establishing comprehensive data systems, including wetland inventories, biodiversity monitoring programs, and ecosystem service assessments, provides the scientific foundation for informed management decisions.

Adaptive management approaches should be used to ensure that policies and interventions can evolve in response to new information or changing environmental conditions. Regular monitoring, evaluation, and learning processes allow policymakers and managers to refine strategies and respond effectively to emerging challenges.

Overall, these enabling conditions form the foundation upon which the national wetland strategy can be successfully implemented. By strengthening political commitment, legal frameworks, institutional capacity, financial resources, stakeholder participation, and scientific knowledge, The Gambia can create a supportive environment for the long-term conservation and sustainable management of its wetlands. Such an enabling framework will ensure that wetlands continue to provide essential ecosystem services, sustain biodiversity, and support the livelihoods of communities across the country.

Action Plan and Budget Overview

The implementation of the national wetland strategy will follow a structured action plan that aligns strategic objectives, priority actions, and resource allocation over time. The action plan provides a clear roadmap for executing conservation, restoration, sustainable use, and

governance initiatives while ensuring accountability among responsible agencies. It also incorporates realistic financial assumptions and funding sources to support long-term sustainability.

Summary of Major Budget Assumptions

A number of assumptions underpin the estimated budget for implementing the wetland strategy:

Exchange and Inflation Contingency

- The budget incorporates modest adjustments to account for potential exchange rate fluctuations and inflation over the implementation period. This ensures that financial projections remain realistic and capable of supporting the planned activities without major shortfalls.

Estimated Annual Budget

- Total costs across all strategic activities are projected to increase gradually over the initial five-year period, reflecting scaling-up of restoration, monitoring, capacity building, and stakeholder engagement efforts.
- Year 1: approximately D15 million
- Year 2: approximately D20 million
- Year 3: approximately D25 million
- Year 4: approximately D32 million
- Year 5: approximately D40 million
- The growth in budget allocation accounts for the expansion of restoration and sustainable livelihood initiatives, operationalization of monitoring systems, and full implementation of multi-stakeholder governance mechanisms.

Funding Sources

- **National Government & Ministries:** Core funding for institutional operations, policy implementation, enforcement, and coordination will be provided through regular budgetary allocations to lead and co-lead ministries.

- **Donor and Partner Grants:** International organizations and bilateral development partners, such as the Food and Agriculture Organization (FAO), the Green Climate Fund (GCF), and other donors, will provide technical and financial support for restoration projects, capacity building, and community-based initiatives.
- **Community Contributions:** Local communities participating in wetland management will contribute in-kind resources, labor, and local knowledge to support restoration, monitoring, and sustainable livelihood programs.

Responsible Agencies

- **Lead Ministry/Department:** The Department of Parks and Wildlife Management will serve as the national wetland focal point and primary implementing agency.
- **Co-Lead Ministries/Departments:** Including the Department of Fisheries, Department of Physical Planning and Housing, Ministry of Agriculture, and Ministry of Tourism and Culture. These institutions will contribute sector-specific expertise and coordinate implementation within their mandates.
- **Local Authorities and Community Committees:** Village-level Wetland Management Committees will actively participate in restoration, monitoring, sustainable livelihood initiatives, and local governance, ensuring community ownership and benefit sharing.

Budget Allocation Principles

The budget will be allocated across the main strategic components of the wetland strategy:

- **Protection and Conservation:** Legal recognition, enforcement, management plan development, and monitoring of high-value wetlands.
- **Restoration and Resilience:** Mangrove reforestation, hydrological restoration, invasive species control, and climate adaptation measures.
- **Sustainable Use and Livelihoods:** Community-based fisheries, agroecological practices, ecotourism, and payments for ecosystem services.
- **Policy Integration and Mainstreaming:** Incorporation of wetland management into sectoral policies, legal harmonization, and inter-ministerial coordination.

- **Institutional Strengthening and Capacity Building:** Training programs, data collection, GIS mapping, and participatory governance.
- **Awareness, Communication, and Stakeholder Engagement:** Community workshops, environmental education campaigns, and multi-stakeholder forums.

Implementation Approach

The action plan emphasizes phased implementation over the initial five years, with activities scaled according to capacity, funding availability, and ecological priorities. Adaptive management will ensure that resources are allocated efficiently based on monitoring results and evolving environmental or socio-economic conditions. By aligning strategic objectives, responsible agencies, and financial planning, the action plan provides a practical and actionable framework for achieving the long-term vision of wetland conservation and sustainable management in The Gambia.

This financial and operational planning lays the foundation for mobilizing resources effectively, engaging all relevant stakeholders, and ensuring measurable outcomes in wetland protection, restoration, and sustainable use.

Action Plan Table (2025-2035)

Year	Activities	Estimated Budget (USD)	Responsible Agencies
2025-2026	• Establish Wetland Management Unit (WMU) within the Department of Parks and Wildlife Management. • Map and compile baseline inventory of coastal/estuarine wetlands (Tanbi etc): extent, condition, biodiversity, use-pressures.	USD300,000	Lead: Dept. of Parks & Wildlife Management (DPWM)/WMU, Dept. of Fisheries; Partners: FA,O, WIA, CSE, UNEP local NGOs

	• Develop/update Wetland Policy & legal framework (draft version) aligned with NBSAP/GBF. • Pilot community restoration site (e.g., 1,000 ha of mangrove planting) with toolkits. • Stakeholder engagement: form Wetland Stakeholder Forum (communities, fishers, tourism, local government). • Launch communication/awareness campaign about wetland values.		
2027-2028	• Legal designation/regulation of at least 2 additional priority wetlands (buffer zones etc). • Roll-out restoration: plant additional 500 ha mangroves; remove 300ha of invasive aquatic plants and 1000ha of bamboo plants in targeted fresh-water wetlands and along the edge of River Gambia. • Integrate wetland considerations into coastal zone/land-use planning & agriculture policy. • Capacity-building: training of national, regional and community-level staff (GIS mapping, restoration, participatory governance).	D300,000	Lead: DPWM/WMU; Co-lead: Dept. Forestry, Dept. Lands/Planning; Community: Wetland Management Committees (WMCs)

	• Monitoring framework design: set indicators, baseline data collection.		
2029-2030	• Scale up restoration: additional 1 000 ha (mangroves + estuarine wetlands) + hydrological interventions (e.g., re-connection of drainage, bunds to reduce salinisation). • Launch sustainable livelihood initiatives tied to wetlands: e.g., mangrove/bamboo-friendly ecotourism, community beekeeping, sustainable aquaculture pilot • Enforce EIA regulation for developments in/adjacent to wetlands; monitoring of compliance begins. • Mid-term review of the wetland policy & legal implementation; adjust as needed. • Outreach: school programmes, community forums, women & youth empowerment in wetland governance.	D350,000	Lead: WMU & Dept. Fisheries; Co-lead: Dept. Lands/Planning, Local Govt. Authorities; NGOs & community WMCs
2031-2032	• Restoration continues: additional 1 500 ha and maintenance of earlier sites; removal of 200ha of invasive species and planting of 500ha of bamboo in fresh-water wetlands. • Full integration: sectoral policies	USD700,000	Lead: DPWM/WMU; Co-lead: Ministry of Finance/Economic Affairs, Dept. Tourism; Partners: Private sector, Carbon/Blue-Carbon specialists

	(agriculture, tourism, fisheries, coastal management) revised to include wetlands; wetland modules added to curricula in local colleges/universities. • Launch payments for ecosystem services (PES) pilot for mangrove carbon/blue-carbon, involving local communities. • Monitoring & reporting: first full report on wetland indicator suite (extent, condition, biodiversity, services). • Secure sustainable finance: develop Wetland Finance Plan (government budget + donor + private/eco-tourism + PES).		
2033-2034	• Final major restoration push: additional 6 000 ha, including coastal defence wetlands, riparian buffer zones, and adjacent agro-ecological transitions. • Expand livelihood programmes: scale-up ecotourism, community mangrove harvesting/management, value chains for wetland products. • Strengthen enforcement: regular compliance audits of development near wetlands, adjust buffer zones, strengthen local by-laws. • Full M&E cycle: measure	USD500,000	Lead: DPWM/WMU; Co-lead: Dept. Fisheries, Local Government; Community WMCs & private partners

	outcomes vs baseline (area restored, biodiversity improvements, ecosystem-services metrics, community benefits). • Prepare strategy revision post-2035: evaluate successes, lessons, update next decade plan.		
2035	• Achieve target: all priority wetland sites under effective management; restoration of ~10, 000 ha total; sustained livelihoods operational. • Long-term governance structure operational: localised wetland-governance networks, regular funding flows, adaptive management embedded. • National report to CBD/GBF: show alignment, progress, outcomes. • Final review & hand-off: ensure continuation beyond 2035, secure long-term funding, institutionalise into regular budgets. • Celebrate results, showcase best practices, regional knowledge-sharing.	700,000	Lead: DPWM/WMU; Co-lead: Ministry Environment & Climate Change; Partners: All stakeholders

Notes, Assumptions, and Rationale for Wetland Strategy Implementation

The planning and execution of the national wetland strategy are guided by a set of strategic assumptions and rationales to ensure that actions are realistic, phased appropriately, and aligned

with ecological, social, and financial priorities. These considerations are critical for achieving measurable outcomes in wetland protection, restoration, sustainable use, and governance while maximizing long-term sustainability.

Incremental Budget Scaling

The projected incremental increase in the annual budget, from approximately D15 million in Year 1 to D40 million by Year 5, reflects the planned scaling up of multiple components of the strategy. Early years focus on baseline mapping, institutional setup, stakeholder engagement, and pilot restoration sites, which require moderate funding. As restoration efforts, sustainable livelihood programs, institutional strengthening, enforcement, and monitoring activities expand, the budget increases proportionally to support larger-scale interventions. This phased approach ensures that resources are aligned with capacity and implementation readiness.

Restoration Targets

Illustrative restoration targets have been set at approximately 5 000 hectares over the first five years. These targets provide a reference point for planning, but actual restoration priorities should be refined based on detailed wetland mapping, site-specific ecological assessments, and available funding. Restoration activities include mangrove planting, estuarine and mangrove buffer rehabilitation, hydrological interventions to mitigate salinisation and flooding, and control of invasive species in freshwater wetlands. The focus on both ecological and structural interventions enhances the resilience of wetland ecosystems to climate impacts and human pressures.

Phased Livelihood Programs

Sustainable livelihood initiatives linked to wetlands, such as community-based fisheries, agroecological practices, ecotourism, and payments for ecosystem services, are phased in after the initial establishment of restoration sites and governance structures. This sequencing ensures that communities have the necessary institutional support, capacity, and infrastructure to participate effectively in livelihood programs while reducing risks of unsustainable resource use.

Financing Plan

A dedicated wetland financing plan is projected for completion around Year 3–4 (2028). This plan is crucial for securing long-term, sustainable funding beyond short-term donor cycles. It will outline diversified sources of financing, including national budget allocations, international donor contributions, private sector partnerships, and innovative mechanisms such as blue carbon and PES schemes. A robust financing plan ensures continuity of conservation activities and supports scaling up of restoration and livelihood initiatives.

Monitoring and Adaptive Management

Monitoring and adaptive management activities are scheduled to commence early, starting in Year 2, to provide timely data for decision-making and mid-term evaluations. Annual monitoring reports will track wetland condition, biodiversity indices, ecosystem services, and community participation. Results from monitoring will inform adaptive management processes and feed into mid-term review (Year 7) and final evaluation (Year 10), ensuring that interventions remain evidence-based and responsive to emerging challenges.

Community Participation and Inclusivity

Community engagement is embedded throughout the strategy, with particular attention to gender equality and youth inclusion. Local Wetland Management Committees, participatory decision-making platforms, and stakeholder consultations ensure that benefits are equitably shared, and that communities have a sense of ownership over conservation and sustainable use initiatives. Policy integration is emphasized starting in Years 2–3 to ensure that wetland considerations are mainstreamed across agriculture, fisheries, tourism, coastal management, and land-use planning sectors.

Restoration and Resilience Interventions

Restoration activities are designed to improve both ecological integrity and resilience to climate change. Key interventions include:

- **Mangrove planting and buffer rehabilitation:** Strengthens coastal protection, enhances biodiversity, and sequesters carbon.

- **Hydrological interventions:** Dykes, bunds, and gulley plugs help mitigate salinisation, maintain wetland hydrology, and reduce flood risks.
- **Control of invasive species:** Removal or management of species such as water hyacinth, Typha, and Phragmites in freshwater wetlands restores ecological function and supports native biodiversity.

In summary, these notes and assumptions provide the rationale for the sequencing, budgeting, and scaling of wetland management activities. By phasing interventions strategically, ensuring sustainable financing, integrating community participation, and emphasizing adaptive management, The Gambia's wetland strategy is positioned to achieve meaningful ecological, social, and economic outcomes over the 10-year implementation period.

Responsible Agency Roles

Effective implementation of the national wetland strategy requires clear delineation of roles among government agencies, local authorities, community structures, and technical partners. Coordination and collaboration across sectors will ensure that conservation, restoration, sustainable use, and governance objectives are achieved efficiently. The following summarizes the key responsibilities of each stakeholder:

Wetland Management Unit (WMU)

- Central coordination of all wetland-related activities at the national level.
- Oversight of monitoring and evaluation frameworks, including data collection and reporting.
- Policy oversight, ensuring alignment with national strategies (NBSAP) and international frameworks (GBF, Ramsar).
- Liaison with donor agencies and technical partners to mobilize funding and technical support.

Department of Parks & Wildlife Management (DPWM)

- Management of biodiversity in wetlands and protected areas.
- Implementation and enforcement of management plans for key wetland sites.

- Community engagement, including training and support for local wetland governance committees.
- Monitoring of ecological health and species populations within protected wetlands.

Department of Forestry

- Mangrove restoration and rehabilitation in coastal and estuarine wetlands.
- Control and management of invasive plant species in freshwater and brackish wetlands.
- Provision of technical guidance on afforestation and habitat enhancement.

Department of Fisheries

- Integration of sustainable fisheries management into wetland planning.
- Protection of fish spawning grounds and nursery habitats.
- Support for livelihood programs linked to fisheries and aquaculture in wetland areas.

Department of Lands/Planning

- Integration of wetland considerations into land use planning and development approvals.
- Establishment and enforcement of buffer zones around key wetlands.
- Implementation of Environmental Impact Assessments (EIAs) for development projects affecting wetlands.

Local Government & Community Wetland Management Committees (WMCs)

- Local governance of wetlands, including on-the-ground management and enforcement of agreed rules.
- Oversight of benefit-sharing mechanisms for communities dependent on wetland resources.
- Implementation of restoration activities, sustainable livelihood programs, and participatory monitoring.
- Engagement of women, youth, and other marginalized groups in wetland stewardship.

Ministry of Finance & Economic Affairs

- Allocation of national budgets for wetland management activities.
- Development of sustainable financing mechanisms, including PES, blue carbon, and private sector engagement.
- Mobilization of green financing and donor contributions for restoration and conservation initiatives.

Ministry of Tourism & Ecotourism Partners

- Promotion of nature-based tourism opportunities linked to wetlands (e.g., bird watching, mangrove tours).
- Diversification of community livelihoods through sustainable tourism programs.
- Coordination with local communities to ensure tourism activities support conservation objectives.

NGOs, Academia & Private Sector

- Technical support in areas such as ecological restoration, biodiversity monitoring, and sustainable livelihood development.
- Capacity building and training programs for government staff and community stakeholders.
- Research and innovation, including piloting of carbon/blue carbon initiatives and ecosystem service assessments.
- Support for implementation of community-based conservation projects and monitoring programs.

This clearly defined division of responsibilities ensures accountability, strengthens collaboration, and facilitates multi-stakeholder participation. By leveraging the expertise and resources of each agency and partner, the strategy can achieve its objectives of protecting, restoring, and sustainably managing The Gambia's wetlands while enhancing livelihoods and ecosystem resilience.

Key Risks, Mitigation Measures, and Next Steps

Effective implementation of The Gambia's wetland strategy requires proactive risk management linked closely to the action plan. Identifying key risks and defining corresponding mitigation measures ensures that conservation, restoration, and livelihood objectives remain achievable, even in the face of financial, environmental, or social challenges. The following outlines major risks, their mitigations, and immediate next steps to operationalize the strategy.

Key Risks and Mitigation Measures

1. **Insufficient Funding in Early Years**
    - **Risk:** Limited financial resources in Years 1–2 could delay institutional setup, baseline mapping, and pilot restoration activities.
    - **Mitigation:**
        - Secure donor commitments and grant agreements in Year 1 to cover foundational activities.
        - Allocate a contingency reserve within the Wetland Management Unit (WMU) budget to buffer against funding shortfalls.
        - Explore early integration of community contributions and in-kind support to supplement financial resources.

Weak Enforcement of Legal and Regulatory Frameworks

- **Risk:** Ineffective enforcement of wetland protection laws and regulations could allow unsustainable land use, overfishing, or illegal development.
- **Mitigation:**
    - Dedicate Year 1 to finalizing policy and legal groundwork, including EIA procedures, buffer zone guidelines, and protection mandates.
    - Strengthen enforcement capacity in Years 3–5 through training, staffing, and coordination among DPWM, Forestry, Fisheries, and Lands/Planning Departments.
    - Promote community-based monitoring and local compliance mechanisms to reinforce enforcement.

Low Community Buy-In or Weak Benefit Sharing

- **Risk:** Without meaningful engagement, local communities may not actively participate in restoration or sustainable livelihood initiatives, reducing effectiveness and sustainability.
- **Mitigation:**
  - Begin stakeholder engagement from Year 1, including consultations with fishers, farmers, women, youth, and local authorities.
  - Ensure livelihood programs are aligned with local needs and initiated early enough to demonstrate tangible benefits.
  - Implement transparent benefit-sharing mechanisms and participatory governance through Community Wetland Management Committees (WMCs).

Climate Change Impacts Outpacing Restoration

- **Risk:** Sea level rise, salinisation, or flooding may compromise early restoration efforts if ecosystems are not designed for resilience.
- **Mitigation:**
  - Integrate climate-resilient measures into restoration design, including hydrological interventions, mangrove buffer rehabilitation, and rewetting of degraded wetlands.
  - Begin adaptive management in Year 2, using monitoring data to adjust interventions in response to observed climate impacts.
  - Prioritize high-value wetlands for early restoration to maximize ecological protection against climate threats.

Monitoring and Data Gaps Impair Adaptive Management

- **Risk:** Insufficient baseline data or weak monitoring systems could hinder evidence-based decision-making.
- **Mitigation:**

- Allocate Year 2 to establish robust baseline mapping, biodiversity inventories, and monitoring protocols.
- Ensure data collection feeds directly into adaptive management processes, informing the mid-term review (Year 7) and final evaluation (Year 10).
- Engage local communities, NGOs, and academic partners in participatory monitoring to supplement government-led data collection.

Next Steps

1. **Validation of Targets and Budgets**
    - Conduct a stakeholder workshop with government agencies, donors, and community representatives to validate annual targets, restoration hectares, and budget estimates.
2. **Detailed Budget Refinement**
    - Break down budget line items for all strategic components, including equipment, planting materials, training, salaries, travel, and monitoring.
3. **Project Implementation Schedule**
    - Develop a Gantt chart outlining all activities with annual timelines, ensuring clear sequencing of restoration, livelihood, and governance interventions.
4. **Secure Initial Funding Commitments**
    - Confirm donor and partner contributions for Years 1–2 to ensure timely launch of critical activities.
5. **Launch Year 1 Activities**
    - Initiate institutional setup, baseline mapping, pilot restoration sites, and stakeholder engagement by Q1 2025.

This risk-informed, phased approach ensures that the strategy starts on a strong footing while building flexibility to respond to emerging challenges. By integrating risk mitigation directly into the action plan and establishing enabling conditions, The Gambia can achieve long-term wetland conservation, restoration, and sustainable livelihood outcomes.

Annex 1: Theory of Change – Wetland Management in The Gambia (2025–2035)

The Theory of Change (ToC) for wetland management in The Gambia provides a comprehensive roadmap linking resources, actions, outputs, and outcomes to achieve the overarching goal of resilient, well-managed wetlands. By establishing clear causal pathways and assumptions, it ensures that interventions are strategically aligned with national biodiversity priorities, global frameworks such as the Global Biodiversity Framework (GBF), and local community needs.

Ultimate Impact (Long-term Goal)

By 2035, The Gambia's wetlands will be resilient and well-managed, contributing to three mutually reinforcing objectives: biodiversity conservation, climate adaptation, and sustainable livelihoods. Healthy wetland ecosystems will not only maintain ecological integrity but also support climate resilience by mitigating floods, salinisation, and coastal erosion, while providing equitable economic opportunities for local communities dependent on wetland resources. This ultimate impact reflects a long-term vision of ecological sustainability, social equity, and climate-smart development.

Outcome Statements (By 2035)

The ToC identifies five interlinked outcomes that collectively define success:

1. **Ecological:** Critical wetland ecosystems, including coastal, estuarine, and freshwater systems, are restored, protected, and functionally resilient to both climate-related and human-induced pressures. Restoration and protection activities will safeguard biodiversity, maintain hydrological regimes, and enhance ecosystem services.
2. **Livelihoods:** Local communities derive sustainable benefits from wetlands through diversified, climate-resilient, and equitable livelihood options. By supporting activities such as sustainable aquaculture, agroecology, and ecotourism, the strategy strengthens socio-economic resilience while reducing pressure on wetland ecosystems.
3. **Governance:** Wetland management is institutionalised and participatory, with clear integration into national and sectoral development planning. This includes formal

governance structures, enforcement mechanisms, and active local-level engagement through community Wetland Management Committees (WMCs).

4. **Knowledge & Awareness:** Wetland values are widely understood, monitored, and used to inform adaptive, evidence-based decision-making. This entails mapping, monitoring, ecosystem service valuation, and dissemination of data to guide management, policy, and stakeholder action.
5. **Finance:** Wetland management is sustainably financed through a combination of public funding, donor support, private sector engagement, and innovative mechanisms such as blue carbon and payments for ecosystem services (PES), ensuring continuity of conservation and livelihood interventions.

Causal Pathway: From Inputs to Impact

A. Inputs & Enablers

Success depends on political will and alignment with NBSAP and GBF priorities, the availability of technical expertise, active community participation, a clear legal framework and land tenure arrangements, reliable financing sources, and access to monitoring tools and data. These inputs provide the foundation for planned activities.

B. Activities

1. **Institutional & Legal:** Establishing the Wetland Management Unit (WMU), updating wetland policy and legal instruments, and legally designating key wetland areas ensures a strong governance framework.
2. **Restoration & Protection:** Ecological restoration includes mangrove replanting, estuarine rehabilitation, freshwater bamboo reforestation, hydrological interventions, and invasive species control to improve wetland resilience and functionality.
3. **Livelihoods & Community Engagement:** Promoting sustainable aquaculture, agroecology, and ecotourism, combined with the establishment of WMCs and inclusion of women and youth in decision-making, fosters equitable benefits and local stewardship.
4. **Knowledge, Planning & Monitoring:** Comprehensive wetland mapping, ecosystem service valuation, and ongoing biodiversity and socio-economic monitoring generate evidence for informed decision-making and adaptive management.

5. **Policy Integration & Mainstreaming:** Integrating wetlands into land use, fisheries, tourism, water, and coastal management plans, developing a Wetland Finance Plan, and incorporating wetland modules into curricula ensure long-term sustainability and cross-sectoral alignment.

C. Outputs

The strategy will deliver tangible outputs, including the adoption of wetland policies, restoration and protection of approximately 10,000 hectares of wetlands, mapping and governance of priority sites, livelihood support for over 1,000 households, institutional capacity-building across 50 organizations and communities, integration of wetland considerations into national policies, and initiation of sustainable financing mechanisms such as PES and carbon credits.

D. Intermediate Outcomes

These outputs are expected to increase ecological integrity, reduce wetland degradation, improve local incomes, institutionalise participatory governance, enhance national reporting on GBF/NBSAP targets, and enable evidence-based adaptive decision-making.

E. Final Outcomes / Impacts

By 2035, The Gambia's wetlands will contribute directly to multiple GBF targets (2, 3, 9, 11, 14, 18, and 19), increase national biodiversity and ecosystem resilience, improve community climate resilience against flooding and sea-level rise, and promote sustainable development and poverty reduction through nature-based solutions.

Assumptions

- Political support remains stable across electoral cycles.
- Funding remains sufficient throughout the implementation period.
- Communities are engaged and benefit equitably.
- Climate impacts do not exceed the adaptive capacity of restoration efforts.
- Functional cross-sectoral cooperation is maintained.

Risks and Mitigation Measures

Risk	Mitigation
Weak enforcement of policies	Include enforcement mechanisms in strategy; build local by-laws and capacity.
Limited local buy-in	Engage communities early and consistently; ensure equitable benefit-sharing.
Climate events damage restored wetlands	Apply climate-resilient restoration designs, including hydrological buffers and multiple planting zones.
Competing land use (agriculture, infrastructure)	Integrate wetlands into national land-use planning; enforce wetland protection zones.

Indicators (Examples)

- Percentage increase in legally protected wetland area.
- Area (ha) of degraded wetlands restored.
- Number of active community WMCs.
- Number of households with wetland-based income.
- Change in populations of key species (e.g., migratory birds, fish).
- Carbon sequestration via restored mangroves (tons CO_2 eq).
- Percentage of national policies integrating wetland management.
- Annual wetland health index (covering water quality, biodiversity, and invasive species control).

Feedback and Adaptive Management

The strategy will adopt an iterative approach to management, with a mid-term evaluation in 2030, annual monitoring reports including stakeholder feedback, and updates to plans based on ecological, social, and economic data. This ensures that interventions remain effective, responsive, and evidence-based throughout the 2025–2035 period.

In conclusion, this Theory of Change provides a detailed, logical, and evidence-informed framework for wetland management in The Gambia. By clearly linking inputs, activities, outputs, and outcomes, and by embedding adaptive management and inclusive governance, it

establishes a pathway toward resilient wetland ecosystems that support biodiversity, climate adaptation, and sustainable livelihoods over the next decade.

Stakeholder Engagement Plan

Purpose

The purpose of this Stakeholder Engagement Plan is to deliberately identify, involve and coordinate the various stakeholder groups whose actions or interests affect or are affected by wetland ecosystems in The Gambia. It aims to ensure that these stakeholders are informed, consulted and actively engaged throughout the life-cycle of the wetland management strategy, thereby improving legitimacy, ownership, transparency, effectiveness and sustainability of wetland management outcomes.

Project / Strategy Overview

This engagement plan supports the implementation of a national Wetland Management Strategy for The Gambia. Key strategic aims include:

- Restoration of degraded wetland ecosystems (mangroves, estuaries) and enhancement of ecosystem services (biodiversity, carbon sequestration, livelihood support).
- Strengthening governance mechanisms, institutional coordination and community participation in wetland management.
- Promoting sustainable livelihoods tied to wetland ecosystems (for example oyster production, mangrove-based livelihoods) while conserving ecological integrity.
- Ensuring national policy alignment with international obligations (e.g., Ramsar Convention) and implementing co-management, inclusive approaches.

The engagement plan spans preparation, implementation, monitoring & adaptive management phases of the wetland strategy.

Stakeholder Identification

Here is a breakdown of key stakeholder groups relevant for the Gambian Wetland Strategy:

Stakeholder Group	Role / Position	Interest in Wetland Strategy	Influence Level	Current Attitude / Key Considerations
National Government Agencies – e.g., Department of Parks and Wildlife Management (DPWM); Department of Water Resources: Department of Fisheries; National Environment Agency (NEA);	Policy-making, regulation, monitoring, enforcement	High interest (ecosystem integrity, obligations)	High influence	Generally supportive but may face capacity/resource constraints
Regional / Local Government & Councils	Implementation at sub-national level; coordination with communities	Medium–High interest (local ecosystems, livelihoods)	Medium influence	Engagement required to ensure buy-in and alignment with local needs
Local Communities & Traditional Authorities (village councils, Alkalo, etc)	Direct users and custodians of wetland resources (fishing, mangrove use, oyster harvesting)	High interest (livelihoods, resource access)	Medium influence	Diverse attitudes: some supportive, some may feel excluded, need inclusive approach
Civil Society Organisations & NGOs (e.g.,	Advocacy, restoration,	High interest	Medium	Typically supportive;

Sahel Wetlands Concern, West African Bird Study Association WABSA)	awareness, capacity building	(wetland conservation, community empowerment)	influence	act as bridges between communities and govt
Private Sector (aquaculture firms, tourism operators, carbon-finance entities)	Potential investors, users of ecosystem services, developers of restoration/credits (e.g., carbon)	Medium–High interest (business opportunities, ecosystem services)	Medium influence	Need to ensure business interests align with sustainable management goals
Academic / Research Institutions	Provide evidence, monitoring, data for wetlands	Medium interest (research, policy influence)	Low–Medium influence	Supportive, but often limited resources
Donors / International Partners (EU, GCF, UNEP, UNDP, etc)	Funding, technical support, international commitments	High interest (successful implementation, results)	High influence (via funding)	Supportive if roles are clearly defined and results oriented

Stakeholder Analysis (Interest vs Influence)

Using the matrix:

Influence \ Interest	**Low Interest**	**High Interest**

High Influence	E.g., key ministers who are not yet committed	Key agencies + donors that are committed , Manage closely
Low Influence	Peripheral actors (e.g., some academic groups)	Community groups, NGOs , Keep informed / involve

This indicates priority for close management and engagement: national agencies, donors, communities and NGOs.

Engagement Objectives

- Build awareness and understanding among all stakeholders of the wetland strategy's goals, benefits, risks and roles.
- Foster meaningful participation from local communities, traditional authorities and civil society in planning, decision-making and implementation.
- Ensure coordination across institutions to avoid duplication, jurisdictional gaps and conflicting mandates.
- Mobilise and sustain stakeholder support for restoration, conservation and sustainable use of wetlands.
- Establish feedback and grievance mechanisms so stakeholders can raise concerns, provide input, and hold implementers accountable.
- Monitor stakeholder engagement outcomes and adapt strategy accordingly.

Engagement Strategies & Communication Methods

Stakeholder Group	Engagement Strategy	Communication Channel	Frequency	Responsible Person / Unit
National Government Agencies	High-level briefing & coordination meetings; joint steering committee	Workshops, policy briefs, inter-agency meetings	Quarterly	WMU/DPWM

Regional / Local Govt	Local stakeholder forums; training workshops	Town-hall meetings, local radio, fact sheets	Bi-monthly	Regional Coordinator
Local Communities & Traditional Authorities	Participatory planning sessions; field visits; livelihood forums	Community meetings, participatory mapping, local languages	Monthly (initially) then quarterly	Field Engagement Officer
Civil Society & NGOs	Collaborative partnerships for awareness, restoration programmes	Webinars, newsletters, site visits	Quarterly	NGO Liaison Officer
Private Sector	Investment workshops; business-case development discussions	Round-table meetings, investment briefs	Twice a year	Private Sector Engagement Lead
Academic / Research	Knowledge exchange workshops; joint monitoring programmes	Conferences, joint reports	Semi-annually	Research Coordinator
Donors / International Partners	Regular progress updates; high-level review meetings	Reports, donor briefing sessions	Semi-annually	Donor Liaison Unit

Engagement Activities & Timeline

Phase	Activity	Timeline
Preparation	Stakeholder mapping & analysis	Month 1
	Launch workshop with key stakeholders	Month 2
	Establish Steering Committee (national) & Local Wetland Forums	Month 2–3
Planning	Community participatory planning sessions in target wetlands	Months 3–6
	Training of community monitors & local committees	Months 4–6
Implementation	Roll-out restoration/livelihood projects (mangrove planting, oyster management)	Months 6–24
	Mid-term stakeholder review & feedback forum	Month 12
Monitoring & Adaptive Management	Regular monitoring of wetland health & stakeholder feedback	Quarterly from Month 6
Evaluation & Scale-up	Final stakeholder workshop + strategy revision for scale-up	Month 24

Feedback & Grievance Mechanism

- Establish a dedicated **Wetland Strategy Feedback Portal** (online and paper-based) for stakeholders to raise concerns, suggestions or complaints.
- At community level, designate **Local Wetland Committees** to receive feedback and escalate unresolved issues to the regional / national level.
- At national level, the Steering Committee will review grievances quarterly and report on actions taken.
- Transparent reporting of grievance resolution is essential to build trust and accountability.

Monitoring & Evaluation of Engagement

Key indicators to track:

- Number and diversity of stakeholders participating in planning/meetings (gender, youth, traditional authorities).
- Percentage of invited stakeholders who attend key engagement events.
- Stakeholder satisfaction levels (via periodic survey) regarding communication and participation.
- Number of partnerships or joint initiatives established with NGOs/communities/private sector.
- Number and type of grievances received vs resolved within agreed timeframe.
- Evidence of stakeholder-influenced decisions or changes in strategy implementation.

Review engagements at least every six months and adjust engagement methods, communication channels or frequency as needed.

Roles & Responsibilities

- **Wetland Management Unit (DPWM)**: Overall coordination, stakeholder mapping, reporting.
- **Steering Committee**: High-level oversight and stakeholder representation (govt, NGO, community, private sector).
- **Regional / Local Engagement Teams**: Facilitate local community meetings, feedback loops, field implementation.
- **Communication & Outreach Unit**: Develop materials (flyers, radio programmes), manage public awareness campaigns.
- **Monitoring & Learning Unit**: Track engagement metrics, conduct evaluations, feed learning back into

Results Framework: Wetlands Management Strategy (2025–2035)

Strategic Objective	Outputs / Activities	Outcome / Impact	Key Indicators	Targets (by 2035)	Responsible Agencies / Partners
1. Protect remainin	- Map, designate, and	Wetlands are legally	- Area (ha) of wetlands legally	- 15 key wetlands	DPWM, WMU,

g high-value wetlands	legally recognize wetlands. - Strengthen management plans of existing protected wetlands (Tanbi, Jokadu, Bao Bolong). - Establish/enforce wetland regulations and EIAs.	protected, with functional ecosystems and reduced degradation.	protected. - Number of wetlands with updated management plans. - Compliance with EIAs.	designated/protected. - 100% of critical wetlands under management plans. - Zero illegal conversions.	Lands/Planning, Local Gov/WMCs
2. Restore degraded wetlands and enhance resilience	- Mangrove replanting and estuarine restoration. - Freshwater bamboo replanting, hydrological interventions. - Control invasive species.	Degraded wetlands restored; ecosystems resilient to climate change, sea-level rise, and salinisation.	- Area (ha) of wetlands restored. - Survival rate of restored mangroves/vegetation. - % of wetlands with controlled invasive species.	- 10,000 ha restored. - >80% survival of plantings. - 75% reduction in invasive coverage.	DPWM, Forestry Dept, Local WMCs, NGOs/Academia
3. Promote	- Establish sustainable	Local communiti	- Number of households with	- 1,000+ households	DPWM, Fisheries,

sustainable and inclusive wetland-based livelihoods	fisheries, aquaculture, agroecology, ecotourism. - Ensure gender and youth inclusion. - Set up community benefit-sharing mechanisms.	es sustainably benefit from wetlands; reduced pressure on ecosystems.	wetland-based income. - Number of livelihood initiatives (fishery, agroecology, tourism). - % women and youth participation.	benefiting. - 50 livelihood initiatives functional. - ≥50% female/youth participation.	Tourism, Local WMCs, NGOs
4. Integrate wetlands into sectoral policies and land-use planning	- Update national wetland policy. - Integrate wetlands into agriculture, fisheries, tourism, coastal management plans. - Harmonize legal frameworks.	Wetlands considerations are mainstreamed across sectors; land-use conflicts minimized.	- Number of national/sectoral policies integrating wetland management. - Number of development plans applying wetland zoning.	- ≥5 sectoral policies mainstreamed. - 100% of priority wetlands reflected in land-use plans.	WMU, DPWM, Lands/Planning, Agriculture, Fisheries, Tourism
5. Strengthen institutional, legal,	- Establish/strengthen Wetland Management Unit (WMU).	Effective wetland governance and sustainabl	- Functional WMU operational. - Amount of funds mobilized	- WMU fully functional by Year 2. - USD 5M mobilized	WMU, Ministry of Finance, DPWM,

and financial frameworks	- Develop wetland finance plan (government, donor, PES, blue carbon). - Build capacity of staff and communities.	e financing in place.	(USD). - Number of staff/community members trained.	annually by Year 5. - 50 institutions and communities trained.	NGOs, Academia
6. Raise awareness, build capacity, and promote stakeholder participation	- Develop campaigns on wetland values and climate adaptation. - Establish participatory governance platforms. - Incorporate traditional knowledge.	Enhanced knowledge and stakeholder engagement; adaptive, participatory management implemented.	- Number of awareness campaigns conducted. - Number of functional WMCs. - % of local population engaged in wetland governance.	- 20 awareness campaigns by 2030. - 15 functional WMCs. - ≥70% of target communities engaged.	WMU, DPWM, Local WMCs, NGOs, Academia

Cross-Cutting Monitoring & Evaluation Indicators

Category	Indicators	Frequency / Notes
Ecological Health	Wetland health index (water quality, biodiversity, invasive species)	Annual

Climate Resilience	Area of wetlands with hydrological interventions; % reduction in salinisation/flood damage	Every 2 years
Biodiversity	Population trends of key species (birds, fish, mangroves)	Annual / seasonal surveys
Socioeconomic	Number of households benefiting; income increase from wetland-based livelihoods	Annual household surveys
Governance	Number of WMCs functioning; number of policies integrating wetland management	Annual
Finance	Funds mobilized for wetlands; number of PES/blue carbon projects operational	Annual

Alignment with GBF & NBSAP Targets

- GBF Target 2: Restoration of degraded wetlands.
- GBF Target 3: Increase in protected inland water and coastal ecosystems.
- GBF Target 9, 11, 14: Mainstreaming biodiversity into policies, plans, and finance.
- GBF Target 18, 19: Sustainable livelihoods and equitable benefit sharing.
- NBSAP: Designation of Ramsar sites, wetland policy development, conservation and wise use of wetlands.