The Gambia's National Biodiversity Strategy and Action Plan Review (2025 – 2035)

Component: The Invasive Species Management Strategy and Action Plan

Consultant: Kebba Bojang

December 2025

1. Background and Status

This Chapter focuses on addressing the threats posed by Invasive Species to The Gambia's biodiversity, ecosystems, and livelihoods. Invasive Species (both native and Non-native) have been identified as one of the major driver of habitat degradation and biodiversity. Invasive Species are defined as native organisms that, when introduced to a new environment, can cause harm to local ecosystems, economies, or human health. They significantly modify and disrupt the ecosystems they colonize. They can be animals, plants, parasites, or disease-causing organisms that establish outside their natural range. They often out-compete native species for resources, disrupt food web and change natural habitats.

Invasive Species pose serious threats to the environment, the food web, life and human health in general and has been identified as one of the leading drivers of biodiversity loss.

As introduced non-native organisms (diseases, parasites, plants, or animals) Invasive species begin to spread or expand their range from the sites of their original introduction and quickly colonise their new surroundings with the potential to cause harm to the environment, the economy, or to human health.

The Gambia is blessed with a rich biodiversity which is an important national treasure sustaining livelihoods, economic well-being and prosperity for her population. Additionally, The Gambia is home to several invasive species, which include various introduced plants and animals that threaten local biodiversity and ecosystems.

Being non-native plants in The Gambia, Invasive species pose significant challenges to the development of the country affecting several vital sectors. Key among the sectors impacted negatively include the following:

- **Ecological:** Invasive species can out-compete native species for resources, disrupt ecosystems, and alter habitats, leading to habitat degradation- a precursor to habitat loss.
- **Agricultural:** Invasive species can cause significant crop damage, leading to food insecurity and economic losses to farmers. This can have significant consequences for The Gambia where agriculture contributes about 35% to GDP and provides employment for 75% of the population.
- **Economic:** The spread of invasive species can increase weed management costs for small-scale farmers and impact trade and livelihoods. The loss of agricultural (crops, livestock) production due to invasive alien species can have adverse impacts on livelihoods of the local populations.

Invasive Alien Species found in The Gambia

Given the country's rich biodiversity status, it is not surprising that a wide range of Invasive Alien Species are found in The Gambia. Different invasive species are found across the length and breadth of the country. They can be found thriving on all the different ecosystems thereby posing serious challenges to the country. The impacts of invasive species on biodiversity, the environment, livelihoods and human health have been established globally and are well known. Depending on the degree and extent of invasion, colonisation and spread, invasive species affect the areas and communities to different degrees.

The Table below lists some of the invasive alien species known to exist in The Gambia. They can be found in many different ecosystems ranging from Terrestrial to wetland ecosystems. Of particular concern is the spread of the Water Hyacinth (*Eichhornia crassipes*) which has been reported to be fast colonising wetlands (river tributaries) in the middle and upper parts of the country.

List of Invasive Alien Species in The Gambia

No.	Scientific Name	Family	Ecology
1	*Amaranthus spinsus*	Amaranthaceae	Weed
2	*Acanthosper hispidum*	Asteraceae	Weed
3	*Ageratum conyzoides*	Asteraceae	Weed
4	*Chromolaena ordata*	Asteraceae	Pasture
5	*Eupatorium ordata*	Asteraceae	Weed
6	*Tidax procumbes*	Asteraceae	Weed
7	*Commelina bengalensis*	Commelinaceae	Weed
8	*Ipomoea aquatic*	Convolvulaceae	Weed
9	*Cyperus difformis*	Cyperaceae	Weed
10	*Cyperus distans*	Cyperaceae	Weed
11	*Cyperus tuberosus*	Cyperaceae	Weed
12	*Mariscus alternifolius*	Cyperaceae	Weed
13	*Acalypha ciliate*	Dipterocarpaceae	Weed
14	*Euphorbia heterophylla*	Euphorbiaceae	Weed
15	*Azadirachta indicate*	Meliaceae	Forest
16	*Leucaena leucocephala*	Mimosaceae	Forest
17	*Mimosa pigra*	Mimosaceae	Forest
18	*Broussonetia papyrifera*	Moraceae	Forest
19	*Brachiaria deflexa*	Poaceae	Weed
20	*Brachiara lata*	Poaceae	Weed
21	*Digitaria horizontalis*	Poaceae	Weed
22	*Echinochloa colona*	Poaceae	Weed
23	*Eleusine indica*	Poaceae	Weed
24	*Imperata cylindrical*	Poaceae	Weed
25	*Oryza barthii*	Poaceae	Weed
26	*Oryza longistaminata*	Poaceae	Weed
27	*Paspalum orbiculare*	Poaceae	Weed
28	*Panicum maximum*	Poaceae	Weed
29	*Sporobolus pyramidalis*	Poaceae	Weed
30	*Eichhornia crassipes (Water Hyacinth)*	Pontedariaceae	Aquatic
31	*Portulaca oleraceae*	Pontedariaceae	Weed
32	*Striga harminthica*	Scrophulariaceae	Weed
33	*Lanthana camara*	Verbenaceae	Terrestrial
34	*Leersia hexandra*	Poaceae	Weed
35	*Nymphaea lotus*	Nymphaeaceae	Aquatic
36	*Digitaria abysinica*	Poaceae	Weed
37	*Alopeceeus myosuroids*	Poaceae	Weed
38	*Mesosphaerum suvedens*	Lamiaceae	Terrestrial
39	*Vertiver chrysopogan*	Poaceae	Weed
40	*Azadirachta indica (Neem)*	Meliaceae	Terrestrial

(Source: Invasive Plants of West Africa: Concepts, Overviews and Sustainable Management; Advances in Recycling and Waste Management: Open Access supplemented with DPWM Annual Waterbird Census data).

To address the challenges posed by Invasive Species in The Gambia, it is crucial to develop an Invasive Species Management Strategy and Action Plan to effectively deal with this problem. First and foremost, such a strategy must aim at strengthening national capacity for the prevention, control, and eradication of invasive species, and to guide the integration of invasive species management into overall biodiversity conservation and protected area management programmes in general.

There is general agreement that invasive alien species pose serious threats to biodiversity and have been identified as the second leading cause of biodiversity loss, the reality however is that they are a part of ecosystems and we must develop strategies for managing them. The first response must be aimed at preventing their introduction – accidentally or intentionally. Once introduced, we can employ a range of measures to manage them to minimise their impacts.

"Blacklist" vs "Whitelist" of Invasive Alien Species

A common policy tool often employed by countries to deal with biological invasions, including invasions by Invasive Alien Species is develop a "Blacklist and a "Whitelist of invasive species for that country. "Blacklists" identify Invasive Alien Species whose introduction has been found to threaten biological diversity and ecosystems. "Whitelists" on the other hand, identify those invasive species which carry a low risk of becoming invasives or impacting negatively on biodiversity and ecosystems. Both lists are based on risk assessments. For "Blacklists", the aim is to ban species for entry into a country or region while for "Whitelists" the aim is to demonstrate its safety for the environment or human wellbeing.

Below are the "Whitelist" and "Blacklist of Invasive Alien Species of The Gambia

.

"Black list" of Invasive Species of The Gambia (High Risk Invasive Species)

No	Name (Scientific name)	Ecosystem
1	Water hyacinth	Aquatic
2	Azadirachta indica	Terrestrial
3	Oryza barthii	Aquatic
4	Oryza longistaminata	Aquatic
5	Ipomea aquatic	Aquatic
6	Striga harmonthica	Terrestrial
7	Lantana camara	Terrestrial
8	Hyptis suvedens	Terrestrial
9	Digitaria abysinia	Terrestrial
10	Panicum maximum	Terrestrial
11	Pennisetum purpurem	Terrestrial
12	Phragmites australis	Aquatic
13	Typha australis	Aquatic

"White list" of invasive species of The Gambia (Low Risk Invasive Species)

No	Name (Scientific name)	Ecosystem
1	Vertiver chrysopogan	Aquatic
2	Andropogan	Terrestrial
3	Leucaena leucocephala	Terrestrial
4	Crotolaria retusa	Terrestrial
5	Moringa olifera	Terrestrial
6	Gmalina arborea	Terrestrial
7	Eucalyptus robusta	Aquatic
8	Casuarina equistifolia	Terrestrial
9	Jatropha curcas	Terrestrial
10	Propsopis juliflora	Terrestrial
11	Cashew	Terrestrial
12	Horticultural crops, seeds, planting materials (Subjected to quarantine).	

The Kunming - Montreal - Global Biodiversity Framework (GBF) as a global strategy aims to initiate fast track actions to halt and reverse biodiversity loss and put nature on the path to recovery by 2030. With 20 targets, The GBF sets 4 overarching goals to be achieved by 2050, The 4 goals focus on ecosystem health, species conservation, and sustainable use of biodiversity. The 4 overarching goals include the following:

- Halting human-induced species extinction and maintaining genetic diversity,

- Sustainable use and management of biodiversity, ensuring that nature's contributions to people are valued and enhanced,

- Adequate means of implementation, including financial resources;

- and capacity building to support biodiversity conservation efforts.

1.1 GBF & Relevant Targets

Among the GBF's 20 targets, Target 6 specifically deals with Invasive Alien Species, which represents an important target for The Gambia's biodiversity conservation efforts.

GBF Target 6 aims to:" *reduce the introduction of Invasive Alien Species (IAS) by 50%, minimize their impacts, manage pathways of introduction, and prioritize eradication/control especially at priority sites"*. The priority actions that must be implemented in pursuit of target 6 objectives will include the following;

- Identifying priority Invasive Alien Species to prevent their introduction,
- Identifying and managing the pathways,
- Working towards reducing the rates of Invasive Species introduction by 50%,
- Identify priority areas of Invasive Species and work on eradicating or controlling their spread.

Other GBF targets also relevant to The Gambia include: Target 2: ecosystem restoration, Target 3: area protection (Target 3), Target 5: sustainable use of species.

Target 2 aims to: "Restore 30% of all Degraded Ecosystems (Terrestrial, Inland waters, Coastal and Marine) by 2030". The target aims to enhance effective biodiversity and ecosystem functions, ecological integrity and connectivity.

Target 3 aims to: "Conserve 30% of land, water and seas" This target aims to ensure that by2030, at least 30% of terrestrial land, inland water, and of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem functions and services. Target 3 provides the opportunity to reverse habitat fragmentation – the leading driver of biodiversity loss.

Target 5 aims to: "Ensure sustainable, safe and legal harvesting and trade of wildlife" - this target aims to prevent the over-exploitation of wildlife resources and minimize the impacts on non-target species. It also aims to protect customary sustainable use by indigenous peoples and local communities. The trade in wildlife resources needs to be highly regulated in light of the trends in global trade in wildlife and its products.

1.2 The Gambia's NBSAP & Existing Provisions

The Gambia's NBSAP (2015, under revision) includes **Target 6** which aims to: *"Reduce by 2020 the occurrence and introduction of invasive species by 50%*". This Goal **has not been met** and the target date will need to be adjusted to 2050.

Invasive/resident species identified in The Gambia include among others *Water hyacinth, Lantana camara, Phragmites australis, Typha australis*, Neem, Striga harmonthica, wild rice, White fly, Cassava mosiac virus, Crotalaria (introduced as a green manure crop), African Migratory Locust, Quela quela (Weaver Bird), Eucalyptus, Vertiva grass (for erosion control), among others.

The Gambia has declared some strategy elements and institutional mandates, but also notes **limited enforcement**, **limited risk assessments**, and **weak coordination** among relevant sectors. Under the Phytosanitary protocols, The Plant Protection Services (PPS) under The Department of Agricultural Services is mandated to control the importation of plant materials that may harbour pest and diseases. The PPS has established stations at the airport, seaport and at the various posts along the country's borders. The effectiveness of this network in preventing the importation of Invasive Species into the country remains an open question.

2. Strategic Vision

By 2035, The Gambia will have **halved** the rate of introduction of alien invasive species, significantly reduced the impacts of established invasive and resident species on biodiversity and ecosystems, and restored resilience to degraded ecosystems. By 2050, biodiversity under threat from invasive species will be well under control, pathways fully managed, and the integrity of ecosystems restored.

3. Strategic Objectives & Key Results

Strategic Objective	Key Results / Indicators by 2030
Prevention & Pathway Management	Percentage of trade/import routes with invasive risk assessments; legislation strengthened/enforced; no major new invasives established.
Early Detection & Rapid Response	National reporting system in place; response teams operational; new incursions eradicated quickly.
Control & Eradication of Priorities	Significant suppression or elimination of priority invasive species in high-value sites (wetlands, protected areas).
Restoration & Ecosystem Resilience	Restoration of degraded wetland and forest ecosystems; improved native species richness and ecosystem functioning.
Policy, Institutional Capacity & Governance	Updated laws; clear roles among agencies; adequate funding; coordination mechanisms functional; compliance and enforcement improved.
Public Engagement & Livelihood Integration	Communities aware and engaged; livelihoods supported (alternatives where invasives caused loss); citizen science involvement.

4. Strategic Pillars & Actions

Below are the main pillars of the strategy, with their specific actions. Each should include time frames, responsible actors, resources, and monitoring.

4.1 Prevention & Pathway Management

Actions:

1. **Risk Assessment for introductions**
    - Mandate pre-import risk assessments for all species proposed for horticulture, aquaculture, pet trade, forestry, erosion control, etc.
    - Maintain a *nationally maintained approved list* of species safe for import/use; blacklist known or high-risk invasives.

2. **Legal and regulatory strengthening**
    - Review and update laws: Biodiversity Act, Wildlife Conservation Act, Plant Protection / Phytosanitary regulations, Biosafety laws.
    - Specify measures for controlling intentional introductions, escapes, and accidental introductions (e.g. ballast water, seed contaminants, and ornamental plants).
    -
3. **Pathway mapping and management**
    - Identify the major pathways through which IAS enter Gambia (trade, tourism, transport, aquaculture).

- For each, implement mitigation measures (e.g. inspections at ports and borders, cleaning protocols for boats and vehicles, regulation of trade).

4. **Biosecurity & quarantine**
    - Strengthen and properly equip phytosanitary services.
    - Institute quarantine or screening requirements for plants, animals, seed, soil, etc.

5. **Prevent restocking**
    - For resident invasives (native or long-established species behaving invasively), regulate their spread via land-use planning, infrastructure design, water flows.

4.2 Early Detection, Monitoring, & Rapid Response (EDRR)

Actions:

1. **Surveillance & monitoring network**
    - Establish baseline surveys for priority ecosystems (wetlands, estuaries, protected areas).
    - Use remote sensing, citizen science, academic institution involvement for monitoring.

2. **National database / information system**
    - Collect, store, and share data on invasives: species, locations, spread rates, control actions

3. **Rapid response protocols**
    - Define criteria for action: what species, what threat level, what scale; thresholds for eradication vs. containment.
    - Establish response teams with clear mandate and resources.

4. **Capacity building**
    - Train staff in species identification, risk assessment, control methods.
    - Equip field teams with tools for detection (e.g. GPS, field guides, mobile phones apps).

4.3 Control & Eradication of Priority Species

Actions:

1. **Prioritize species and sites**
    - Identify a list of *priority alien invasive species* and **resident species** that cause the greatest harm.
    - Identify **priority sites** (protected areas, critical wetland reserves, fisheries zones).
    -
2. **Integrated control programs**
    - Use mechanical, chemical, biological and cultural methods as appropriate.
    - For aquatic invasives (e.g. water hyacinth), consider biological control, mechanical removal, manual removal, etc.
    -
3. **Sustainable financing mechanisms**
    - Establish dedicated funds or budget lines for IAS management.
    - Explore payment for ecosystem services, international funding (GEF, donors), public–private partnerships.
    -
4. **Mitigation of spread**
    - For species already established, contain spread through buffer zones, barriers, restoration of competitor/ native species.

4.4 Restoration & Ecosystem Resilience

Actions:

1. **Ecosystem restoration in invaded areas**
    - After control efforts, restore native vegetation, hydrology, habitat structure.
    - Use local species to maintain genetic integrity.
    -
2. **Enhance ecosystem connectivity**
    - Ensure corridors, buffer zones so native species can migrate and recolonize.
    -
3. **Ecosystem-based adaptation & nature-based solutions**
    - Where climate change increases invisibility, integrate adaptation: restoring wetlands to buffer flood, controlling invasives that exacerbate erosion.

4.5 Governance, Institutional Arrangements & Policy

Actions:

1. **Clarify roles & mandates**
    - Map responsibilities among agencies: National Environment Agency (NEA), Department of Parks & Wildlife Management (DPWM), Department of Fisheries, Customs, Agriculture, Forestry, National Disaster Management Agency (NDMA) etc.

- Create interagency coordination committee or taskforce for IAS management.
-

2. **Legislation and legal enforcement**
   - Update and create regulations with clear penalties for non-compliance.
   - Ensure enforcement capacity (staff, courts, inspection).
   -
3. **Align NBSAP revision with GBF**
   - Incorporate the updated GBF targets into Gambia's NBSAP; revise strategy elements, milestones.
   - Establish monitoring, reporting, review mechanisms.
   -
4. **Resource mobilization**
   - Budget allocations at national and local levels.
   - Seek international funding, e.g. GEF, biodiversity-related donors.
   - Use economic valuation of the damage from invasives to justify spending.

4.6 Public Awareness, Community Engagement & Livelihoods

Actions:

1. **Awareness campaigns**
   - In schools, media, faith-based organizations; highlight the costs and risks of invasive species.
   -
2. **Local community involvement**
   - Empower communities near protected areas/wetlands to participate in monitoring, control, restoration.
   - Train locals in removal, restoration, perhaps produce value-added by-products (e.g. crafts made from removed invasives) where safe.
   -
3. **Alternate livelihoods**
   - Where invasives reduce ecosystem services or livelihoods (e.g. fisheries, water supply), develop alternatives so that people are not forced to encourage or tolerate invasives.
   -
4. **Citizen science**
   - Use mobile apps, participatory mapping, reporting of suspect species, school competitions.

5. Key Priority Species & Sites for The Gambia

Based on current information:

- **Species**:
  - *Water hyacinth* (*Eichhornia crassipes*) – major aquatic threat.
  - *Lantana camara* – terrestrial invasive shrub known to displace native flora.
  - *Phragmites australis*, *Typha australis* – species that can dominate wetlands.

- **Sites**:
    - Major wetlands and water bodies (River Gambia tributaries, estuaries, mangrove zones).
    - Protected areas: Abuko Nature Reserve, Kiang West NP, Bao Bolong Wetland Reserve, Tanji Bird Reserve.

6. Implementation Phases & Timeframes

Phase	Duration	Core Activities
Phase 1: Foundation (Year 1–2)	2025–2027	Risk assessment frameworks; pathway mapping; law review; setting up coordination body; baseline surveys and monitoring; public awareness starting.
Phase 2: Priority Action (Year 3–5)	2027–2030	Launch rapid response for new invasives; implement control programs for priority species; restore ecosystem in invaded priority sites; enforce strengthened regulations.
Phase 3: Consolidation & Scaling (Year 6–10)	2030–2035	Scale up successful interventions; ensure sustainability; mainstream IAS management in sectors (agriculture, aquaculture, forestry); evaluate progress vs GBF targets; adjust strategy.

7. Monitoring, Evaluation & Adaptive Management

- Develop **national indicators** aligned with GBF, e.g., indicator for Target 6: reduction in rate of introduction / establishment of IAS.
- Periodic reporting (annual, biannual) on progress: species control, new spp detected, habitats restored, regulatory enforcement levels.
- Use **adaptive management**: adjust methods as evidence comes in (which control works, which pathways are most problematic).
- Involve research institutions (Darwin Field Station, universities) in evaluating and publishing results.

8. Institutional Stakeholders & Partnerships

- **Government ministries/departments/agencies**:
    - National Agricultural Research Institute (NARI) Ministry of Agriculture
    - Department of Parks & Wildlife Management
    - Department of Agriculture / Plant Protection ServicesPest Management Unit
    - Department of Forestry
    - Department of Fisheries
    - Customs & Quarantine / Biosecurity units
    - National Environment Agency (NEA)
    - National Disaster Management Agency (NDMA)
    - Department of Livestock Services (DLS)

Local government / communities

- **Non-Governmental Organizations (NGOs) & Civil Society**: e.g. Makasutu Wildlife Trust, forest community associations.
- **Academic & Research Institutions**: Darwin Field Station, universities.
- **International Partners / Donors**: GEF, FAO, UNDP, international conservation NGOs.

9. Risks, Challenges & Mitigation

Risk / Challenge	Mitigation Measures
Limited funding and competing priorities	Make business case (cost of inaction), seek donor funding, integrate with other sectors (e.g. climate, agriculture)
Weak enforcement & weak institutional capacity	Capacity building; clear mandates; dedicated enforcement units; community monitors
Inadequate data on species, pathways, impacts	Baseline studies; partnerships with research institutions; community reporting
Resistance or lack of awareness among stakeholders	Outreach; participatory processes; demonstrating benefits to livelihoods
Climate change altering species dynamics	Integrate climate risk into planning; use scenario modeling; adaptive methods

10. Budgeting & Resourcing

- Estimate costs for: baseline surveys; staff training; control and eradication operations; restoring ecosystems; awareness campaigns; building laboratory or biosecurity infrastructure.
- Assign dedicated budget from national government, possibly ring-fenced for IAS/ invasive management.
- Leverage external grants and technical assistance.
- Explore economic incentives: e.g. payment for ecosystem services, ecotourism, sustainable harvesting of biomass from invasive species if safe.

11. Integration into Broader Policy & Sectoral Plans

- Mainstream invasive species considerations into: agriculture policies; forestry; fisheries; water resources; land-use planning; infrastructure development.
- Align with other national plans: climate change adaptation, coastal zone management, disaster risk reduction.
- Use NBSAP revision as leverage to embed these strategies in national legislation and plans.

12. **Potential Donors and Partners**

For the implementation of the Invasive Species Management Strategy and Action plan, it is critical to build a broad-based alliance of partners and donors. This goal of bringing together partners will be to create an enabling environment for generating interest in the goal of the IAS strategy given its potential impacts on the Gambian population. The list of partners and potential donors include, but not limited to the following institutions.

The Global Environment Facility (GEF)

The UN Food and Agricultural Organisation (FAO)

The African Development Bank (AfDB)

The International Fund for Agricultural Development (IFAD)

The Economic Community of West African States (ECOWAS)

The Interstate Committee for Drought Control in the Sahel (CILSS)

The Islamic Development (IDB)

The World Bank (WB).

The Arab Bank for Economic Development in Africa (BADEA)

The European Union (EU

The French GEF

Invasive Species Management Action Plan (2025–2035) – The Gambia

Goal: To prevent, detect, control, and manage alien and resident invasive species in The Gambia to reduce biodiversity loss, protect ecosystem services, and improve climate and livelihood resilience, in line with the GBF and NBSAP, the following measures need to be put in place:

1. Prevention and Pathway Management

Code	Activity	Lead Agency	Partners	Timeline	Output Indicators	Budget (USD)	Remarks
P1	Develop & implement	NEA	Plant Protection Services (Dept.	2025–2026	Protocol developed	60,000	Align with trade and

Code	Activity	Lead Agency	Partners	Timeline	Output Indicators	Budget (USD)	Remarks
	national IAS risk assessment protocol		of Agriculture), Forestry, Fisheries, Academia		& in use		biosafety laws Plant Quarantine regulations.
P2	Update laws to regulate import, sale, and planting of known invasives	MECCNAR Ministry of Agriculture, Livestock & Food Security.	NEA, Ministry of Justice	2025–2027	Amended legal provisions	40,000	Include penalty clauses
P3	Conduct pathway analysis for invasive species introductions	NEA PPS	GRA Ports Authority Plant Protection Services.	2025–2026	Pathway map & report	25,000	Includes land, sea, air routes
P4	Install biosecurity & quarantine facilities at entry points	Customs	NEA, Plant Protection, FAO	2026–2028	Facilities operational	500,000	Infrastructure and training
P5	Develop a "white list" of species safe for import and a "black list" of known invasives	NEA Plant Protection Services.	Academia, CITES Focal Point	2025–2026	Lists published and enforced	15,000	Align with regional efforts (ECOWAS)

2. Early Detection, Monitoring, and Rapid Response (EDRR)

Code	Activity	Lead Agency	Partners	Timeline	Output Indicators	Budget (USD)	Remarks
E1	Establish national IAS monitoring network with trained personnel	NEA Crop Protection Services	Communities, NGOs, Researchers	2026–2028	Monitoring system active	100,000	Use mobile-based data reporting
E2	Develop IAS database and online dashboard	NEA	ICT Dept., Universities NGOs	2026–2027	Functional database & dashboard	80,000	Publicly accessible, linked to GBIF
E3	Create rapid response teams with SOPs	NEA	DPWM, Forestry	2026–2028	Teams trained & deployed	120,000	Equipment and training included
E4	Develop community-based early detection programs	NGOs TANGO NGO Affairs	Community Forest Committees	2027–2030	# of trained community monitors	50,000	Use participatory approaches

3. Control, Eradication, and Containment

Code	Activity	Lead Agency	Partners	Timeline	Output Indicators	Budget (USD)	Remarks
C1	Prioritize top 10 invasive species and top 10 affected sites	NEA	Research Institutions Plant Protection Services	2025	Prioritized list available	10,000	Essential for targeting resources
C2	Develop Integrated Species Control Plans (ISCP) for each priority species	NEA	FAO, DPWM, NGO, Department of Agriculture, PPS	2026–2028	10 ISCPs developed	100,000	Based on ecological and socioeconomic impact
C3	Implement pilot eradication of *Eichhornia crassipes* (Water hyacinth) in Gambia River estuaries	NARI/DPWM	Local , Councils, DOF	2027–2030	Area (ha) cleared; native plants restored	500,000	Include mechanical, bio-control, monitoring
C4	Control *Lantana camara* in protected areas	NARI/DPWM	Communities, Rangers	2026–2029	% reduction in Lantana cover	150,000	Combine with fire management
C5	Introduce control buffer zones in wetland areas to prevent reinvasion	NARI/DPWM	Fisheries Dept., NGOs	2028–2032	5 buffer zones established	75,000	Protect restored areas

4. Restoration and Resilience Building

Code	Activity	Lead Agency	Partners	Timeline	Output Indicators	Budget (USD)	Remarks
R1	Restore 5 key ecosystems degraded by invasives (wetlands, mangroves)	DPWM	Forestry, NGOs, Communities	2026–2032	5 sites restored (ha)	600,000	Use native species only
R2	Reintroduce native vegetation in post-eradication areas	Forestry Dept.	NEA, NGOs	2027–2033	Seedlings planted and survival rates	120,000	Link with NBSAP restoration targets
R3	Integrate IAS control into	MECCNAR	Climate Unit, UNDP	2026–2030	# of joint adaptation-	50,000	Dual benefits for resilience

Code	Activity	Lead Agency	Partners	Timeline	Output Indicators	Budget (USD)	Remarks
	climate adaptation plans (NbS)				invasion projects		and biodiversity

5. Public Engagement, Education, and Livelihoods

Code	Activity	Lead Agency	Partners	Timeline	Output Indicators	Budget (USD)	Remarks
A1	Launch national invasive species awareness campaign (TV, radio, social media)	NEA	Youth groups, Schools, Media NGOs	2025–2027	Reach metrics; awareness levels	70,000	Translate into local languages
A2	Train community members on IAS monitoring and control	NGOs	Forestry, DPWM	2026–2029	# trained and employed	60, 000	Build green jobs
A3	Promote alternative livelihoods in areas affected by invasive loss for 50% of communities with 25, 000 households.	NEA	MoA, MoWA, FAO NGOs/CBOs	2027–2032	# of new enterprises; income levels	200,000	E.g. beekeeping, eco-tourism
A4	Develop school curriculum content on biodiversity and invasive species	MoBSE	NEA, UNESCO	2026–2028	Modules piloted in schools	40,000	Long-term attitude change

6. Governance, Policy, and Financing

Code	Activity	Lead Agency	Partners	Timeline	Output Indicators	Budget (USD)	Remarks
G1	Establish National Invasive Species Taskforce (NIST)	MECCNAR	All sectoral agencies	2025	Taskforce operational	10,000	Oversees all coordination
G2	Revise NBSAP to reflect GBF Target 6	NEA	CBD Focal Point, Consultants	2025–2026	Updated NBSAP submitted	30,000	Include SMART indicators
G3	Develop a sustainable IAS funding mechanism (Trust Fund,	DPWM	MoFEA, UNDP, GEF	2026–2029	Fund established & disbursing	500,000 (capital)	Long-term financing

Code	Activity	Lead Agency	Partners	Timeline	Output Indicators	Budget (USD)	Remarks
	GEF project)						
G4	Monitor & report IAS indicators to CBD Secretariat	NEA	CBD Focal Point	Biennially	Reports submitted on time	10,000	Ensure data links with GBF reporting

Monitoring & Evaluation Framework

M&E Component	Details
Baseline	2025 species distribution map, ecosystem health indicators
Midterm Review	2030: Assess progress on GBF Target 6 indicators
Final Evaluation	2035: Evaluate against reduction in IAS impact and restoration success
Tools	National IAS dashboard, GIS mapping, community feedback
Responsible Body	NEA Monitoring & Evaluation Unit

Estimated Total Budget (2025–2035)

~ USD 3.2 Million
(Subject to refinement in annual operational planning)

Annex 3. Activity Budget Framework: The Gambia IAS Management Strategy

Code	Strategic Area	Activity	Estimated Budget (USD)	Timeframe	Remarks
P1	Prevention	Develop national IAS risk assessment protocol	60,000	2025–2026	Includes stakeholder validation
P2	Prevention	Update laws to regulate introduction of IAS	40,000	2025–2027	Includes legal consultancy
P3	Prevention	Conduct invasive species pathway analysis	25,000	2025–2026	Focus on key trade and travel routes
P4	Prevention	Install quarantine & biosecurity facilities	500,000	2026–2028	Ports, border posts, training
P5	Prevention	Develop national species white & black lists	15,000	2025–2026	Alignment with ECOWAS/CBD

Code	Strategic Area	Activity	Estimated Budget (USD)	Timeframe	Remarks
E1	Early Detection	Establish national IAS monitoring network	100,000	2026–2028	Training, tools, and network setup
E2	Early Detection	Develop IAS database & dashboard	80,000	2026–2027	Public data access and GIS tools
E3	Early Detection	Create rapid response teams with SOPs	120,000	2026–2028	Equipment, transport, training
E4	Early Detection	Community-based detection programs	50,000	2027–2030	Local empowerment & incentives
C1	Control	Prioritize top 10 species and sites	10,000	2025	Rapid ecological and social assessment
C2	Control	Integrated Control Plans (ISCP) for priority species	100,000	2026–2028	Cross-sectoral planning
C3	Control	Eradicate *Eichhornia crassipes* (Water hyacinth)	500,000	2027–2030	Mechanical & bio-control
C4	Control	Control *Lantana camara* in protected areas	150,000	2026–2029	Includes ranger training
C5	Control	Create wetland buffer zones	75,000	2028–2032	To prevent reinvasion
R1	Restoration	Restore 5 degraded ecosystems	600,000	2026–2032	Wetlands, forests, mangroves
R2	Restoration	Native vegetation reintroduction	120,000	2027–2033	Seedlings, monitoring, survival rates
R3	Restoration	Link IAS to climate adaptation plans	50,000	2026–2030	Nature-based solutions pilot
A1	Engagement	National awareness campaigns	70,000	2025–2027	Radio, social media, schools
A2	Engagement	Train 100 community members	60,000	2026–2029	Skill-building, employment
A3	Engagement	Livelihood alternatives in affected zones	500,000	2027–2032	Eco-enterprise development
A4	Engagement	Invasive species school curriculum	40,000	2026–2028	National curriculum modules
G1	Governance	Establish National IAS Taskforce	10,000	2025	Launch & intersectoral agreement
G2	Governance	Revise NBSAP with GBF Target 6	30,000	2025–2026	Integration of indicators
G3	Governance	Establish IAS Trust Fund or GEF project	500,000	2026–2029	Capitalization + launch

Code	Strategic Area	Activity	Estimated Budget (USD)	Timeframe	Remarks
G4	Governance	Reporting to CBD on IAS progress	10,000	Biennial	Indicator-based reporting

TOTAL ESTIMATED BUDGET (2025–2035): USD 3.2 Million