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Somalia National Biodiversity Strategy and Action Plan

2026-2030



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ABBREVIATION & ACRONYMS

Abbreviation	Full form
ABS	Access and benefit-sharing
BER	Biodiversity Expenditure Review
BIOFIN	Biodiversity Finance Initiative
CBD	Convention on Biological Diversity
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMS	Convention on the Conservation of Migratory Species of Wild Animals
DRR	Disaster risk reduction
DSI	Digital sequence information
EbA	Ecosystem-based adaptation
EEZ	Exclusive economic zone
EIA	Environmental impact assessment
EPMA	Environmental Protection and Management Act
ESG	Environmental, social and governance
ESIA	Environmental and social impact assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
FAO	Food and Agriculture Organization of the United Nations
FGS	Federal Government of Somalia
FMS	Federal Member State or Federal Member States
FNA	Financial Needs Assessment
GBF	Global Biodiversity Framework
GBFF	Global Biodiversity Framework Fund
GCF	Green Climate Fund
GEF	Global Environment Facility
GIS	Geographic information system
GMO	Genetically modified organism
IAS	Invasive alien species
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IGAD	Intergovernmental Authority on Development
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPM	Integrated pest management
IUCN	International Union for Conservation of Nature
IUU	Illegal, unreported and unregulated fishing
KMGBF	Kunming–Montreal Global Biodiversity Framework; also written KM-GBF or KM–GBF

LDCF	Least Developed Countries Fund
LDN	Land degradation neutrality
LT-LEDs	Long-term low greenhouse gas emission development strategy
MCS	Monitoring, control and surveillance
METT	Management Effectiveness Tracking Tool
MFBE	Ministry of Fisheries and Blue Economy
MIS	Management information system
MoAI	Ministry of Agriculture and Irrigation
MoECC	Ministry of Environment and Climate Change
MoF	Ministry of Finance
MPA	Marine protected area
MRV	Measurement, reporting and verification
NAP	National Adaptation Plan
NBIS	National Biodiversity Information System
NbS	Nature-based solutions
NBSAP	National Biodiversity Strategy and Action Plan
NBSC	National Biodiversity Steering Committee
NCCAP	National Climate Change Action Plan
NDC	Nationally Determined Contribution
NDP-9	Ninth National Development Plan
NGO	Non-governmental organization
NTFP	Non-timber forest product
NTP	National Transformation Plan
OECM	Other effective area-based conservation measure
OHS	Occupational health and safety
PA	Protected area
PAME	Protected area management effectiveness
PES	Payments for ecosystem services
PFM	Public financial management
PIC	Prior informed consent
PIR	Policy and Institutional Review; used here in the biodiversity-finance context
RLRP	Rural Livelihoods Resilience Programme
S-FSRP	Somalia Food Systems Resilience Project
SADAR	Sadar Development and Resilience Institute
SDG	Sustainable Development Goal
SEA	Strategic environmental assessment
SEEA	System of Environmental-Economic Accounting

SEP	Stakeholder Engagement Plan
SoDMA	Somalia Disaster Management Agency
SOP	Standard operating procedure
SWALIM	Somalia Water and Land Information Management
TEK	Traditional ecological knowledge
TNFD	Taskforce on Nature-related Financial Disclosures
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change

DEFINITION OF TERMS

Access and benefit-sharing	Arrangements governing access to genetic resources and the fair and equitable sharing of benefits arising from their use, including associated traditional knowledge where applicable.
Adaptive management	A structured process of monitoring results and adjusting actions as conditions change or new evidence becomes available.
Baseline	The documented starting condition against which subsequent changes and progress are measured.
Biodiversity	The variety of living organisms, including diversity within species, between species and of ecosystems.
Biodiversity finance	Financial resources and mechanisms that support biodiversity conservation, sustainable use and equitable benefit-sharing.
Biodiversity mainstreaming	Integrating biodiversity considerations into sector policies, development plans, budgets, investment decisions and routine institutional practice.
Biodiversity offset	A measurable conservation outcome intended to compensate for significant residual biodiversity impacts after avoidance, minimization and restoration measures. Offsets cannot make all impacts acceptable.
Biosafety	Measures to assess and manage risks that biotechnology and living modified organisms may pose to biodiversity, taking human health into account.
Blended finance	The use of development or concessional finance to mobilize additional commercial finance for agreed development and environmental objectives
Community stewardship	Community participation and responsibility in conserving, restoring and sustainably managing natural resources, with recognition of legitimate rights and local knowledge.
Connectivity	The degree to which habitats and landscapes allow organisms to move and ecological processes to continue between areas.
Critical habitat	An area with particularly high biodiversity importance, such as habitat supporting highly threatened species, restricted-range species or important ecological processes; criteria depend on the applicable safeguard framework.
Cumulative impacts	The combined effects of an activity together with other past, present and reasonably foreseeable activities.
Customary tenure	Locally recognized rights and arrangements for holding, accessing and managing land or resources under customary institutions and practices.
Digital sequence information	Digitally represented information derived from genetic sequencing; the term is used in biodiversity policy and benefit-sharing discussions.
Ecological integrity	The ability of an ecosystem to maintain its characteristic composition, structure, functions and ecological processes.
Ecosystem	A dynamic complex of organisms and their non-living environment interacting as a functional unit.
Ecosystem restoration	Assisting the recovery of an ecosystem that has been degraded, damaged or destroyed.
Ecosystem services	Benefits that people obtain from ecosystems, including food, water regulation, soil protection and cultural benefits.
Ecosystem-based adaptation	Using biodiversity and ecosystem services as part of an overall strategy to help people adapt to climate change
Endemic species	A species whose natural distribution is restricted to a particular geographical area
Environmental and social impact assessment	A process for assessing the likely environmental and social effects of a proposed project and identifying measures to manage them.
Environmental and social safeguards	Requirements and procedures to identify, avoid, reduce and manage adverse environmental and social impacts and support equitable implementation.
Environmental impact assessment	A process for identifying and evaluating the likely environmental effects of a proposed project before decisions are made.

Financial needs assessment	An estimate of the expenditure needed to implement specified biodiversity actions and achieve agreed results.
Financing gap	The difference between estimated financial needs and the funding available or expected, using clearly stated assumptions.
Free prior and informed consent	A consent process conducted without coercion, before the relevant activity, and with accessible information and sufficient time for rights holders to decide, where applicable.
Genetic diversity	Variation in genetic characteristics within and among populations of a species.
Genetic resources	Genetic material of actual or potential value, including material of plant, animal, microbial or other origin containing functional units of heredity.
Grievance mechanism	An accessible process through which affected people can raise concerns and seek a timely, fair response or remedy.
Habitat	The place or type of site where an organism or population naturally occurs.
Habitat fragmentation	The division of a formerly connected habitat into smaller or more isolated patches.
Harmful incentives	Policies, subsidies or other incentives that encourage activities causing biodiversity loss or ecosystem degradation.
Indicator	A measurable variable used to assess conditions, pressures, implementation or progress toward a target.
Invasive alien species	A species introduced outside its natural range whose establishment or spread threatens biodiversity.
Land degradation neutrality	A condition in which the amount and quality of land resources needed to support ecosystem functions and services remain stable or increase within a specified area and period.
Mitigation hierarchy	A sequence for managing impacts: first avoid harm, then minimize unavoidable harm, restore affected areas, and address eligible residual impacts through compensation or offsets.
Nature based solutions	Actions to protect, conserve, restore or sustainably manage ecosystems that address societal challenges while providing benefits for people and biodiversity.
Nature contributions to people	The positive and negative contributions of living nature to people's quality of life, including material, regulating and non-material contributions.
Other effective area-based conservation measure	A geographically defined area outside a protected area that is governed and managed in ways delivering sustained long-term conservation of biodiversity, with associated ecosystem functions and services.
Protected area	A clearly defined geographical space recognized, dedicated and managed to achieve the long-term conservation of nature, with associated ecosystem services and cultural values.
Resilience	The capacity of an ecosystem or community to absorb disturbance, adapt and retain essential functions.
Strategic environmental assessment	An assessment of the environmental implications of policies, plans or programmes undertaken early enough to inform strategic decisions.
Sustainable use	Use of biodiversity components at a rate and in a way that does not cause their long-term decline and maintains their potential to meet present and future needs.
Threatened species	A species facing an elevated risk of extinction; in the IUCN Red List system, the threatened categories are Vulnerable, Endangered and Critically Endangered.
Traditional ecological knowledge	Knowledge, practices and understandings of ecosystems developed and maintained by communities over generations; its use should respect knowledge holders' rights and consent.
Whole of government approach	Coordinated action across ministries, agencies and levels of government to deliver shared biodiversity objectives.
Whole of society approach	Participation by government, communities, civil society, academia, businesses and other actors in biodiversity planning and implementation.

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The Ministry looks forward to continued cooperation in implementing the Strategy to conserve biodiversity, strengthen resilient livelihoods and support the well-being of present and future generations.

FOREWORD

Somalia's biodiversity, including its rangelands, forests and woodlands, rivers and wetlands, agricultural landscapes, islands, mangroves, coral reefs, wildlife, genetic resources and extensive coastal waters, sustains the lives and livelihoods of millions of people. These ecosystems support pastoralism, farming, fisheries and trade; regulate water and soils; provide protection from droughts, floods and coastal hazards; and carry ecological, cultural and economic values that are central to Somalia's recovery and long-term development. Safeguarding this natural heritage is therefore a national development responsibility.

The National Biodiversity Strategy and Action Plan 2026-2030 provides Somalia's strategic framework for meeting that responsibility. It responds to continuing pressures from habitat loss and degradation, unsustainable harvesting, overgrazing, illegal and unregulated fishing, pollution, invasive alien species, infrastructure expansion, climate change, institutional weakness and persistent gaps in biodiversity information. It translates Somalia's priorities and its commitments under the Convention on Biological Diversity and the Kunming-Montreal Global Biodiversity Framework into five strategic objectives, twenty national targets and a practical programme of action through 2030.

This Strategy places implementation at the center of biodiversity governance. It calls for a whole-of-government and whole-of-society approach suited to Somalia's federal system. Federal institutions, Federal Member States and local authorities are expected to integrate biodiversity into policies, plans, budgets, public investment and regulatory decisions. Communities, customary institutions, women, youth, civil society, universities, businesses and development partners must participate meaningfully in implementation, monitoring and learning. The rights, knowledge, livelihood needs and stewardship practices of biodiversity-dependent communities must remain integral to conservation and restoration decisions.

The Ministry of Environment and Climate Change will coordinate implementation in partnership with line ministries, Federal Member States, finance and planning institutions, research bodies and non-state actors. Progress will depend on clear responsibilities, effective institutions, enforceable safeguards, reliable data, transparent reporting, sustained financing and accountable partnerships. The Strategy therefore establishes arrangements for coordination, biodiversity mainstreaming, environmental and social safeguards, capacity development, monitoring and evaluation, and resource mobilization. Its provisional financing envelope of USD 500 million will be refined through the national biodiversity-finance process and translated into costed, finance-ready programmes.

I commend the public institutions, technical experts, communities, civil-society organizations, universities, private-sector representatives and development partners whose knowledge and participation informed this Strategy. I call upon all stakeholders to use it as Somalia's common framework for biodiversity action and to convert its priorities into funded programmes, effective regulation, strengthened institutions and measurable results. Through shared responsibility and sustained implementation, Somalia can restore degraded ecosystems, secure nature-dependent livelihoods and build a more resilient and prosperous future for present and coming generations.



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EXECUTIVE SUMMARY

Somalia occupies a distinctive ecological position in the Horn of Africa and the western Indian Ocean. Its arid and semi-arid rangelands, northern mountains, dry forests and woodlands, Juba and Shabelle river systems, seasonal wetlands, agricultural landscapes, mangroves, reefs, seagrass beds, islands and offshore waters support nationally, regionally and globally important biodiversity. These systems provide food, income, livestock forage, fuel and fibre; regulate water, soils and climate; protect settlements and coastlines; and sustain cultural values and local knowledge. Their condition is inseparable from food and water security, poverty reduction, disaster resilience, peacebuilding and sustainable development.

Biodiversity is under growing pressure from land degradation and fragmentation, unsustainable charcoal and fuelwood production, overgrazing, poorly planned agricultural expansion, altered freshwater systems, illegal and excessive fishing, wildlife hunting and trade, pollution, invasive alien species, infrastructure and extractive development, and climate-related droughts, floods and coastal change. Poverty, displacement, rapid urbanization, market demand, insecure tenure, limited institutional capacity, weak enforcement, inadequate finance and major information gaps intensify these pressures. The Strategy therefore combines ecosystem protection and restoration with sustainable production, community stewardship, equitable benefit-sharing, stronger governance, better knowledge and long-term finance.

The national vision for 2050 is that Somalia's biodiversity, ecosystems and genetic resources are valued, conserved, restored and sustainably managed, supporting resilient livelihoods, food and water security, climate adaptation, inclusive economic development and the well-being of present and future generations. The mission to 2030 is to halt and begin reversing biodiversity loss through inclusive spatial planning, ecosystem restoration, effective and equitable conservation, sustainable natural-resource management, stronger institutions, improved knowledge systems and increased investment in nature.

STRATEGY AT A GLANCE

Implementation period	Strategic objectives	National targets	Action areas	Provisional finance
2026-2030	5	20	5	USD 500 million

STRATEGIC FRAMEWORK

The Strategy is organized around five mutually reinforcing objectives: reducing direct pressures on biodiversity; protecting and restoring ecosystems and species; promoting sustainable and equitable use; mainstreaming biodiversity into governance and development; and strengthening the means of implementation. These objectives are delivered through twenty national targets grouped under three action areas: reducing threats to biodiversity; meeting people's needs through sustainable use and benefit-sharing; and deploying the tools and solutions required for implementation and mainstreaming.

The targets establish a common results framework while recognizing that Somalia's baseline information remains incomplete. Early implementation will therefore combine urgent action with systematic work to verify baselines, map priority ecosystems, establish monitoring protocols and refine milestones. Targets and programme priorities will be adjusted through transparent review where new evidence becomes available, without reducing the Strategy's overall ambition.

PRIORITY RESULTS BY 2030

- Establish participatory biodiversity-inclusive spatial planning for priority land, freshwater, coastal and marine areas, with measures to bring loss of areas of high biodiversity importance close to zero. Conserve at least 30% of terrestrial and inland-water areas and at least 30% of coastal and marine areas through representative, connected, effectively and equitably managed protected areas and other effective area-based conservation measures, subject to verified national baselines and respect for community rights.
- Place at least 30% of degraded terrestrial, inland-water, coastal and marine ecosystems identified through the national baseline under effective restoration, with measurable improvements in ecological integrity, connectivity, ecosystem functions and community benefits. Priorities include degraded rangelands, forests, riverine habitats, wetlands, mangroves and other critical ecosystems.
- Recover threatened and endemic species, conserve genetic diversity, ensure sustainable, safe and legal use of wild species, reduce illegal wildlife exploitation and strengthen invasive-species prevention, early detection and control.
- Expand sustainable agriculture, livestock production, forestry and fisheries; protect nature's contributions to people; support nature-based livelihoods and fair benefit-sharing from genetic resources; reduce pollution, unsustainable consumption and waste; and strengthen ecosystem-based climate resilience.
- Strengthen community stewardship, customary institutions and traditional knowledge with knowledge holders' consent. Apply a minimum benchmark of 30% women's participation in NBSAP governance bodies, technical working groups and consultations, and ensure meaningful, accessible participation by youth, persons with disabilities, pastoralists, fishers and other marginalized or resource-dependent groups.
- Integrate biodiversity into national and Federal Member State development planning, urban and settled areas, public investment, environmental assessment, climate action, humanitarian response, infrastructure and business and financial-sector decisions, applying the mitigation hierarchy and conflict-sensitive safeguards.
- Establish a national biodiversity information and monitoring system, strengthen research, technology, biosafety and institutional capacity, improve public access to information and transparent reporting, and maintain accountable coordination across institutions and levels of government.
- Increase and diversify biodiversity finance, identify and progressively reform harmful incentives, expand positive incentives, track expenditure transparently and develop costed programmes with safeguards and measurable outputs.

IMPLEMENTATION, MONITORING AND FINANCE

The Ministry of Environment and Climate Change will provide national leadership through a whole-of-government and whole-of-society approach. The Ministry will serve as the national coordination unit, supported by a national steering structure, technical working groups and designated focal points. Federal sector institutions will remain responsible for actions within their mandates, while Federal Member States and local institutions will translate national targets into place-based priorities and delivery arrangements. Communities, civil society, customary institutions, academia, development partners and the private sector will participate in programme design, implementation, oversight and learning.

Implementation will follow three phases: foundations and baselines; scaling implementation; and consolidation and evaluation. Initial work will establish coordination, ecosystem maps, inventories, verified conservation-area information, regulations, finance planning, monitoring systems and priority pilot sites. Subsequent work will scale restoration, conservation, sustainable production, species recovery, pollution and invasive-species control, and community programmes. The final phase will evaluate every target, update baselines, address underperformance, consolidate recurrent finance and prepare the next strategy. Priority actions have defined outputs, indicators, leads, implementation periods and indicative costs, with detailed activities retained in the implementation matrix

The monitoring framework links targets to baselines, milestones, indicators, data sources and responsible institutions. Where data are missing, the first milestone is to establish and validate the baseline, followed by measurable changes from it. Periodic reviews will assess ecological effectiveness, reduced pressures, expenditure, institutional performance, geographic distribution, participation, equity and unintended impacts. Establishing a law, plan, committee or project alone will not demonstrate target achievement; assessment must establish measurable biodiversity improvements or increased institutional effectiveness.

The provisional financing requirement for 2026–2030 is USD 500 million. This is a planning envelope, not confirmed finance. The largest indicative allocations are directed to ecosystem restoration and land-condition improvement, protected areas and ecological connectivity, sustainable production, marine and species conservation, and climate resilience. Financing is expected from international biodiversity funds, bilateral and multilateral partners, domestic federal and State budgets, private investment, blended-finance instruments, research and philanthropic support, expenditure reform and verified community contributions. Detailed costing, expenditure review, financial-needs assessment and financing-gap analysis will be completed through the BIOFIN strategy and the National Biodiversity Finance Plan. Transparent tracking will distinguish commitments, releases, expenditure and biodiversity results.

Implementation will prioritize terrestrial, freshwater, coastal and marine ecosystems across Somalia where biodiversity importance, ecosystem degradation and community dependence overlap. Priority areas and interventions will be informed by ecological evidence, community consultation, tenure assessment and conflict-sensitive planning, while respecting legitimate rights and resource use. Effective delivery will require sustained political commitment, coordination across sectors and levels of government, capable institutions, predictable financing, meaningful community participation and transparent public accountability.

1.1 BACKGROUND

Biological diversity is fundamental to Somalia's sustainable development, food and water security, climate resilience, economic recovery and social stability. The country's rangelands, forests and woodlands, riverine areas, wetlands, agricultural landscapes, and coastal and marine ecosystems support the livelihoods and well-being of millions of people. Pastoralism, crop production, fisheries, forestry and other natural-resource-based activities remain central to household incomes and the national economy.

Somalia's biodiversity is nevertheless experiencing increasing pressure. Habitat degradation, deforestation and charcoal production, overgrazing, unsustainable harvesting, illegal and unregulated fishing, land conversion, invasive alien species, pollution and poorly planned development are reducing ecosystem health and productivity. These pressures are intensified by recurrent droughts, floods, coastal hazards and other effects of climate change. Institutional limitations, insecurity, fragmented environmental governance, insufficient financing and major gaps in biodiversity information further constrain effective conservation and sustainable resource management.

Biodiversity loss in Somalia is therefore not solely an environmental concern. It affects food security, pastoral and coastal livelihoods, public health, disaster resilience, employment, poverty reduction and prospects for durable peace. Protecting and restoring biodiversity is essential for achieving the country's national development priorities and building resilience among communities that depend directly on natural resources.

Somalia became a Party to the Convention on Biological Diversity (CBD) in 2009. The country subsequently prepared its first National Biodiversity Strategy and Action Plan in 2015, establishing an initial national framework for biodiversity conservation, sustainable use and institutional development. Since that strategy was prepared, Somalia's policy and institutional context have evolved considerably. New environmental legislation, policies and national development frameworks have been introduced, while national experience in ecosystem restoration, land management, climate adaptation, fisheries governance and biodiversity assessment has expanded.

At the global level, the adoption of the Kunming–Montreal Global Biodiversity Framework in December 2022 established a renewed international agenda for halting and reversing biodiversity loss. The Framework contains four long-term goals for 2050 and 23 action-oriented targets for 2030. Parties to the Convention are expected to revise or update their national biodiversity strategies, targets and implementation arrangements to support the achievement of these global commitments.

Somalia has consequently prepared this updated National Biodiversity Strategy and Action Plan for the period 2026–2030. The NBSAP translates the Kunming–Montreal Global Biodiversity Framework into nationally relevant commitments that reflect Somalia's ecological conditions, development priorities, federal governance system, institutional capacities and fragile and conflict-affected context.

1.2 PURPOSE OF THE NBSAP

The NBSAP provides Somalia's principal national framework for conserving biodiversity, restoring degraded ecosystems, promoting the sustainable use of biological resources and ensuring the fair and equitable sharing of benefits arising from biodiversity and genetic resources.

More specifically, the NBSAP seeks to:

- establish Somalia's biodiversity vision, goals and measurable national targets for 2030;
- identify priority actions required to address biodiversity loss and ecosystem degradation;
- align national biodiversity action with the Kunming–Montreal Global Biodiversity Framework;
- integrate biodiversity into national, sectoral, federal member state and local development planning;
- clarify institutional responsibilities for implementation, coordination and reporting;
- strengthen biodiversity knowledge, monitoring, research and information management;
- promote meaningful participation by communities, women, youth and marginalized groups;
- recognize customary governance systems and relevant traditional ecological knowledge;
- strengthen capacity, technology transfer and scientific cooperation;
- mobilize and align domestic, international, public and private financial resources; and
- establish mechanisms for monitoring, reporting, review and adaptive implementation.

The NBSAP is intended to guide the Federal Government, Federal Member States, local authorities, communities, civil society, academic and research institutions, the private sector and development partners. It also provides a common framework through which biodiversity considerations can be incorporated into policies, public investment programmes, sector strategies and locally led development initiatives.

1.3 NATIONAL AND GLOBAL ALIGNMENT

The NBSAP is aligned with the four goals and 23 targets of the Kunming–Montreal Global Biodiversity Framework. It adapts these global commitments to Somalia's circumstances, recognizing the country's extensive dependence on natural resources, limited biodiversity baseline information, institutional capacity constraints, federal governance arrangements and exposure to conflict and climatic shocks.

The strategy also supports the implementation of the Sustainable Development Goals, particularly those concerning poverty reduction, food security, gender equality, water, sustainable production, climate action, life below water, life on land, inclusive institutions and partnerships.

At the national level, the NBSAP is designed to complement and reinforce the:

- National Transformation Plan 2025–2029;
- Nationally Determined Contribution 3.0;
- National Blue Economy Strategy;
- National Environment Policy;
- Environmental Protection and Management Act;
- National Climate Change Policy;
- National Adaptation Plan;
- National Forest Policy;
- Land Degradation Neutrality targets;
- fisheries, agriculture, livestock, water and energy policies; and

- relevant Federal Member State development and environmental plans.

This alignment is intended to position biodiversity as a cross-cutting national development priority. It also helps reduce duplication, strengthen institutional cooperation and maximize the combined benefits of biodiversity conservation, climate adaptation, land restoration, food security, peacebuilding and sustainable livelihoods.

1.4 SCOPE AND TIMEFRAME

The NBSAP covers the period 2026–2030, while contributing to Somalia’s longer-term biodiversity and sustainable development aspirations to 2050. Its geographic scope encompasses Somalia’s terrestrial, inland-water, coastal and marine environments, including:

- arid and semi-arid rangelands;
- forests, woodlands and bushlands;
- agricultural and pastoral production landscapes;
- the Juba and Shabelle river systems and associated wetlands;
- mountain and escarpment ecosystems;
- urban and peri-urban ecosystems;
- mangroves, coral reefs and seagrass habitats;
- islands, beaches and marine-species breeding areas; and
- territorial waters and the exclusive economic zone.

The strategy addresses biodiversity at ecosystem, species and genetic levels. It covers conservation, restoration, sustainable use, pollution, invasive alien species, climate-related impacts, biosafety, access and benefit-sharing, biodiversity financing, knowledge management and the mainstreaming of biodiversity across productive and development sectors.

Implementation will follow a phased approach. Initial actions will focus on establishing baselines, strengthening enabling policies and institutions, improving information systems and initiating priority interventions. Subsequent phases will concentrate on scaling up restoration, conservation and sustainable-use measures and demonstrating measurable progress toward the 2030 national targets.

1.5 PRINCIPLES UNDERPINNING THE PREPARATION PROCESS

Preparation of the NBSAP was guided by the following principles:

- national ownership and government leadership;
- consistency with Somalia’s federal system;
- whole-of-government and whole-of-society participation;
- evidence-based and precautionary decision-making;
- ecosystem and landscape approaches;
- gender responsiveness and social inclusion;
- meaningful participation of communities and traditional knowledge holders;
- respect for customary institutions and locally appropriate governance systems;
- conflict sensitivity and do-no-harm approaches;
- climate resilience and nature-based solutions;
- intergenerational equity;

- transparency and accountability; and
- adaptive management in response to new knowledge and changing conditions.

These principles also inform the strategy's implementation and monitoring arrangements.

1.6 NBSAP PREPARATION PROCESS

The Ministry of Environment and Climate Change (MoECC) led and coordinated preparation of the updated NBSAP as Somalia's national focal institution for the Convention on Biological Diversity. The process drew upon participation from relevant federal ministries, Federal Member State institutions, local authorities, academic and research institutions, civil society organizations, community representatives, women and youth groups, the private sector and development partners.

The preparation process consisted of six interrelated stages.

STAGE 1: INCEPTION AND PROCESS DESIGN

The inception stage established the scope, methodology, governance arrangements and technical requirements for the NBSAP update. It identified the institutions and stakeholder groups to be engaged, the analytical studies required and the relationship between the NBSAP process and Somalia's national reporting obligations under the Convention.

STAGE 2: REVIEW OF EXISTING EVIDENCE

Relevant national and international information was reviewed, including:

- Somalia's first NBSAP;
- the Sixth and Seventh National Reports to the Convention;
- national environmental and sector policies;
- biodiversity assessments and project reports;
- national climate and development strategies;
- land-degradation and ecosystem-restoration assessments;
- scientific literature and regional studies;
- spatial and remote-sensing information; and
- reports submitted by government institutions, civil society organizations, universities and development partners.

The review assessed the condition and trends of biodiversity, implementation experience under the previous NBSAP, major threats, policy and institutional gaps, financing constraints and emerging conservation opportunities.

STAGE 3: NATIONAL ASSESSMENTS AND TECHNICAL ANALYSES

The document review was complemented by rapid national biodiversity assessments covering biodiversity status and trends, policy coherence, institutional capacity, spatial priorities, gender and social inclusion, financing needs and environmental and social considerations.

Information from field observations, stakeholder submissions, key-informant consultations, geospatial analysis and expert review was triangulated where possible. Where reliable quantitative information was

unavailable, data gaps were explicitly identified and actions were included to establish the necessary baselines during the initial implementation period.

STAGE 4: DEVELOPMENT AND PRIORITIZATION OF NATIONAL TARGETS

Proposed national biodiversity targets were developed in alignment with the 23 targets of the Kunming–Montreal Global Biodiversity Framework. The targets were assessed against Somalia’s biodiversity needs, national development priorities, implementation capacity, potential social and economic benefits and opportunities for mobilizing finance.

A prioritization exercise was used to identify the targets and interventions expected to provide the greatest biodiversity, livelihood and resilience benefits. Particular consideration was given to ecosystem restoration, area-based conservation, sustainable production, nature’s contributions to people, climate resilience, institutional capacity and biodiversity financing.

STAGE 5: STAKEHOLDER CONSULTATION AND TECHNICAL REVIEW

Stakeholders reviewed the biodiversity assessment, proposed national targets, strategic priorities, indicators and implementation arrangements. Consultations were intended to capture federal, Federal Member State, sectoral and community perspectives and to strengthen the feasibility and national ownership of the strategy.

Technical review focused on:

- the relevance and measurability of the national targets;
- consistency with national policies and development priorities;
- the adequacy of proposed indicators and baselines;
- institutional responsibilities;
- financing and capacity requirements;
- gender equality and social inclusion;
- implementation risks; and
- monitoring and reporting arrangements.

STAGE 6: VALIDATION, FINALIZATION AND ADOPTION

Stakeholder recommendations and technical comments were consolidated and incorporated into the revised document. The final draft was subjected to national validation and government review before submission for formal approval through the appropriate national procedures.

Following adoption, the NBSAP will provide the basis for programme development, annual work planning, resource mobilization, national biodiversity monitoring and future reporting to the Convention on Biological Diversity.

1.7 EVIDENCE LIMITATION AND THE ADAPTIVE APPROACH

Preparation of the NBSAP took place in the context of significant biodiversity information gaps. Somalia does not yet have a comprehensive national biodiversity inventory, fully operational protected-area database or harmonized long-term monitoring system. Information is often dispersed across government

institutions, research organizations and externally financed projects, while insecurity and access limitations constrain field surveys in some areas.

The strategy therefore applies an adaptive approach. Available evidence has been used to establish the strongest feasible initial baselines, while uncertainty and missing information are identified transparently. Baseline verification, national ecosystem mapping, species assessment and establishment of a National Biodiversity Information System are treated as early implementation priorities.

National targets, actions and indicators may be refined through periodic technical review where new evidence becomes available, provided that such adjustments do not reduce Somalia's overall level of ambition.

These information gaps will be partially addressed through the upcoming activities of the GEF-8 biodiversity projects, which have commenced. These projects will support baseline verification, ecosystem mapping, species assessments and the development and operationalization of the National Biodiversity and Protected Area Information System

1.8 STRUCTURE OF THE NBSAP

The remainder of the NBSAP presents Somalia's national development and biodiversity context; the status, trends and values of biodiversity; major threats and underlying drivers; lessons from the previous NBSAP; and the policy, legal and institutional framework. It then establishes the national vision, mission, goals and targets and provides target-specific strategies and actions.

The later chapters set out cross-cutting priorities, institutional coordination, capacity development, communication and public awareness, financing, monitoring and reporting, risk management and the costed implementation plan. Supporting technical information, indicator matrices and detailed implementation schedules are provided in the annexes.

CHAPTER 2 NATIONAL DEVELOPMENT AND BIODIVERSITY CONTEXT

Somalia's development prospects are closely linked to the condition of its natural environment. Rangelands, forests, rivers, wetlands, agricultural lands, coastal habitats and marine ecosystems provide the foundation for livelihoods, food production, water security, climate resilience and economic activity. This chapter describes the geographic, social, economic and governance context within which biodiversity conservation must be pursued. It also explains why biodiversity is a national development asset whose protection and sustainable use are essential to poverty reduction, stability and the achievement of Somalia's long-term development objectives.

2.1 GEOGRAPHIC AND ENVIRONMENTAL SETTING

Somalia is located in the Horn of Africa and has an extensive land area extending from the Gulf of Aden in the north to the Indian Ocean in the east and south. It shares land borders with Djibouti, Ethiopia and Kenya and has a coastline of more than 3,300 kilometers – the longest on mainland Africa. This geographic position gives Somalia ecological, economic and strategic importance within the Horn of Africa, the western Indian Ocean and the Red Sea–Gulf of Aden region.

The country is predominantly arid and semi-arid. Rainfall is generally low, irregular and unevenly distributed, while temperatures are high across much of the country. Somalia traditionally experiences two main rainy seasons, the Gu and the Deyr, separated by dry periods. The timing, duration and intensity of these seasons strongly influence pastoral mobility, crop production, water availability and ecosystem productivity.

Somalia's landscapes range from coastal plains and extensive rangelands to mountains, escarpments, plateaus, river valleys and seasonal wetlands. The Juba and Shabelle rivers are the country's only permanent rivers and support some of its most productive agricultural areas and freshwater-dependent ecosystems. Seasonal rivers, known locally as toggas or wadis, together with natural depressions, water catchments and groundwater sources, are also important for people, livestock and wildlife.

The coastal and marine environment includes coral reefs, mangroves, seagrass beds, sandy beaches, rocky shores, offshore islands, coastal wetlands and highly productive marine waters. These ecosystems support fisheries, protect shorelines, store carbon and provide feeding, breeding and nesting habitats for marine species.

The country's environmental conditions have produced biodiversity that is adapted to heat, water scarcity, seasonal variability and frequent climatic stress. However, these same conditions make many ecosystems sensitive to overuse, prolonged drought and poorly planned land-use change. Recovery from degradation can be slow, particularly where vegetation cover, soils and natural water systems have been severely disturbed.

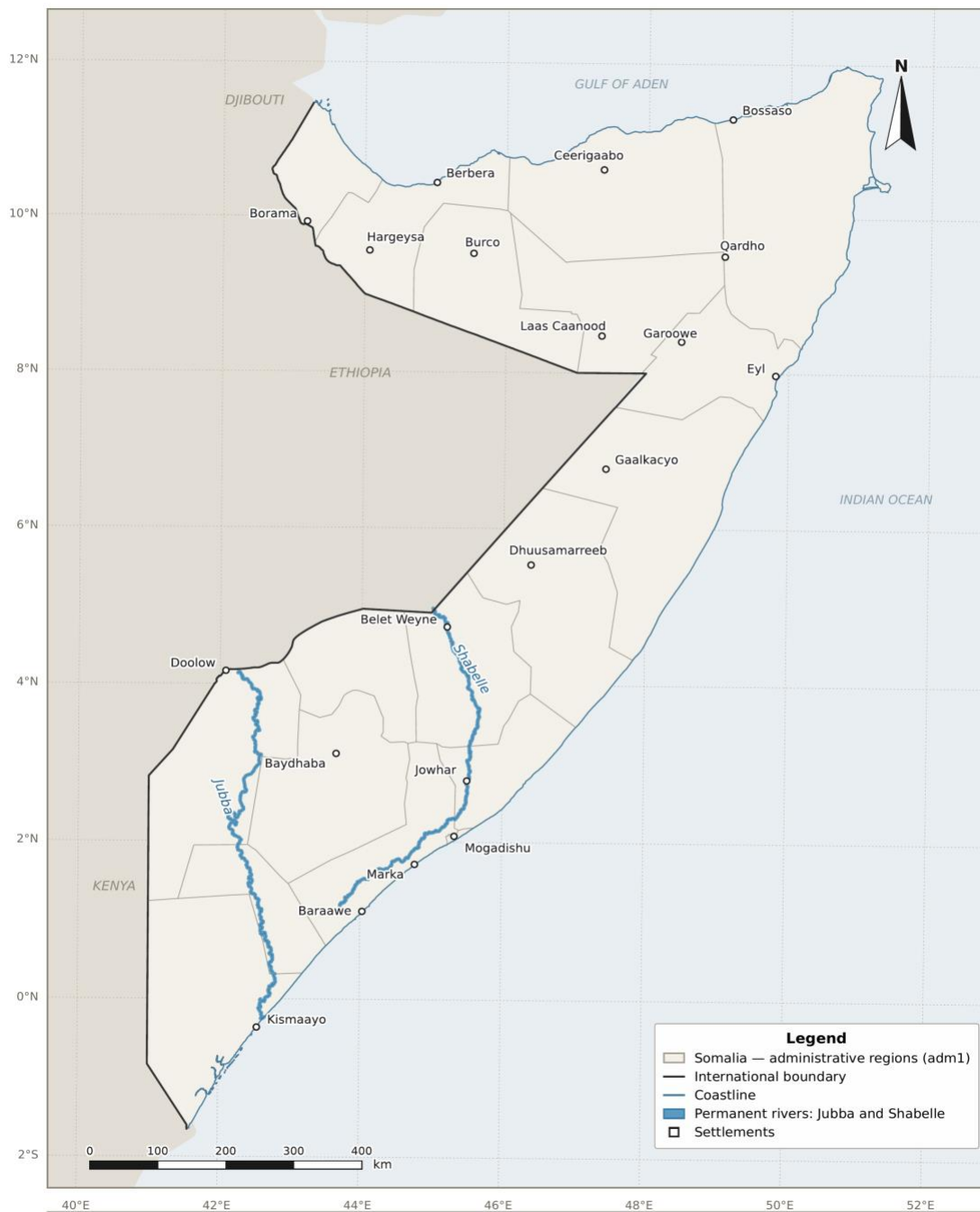
2.2 POPULATION, SETTLEMENT AND HUMAN DEVELOPMENT CONTEXT

Somalia's population is young and growing, with settlement patterns shaped by pastoralism, agriculture, trade, conflict, displacement and rapid urbanization. The population includes nomadic and semi-nomadic pastoralists, agro-pastoral communities, riverine farmers, coastal and fishing communities and an expanding urban population.

Figure 1

Geographic and Environmental Setting of Somalia

National boundary, administrative regions, permanent river systems, principal towns and coastal frontage



Sources: UN OCHA / ITOS Somalia COD-AB (2023); FAO SWALIM river network and major towns (2024).

CRS: Africa Albers Equal Area Conic (ESRI:102022), WGS 84.

Note: Neighbouring countries are shown for orientation only.

Figure 1 – Geographic & Environmental setting of Somalia

A substantial proportion of the population depends directly on land, water, vegetation and biological resources for food, income, energy, shelter and traditional medicine. Consequently, changes in ecosystem condition can have immediate effects on household welfare. Reduced pasture, declining soil fertility, unreliable water supplies, loss of forest products and depleted fisheries may quickly translate into food insecurity, declining incomes and increased displacement.

Rapid urban growth is changing patterns of natural-resource use. Cities and settlements require increasing quantities of water, food, energy and construction materials and generate growing volumes of solid waste and wastewater. Where planning and municipal services are limited, urban expansion can result in the conversion of natural habitats, occupation of drainage areas, pollution of water bodies and coastal zones, and increased pressure on surrounding forests and rangelands.

Internal displacement also has important environmental dimensions. Drought, floods, conflict and livelihood losses have contributed to repeated population movements. Displaced communities are often concentrated in settlements with inadequate water, sanitation, energy and waste-management services. Host areas may consequently experience increased pressure on vegetation, groundwater, grazing land and other shared resources. At the same time, displaced and vulnerable households may have few livelihood alternatives and may depend on natural-resource extraction for survival.

Poverty, limited basic services and unequal access to productive resources increase vulnerability to biodiversity loss. Women, young people, pastoral communities, minority groups, persons with disabilities and displaced households may experience environmental decline differently. Women frequently carry major responsibilities for household water, fuel and food security but remain underrepresented in formal natural-resource decision-making. These conditions make gender responsiveness, social inclusion and equitable participation essential components of biodiversity planning.

2.3 NATURAL RESOURCES AND THE NATIONAL ECONOMY

Somalia's economy is strongly dependent on renewable natural resources. Livestock production, crop agriculture, fisheries, forestry and associated trade and services support employment, household income, domestic consumption and exports. Biodiversity conservation is therefore inseparable from economic recovery and sustainable development.

2.3.1 PASTORALISM AND LIVESTOCK PRODUCTION

Pastoralism is one of Somalia's most important livelihood and production systems. Extensive rangelands provide forage, water and mobility corridors for camels, cattle, sheep and goats. Livestock production supports pastoral and agro-pastoral households and contributes to domestic trade, exports, transport, food processing and other economic activities.

Pastoral systems have historically managed environmental variability through mobility, flexible access arrangements and customary systems governing pasture and water. These practices can support sustainable use where migration routes remain open and resource-use agreements are respected. However, rangeland fragmentation, enclosure, settlement expansion, prolonged drought, invasive species and the weakening of customary management systems increasingly restrict mobility and concentrate grazing pressure.

Healthy rangelands are therefore essential not only for biodiversity but also for livestock productivity, drought resilience and social stability. Restoration of degraded grazing lands, protection of mobility corridors and improved management of shared water and pasture resources can generate both ecological and livelihood benefits.

2.3.2 CROP AGRICULTURE AND RIVERINE PRODUCTION

Agriculture is concentrated mainly in the Juba and Shabelle river valleys, rain-fed farming areas and agro-pastoral zones. Major production systems depend on soil fertility, pollination, water availability, flood regulation and the control of pests and diseases – all of which are supported by functioning ecosystems.

Somalia's agricultural biodiversity includes locally adapted crops, livestock breeds and associated traditional knowledge. These resources can strengthen resilience to drought, heat, pests and changing rainfall conditions. However, land degradation, soil erosion, salinization, flooding, invasive species, inadequate water management and the loss of locally adapted varieties may reduce agricultural productivity.

Sustainable agriculture will require improved soil and water management, protection of riverine vegetation, restoration of degraded land, responsible use of agricultural inputs and conservation of crop and livestock genetic diversity. Biodiversity considerations should accordingly be incorporated into irrigation development, agricultural modernization and food-security programmes.

2.3.3 FISHERIES AND THE BLUE ECONOMY

Somalia's extensive coastline and marine waters provide significant opportunities for sustainable fisheries and broader blue-economy development. Coastal communities depend on fish and other marine resources for food, income and employment, while the sector has the potential to contribute more substantially to national economic diversification and food security.

Realizing this potential depends on maintaining healthy fish stocks and protecting critical habitats such as mangroves, coral reefs, seagrass beds, spawning grounds and nursery areas. Illegal, unreported and unregulated fishing, limited surveillance, harmful fishing practices, marine pollution and insufficient scientific information threaten the long-term productivity of marine resources.

The National Blue Economy Strategy provides an important framework for developing ocean-based economic activities. Its implementation must ensure that economic growth remains within ecological limits and that coastal communities receive fair and sustainable benefits. Effective marine spatial planning, improved fisheries governance, habitat protection, better landing infrastructure and value-chain development can help align biodiversity conservation with economic opportunity.

2.3.4 FORESTS, WOODLANDS AND ENERGY

Forests, woodlands and shrublands provide fuel, construction materials, fodder, food products, traditional medicines, shade, soil protection and habitat for wildlife. They also contribute to water regulation, carbon storage and resilience to drought and desertification.

Biomass remains an important household energy source, and charcoal production provides income for some rural and urban households. However, unsustainable tree cutting and charcoal production have contributed

to the degradation of forests and woodlands in many areas. The removal of vegetation exposes soils to erosion, reduces livestock forage, affects water infiltration and weakens the capacity of landscapes to withstand drought.

The transition to cleaner and more efficient energy sources is therefore a biodiversity and development priority. Sustainable forest management, assisted natural regeneration, community forestry, restoration using suitable native species and stronger regulation of charcoal value chains will be necessary. These measures should be accompanied by affordable livelihood and household-energy alternatives so that conservation measures do not place disproportionate burdens on vulnerable communities.

2.4 BIODIVERSITY, ECOSYSTEM SERVICES AND HUMAN WELL-BEING

Somalia's biodiversity supports human well-being through a wide range of ecosystem services, often referred to under the Kunming–Montreal Global Biodiversity Framework as nature's contributions to people.

Provisioning services include food, fodder, fuelwood, fish, medicinal plants, construction materials and freshwater. Regulating services include erosion control, pollination, water regulation, coastal protection, carbon storage and moderation of drought and flood impacts. Cultural services include traditional knowledge, identity, customary institutions, recreation and the cultural significance associated with particular landscapes and species. Supporting ecological processes, including soil formation, nutrient cycling and habitat provision, sustain the productivity of the country's land and marine systems.

These benefits are rarely fully reflected in conventional economic planning. Natural resources may consequently be treated as freely available inputs rather than productive assets requiring investment and management. This can lead to decisions that generate short-term returns while creating longer-term costs through land degradation, declining fisheries, water scarcity, disaster exposure and livelihood loss.

Recognizing the economic and social value of ecosystem services is therefore necessary for better public investment and development planning. Environmental and social assessment, natural-capital accounting, strategic environmental assessment and biodiversity-inclusive spatial planning can help decision-makers compare development alternatives and avoid preventable ecological damage.

2.5 CLIMATE CHANGE, DISASTERS AND ECOLOGICAL RESILIENCE

Somalia is highly vulnerable to climate variability and climate change. Recurrent droughts, floods, rising temperatures, increasingly unpredictable rainfall and coastal hazards affect ecosystems, food production, water supplies, settlements and infrastructure. These impacts interact with poverty, conflict, displacement and limited institutional capacity, creating compound risks.

Drought reduces vegetation cover, water availability and livestock productivity and may concentrate people and animals around remaining resources. Flooding can cause loss of life and property, crop destruction, soil erosion, riverbank damage and contamination of water sources. Coastal erosion, sea-level rise and changes in marine conditions threaten settlements, infrastructure and coastal habitats. Climate change may also alter species distributions, increase invasive species risks and intensify pressure on already degraded ecosystems.

Degraded ecosystems provide fewer protective services and recover less effectively from climatic shocks. Conversely, conserving and restoring rangelands, forests, wetlands, riverbanks, mangroves and coastal habitats can strengthen resilience. These ecosystems help regulate water, stabilize soils, protect shorelines, provide drought refuges and support diversified livelihoods.

Somalia's NDC 3.0, climate-change policy and national adaptation planning processes recognize the importance of ecosystem restoration, sustainable land management, climate-resilient agriculture, water management and coastal protection. The NBSAP complements these frameworks by defining biodiversity outcomes and actions that can generate mitigation, adaptation and livelihood benefits simultaneously.

2.6 PEACE, SECURITY AND NATURAL-RESOURCE GOVERNANCE

Biodiversity action in Somalia must take account of the country's fragile and conflict-affected context. Insecurity and restricted access can limit field surveys, regulatory enforcement, protected-area management and delivery of conservation programmes. Weak institutional presence in some areas can also facilitate illegal or unsustainable exploitation of forests, wildlife, fisheries and other resources.

Environmental degradation can intensify competition over land, pasture, water and access routes. Disputes may arise where resources become scarce, migration routes are blocked, land is enclosed or customary arrangements are not recognized. Such pressures do not automatically produce conflict, but they can aggravate existing social, political and economic tensions.

At the same time, cooperative management of shared natural resources can support dialogue and local stability. Inclusive agreements governing water, grazing, forests, fisheries and seasonal access can strengthen relationships among communities. Ecosystem restoration and sustainable livelihood programmes can also create employment and common interests, especially for young people and communities affected by displacement and conflict.

NBSAP implementation must therefore be conflict-sensitive. Activities should be informed by local political and social conditions, avoid reinforcing inequalities and ensure that benefits and restrictions are distributed fairly. Community participation, transparent decision-making, accessible grievance mechanisms and recognition of legitimate customary institutions will be essential.

2.7 FEDERAL GOVERNANCE AND INSTITUTIONAL CONTEXT

Somalia's federal system assigns environmental and natural-resource responsibilities across the Federal Government, Federal Member States and local authorities. The MoECC provides national leadership on environmental policy and serves as Somalia's focal institution for the Convention on Biological Diversity. However, effective biodiversity management also depends on institutions responsible for livestock, agriculture, fisheries and the blue economy, water, energy, planning, finance, infrastructure, education, local government and disaster management.

Federal Member State ministries and local authorities are critical to translating national commitments into locally appropriate action. Many biodiversity interventions – including land-use planning, restoration, community conservation, fisheries management, pollution control and enforcement – must ultimately be implemented at landscape, seascape, district and community levels.

Institutional capacity remains uneven. Constraints include limited staffing and budgets, overlapping mandates, insufficient coordination, weak enforcement, inadequate technical equipment and fragmented environmental information. Biodiversity data are held by different government institutions, universities, civil society organizations and development projects and are not yet managed through a unified national system.

The NBSAP therefore requires clear allocation of responsibilities, regular intergovernmental coordination and a practical system for reporting from local and Federal Member State levels to the Federal Government. Capacity development must be sustained rather than limited to short-term training. It should include institutional systems, staffing, technical standards, equipment, financing and long-term partnerships with Somali universities and research institutions.

Customary governance also remains important, particularly in pastoral and rural areas. Elders, community leaders and customary systems – including Xeer – continue to influence access to pasture, water, forests and other communal resources. Where consistent with national law, human rights and equitable participation, these institutions can complement formal governance and support locally legitimate resource-management arrangements.

2.8 NATIONAL DEVELOPMENT AND POLICY DIRECTION

Somalia's biodiversity agenda is anchored in the Provisional Constitution, particularly provisions concerning the environment, land and natural resources. The Environmental Protection and Management Act of 2024 and the National Environment Policy of 2023 further strengthen the basis for environmental governance, pollution control, environmental assessment and sustainable natural-resource management.

The updated NBSAP functions as the key biodiversity instrument supporting the national biodiversity frameworks such as the National Transformation Plan, NDC 3.0, National Adaptation Plan, Land Degradation Neutrality targets and sector development strategies. Biodiversity objectives should therefore be integrated into national development and public investment planning processes

The National Transformation Plan 2025–2029 is the central medium-term framework for national development. Its priorities relevant to biodiversity include restoration and reforestation, sand-dune management, sustainable marine-resource management, implementation of environmental and social impact assessment requirements and improvement of early-warning systems. The NBSAP supports these priorities by identifying the biodiversity outcomes, safeguards and implementation measures needed to ensure that development is environmentally sustainable.

Other important national frameworks include:

- Somalia's NDC 3.0;
- the national adaptation plan;
- the National Blue Economy Strategy;
- the National Climate Change Policy;
- the National Forest Policy;
- national Land Degradation Neutrality targets;
- policies and strategies for agriculture, livestock, fisheries, water and energy;

- disaster-risk-management and food-security frameworks; and
- relevant Federal Member State development and environmental plans.

The NBSAP provides an integrating framework across these instruments. It does not replace sector policies; rather, it identifies shared biodiversity priorities, establishes national targets and clarifies how different sectors can contribute to their achievement.

2.9 INFRASTRUCTURE, INVESTMENT AND DEVELOPMENT PLANNING

Somalia requires substantial investment in roads, ports, housing, water systems, irrigation, energy, telecommunications and urban services. Such investments are necessary for economic growth, service delivery and national integration. However, poorly planned development can fragment habitats, accelerate land conversion, disturb water systems, increase pollution and open previously inaccessible areas to unsustainable extraction.

Biodiversity must therefore be considered early in planning and investment decisions. The application of the mitigation hierarchy – avoid, minimize, restore and, where appropriate, offset residual impacts – can reduce damage and improve project sustainability. Environmental and social impact assessments should be supported by strategic environmental assessment, land-use planning and better biodiversity data.

Particular attention is required in ecologically sensitive areas, including riverbanks, wetlands, forests, important rangelands, wildlife corridors, mangroves, coral reefs, breeding grounds and coastal zones. Development planning should also account for cumulative impacts arising from multiple projects or activities within the same landscape or seascape.

Well-designed infrastructure can support biodiversity objectives. Examples include water systems that reduce pressure on sensitive sources, transport planning that avoids critical habitats, renewable-energy investments that reduce dependence on charcoal and urban drainage systems that incorporate nature-based solutions.

2.9.1 BIODIVERSITY AND HYDROCARBON EXPLORATION

The exploration and development of hydrocarbon resources in Somalia should be guided by biodiversity-sensitive planning to protect marine, coastal and terrestrial ecosystems. Exploration activities and associated infrastructure should avoid ecologically sensitive areas and minimize habitat fragmentation, disturbance to migratory species, pollution and oil-spill risks.

Strategic Environmental Assessment (SEA) should be applied to hydrocarbon policies, plans and programmes to assess cumulative biodiversity impacts and inform decisions before individual projects are approved. Project-level Environmental and Social Impact Assessments (ESIAs) should identify site-specific risks and establish measures for impact avoidance, mitigation, restoration, biodiversity monitoring and emergency response.

2.10 DEVELOPMENT CHALLENGES AFFECTING NBSAP IMPLEMENTATION

Implementation of the NBSAP will take place under significant structural constraints. These include:

- insecurity and restricted access in some locations;

- recurrent droughts, floods and other climatic shocks;
- poverty, displacement and high dependence on natural resources;
- limited domestic fiscal space and reliance on external financing;
- weak and uneven institutional capacity;
- insufficient enforcement of environmental legislation;
- incomplete biodiversity baselines and monitoring systems;
- fragmented responsibilities and information;
- rapid urban growth and inadequately planned land conversion; and
- limited livelihood and energy alternatives for communities dependent on resource extraction.

These constraints require an implementation model that is realistic, phased and adaptable. Initial efforts should prioritize areas where government access, community support, technical feasibility and opportunities for co-financing are strongest. Successful approaches can then be expanded as capacity and evidence improve.

Fragility must not be interpreted as a reason to delay biodiversity action. Environmental degradation itself undermines food security, livelihoods and resilience. Biodiversity investments should therefore be integrated into humanitarian recovery, climate adaptation, disaster-risk reduction, infrastructure, employment and local-development programmes.

2.11 OPPORTUNITIES FOR BIODIVERSITY-POSITIVE DEVELOPMENT

Despite the challenges, Somalia has important opportunities to align biodiversity protection with economic recovery and social development. These include:

- restoring degraded rangelands, forests, riverbanks, wetlands, mangroves and coastal habitats;
- strengthening community-based management of pasture, water, forests and fisheries;
- developing sustainable fisheries and biodiversity-positive blue-economy value chains;
- expanding clean and efficient energy alternatives to reduce pressure on woody vegetation;
- supporting climate-smart and biodiversity-friendly agriculture;
- protecting indigenous crop varieties and livestock genetic resources;
- creating employment through ecosystem restoration and nature-based enterprises;
- integrating biodiversity into climate finance and disaster-resilience investments;
- applying environmental assessment and spatial planning to major investments;
- developing biodiversity research, monitoring and information systems;
- engaging the Somali diaspora, universities and private sector in conservation finance and innovation; and
- strengthening cooperation with neighboring countries and regional organizations on migratory species, transboundary ecosystems and shared marine resources.

Somalia's young population also presents an opportunity. Investments in environmental education, technical training, research, digital monitoring and green enterprise can enable young people to participate in restoration, sustainable production and biodiversity-related employment.

2.12 IMPLICATIONS FOR THE UPDATED NBSAP

Somalia's national context requires an NBSAP that is ambitious but responsive to institutional, financial and security realities. The strategy must connect biodiversity outcomes to livelihoods, food security, climate resilience, public investment and peacebuilding. It must also translate national commitments into actions that can be implemented by Federal Member States, local authorities, communities and sector institutions.

The updated NBSAP therefore emphasizes:

- measurable but context-appropriate national targets;
- early establishment of missing biodiversity baselines;
- integration with the National Transformation Plan and sector priorities;
- restoration and sustainable use alongside species and habitat protection;
- community participation and recognition of appropriate customary systems;
- equitable participation by women, youth and marginalized groups;
- federal and Federal Member State coordination;
- conflict-sensitive and locally adaptable implementation;
- mobilization of climate, development and biodiversity finance; and
- continuous monitoring, learning and adaptive management.

CHAPTER 3 STATUS, TRENDS AND VALUES OF SOMALIA’S BIODIVERSITY

3.1 INTRODUCTION

Somalia supports a distinctive range of terrestrial, freshwater, coastal and marine biodiversity shaped by its arid climate, seasonal rainfall, northern mountains, extensive rangelands, two major river systems and more than 3,333 kilometers of coastline. These ecosystems sustain pastoralism, agriculture, fisheries, forestry, traditional medicine and many other rural and coastal livelihoods. They also regulate water, protect soils and shorelines, store carbon and strengthen resilience to droughts, floods and other climatic shocks.

This chapter presents the current understanding of Somalia’s ecosystems, species and genetic resources and the benefits they provide. It draws on national reports, spatial-prioritization work, sector plans, historical biodiversity assessments and the National Biodiversity Assessment Report of Somalia 2025. The latter consolidated 318 survey responses, field-validation activities, key-informant interviews and focus-group discussions conducted across Galmudug, Hirshabelle, Southwest State, Jubaland, Puntland and the Northeastern regions.

This NBSAP is a national strategic and implementation framework rather than a comprehensive taxonomic inventory. It therefore does not attempt to reconcile every historical species record or provide exhaustive national species lists. Disputed or unsupported totals are omitted or explicitly qualified. Plant names and distributions should be checked against Flora of Somalia and maintained botanical collections, while conservation status should be verified through the IUCN Red List and relevant national or regional assessments. A comprehensive national biodiversity inventory, supported by universities, museums, responsible ministries and a nationally managed biodiversity information system, is established as a priority implementation action.

The 2025 assessment significantly improves the national evidence base by documenting community observations and differences among ecological regions. Nevertheless, its percentages primarily represent respondents’ perceptions and conditions at surveyed locations. They should not automatically be interpreted as statistically representative measurements of national ecosystem area, species abundance or habitat loss. Accordingly, this chapter distinguishes among:

- historical national estimates;
- measured or spatially derived findings;
- findings reported through the 2025 consultations and field assessments; and
- matters that require additional scientific verification.

Detailed analysis of the pressures responsible for biodiversity loss is provided in Chapter 4.

3.2 OVERVIEW OF SOMALIA’S BIODIVERSITY

Somalia lies within the Horn of Africa, where African and Arabian ecological systems meet. Its location beside the Gulf of Aden and western Indian Ocean also connects the country to important marine upwelling systems and regional migration routes.

Somalia’s major biodiversity systems include:

- arid and semi-arid rangelands;
- grasslands, shrublands and bushlands;
- dry forests and woodlands;
- northern mountains and escarpments;
- riverine forests, floodplains and agricultural landscapes;
- seasonal rivers, watercourses and wetlands;
- coastal dunes, beaches, lagoons and estuaries;
- mangrove forests;
- coral and rocky reefs;
- seagrass and other shallow-water habitats;
- offshore islands; and
- pelagic and deep-water marine ecosystems.

Historical national sources have identified approximately 3,165 plant species, including about 1144 species considered endemic. Older assessments also recorded approximately 660 bird species and 34 Amphibians 229 reptile species of these 97 herpetofauna are endemic to Somalia. These figures demonstrate Somalia's biological richness but should be treated as historical reference estimates until updated through modern inventories and taxonomic review.

The 2025 biodiversity assessment found a consistent pattern of perceived ecological deterioration. Across the six assessed areas, 81% of respondents described local vegetation or soil conditions as declining or severely degraded. Respondents also reported substantial reductions in native woody vegetation, declining wildlife sightings and deterioration of riverine, rangeland and coastal habitats.

These results provide strong evidence of the direction of change, but not yet a nationally measured rate of biodiversity loss. Somalia does not currently have sufficient permanent monitoring sites, repeated wildlife surveys or harmonized habitat-condition datasets to quantify change consistently across the entire country.

Table 1 – Principal biodiversity systems and their indicative condition

Biodiversity system	Principal features	Main contributions	Indicative condition
Rangelands and grasslands	Native grasses, herbs, shrubs and drought-adapted trees	Livestock forage, pastoral mobility, soil protection and drought resilience	Widespread stress and degradation, with local areas of recovery
Forests and woodlands	Acacia–Commiphora vegetation, dry woodland, mountain forest and riverine forest	Fuel, fodder, gums, resins, medicines, carbon storage and wildlife habitat	Declining and increasingly fragmented
Mountains and escarpments	Golis, Cal Madow and associated highland habitats	Endemic species, frankincense, water regulation and climatic refuges	Locally important but insufficiently surveyed
Rivers and wetlands	Juba and Shabelle rivers, floodplains, seasonal watercourses and temporary wetlands	Water supply, farming, fisheries, flood regulation and wildlife habitat	Variable, with significant localized deterioration

Agricultural landscapes	Riverine, rain-fed, irrigated and agro-pastoral systems	Food, crop varieties, livestock genetic resources and pollination	Mixed condition, with increasing pressure on natural habitat
Coastal ecosystems	Mangroves, beaches, dunes, lagoons, tidal flats and estuaries	Coastal protection, fisheries nurseries, nesting areas and blue carbon	Under growing pressure; condition varies considerably
Marine ecosystems	Coral reefs, seagrass beds, islands, pelagic waters and deep-sea habitats	Fisheries, food security, livelihoods and regional ecological connectivity	National status insufficiently measured
Urban and peri-urban ecosystems	Remnant vegetation, drainage corridors, wetlands and public green areas	Cooling, drainage, recreation and public health	Limited natural cover but increasing restoration interest

3.3 TERRESTRIAL ECOSYSTEMS

3.3.1 RANGELANDS, GRASSLANDS AND SHRUBLANDS

Rangelands occupy much of Somalia and form the ecological foundation of the pastoral economy. They include open grasslands, shrublands, bushlands and sparsely vegetated drylands. Common vegetation includes drought-tolerant acacias, Commiphora species, grasses, herbs and browse species adapted to highly variable rainfall.

These landscapes provide forage for camels, cattle, sheep and goats and habitat for gazelles, antelopes, warthogs, carnivores, birds, reptiles, insects and other dryland fauna. Rangeland's also protect soil, facilitate water infiltration and provide livestock and wildlife with seasonal drought refuges.



Figure 2 – Livestock in Somali drylands landscape

The condition of Somalia's rangelands varies across and within regions. The 2025 assessment recorded declining vegetation and soil conditions across all assessed areas. The interior rangelands of Galmudug and Southwest State were reported to be particularly affected. Respondents linked deterioration to reduced native vegetation, exposed soils, declining forage quality and contraction of seasonal grazing areas.



Figure 3 – Degraded rangeland and spare vegetation

Somalia's Land Degradation Neutrality assessment previously estimated that approximately 147,704 square kilometers – about 26.7% of the assessed land area – fell within declining, early-decline or stable-but-stressed land-productivity classes. These results identified hotspots in several northern, central and southern regions. The assessment provides a valuable spatial indication of land condition, although it requires periodic updating and field verification.

Rangeland condition cannot be understood separately from mobility and customary governance. Seasonal livestock movement allows grazing areas and water sources to recover. The 2025 assessment found that locations in which customary rotational grazing arrangements remained functional generally retained better vegetation condition than comparable unmanaged locations. This was particularly evident in parts of the northern and North-Eastern highlands.

Encouragingly, closed or protected grazing plots have demonstrated natural regeneration after favorable rainy seasons. Community grazing controls, reseedling, water-point management and restoration around settlements are emerging in several regions. Their ecological effectiveness must be measured systematically before results are extrapolated nationally.



Figure 4 – Seasonally dry grassland in Somalia

3.3.2 FORESTS, WOODLANDS AND BUSHLANDS

Somalia's forests and woodlands include Acacia–Commiphora bushland, dry woodlands, mountain forests, riverine gallery forests, coastal forests and mangroves. These habitats support wildlife and provide fuelwood, charcoal, fodder, construction materials, gums, resins, medicine, fruits and shade.

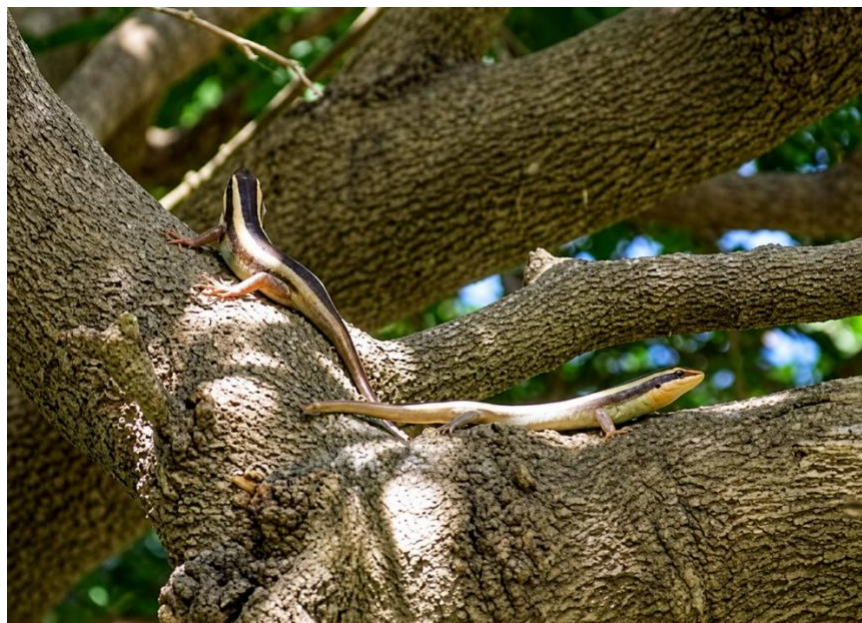


Figure 5 – Skinks resting on the drought-adapted woody vegetation

Frequently reported native woody plants include members of genus *Vachellia*, *Acacia bussei*, *Acacia seyal*, *Commiphora africana*, *Commiphora myrrha*, *Boswellia frereana*, *Boswellia sacra*, *Balanites aegyptiaca*, *Salvadora persica* and *Ziziphus spina-christi*. Their local distribution varies by rainfall, elevation, soil and land use.



Figure 6 – Mature acacia in a dryland agricultural landscape

Historical reports have placed Somalia’s forest or wooded-land cover at approximately 10–12%, depending on the definitions and source datasets applied. These estimates are not directly comparable and should not be used as a 2026 baseline without harmonizing the underlying definitions.

The 2025 assessment reported that respondents across all assessed regions perceived major reductions in woody cover during the previous decade. The report described losses commonly in the range of 30–50%. This is important evidence of perceived local change but is not equivalent to a wall-to-wall remote-sensing estimate of national forest loss.

The assessment identified particularly visible woodland deterioration in parts of Galmudug and South West State and riverine forest loss along the Juba and Shabelle corridors. Thinning of dry forests was also reported around urban and peri-urban settlements in Puntland and the North Eastern regions.

Despite this deterioration, community nurseries, woodlots, tree planting and natural-regeneration activities are emerging. Future assessments should record the number and survival of native trees, hectares under assisted natural regeneration and changes in canopy or woody cover using consistent field and remote-sensing methods.

3.3.3 FRANKINCENSE AND MYRRH LANDSCAPES

Northern Somalia contains internationally important landscapes dominated by *Boswellia* and *Commiphora* species. Frankincense and myrrh provide income, export earnings and culturally important products while supporting dryland ecological functions.

The Golis and Cal Madow Mountain systems are particularly associated with frankincense-producing trees and high plant endemism. These landscapes also provide habitat for range-restricted birds, mammals, reptiles and invertebrates.



Figure 7 – A resin-producing tree on a rocky northern slope

The long-term productivity of resin-bearing trees depends on appropriate tapping, resting periods, recruitment of young trees and protection from excessive grazing and cutting. Current national information on tree age structure, regeneration, harvest levels and population trends remains incomplete. A dedicated inventory of *Boswellia* and *Commiphora* resources is therefore needed.

3.3.4 NORTHERN MOUNTAINS AND ESCARPMENTS

Somalia's northern mountain ranges and escarpments contain some of its most distinctive terrestrial habitats. Changes in elevation, slope, rainfall and exposure create ecological conditions that differ sharply from surrounding arid lowlands.

These habitats include mountain forest remnants, evergreen and semi-evergreen shrublands, montane grasslands, juniper-associated vegetation, frankincense woodland, cliffs, wadis and rocky outcrops. The Cal Madow and Golis ranges are especially important for endemic and restricted-range species.



Figure 8 – An arid escarpment of and sparsely vegetated hill landscape

The ecological distinctiveness of the northern mountains is closely related to their geology, elevation and landforms. Limestone escarpments, rocky outcrops, cliffs and wadis create specialized habitats, refuges and conditions supporting endemic and restricted-range species.



Figure 9 – Vegetated highlands and escarpments of northern Somalia

The 2025 assessment found that parts of the northern and North Eastern highlands retained comparatively intact vegetation and wildlife habitat, particularly where customary grazing controls remained active. However, the scale and ecological condition of these areas have not been comprehensively mapped. Updated botanical, bird, reptile and mammal surveys are a high priority.

3.3.5 SOUTHERN FOREST AND WOODLAND MOSAICS

Southern Somalia contains relatively diverse mosaics of rangeland, woodland, riverine forest, floodplain vegetation, wetland and coastal forest. These landscapes are associated with the Juba and Shabelle rivers and generally receive more rainfall than the central and northern drylands.



Figure 10 – Monkeys and warthogs moving through an agroforestry landscape

The Lower Juba landscape, including the Lag Badana–Bushbush area, combines coastal forest, woodland, mangroves, wetlands, beaches and offshore islands. It is frequently identified as a national biodiversity priority. Its current boundaries, habitat condition and species composition nevertheless require renewed field verification.

The 2025 assessment reported substantial pressure on riverine and coastal vegetation in Jubaland. At the same time, local mangrove planting, coastal clean-ups and community restoration activities indicate the potential for recovery where extraction and land conversion are controlled.

3.4 INLAND-WATER AND WETLAND ECOSYSTEMS

3.4.1 JUBA AND SHABELLE RIVER SYSTEMS

The Juba and Shabelle are Somalia's two principal perennial rivers. Their riverbanks, floodplains, oxbow features, seasonal wetlands and gallery forests support fish, waterbirds, reptiles, amphibians, aquatic plants and terrestrial wildlife.



Figure 11 – An inland wetland supporting water, vegetation and wildlife

These systems are also central to agricultural production, livestock watering, domestic water supply and local fisheries. Riverbank vegetation stabilizes soils, filters runoff and maintains habitat connectivity. Floodplains replenish soil fertility and provide seasonally productive habitat.



Figure 12 – A great egret feeding along a wetland margin

The 2025 assessment identified the riverine corridors of Hirshabelle and Jubaland as among the most visibly altered ecosystems. Respondents and field teams reported riverbank clearing, erosion, sedimentation, floodplain conversion and deterioration of riparian vegetation. Reduced observations of waterbirds were also reported along parts of the Shabelle system.

These findings show a strong direction of concern but do not provide a complete river-basin baseline. Somalia needs coordinated monitoring of water flows, environmental flow requirements, riparian vegetation, water quality, aquatic species and land-use change along both rivers.

3.4.2 SEASONAL WATERCOURSES, FLOODPLAINS AND WETLANDS

Seasonal rivers, toggas, wadis, temporary pools and natural depressions are vital components of Somalia's dryland ecology. They provide temporary water, vegetation and feeding habitat for people, livestock and wildlife. During drought, a relatively small wetland can function as a disproportionately important refuge.



Figure 13 – A seasonal riverbed, or wadi, during the dry period

Wetlands also provide breeding or stopover habitat for resident and migratory birds and support aquatic plants and invertebrates. However, Somalia does not yet possess a comprehensive national wetland inventory. Many wetlands are seasonal, and their ecological extent cannot be accurately determined from a single-date satellite image.

A national inventory should differentiate among permanent, seasonal, riverine, coastal and human-modified wetlands. It should also identify sites potentially qualifying for national protection, Key Biodiversity Area status or designation under the Ramsar Convention.

3.4.3 FRESHWATER BIODIVERSITY

Available information on Somalia's freshwater fish, amphibians, molluscs, crustaceans, insects and aquatic plants remains limited. Historical species records require verification because river flow, habitat condition and water quality have changed.

Freshwater biodiversity assessments should be integrated with river-basin planning, irrigation development and wetland restoration. Fish and aquatic-invertebrate communities can provide useful indicators of water quality and habitat condition, while amphibians can help identify hydrological and pollution-related changes.



Figure 14 – Wetland bird habitat near a settlement

3.4.4 GROUNDWATER-DEPENDENT, CAVE, KARST AND SUBTERRANEAN ECOSYSTEMS

Knowledge of Somalia's springs, aquifers, caves, karst formations and other subterranean habitats is extremely limited. These systems may support specialized fauna, provide drought refuges and sustain water-dependent ecosystems and communities. Likely pressures include groundwater abstraction, contamination, quarrying and mining, infrastructure development, waste disposal and disturbance of cave habitats. Priority actions are to map these systems, establish baseline biological and water-quality information, assess threats, apply environmental safeguards to potentially damaging development, and introduce site-specific protection where ecological importance is confirmed.

3.5 COASTAL AND MARINE ECOSYSTEMS

Somalia has Africa's longest mainland coastline, extending for more than 3,300 kilometers along the Gulf of Aden and Indian Ocean. Seasonal monsoons and coastal upwelling contribute to high marine productivity, especially off the northeastern coast.

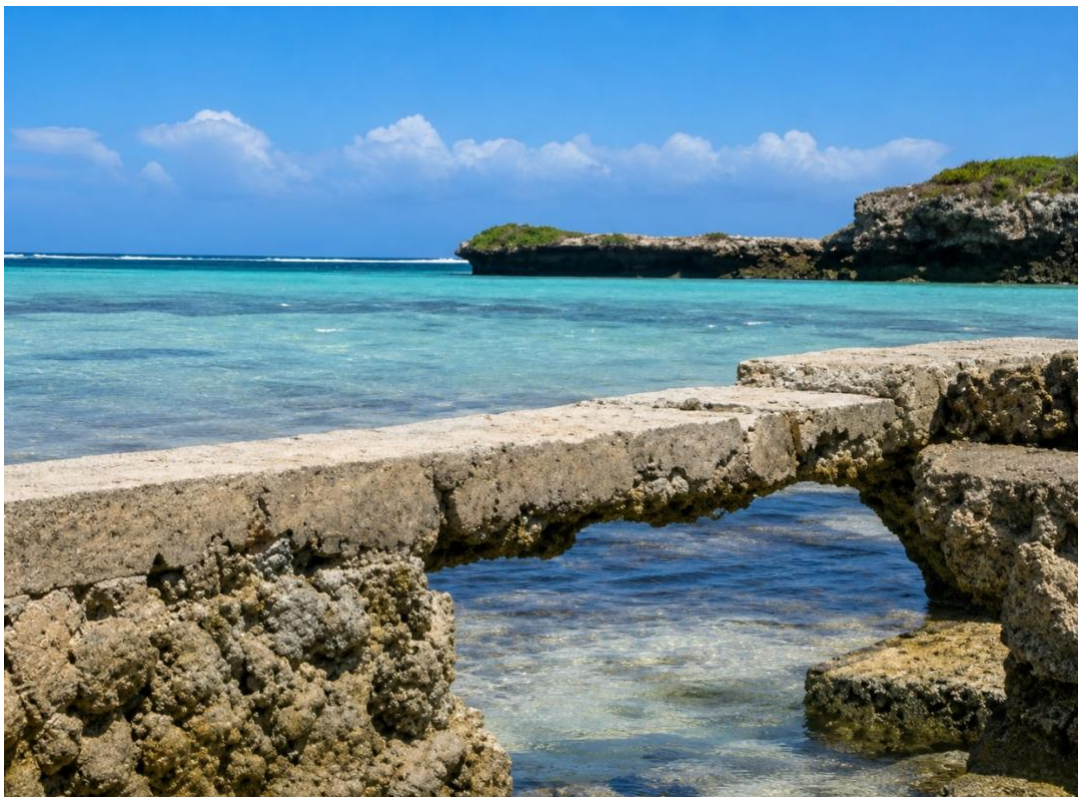


Figure 15 – Rocky shoreline along Somalia’s coast

The 2025 assessment confirmed the importance of coastal and marine resources to livelihoods in Puntland, Jubaland, Galmudug and the North Eastern coastal regions. It also documented widespread community concern about declining fish catches, pollution and deterioration of some coastal habitats.

3.5.1 MANGROVE ECOSYSTEMS

Mangroves occur in sheltered bays, lagoons, estuaries and around islands, particularly along the southern coast and at scattered northern locations. They provide nursery habitat for fish and crustaceans, nesting and roosting sites for birds, shoreline stabilization, carbon storage and protection from erosion and storm impacts.

Existing national documents provide different estimates of mangrove extent because they apply different mapping dates and methodologies. No single figure should therefore be adopted as the official current baseline until the datasets are reconciled and verified in the field.

The 2025 assessment identified mangrove deterioration in parts of Jubaland and Puntland while also recording community mangrove planting and protection activities. These initiatives demonstrate local stewardship but remain geographically limited. National monitoring should distinguish natural mangrove stands, degraded areas, restored sites and locations where hydrological conditions can support successful recovery.

3.5.2 CORAL AND ROCKY REEFS

Coral and rocky reefs occur along sections of the Gulf of Aden and Indian Ocean coasts and around offshore islands. They support fish, invertebrates, marine turtles and other species and contribute to fisheries productivity and possible nature-based tourism.

The 2025 assessment recorded community observations of reef deterioration and coral bleaching in some coastal areas. However, Somalia does not yet have a standardized national reef-condition dataset. The spatial extent of reefs, live coral cover, bleaching history and condition of reef-fish communities therefore remain uncertain.

Standardized surveys should prioritize the Bajuni Islands, Ras Casey, Hafun, Alula, Sa'ad ad-Din and other ecologically important reef areas. Repeated monitoring will be necessary to distinguish short-term bleaching events from persistent ecological decline.

3.5.3 SEAGRASS BEDS AND SHALLOW-WATER HABITATS

Seagrass beds provide feeding and nursery habitat for fish, marine turtles, dugongs and numerous invertebrates. They stabilize seabed sediments, improve water quality and store substantial amounts of carbon.

Somalia does not yet possess a comprehensive national map of seagrass distribution or condition. The presence of seagrass has been reported in several shallow coastal areas, but its total extent and species composition remain insufficiently documented.

Seagrass mapping is an urgent priority because the same habitats contribute to fisheries, threatened-species recovery, coastal resilience and blue-carbon objectives.

3.5.4 BEACHES, ISLANDS, LAGOONS AND ESTUARIES



Figure 16 – A coastal lagoon and shoreline at sunset

Somalia's beaches, offshore islands, lagoons, tidal flats and estuaries provide nesting, breeding, resting and feeding habitat for marine turtles, seabirds, shorebirds and other coastal wildlife.

Important or potential marine-turtle nesting areas include Ras Casey, Hafun, Alula, Gara'ad, Eyl, Warsheikh, the Bajuni Islands and sections of the southern coast. Offshore islands are also important for seabird breeding. Recent colony counts and standardized nesting records remain limited, and many reported sites require confirmation through seasonal surveys.

3.5.5 PELAGIC AND DEEP-WATER ECOSYSTEMS

Somalia's offshore waters support commercially important fish, sharks, rays, marine mammals, turtles and seabirds. These waters form part of wider ecological systems linking the Gulf of Aden, Arabian Sea and western Indian Ocean.

Deep-water biodiversity is among the least studied components of Somalia's natural heritage. Information is limited on seamounts, deep-water corals, benthic communities and the distribution of deep-sea species. This is an important gap given Somalia's large maritime area and plans for blue-economy development.

3.6 SPECIES DIVERSITY AND CONSERVATION STATUS

3.6.1 PLANT DIVERSITY

Somalia is an important center of plant diversity and endemism. Historical sources identify approximately 3,028 plant species, of which about 518 have been described as endemic. The flora includes drought-adapted trees, shrubs, grasses, herbs, succulents, mangroves and riverine plants.

Plants provide livestock forage, food, medicine, fibre, fuel, construction materials, gums and resins. Somali communities maintain extensive knowledge of the properties, seasonal availability and appropriate uses of native species.

The 2025 assessment reported widespread decline in native woody plants across all assessed regions. It also recorded the increasing presence of invasive *Prosopis juliflora* in several landscapes. However, the report's regional percentages describing plants as vulnerable, threatened or endangered were derived mainly from respondent classifications rather than formal IUCN Red List assessments. They should therefore be treated as indicators of perceived local decline and not as official conservation categories.

Somalia requires an updated national flora, strengthened herbarium facilities and coordinated plant Red List assessments. Priority groups include endemic plants, resin-producing trees, medicinal plants, mangroves and species restricted to mountain, riverine or coastal-forest habitats.

3.6.2 TERRESTRIAL MAMMALS

Somalia's terrestrial mammals include gazelles, antelopes, carnivores, primates, bats, rodents and other dryland-adapted species. Species historically or currently associated with Somalia include the Somali wild ass, hirola, beira, dibatag, Speke's gazelle, Soemmerring's gazelle, gerenuk, Somali elephant shrew, hamadryas baboon, cheetah, leopard, caracal and spotted hyena.



Figure 17 – A primate in Somali woodland habitat

The 2025 assessment recorded a widespread decline in reported sightings of large mammals. In some assessed landscapes, respondents indicated that scavengers and adaptable small carnivores were more frequently observed than large herbivores and predators. Pockets of relatively greater faunal persistence were reported in northern highlands and isolated wadis.

These community observations are consistent with concern about long-term wildlife decline. Nevertheless, statements that particular species are nationally absent or locally extinct should be verified through field surveys, camera traps, environmental DNA and documented observation records.

The Somali wild ass, hirola, beira and other range-restricted mammals require particular attention. Their current distribution, population size and connectivity cannot be established reliably from the existing national evidence base.

3.6.3 BIRDS

Somalia's location connects African, Arabian and Eurasian migration routes. Historical assessments have recorded approximately 660 bird species, including endemic and restricted-range species. Bird habitats include northern mountains, dry rangelands, river valleys, wetlands, mangroves, beaches and offshore islands.

Historically, at least 24 Important Bird and Biodiversity Areas have been identified, many of them associated with wetlands and coastal environments. Their boundaries and current ecological condition require reassessment.

The 2025 assessment recorded community reports of declining wetland and ground-bird observations in several regions. Respondents along the Shabelle corridor particularly noted reduced observations of some

waterbirds. Such reports provide valuable local indicators but require standardized counts before population trends can be quantified.



Figure 18 – A dove foraging in an open dryland habitat

3.6.4 REPTILES AND AMPHIBIANS

Somalia's reptiles are highly diverse, with historical assessments reporting approximately 235 species. The country supports snakes, lizards, geckos, tortoises, freshwater turtles and crocodiles. Northern mountains, rocky habitats and isolated dryland systems are particularly important for reptile endemism.



Figure 19 – A lizard using a rocky dryland microhabitat

Amphibians are less diverse because of the country's predominantly arid climate, but they occur in rivers, wetlands and seasonal-water habitats. Both reptiles and amphibians remain poorly surveyed. Updated distribution records and conservation assessments are required.

3.6.5 MARINE TURTLES

Five marine-turtle species are reported from Somali waters:

- green turtle (*Chelonia mydas*);
- hawksbill turtle (*Eretmochelys imbricata*);
- loggerhead turtle (*Caretta caretta*);
- olive ridley turtle (*Lepidochelys olivacea*); and
- leatherback turtle (*Dermochelys coriacea*).

Green and hawksbill turtles are particularly associated with Somali feeding and nesting habitats. The National Action Plan for Marine Turtles, Sharks, Marine Mammals and Seabirds in Somalia (2025) identifies Somalia's beaches as potentially important to regional turtle conservation.

Documented and stakeholder-reported nesting, breeding and feeding areas include Ras Casey, Hafun, Alula, Gara'ad, Eyl, Warsheikh, the Bajuni Islands and sections of the southern coast. Their current use, nesting intensity and seasonal importance require standardized coastal surveys. Claims concerning the geographic origin of marine turtles sold or traded in Mogadishu and other markets shall not be treated as established facts without landing-site surveys, market-chain assessment and enforcement records. These investigations are priority actions under the marine-species programme.

The present number of nesting females, annual nest abundance and nesting success are not known nationally. Standardized beach monitoring and community reporting are therefore essential.

3.6.6 SHARKS AND RAYS

Somali waters support sharks and rays associated with reefs, continental shelves, upwelling systems and offshore waters. These species perform important ecological functions and contribute to fisheries and trade.

National trends cannot yet be determined for most species because landing records, species identification and fishing-effort data remain incomplete. The 2025 biodiversity assessment nevertheless confirmed that sharks and rays continue to be reported in community fisheries, particularly along the northern, central and southern coasts.

Somalia signed the Convention on Migratory Species Memorandum of Understanding on Migratory Sharks in 2016. The national marine-species action plan provides a basis for improving landing-site monitoring, fisheries management, species protection and regional cooperation.

3.6.7 MARINE MAMMALS

Marine mammals reported in Somali waters include humpback, blue, Bryde's, sperm, fin and minke whales; killer whales; spinner, bottlenose, common and Risso's dolphins; false killer whales; and dugongs.

Somalia's waters may contain significant feeding areas and migration routes. Systematic national surveys remain extremely limited, however. Major information gaps include distribution, abundance, seasonal movement, genetics, fisheries interactions and the condition of dugong and cetacean habitats.

3.6.8 INVERTEBRATES AND POLLINATORS

Invertebrates constitute most of Somalia's species diversity but remain the least documented. Bees, butterflies, moths, beetles, termites, ants and other invertebrates support pollination, decomposition, soil formation and food webs.

Marine invertebrates – including corals, crustaceans, molluscs, sea cucumbers and echinoderms – support ecosystem functioning and coastal livelihoods. National baseline information on their diversity, abundance and distribution is limited.

Pollinator assessments are particularly important because wild and managed pollinators support crop production, native-plant regeneration and income from honey and other products.

3.7 AGRICULTURAL BIODIVERSITY AND GENETIC RESOURCES

3.7.1 LIVESTOCK GENETIC DIVERSITY

Somali pastoral systems maintain locally adapted camels, cattle, sheep and goats. These animals support food production, exports, household income and cultural identity. Their tolerance of heat, water scarcity, variable forage and long-distance movement represents an important genetic resource under climate change.



Figure 20 – Camels grazing in a Somali pastoral landscape

Genetic diversity may be affected by drought-related mortality, disease, unplanned crossbreeding and loss of traditional breeding knowledge. Somalia currently lacks a comprehensive national inventory and coordinated conservation programme for livestock genetic resources.

3.7.2 CROP AND SEED DIVERSITY

Somali farmers cultivate sorghum, maize, sesame, cowpea, pulses, fruits and vegetables under rain-fed, riverine and irrigated systems. Locally adapted varieties contribute to food security and may contain valuable traits related to drought, heat, pests and variable rainfall.

Displacement, repeated crop failure, market change and dependence on externally supplied seed may contribute to the loss of local varieties. Priorities include documenting farmer varieties, strengthening community seed systems, establishing suitable gene-bank facilities and supporting farmer-led conservation.



Figure 21 – Priority crops contributing to Somalia's agricultural plant diversity

3.7.3 MEDICINAL, AROMATIC AND RESIN-PRODUCING PLANTS

Medicinal and aromatic plants support household healthcare, cultural practices, trade and rural income. Frankincense, myrrh, gums and other non-timber forest products also have export potential.

Their long-term sustainability depends on resource inventories, harvesting standards, regeneration, traceable value chains and equitable benefit-sharing. Documentation should respect the rights and knowledge of the communities that maintain and use these resources.

3.8 REGIONAL BIODIVERSITY PATTERNS

The 2025 assessment provides a clearer picture of ecological variation among assessed regions. The findings are indicative rather than exhaustive.

Table 2 – Indicative regional biodiversity characteristics

Assessed area	Principal biodiversity systems	Findings from the 2025 assessment	Evidence limitation
Galmudug	Arid rangelands, dry savannah, shrubland and coastal habitats	Strong reported decline in native vegetation; pressure on rangeland condition; emerging grazing controls and restoration around water points	Primarily community and site-level observations
Puntland	Rangelands, Golis and Cal Madow highlands, frankincense landscapes, reefs, seagrass and mangroves	Important terrestrial and marine diversity; community nurseries and mangrove protection emerging; some upland refuges retain ecological value	Reef, seagrass and wildlife trends require systematic surveys
Jubaland	Juba River, floodplains, riverine and coastal forests, mangroves, reefs and Bajuni Islands	High ecosystem diversity; deterioration of some riparian and coastal habitats; active community mangrove and coastal initiatives	Habitat extent and species populations remain incompletely mapped
South West State	Rangelands, woodlands, agricultural landscapes and river-associated habitats	Significant perceived woodland and rangeland deterioration; agroforestry and community tree planting provide restoration opportunities	Few repeated ecological measurements
Hirshabelle	Shabelle River, floodplains, wetlands, agriculture and dry woodlands	Severe localized riverbank and riparian-vegetation deterioration; reported decline in some wetland birds	Requires basin-wide hydrological and biodiversity monitoring
North Eastern regions	Highlands, wadis, rangelands, frankincense areas and Gulf of Aden coast	Pockets of relatively intact habitat and native species associated with highlands and functioning customary grazing arrangements	Administrative coverage and survey intensity remain uneven

The findings show that Somalia's biodiversity is not distributed uniformly. Conservation and restoration priorities must therefore be adapted to local ecological and livelihood conditions rather than applying a single model nationwide.

3.9 AREAS OF PARTICULAR BIODIVERSITY IMPORTANCE

Somalia's historically recognized conservation areas include national parks, wildlife reserves, game reserves and forest reserves. The present legal status, boundaries, management presence and ecological condition of many of these sites are unclear. Somalia does not yet have a fully representative and effectively managed national protected-area network.

3.9.1 KEY BIODIVERSITY AREAS (KBAS)

Somalia should undertake a national Key Biodiversity Area assessment to identify locally significant sites, threatened species, endemic biodiversity, ecological integrity and critical ecosystem functions.

Areas repeatedly identified as priorities include:

- the Golis and Cal Madow mountain systems;
- frankincense- and myrrh-producing landscapes;
- rangeland migration corridors and drought refuges;
- the Juba and Shabelle rivers and associated wetlands;
- Lag Badana–Bushbush and the Lower Juba forest and coastal mosaic;
- the Bajuni Islands and adjacent marine habitats;
- mangroves and marine-turtle nesting beaches;
- Sa'ad ad-Din and other northern islands;
- Ras Caseyr, Hafun, Alula, Eyl, Gara'ad and Qandala;
- Warsheikh and adjacent coastal habitats;
- Goobweyn and the Juba estuary; and
- Buur Gaabo and other southern coastal areas.

The consultant's spatial-prioritization work identifies terrestrial, freshwater and marine areas with potentially high biodiversity value. These maps are useful screening and planning tools, but they should be treated as preliminary until validated through ecological surveys and community consultation.

Documented priority landscapes include the Hobyo grasslands and coastal landscape. Other reported areas – including parts of Hiiraan–Bakool, Puntland and Sanaag/Maydh – require further ecological and spatial validation before they are presented as formally recognized conservation sites or endemic centers. Future mapping shall distinguish between validated biodiversity priorities, stakeholder-reported areas and proposed assessment sites, and shall record the evidence source and confidence level for each boundary.

Area-based conservation should extend beyond formal protected areas. Customary grazing reserves, community-managed forests, locally regulated fishing grounds, sacred or culturally important sites and seasonal wetlands may qualify as other effective area-based conservation measures where they meet CBD criteria and produce sustained biodiversity outcomes.

3.10 BIODIVERSITY TRENDS AND EVIDENCE CONFIDENCE

The combined evidence indicates a general decline in Somalia's biodiversity, but the magnitude and rate of change vary and cannot yet be quantified consistently.

Table 3 – Biodiversity trends table

Biodiversity component	Indicative direction	Main evidence	Confidence
Native woody vegetation	Declining	Historical land-cover evidence, national reporting and consistent 2025 respondent observations	Moderate
Rangeland productivity and condition	Declining or stressed in several regions	LDN assessment, local field findings and pastoral observations	Moderate
Riverine forest and wetland condition	Localized but significant decline	2025 assessments along Juba and Shabelle corridors and land-use observations	Low to moderate
Mangrove condition	Declining at some locations, with local restoration emerging	Community reports, project observations and available mapping	Moderate at assessed sites; low nationally
Coral reefs and seagrass	Condition uncertain, with localized concern	Coastal observations and limited regional evidence	Low
Large terrestrial wildlife	Likely declining and increasingly fragmented	Historical records and widespread reduction in reported sightings	Low to moderate
Marine turtles, sharks and marine mammals	Status uncertain; several species of conservation concern	Marine action plan, fisheries information and community observations	Low to moderate
Agricultural genetic diversity	Potential decline but insufficiently measured	Changes in farming, seed systems and livestock production	Low
Invasive alien species	Expanding in some landscapes	Frequent reports of <i>Prosopis juliflora</i> and other invasive species	Moderate in assessed areas
Ecosystem-restoration activity	Increasing from a low baseline	Community nurseries, grazing closures, mangrove planting and watershed initiatives	Moderate

The 2025 assessment’s statement that respondents commonly perceived 30–50% woody-cover reduction provides important evidence of widespread concern. It should not, however, be adopted as the official national rate of forest loss until verified using harmonized remote sensing and representative field plots.

Similarly, reports that large mammals are absent from particular locations should be recorded as declining or unconfirmed unless systematic surveys demonstrate local extirpation.

3.11 VALUES AND CONTRIBUTIONS OF BIODIVERSITY

3.11.1 LIVELIHOOD AND ECONOMIC VALUE

The 2025 assessment found that approximately 70% of surveyed households depended directly on biological resources for food, fuel, materials or income. This demonstrates the close relationship between biodiversity condition and household welfare, although the percentage should be interpreted as a finding from the assessment sample rather than a national household estimate.

Rangelands support livestock production, rivers and pollinators support farming, forests provide gums, resins, fuel and medicine, and coastal and marine ecosystems sustain fisheries. Biodiversity degradation therefore affects incomes, food prices, export potential and public expenditure.

These values are not yet captured adequately in national accounts. Natural-capital and ecosystem-service accounting would help demonstrate biodiversity's economic contribution and the costs of degradation.

3.11.2 FOOD AND NUTRITION SECURITY

Biodiversity contributes to food security through livestock, crops, fisheries, wild foods, fruits, honey and other products. Genetic diversity within crops and livestock increases the capacity of food systems to withstand drought, disease and temperature extremes.

Healthy fisheries provide animal protein and income to coastal communities. Productive rangelands sustain the livestock economy. Decline in either system affects household nutrition, market prices and national dependence on food imports.

3.11.3 WATER REGULATION, SOIL PROTECTION AND POLLINATION

Vegetation cover reduces erosion, improves water infiltration and limits sediment movement into rivers and coastal waters. Riparian vegetation protects riverbanks, while wetlands and floodplains store water and regulate floods.

Pollinators support both wild-plant regeneration and crop production. The deterioration of forests, woodlands and agricultural field margins can therefore affect ecological recovery and food production simultaneously.

3.11.4 CLIMATE REGULATION AND DISASTER RESILIENCE

Forests, woodlands, rangelands, wetlands, mangroves and seagrass beds store carbon and strengthen adaptation to climate change. Mangroves and coastal vegetation reduce shoreline erosion, while healthy watersheds and rangelands improve resilience to floods and drought.

Somalia's National Adaptation Plan and NDC 3.0 recognize ecosystem restoration, sustainable land management, watershed rehabilitation and coastal protection as important climate actions.

3.11.5 CULTURAL AND KNOWLEDGE VALUE

Somali pastoralists, farmers, fishers, elders and traditional healers maintain detailed knowledge of rainfall, soils, forage, livestock, medicinal plants, fishing grounds, currents and species behavior.

Customary institutions, including locally applied aspects of Xeer, continue to influence access to pasture, water, forests and other communal resources. The 2025 assessment found comparatively better ecological condition in some locations where rotational grazing and customary controls remained functional.

Traditional knowledge should inform biodiversity planning and monitoring while respecting the rights, consent and interests of knowledge holders.

3.11.6 REGIONAL AND GLOBAL VALUE

Somalia's endemic plants and animals form an irreplaceable part of global biodiversity. Migratory birds, turtles, sharks, whales, dolphins and other species connect Somalia with neighboring countries and the wider western Indian Ocean and Arabian Sea.

Somalia's marine productivity, rangelands, forests, mangroves and seagrasses also contribute to regional food systems, ecological connectivity and climate regulation.

3.12 COMMUNITY STEWARDSHIP AND ECOLOGICAL RESILIENCE

The 2025 assessment found that approximately half of surveyed respondents reported participation in activities such as tree planting, grazing-land restoration or coastal clean-ups. Women and young people were prominent in several community nurseries, mangrove initiatives and environmental-awareness activities.

These findings demonstrate significant local willingness to participate in biodiversity recovery. They do not yet show that restoration is occurring at a scale sufficient to reverse national biodiversity decline.

Examples of ecological resilience include:

- regeneration of native vegetation in protected grazing plots;
- survival of remnant native species in northern highlands and wadis;
- natural or assisted mangrove regeneration where cutting is reduced;
- agroforestry initiatives in agricultural landscapes;
- community nurseries supplying native plants;
- restoration around water points and degraded catchments; and
- continued customary management of shared rangeland resources.

Future programmes should measure restoration outcomes through vegetation cover, native-species recovery, soil condition, survival rates and livelihood benefits rather than relying only on the number of seedlings planted or activities conducted.

3.13 BIODIVERSITY KNOWLEDGE AND INFORMATION GAPS

Somalia's biodiversity information is fragmented among government institutions, universities, communities, international organizations, civil society and development projects. The country does not yet possess a comprehensive national biodiversity inventory or fully operational National Biodiversity Information System.

Priority gaps include:

- a harmonized national ecosystem and land-cover classification;
- regularly updated ecosystem-extent and condition maps;
- national flora and fauna inventories;
- updated national Red List assessments;
- systematic terrestrial wildlife surveys;
- freshwater biodiversity and wetland inventories;

- mangrove, coral-reef and seagrass mapping;
- marine-species and fisheries population data;
- pollinator and invertebrate assessments;
- crop, seed and livestock genetic-resource inventories;
- verified protected-area and OECM records;
- Federal Member State biodiversity profiles;
- natural-capital and ecosystem-service accounts;
- documentation of traditional ecological knowledge; and
- standardized community-monitoring protocols.

Future reporting should clearly state the date, methodology, geographic coverage and confidence associated with each figure. Survey perceptions, spatial estimates and scientifically measured ecological indicators should be reported separately.

3.14 PRIORITIES FOR ESTABLISHING THE NATIONAL BIODIVERSITY BASELINE

During the initial NBSAP implementation period, Somalia should establish a coordinated national baseline programme consisting of:

- national ecosystem mapping and condition assessment;
- field validation of the preliminary spatial-priority areas;
- identification and mapping of Key Biodiversity Areas;
- verification of existing and proposed conservation areas;
- national threatened-species and Red List assessments;
- standardized forest, rangeland, river, wetland, mangrove, reef and seagrass monitoring;
- inventories of crop, seed and livestock genetic resources;
- preparation of a national geodiversity and geosite inventory;
- Federal Member State and regional biodiversity profiles;
- community biodiversity logs and participatory monitoring;
- integration of traditional knowledge with scientific evidence;
- designation of institutional data custodians and monitoring protocols; and
- establishment of a publicly accessible National Biodiversity Information System.

The programme should combine field surveys, remote sensing, camera traps, environmental DNA where feasible, fisheries and market records, participatory mapping and regional or global datasets. Permanent sample sites should be established so that changes can be measured against consistent baselines.

3.15 OVERALL ASSESSMENT

Somalia retains biodiversity of considerable national, regional and global importance. Its rangelands, dry forests, mountains, river systems, coastal habitats and marine waters sustain livelihoods and support endemic, threatened and migratory species.

The 2025 National Biodiversity Assessment strengthens the evidence that ecosystem deterioration is widespread across the assessed regions. Its most consistent findings are declining native vegetation, deteriorating rangelands, reduced wildlife observations, loss of riparian habitat and growing concern over

coastal and marine ecosystems. It also demonstrates the persistence of local ecological knowledge and a willingness among communities to participate in restoration.

Somalia's biodiversity status can therefore be summarized as follows:

- biodiversity and endemism are high relative to the country's arid conditions;
- natural ecosystems remain fundamental to livelihoods, food security and resilience;
- degradation is widespread but varies significantly among landscapes and seascapes;
- community perceptions consistently indicate declining vegetation, soils and wildlife;
- the magnitude of national ecosystem and species change remains insufficiently measured;
- mountain, riverine, coastal and marine habitats contain important but incompletely documented biodiversity;
- effective formal conservation coverage remains extremely limited;
- customary and community-management systems continue to provide locally important conservation functions;
- restoration initiatives are increasing but remain fragmented and relatively small in scale; and
- establishing scientifically defensible national baselines is an urgent NBSAP priority.

The evidence supports decisive conservation and restoration action while also requiring careful treatment of uncertain figures. Chapter 4 examines the immediate pressures and underlying climatic, economic, institutional and social drivers responsible for the observed changes.

CHAPTER 4 MAJOR THREATS AND UNDERLYING DRIVERS

4.1 INTRODUCTION

Somalia's biodiversity is being affected by a combination of direct pressures and underlying climatic, social, economic and institutional drivers. These pressures act across terrestrial, freshwater, coastal and marine ecosystems and frequently reinforce one another. Drought may reduce vegetation cover, for example, while concentrated grazing around remaining water points slows recovery. Poverty and limited livelihood alternatives can increase dependence on charcoal, fuelwood, wildlife and fisheries, while weak regulation allows extraction to exceed sustainable levels.

The principal direct pressures on Somalia's biodiversity are:

- habitat loss, degradation and fragmentation;
- unsustainable harvesting of forests and other biological resources;
- overgrazing and poor rangeland management;
- land conversion and unsustainable agricultural practices;
- overfishing, bycatch and illegal, unreported and unregulated fishing;
- climate change and extreme weather events;
- pollution and inadequate waste management;
- invasive alien species;
- unsustainable infrastructure and urban development;
- wildlife hunting, capture and trade; and
- disturbance of ecologically sensitive areas.

Underlying these pressures are poverty, displacement, population growth, insecurity, weak governance, limited institutional capacity, inadequate environmental information, insecure land and resource tenure, insufficient financing and low availability of sustainable livelihood alternatives.

The severity of each pressure varies among ecosystems and regions. This chapter therefore avoids assigning national quantitative rates where the available evidence is primarily based on historical information, community observations or geographically limited assessments. The analysis should be updated as standardized monitoring information becomes available.

4.2 CONCEPTUAL FRAMEWORK

Biodiversity loss can be understood through the relationship between underlying drivers, direct pressures, changes in ecosystem condition and impacts on people.

Table 4 – Conceptual Framework for biodiversity loss

Level	Examples in Somalia
Underlying drivers	Poverty, demographic change, insecurity, displacement, weak governance, market demand, climate change and limited livelihood alternatives
Direct pressures	Tree cutting, overgrazing, land conversion, overfishing, pollution, invasive species and infrastructure development

Changes in biodiversity	Reduced vegetation cover, habitat fragmentation, declining wildlife observations, degradation of rivers and wetlands, and deterioration of coastal habitats
Consequences	Reduced forage and fisheries productivity, soil erosion, water insecurity, loss of livelihoods, increased disaster risk and diminished ecological resilience
Required responses	Sustainable resource management, restoration, conservation, stronger institutions, livelihood diversification, enforcement and monitoring

Direct pressures should not be considered in isolation. Their cumulative effects may be greater than the effects of any individual activity. A drought-affected rangeland, for example, becomes more vulnerable when livestock mobility is restricted, water points are concentrated, invasive plants spread and woody vegetation is removed for charcoal.

4.3 HABITAT LOSS, DEGRADATION AND FRAGMENTATION

Habitat degradation is the most widespread pressure affecting Somalia's biodiversity. It occurs when the structure, composition or ecological functions of an ecosystem are reduced, even if the ecosystem has not been completely converted to another land use.

Degradation affects rangelands, dry forests, riverine forests, wetlands, mountains, agricultural landscapes, mangroves, reefs, seagrass beds and other coastal habitats. The main mechanisms include:

- removal of native vegetation;
- excessive and poorly managed grazing;
- conversion of natural habitat to agriculture and settlements;
- erosion and loss of fertile soil;
- clearing of riverbanks and floodplains;
- construction of roads and other infrastructure;
- concentration of people and livestock around water sources;
- disruption of natural water flows;
- sand and mineral extraction;
- cutting of mangroves and coastal vegetation; and
- disturbance of breeding, nesting and feeding areas.

Fragmentation divides continuous habitat into smaller and increasingly isolated patches. This limits the movement of wildlife and livestock, reduces access to seasonal resources and may isolate plant and animal populations. Fragmentation is especially concerning along pastoral migration routes, riverine corridors, mountain ecosystems, coastal forests and wildlife refuges.

The 2025 National Biodiversity Assessment recorded consistent community perceptions of declining native vegetation, deteriorating soil condition and reduced wildlife sightings across the assessed regions. These findings indicate a widespread direction of ecological change, although nationally representative rates of habitat loss have not yet been established.

Habitat loss also reduces ecosystem services. Removal of vegetation increases soil erosion and surface runoff, while degradation of wetlands and floodplains reduces water storage and flood regulation. Loss of mangroves, reefs and coastal vegetation weakens shoreline protection and fisheries nursery functions.

4.4 UNSUSTAINABLE FOREST AND WOODLAND RESOURCE USE

4.4.1 CHARCOAL PRODUCTION

Charcoal production is one of the most significant causes of woody-vegetation loss in Somalia. Urban demand for household energy, commercial markets and cross-border trade creates economic incentives for tree cutting. Production frequently targets mature native trees that take many years to replace.

Charcoal-related degradation is especially damaging where:

- harvesting is concentrated around settlements and transport routes;
- slow-growing native trees are selectively removed;
- cutting exceeds natural regeneration;
- roots and young trees are also removed;
- grazing prevents seedlings from becoming established; and
- production expands into remaining woodland or drought-refuge areas.

The environmental effects extend beyond the loss of individual trees. Removal of woody vegetation reduces shade and forage, exposes soils to erosion, affects pollinators and wildlife, and weakens the capacity of rangelands to recover after drought.

Charcoal production is also connected to poverty, energy insecurity and limited employment opportunities. Enforcement alone is unlikely to succeed without affordable energy alternatives, improved urban energy systems and livelihood options for producers and traders.

4.4.2 FUELWOOD, CONSTRUCTION MATERIALS AND FENCING

Fuelwood remains important for domestic and commercial energy. Poles, branches and shrubs are also collected for housing, livestock enclosures, fencing and other uses. At low intensity these activities may be locally sustainable, but concentrated harvesting around cities, displacement settlements, water points and transport corridors can cause severe degradation.

Community woodlots, efficient cooking technologies, sustainable harvesting arrangements, assisted natural regeneration and alternative construction materials can reduce pressure on natural woodland.

4.4.3 UNSUSTAINABLE HARVESTING OF GUMS AND RESINS

Frankincense, myrrh and other gums and resins provide important income in northern Somalia. The trees can continue producing for many years when tapping intensity, seasonal timing and resting periods are properly managed.

Unsustainable tapping can weaken trees, reduce seed production and increase vulnerability to pests, drought and disease. Other concerns include cutting of productive trees, poor regeneration, excessive grazing of seedlings and insecure producer access to valuable harvesting areas.

Strengthening producer associations, sustainable tapping standards, traceability, regeneration programmes and fairer value chains would support both biodiversity conservation and local incomes.

4.5 RANGELAND DEGRADATION AND UNSUSTAINABLE GRAZING

Rangelands form the foundation of Somalia's pastoral production system, but they are increasingly affected by declining vegetation, soil erosion and changes in plant composition. Livestock grazing is not inherently a cause of biodiversity loss. Traditional mobile pastoralism can be compatible with dryland ecology when livestock movement, seasonal resting and access to dispersed water sources are maintained.

Degradation occurs when grazing pressure exceeds the capacity of vegetation and soil to recover. Contributing factors include:

- concentration of livestock around permanent water points;
- disruption of seasonal mobility routes;
- prolonged use of drought refuges;
- weakening of customary grazing arrangements;
- privatization or enclosure of communal land;
- reduced access caused by conflict and insecurity;
- increased settlement around productive grazing areas;
- expansion of unplanned water infrastructure;
- cutting of important browse species;
- invasive alien plants; and
- repeated drought with insufficient recovery periods.

Overgrazing reduces palatable grasses and browse species and can favor thorny, unpalatable or invasive plants. Trampling and loss of ground cover increase soil compaction, runoff and erosion. As rangeland productivity declines, livestock become more concentrated in the remaining productive areas, creating a cycle of further degradation.

Water development requires particular care. New boreholes and water-storage facilities can improve drought resilience, but poorly located permanent water points may encourage settlement and year-round grazing in areas that were previously used only seasonally.

Priority responses include participatory rangeland management, protection of migration corridors, seasonal grazing plans, restoration of customary reserves, reseeding with native species, control of invasive plants, improved water-point planning and monitoring of vegetation and soil condition.

4.6 AGRICULTURAL EXPANSION AND UNSUSTAINABLE LAND MANAGEMENT

Agriculture is concentrated along the Juba and Shabelle rivers and in rain-fed and agro-pastoral production areas. Agricultural development is essential for food security, but poorly planned expansion can replace natural habitat and reduce ecosystem functions.

Major pressures associated with agriculture include:

- clearance of riverine forest, woodland and shrubland;
- cultivation of floodplains, wetlands and natural drainage areas;
- farming too close to riverbanks;
- removal of field-margin vegetation;

- soil erosion and declining soil fertility;
- salinization and waterlogging;
- inappropriate irrigation practices;
- unsustainable abstraction of river and groundwater;
- uncontrolled use of pesticides and fertilizers;
- abandonment of degraded land and expansion into new areas; and
- loss of locally adapted crop varieties.

Clearance of riparian vegetation destabilizes riverbanks and increases erosion and sedimentation. It also removes wildlife corridors and habitat for birds, pollinators and other species.

Pesticides can affect beneficial insects, aquatic organisms, livestock and human health when products are poorly selected, stored or applied. Empty containers and obsolete chemicals may create additional contamination risks.

Sustainable agriculture should therefore emphasize soil and water conservation, agroforestry, integrated pest management, protection of riparian buffer zones, efficient irrigation, conservation agriculture and maintenance of crop and seed diversity.

4.7 WATER ABSTRACTION AND ALTERATION OF FRESHWATER SYSTEMS

The Juba and Shabelle rivers, seasonal watercourses and wetlands support biodiversity, agriculture, livestock and domestic water supply. These systems are affected by both natural variability and human alteration.

Important pressures include:

- upstream and local water abstraction;
- riverbank cultivation and clearing;
- irrigation diversions;
- construction within floodplains;
- sedimentation caused by erosion;
- disposal of solid and liquid waste;
- reduced environmental flows;
- obstruction of natural drainage;
- extraction of sand and construction materials; and
- damage to wetland and riparian vegetation.

Changes in water quantity, timing and quality affect fish, waterbirds, aquatic plants, amphibians, invertebrates and riverine forests. Reduced flow may concentrate pollutants, disconnect wetlands and allow saline water to penetrate farther into estuarine systems.

Somalia's limited hydrological and ecological monitoring makes it difficult to quantify these impacts. River-basin planning should include environmental-flow requirements, wetland conservation, water-quality monitoring and protection of riparian vegetation.

Transboundary cooperation is also important because the Juba and Shabelle originate outside Somalia. Upstream development, climate variability and water use can influence downstream ecosystem condition, agriculture and water security.

4.8 UNSUSTAINABLE FISHERIES AND MARINE RESOURCE USE

4.8.1 EXCESSIVE FISHING PRESSURE

Somalia's coastal and marine ecosystems support artisanal, commercial and subsistence fisheries. These resources have considerable potential to improve food security and economic development. However, fisheries sustainability is constrained by incomplete stock assessments, weak landing data and limited monitoring of fishing effort.

Pressure may be concentrated on high-value or slow-growing species, including sharks, rays, groupers, snappers, lobsters and sea cucumbers. Where fishing effort increases without reliable stock information, populations can decline before management authorities are able to detect the change.

Unsustainable practices may include:

- harvesting during breeding or aggregation periods;
- catching juvenile fish;
- fishing in nursery areas;
- use of inappropriate or prohibited gear;
- excessive removal of large breeding individuals; and
- targeting of threatened or slow-reproducing species.

4.8.2 ILLEGAL, UNREPORTED AND UNREGULATED FISHING

Illegal, unreported and unregulated (IUU) fishing remains a serious concern in Somali waters. It can include fishing without authorization, misreporting catches, operating in prohibited areas, using prohibited gear or failing to comply with license conditions.

IUU fishing reduces government revenue, undermines legitimate fishers and makes stock assessment difficult. It may also increase conflict between artisanal fishers and larger vessels, especially when industrial operations occur near the coast or damage local fishing equipment.

Stronger licensing, vessel monitoring, landing-site inspection, catch documentation, regional cooperation and community reporting are needed. Monitoring should distinguish verified violations from unconfirmed reports.

4.8.3 BYCATCH AND THREATENED MARINE SPECIES

Marine turtles, sharks, rays, seabirds, dolphins and other non-target species may be caught unintentionally in nets, lines and other fishing gear. The extent of bycatch is not systematically documented nationally.

Lost or abandoned fishing gear can continue capturing marine animals and damage reefs and other habitats. Priority actions include bycatch monitoring, gear modifications, safe-release training, reporting systems and targeted protection of important nesting, nursery and feeding areas.

4.8.4 DAMAGE TO COASTAL AND SEABED HABITATS

Fishing practices that physically damage reefs, seagrass beds or the seabed can reduce habitat complexity and fisheries productivity. Anchoring in sensitive habitats, destructive gear and repeated disturbance of nursery areas may cause localized but persistent degradation.

Fisheries management should therefore be linked to marine spatial planning, habitat mapping, community-conserved areas and ecosystem-based management.

4.9 WILDLIFE HUNTING, CAPTURE AND TRADE

Somalia's terrestrial wildlife has experienced long-term pressure from hunting, capture and habitat loss. Wildlife may be hunted for food, skins, traditional uses, trade, retaliation or recreation. Live animals, particularly young cheetahs and other charismatic species, may also be captured for illegal trade.

The scale of wildlife hunting and trade is difficult to quantify because much of it is informal or concealed. Reduced observations of large mammals reported by communities are consistent with concern about declining populations, but systematic surveys are needed before the status of individual species can be established.

Wildlife loss can affect ecosystem functions such as grazing, seed dispersal, predation and scavenging. The removal of breeding adults may be especially damaging to species with small or isolated populations.

Priority actions include stronger wildlife legislation, enforcement at markets and transport points, public awareness, cooperation with neighboring countries and international conventions, rehabilitation protocols for confiscated wildlife and livelihood support for communities living near important habitats.

Human–wildlife conflict must also be addressed. Predation on livestock, crop damage and concern for human safety can lead to retaliatory killing. Preventive measures, improved livestock enclosures, community response systems and conflict reporting can reduce these pressures.

4.10 POLLUTION AND WASTE

4.10.1 SOLID WASTE AND PLASTICS

Inadequate collection and disposal of solid waste affects urban, riverine and coastal ecosystems. Plastics and other waste may be transported through drainage channels and seasonal watercourses into rivers and the sea.

Plastic pollution can entangle wildlife, be ingested by livestock and marine species, obstruct drainage and degrade beaches, mangroves and fishing grounds. Open dumping can also contaminate soil and water and provide pathways for invasive species and disease vectors.

Priority measures include improved municipal collection, controlled disposal sites, reduction of single-use plastics, recycling initiatives, community clean-ups and interception of waste before it enters waterways.

4.10.2 SEWAGE AND WASTEWATER

Untreated domestic wastewater can introduce pathogens, nutrients and organic matter into rivers, groundwater and coastal waters. Nutrient enrichment may reduce water quality and alter aquatic ecosystems.

Rapidly growing urban areas require wastewater and sanitation systems that protect shallow groundwater, wetlands, rivers and nearshore marine habitats.

4.10.3 OIL, FUEL AND HAZARDOUS SUBSTANCES

Ports, vessels, fuel storage, transport and industrial activities create risks of oil and chemical pollution. Even relatively small spills can damage mangroves, beaches, coral reefs, seagrass beds and fisheries where preparedness and response capacity are limited.

Somalia has begun expanding offshore oil and gas exploration along its coast, with commercial extraction currently anticipated around 2030. This timeline remains dependent on successful exploration, confirmation of commercially recoverable reserves, investment and regulatory approvals. The emerging petroleum sector could increase risks from seismic surveys, exploratory drilling, operational discharges, vessel traffic, coastal infrastructure and accidental oil spills. These activities may affect marine mammals, turtles, seabirds, fish populations, benthic habitats and coastal livelihoods unless they are governed by rigorous environmental and social safeguards. Somalia's national petroleum policy confirms that exploration is being undertaken in both offshore and onshore sedimentary basins, while international cooperation agreements cover exploration, development and potential production.

Before commercial extraction begins, Somalia should establish a comprehensive petroleum-sector environmental framework, including strategic environmental and social assessment, project-level environmental and social impact assessments, marine spatial planning, biodiversity baseline surveys, oil-spill contingency plans, operator liability and financial-assurance requirements, independent compliance monitoring and transparent emergency-response arrangements. Development should avoid critical habitats, marine protected areas, important fishing grounds, coral reefs, mangroves, seagrass beds and marine-turtle nesting or migration areas wherever possible.

Agricultural chemicals, medical waste, batteries, electronic waste and other hazardous materials can also contaminate soil and water when stored, transported or disposed of improperly. Somalia therefore requires stronger systems for chemical registration, storage, handling, transport, emergency response and environmentally sound treatment and disposal.

4.10.4 ABANDONED OR LOST FISHING GEAR

Fishing nets, lines and other gear may persist in the marine environment and continue trapping animals. They can also damage reefs, entangle vessels and reduce the visual and recreational quality of beaches. Gear-recovery schemes, port-reception facilities, fisher awareness and incentives for returning damaged gear should form part of coastal-waste management.

4.10.5 MARINE PLASTIC POLLUTION

Marine plastic pollution poses a threat to Somalia's coastal and marine biodiversity, fisheries and coastal livelihoods. Sources include fisheries-derived plastics, abandoned or lost fishing gear, inadequately managed port waste, plastics carried through urban drainage systems and coastal dumping. These materials can accumulate on beaches, in coastal waters and on the seabed, where they persist and harm wildlife through ingestion, entanglement and habitat degradation.

Addressing these pressures requires coordinated action across fisheries, ports, municipalities and coastal communities. Priorities should include improved waste collection and disposal, adequate port-reception facilities, fishing-gear recovery and return schemes, measures to intercept plastics in urban drainage systems, and prevention of coastal dumping. Public awareness, fisher participation and regular monitoring of beach litter and marine debris should support these measures, with particular attention to sensitive habitats and areas where waste accumulates.

4.11 INVASIVE ALIEN SPECIES

Invasive alien species can displace native plants and animals, change ecosystem functions and reduce access to land and water. Somalia's most widely reported invasive plant is *Prosopis juliflora*. It forms dense thickets in some riverine, agricultural and settlement areas.

Although *Prosopis* may provide fuelwood, charcoal and shade, unmanaged expansion can:

- replace native vegetation;
- obstruct access to grazing land and water;
- reduce the availability of palatable forage;
- invade farmland and irrigation channels;
- alter soil and hydrological conditions; and
- increase management costs for communities.

Other invasive plants, agricultural pests, aquatic organisms and disease vectors may also be present, but Somalia lacks a comprehensive national inventory.

Control measures should be based on ecological assessment. Removal without follow-up restoration can expose soil and allow reinvasion. Effective management generally requires mapping, containment, productive use where environmentally appropriate, restoration with native species and long-term monitoring.

Prevention is more cost-effective than control. Somalia should strengthen risk assessment and quarantine procedures for imported plants, animals, seeds, soil, ballast water and other pathways.

A national distribution assessment shall map priority invasive plants and cross-border pests and identify introduction and spread pathways. MoECC and the responsible agriculture, livestock, fisheries, customs and port authorities, working with Federal Member States and neighboring countries, should establish coordinated surveillance, early warning, quarantine, rapid-response protocols and routine information exchange. Verified occurrence records and response outcomes should be maintained through the national biodiversity information system.

4.12 CLIMATE CHANGE AND EXTREME EVENTS

Climate change is both a direct pressure on biodiversity and a factor that intensifies other threats. Rising temperatures, changing rainfall patterns, more frequent or severe drought, intense flooding, sea-level rise, coastal erosion and ocean warming affect ecosystems and livelihoods throughout Somalia.

4.12.1 DROUGHT

Repeated drought reduces vegetation growth, surface water and soil moisture. It can cause mortality of plants, livestock and wildlife and increase pressure on remaining water and forage resources.

Drought also contributes to displacement and livelihood losses. Movement of people and livestock into less-affected areas may concentrate resource use and lead to conflict. Ecosystems may not fully recover where droughts occur more frequently or where grazing and tree cutting continue during recovery periods.

4.12.2 FLOODS AND EROSION

Floods can support floodplain productivity and wetland ecosystems, but extreme flooding may erode riverbanks, damage vegetation, transport pollutants and alter river channels. Where riparian vegetation has been removed or settlements have expanded into floodplains, ecological and human impacts become more severe.

4.12.3 COASTAL CHANGE

Sea-level rise, storm surges and erosion threaten mangroves, turtle-nesting beaches, coastal settlements, freshwater resources and infrastructure. Coastal habitats may be unable to migrate inland when roads, settlements or other developments occupy the adjacent land.

4.12.4 OCEAN WARMING AND ACIDIFICATION

Rising sea temperatures can contribute to coral bleaching and shifts in marine-species distribution. Ocean acidification may affect corals, shell-forming organisms and marine food webs. Somalia currently lacks sufficient long-term marine monitoring to determine national trends, but the vulnerability of its fisheries and coastal communities makes precautionary action necessary.

4.12.5 CLIMATE–BIODIVERSITY FEEDBACKS

Degraded ecosystems are less able to withstand climatic shocks. Loss of vegetation reduces water retention and soil protection, while damage to mangroves and reefs weakens coastal resilience. Biodiversity restoration is therefore an essential component of climate adaptation and disaster-risk reduction.

4.13 INFRASTRUCTURE, EXTRACTIVE ACTIVITIES AND URBAN DEVELOPMENT

Somalia requires infrastructure to support economic growth and public services. Roads, ports, airports, energy facilities, water systems and urban development can nevertheless affect biodiversity when environmental and social risks are not identified early.

Potential impacts include:

- direct clearance of natural habitat;
- fragmentation of wildlife and pastoral corridors;
- obstruction of drainage and water flows;
- erosion and sedimentation;
- pollution from construction and operation;
- disturbance from noise, lighting and traffic;
- increased access to previously remote ecosystems;
- introduction of invasive species;
- collision risks for wildlife;
- extraction of sand, stone and other construction materials; and
- induced settlement and resource exploitation.

Roads may produce indirect impacts beyond their immediate footprint by improving access for charcoal production, hunting, land conversion and settlement. Ports and coastal infrastructure may affect reefs, mangroves, seagrass beds, beaches and fisheries through dredging, reclamation, pollution and changes in sediment movement.

4.13.1 SAND AND AGGREGATE MINING

Unregulated extraction of sand and construction aggregate from river systems, beaches and coastal dunes is emerging as a significant threat to freshwater ecosystems, shoreline stability and biodiversity if undertaken without strategic planning and rigorous safeguards.

Environmental and social impact assessment should be applied early and consistently. Projects should follow the mitigation hierarchy:

- avoid significant biodiversity impacts;
- minimize impacts that cannot be avoided;
- restore affected ecosystems; and
- address significant residual impacts through appropriate and measurable measures.

Projects affecting critical habitats, threatened species or important ecosystem services require particularly careful assessment and consultation.

4.14 CONFLICT, INSECURITY AND DISPLACEMENT

Conflict and insecurity influence biodiversity through multiple pathways. They may weaken government presence, limit field research, disrupt customary management and reduce enforcement against illegal resource use. Insecurity can also prevent communities from accessing traditional grazing areas, concentrating people and livestock in safer locations.

Displacement increases demand for fuelwood, water, construction materials and land around settlements and camps. Host communities and displaced households may depend on the same limited natural resources, increasing the risk of degradation and conflict.

At the same time, some inaccessible areas may experience temporary reductions in development or settlement pressure. Such effects should not be interpreted as durable conservation because insecurity also prevents effective monitoring and management.

Peacebuilding, land governance and biodiversity management are closely connected. Joint management of water, grazing land, forests and fisheries can reduce competition and support cooperation when arrangements are inclusive and locally legitimate.

4.15 UNDERLYING SOCIAL AND ECONOMIC DRIVERS

4.15.1 POVERTY AND DEPENDENCE ON NATURAL RESOURCES

Many Somali households depend directly on livestock, fisheries, fuelwood, charcoal, agriculture, wild plants and other biological resources. When income and employment alternatives are limited, immediate household needs may take priority over long-term resource sustainability.

Environmental policies must therefore be linked to livelihood diversification, social protection, access to finance, value-chain development and equitable benefit-sharing.

4.15.2 POPULATION GROWTH, URBANIZATION AND CHANGING CONSUMPTION

Population growth and urbanization increase demand for food, water, energy, housing and construction materials. Expanding cities place pressure on nearby forests, rangelands, wetlands and coastal habitats.

Urban demand can shift environmental pressure to distant rural areas through markets for charcoal, livestock, fish and construction materials. Consumption patterns and supply chains should therefore be included in biodiversity planning.

4.15.3 DISPLACEMENT AND HUMANITARIAN EMERGENCIES

Drought, flooding, conflict and livelihood collapse repeatedly displace communities. Emergency settlements are often established rapidly and may lack adequate energy, water, sanitation and waste-management systems.

Humanitarian planning should assess surrounding natural resources, provide cleaner energy alternatives and avoid locating settlements in wetlands, floodplains, wildlife habitats or other environmentally sensitive areas.

4.15.4 MARKET DEMAND AND VALUE CHAINS

Domestic and international demand influences charcoal production, fishing, resin harvesting, livestock production and wildlife trade. Producers may receive a relatively small share of the final value while bearing much of the environmental cost.

Traceability, certification, sustainable harvesting standards, producer organizations and enforcement against illegal trade can help align markets with biodiversity objectives.

4.15.5 ENERGY INSECURITY

Dependence on charcoal and fuelwood reflects limited access to affordable alternative energy. Transitioning toward cleaner cooking technologies, electricity and sustainable energy sources would reduce pressure on forests and woodlands while producing health and economic benefits.

4.16 INSTITUTIONAL AND GOVERNANCE DRIVERS

4.16.1 INCOMPLETE LEGAL AND POLICY IMPLEMENTATION

Somalia has developed environmental, climate, fisheries and natural-resource policies and legislation, but implementation remains constrained. Regulations, institutional mandates and enforcement responsibilities may be incomplete, overlapping or insufficiently coordinated.

Legal reform should clarify responsibilities across federal, Federal Member State and local levels and establish practical procedures for permits, monitoring, compliance and enforcement.

4.16.2 LIMITED INSTITUTIONAL CAPACITY

Environmental institutions face shortages of technical staff, operational budgets, equipment, laboratories, monitoring systems and presence outside major cities. Limited capacity affects ecological assessment, protected-area management, fisheries monitoring, pollution control and enforcement.

Capacity development should be long-term and accompanied by predictable institutional financing, equipment, data systems and professional career structures.

4.16.3 UNCLEAR LAND AND RESOURCE TENURE

Unclear or contested rights over land, forests, water, rangelands and coastal resources can encourage short-term exploitation. Enclosures and privatization may restrict pastoral mobility and community access to previously shared resources.

Biodiversity programmes should recognize legitimate customary tenure, strengthen transparent dispute-resolution mechanisms and ensure that conservation does not dispossess local communities.

4.16.4 WEAK PROTECTED-AREA MANAGEMENT

The unclear legal status, boundaries and management arrangements of many historically recognized conservation areas limit their effectiveness. Few sites have verified boundaries, management plans, permanent staff, infrastructure and sustainable financing.

Area-based conservation requires more than legal designation. It depends on community participation, clearly defined rights, ecological monitoring, conflict-sensitive management and tangible local benefits.

4.16.5 LIMITED COORDINATION

Biodiversity is affected by decisions in agriculture, livestock, fisheries, water, energy, infrastructure, urban planning, finance and security. Weak coordination can result in sector plans that unintentionally conflict with conservation objectives.

The NBSAP should therefore be implemented through a whole-of-government framework supported by intergovernmental coordination and participation from communities, civil society, academia and the private sector.

4.16.6 KNOWLEDGE, AWARENESS AND FINANCING CONSTRAINTS

Somalia's ability to manage biodiversity is constrained by incomplete information. Major gaps include ecosystem maps, species inventories, protected-area records, fisheries data, pollution monitoring and information on genetic resources.

These gaps have several consequences:

- changes may not be detected early;
- conservation priorities may be based on outdated records;
- development decisions may overlook sensitive habitats;
- funding cannot be targeted effectively;
- enforcement agencies lack evidence;
- national reporting remains dependent on historical estimates; and
- restoration results are difficult to measure.

Environmental awareness also varies. Biodiversity may be viewed as a sectoral concern rather than a foundation for food security, livestock production, water management, climate resilience and economic development.

Financing remains highly project-dependent. Short funding cycles can support consultations and pilot activities without providing the sustained resources needed for monitoring, enforcement and long-term ecosystem management.

Somalia should develop a biodiversity finance plan combining national budgets, climate and biodiversity funds, development finance, private-sector contributions, sustainable tourism opportunities, blue-economy finance and community-level benefit-sharing.

4.17 GENDER, YOUTH AND SOCIAL INCLUSION DIMENSIONS

Biodiversity loss does not affect all groups equally. Women, men, pastoralists, farmers, fishers, young people, displaced households and minority or marginalized communities may use and manage natural resources differently.

Women often play important roles in collecting fuel, water, food and medicinal plants and in processing agricultural and fisheries products. Environmental degradation may increase the time and physical effort required to meet household needs while reducing income opportunities.

Young people face limited employment options and may become involved in environmentally harmful activities when sustainable alternatives are unavailable. At the same time, youth can contribute to restoration, environmental monitoring, clean energy, recycling and sustainable enterprises.

Planning processes should ensure:

- meaningful participation rather than nominal representation;
- access to information in appropriate languages and formats;
- safe consultation processes;
- recognition of traditional and local knowledge;
- equitable access to employment and restoration benefits;
- accessible grievance mechanisms; and
- protection against exclusion or involuntary displacement arising from conservation measures.

4.18 SIGNIFICANCE OF THE MAIN PRESSURES

The following assessment reflects the available national evidence and should be refined through future monitoring.

Table 5 - Indicative significance of major biodiversity pressures

Pressure	Main ecosystems affected	Indicative significance	Evidence confidence
Habitat degradation and fragmentation	All ecosystems	Very high	Moderate
Charcoal and unsustainable woody-resource use	Forests, woodlands and rangelands	Very high	Moderate-to-high
Rangeland degradation and grazing pressure	Rangelands, shrublands and drought refuges	Very high	Moderate
Climate change and extreme events	All ecosystems	Very high and increasing	High for climatic exposure; moderate for ecological impacts
Agricultural conversion and poor land management	Riverine, woodland, wetland and agro-pastoral systems	High	Moderate
Unsustainable fisheries and IUU fishing	Coastal and marine ecosystems	High	Moderate for pressure; low-to-moderate for stock trends
Water abstraction and alteration	Rivers, wetlands, floodplains and estuaries	High in affected basins	Low-to-moderate
Pollution and inadequate waste management	Urban, freshwater, coastal and marine ecosystems	High in hotspots	Moderate
Invasive alien species	Riverine, agricultural and rangeland systems	High in invaded areas	Moderate
Infrastructure and urban expansion	Terrestrial, freshwater and coastal habitats	Moderate-to-high and increasing	Moderate

Wildlife hunting, capture and trade	Terrestrial wildlife and selected marine species	High for targeted species	Low-to-moderate
Unsustainable harvesting of gums, resins and medicinal plants	Northern woodlands and localized habitats	Moderate-to-high in affected landscapes	Low-to-moderate

The classifications are indicative rather than statistically calculated. A pressure categorized as moderate nationally may be severe within a specific ecosystem or location.

4.19 ECOSYSTEM-SPECIFIC PRESSURE SUMMARY

Table 6 - Principal pressures by biodiversity system

Biodiversity system	Principal direct pressures	Important underlying drivers
Rangelands	Concentrated grazing, vegetation removal, invasive plants, erosion and water-point pressure	Drought, mobility restrictions, land enclosure, insecurity and livestock dependence
Dry forests and woodlands	Charcoal, fuelwood, construction materials, grazing and agricultural conversion	Urban energy demand, poverty, weak regulation and limited alternatives
Northern mountains and resin landscapes	Unsustainable tapping, cutting, grazing, erosion and infrastructure	Market demand, insecure tenure, limited inventories and weak management
Rivers and wetlands	Clearing, cultivation, abstraction, pollution, sedimentation and flow alteration	Food demand, irrigation expansion, weak basin management and transboundary pressures
Agricultural landscapes	Soil degradation, pesticide risks, loss of local varieties and habitat simplification	Climate stress, limited extension services and market change
Mangroves and coastal forests	Cutting, settlement, waste, erosion and infrastructure	Fuel demand, poverty, weak coastal planning and climate change
Coral reefs and seagrass beds	Fishing pressure, destructive gear, anchoring, pollution and warming	Limited monitoring, IUU fishing, coastal development and climate change
Beaches, islands and estuaries	Waste, disturbance, extraction, infrastructure and incidental catch	Urbanization, tourism or port development, weak management and sea-level rise
Pelagic and deep-water ecosystems	Industrial fishing, bycatch, pollution and limited oversight	Weak maritime surveillance, data gaps and international market demand

4.20 INTERACTIONS AND CUMULATIVE EFFECTS

The principal threats to Somalia's biodiversity are interconnected:

- climate change reduces ecosystem productivity and increases pressure on remaining resources;
- woodland loss contributes to erosion, reduced water infiltration and declining rangeland condition;
- degradation around water points increases competition and may contribute to conflict;
- riverbank clearing increases erosion and sediment movement into wetlands and coastal waters;

- poverty and energy insecurity maintain demand for charcoal;
- weak fisheries monitoring enables unsustainable and illegal fishing;
- displacement concentrates demand for water, fuel and land;
- roads and ports can expand access to previously remote ecosystems; and
- invasive species spread more easily through disturbed landscapes.

Planning and environmental assessment should therefore examine cumulative impacts across sectors and geographic areas rather than evaluating individual projects or pressures separately.

4.21 PRIORITY RESPONSES

Addressing the drivers of biodiversity loss requires coordinated action at national, Federal Member State, local and community levels. Immediate priorities include:

1. completing national ecosystem mapping and establishing measurable baselines;
2. strengthening environmental and natural-resource laws, regulations and enforcement;
3. reducing dependence on unsustainably produced charcoal and fuelwood;
4. restoring degraded rangelands, forests, riverbanks, wetlands, mangroves and watersheds;
5. protecting pastoral mobility corridors, seasonal grazing reserves and drought refuges;
6. improving fisheries data, licensing, vessel monitoring and community-based management;
7. preventing wildlife trafficking and reducing bycatch;
8. establishing invasive-species prevention, early-warning and control systems;
9. improving solid-waste, wastewater and hazardous-material management;
10. integrating biodiversity into infrastructure, agriculture, water, energy and urban planning;
11. applying environmental and social assessment and the mitigation hierarchy consistently;
12. securing community rights and strengthening customary resource-management systems;
13. expanding climate-resilient and biodiversity-compatible livelihoods;
14. ensuring meaningful participation by women, youth, pastoralists, fishers, farmers and marginalized communities;
15. establishing a national biodiversity information and monitoring system; and
16. mobilizing predictable domestic and international biodiversity finance.

4.22 OVERALL ASSESSMENT

Somalia's biodiversity is experiencing significant and mutually reinforcing pressures. The most widespread are habitat degradation, unsustainable woody-resource use, rangeland deterioration, agricultural expansion, fisheries pressure and climate-related shocks. Pollution, invasive species, infrastructure development, wildlife exploitation and alteration of freshwater systems create additional impacts.

The underlying causes extend beyond the environment sector. Poverty, energy insecurity, displacement, conflict, rapid urbanization, weak land and resource governance, limited institutional capacity and insufficient environmental information influence how natural resources are accessed and used.

The overall assessment is that:

- biodiversity loss is being driven by several pressures acting simultaneously;
- climate change is intensifying existing ecological and livelihood stresses;

- terrestrial degradation is closely linked to energy use, livestock systems and land governance;
- marine biodiversity is threatened by fishing pressure, bycatch, pollution and inadequate oversight;
- riverine and wetland habitats are affected by land conversion, altered flows and water-quality decline;
- weak data systems conceal the full scale and distribution of biodiversity loss;
- customary institutions remain important but are under increasing pressure;
- conservation measures must recognize community rights and livelihood needs;
- restoration alone will not succeed unless the underlying drivers of degradation are addressed; and
- biodiversity considerations must be integrated across economic development, humanitarian response, climate action and peacebuilding.

Somalia's biodiversity decline is serious but not irreversible. Remaining natural habitats, customary management systems, community restoration initiatives and emerging national policies provide a foundation for recovery. Chapter 5 translates this assessment into the strategic framework, national biodiversity targets and priority actions for implementation of the updated NBSAP.

5.1 INTRODUCTION

This chapter establishes Somalia's strategic framework for conserving biodiversity, restoring degraded ecosystems and ensuring the sustainable and equitable use of biological resources. It translates the biodiversity status and trends described in Chapter 3 and the pressures and underlying drivers identified in Chapter 4 into national targets and priority actions for implementation through 2030.

The framework is aligned with the three objectives of the Convention on Biological Diversity:

- conservation of biological diversity;
- sustainable use of the components of biological diversity; and
- fair and equitable sharing of benefits arising from the utilization of genetic resources.

It also contributes to the Kunming–Montreal Global Biodiversity Framework, which contains four long-term goals for 2050 and 23 global targets for 2030. Parties to the Convention are expected to establish national targets reflecting their circumstances, priorities, and capacities under the Convention on Biological Diversity-Kunming-Montreal Global Biodiversity Framework Decision 15/4.

Somalia's framework is organized around 20 national biodiversity targets. These targets address ecosystem planning, restoration, area-based conservation, species recovery, sustainable production, pollution, invasive species, climate resilience, genetic resources, biodiversity mainstreaming, financing, institutional capacity and social inclusion.

Because Somalia's biodiversity baselines remain incomplete, several targets combine measurable implementation commitments with requirements to establish and validate national baselines. Targets and indicators should be refined as ecosystem maps, inventories and monitoring systems become operational.

5.2 STRATEGIC VISION

Vision for 2050

By 2050, Somalia's biodiversity, ecosystems and genetic resources are valued, conserved, restored and sustainably managed, supporting resilient livelihoods, food and water security, climate adaptation, inclusive economic development and the well-being of present and future generations.

This vision recognizes that biodiversity conservation is inseparable from Somalia's development. Healthy rangelands support livestock production; functioning rivers and soils sustain agriculture; coastal and marine ecosystems support fisheries; and forests, wetlands and mangroves, provide protection from climate-related hazards.

5.3 MISSION TO 2030

By 2030, Somalia will halt and begin reversing biodiversity loss through inclusive spatial planning, ecosystem restoration, effective and equitable conservation, sustainable natural-resource management, stronger institutions, improved knowledge systems and increased investment in nature.

Implementation will prioritize actions that:

- address the most immediate causes of biodiversity loss;
- protect ecosystems of high biodiversity and livelihood importance;
- restore degraded landscapes and seascapes;
- strengthen community and customary management systems;

- improve biodiversity governance and enforcement;
- integrate biodiversity into all relevant sectors;
- build credible national baselines and monitoring systems; and
- mobilize the financial, technical and human resources required for sustained implementation.

5.4 STRATEGIC OBJECTIVES

The NBSAP has five mutually reinforcing strategic objectives.

Table 7 – Strategic objectives table

Strategic Objective	Description
Strategic Objective 1: Reduce direct pressures on biodiversity	Reduce habitat loss, unsustainable harvesting, overgrazing, overfishing, pollution, invasive species and other pressures affecting terrestrial, freshwater, coastal and marine ecosystems.
Strategic Objective 2: Protect and restore ecosystems and species	Restore degraded ecosystems, establish effective and representative conservation systems, recover threatened species and maintain ecological connectivity.
Strategic Objective 3: Promote sustainable and equitable use	Ensure that agriculture, livestock production, forestry, fisheries, water management and other nature-dependent sectors use biodiversity sustainably while supporting livelihoods and food security.
Strategic Objective 4: Mainstream biodiversity into governance and development	Integrate biodiversity into national and subnational planning, infrastructure, public finance, climate action, humanitarian response, business practice and environmental assessment.
Strategic Objective 5: Strengthen the means of implementation	Improve institutional capacity, biodiversity information, technology, financing, partnerships, participation, gender responsiveness and accountability.

5.5 LINKING NBSAP TO SOMALIA’S DEVELOPMENT AGENDA AND SDGs

The National Biodiversity Strategy and Action Plan (NBSAP) 2026–2030 is designed as a cross-cutting national development framework. Its five strategic objectives—reducing direct pressures on biodiversity; protecting and restoring ecosystems and species; promoting sustainable and equitable use; mainstreaming biodiversity into governance and development; and strengthening the means of implementation—connect directly with Somalia’s development agenda. Particularly, the NBSAP connects with the National Transformation Plan (NTP) 2025–2029, the NDC 3.0, National Adaptation Plan 2025, land degradation neutrality agenda, Blue Economy Strategy and the different sector policies. The NBSAP also connects well with the UN Sustainable Development Cooperation Framework 2026–2030. The strongest SDG linkages are with SDGs 1, 2, 5, 6, 8, 9, 11, 12, 13, 14, 15, 16 and 17, varying by objective. The NBSAP itself frames biodiversity as inseparable from food and water security, poverty reduction, livelihoods, climate resilience, economic development and human well-being. Table 7(b) presents a summary of the linkage between the NBSAP and Somalia’s various developmental agenda.

Table 8 – Table Linking NBSAP to Somalia’s Development Agenda and SDGs

NBSAP Strategic Objective	Development Agenda / SDGs	Description
1. Reduce direct pressures on biodiversity	National agenda: NTP Pillar 2 (Sustainable Economic Transformation) and Pillar 4 (Environment and Climate Resilience); NDC 3.0; NAP 2025; land/forest/fisheries and pollution agendas. SDGs: 2, 6, 11, 12, 13, 14, 15.	Objective 1 addresses pressures that undermine Somalia’s productive and resilience assets: degradation of rangelands and forests, unsustainable harvesting, overgrazing, overfishing, pollution and invasive species. These pressures affect livestock, agriculture, water, fisheries, coastal protection and household energy security. It therefore supports the NTP’s sustainable economic transformation and environment/climate-resilience pillars. Reducing these pressures also advances food production, water security, sustainable consumption, climate resilience and healthy marine and terrestrial ecosystems. NBSAP measures such as sustainable fisheries, reduced charcoal pressure, pollution control, safeguards and restoration can be incorporated into NTP, climate and sector investments while contributing to SDGs 2, 6, 12, 13, 14 and 15.
2. Protect and restore ecosystems and species	National agenda: NTP Pillar 4 (Environment and Climate Resilience); NAP 2025 biodiversity/ecosystems adaptation actions; NDC 3.0 ecosystem restoration and resilience; LDN/restoration agenda. SDGs: 2, 6, 11, 13, 14, 15.	Objective 2 provides the ecological foundation for resilience and long-term development. The NBSAP calls for restoration of rangelands, forests, riverine habitats, wetlands, mangroves and reefs, together with effective conservation, species recovery and connectivity. This directly reinforces climate adaptation because healthy ecosystems regulate water, reduce erosion, protect coasts and strengthen resilience to droughts and floods. The strongest SDG links are SDGs 13, 14 and 15, while restoration of watersheds, wetlands and productive landscapes also supports SDGs 2 and 6. Somalia’s NAP 2025 explicitly identifies biodiversity and ecosystems as an adaptation area, including rehabilitation of rangelands, mangroves and forests and ecosystem-based adaptation, creating a direct biodiversity–climate investment pathway.
3. Promote sustainable and equitable use	National agenda: NTP Pillar 2 (Sustainable Economic Transformation), Pillar 3 (Social and Human Capital Transformation) and Pillar 4; Blue Economy Strategy; agriculture, livestock, forestry and fisheries policies; community/customary stewardship. SDGs: 1, 2, 5, 8, 12, 14, 15.	Objective 3 connects biodiversity directly to Somalia’s productive economy and poverty-reduction agenda. The NBSAP recognizes pastoralism, agriculture, fisheries, forestry and other natural-resource activities as foundations of employment, household income, food security and trade. Sustainable use therefore protects the ecological productivity of these sectors while improving benefit-sharing and respecting community and customary stewardship. This creates direct links to SDGs 1, 2 and 8 through resilient livelihoods and sustainable production, and to SDG 5 through gender-responsive participation. It also supports SDGs 12, 14 and 15. NBSAP actions can be embedded in livestock, agriculture, fisheries, forestry and blue-economy programmes, with biodiversity safeguards and livelihood indicators incorporated into sector results frameworks.
4. Mainstream biodiversity into governance and development	National agenda: NTP Pillar 1 (Transformational Governance), Pillar 2 and Pillar 4; NDC 3.0; NAP 2025; LDN; National Environment Policy; Blue Economy Strategy; sector planning; UN Cooperation Framework 2026–2030. SDGs: 9, 11, 12, 13, 16, 17.	Objective 4 recognizes that biodiversity outcomes depend on decisions made outside the environment sector. The NBSAP therefore calls for biodiversity integration into national and subnational planning, public investment, infrastructure, climate action, humanitarian response, business practice and environmental assessment. This aligns closely with the NTP’s governance and sustainable-transformation agenda and helps ensure that investments account for ecosystem services, environmental risks and long-term resilience. The objective operationalizes integrated development across the SDGs. Environmental assessment, spatial planning, public-finance integration

		and institutional coordination contribute to SDGs 9, 11, 12, 13 and 16, while government–community–private-sector–development-partner coordination supports SDG 17. The UN Cooperation Framework 2026–2030 explicitly aligns UN support with the NTP and combines governance, resilient economic growth, human capital and climate/environment systems.
5. Strengthen the means of implementation	National agenda: all NTP pillars, especially governance, institutional capacity, economic transformation, human capital and environment/climate resilience; NIMEF; UN Cooperation Framework 2026–2030. SDGs: 5, 9, 13, 15, 16, 17.	Objective 5 provides the enabling conditions for the other four objectives to produce measurable development results. The NBSAP identifies institutional capacity, biodiversity information, technology, financing, partnerships, participation, gender responsiveness, monitoring and accountability as core implementation requirements. These correspond with Somalia’s national planning and monitoring architecture and with the SDG emphasis on effective institutions and partnerships. The strongest means-of-implementation links are capable institutions and accountability (SDG 16), partnerships and resource mobilization (SDG 17), gender-responsive participation (SDG 5), information and technology (SDG 9), and climate and biodiversity finance/capacity (SDGs 13 and 15). The NBSAP should therefore be reflected in national investment pipelines, annual plans and budgets, monitoring systems, partner programmes and biodiversity-finance mechanisms rather than implemented as a parallel planning process.

5.6 GUIDING PRINCIPLES

Implementation of the NBSAP will be guided by the following principles.

Table 9 – Guiding Principles table

Principles	Rationale
National ownership and federal cooperation	The Federal Government of Somalia will provide national leadership while recognizing the constitutional roles and operational responsibilities of Federal Member States and local governments.
Whole-of-government approach	Biodiversity will be treated as a cross-sectoral development concern involving environment, livestock, agriculture, fisheries, water, energy, finance, planning, infrastructure, education, trade, petroleum and local government institutions.
Whole-of-society participation	Communities, customary leaders, women, young people, pastoralists, farmers, fishers, displaced populations, academia, civil society and the private sector will be involved in planning, implementation and monitoring.
Human-rights-based and socially inclusive implementation	Conservation measures will respect legitimate tenure, customary use, access to resources, cultural values and procedural rights. They should not result in unjustified displacement, exclusion or loss of livelihoods.
Recognition of traditional knowledge	Traditional and local ecological knowledge will be respected and incorporated, with the consent and participation of knowledge holders, alongside scientific evidence.

Ecosystem approach	Natural resources will be managed as interconnected ecological systems rather than isolated sites or species.
Precautionary principle	The absence of complete scientific information will not be used to postpone reasonable action where there is a risk of serious or irreversible biodiversity loss.
Mitigation hierarchy	Development activities will first avoid biodiversity impacts, then minimize unavoidable impacts, restore affected ecosystems and address significant residual impacts through appropriate measures.
Climate resilience and conflict sensitivity	Biodiversity interventions will consider climate risks, resource competition, pastoral mobility, displacement and the potential for either conflict or cooperation.
Evidence-based and adaptive management	Programmes will establish measurable baselines, monitor results and adjust interventions in response to evidence and changing conditions.

5.7 THEORY OF CHANGE

Somalia's biodiversity is declining because direct pressures – including habitat degradation, tree cutting, unsustainable grazing, overfishing, pollution and land conversion – are reinforced by poverty, climate change, insecurity, weak governance, inadequate information and limited financing.

If Somalia:

- strengthens biodiversity governance and coordination;
- establishes reliable ecological baselines;
- applies inclusive land, water and marine spatial planning;
- protects and restores priority ecosystems;
- supports sustainable livelihoods and production systems;
- strengthens community and customary resource management;
- regulates harmful activities and improves compliance;
- mobilizes long-term biodiversity finance; and
- ensures meaningful participation by women, youth and resource-dependent communities;

then direct pressures on biodiversity will decline, ecosystem condition will improve, threatened species will have greater prospects for recovery and communities will receive more secure and equitable benefits from nature. These outcomes will improve food and water security, climate resilience, disaster-risk reduction, livelihoods and sustainable economic development.



Figure 22 – Theory of Change for Somalia's updated NBSAP

5.8 STRUCTURE OF THE NATIONAL TARGETS

The 20 national targets are grouped under the five National Biodiversity strategic objectives. Table 9 presents the linkages among the Strategic Objectives, the national targets the Kunming Montreal Global Biodiversity Framework and its 23 targets.

Table 10 – National targets grouping

No.	Strategic Objectives	National Targets	Linkage to Goals of KMGBF	Linkage to the KMGBF targets
1	Reduce direct pressures on biodiversity	Target 1: Biodiversity -inclusive Spatial Planning Target 3: Protected Areas and Other Effective Conservation Measures Target 7: Pollution Reduction Target 8: Biodiversity and Climate Change	Goal A	Global targets 1, 3, 7, 8
2	Protect and restore ecosystems and species	Target 2: Ecosystem Restoration Target 4: Species Conservation and Recovery Target 5: Sustainable, Safe and Legal Use of Wild Species Target 6: Invasive Alien Species	Goal A	Global targets 2, 4, 5, 6
3	Promote sustainable and equitable use	Target 9: Sustainable Nature-Based Livelihoods Target 10: Sustainable Agriculture, Livestock, Fisheries and Forestry	Goal B and Goal C	Global targets 9, 10, 11, 13

		Target 11: Nature's Contributions to People Target 13: Genetic Resources and Benefit-Sharing		
4	Mainstream biodiversity into governance and development	Target 12: Biodiversity in Urban and Settled Areas Target 14: Biodiversity Mainstreaming Target 15: Business and Financial-Sector Responsibility Target 16: Sustainable Consumption and Reduced Waste	Goal D	Global targets 12, 14, 15, 16
5	Strengthen the means of implementation	Target 17: Biosafety and Biotechnology Target 18: Reform of Harmful Incentives Target 19: Biodiversity Finance Target 20: Capacity, Technology, Knowledge and Participation	Goal D	Global targets 17, 18, 19, 20, 21, 22, 23

The targets should be implemented as an integrated package. Restoration will not succeed without reducing the pressures that caused degradation, while conservation cannot be sustained without community participation, equitable benefits, financing and institutional capacity.

5.9 STRATEGIC OBJECTIVE I: REDUCE DIRECT PRESSURES ON BIODIVERSITY

This strategic objective addresses the immediate human pressures that are driving biodiversity loss across Somalia's terrestrial, freshwater, coastal and marine environments. Habitat degradation and conversion, unsustainable harvesting of woody resources, overgrazing, overfishing, pollution, invasive species and climate-related pressures are interconnected threats that affect the biodiversity of Somalia. These pressures are intensified by poverty, energy insecurity, displacement, rapid urbanization, weak resource governance and limited environmental information. The objective therefore focuses on preventing and reducing the causes of biodiversity decline rather than relying only on restoration after damage has occurred. Priority responses include reducing dependence on unsustainably produced charcoal and fuelwood; improving fisheries licensing, monitoring and community-based management; preventing wildlife trafficking and bycatch; establishing invasive-species prevention and early-warning systems; improving solid-waste, wastewater and hazardous-material management; and applying environmental assessment and the mitigation hierarchy consistently. It also recognizes the need to manage cumulative impacts from infrastructure, agriculture, water and energy development. Reducing these pressures will help maintain ecosystem functions, improve ecological resilience and support the livelihoods and food and water security of communities that depend directly on natural resources

NATIONAL TARGET 1: BIODIVERSITY-INCLUSIVE SPATIAL PLANNING

National Target 1: Biodiversity-inclusive Spatial Planning

By 2030, Somalia has established and begun implementing participatory, integrated and biodiversity-inclusive spatial planning or other effective management processes for priority terrestrial, freshwater, coastal and marine areas, with measures in place to bring the loss of areas of high biodiversity importance close to zero.

Corresponding KMGBF target 1: Plan and manage all areas to reduce biodiversity loss, with special attention to areas of high biodiversity importance.

National Indicators

- Plan and manage all areas to reduce biodiversity loss.

Headline Indicators

- Proportion of Somalia covered by biodiversity-inclusive spatial plans or other effective area-based management processes.

Component Indicators

- Number of Federal Member States (FMS) with approved biodiversity-informed spatial plans.
- Number of strategic environmental assessments (SEAs) incorporating biodiversity information.

Connectivity Indicators

- Extent of mapped pastoral mobility corridors, drought refuges and ecological corridors integrated into spatial plans.

Complementary Indicators

- Area of high-biodiversity-importance ecosystems affected by documented land- or sea-use change.
- Number of districts using natural capital in planning
- ProtConn - connectivity of planned areas

Table 11 – National target 1

Strategy	Action	Proposed Activities	Baseline 2026	Output indicators	Lead Agency	Partner institutions	Cost in USD
National ecosystem knowledge base	Produce and validate national ecosystem, land-cover and high-biodiversity-value maps	Compile and quality-check existing land-cover/remote-sensing data; validate through field verification; identify areas of high biodiversity value, ecological integrity and ecosystem-service importance; publish a national ecosystem/land-cover atlas.	No validated national ecosystem or land-cover atlas currently exists	A validated national ecosystem/land-cover atlas is produced and endorsed by MoECC.	Ministry of Environment and Climate Change (MoECC)	Ministry of Planning; FMS environment authorities; FAO-SWALIM; UNDP	US\$0.8-1.5 million (2026 mapping phase; indicative, may draw on the US\$18.95M GEF/UNDP project 11414 "Conserving Terrestrial and Marine Biodiversity...in Somalia", 2026-2032)
Biodiversity-inclusive land, water and marine planning	Integrate biodiversity into land-use, watershed, coastal and marine spatial planning	Mainstream priority-area and corridor maps into land-use, watershed and marine spatial plans; map wetlands, riparian buffers, mangroves, reefs, seagrass beds and fisheries nursery areas; establish biodiversity screening requirements for infrastructure, petroleum, mining and urban-development plans.	Spatial planning processes at federal and FMS level currently apply no standard biodiversity screening requirement.	Priority-area and corridor maps completed; number of SEAs using biodiversity data.	MoECC	Ministry of Planning; Ministry of Public Works; Ministry of Fisheries and Blue Economy; Lands; Water	US\$0.5-1.0 million (2027-2028; indicative)
Federal Member State biodiversity profiling and community recognition	Develop FMS spatial biodiversity profiles and ensure community participation	Prepare a biodiversity profile for each Federal Member State; establish participatory procedures that recognise legitimate customary rights and community-conserved areas within spatial plans.	Approved, biodiversity-informed spatial profile (NBSAP Annex 1, 2030 result target: 100% of FMS profiled).	Number of FMS with approved biodiversity-informed spatial plans; area and share of priority geography covered by biodiversity-inclusive plans.	MoECC	FMS environment authorities; local/customary institutions	US\$1.5-2.5 million (2029-2030 implementation and review; indicative)

National Target 3: Protected Areas and Other Effective Conservation Measures

By 2030, Somalia has conserved at least 30% of its terrestrial and inland-water areas and at least 30% of its coastal and marine areas through ecologically representative, well-connected, effectively and equitably managed protected areas and other effective area-based conservation measures, subject to verified national baselines and respect for community rights.

Corresponding KMGBF target 3: Conserve and effectively manage at least 30% of terrestrial, inland water, coastal and marine areas by 2030 ("30x30"), through ecologically representative and well-connected systems of protected areas and OECMs.

National Indicators

- Conserve at least 30% of terrestrial/inland-water and 30% of coastal/marine areas through effective and equitable area-based conservation.

Headline Indicators

- Coverage of protected areas and other effective area-based conservation measures (percentage of terrestrial/inland-water and coastal/marine area conserved).

Component Indicators

- Proportion of conservation areas with effective management arrangements (Protected Area Management Effectiveness results).
- Coverage of areas important for biodiversity (KBAs) within protected areas and OECMs.

Connectivity Indicators

- Improvement in ecological connectivity between conservation areas (corridor mapping and designation).

Complementary Indicators

- Number of recognized community-managed conservation areas.
- Management Effectiveness - METT score
- Number of functioning LMMAs

Table 12 – National target 3

Strategy	Action	Proposed Activities	Baseline 2026	Output indicators	Lead Agency	Partner institutions	Cost in USD
Verify and analyze the existing protected-area estate	Verify existing conservation areas and complete a protected-area/OECM gap analysis	Verify the location, boundaries, legal status and ecological condition of existing conservation areas; undertake a national PA/OECM gap analysis; prioritise Key Biodiversity Areas, mountain refuges, riverine forests, wetlands, mangroves, reefs,	As of 2026, the World Database on Protected Areas lists only 21 designated protected areas for Somalia, none with a recorded management-effectiveness evaluation, and no reported OECMs (UNEP-WCMC/Protected Planet, September 2026) - implying current verified	Verified conservation-area register; national PA/OECM gap analysis.	MoECC	FMS; Ministry of Fisheries and Blue Economy; Lands; local authorities	US\$0.4-0.8 million (2026 verification/gap analysis; indicative)

		islands and migration corridors.	coverage is far below the 30% terrestrial/inland-water and 30% coastal/marine targets.				
Designation and management planning	Establish recognition procedures and prepare financed management plans	Establish clear, participatory procedures for protected-area and OECM recognition; prepare management plans with defined governance, staffing, financing and monitoring; strengthen community-conserved areas and customary grazing reserves; develop marine protected and community-managed fishing areas.	No standard national procedure currently exists for OECM recognition; community-conserved areas and customary grazing reserves are not formally counted toward national coverage.	Legal/recognition procedures adopted; management plans in place for priority sites; terrestrial/inland-water and coastal/marine percentage conserved.	MoECC	FMS; local/customary institutions; Ministry of Fisheries and Blue Economy	US\$5-12 million (2027-2028 designation and planning; can draw on GEF/UNDP project 11414, US\$18.95 million total, 2026-2032, which is explicitly designed to establish sustainably managed protected areas in Somalia)
Safeguards and effectiveness assessment	Establish safeguards against displacement and assess management effectiveness	Establish safeguards against involuntary displacement and unfair restriction of resource access; improve ecological connectivity between conservation areas; conduct Protected Area Management Effectiveness (PAME) assessments.	No PAME assessments have been conducted for any of Somalia's 21 listed protected areas (Protected Planet, 2026).	Share of conservation areas with effective management arrangements; PAME assessment results.	MoECC	FMS; civil society/community representatives	US\$0.6-1.2 million (2029-2030 management assessment; indicative)

National Target 7: Pollution Reduction

By 2030, pollution risks and their impacts on biodiversity and ecosystem functions are significantly reduced, including risks from solid waste, plastics, wastewater, agricultural chemicals, oil, hazardous substances and abandoned fishing gear.

Corresponding KMGBF target 7: Reduce pollution risks and the negative impact of pollution from all sources to levels that are not harmful to biodiversity and ecosystem functions.

National Indicators

- Reduce pollution to levels that are not harmful to biodiversity and ecosystem functions.

Headline Indicators

- Trends in water quality at selected riverine and coastal monitoring sites.

Component Indicators

- Quantity of plastic and solid waste collected or prevented from entering ecosystems.
- Proportion of priority municipalities with controlled waste-disposal arrangements.
- Percentage reduction in charcoal production
- Number of active charcoal kilns in Afmadow corridor
- Kg of plastic waste per km of Kismayo beach

Connectivity Indicators

- NA

Complementary Indicators

- Number of ports with waste- and fishing-gear reception facilities.
- National oil-spill contingency arrangements established and tested.
- Fertilizer use per ha in place like Shabelle
- Water Quality Index in places like Juba river

Table 13 – National target 7

Strategy	Action	Proposed Activities	Baseline 2026	Output indicators	Lead Agency	Partner institutions	Cost in USD
Standards and monitoring	Establish biodiversity-sensitive pollution standards and monitor hotspots	Establish biodiversity-sensitive pollution standards; identify and monitor priority pollution hotspots (e.g. Mogadishu, Kismayo and other coastal urban centres); require biodiversity baselines and safeguards for offshore petroleum exploration and any future extraction.	Insufficient data	Pollution standards and hotspot inventory published.	MoECC	Municipalities; Ministry of Health; Water; MoAI	US\$0.5-1.0 million (2026 standards/baselines; indicative)

Solid waste, plastics and wastewater management	Improve municipal collection, disposal and wastewater systems; reduce plastic leakage	Improve solid-waste collection and controlled disposal; reduce plastic leakage into rivers, drainage systems and coastal waters; improve sewage and wastewater management in priority urban and coastal areas; develop port and fishing-gear reception/recovery systems.	Municipal solid-waste collection and controlled disposal coverage is low in most Somali cities, with widespread informal dumping and open burning reported in urban assessments	Municipal/port waste systems established; waste collected/diverted; priority municipalities with controlled disposal.	MoECC	Ministry of Public Works; Municipalities; Water	US\$5-10 million (2027-2029 infrastructure and enforcement; can draw on GEF/LDCF project 11564, US\$13.93 million total)
Agro-chemical management and oil-spill preparedness	Promote integrated pest management and strengthen oil-spill response capacity	Promote integrated pest management and safer agricultural-chemical use; establish systems for hazardous and medical-waste management; strengthen oil-spill prevention, preparedness, liability and response capacity.	Somalia currently has no tested national oil-spill contingency plan	National oil-spill contingency arrangements established and tested; trends in water quality at monitored sites.	MoECC	MoAI; petroleum sector operators; Ministry of Health	US\$1-2 million (2030 impact assessment; indicative, partly funded through polluter-pays fees and petroleum operator obligations)

NATIONAL TARGET 8: BIODIVERSITY AND CLIMATE CHANGE

National Target 8: Biodiversity and Climate Change

By 2030, the impacts of climate change and ocean acidification on biodiversity are reduced, and ecosystem-based adaptation, restoration and nature-based solutions are implemented to strengthen the resilience of ecosystems and vulnerable communities.

Corresponding KMGBF target 8: Minimize the impact of climate change and ocean acidification on biodiversity, build ecosystem resilience, and use nature-based solutions for mitigation and adaptation.

National Indicators

- Minimize climate impacts on biodiversity and build resilience.

Headline Indicators

- Area covered by ecosystem-based adaptation (EbA) and nature-based solutions (NbS) measures.

Component Indicators

- Number of national and subnational climate plans (NAP/NDC) incorporating biodiversity.
- Area of climate-refuge and coastal-protection ecosystems under management.
- Climate vulnerability and ecosystem-resilience
- Ha of ecosystem providing climate adaptation - mangrove, rangeland shade

- Number of boreholes with drought-reserve grazing bylaws

Connectivity Indicators

- Identification and protection of climate refuges and ecological corridors linking resilient habitats.

Complementary Indicators

- Number of communities benefiting from ecosystem-based adaptation.
- Trends in selected climate-sensitive ecosystems and species (e.g. coral bleaching, shoreline change).
- Ecosystem-based Adaptation effectiveness score
- Ocean acidification pH at Kismayo

Table 14 – National target 8

Strategy	Action	Proposed Activities	Baseline 2026	Output indicators	Lead Agency	Partner institutions	Cost in USD
Align biodiversity with national climate frameworks	Integrate biodiversity into implementation of Somalia's NAP and NDC	Align NBSAP implementation with Somalia's National Adaptation Plan (NAP) and Nationally Determined Contribution (NDC); integrate climate projections into protected-area and species planning; establish environmental and social safeguards for nature-based solutions.	No baseline information	Joint NBSAP-NAP-NDC programme document.	MoECC	Somali Disaster Management Agency (SoDMA); Water; MoAI; Livestock	US\$0.5-1.0 million (2026 vulnerability assessment; indicative)
Ecosystem-based adaptation implementation	Restore rangelands, watersheds, wetlands, mangroves and coastal vegetation as climate-resilience measures	Restore rangelands, watersheds, wetlands, mangroves and coastal vegetation as climate-resilience measures; develop ecosystem-based drought- and flood-risk-reduction interventions; promote native, climate-resilient species in restoration, strengthening	The Adaptation Fund/UNEP "Enhancing Adaptation and Resilience through Nature-Based Solutions" (EARNSS) project (US\$5.0 million, 5 years, approved) and the Adaptation Fund/IFAD "Green and	EbA site portfolio; climate-refuge maps; area under EbA.	MoECC	SoDMA; Water; MoAI; Livestock	US\$15 million (existing pipeline: US\$5.0 million EARNSS + US\$10.0 million Hal-abuur, 2026-2032; additional scale-up indicative)

		mountain ecosystem resilience.	Resilient Ecosystems for Somali Livelihoods" (Hal-abuur) project (US\$10.0 million, 2026-2032) provide the current national baseline of funded EbA/NbS activity;				
Monitoring and safeguards	Monitor climate-sensitive indicators and prevent maladaptation	Monitor coral bleaching, shoreline change and other climate-sensitive indicators; prevent poorly designed climate projects from damaging biodiversity or community rights.	Somalia currently lacks a functioning long-term coral-reef or shoreline-change monitoring programme (NBSAP Chapter 3/5).	Trends in selected climate-sensitive ecosystems and species; climate plans incorporating biodiversity.	MoECC	Ministry of Fisheries and Blue Economy; universities	US\$0.4-0.8 million (2030 resilience review; indicative)

5.10 STRATEGIC OBJECTIVE 2: PROTECT AND RESTORE ECOSYSTEMS AND SPECIES

Strategic Objective 2 focuses on maintaining the ecological foundation on which Somalia's biodiversity, livelihoods and resilience depend. It seeks to restore degraded ecosystems, establish effective and representative conservation systems, recover threatened species and maintain ecological connectivity across landscapes and seascapes. This strategy recognizes the importance of rangelands, forests and woodlands, rivers and wetlands, coastal and marine ecosystems, mangroves and other habitats, while also emphasizing threatened species and genetic diversity. Conservation is intended to extend beyond isolated protected areas through connected landscapes, pastoral mobility corridors, seasonal grazing reserves, drought refuges and community and customary management systems. Restoration priorities include degraded rangelands, forests, riverbanks, wetlands, mangroves and watersheds. The objective also responds to the need for reliable ecological baselines, ecosystem mapping, species information and monitoring so that conservation and restoration can be targeted and their effectiveness assessed. In Somalia's climate-vulnerable context, protecting and restoring ecosystems also strengthens adaptation, disaster-risk reduction and the continued provision of ecosystem services. The approach recognizes that restoration alone cannot succeed unless the underlying drivers of degradation are simultaneously reduced and local communities and rights-holders are meaningfully involved.

National Target 2: Ecosystem Restoration

By 2030, at least 30% of degraded terrestrial, inland-water, coastal and marine ecosystems identified through the national baseline are under effective restoration, with measurable improvements in ecological integrity, connectivity, ecosystem functions and community benefits.

Corresponding KMGBF target 2: Ensure that at least 30% of degraded terrestrial, inland water, coastal and marine ecosystems are under effective restoration by 2030.

National Indicators

- Restore at least 30% of degraded ecosystems where the national baseline and priority geography have been verified.

Headline Indicators

- Area and proportion of degraded ecosystems under effective restoration.

Component Indicators

- Area showing improvement in vegetation cover, soil condition or hydrological function.
- Survival and natural-regeneration rates in restoration sites.

Connectivity Indicators

- Restoration of riparian buffers along the Juba and Shabelle rivers as connective corridors between upland and floodplain ecosystems.

Complementary Indicators

- Number of community-managed restoration agreements.
- Number of women and young people receiving restoration-related employment or livelihood benefits.

Table 15 – National target 2

Strategy	Action	Proposed Activities	Baseline 2026	Output indicators	Lead Agency	Partner institutions	Cost in USD
Establish restoration baseline and priorities	Establish a national degradation and restoration baseline and identify priority landscapes/seascapes	Compile degradation data (remote sensing, field plots); select priority restoration landscapes and seascapes; produce a national restoration opportunity map.	No verified national baseline of degraded-area extent exists.	National restoration baseline and opportunity map published.	MoECC	FMS; Ministry of Livestock; Ministry of Agriculture and Irrigation (MoAI); Water	US\$0.5-1.0 million (2026 baseline/pilots; indicative)
Rangeland, watershed and riparian restoration	Restore rangelands, watersheds, water-point surroundings and river riparian buffers	Apply grazing management, native reseedling and assisted natural regeneration; rehabilitate degraded watersheds and water-point surroundings; restore riparian buffers along the Juba and	Restoration to date has been limited to isolated donor-funded pilots (e.g. under IFAD's Rural Livelihoods Resilience Programme and A2R2); no	Hectares and percentage of degraded ecosystems under effective restoration; survival/regeneration rate.	MoECC	MoAI; Livestock; Water; FMS	US\$10-40 million (2027-2029 scale-up; can draw on IFAD/GEF Adaptive Agriculture and Rangeland Rehabilitation Project A2R2, US\$41.46 million, 2023-2028, and the FAO/GCF Climate

		Shabelle rivers; promote farmer-managed natural regeneration and agroforestry.	nationally reported hectareage under effective restoration.				Resilient Agriculture in Somalia "Ugbaad" project, US\$94.9 million, 2024-2031)
Coastal and marine ecosystem restoration	Restore mangroves, wetlands, coastal dunes and other natural protective systems	Restore mangroves using suitable native species and hydrological assessment; rehabilitate wetlands and coastal dunes; establish long-term restoration monitoring and survival-rate standards; prevent introduction of invasive or ecologically unsuitable species in restoration.	Somalia's mangrove and coastal-wetland extent and condition are last comprehensively documented in FAO/UNEP assessments from the early 2000s-2010s; no current, validated national figure exists.	Restored coastal/mangrove sites; hectares with improved vegetation, soil or hydrological condition.	MoECC	Ministry of Fisheries and Blue Economy; FMS coastal authorities	US\$2-5 million (2028-2030 effectiveness assessment; indicative, blended with Adaptation Fund/GCF blue-carbon financing)

NATIONAL TARGET 4: SPECIES CONSERVATION AND RECOVERY

National Target 4: Species Conservation and Recovery

By 2030, urgent management actions are being implemented to halt human-induced extinctions, reduce extinction risks, recover priority threatened species and maintain the genetic diversity of Somalia's wild species.

Corresponding KMGBF target 4: Halt human-induced extinction of known threatened species, recover and conserve populations, and maintain genetic diversity within and between populations of native, wild and domesticated species.

National Indicators

- Implement urgent measures to prevent extinctions of African Wild Dog, Somali Wild Ass, Cheetah, Dugong + % of frankincense trees with viable population and reduce extinction risk.

Headline Indicators

- Red List Index/change in conservation status of assessed Somali species. Species assessed; priority species with recovery plans; change in conservation status or abundance.

Component Indicators

- Number of species assessed for national conservation status.
- Number of priority species covered by implemented recovery plans.
- Species Recovery Score for flagship species

Connectivity Indicators

- Area of critical habitat (breeding, nesting, nursery, feeding and migration areas) under effective protection or management.

Complementary Indicators

- Number of reported and successfully addressed wildlife-trafficking incidents.

- Recorded bycatch of priority marine species.
- Living Planet Index – Somalia
- Species Habitat Index

Table 16 – National target 4

Strategy	Action	Proposed Activities	Baseline 2026	Output indicators	Lead Agency	Partner institutions	Cost in USD
Species assessment and prioritization	Prepare updated national threatened-species assessments and identify priority species	Update national Red Lists; identify priority endemic, threatened, migratory and culturally important species; establish systematic surveys using field observation, camera traps, acoustic methods and environmental DNA where appropriate.	192 mammal species/subspecies have been assessed for Somalia on the IUCN Red List, of which 2 are Critically Endangered, 1 Endangered, 12 Vulnerable and 4 Near Threatened (IUCN Red List)	Updated national priority-species list and Red List assessments.	MoECC	Ministry of Fisheries and Blue Economy; FMS; universities	US\$0.5-1.0 million (2026 priority list and protocols; indicative)
Recovery planning and implementation	Develop and implement species and marine-megafauna recovery plans	Develop and implement species recovery plans; implement national action plans for sharks, marine turtles, seabirds and marine mammals; protect nesting, breeding, nursery, feeding and migration areas; develop protocols for confiscated, injured or stranded wildlife.	No marine turtle, shark, seabird or marine-mammal national action plan is currently operational in Somalia.	Recovery plans implemented for agreed priority species; protected critical habitats; abundance/status trend for selected species.	MoECC	Ministry of Fisheries and Blue Economy; FMS; CITES/CMS focal institutions	US\$2-4 million (2027-2029 implementation; indicative, potentially co-financed through PERSGA regional marine-species programmes)

Anti-trafficking and enforcement	Reduce illegal capture and trade in cheetahs and other wildlife; reduce bycatch	Reduce illegal capture and trade in cheetahs and other wildlife; strengthen measures to reduce marine bycatch and abandoned fishing gear; strengthen cooperation under relevant regional and international agreements (CITES, CMS).	Somalia (particularly Somaliland/Puntland) is a documented transit route for illegal live cheetah cub trafficking to the Gulf, but no systematic national trafficking database currently exists (NBSAP Annex 1 gap statement).	Number of reported and successfully addressed wildlife-trafficking incidents.	MoECC	Customs; CITES/CMS focal institutions; FMS	US\$0.5-1.0 million (2030 reassessment period; indicative)
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NATIONAL TARGET 5: SUSTAINABLE, SAFE AND LEGAL USE OF WILD SPECIES

National Target 5: Sustainable, Safe and Legal Use of Wild Species

By 2030, the harvesting, use and trade of wild terrestrial, freshwater and marine species are legal, sustainable and safe, with measures in place to prevent overexploitation, minimize impacts on non-target species and protect customary sustainable use.

Corresponding KMGBF target 5: Ensure that the use, harvesting and trade of wild species is safe, legal and sustainable, preventing overexploitation, minimizing impacts on non-target species and protecting customary sustainable use by indigenous peoples and local communities.

National Indicators

- Ensure sustainable, safe and legal use of wild species.

Headline Indicators

- Proportion of priority fisheries and wild-resource value chains operating under enforceable sustainability, legality and traceability arrangements.

Component Indicators

- Proportion of recorded harvest originating from legal and regulated sources.
- Number of community-based sustainable-use agreements.

Connectivity Indicators

NA

Complementary Indicators

- Trends in bycatch involving threatened species.
- Number of priority wild-resource value chains operating under sustainability standards.
- CITES trade database for Somalia
- Volume of illegal charcoal seized

Table 17 – National target 5

Strategy	Action	Proposed Activities	Baseline 2026	Output indicators	Lead Agency	Partner institutions	Cost in USD
Science-based harvest management	Set precautionary harvest rules and improve fisheries data systems	Establish science- and precaution-based harvesting rules for priority species; improve fisheries stock assessments, catch records and landing-site monitoring; strengthen licensing, vessel monitoring and action against illegal, unreported and unregulated (IUU) fishing.	Catch, effort and wild-harvest/trade data are fragmented across federal and FMS fisheries authorities, with no unified national fisheries data system	Harvest and trade regulations issued; fisheries data system operational; monitored landing sites.	Ministry of Fisheries and Blue Economy	MoECC; FMS fisheries/environment authorities; Livestock; MoAI	US\$1-3 million (2026 rules/data design; indicative, complementary to the US\$55.0 million BADMAAL project)
Non-timber forest product and medicinal plant value chains	Develop sustainable harvesting standards for gums, resins, medicinal plants and other non-timber products	Develop and enforce sustainable harvesting standards for frankincense, myrrh, gums, resins and medicinal plants; improve traceability for high-risk wildlife, fisheries and forest products; support community-based natural-resource management.	Somalia's frankincense- and myrrh-producing landscapes (Golis/Cal Madow) are identified in as a national geographic priority, but no sustainability certification or harvesting-quota system currently applies to these value chains.	Sustainable harvesting standards adopted; number of community-based sustainable-use agreements.	Ministry of Commerce / MoECC	FMS; Livestock; Agriculture	US\$0.5-1.5 million (2027-2029; indicative)
Enforcement and cross-border cooperation	Regulate wildlife trade and strengthen cross-border enforcement	Regulate hunting, wildlife capture and wildlife trade; develop safe-release procedures for marine bycatch; strengthen cross-border cooperation and enforcement with neighboring states.	No sufficient data	Priority fisheries and wild-resource sectors with implemented management measures; share of recorded harvest from regulated sources.	Ministry of Fisheries and Blue Economy	MoECC; Customs; FMS	US\$0.5-1.0 million (2030 compliance review; indicative)

National Target 6: Invasive Alien Species

By 2030, pathways for the introduction of invasive alien species are identified and managed; the introduction and establishment of priority invasive species are prevented; and the impacts of established invasive species are reduced in priority ecosystems.

Corresponding KMGBF target 6: Reduce the introduction and establishment of invasive alien species by at least 50%, and manage or eradicate them to reduce their impacts.

National Indicators

- Manage invasive alien species and pathways.

Headline Indicators

- Rate of invasive alien species introduction and establishment (priority species/pathways assessed and controlled).

Component Indicators

- Area under effective invasive-species control and ecological restoration.
- Number of new introductions detected and contained.
- Percentage of priority pathways under effective management; response time to priority detections.
- Number of districts with IAS management plan

Connectivity Indicators

NA

Complementary Indicators

- Number of functioning early-warning and rapid-response mechanisms.
- Rate of spread via remote sensing
- Cost of IAS control on pastoralists

Table 18 – National target 6

Strategy	Action	Proposed Activities	Baseline 2026	Output indicators	Lead Agency	Partner institutions	Cost in USD
National IAS inventory and risk assessment	Prepare a national inventory and risk assessment of invasive alien species	Prepare a national IAS inventory and risk assessment; map the distribution and impacts of <i>Prosopis juliflora</i> ; identify priority introduction pathways including ports, imported planting materials and ballast water.	No comprehensive national IAS inventory exists.	National IAS inventory; <i>Prosopis</i> distribution map; pathway action plan.	MoECC	MoAI; Livestock; ports authorities; Customs	US\$0.6-1.2 million (2026 inventory and risk analysis; indicative)
Early detection, rapid	Establish early-detection/rapid-response systems	Establish early-detection and rapid-response	Community-level <i>Prosopis</i> control has so far been limited to	Priority species/pathways assessed; hectares	MoECC	MoAI; Livestock; ports; Customs	US\$3-8 million (2027 pilots, 2028-2030)

response and control	and implement integrated control	arrangements for new introductions; develop integrated management programmes for priority invasive species (mechanical, biological and, where appropriate, productive-use approaches to Prosopis); restore treated areas with native vegetation; strengthen quarantine and inspection procedures at ports.	small, donor-funded pilots (e.g. FAO/PENHA "	under control and restoration; new introductions detected and contained.			scale-up; indicative, potentially linked to GEF/GBFF agricultural-landscape financing)
Community awareness and productive-use safeguards	Promote community awareness and reporting; evaluate safe productive uses of invasive biomass	Promote community awareness and reporting of new invasive species sightings; evaluate productive uses of invasive biomass (e.g. Prosopis charcoal/animal feed) only where these will not encourage further spread.	Local perceptions of Prosopis are mixed: pastoralists generally regard it as a rangeland menace, while some community charcoal/livestock-feed enterprises derive income from it (PENHA, 2016)	Community reporting mechanisms established; area under safeguarded productive use.	MoECC	FMS; community/customary institutions	US\$0.3-0.6 million (2028-2030; indicative)

5.11 STRATEGIC OBJECTIVE 3: PROMOTE SUSTAINABLE AND EQUITABLE USE

NBSAP focuses on promoting the sustainable and equitable use of biodiversity and biological resources while supporting livelihoods, food security and economic development. Somalia's rural and coastal economies are closely dependent on nature, including pastoral livestock systems, agriculture, fisheries, forestry and water resources. The objective therefore seeks to ensure that nature-dependent sectors operate within ecological limits and that resource use does not undermine the ecosystems on which future production depends. It includes sustainable management of grazing systems and pastoral mobility, biodiversity-compatible agriculture and forestry, improved fisheries management, sustainable use of wild species and better stewardship of freshwater resources. Community and customary institutions

are particularly important because many natural resources are accessed and managed through local practices and social arrangements. The NBSAP emphasizes participation by pastoralists, farmers, fishers, women, youth and other resource-dependent groups, together with recognition of traditional and local ecological knowledge. Equitable use also includes fair and transparent sharing of benefits arising from biodiversity and genetic resources. By linking conservation with sustainable livelihoods and value chains, this objective seeks to reduce incentives for destructive resource use while strengthening resilience, food security, income opportunities and the long-term economic value of Somalia's natural capital.

NATIONAL TARGET 9: SUSTAINABLE NATURE-BASED LIVELIHOODS

National Target 9: Sustainable Nature-Based Livelihoods

By 2030, the sustainable management and use of wild species and ecosystems provide increased social, economic and nutritional benefits to communities, particularly pastoralists, farmers, fishers, women, youth and other resource-dependent groups.

Corresponding KMGBF target 9: Ensure sustainable management and use of wild species to provide social, economic and environmental benefits, protecting and encouraging customary sustainable use by indigenous peoples and local communities.

National Indicators

- Sustainably manage wild species for people and livelihoods.

Headline Indicators

- Income generated from sustainable biodiversity-based value chains.

Component Indicators

- Number of households benefiting from biodiversity-compatible livelihoods.
- Percentage of supported enterprises complying with sustainability standards.

Connectivity Indicators

NA

Complementary Indicators

- Proportion of beneficiaries who are women or young people.
- Number of community resource-management agreements linked to livelihoods.

Table 19 – National target 9

Strategy	Action	Proposed Activities	Baseline 2026	Output indicators	Lead Agency	Partner institutions	Cost in USD
Value-chain development	Support sustainable fisheries, resin, honey, medicinal-plant and non-timber forest-product value chains	Support sustainable fisheries, resin, honey, medicinal-plant and non-timber forest-product (NTFP) value chains; improve community access to markets, finance, storage and processing; establish equitable benefit-sharing arrangements.	No baseline information .	Supported enterprises and producer groups; sustainability standards and certification established.	Ministry of Commerce / MoECC	Ministry of Fisheries and Blue Economy; MoAI; Livestock; FMS	US\$2-5 million (2026 value-chain studies; indicative, complementary to IFAD Rural Livelihoods Resilience Programme,

							US\$33.23 million, 2024-2032)
Alternatives to harmful livelihoods and eco-tourism	Promote alternatives to environmentally harmful activities and support suitable eco-tourism	Promote alternatives to environmentally harmful livelihood activities (e.g. unsustainable charcoal); support eco-tourism where security, ecological and community conditions are suitable; recognize and support customary sustainable-use practices; increase women's and youth participation in nature-positive enterprises.	Charcoal production remains a principal rural livelihood in parts of south-central Somalia despite the UN Security Council import/export ban (Resolutions 2036 (2012) and 2182 (2014), most recently reaffirmed in Resolution 2776 (2025)), reflecting the continued absence of large-scale, viable alternative livelihoods.	Enterprises meeting sustainability standards; sustainable value-chain income; proportion of beneficiaries who are women or youth.	Ministry of Commerce / MoECC	MoAI; Livestock; FMS	US\$3-6 million (2027-2029 enterprise scale-up; indicative)
Safeguards against overexploitation	Apply safeguards to prevent commercialization from increasing harvesting pressure	Apply safeguards to prevent commercialization from increasing harvesting pressure on wild species; monitor household benefit and harvest-pressure trends together.	No systematic monitoring currently links livelihood-programme uptake with harvest-pressure trends for the species/products concerned.	Household surveys and sustainability audits completed; outcome evaluation report.	MoECC	Ministry of Commerce; FMS	US\$0.3-0.6 million (2030 outcome evaluation; indicative)

NATIONAL TARGET 10: SUSTAINABLE AGRICULTURE, LIVESTOCK, FISHERIES AND FORESTRY

National Target 10: Sustainable Agriculture, Livestock, Fisheries and Forestry

By 2030, areas under agriculture, pastoralism, fisheries, and forestry are managed sustainably, maintaining ecosystem functions, productivity, resilience and genetic diversity while reducing adverse impacts on biodiversity.

National Indicators

- Enhance biodiversity and sustainability in production systems.

Headline Indicators

- Area under participatory rangeland management, biodiversity-friendly agriculture and sustainably managed woodland/fisheries, combined.

Component Indicators

- Area of agricultural land under biodiversity-friendly practices.
- Number of fisheries with approved and implemented management measures.
- Area of woodland under sustainable management.

Corresponding KMGBF target 10: Ensure areas under agriculture, fisheries and forestry are managed sustainably, in particular through sustainable use of biodiversity, to increase the sustainability and resilience of production systems.

Connectivity Indicators

- Protection of pastoral mobility corridors, grazing reserves and drought refuges connecting rangeland units.

Complementary Indicators

- Proportion of supported producers applying soil, water or habitat-conservation practices.
- Trends in productivity and ecological condition in selected production landscapes.

Sustainable Forest Management index for acacia

Table 20 – National target 10

Strategy	Action	Proposed Activities	Baseline 2026	Output indicators	Lead Agency	Partner institutions	Cost in USD
Rangeland and pastoral management	Expand participatory rangeland management and protect mobility corridors	Expand participatory rangeland management and seasonal grazing systems; protect pastoral mobility corridors, grazing reserves and drought refuges; strengthen agricultural and pastoral extension services.	Comparable national baselines for area under participatory rangeland management and adoption of biodiversity-friendly practices are incomplete	Rangeland agreements; area under participatory rangeland management.	Ministry of Agriculture and Irrigation / Ministry of Livestock	Ministry of Fisheries and Blue Economy; MoECC; Water; FMS	US\$20-50 million (2026-2029 scale-up; drawing on S-FSRP, US\$180.0 million, and RLRP, US\$33.23 million)
Agroforestry, soil/water conservation and sustainable charcoal transition	Promote agroforestry, conservation agriculture, IPM, and sustainable charcoal alternatives	Promote agroforestry, conservation agriculture and soil and water conservation; protect riverbank buffers, wetlands and natural drainage systems; improve irrigation efficiency and environmental-flow management; strengthen integrated pest management (IPM) and reduce pesticide risks; develop sustainable charcoal-transition and community woodland programmes; improve sustainability/traceability of gums and resins.	Charcoal remains a leading driver of woodland loss in south-central Somalia notwithstanding the UN charcoal export ban	Sustainable production standards and extension packages; biodiversity-friendly farms; area of woodland under sustainable management.	Ministry of Agriculture and Irrigation	MoECC; Water; FMS; Ministry of Energy	US\$5-10 million (2027-2029; indicative, linked to FAO/GCF "Ugbaad" Climate Resilient Agriculture project, US\$94.9 million total, 2024-2031)
Ecosystem-based fisheries management	Implement ecosystem-based fisheries management	Implement ecosystem-based fisheries management measures; align with the Ministry of Fisheries and Blue Economy's BADMAAL programme on sustainable marine fisheries.	Fisheries management measures are currently implemented for only a limited number of priority fisheries	Number of fisheries with approved and implemented management measures.	Ministry of Fisheries and Blue Economy	MoECC; FMS fisheries authorities	Included within BADMAAL (US\$55.0 million); additional indicative top-up US\$1-2 million for biodiversity-specific components

NATIONAL TARGET 11: NATURE'S CONTRIBUTIONS TO PEOPLE

National Target 11: Nature's Contributions to People

By 2030, ecosystem functions and services -- including water regulation, soil protection, pollination, coastal protection, climate regulation and disaster-risk reduction -- are maintained, restored and equitably accessible.

Corresponding KMGBF target 11: Restore, maintain and enhance nature's contributions to people, including ecosystem functions and services such as regulation of air, water and climate, soil health, pollination and disaster-risk reduction.

National Indicators

- Restore, maintain and enhance nature's contributions to people.

Headline Indicators

- Area of ecosystems important for water, soil and coastal protection under effective management.

Component Indicators

- Number of planning processes using ecosystem-service valuation.
- Change in soil erosion, water retention or shoreline stability at monitored sites.
- Number of people protected from floods by Dhasheeg/mangrove restoration
- Volume of dry-season water maintained in Dhasheegs

Connectivity Indicators

- Maintenance of riparian and watershed corridors linking upstream catchments to downstream floodplain and coastal ecosystems.

Complementary Indicators

- Number of communities benefiting from restored ecosystem services.
- Natural-capital accounts developed and periodically updated.
- Ecosystem Services valuation - USD
- Number of pollinator-dependent farms

Table 21 – National target 11

Strategy	Action	Proposed Activities	Baseline 2026	Output indicators	Lead Agency	Partner institutions	Cost in USD
Ecosystem-service mapping and valuation	Identify and map ecosystems providing nationally important services; assess their economic value	Identify and map ecosystems providing nationally important services (watershed regulation, coastal protection, pollination); assess the economic value of priority ecosystem services; develop natural-capital and ecosystem-service accounts.	No baseline information	Ecosystem-service maps; valuation studies.	MoECC / National Bureau of Statistics	Ministry of Water; SoDMA; Ministry of Finance; Ministry of Planning	US\$0.6-1.2 million (2026 mapping/valuation design; indicative)
Watershed, riparian and coastal protection	Protect and restore watersheds, riparian vegetation, wetlands and	Protect and restore watersheds, riparian vegetation and wetlands; maintain natural vegetation	Coastal and riverine protective ecosystems	Watershed/coastal management projects; area of service-providing	MoECC	Ministry of Water; SoDMA	US\$3-6 million (2027-2029 management and accounts; indicative, linked to

	coastal protective systems	around settlements, farms and water sources; restore mangroves, dunes and other coastal protective systems; integrate ecosystem services into disaster-risk planning.	(mangroves, dunes, riparian buffers along the Juba and Shabelle) are degrading but condition trends are not systematically tracked	ecosystems effectively managed.			EARNSS/Hal-abuur nature-based-solutions projects)
Equitable benefit distribution	Ensure restoration and conservation benefits reach vulnerable communities	Ensure restoration and conservation benefits reach vulnerable communities, including displaced populations and host communities; update natural-capital accounts periodically.	No mechanism currently tracks whether ecosystem-restoration benefits reach displacement-affected	Number of communities benefiting from restored ecosystem services; updated natural-capital accounts.	MoECC	SoDMA; Ministry of Planning	US\$0.3-0.6 million (2030 update; indicative)

NATIONAL TARGET 13: GENETIC RESOURCES AND BENEFIT-SHARING

National Target 13: Genetic Resources and Benefit-Sharing

By 2030, Somalia has established legal, policy and institutional measures to facilitate appropriate access to genetic resources and traditional knowledge and to ensure the fair and equitable sharing of benefits arising from their utilization, consistent with national circumstances and international obligations.

National Indicators

- Fair and equitable sharing of benefits from genetic resources.

Headline Indicators

- National access and benefit-sharing (ABS) framework adopted and operational.

Component Indicators

- Number of access applications and benefit-sharing agreements processed.
- Number of communities supported to develop community protocols.
- Number of ABS agreements with prior informed consent
- USD benefits shared with Golis & Lower Juba communities

Connectivity Indicators

- NA

Complementary Indicators

Corresponding KMGBF target 13: Ensure the fair and equitable sharing of benefits arising from the utilization of genetic resources, digital sequence information and associated traditional knowledge, and facilitate appropriate access.

- Monetary and non-monetary benefits generated and shared.
- Progress toward consideration of accession to the Nagoya Protocol.
- Number of traditional knowledge databases registered
- Nagoya Protocol compliance certificates

Strategy	Action	Proposed Activities	Baseline 2026	Output indicators	Lead Agency	Partner institutions	Cost in USD
Legal and institutional review	Review ABS legal/institutional needs and assess Nagoya Protocol accession	Review national legal and institutional requirements for access and benefit-sharing; assess the implications and potential benefits of Somalia joining the Nagoya Protocol; designate competent authorities and national focal arrangements.	No available base information	ABS options and accession study completed.	MoECC	Ministry of Justice; Ministry of Foreign Affairs	US\$0.2-0.4 million (2026 review; indicative)
ABS system design and traditional-knowledge protection	Establish procedures for prior informed consent and protect traditional knowledge	Establish procedures for prior informed consent (PIC) and mutually agreed terms (MAT); protect traditional knowledge associated with genetic resources (including ethnobotanical/medicinal-plant knowledge held by pastoralist and coastal communities); develop community protocols where appropriate; address digital sequence information in accordance with applicable CBD decisions.	No available baseline informs	National ABS framework designed; designated competent authorities.	MoECC	Ministry of Agriculture and Irrigation; Ministry of Livestock; customary/community institutions	US\$0.4-0.8 million (2027 legal/institutional design; indicative)
Operationalization and capacity building	Establish records of permits/agreements and build institutional capacity	Establish records of permits, agreements and benefits; build the capacity of government, researchers, universities and communities to administer the ABS system.	No permit or agreement record-keeping system currently exists for access to Somalia's genetic resources.	Framework adopted; applications and agreements processed; communities with protocols.	MoECC	Universities; CBD Secretariat capacity-support mechanisms	US\$0.3-0.6 million (2028-2030 operation and review; indicative)

5.12 STRATEGIC OBJECTIVE 4: MAINSTREAM BIODIVERSITY INTO GOVERNANCE AND DEVELOPMENT

This Objective places biodiversity within the wider system of national development, governance and public decision-making. Biodiversity loss is not solely an environmental-sector issue: decisions on agriculture, livestock, fisheries, water, energy, infrastructure, urban development, finance, trade, climate action and humanitarian response can either increase or reduce pressure on ecosystems. The objective therefore calls for biodiversity to be integrated into national and subnational planning, public investment and finance, infrastructure development, climate action, business practice and environmental assessment. It supports application of environmental and social assessment and the mitigation hierarchy so that impacts are avoided or minimized and affected ecosystems are appropriately restored. The intention is to respond to the fragmented institutional and information environment identified in the NBSAP by promoting stronger coordination across levels of government and sectors. Biodiversity considerations should be reflected in policies, programmes, budgets, investment decisions and monitoring systems rather than treated as stand-alone environmental commitments. This mainstreaming approach is important for Somalia because healthy rangelands, forests, watersheds, wetlands and marine ecosystems underpin livelihoods, food and water security, climate resilience and economic development. Effective mainstreaming can therefore make biodiversity conservation part of routine development decision-making

NATIONAL TARGET 12: BIODIVERSITY IN URBAN AND SETTLED AREAS

National Target 12: Biodiversity in Urban and Settled Areas

By 2030, the area, quality, connectivity and accessibility of green and blue spaces in Somalia's cities and settlements are increased, and biodiversity is integrated into urban planning and infrastructure development.

Corresponding KMGBF target 12: Significantly increase the area and quality, and enhance connectivity and access to, green and blue spaces in urban and densely populated areas, integrating biodiversity into urban planning.

National Indicators

- Enhance biodiversity and sustainability in urban and densely populated areas.

Headline Indicators

- Urban green-space area per resident in participating cities.

Component Indicators

- Proportion of municipal plans incorporating biodiversity.
- Number of restored urban wetlands, drainage corridors or coastal buffers.
- Percentage of built-up area occupied by green or blue spaces, such as along the Mogadishu Lido-Afgoye corridor
- Number of urban Dhasheegs rehabilitated

Connectivity Indicators

- Connectivity of urban green/blue spaces (drainage corridors, coastal buffers) linking to surrounding natural ecosystems.

Complementary Indicators

- Native-tree survival rates in urban programmes.
- Proportion of residents with reasonable access to public green space.
- Urban Biodiversity Index
- Air quality PM2.5 reduction

Strategy	Action	Proposed Activities	Baseline 2026	Output indicators	Lead Agency	Partner institutions	Cost in USD
Urban green-space standards and planning	Establish urban green-space standards and incorporate biodiversity into municipal plans	Establish urban green-space standards and plans; incorporate biodiversity into municipal land-use and development plans; protect wetlands, drainage corridors and natural coastal buffers within urban areas.	No baseline information	Municipal green/blue plans adopted.	Municipalities / Ministry of Public Works	MoECC; FMS; Water; local planners	US\$13.93 million (GEF/LDCF project 11564, 2026-city baselines/standards through 5-year implementation)
Urban ecological restoration	Expand native tree planting, urban ecological restoration and green infrastructure	Expand native tree planting and urban ecological restoration; promote green infrastructure for heat, flood and erosion reduction; improve waste, drainage and wastewater systems; avoid planting invasive or water-demanding species in unsuitable areas.	No baseline information	Protected urban ecological corridors; restored sites; native-tree survival rates.	Municipalities	MoECC; Ministry of Public Works; FMS	Included within GEF/LDCF project 11564 (US\$13.93 million); additional municipal co-financing indicative
Equitable access to green space	Ensure equitable public access to safe green spaces	Ensure equitable public access to safe green spaces across income groups and displacement-affected populations.	No baseline information	Proportion of residents with reasonable access to public green space.	Municipalities	MoECC; SoDMA	US\$0.3-0.6 million (2030 access and quality review; indicative)

NATIONAL TARGET 14: BIODIVERSITY MAINSTREAMING

National Target 14: Biodiversity Mainstreaming

By 2030, biodiversity and its multiple values are fully integrated into national and subnational policies, plans, budgets, environmental assessments, development programmes and sector decision-making.

National Indicators

- Integrate biodiversity into policies, planning and development processes.

Headline Indicators

- Number of sector policies and plans incorporating measurable biodiversity commitments.

Component Indicators

- Proportion of major public investments screened for biodiversity risk.
- Number of strategic environmental assessments (SEAs) completed.

Corresponding KMGBF target 14: Fully integrate biodiversity values into policies, regulations, planning, development processes, poverty-eradication strategies and accounts across all levels and sectors of government and society.

- Number of EIA that include biodiversity criteria
- Percentage of livestock & water sector budget marked for biodiversity

Connectivity Indicators

- NA

Complementary Indicators

- Biodiversity-related allocations in national and subnational budgets.
- Number of institutions with designated biodiversity focal points.
- Natural Capital Accounts in National Accounts
- Biodiversity in NDP-9 indicators

Table 22 – National target 14

Strategy	Action	Proposed Activities	Baseline 2026	Output indicators	Lead Agency	Partner institutions	Cost in USD
Mainstreaming guidance and focal points	Establish biodiversity focal points and mainstreaming guidelines across sectors	Integrate biodiversity into national and subnational development and investment plans; establish biodiversity focal points in priority ministries and Federal Member States; mainstream biodiversity across agriculture, livestock, fisheries, water, energy, infrastructure, petroleum, mining, urban planning and humanitarian response.	A systematic baseline of sector-level biodiversity integration and budget allocation has not yet been completed across Somali government institutions	Mainstreaming guidelines published; biodiversity focal-point network established.	MoECC / Ministry of Planning	Ministry of Finance; all sector ministries; FMS; municipalities	US\$0.5-1.0 million (2026 guidance/focal points; indicative)
Environmental assessment and investment appraisal	Strengthen SEA/ESIA and incorporate biodiversity into public-investment appraisal	Strengthen strategic environmental assessment (SEA) and environmental and social impact assessment (ESIA) systems; incorporate biodiversity criteria into public-investment appraisal; integrate ecosystem-service and natural-capital information into planning; apply the mitigation hierarchy to public and private development.	SEA/ESIA requirements exist in Somali environmental legislation but are inconsistently applied to major public investments, particularly in infrastructure and extractive-sector projects.	Revised sector plans; major public investments screened; SEAs completed.	MoECC / Ministry of Planning	Ministry of Finance; sector ministries	US\$1-2 million (2027-2029 policy and budget integration; indicative)
Cross-plan alignment	Align NBSAP, NDC, NAP, LDN and disaster-risk-reduction implementation	Align implementation of the NBSAP with the NDC, NAP, Land Degradation Neutrality (LDN) targets and national disaster-risk-reduction frameworks to avoid duplication and maximize co-benefits.	NBSAP, NDC, NAP and LDN processes in Somalia have so far been prepared largely in parallel, with limited formal cross-referencing	Institutional review of cross-plan alignment completed.	MoECC / Ministry of Planning	SoDMA; sector ministries	US\$0.3-0.6 million (2030 institutional review; indicative)

National Target 15: Business and Financial-Sector Responsibility

By 2030, large and transnational businesses, financial institutions and high-impact sectors operating in Somalia regularly assess, disclose and reduce their biodiversity-related risks, dependencies and impacts across their operations and value chains.

Corresponding KMGBF target 15: Enable and encourage businesses, particularly large and transnational companies and financial institutions, to regularly assess and disclose their biodiversity-related risks, dependencies and impacts across operations, supply chains and portfolios.

National Indicators

- Businesses and financial institutions assess, disclose and reduce biodiversity-related dependencies, impacts and risks.

Headline Indicators

- Number of large or high-impact companies issuing biodiversity-related disclosures.

Component Indicators

- Proportion of major projects subject to biodiversity risk assessment.
- Number of financial institutions applying biodiversity screening.
- Number of livestock exporters, telecoms, fisheries reporting
- Percentage of Kismayo fishing companies with sustainability policy

Connectivity Indicators

- NA

Complementary Indicators

- Number of businesses implementing verified impact-reduction plans.
- Compliance rates for environmental approval conditions.
- ESG reporting compliance rate
- TNFD alignment of Hormuud, Telesom

Table 23 – National target 15

Strategy	Action	Proposed Activities	Baseline 2026	Output indicators	Lead Agency	Partner institutions	Cost in USD
Disclosure guidance and sector standards	Issue national biodiversity-disclosure guidance and sector guidance for high-impact sectors	Develop national biodiversity-disclosure guidance; establish sector guidance for infrastructure, ports, fisheries, petroleum, mining, agriculture and finance; require high-risk projects and companies to assess biodiversity impacts and dependencies.	No comprehensive inventory of covered entities or current disclosure practices exists for Somalia	Disclosure and sector guidance published.	MoECC / Ministry of Commerce	Central Bank of Somalia; Ministry of Finance; Ministry of Petroleum; Ministry of Mining	US\$0.3-0.6 million (2026 entity baseline/guidance; indicative)
Compliance and public disclosure	Strengthen environmental compliance and public disclosure;	Strengthen environmental compliance and public disclosure; require credible restoration and closure plans where ecosystems may be	Compliance monitoring for environmental approval conditions is limited by	Corporate compliance reports; compliance rates for	MoECC	Ministry of Commerce; FMS	US\$0.5-1.0 million (2027 pilots; indicative)

	prevent greenwashing	disturbed; prevent misleading environmental or biodiversity claims.	institutional capacity constraints across federal and FMS environment authorities.	environmental approval conditions.			
Financial-sector screening	Encourage financial institutions to screen investments for biodiversity risks	Encourage financial institutions to screen investments for biodiversity risks; promote biodiversity-positive investment and procurement.	No Somali financial institution currently applies a formal biodiversity-risk screening tool to its lending or investment portfolio.	Financial screening tools adopted; number of financial institutions applying biodiversity screening.	Central Bank of Somalia / MoECC	Ministry of Finance; commercial banks	US\$0.3-0.6 million (2028-2030 mandatory or phased compliance; indicative)

NATIONAL TARGET 16: SUSTAINABLE CONSUMPTION AND REDUCED WASTE

National Target 16: Sustainable Consumption and Reduced Waste

By 2030, Somalia has established policies, information systems and incentives that enable sustainable consumption, reduce food and material waste, and decrease the ecological impacts of charcoal, plastics, fisheries products and other high-impact commodities.

Corresponding KMGBF target 16: Enable sustainable consumption choices, including through supportive policy, information and infrastructure, and substantially reduce food waste, overconsumption and waste generation.

National Indicators

- Ensure sustainable consumption and production patterns and reduce waste and pollution.

Headline Indicators

- Volume of sustainably sourced charcoal or alternative fuels; household use of clean or efficient cooking technologies.

Component Indicators

- Quantity of plastic and organic waste diverted from uncontrolled disposal.
- Reduction in post-harvest losses within supported value chains.
- Per capita charcoal consumption in urban areas
- Kg food waste at Mogadishu fish markets

Connectivity Indicators

- NA

Complementary Indicators

- Number of institutions applying sustainable-procurement standards.
- Ecological Footprint of Somalia
- Number of community recycling groups

Table 24 – National target 16

Strategy	Action	Proposed Activities	Baseline 2026	Output indicators	Lead Agency	Partner institutions	Cost in USD
Clean energy and charcoal-demand reduction	Promote clean/efficient household energy and reduce reliance on unsustainable charcoal	Promote clean and efficient household energy (improved cookstoves, alternative fuels); reduce reliance on unsustainably produced charcoal; improve information on the origin and sustainability of forest and fisheries products.	Charcoal remains the dominant household cooking fuel in much of Somalia. The UN Panel of Experts (e.g. the MV Fox case, 2022-2023) indicated continued production and informal trade.	Clean-energy and charcoal-transition schemes established; households using clean/efficient cooking.	Ministry of Commerce / Ministry of Energy	MoECC; MoAI; Ministry of Fisheries and Blue Economy; municipalities	US\$2-5 million (2026 baselines/policy design; indicative, potentially blended with climate finance)
Food-loss reduction and circular economy	Reduce food loss and promote reuse, recycling and circular-economy enterprises	Reduce food loss through improved storage, transport and processing; promote reuse, recycling and circular-economy enterprises; develop measures to reduce single-use plastics.	Consumption, charcoal-source, food-loss and waste-flow baselines require harmonization; no unified national dataset currently exists	Storage/processing facilities established; sustainable charcoal/alternative-fuel volume; waste diverted.	Ministry of Commerce	MoAI; Ministry of Fisheries and Blue Economy; municipalities	US\$1-3 million (2027-2029 market measures; indicative)
Sustainable public procurement and awareness	Integrate sustainable procurement into public institutions and conduct awareness campaigns	Integrate sustainable procurement into public institutions; conduct public-awareness campaigns linking consumption with biodiversity.	No Somali public institution currently applies a formal sustainable-procurement standard.	Number of institutions applying sustainable-procurement standards.	Ministry of Finance / MoECC	All sector ministries	US\$0.3-0.6 million (2030 consumption/waste review; indicative)

5.13 STRATEGIC OBJECTIVE 5: STRENGTHEN THE MEANS OF IMPLEMENTATION

This Strategic Objective addresses the conditions required to turn the NBSAP's targets and actions into sustained results. Somalia's biodiversity challenges are compounded by limited institutional capacity, incomplete ecological information, weak monitoring systems, insufficient financing, fragmented responsibilities and gaps in technical and technological capacity. The objective responds by strengthening institutions, biodiversity information and knowledge systems, technology, financing, partnerships, participation, gender responsiveness and accountability. A central priority is to establish credible national baselines, ecosystem maps, biodiversity monitoring and information systems so that decisions can increasingly be based on reliable evidence. Implementation also requires clear institutional responsibilities, effective federal–State cooperation, stronger environmental and natural-resource enforcement, and meaningful participation by communities, customary institutions, women, youth, civil society, academia and the private sector. Resource mobilization is equally important, requiring predictable domestic and international finance and stronger integration of biodiversity into planning and investment processes. The objective also supports learning and adaptive management: programmes should establish measurable baselines, monitor results and adjust interventions as evidence improves. Together, these measures provide the institutional, financial, technical and social foundation needed to implement the other four strategic objectives effectively and maintain accountability for progress through 2030.

NATIONAL TARGET 17: BIOSAFETY AND BIOTECHNOLOGY

National Target 17: Biosafety and Biotechnology

By 2030, Somalia has strengthened its national biosafety framework and institutional capacity to manage the potential adverse impacts of living modified organisms and biotechnology on biodiversity and human health.

Corresponding KMGBF target 17: Strengthen biosafety measures and ensure that the benefits of biotechnology are shared, in line with the Cartagena Protocol on Biosafety.

National Indicators

- Strengthen biosafety and biotechnology governance.

Headline Indicators

- Updated biosafety legislation or regulations adopted/ Percentage of defined biosafety functions operating to agreed standards; applications assessed through approved procedures.

Component Indicators

- Competent national authorities designated and operational.
- Number of trained biosafety regulators and technical specialists.
- Number of GMO risk assessments done at ports
- Percentage of seed imports screened

Connectivity Indicators

- NA

Complementary Indicators

- Proportion of applications assessed through approved procedures.
- National information regularly updated through the Biosafety Clearing-House.
- Number of labs with biosafety capacity
- Cartagena Protocol reporting

Table 25 – National target 17

Strategy	Action	Proposed Activities	Baseline 2026	Output indicators	Lead Agency	Partner institutions	Cost in USD
Legal and institutional readiness	Review and update the national biosafety framework and clarify institutional responsibilities	Review and update the national biosafety framework; strengthen implementation of the Cartagena Protocol on Biosafety; clarify institutional responsibilities for biosafety decisions.	An institutional and technical readiness assessment for biosafety has not yet been completed for Somalia	Updated biosafety law/regulations; competent authorities designated.	MoECC / Ministry of Agriculture and Irrigation	Ministry of Health; Customs; national standards bureau	US\$0.3-0.6 million (2026 readiness review; indicative)
Risk assessment and border control procedures	Establish risk-assessment, authorization, inspection and monitoring procedures	Establish risk-assessment, authorization, inspection and monitoring procedures; strengthen controls for transboundary movement; develop emergency-response and liability procedures; improve laboratory and technical capacity.	Somalia currently has limited laboratory capacity for biosafety risk assessment, and mandate ambiguity between agriculture, health and environment institutions is identified as a key risk (Annex 1).	Standard operating procedures adopted; trained specialists.	MoECC / Ministry of Agriculture and Irrigation	Universities/laboratories; Ministry of Health	US\$0.5-1.2 million (2027 legal/SOP update; indicative, potentially GEF biosafety support)
Public awareness and information sharing	Promote public awareness and strengthen participation in the Biosafety Clearing-House	Promote public awareness and access to biosafety information; strengthen participation in the Biosafety Clearing-House.	Somalia does not currently maintain regularly updated national information in the Biosafety Clearing-House.	National information regularly updated through the Biosafety Clearing-House.	MoECC	Cartagena Protocol capacity-support mechanisms	US\$0.1-0.3 million (2028-2030 capacity and operation; indicative)

NATIONAL TARGET 18: REFORM OF HARMFUL INCENTIVES

National Target 18: Reform of Harmful Incentives

By 2030, incentives, subsidies and public expenditures harmful to biodiversity are identified and progressively eliminated, phased out or reformed, while positive incentives for conservation, restoration and sustainable use are expanded.

National Indicators

- Reduce harmful incentives and increase positive incentives for biodiversity.

Headline Indicators

Corresponding KMGBF target 18: Identify and eliminate, phase out or reform incentives harmful to biodiversity, while scaling up positive incentives for conservation and sustainable use.

- Value and number of harmful incentives identified, and subsequently reformed, redirected or eliminated.

Component Indicators

- Value of positive biodiversity incentives introduced.
- Number of beneficiaries supported through conservation or restoration incentives.
- Value of charcoal export permits phased out
- Value of borehole subsidies redirected to rangeland enclosure

Connectivity Indicators

- NA

Complementary Indicators

- Percentage of agriculture subsidies that are biodiversity-positive
- Fuel subsidies for illegal fishing vessels removed

Table 26 – National target 18

Strategy	Action	Proposed Activities	Baseline 2026	Output indicators	Lead Agency	Partner institutions	Cost in USD
Incentive and expenditure review	Conduct a national review of biodiversity-relevant subsidies and incentives	Conduct a national review of biodiversity-relevant subsidies and public expenditures; identify incentives contributing to unsustainable fishing, land conversion, charcoal production, water use or habitat degradation; assess distributional impacts on vulnerable households.	No consolidated biodiversity-relevant incentive inventory or monetary baseline exists for Somalia (Annex 1 gap statement).	Incentive inventory and expenditure review published.	Ministry of Finance / MoECC	Ministry of Planning; Ministry of Fisheries and Blue Economy; MoAI; Livestock	US\$0.3-0.6 million (2026 inventory; indicative)
Socially responsible reform design	Develop reform pathways that protect vulnerable households	Develop socially responsible reform pathways; ensure reforms protect vulnerable households and avoid unintended livelihood impacts; integrate biodiversity criteria into grants, concessions and public procurement.	Political resistance and potential adverse impacts on poor/resource-dependent groups are identified as the principal risk to this target (Annex 1).	Reform roadmap and distributional assessments completed.	Ministry of Finance / MoECC	Ministry of Planning; social-protection agencies	US\$0.3-0.6 million (2027 reform design; indicative)
Positive incentive expansion	Establish positive incentives for restoration and sustainable production	Establish positive incentives for restoration and sustainable production; promote payment for ecosystem services (PES) where feasible.	No payment-for-ecosystem-services scheme currently operates in Somalia.	Value and number of positive biodiversity incentives introduced; number of beneficiaries supported.	Ministry of Finance / MoECC	MoAI; Livestock; Ministry of Fisheries and Blue Economy	US\$1-3 million (2028-2030 phased implementation and evaluation; indicative)

National Target 19: Biodiversity Finance

By 2030, Somalia has substantially increased and diversified domestic and international financial resources for biodiversity and has established transparent systems for allocating, tracking and reporting biodiversity expenditure.

Corresponding KMGBF target 19: Substantially and progressively increase financial resources from all sources to implement national biodiversity strategies and action plans, mobilizing at least US\$200 billion per year globally by 2030.

National Indicators

- Increase and diversify biodiversity finance and improve expenditure tracking.

Headline Indicators

- Annual biodiversity expenditure from domestic and international sources.

Component Indicators

- Percentage of estimated NBSAP financing needs secured.
- Number and value of funded biodiversity programmes.
- Domestic finance from port levies for the environment
- International finance - GEF, GCF, bilateral received

Connectivity Indicators

- NA

Complementary Indicators

- Proportion of biodiversity finance reaching Federal Member State and community implementation.
- National biodiversity finance plan adopted and operational; annual biodiversity expenditure report produced.
- Percentage of ODA for biodiversity
- Private sector co-finance mobilized

Table 27 – National target 19

Strategy	Action	Proposed Activities	Baseline 2026	Output indicators	Lead Agency	Partner institutions	Cost in USD
Costing and finance-gap assessment	Prepare a BIOFIN-based national biodiversity finance plan and cost the NBSAP	Prepare and implement a national biodiversity finance plan using the UNDP BIOFIN methodology; assess NBSAP implementation costs and quantify the biodiversity finance gap; increase national and subnational budget allocations.	Somalia's current biodiversity-related public expenditure has not been comprehensively tracked;	Costed NBSAP; finance-needs and gap assessment; national biodiversity finance plan adopted.	MoECC /Ministry of Finance	Ministry of Planning; FMS finance/environment authorities; UNDP (BIOFIN)	US\$0.5-1.0 million (2026 costing/finance plan; indicative, typically UNDP/GEF-supported BIOFIN technical assistance)
Resource mobilization	Develop GEF, GBFF, GCF and other funding	Develop Global Environment Facility (GEF), Global	Somalia has already secured a substantial and growing	Pipeline of new proposals developed; number/value of	MoECC Ministry/of Finance	Central Bank of Somalia; private	US\$0.5-1.0 million (2027 system and pipeline development;

	proposals; link climate and biodiversity finance	Biodiversity Framework Fund (GBFF) and Green Climate Fund (GCF) proposals; strengthen climate-biodiversity finance synergies; develop safeguards for private, blended and innovative finance; promote biodiversity-positive investment by businesses and development partners.	biodiversity/climate-resilience project pipeline, including the GEF/UNDP, the GEF/LDCF, the Adaptation Fund EARNSS among others	funded biodiversity programmes.		sector; development partners	indicative, in addition to the projects it seeks to leverage)
Expenditure tracking and community-level finance	Establish biodiversity expenditure tracking, community-level finance and improved donor coordination	Develop mechanisms for community-level finance and benefit-sharing; establish biodiversity expenditure tracking and reporting; improve coordination between government, development partners and funds.	No transparent, standardised biodiversity-expenditure tracking and reporting system currently exists at federal or FMS level.	Annual domestic/international biodiversity expenditure tracked and reported; share of biodiversity finance reaching FMS/community level.	MoECC / Ministry of Finance	FMS finance/environment authorities; development partners	US\$0.3-0.6 million (2028-2030 mobilization and annual reporting; indicative)

NATIONAL TARGET 20: CAPACITY, TECHNOLOGY, KNOWLEDGE AND PARTICIPATION

National Target 20: Capacity, Technology, Knowledge and Participation

By 2030, Somalia has substantially strengthened the human, institutional, scientific and technological capacity required to implement the NBSAP, supported by an operational national biodiversity information and monitoring system and inclusive participation at all levels.

Corresponding KMGBF target 20, 21, 22 and 23: Strengthen capacity-building, technology transfer and scientific/technical cooperation (Target 20); ensure that the best available data, information and knowledge are accessible to guide effective biodiversity governance (Target 21); ensure the full, equitable, inclusive and gender-responsive representation and participation of indigenous peoples, women, youth, civil society and other stakeholders in decision-making, and their access to justice and information (Targets 22 and 23).

National Indicators

- Strengthen capacity, knowledge, technology and participation for implementation and monitoring.

Headline Indicators

- National Biodiversity Information System (NBIS) established and publicly accessible. Functioning coordination mechanisms; personnel trained/retained; participation; operational biodiversity information platform and datasets meeting standards, and percentage of NBSAP actions led by or co-led by women, and percentage of finance reaching biodiversity protection women-led groups

Component Indicators

- Number of national indicators with validated baselines and regular data collection
- Number of trained biodiversity professionals and community monitors.
- Number of district officers trained in biodiversity monitoring

- Number of pastoral scouts using KoBoCollect/SWALIM app
- Percentage of GBF indicators with data on Somalia Biodiversity Information System
- Number of traditional pastoral grazing calendars documented
- Number of community conservancy meetings with quorum of women >30%
- Number of Free Prior Informed Consent protocols signed
- Percentage of NBSAP committee members who are women
- Number of women-led rangeland/fishery cooperatives funded

Connectivity Indicators

- Number of research institutions contributing verified data to a shared, interoperable national system.

Complementary Indicators

- Number of Federal Member States producing periodic biodiversity reports.
- Representation of women, youth and communities in biodiversity decision-making bodies (minimum 30% women's participation benchmark, per NBSAP Section 5.13.1).
- South-South cooperation projects active
- Number of university theses on biodiversity
- Number of datasets uploaded to GBIF from Somalia
- Citizen science observations – iNaturalist
- Land tenure security index for pastoralists
- Number of conflicts resolved via traditional Xeer
- Gender gap in land ownership
- Percentage of capacity building participants who are women

Table 28 – National target 20

Strategy	Action	Proposed Activities	Baseline 2026	Output indicators	Lead Agency	Partner institutions	Cost in USD
National biodiversity information system	Establish a National Biodiversity Information System and adopt monitoring protocols	Establish a National Biodiversity Information System (NBIS); designate institutional data custodians and reporting responsibilities; develop national biodiversity indicators and standardized monitoring protocols.	Institutional capacity, staffing, datasets and participation baselines require an initial capacity assessment; no operational, publicly accessible NBIS currently exists (Annex 1 gap statement).	NBIS governance policy adopted; indicator protocols and baseline programme established.	MoECC	National Bureau of Statistics; universities; FMS; Ministry of Education	US\$1-2 million (2026 system/capacity design; indicative, potentially GEF/GBFF-supported)
Institutional and human-capacity strengthening	Strengthen universities, research institutions and laboratories and train specialists	Strengthen universities, research institutions and laboratories; provide technical training in	Somalia's tertiary biodiversity-science and taxonomic capacity was severely	Trained professionals and community monitors;	MoECC	Universities; regional/international technical-cooperation partners	US\$2-4 million (2027 deployment; indicative)

		taxonomy, GIS, remote sensing, ecosystem assessment, environmental DNA, fisheries science and ecological restoration; establish community-based biodiversity-monitoring programmes; document traditional ecological knowledge with appropriate consent and safeguards; support South-South, regional and international technical cooperation.	eroded during decades of conflict; current numbers of trained national biodiversity professionals and functioning laboratories are not systematically recorded.	number of research institutions contributing verified data.			
Inclusive governance and accountability	Institutionalize participation and establish grievance/accountability mechanisms	Improve public access to biodiversity information; strengthen biodiversity education and professional development; institutionalize participation by women, youth, local communities, civil society and the private sector (applying the 30% women's-participation benchmark set out in NBSAP Section 5.13.1); establish accessible grievance and accountability mechanisms.	No standing accountability or grievance mechanism currently exists for NBSAP implementation; women's representation in biodiversity governance bodies has not yet been benchmarked against the NBSAP's own 30% target.	NBIS operational and public; representation of women, youth and communities in decision-making bodies; FMS producing periodic biodiversity reports.	MoECC	Ministry of Women and Human Rights Development; civil society organisations; FMS	US\$0.5-1.0 million (2028-2030 routine monitoring and reporting; indicative)

5.14 CROSS-CUTTING IMPLEMENTATION COMMITMENTS

Table 29 – Cross-cutting commitment table

Commitment	Description
Gender Equality	Gender equality will be integrated across all targets. Programmes will collect sex-disaggregated data, identify gender-specific barriers, support women's leadership and ensure equitable access to finance, employment, training and biodiversity benefits.
Youth Participation	Young people will be engaged as decision-makers, researchers, community monitors, restoration practitioners and entrepreneurs. Youth involvement should extend beyond temporary awareness activities.
Local Communities and Customary Institutions	Implementation will recognize the importance of customary governance, including locally legitimate systems for managing grazing, water, forests and fisheries. Formal measures should strengthen effective community institutions without imposing arrangements that undermine legitimate rights.
Peace and Conflict Sensitivity	Interventions will assess potential effects on access to land, water, grazing, fishing grounds and other shared resources. Conservation and restoration activities should support cooperation and avoid creating or intensifying disputes.
Displacement and Vulnerability	The needs and rights of displaced people, host communities, minority groups and other vulnerable populations will be considered in biodiversity planning. Conservation measures must not transfer disproportionate costs to groups with limited decision-making power.
Traditional Knowledge and Data Rights	Traditional knowledge will be documented or shared only with the appropriate consent of knowledge holders. Programmes should recognize community ownership, confidentiality and benefit-sharing considerations.

5.14.1 GENDER EQUALITY AND SOCIAL INCLUSION COMMITMENTS

Implementation will apply gender equality and social inclusion as cross-cutting conditions for biodiversity results, consistent with GBF Targets 22 and 23. All NBSAP governance bodies, technical working groups and consultations will use a minimum benchmark of 30 percent women's participation, with progressive improvement toward balanced and influential representation. Youth, persons with disabilities, pastoralists, artisanal fishing communities and other resource-dependent or marginalized groups will receive targeted outreach, accessible participation arrangements and meaningful roles in decisions affecting resources and livelihoods.

NBSAP programmes will apply gender-responsive safeguards and benefit-sharing criteria, establish sex-, age- and disability-disaggregated baselines, and direct capacity development, biodiversity finance and nature-positive livelihood opportunities toward groups facing barriers to land, assets, credit, information and decision-making. Gender focal points in MoECC and Federal Member State environment institutions will support implementation and reporting.

5.15 GEOGRAPHIC PRIORITIES

National implementation should prioritize landscapes and seascapes where biodiversity importance, ecosystem degradation and human dependence overlap. Indicative priorities include:

- the Golis and Cal Madow Mountain systems;
- frankincense- and myrrh-producing landscapes;
- degraded rangelands and important pastoral corridors;
- drought refuges and areas surrounding strategic water sources;
- the Juba and Shabelle rivers, floodplains and wetlands;
- Lag Badana–Bushbush and the Lower Juba Forest–coastal mosaic;
- the Bajuni Islands and adjacent marine habitats;
- mangroves, seagrass beds and coral reefs;
- marine-turtle nesting beaches;
- Sa’ad ad-Din and other northern islands;
- Ras Casey, Hafun, Alula, Eyl, Gara’ad and Qandala;
- Warsheikh and adjacent coastal habitats;
- Goobweyn and the Juba estuary; and
- Buur Gaabo and other southern coastal areas.

These priorities remain subject to ecological validation, community consultation, tenure assessment and conflict-sensitive planning. Their identification does not automatically establish legal protection or restrict existing legitimate use.

5.16 PHASED IMPLEMENTATION

For 2026–2030, implementation shall focus first on the SMART priority actions identified in the implementation matrix. Each priority action is linked to a defined output, measurable indicator, responsible lead, implementation period and indicative cost. Detailed operational activities remain in the annexed matrix so that the main strategy can function as a concise policy document.

Table 30 - Phased Implementation approach

Phase	Focus Area
Phase I: Foundations and Baselines	▪ institutional coordination; ▪ ecosystem and land-cover mapping; ▪ identification of data custodians; ▪ national inventories and baseline development; ▪ verification of conservation areas; ▪ preparation of regulations and sector guidelines; ▪ biodiversity finance planning; ▪ establishment of monitoring systems; and ▪ selection of priority pilot landscapes and seascapes.
Phase II: Scaling Implementation	▪ ecosystem restoration; ▪ protected areas and OECMs; ▪ community resource management; ▪ sustainable production systems; ▪ species recovery programmes;

	▪ pollution and invasive-species control; ▪ biodiversity-compatible livelihoods; and ▪ subnational implementation mechanisms.
Phase III: Consolidation and Evaluation	▪ evaluate progress against every national target; ▪ update ecological and financial baselines; ▪ document lessons from implementation; ▪ address underperforming interventions; ▪ consolidate recurrent financing; ▪ prepare the next national biodiversity strategy; and ▪ report national contributions to the Global Biodiversity Framework.

5.17 TARGET REVIEW AND ADAPTIVE MANAGEMENT

The targets will be reviewed periodically through a national NBSAP implementation and monitoring mechanism. Reviews should assess:

- progress against indicators;
- geographic distribution of results;
- ecological effectiveness;
- financial expenditure;
- institutional performance;
- participation and equity;
- unintended environmental or social impacts;
- contributions from non-state actors; and
- emerging risks and opportunities.

Where baselines are not yet available, the first implementation milestone should be to establish and validate the baseline. Subsequent milestones should then be expressed as measurable changes from that baseline.

Targets should not be considered achieved solely because a law, plan, committee or project has been established. Assessment should determine whether implementation has produced measurable improvements in biodiversity condition, reduced pressures or increased institutional effectiveness.

5.18 CONDITIONS REQUIRED FOR SUCCESS

Successful implementation will depend on:

- sustained political commitment;
- effective federal and intergovernmental coordination;
- clear institutional mandates;
- meaningful community participation;
- predictable long-term finance;
- improved security and field access;
- technically capable institutions;
- credible and accessible biodiversity information;
- enforcement accompanied by livelihood alternatives;
- integration of biodiversity into development finance;

- cooperation with neighboring countries and regional organizations; and
- transparent monitoring and public accountability.

5.19 OVERALL STRATEGIC DIRECTION

Somalia's national biodiversity targets provide a framework for moving from fragmented projects toward coordinated national action. Their central strategic directions are to:

- place biodiversity at the center of land, water and marine planning;
- restore degraded ecosystems at ecologically meaningful scales;
- establish representative and equitably governed conservation systems;
- halt the loss of threatened and endemic species;
- make agriculture, pastoralism, forestry and fisheries more sustainable;
- reduce pollution, invasive species and climate-related risks;
- protect the ecosystem services on which communities and the economy depend;
- integrate biodiversity into government and private-sector decisions;
- strengthen equitable benefit-sharing and nature-based livelihoods;
- build national scientific, institutional and monitoring capacity; and
- mobilize sufficient and sustained resources for implementation.

The framework is ambitious but reflects the scale of Somalia's biodiversity challenges and its dependence on healthy ecosystems. Implementation must combine immediate action with systematic baseline development. Somalia cannot wait for perfect information before addressing evident degradation, but interventions must be monitored carefully so that future decisions are based on increasingly reliable evidence. For more detailed implementation priorities please see Annex 1.

CHAPTER 6 POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

6.1 INTRODUCTION

Implementation of Somalia's updated National Biodiversity Strategy and Action Plan requires a coherent policy, legal and institutional framework capable of translating the national biodiversity targets into coordinated and enforceable action. Biodiversity is affected by decisions concerning land, water, agriculture, livestock, forestry, fisheries, climate change, disaster-risk management, infrastructure, energy, petroleum, trade, urban development and public finance. The enabling framework must therefore extend beyond institutions traditionally responsible for environmental protection.

This chapter situates the updated NBSAP within Somalia's wider national planning framework, including:

- the National Transformation Plan 2025–2029;
- Somalia's Third-Generation Nationally Determined Contribution (NDC 3.0);
- the National Adaptation Plan 2025;
- the National Climate Change Policy;
- Somalia's Land Degradation Neutrality targets;
- the National Environment Policy;
- the National Forest Policy;
- the National Charcoal Policy;
- the National Blue Economy Strategy and Implementation Plan;
- national disaster-risk management frameworks;
- water, agriculture, livestock, fisheries and infrastructure policies;
- the Environmental Protection and Management Act;
- the Environmental and Social Impact Assessment Regulations; and
- Somalia's international commitments under the three Rio Conventions and other multilateral environmental agreements.

These instruments contain mutually reinforcing commitments concerning ecosystem restoration, climate adaptation, sustainable land management, forest and rangeland recovery, water security, coastal protection, sustainable fisheries and resilient livelihoods. The updated NBSAP provides a common biodiversity framework through which these commitments can be coordinated and monitored.

The purpose of this chapter is to:

- identify the principal policies, laws and institutions relevant to biodiversity;
- explain their relationship to the national biodiversity goals and targets;
- promote coherence among the NBSAP, NDC 3.0, NAP and LDN targets;
- clarify complementary federal, State, local and sector responsibilities;
- identify policy and legal gaps affecting biodiversity implementation; and
- establish the enabling conditions for the implementation arrangements presented in Chapter 7.

6.2 CONSTITUTIONAL FOUNDATION

The Provisional Constitution of the Federal Republic of Somalia provides the overarching foundation for environmental governance. It recognizes the right of every person to an environment that is not harmful to health and well-being and establishes responsibilities for environmental protection, conservation of natural resources and prevention of environmental damage.

The Constitution also recognizes Somalia's federal system. Biodiversity governance must consequently be based on cooperation between the Federal Government, Federal Member States and local governments, particularly where responsibilities for land, water, forests, rangelands, fisheries, wildlife and other natural resources intersect.

The constitutional framework has the following implications for the updated NBSAP:

- biodiversity and ecosystem services should be treated as national assets held for present and future generations;
- natural-resource use should remain within ecologically sustainable limits;
- federal and State institutions should cooperate in establishing and enforcing environmental standards;
- communities should participate in decisions affecting their land, resources and livelihoods;
- legitimate customary tenure and sustainable-resource-use systems should be recognized;
- environmental protection should be integrated into economic and infrastructure development; and
- access to environmental information, consultation, accountability and remedy should be strengthened.

These principles should guide the interpretation and future reform of all biodiversity-related policies and legislation.

6.3 ALIGNMENT WITH NATIONAL DEVELOPMENT AND ENVIRONMENTAL FRAMEWORKS

6.3.1 NATIONAL TRANSFORMATION PLAN 2025–2029

The National Transformation Plan 2025–2029 is Somalia's principal medium-term development framework. It connects governance, economic transformation, human-capital development, infrastructure, resilience, peacebuilding and environmental sustainability.

Somalia's economy and social well-being depend heavily on biological resources and ecosystem services. Rangelands sustain pastoral livelihoods; soils and water support agriculture; forests and woodlands provide energy and marketable products; and marine and coastal ecosystems support food security, employment and the blue economy. Biodiversity loss would therefore undermine the economic and resilience objectives of the National Transformation Plan.

Alignment should focus on:

- restoring degraded rangelands, forests, agricultural soils, watersheds, wetlands and coastal ecosystems;
- developing sustainable fisheries and biodiversity-compatible blue-economy value chains;
- reducing reliance on unsustainably produced charcoal;
- expanding clean cooking and renewable-energy access;
- integrating biodiversity into public-investment planning;
- applying environmental safeguards to infrastructure and extractive activities;
- strengthening drought, flood and coastal resilience through nature-based solutions;
- creating biodiversity-compatible employment for women and young people; and
- improving environmental information for development planning.

NBSAP targets and actions should be reflected in the relevant National Transformation Plan results frameworks, sector programmes, investment pipelines and annual budgets.

6.3.2 SOMALIA’S NDC 3.0

Somalia’s NDC 3.0 establishes the country’s climate commitments for 2025–2035 and represents a progression from the previous NDC. It places adaptation and resilience at the center of national climate action while also setting mitigation priorities based on Somalia’s national circumstances.

The NDC 3.0 and updated NBSAP are closely connected because many of Somalia’s climate responses depend on the condition and functioning of ecosystems. The NBSAP supports implementation of the NDC 3.0 through:

- restoration of degraded forests, rangelands, wetlands, watersheds and coastal ecosystems;
- climate-smart and regenerative agriculture;
- sustainable grazing and rangeland management;
- improved soil health and soil-carbon retention;
- protection and restoration of mangroves and natural coastal buffers;
- sustainable forest management and reduced deforestation;
- reduction of unsustainable biomass and charcoal consumption;
- improved fisheries and marine-ecosystem management;
- ecosystem-based water-resource management;
- biodiversity-sensitive urban resilience and infrastructure;
- green employment and restoration enterprises; and
- improved environmental and climate information systems.

NDC 3.0 estimates that implementation of its adaptation priorities will require approximately USD 6.33 billion between 2025 and 2035. Its agriculture, livestock and fisheries priorities alone include more than USD 1.9 billion in planned investment. These investments represent important opportunities for delivering biodiversity benefits, provided that biodiversity safeguards and measurable ecosystem outcomes are incorporated into programme design.

The NDC 3.0 also promotes a whole-of-government and whole-of-society implementation model. The NBSAP should coordinate with NDC facilitator, National Climate Finance Unit and relevant Federal Member State structures. Shared arrangements should be developed for:

- ecosystem and land-condition indicators;
- geospatial and field data;
- climate and biodiversity finance tracking;
- reporting on restoration and nature-based solutions;
- gender and social-inclusion indicators;
- project safeguards; and
- national and international reporting.

Climate investments should be screened to ensure that they do not introduce invasive species, damage natural habitats, reduce environmental flows, cause inappropriate afforestation in natural grasslands or transfer risks to vulnerable communities.

6.3.3 NATIONAL ADAPTATION PLAN 2025

Somalia's National Adaptation Plan provides the principal national framework for addressing current and projected climate risks. Its long-term vision is to build a climate-resilient country in which vulnerable populations, sectors and ecosystems are protected and adaptive capacity is strengthened at all levels.

The NAP covers agriculture, livestock, water resources, public health, infrastructure, coastal management, disaster preparedness, social protection and other climate-sensitive sectors. Its objectives include:

- enhancing the adaptive capacity of communities, institutions and ecosystems;
- building resilience to climate shocks and stresses; and
- mainstreaming adaptation into national and sector planning.

The NAP recognizes the CBD, UNFCCC and UNCCD as complementary frameworks. It identifies healthy ecosystems and biodiversity as essential for adaptation and recognizes sustainable land and water management as a response to climate vulnerability, desertification and land degradation.

The NBSAP contributes to the NAP through:

- ecosystem-based adaptation;
- restoration of mangroves and coastal vegetation;
- watershed and wetland protection;
- drought-resilient restoration using ecologically suitable native species;
- sustainable land and rangeland management;
- community forestry and agroforestry;
- erosion control and anti-desertification measures;
- protection of climate refuges and ecological connectivity;
- climate-resilient management of fisheries and coastal resources; and
- community-based ecosystem monitoring.

The NAP and NBSAP should use a common approach to identifying climate-vulnerable ecosystems and communities. Adaptation actions should assess not only human and infrastructure outcomes but also changes in ecosystem condition, species, soil stability, water regulation and livelihood dependence on natural resources.

6.3.4 NATIONAL CLIMATE CHANGE POLICY

The National Climate Change Policy provides direction for mainstreaming climate change into federal, State, district and local planning. It supports adaptation, mitigation, social development and the conservation and enhancement of natural resources.

Its provisions concerning forestry, afforestation, climate-resilient development and institutional coordination support the updated NBSAP. Implementation should nevertheless distinguish ecological restoration from tree planting alone. Afforestation and reforestation programmes should:

- use suitable native species wherever feasible;
- avoid conversion of natural grasslands and other valuable non-forest ecosystems;
- protect native genetic diversity;
- consider water availability and future climate conditions;
- control invasive alien species;
- involve communities and legitimate land users; and
- monitor survival, ecosystem function and livelihood outcomes.

6.3.5 LAND DEGRADATION NEUTRALITY TARGETS

Somalia has established voluntary Land Degradation Neutrality targets consistent with the UNCCD and SDG Target 15.3. The national ambition is to achieve LDN by 2030 relative to the 2015 baseline, while securing an additional improvement in land condition.

The LDN framework is directly relevant to NBSAP Targets 1, 2, 8, 10, 11, 14 and 20. Its principal biodiversity-related commitments include:

- achieving no net loss of land-based natural capital by 2030 compared with 2015;
- improving an additional 10 per cent of national territory by 2030;
- maintaining and improving land productivity and soil organic carbon relative to the 2015 baseline;
- reducing areas of stressed or declining land productivity by 50 per cent by 2030;
- preventing net loss of forests and wetlands;
- minimizing conversion of grasslands and croplands to artificial surfaces;
- improving productivity in degraded tree-covered areas, grasslands and croplands;
- improving soil-carbon stocks in cultivated areas;
- rehabilitating degraded forests;
- expanding land protected against soil erosion;
- reducing unsustainable traditional biomass consumption; and
- applying sustainable land management in nationally identified degradation hotspots.

These commitments should be implemented through the LDN response hierarchy:

- avoid new land degradation;
- reduce degradation where it cannot immediately be avoided; and
- reverse previous degradation through restoration.

The updated NBSAP should not create a separate land-monitoring system where suitable LDN systems already exist. Shared indicators should include:

- land-cover change;
- land productivity;
- soil organic carbon;
- vegetation condition;
- forest and woodland cover;
- extent and condition of wetlands;
- extent of land under sustainable management; and
- area restored or experiencing improved ecological condition.

The attached LDN report contains inconsistent forest-cover figures in different sections, including references to both 15 per cent and approximately 30 per cent forest cover by 2030. These figures should be technically verified against the formally validated national target before a single percentage is incorporated into the NBSAP indicator framework. Until that verification is completed, the NBSAP should state the direction of commitment – an increase in ecologically appropriate forest and woodland cover – without introducing an unverified national percentage.

6.3.6 NATIONAL ENVIRONMENT POLICY

The National Environment Policy provides the broad policy foundation for environmental protection and sustainable development. It recognizes the connections among environmental degradation, livelihoods, health, economic development and stability.

The Policy supports conservation and sustainable use of forests, rangelands, wildlife, wetlands, water resources and marine and coastal ecosystems. It also calls for protection of important coral reefs, mangroves, seagrass beds, seabird colonies, turtle-nesting beaches and other sensitive habitats.

The updated NBSAP operationalizes these principles through measurable national targets, actions and indicators. Future revisions of the Policy should incorporate:

- the Kunming–Montreal Global Biodiversity Framework;
- Somalia’s updated national biodiversity targets;
- the NDC 3.0;
- the NAP;
- verified national LDN targets;
- current environmental legislation; and
- strengthened federal–State implementation arrangements.

6.3.7 NATIONAL FOREST AND CHARCOAL POLICIES

The National Forest Policy supports restoration and sustainable management of forests, woodlands, mangroves and priority watersheds. It promotes afforestation, reforestation and use of drought-resistant species. The National Charcoal Policy addresses the severe pressure that unsustainable charcoal production places on native tree species and dryland ecosystems.

The NBSAP should support these policies through:

- national forest and woodland inventories;
- mapping of charcoal-production and deforestation hotspots;
- protection of threatened native tree species;
- restoration of degraded woodlands and watershed forests;
- sustainable management of gums, resins and other non-timber products;
- community-based forest management;
- clean-cooking and alternative-energy programmes;
- charcoal traceability and enforcement;
- livelihood alternatives for charcoal-dependent communities; and
- long-term monitoring of restored areas.

Forest-policy implementation should be coordinated with NDC mitigation and adaptation measures and the LDN targets for land cover, productivity and soil organic carbon.

6.3.8 NATIONAL BLUE ECONOMY STRATEGY AND IMPLEMENTATION PLAN

The National Blue Economy Strategy and Implementation Plan 2023–2027 promotes sustainable use of marine and coastal resources for economic development, food security and employment. Its implementation depends on healthy fish stocks, coral reefs, mangroves, seagrasses, coastal wetlands and other marine ecosystems.

The updated NBSAP should guide biodiversity safeguards for blue-economy development through:

- ecosystem-based fisheries management;
- protection of spawning, nursery and migratory areas;
- reduction of illegal, unreported and unregulated fishing;
- protection and restoration of mangroves, seagrass beds and coral reefs;
- regulation of coastal infrastructure and port development;
- prevention of oil, waste and plastic pollution;
- marine spatial planning;
- identification of protected areas and OECMs;
- protection of threatened marine species; and
- equitable participation of coastal communities.

Economic use of marine resources should remain within ecologically sustainable limits and should not undermine customary access, food security or small-scale fishing livelihoods.

6.3.9 DISASTER-RISK MANAGEMENT FRAMEWORKS

Somalia's disaster-risk management policies and institutions recognize the need to strengthen community resilience and reduce exposure to drought, floods, cyclones and other hazards. Healthy ecosystems can reduce disaster risk by stabilizing soils, regulating water, reducing erosion, buffering coastlines and supporting livelihoods during climate shocks.

NBSAP alignment should promote ecosystem-based disaster-risk reduction through:

- restoration of degraded watersheds and catchments;
- protection of wetlands and floodplains;
- restoration of mangroves and coastal buffers;
- stabilization of erosion-prone land;
- climate-resilient rangeland management;
- protection of natural drainage corridors; and
- inclusion of ecosystem condition in disaster-risk assessments.

Post-disaster recovery should avoid environmentally harmful sourcing, uncontrolled disposal of waste and reconstruction within ecologically sensitive areas.

6.3.10 WATER, AGRICULTURE, LIVESTOCK AND FISHERIES POLICIES

Water, agriculture, livestock and fisheries policies are central to biodiversity because these sectors directly affect land cover, soils, rivers, groundwater, rangelands, forests and marine ecosystems.

Policy alignment should promote:

- environmental flows and catchment protection;
- wetland and riverbank buffers;
- climate-smart and biodiversity-supportive agriculture;
- soil and water conservation;
- integrated pest management;
- protection of crop varieties and livestock genetic resources;
- pastoral mobility and protection of grazing corridors;

- sustainable stocking and grazing arrangements;
- restoration of degraded rangelands;
- ecosystem-based fisheries management; and
- reduction of bycatch and destructive fishing practices.

Sector policies should include measurable biodiversity outcomes rather than treating environmental protection only as a general principle.

6.4 POLICY-COHERENCE FRAMEWORK

The following relationships should guide implementation.

Table 31 – Policy Coherence Framework

National framework	Principal biodiversity contribution	Related NBSAP targets
National Transformation Plan 2025–2029	Integrates biodiversity into national development, investment, livelihoods, resilience and economic transformation	All targets, particularly 10, 11, 12, 14, 19 and 20
NDC 3.0	Ecosystem restoration, sustainable agriculture and grazing, soil carbon, forestry, clean energy, coastal resilience and climate finance	2, 7, 8, 10, 11, 14, 16, 19 and 20
National Adaptation Plan 2025	Ecosystem-based adaptation, watershed management, mangrove restoration, community forestry and anti-desertification	2, 8, 10, 11, 12 and 20
LDN targets	No net land degradation, improved land condition, soil organic carbon, land productivity and reduced conversion	1, 2, 8, 10, 11, 14 and 20
National Environment Policy	Overall environmental protection and conservation of terrestrial, inland-water, coastal and marine ecosystems	All targets
National Forest Policy	Forest and woodland protection, rehabilitation, afforestation and sustainable management	2, 4, 8, 10, 11 and 16
National Charcoal Policy	Reduced deforestation, protection of threatened trees and sustainable household energy	4, 8, 10 and 16
Blue Economy Strategy	Sustainable fisheries, coastal livelihoods and protection of marine resources	1, 2, 3, 4, 5, 7, 9, 10 and 11
Disaster-risk management policies	Ecosystem-based disaster-risk reduction and resilient recovery	2, 8, 11 and 12
Water and WASH policies	Catchment, watershed, wetland and water-quality management	1, 2, 7, 11 and 12
Agriculture and livestock policies	Sustainable production, agrobiodiversity, soil protection and rangeland management	2, 8, 10, 11 and 13
Fisheries legislation and policies	Sustainable fisheries, marine conservation, licensing and enforcement	3, 4, 5, 9 and 10

6.5 NATIONAL LEGAL FRAMEWORK

6.5.1 ENVIRONMENTAL PROTECTION AND MANAGEMENT ACT

The Environmental Protection and Management Act provides the principal federal legal framework for environmental governance. It establishes responsibilities relating to environmental management, biodiversity, pollution control, environmental assessment, waste management, compliance and institutional oversight.

The Act provides the legal foundation for implementing many updated NBSAP targets. Priority actions should include:

- preparing biodiversity and ecosystem regulations;
- establishing protected-area and OECM procedures;
- developing threatened-species listing and recovery procedures;
- establishing ecological-restoration standards;
- strengthening pollution and waste-management requirements;
- developing invasive alien species measures;
- establishing access-and-benefit-sharing procedures;
- strengthening environmental information and reporting requirements;
- improving inspection and enforcement; and
- clarifying responsibilities among federal, State and local authorities.

6.5.2 ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT REGULATIONS

The Environmental and Social Impact Assessment Regulations establish procedures for screening, assessing, reviewing and authorizing activities that may have environmental and social impacts. These procedures are essential for preventing biodiversity loss associated with infrastructure, urban expansion, agriculture, irrigation, petroleum, mining, ports, energy and industrial development.

Assessments should identify:

- natural and critical habitats;
- threatened, endemic and migratory species;
- ecosystem services used by communities;
- impacts on land-degradation and restoration targets;
- climate risks and ecosystem vulnerability;
- cumulative impacts across landscapes and seascapes;
- impacts on ecological and pastoral connectivity;
- pollution and invasive-species risks;
- effects on customary land and resource use; and
- alternatives capable of avoiding or reducing harm.

All significant activities should apply the mitigation hierarchy: avoid impacts, minimize unavoidable impacts, restore affected areas and address significant residual effects. Compensation or offsets must not be used to justify avoidable harm to critical habitats.

Strategic environmental and social assessment should also be applied to major policies, plans and programmes with potential biodiversity implications.

To make these provisions enforceable within existing powers, MoECC shall maintain a public register of environmental approvals recording the proponent, location, decision, conditions attached and compliance status; sector licensing authorities shall not issue a permit or concession without prior written environmental clearance; and MoECC shall publish a schedule of critical habitats and no-go areas - including confirmed marine-turtle nesting beaches, mangrove stands, remaining riverine forest, Key Biodiversity Areas and the northern montane escarpments - in which development consent is refused rather than mitigated or offset.

6.5.3 FISHERIES LEGISLATION

The Fisheries Law establishes requirements for fisheries administration, licensing, management and enforcement. It includes provisions relevant to endangered marine organisms, incidental catch, marine pollution, coral reefs, mangroves and destructive fishing practices.

Implementation should be strengthened through:

- ecosystem-based fisheries-management plans;
- licensing and vessel-registration systems;
- monitoring, control and surveillance;
- catch, landing and bycatch reporting;
- protection of breeding and nursery grounds;
- regulation of fishing gear and seasons;
- community-based fisheries management;
- seafood traceability;
- action against illegal, unreported and unregulated fishing; and
- federal–State cooperation.

6.5.4 FORESTRY, RANGELAND AND WILDLIFE LEGISLATION

Somalia requires an updated and coherent legal framework for forests, woodlands, rangelands and wildlife. Reform should establish:

- clear resource and habitat classifications;
- protection of threatened, endemic and migratory species;
- controls on commercial charcoal production and trade;
- sustainable harvesting standards for gums, resins and medicinal plants;
- recognition of community-based natural-resource management;
- protection of pastoral mobility and ecological corridors;
- ecological-restoration obligations;
- alien-species controls;
- wildlife trade and traceability requirements; and
- appropriate offences, penalties and enforcement powers.

Legislation should recognize legitimate customary governance arrangements where these are inclusive and consistent with constitutional rights and conservation objectives.

6.5.5 WATER, AGRICULTURE AND LAND-USE LEGISLATION

Relevant laws and regulations should incorporate:

- environmental-flow requirements;
- riverbank, wetland and shoreline buffer zones;
- controls on drainage and conversion of wetlands;
- protection of catchments and groundwater-recharge areas;
- soil and water conservation;
- irrigation safeguards;
- sustainable pesticide and fertilizer management;
- protection of agricultural genetic diversity;
- land-use planning based on biodiversity and LDN information; and
- assessment of cumulative impacts across river basins and landscapes.

6.5.6 POLLUTION, CHEMICALS AND WASTE

The legal framework should address the biodiversity effects of solid waste, plastics, sewage, hazardous materials, agricultural chemicals, medical waste, petroleum products and abandoned fishing gear.

Coastal and marine monitoring shall specifically cover untreated sewage, solid-waste leakage, nutrient loading and eutrophication, mining and other extractive activities, port and petroleum pollution, and cumulative land-based discharges. Priority measures include municipal sanitation and waste-management improvements, discharge and water-quality monitoring, environmental and social assessment of extractive and infrastructure proposals, pollution-prevention plans, compliance inspections, public disclosure of significant incidents and proportionate enforcement.

Priority regulatory measures include:

- discharge and water-quality standards;
- municipal waste-management requirements;
- controls on harmful plastics;
- hazardous-waste storage, transport and disposal standards;
- port waste-reception facilities;
- oil-spill preparedness and response;
- pollution monitoring and public disclosure;
- environmental liability; and
- restoration and remediation requirements.

6.5.7 PETROLEUM, MINERALS AND MAJOR INFRASTRUCTURE

Applicable legislation, licenses and contracts should require:

- strategic environmental and social assessment;
- project-specific impact assessment;
- biodiversity baselines before authorization;
- avoidance of critical habitats and important community-resource areas;
- screening of licences and infrastructure proposals against the national geological baseline and the geodiversity and geosite inventory established under National Target 1;
- biodiversity-management and monitoring plans;
- emergency-response and oil-spill arrangements;
- operator liability and financial assurance;
- decommissioning and restoration plans;
- independent compliance monitoring; and
- disclosure of environmental performance.

Licenses and concessions should be compatible with biodiversity spatial plans, protected areas, OECMs, fisheries-management areas, LDN priorities and climate-vulnerable ecosystems.

6.6 INTERNATIONAL AND REGIONAL COMMITMENTS

Somalia became a Party to the Convention on Biological Diversity in 2009 and to the Cartagena Protocol on Biosafety in 2010. Somalia is not currently a Party to the Nagoya Protocol on Access and Benefit-Sharing.

The updated NBSAP is Somalia's principal national instrument for implementing the CBD and contributing to the Kunming–Montreal Global Biodiversity Framework. It also supports implementation of:

- the UN Framework Convention on Climate Change and Paris Agreement;
- Somalia's NDC 3.0;
- the UN Convention to Combat Desertification;
- the national LDN targets;
- the Sustainable Development Goals;
- relevant Convention on Migratory Species instruments;
- wildlife-trade commitments;
- the Nairobi Convention;
- the Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment; and
- applicable regional marine-pollution and fisheries arrangements.

The NBSAP should provide the biodiversity pillar of an integrated national approach to the three Rio Conventions. Common priorities include ecosystem restoration, sustainable land management, resilience, resource mobilization, environmental information, community participation and gender-responsive implementation.

Regional cooperation should be strengthened through the African Union, East African Community, IGAD, regional seas programmes, fisheries bodies and cooperation with neighboring countries.

6.7 INSTITUTIONAL FRAMEWORK

6.7.1 MINISTRY OF ENVIRONMENT AND CLIMATE CHANGE

The MoECC is the federal lead institution for biodiversity policy and NBSAP coordination. Its functions include:

- coordinating implementation of the CBD;
- maintaining the national biodiversity policy framework;
- developing regulations, standards and technical guidance;
- coordinating NBSAP implementation and reporting;
- overseeing environmental and social assessment;
- coordinating biodiversity information and monitoring;
- supporting protected areas, OECMs and species programmes;
- mainstreaming biodiversity across sectors;
- coordinating with NDC, NAP and LDN structures;
- mobilizing biodiversity and climate finance;
- supporting Federal Member States; and
- monitoring compliance with federal environmental requirements.

The Ministry's coordinating role does not replace the statutory responsibilities of sector institutions or Federal Member States.

6.7.2 COORDINATION WITH NDC, NAP AND LDN STRUCTURES

The NBSAP should establish formal working relationships with:

- the NBSAP country facilitator;
- the NDC country facilitator;
- the National Climate Finance Unit;
- the national MRV and climate-information structures;
- the institutions responsible for the NAP;
- the LDN National Working Group;
- the National Transformation Plan secretariat; and
- Federal Member State environmental and sector institutions.

Coordination should ensure that biodiversity, climate and land programmes do not use incompatible baselines or report the same intervention differently. Joint technical work should focus on restoration, ecosystem-based adaptation, land-condition monitoring, natural climate solutions, finance tracking and community participation.

6.7.3 FEDERAL SECTOR INSTITUTIONS

Table 32 - Federal Sector Institutions & their responsibilities

Institution or sector	Principal biodiversity responsibilities
Planning and economic development	Integrating biodiversity, NDC, NAP and LDN priorities into national planning and public investment
Finance	Biodiversity and climate budgeting, expenditure tracking, incentive reform and financial-sector policy
Agriculture and irrigation	Sustainable agriculture, agrobiodiversity, soil conservation, irrigation safeguards and pesticide management
Livestock, forestry and rangelands	Rangeland management, forest conservation, pastoral corridors, restoration and sustainable woody-resource use
Fisheries and blue economy	Fisheries management, marine conservation, licensing and control of illegal fishing
Energy and water resources	Clean-energy transition, watershed protection, water allocation and environmental flows
Petroleum and minerals	Environmental safeguards, monitoring, liability, emergency response and restoration
Public works and infrastructure	Biodiversity-sensitive infrastructure planning and application of the mitigation hierarchy
Ports and marine transport	Marine-pollution prevention, ballast and waste management, and emergency response
Trade, industry and customs	Product traceability, wildlife and fisheries trade controls and border enforcement
Urban development and local government	Green spaces, drainage corridors, wetlands, pollution control and municipal planning
Disaster-management institutions	Ecosystem-based risk reduction, preparedness and resilient recovery
Education and higher education	Research, biodiversity education, training and scientific capacity
Justice and law enforcement	Investigation, prosecution and adjudication of environmental offences

6.7.4 FEDERAL MEMBER STATES

Federal Member States are essential because most biodiversity actions occur within State and local jurisdictions. Their functions should include:

- adapting national frameworks to State circumstances;
- preparing State biodiversity programmes;
- integrating NBSAP, NDC, NAP and LDN actions into State plans;
- identifying priority landscapes, seascapes and species;
- enforcing environmental and natural-resource requirements;
- coordinating districts and community institutions;
- collecting and reporting biodiversity data;

- supporting conservation and restoration sites; and
- incorporating biodiversity into State budgets.

Where mandates overlap, responsibilities should be agreed through intergovernmental consultation and documented in regulations, protocols or memoranda of understanding.

6.7.5 LOCAL GOVERNMENTS

Local governments should contribute through:

- biodiversity-sensitive land-use planning;
- protection of wetlands and natural drainage corridors;
- development of accessible green and blue spaces;
- local waste and pollution management;
- community restoration;
- control of harmful land conversion;
- environmental awareness; and
- local grievance and dispute-resolution systems.

6.7.6 COMMUNITIES AND CUSTOMARY INSTITUTIONS

Communities and customary institutions should be recognized as rights-holders and implementation partners. Their roles include:

- identifying priority ecosystems and resources;
- developing management and restoration agreements;
- contributing traditional and local ecological knowledge with consent;
- monitoring biodiversity and land condition;
- establishing sustainable-use rules;
- preventing and resolving resource conflict;
- managing local conservation benefits; and
- evaluating livelihood and social outcomes.

6.7.7 UNIVERSITIES, CIVIL SOCIETY AND THE PRIVATE SECTOR

Universities and research institutions should support inventories, baselines, taxonomy, GIS, remote sensing, ecosystem-service assessment, indicator development, data-quality assurance and professional training.

Civil society should support public participation, community mobilization, environmental education, independent monitoring and grievance mechanisms.

The private sector is responsible for compliance, biodiversity-risk assessment, application of the mitigation hierarchy, disclosure of significant impacts, remediation and supply-chain sustainability. It should also be encouraged to invest in restoration, sustainable fisheries, clean energy, recycling and biodiversity-compatible value chains.

6.8 FEDERAL–STATE AND CROSS-SECTOR COORDINATION

Coordination should be guided by:

- national standards with locally appropriate implementation;
- consultation before decisions affecting State or community resources;
- clearly assigned lead and supporting responsibilities;
- shared data standards;
- alignment of NBSAP, NDC, NAP and LDN planning;
- joint planning for ecosystems and mobile resources crossing administrative boundaries;
- coordinated licensing and enforcement;
- transparent finance and benefit-sharing; and
- mechanisms for resolving institutional disputes.

Federal–State agreements should cover protected areas, OECMs, fisheries licensing, wildlife enforcement, biodiversity data, land-use planning, environmental assessment, restoration, climate finance and community benefit-sharing.

6.9 COMPLIANCE AND ENFORCEMENT

Priority measures include:

- developing implementing regulations and technical standards;
- training inspectors, customs officers, prosecutors and judicial personnel;
- strengthening permits and licenses;
- conducting joint inspections;
- improving evidence collection;
- applying proportionate penalties;
- publishing non-sensitive compliance information;
- enabling community reporting;
- issuing restoration and remediation orders; and
- coordinating environmental, fisheries, customs, police and justice institutions.

Enforcement should address significant and organized environmental harm while avoiding disproportionate penalties for vulnerable households where sustainable alternatives have not been provided.

6.10 PRIORITY POLICY AND LEGAL GAPS

Implementation rule for priority instruments. Each law, regulation, standard or guidance instrument prepared under the NBSAP should identify the responsible authority, implementation deadline, financing source, compliance and enforcement powers, data and disclosure requirements, public-participation arrangements, grievance pathway and indicators feeding into the national monitoring framework.

Business biodiversity accountability should be phased into relevant licensing, investment and procurement systems. Priority measures include biodiversity risk-and-dependency screening, due diligence, supply-

chain traceability, a transparent compliance register, sustainable public procurement and proportionate disclosure requirements for sectors with material impacts on ecosystems. Offsets should be considered only after avoidance, minimization and restoration measures have been applied.

The legal inventory shall be maintained as a living register showing the status, responsible institution, relationship and principal implementation gap for each relevant instrument. Priority gaps to be addressed through coordinated sector processes include forestry and wildlife protection, rangeland and soil conservation, seed and plant-health regulation, agrochemical registration and safe use, invasive-species control, pollution and waste management, and biodiversity safeguards for mining and major infrastructure. This NBSAP identifies the biodiversity requirements without duplicating detailed sector-policy reviews.

Table 33 – Legal gaps & priorities

Priority gap	Required response
Weak alignment among NBSAP, NDC, NAP and LDN processes	Establish common planning, indicators, data-sharing and reporting arrangements
Inconsistent LDN forest-cover figures	Verify and formally confirm the applicable national baseline and 2030 target
Incomplete biodiversity regulations	Prepare implementing regulations under the Environmental Protection and Management Act
Outdated forestry, rangeland and wildlife provisions	Develop a modern federal framework covering habitats, species and community management
Unclear protected-area and OECM procedures	Establish categories, designation procedures, governance standards and management-effectiveness requirements
Limited species-protection mechanisms	Establish threatened-species listing, recovery and trade-control procedures
No operational ABS framework	Develop access, prior-informed-consent and benefit-sharing procedures and assess Nagoya Protocol accession
Weak invasive-species controls	Establish prevention, risk assessment, early warning, control and restoration procedures
Incomplete pollution and waste standards	Develop standards for waste, wastewater, plastics, chemicals and marine pollution
Limited ecological-restoration standards	Establish native-species, ecosystem-integrity and long-term monitoring requirements
Weak biodiversity safeguards for climate projects	Introduce biodiversity screening for NDC and NAP investments
Weak safeguards for petroleum and infrastructure	Strengthen strategic assessment, critical-habitat protection, liability and financial assurance
Fragmented environmental information	Establish data-custodian, quality-control and sharing requirements
Overlapping institutional mandates	Clarify federal, State and sector responsibilities
Limited recognition of community governance	Establish legal mechanisms for community management and customary rights

6.11 STRATEGIC PRIORITIES THROUGH 2030

Somalia should prioritize:

- implementing the Environmental Protection and Management Act and ESIA Regulations;
- formally aligning the NBSAP with NDC 3.0, NAP and verified LDN targets;
- adopting shared biodiversity, climate and land-condition indicators;
- preparing biodiversity, protected-area, species and restoration regulations;
- modernizing forestry, rangeland and wildlife legislation;
- strengthening fisheries regulation and enforcement;
- establishing an access-and-benefit-sharing framework;
- developing invasive-species, pollution and waste-control measures;
- integrating biodiversity into climate, petroleum, infrastructure and public-investment frameworks;
- clarifying federal, State and local responsibilities;
- recognizing appropriate community-based management arrangements;
- strengthening environmental inspection and judicial capacity; and
- periodically reviewing policy coherence as national frameworks are updated.

6.12 OVERALL ASSESSMENT

Somalia has established an increasingly important foundation for biodiversity governance through its Constitution, National Transformation Plan, NDC 3.0, National Adaptation Plan, LDN targets, National Environment Policy, sector policies, Environmental Protection and Management Act, ESIA Regulations and Fisheries Law.

Together, these frameworks recognize that biodiversity, climate resilience, land productivity, food security, water security and economic development are inseparable. The updated NBSAP should serve as the national biodiversity framework connecting these commitments.

The principal challenge is not the absence of policy commitments but fragmentation among policies, institutions, indicators, budgets and reporting systems. Implementation will require:

- verified and compatible targets;
- clearly assigned institutional responsibilities;
- strong federal–State cooperation;
- functioning regulatory and enforcement systems;
- shared biodiversity, climate and land information;
- coordinated resource mobilization; and
- meaningful participation by communities and other rights-holders.

CHAPTER 7 IMPLEMENTATION, COORDINATION & BIODIVERSITY MAINSTREAMING ARRANGEMENTS

This chapter unveils the operational framework for delivery of Somalia's updated National Biodiversity Strategy and Action Plan through 2030

7.1 INTRODUCTION

This chapter establishes the operational arrangements through which Somalia will translate the national biodiversity targets and priority actions in Chapter 5 into coordinated programmes, investments and locally implemented measures. It does not restate the strategic vision, individual targets, or legal and institutional mandates set out in Chapters 5 and 6. Instead, it defines how responsible institutions and partners will organize delivery, integrate biodiversity into routine planning and decision-making, manage implementation risks, and maintain accountability through 2030.

Implementation will take place in a federal, institutionally diverse and environmentally variable setting. National direction must therefore be combined with Federal Member State ownership, district-level delivery, community participation and sector leadership. The arrangements below are designed to be practical and scalable: they can support immediate action through existing structures while allowing coordination, technical capacity and information systems to mature over time.

7.2 IMPLEMENTATION APPROACH

Somalia will apply a whole-of-government and whole-of-society approach to NBSAP implementation. National targets will be implemented through existing government and community systems wherever these are capable of carrying out the required functions.

Implementation will be guided by the following operational principles:

- National direction will be combined with Federal Member State and local ownership.
- One accountable lead institution will be assigned to each action.
- Existing institutions and coordination mechanisms will be used before new structures are established.
- Implementation will begin using the best available evidence and will be adjusted as information improves.
- Actions will be organized around connected landscapes, seascapes, watersheds and ecosystems where appropriate.
- Communities and customary institutions will participate in decisions affecting their resources, livelihoods, knowledge and access.
- Implementation will be gender-responsive, youth-inclusive and conflict-sensitive.
- Biodiversity, climate, land, water and livelihood outcomes will be coordinated wherever they arise from the same intervention.
- Responsibilities, decisions, resources, progress and corrective actions will be documented.

7.3 NATIONAL IMPLEMENTATION AND COORDINATION MECHANISM

The institutional mandates underlying the following arrangements are described in Chapter 6. The structures below define how those mandates will be exercised during NBSAP implementation.

Table 34 - National NBSAP Implementation and Coordination Mechanism

Coordination component	Operational function	Composition or responsibility	Operating arrangement
National Biodiversity Steering Committee	Provide strategic oversight, approve national implementation priorities and resolve major interinstitutional issues	MoECC; relevant federal ministries and agencies; Ministry of Finance; Ministry of Planning; Federal Member States; and appropriate representatives of communities, women, youth, civil society, research institutions and the private sector	Meet at least twice annually. Decisions should identify responsible institutions, agreed actions and deadlines
Ministry of Environment and Climate Change	Convene and coordinate national NBSAP implementation	Perform the lead coordinating functions established in Section 6.7.1 without replacing the statutory responsibilities of sector or State institutions	Present consolidated implementation priorities, progress and unresolved matters to the Steering Committee
NBSAP Coordination Unit	Manage day-to-day implementation coordination	Small technical unit within MoECC using existing staff and structures where feasible	Maintain implementation plans, responsibility matrices, decision records, programme pipelines and communication with focal points
Institutional focal points	Coordinate the contribution of individual ministries, agencies and partner institutions	Formally designated officer and alternate from each participating institution	Integrate assigned actions into institutional work plans and submit agreed implementation information
Federal Member State focal points	Coordinate State-level implementation and connect State and national processes	Designated focal institution or officer in each Federal Member State	Consolidate State sector inputs, support district delivery and communicate implementation constraints
Technical working groups	Address specific time-bound technical assignments	Relevant government, research, community, civil-society and private-sector expertise	Each group should have a defined task, lead, outputs, timetable and closure or renewal date
Federal–State Implementation Forum	Review common priorities and issues extending across jurisdictions	Federal institutions, Federal Member States and other relevant implementing bodies	Convene annually, supported by technical meetings when necessary

7.3.1 WHOLE-OF-GOVERNMENT AND WHOLE-OF-SOCIETY GOVERNANCE MODEL

The implementation architecture will be operated through a whole-of-government and whole-of-society model under MoECC leadership. A National Biodiversity Steering Committee will provide apex oversight,

supported by technical working groups on terrestrial ecosystems and rangelands; marine and coastal biodiversity; spatial planning, protected areas and OECMs; biodiversity finance and mainstreaming; gender and social inclusion; and monitoring, data and reporting. Federal–Federal Member State coordination will be maintained through a standing environment coordination forum, designated biodiversity focal points in each Federal Member State and the Benadir Regional Administration, and joint annual planning.

Decisions should be taken at the lowest competent level, with responsibilities clearly assigned in the implementation plan. The Steering Committee will oversee target revisions, reallocations between programme packages and proposals for new conservation areas, subject to applicable legal mandates and approval procedures. The Coordination Unit will manage work planning, implementation sequencing and technical guidance. Federal Member State authorities, district authorities and community institutions will lead site selection within agreed landscapes, grazing and harvesting rules, and local dispute resolution, within their respective mandates. District authorities, customary institutions, community conservancies, locally managed marine areas, cooperatives and village committees will serve as local delivery and co-management platforms. Technical issues will be resolved through working groups, cross-sector matters elevated to the Steering Committee, and unresolved political or intergovernmental issues referred through established federal coordination mechanisms.

7.4 FUNCTIONS OF THE NBSAP COORDINATION UNIT

The NBSAP Coordination Unit will undertake the following functions:

Table 35 - Core Functions and Outputs of the NBSAP Coordination Unit

Function	Required output
Implementation planning	Rolling multi-year implementation plan and annual national delivery plan
Assignment of responsibility	Current matrix identifying the lead, supporting actors, delivery level, timing and dependencies for every NBSAP action
Coordination	Meeting schedules, decision records, action trackers and referral of unresolved matters
Federal Member State support	State planning templates, technical support and consolidated State implementation updates
Programme development	Prioritized pipeline of programme and project concepts linked to the national targets
Mainstreaming support	Screening tools, sector checklists and planning guidance
Partnership coordination	Record of partner programmes, geographic coverage, financing and institutional support
Cross-framework alignment	Operational matrix connecting the NBSAP with NDC 3.0, NAP, LDN and national development programmes
Management review	Consolidated information on implementation progress, constraints and required corrective action
Link to other chapters	Coordination with Chapter 8 financing, and Chapter 9 monitoring

The NBSAP Coordination Unit should remain an operational coordination mechanism rather than becoming a parallel implementing agency. Programmes and field actions will remain under the responsibility of the institutions holding the appropriate legal and sector mandates.

7.5 FEDERAL, STATE AND LOCAL DELIVERY ARRANGEMENTS

The general responsibilities of federal, State and local institutions are already defined in Chapter 6. For implementation purposes, these responsibilities will be translated into the following planning and delivery instruments.

Table 36 - NBSAP Delivery Arrangements at National, State and Local Levels

Implementation level	Principal delivery instrument	Minimum content	Coordination pathway
National	Rolling national NBSAP implementation plan	Programme packages, national milestones, responsible institutions, dependencies and indicative resource requirements	Prepared by the NBSAP Coordination Unit and approved through the national coordination mechanism
Federal sector	Institutional or sector implementation plan	Actions assigned to the institution, responsible unit, annual milestones, budget requirements and expected results	Submitted through the relevant institutional focal point
Federal Member State	Concise State NBSAP implementation programme	State ecosystems and priorities, geographic areas, responsible bodies, district partners, community arrangements and investment needs	Coordinated by the State focal point and aligned with national targets
District or municipality	Biodiversity-responsive local development plan	Priority sites, local land-use measures, restoration, green and blue spaces, pollution control and community delivery arrangements	Integrated into established district or municipal planning
Landscape or seascape	Integrated programme plan	Geographic boundary, ecosystem pressures, connected interventions, stakeholder arrangements and safeguards	Coordinated among relevant federal, State, district and community institutions
Community or site	Site-level implementation agreement	Area or resource, participants, management rules, responsibilities, benefits, restrictions, monitoring and grievance arrangements	Agreed with affected rights-holders and relevant local authorities

Actions should be incorporated into existing plans and administrative systems rather than delivered through disconnected environmental projects.

7.6 ASSIGNMENT OF IMPLEMENTATION RESPONSIBILITIES

Every NBSAP action will be assigned to one lead institution and a limited number of supporting institutions.

Table 37 - Categories and Functions of NBSAP Implementation Actors

Responsibility category	Operational meaning
Lead institution	Accountable for convening delivery, maintaining the work plan, coordinating supporting actors and reporting implementation progress
Supporting institution	Provides a defined technical, regulatory, financial, information, enforcement or service-delivery contribution
Delivery partner	Implements agreed programme or site activities under an appropriate agreement

Coordination body	Resolves dependencies, overlaps and cross-institutional implementation issues
Oversight body	Reviews performance, compliance and major corrective actions
Rights-holders and resource users	Participate in design, implementation, monitoring, benefit-sharing and local accountability

Where authority is shared, the responsibility matrix should identify the specific function of each institution instead of listing several undifferentiated lead institutions.

Designation as the lead does not confer exclusive legal authority or ownership over all resources associated with an action.

7.7 INTERGOVERNMENTAL AND CROSS-SECTOR COORDINATION

Federal–State and cross-sector coordination principles are established in Section 6.8. During implementation, coordination will follow the operational process below.

Table 38 - Operational Process for Intergovernmental and Cross-Sector Coordination

Stage	Required action	Expected result
Identification	Document the overlapping mandate, geographic issue, dependency or implementation constraint	Clear statement of the issue and the institutions concerned
Technical consultation	Examine applicable mandates, evidence, programme requirements and potential solutions	Agreed technical solution or defined options
Operational agreement	Record the agreed division of work, resources, data requirements and timetable	Implementable and accountable arrangement
Escalation	Refer significant unresolved matters to the Steering Committee or constitutionally appropriate mechanism	Documented high-level decision
Continued implementation	Proceed with uncontested activities while the disputed matter is considered	Wider implementation is not unnecessarily delayed
Follow-up	Track completion of the agreed decision	Closure of the issue and incorporation of lessons

Intergovernmental agreements or protocols may be developed for issues such as protected areas, OECCMs, shared ecosystems, fisheries management, biodiversity information, environmental assessment, restoration and community benefit-sharing.

7.7.1 STAKEHOLDER ENGAGEMENT AND ACCOUNTABILITY SYSTEM

The Stakeholder Engagement Plan will remain operational throughout implementation. Its stakeholder map currently identifies 83 actors across federal and state institutions, district and customary authorities, civil society, women’s and youth organizations, academia, development partners, communities and the private sector, and will be updated annually. Engagement will combine national forums, thematic technical sessions, Federal Member State consultations, community dialogue, participatory rural appraisal, focus groups, bilateral technical meetings, radio and other accessible communication channels. MoECC will maintain a public feedback matrix showing whether consultation recommendations were fully incorporated,

partly incorporated or not incorporated, with reasons. Accessible grievance channels will operate through district authorities, Federal Member State focal points and MoECC. Consultation participation, geographic coverage, disaggregated representation, stakeholder satisfaction, feedback publication and grievance resolution will be reported annually.

7.8 IMPLEMENTATION PLANNING AND DELIVERY INSTRUMENTS

7.8.1 PROGRAMME PACKAGES

The national targets and actions should be consolidated into a manageable number of programme packages. Each package should combine related interventions, institutions and geographic priorities. A programme package should specify: the biodiversity problem being addressed; the intended outcome; the relevant national targets; the intervention logic; proposed geographic focus or site-selection criteria; lead and supporting institutions; community and stakeholder arrangements; social and biodiversity safeguards; implementation period and milestones; resource requirements; monitoring responsibilities; and post-project institutional and maintenance arrangements.

7.8.2 CORE IMPLEMENTATION INSTRUMENTS

Table 39 - Core NBSAP Implementation and Delivery Instruments

Instrument	Purpose	Preparation responsibility	Use
Rolling multi-year implementation plan	Establish the national delivery pathway through 2030	NBSAP Coordination Unit, lead institutions and Federal Member States	Programme sequencing and medium-term planning
Annual implementation plan	Identify deliverables feasible within available or reasonably anticipated resources	Lead institutions, State focal points and NBSAP Coordination Unit	Annual budgeting and programme coordination
Implementation responsibility matrix	Assign one lead, supporting actors, delivery level, timing and dependencies	NBSAP Coordination Unit	Day-to-day coordination and accountability
State implementation programme	Adapt national priorities to State ecosystems and institutional conditions	Federal Member State focal institution	State and district delivery
Site-level implementation plan	Define locally agreed activities, safeguards, benefits and responsibilities	Implementing institution, district and affected communities	Field implementation
Partnership agreement	Define outputs, financing, data, safeguards, reporting, assets and exit arrangements	Lead institution and participating partner	Transfer of resources or delivery responsibility
Programme pipeline	Maintain prioritized and sufficiently developed concepts	Lead institutions and NBSAP Coordination Unit	Resource mobilization under Chapter 8

7.9 BIODIVERSITY MAINSTREAMING

Biodiversity mainstreaming means incorporating biodiversity considerations into the routine decisions, plans, budgets, investments and regulatory functions of institutions whose activities depend on or affect ecosystems.

Mainstreaming is not achieved through the simple inclusion of a general environmental statement. A plan or programme will be considered biodiversity-responsive when it:

- identifies its dependencies on biodiversity and ecosystem services;
- assesses its potential direct, indirect and cumulative impacts;
- uses appropriate spatial and ecological information;
- applies the mitigation hierarchy;
- identifies opportunities to contribute positively to national biodiversity targets;
- assigns measurable responsibilities;
- provides appropriate resources; and
- includes indicators capable of tracking implementation.

7.10 MAINSTREAMING INTO NATIONAL, STATE AND LOCAL PLANNING

7.10.1 NATIONAL TRANSFORMATION PLAN

During annual reviews and the preparation of successor national development plans, relevant NBSAP targets should be translated into development outcomes, sector results and public-investment criteria.

National planning guidance should require institutions to identify:

- the biodiversity targets supported by their programmes;
- the ecosystems and ecosystem services on which the programmes depend;
- potential adverse impacts on biodiversity;
- measures for avoiding or reducing those impacts; and
- associated implementation and budget responsibilities.

This operationalizes the policy alignment described in Section 6.3.1 without creating a separate national planning process.

7.10.2 FEDERAL MEMBER STATE AND DISTRICT PLANS

Federal Member State and district planning templates should include:

- a short assessment of priority ecosystems and ecosystem services;
- mapped priority areas where adequate information is available;
- relevant NBSAP actions;
- responsible State or local offices;
- recurrent management requirements; and
- evidence of consultation with affected resource users.

State and local biodiversity measures should be incorporated into development, land-use and investment plans instead of being maintained as separate environmental commitments.

7.10.3 PUBLIC INVESTMENT PLANNING

Public-investment proposals with potential biodiversity implications should identify:

- location and physical footprint;
- dependence on water, land and other natural resources;
- proximity to sensitive ecosystems and community-resource areas;
- pollution and invasive-species risks;
- feasible alternatives;
- proposed avoidance and mitigation measures; and
- long-term restoration or management obligations.

Proposals involving sensitive areas should not proceed to detailed design until reasonable alternatives and avoidance options have been examined.

7.10.4 ANNUAL PLANNING AND BUDGETING CYCLE

Each year, MoECC should issue NBSAP planning and budgeting guidance. National planning authorities should incorporate biodiversity targets, indicators and spatial priorities into planning templates and results frameworks. Federal institutions and Federal Member States should screen programmes and prepare costed biodiversity actions. The Ministry of Finance should apply biodiversity budget tags and public-investment appraisal criteria, while MoECC should confirm applicable SEA, ESIA and biodiversity-screening requirements. Responsible institutions should then report expenditure, safeguard compliance and biodiversity results through the NBSAP monitoring framework.

Minimum annual products are: national NBSAP planning and budget guidance; costed sector and Federal Member State biodiversity workplans; a biodiversity-tagged expenditure statement; an SEA/ESIA and project-screening compliance report; and an annual implementation and policy-coherence review. A strategic policy-coherence review should be undertaken at least every two to three years.

7.11 SECTOR MAINSTREAMING ENTRY POINTS

Sector institutions should manage biodiversity dependencies and impacts through their own mandates, policies, licensing functions, budgets and investment decisions. Agriculture, livestock and rangelands, fisheries and the blue economy, forestry, water, energy, infrastructure and transport, urban development, mining and extractives, and disaster-risk reduction should each appoint an NBSAP focal point; apply the mitigation hierarchy and climate-and-nature risk screening; use common indicators and geospatial standards; prepare costed annual actions; and integrate community rights, gender equality, youth participation and accessible grievance mechanisms.

Chapter 6 identifies the mandates and general biodiversity responsibilities of federal sector institutions. The following table identifies the principal administrative and programme decisions through which those responsibilities should be implemented.

Table 40 – Sector-Specific Entry Points for Biodiversity Mainstreaming

Sector	Routine mainstreaming entry points
Agriculture and irrigation	Land suitability, soil and water conservation, crop diversity, pollinator protection, integrated pest management, irrigation safeguards and extension services
Livestock, forestry and rangelands	Grazing plans, pastoral mobility corridors, dry-season reserves, water-point siting, invasive-species management, woodland restoration and sustainable harvesting
Fisheries and blue economy	Licensing, catch and bycatch reporting, gear and seasonal controls, nursery habitats, community management, traceability and control of illegal fishing
Water resources	Environmental flows, catchment protection, wetland buffers, abstraction decisions, water quality and nature-based flood and drought management
Infrastructure and urban development	Alternatives analysis, avoidance of sensitive areas, ecological connectivity, erosion and pollution control and urban green and blue infrastructure
Energy, petroleum and minerals	Strategic siting, critical-habitat avoidance, spill prevention, financial assurance, decommissioning and ecological restoration
Trade, industry and customs	Sustainable sourcing, resource efficiency, waste reduction, traceability, disclosure and control of illegal wildlife and natural-resource trade
Education and research	Biodiversity education, professional training, applied research, taxonomy, environmental information and public awareness
Finance and economic planning	Biodiversity-responsive budgeting, expenditure tracking, incentive reform, investment screening and natural-capital considerations
Disaster management and humanitarian response	Ecosystem-based risk reduction, environmental screening, sustainable sourcing, waste management and resilient recovery

7.12 ALIGNMENT WITH NDC 3.0, NAP, LDN, NTP AND RELATED FRAMEWORKS

Chapter 6 explains the substantive relationship between these national frameworks. Implementation coordination will focus on shared programmes, compatible information and synchronized work planning.

Table 41 – Alignment with related frameworks

Framework	Shared implementation areas	Operational coordination mechanism
NDC 3.0	Ecosystem restoration, forests and rangelands, coastal resilience, sustainable production, nature-based solutions and climate-finance programmes	Joint programme concepts, common geographic records and coordinated financing proposals
National Adaptation Plan	Ecosystem-based adaptation, watersheds, wetlands, mangroves, drought resilience and climate-vulnerable livelihoods	Coordinated site selection and shared implementation plans
LDN targets	Land-condition baselines, sustainable land management, restoration, land productivity and soil organic carbon	Compatible restoration planning and shared land-condition information
National Transformation Plan	Public investment, productive sectors, resilience, employment and human development	Integration of biodiversity targets into development programmes and results frameworks

Disaster-risk and humanitarian frameworks	Ecosystem-based risk reduction and environmental pressures associated with emergencies and recovery	Environmental screening and coordinated preparedness and recovery planning
Rio Conventions	Capacity, data, finance, restoration and reporting investments	Joint technical planning while preserving each Convention's distinct indicators and reporting obligations

The NBSAP Coordination Unit should maintain a cross-framework implementation matrix containing:

Table 42 - Required Fields of the Cross-Framework Implementation Matrix

Matrix field	Information recorded
Programme or intervention	Name and concise description
Relevant national frameworks	NBSAP, NDC 3.0, NAP, LDN, NTP or other applicable framework
Lead institution	Institution accountable for implementation coordination
Supporting institutions	Institutions providing defined contributions
Geographic coverage	Federal Member State, district, landscape, seascape or site
Financing source	Confirmed or anticipated funding
Implementation period	Start, milestones and intended completion
Expected contributions	Biodiversity, climate, land and development outcomes
Reporting pathway	Institutions and frameworks receiving the results
Double-counting control	Method used to distinguish or appropriately attribute shared outcomes

7.13 SPATIALLY INTEGRATED IMPLEMENTATION

NBSAP interventions should be coordinated geographically so that separate sector projects contribute to connected ecological and livelihood outcomes.

Spatial planning should consider:

- biodiversity values and priority ecosystems;
- land condition and restoration needs;
- water systems and environmental flows;
- settlements and infrastructure;
- pastoral mobility and seasonal resource use;
- customary and formal tenure;
- community-resource areas;
- development proposals; and
- climate and disaster risks.

Priority landscapes and seascapes should integrate conservation, restoration, sustainable production and livelihood measures rather than treating each intervention as an isolated project.

7.13.1 SITE SELECTION

Sites should be selected using:

- ecological importance and level of threat;
- expected contribution to national targets;
- connectivity with other important areas;
- livelihood and ecosystem-service value;
- implementation feasibility;
- tenure and resource-use conditions;
- geological, geomorphological and landscape significance
- community support;
- security and accessibility; and
- geodiversity and geosite significance, using the national geodiversity and geosite inventory established under National Target 1, including karst, cave, spring and groundwater-dependent systems
- capacity for long-term management.

7.13.2 PROTECTED AREAS, OECMs AND CONNECTIVITY

Area-based measures should be developed through transparent assessment of biodiversity value, governance, rights, management capacity and equitable benefits.

Portfolios should support ecological connectivity across terrestrial, freshwater, coastal and marine ecosystems rather than relying only on isolated designations.

7.13.3 INTER-STATE AND TRANSBOUNDARY ECOSYSTEMS

For river basins, rangelands, pastoral corridors, coastal systems and species ranges that cross administrative or national boundaries, participating institutions should agree on:

- common objectives;
- compatible management measures;
- information exchange;
- monitoring responsibilities; and
- procedures for responding to incidents or disputes.

7.13.4 SPATIAL PLANNING AND AREA-BASED ACTION FRAMEWORK

A National Integrated Spatial Plan will translate the NBSAP into coordinated land- and seascape decisions. Planning will distinguish high-priority conservation zones, restoration priority zones, sustainable-use landscapes and development-control zones, while recognizing that current boundaries and maps are preliminary and require field verification, Federal Member State consultation and legal review before designation.

Early spatial priorities include the Daallo–Golis montane complex, Awdal and north-western rangelands, the Jubba–Shabelle riparian corridor, Hobyo grasslands, central dryland forest remnants, the Buur Gaabo and Lag Badana–Bushbushle system, Ras Hafun–Guardafui, the Mogadishu–Marka coastal belt and the Kismayo–Ras Kamboni complex. Implementation will combine protected areas, OECMs, community conservancies, locally managed marine areas, ecological corridors, restoration and conflict-sensitive land

and resource-use planning. The technical method, datasets, maps and site-level priorities are provided in Annex 8.

7.14 IMPLEMENTATION PARTNERSHIPS

7.14.1 ENVIRONMENTAL AND SOCIAL SAFEGUARDS FOR NBSAP DELIVERY

All NBSAP-supported policies, programmes, projects, grants, contracts, restoration and conservation activities, research and area-based measures shall comply with the Environmental and Social Safeguards Framework in Annex 3. Before any physical or field activity begins, the implementing institution shall complete environmental and social screening, assign a proportionate risk category, prepare and obtain approval for the required instrument, consult affected stakeholders, disclose appropriate information and incorporate mitigation responsibilities and costs into workplans, budgets, procurement documents and contracts.

Risk shall be classified as low, moderate, substantial or high. Moderate-risk activities will normally require a site-specific ESMP; substantial- or high-risk activities require targeted or full assessment and relevant specialist plans. Activities with unacceptable, irreversible or unmanageable impacts shall be redesigned, relocated or excluded. MoECC will provide national oversight; implementing institutions and Federal Member States will conduct screening and monitoring; and contractors and partners will be bound by safeguard, labour, community-safety, incident-reporting and corrective-action requirements.

A free, accessible, culturally appropriate and non-retaliatory grievance mechanism shall serve communities and workers. It shall accept oral, written, anonymous and confidential submissions where practicable; establish clear acknowledgement and resolution standards; protect complainants from retaliation; provide appeal and escalation routes; and refer sensitive complaints confidentially to appropriately qualified services. Safeguard performance shall be consolidated through the monitoring framework in Chapter 9.

Government institutions may enter implementation partnerships with communities, civil-society organizations, universities, private enterprises and development partners where these partnerships address clearly defined delivery or capacity gaps.

Partnership agreements should specify:

- expected outputs;
- institutional responsibilities;
- financing and financial controls;
- data ownership and sharing;
- environmental and social safeguards;
- reporting arrangements;
- asset ownership and maintenance;
- communication and visibility requirements;
- dispute-resolution procedures; and
- completion or exit arrangements.

Development partners should align support with the national and State implementation plans and avoid establishing parallel planning, data or reporting systems that cannot be sustained by national institutions.

Technology introduced through partnerships should be affordable to operate, compatible with national systems and accompanied by training, maintenance and data-governance arrangements.

7.14.2 GENDER-RESPONSIVE AND INCLUSIVE DELIVERY

Delivery partners will use inclusive consultation schedules and venues, local-language and low-literacy communication, women-only sessions where culturally appropriate, and targeted access measures for youth and persons with disabilities. Community leaders and customary institutions should be engaged to support legitimacy without displacing the voices or rights of affected groups.

Biodiversity-finance instruments and livelihood programmes will include eligibility, scoring and benefit-sharing criteria that reach women-led groups and enterprises and strengthen women's participation in higher-value segments of fisheries, livestock, rangeland-product, restoration and nature-based value chains. Safeguard screening will assess exclusion, elite capture, unequal workload and unequal access to programme benefits.

7.15 IMMEDIATE IMPLEMENTATION PRIORITIES

7.15.1 CAPACITY DEVELOPMENT APPROACH

Capacity development shall follow the whole-of-government and whole-of-society programme in Annex 4 and shall strengthen individual skills, institutional systems and the wider enabling environment. Priority competencies include policy and legal implementation, biodiversity assessment and taxonomy, GIS and spatial planning, protected-area management, ecosystem restoration, environmental and social safeguards, gender and inclusion, project preparation, biodiversity finance, information management, monitoring and CBD reporting.

The programme shall prioritize Federal Government institutions, Federal Member States and districts, universities and research bodies, communities and civil society, women and youth organizations, and relevant private-sector actors. Training should be linked to mentoring, certification, applied fieldwork, equipment, standard operating procedures and measurable institutional performance. Technical assistance should work alongside national personnel and progressively transfer implementation, quality-assurance and leadership responsibilities to Somali institutions.

Table 43 - Immediate Priorities for Operationalizing NBSAP Implementation

No.	Priority action	Lead responsibility	Immediate output
1	Formally designate the NBSAP Coordination Unit	MoECC	Operational Unit with defined functions
2	Designate institutional and Federal Member State focal points and alternates	Participating institutions	Functional focal-point network
3	Constitute the National Biodiversity Steering Committee	MoECC and participating institutions	Approved membership, terms of reference and meeting calendar
4	Prepare the national implementation responsibility matrix	NBSAP Coordination Unit	Lead and supporting roles assigned to every action
5	Prepare the first rolling multi-year implementation plan	NBSAP Coordination Unit, lead institutions	Sequenced implementation pathway through 2030

		and Federal Member States	
6	Prepare concise State implementation programmes	Federal Member State focal institutions	State priorities, geographic areas and delivery arrangements
7	Develop biodiversity-screening and sector-mainstreaming tools	MoECC and relevant technical institutions	Standard tools for policies, investments and programmes
8	Integrate biodiversity into planning, budgeting and procurement guidance	Planning, finance, procurement and environment institutions	Revised administrative templates and guidance
9	Establish priority technical working groups	NBSAP Coordination Unit and designated leads	Time-bound groups for immediate technical assignments
10	Develop a coordinated programme pipeline	Lead institutions and NBSAP Coordination Unit	Prioritized programme concepts linked to Chapter 8
11	Establish the cross-framework implementation matrix	NBSAP Coordination Unit and relevant national focal points	Shared interventions and responsibilities documented
12	Issue minimum requirements for community agreements, benefit-sharing and grievances	Responsible national and State institutions	Standard implementation guidance
13	Conduct the first annual implementation review	Steering Committee and NBSAP Coordination Unit	Documented management response and subsequent annual priorities

7.16 CONCLUSION

Successful implementation of Somalia's updated NBSAP depends on making biodiversity part of ordinary government, sector, investment and community decisions. The framework in this chapter creates a practical bridge between the strategic commitments in Chapter 5 and delivery at federal, State, district and site levels. It emphasizes clear responsibility, locally appropriate action, early screening, coordinated spatial delivery, inclusive participation, functional capacity and transparent corrective action. The framework is intentionally adaptive. It can begin with existing institutions and available information while becoming more systematic as finance, evidence and capacity improve.

8.1 INTRODUCTION

Implementation of Somalia's National Biodiversity Strategy and Action Plan will require adequate, predictable and well-coordinated financial, human, institutional and technical resources. Chapter 7 establishes the national implementation architecture and assigns responsibilities across federal institutions, Federal Member States, districts, communities and implementation partners. This chapter establishes the corresponding framework for costing the NBSAP, assessing existing expenditure, estimating the financing gap and mobilizing resources through 2030.

Somalia's biodiversity-finance system remains at an early stage. Biodiversity expenditure has not yet been comprehensively identified across public budgets, development-partner programmes, private investment and community contributions. Similarly, the full cost of implementing the final national biodiversity targets has not yet been determined through detailed activity-based costing.

Earlier national assessments provide important planning references:

- Somalia's 2015 NBSAP estimated that USD 302.36 million would be required to implement its biodiversity priorities and Aichi-aligned targets.
- The GBF Early Action Support assessment developed an initial planning estimate of approximately USD 100 million annually, or USD 500 million for the five-year period through 2030.
- The target-level figures presented in the GBF-EAS report total approximately USD 109.15 million, excluding the resource-mobilization target for which no implementation cost was assigned.

The difference between the approximately USD 109.15 million in individually listed target estimates and the USD 500 million overall planning estimate demonstrates that the earlier figures were preliminary and prepared before detailed programme design, expenditure analysis and unit-cost assessment. They did not consistently account for geographic scale, recurrent management costs, safeguards, inflation, security and access costs, restoration maintenance, community benefits or implementation across all Federal Member States.

For current planning purposes, this chapter therefore adopts USD 500 million as a provisional national resource envelope for 2026–2030, equivalent to an average of USD 100 million per year. This is a resource-mobilization scenario, not a validated cost or confirmed budget. It must be reviewed and replaced or adjusted through Somalia's BIOFIN Policy and Institutional Review, Biodiversity Expenditure Review, Financial Needs Assessment and Biodiversity Finance Plan.

The objectives of this chapter are to:

- establish a provisional financing envelope through 2030;
- provide an indicative allocation of resources among implementation programmes;
- establish a consistent method for detailed NBSAP costing;
- determine existing biodiversity expenditure and available financing;
- quantify the unmet financing need;
- increase the contribution of domestic public finance;
- improve alignment of international assistance with national priorities;
- mobilize climate, land, water and development finance for biodiversity;

- promote responsible private-sector and blended finance;
- improve expenditure effectiveness and transparency;
- develop a pipeline of finance-ready programmes; and
- provide a clear work programme for the national BIOFIN team.

All figures in this chapter should be presented as provisional until validated through the BIOFIN process.

8.2 BIODIVERSITY-FINANCE PRINCIPLES

Somalia's biodiversity-finance arrangements will be guided by the following principles:

- **National ownership:** Finance should respond to nationally approved biodiversity targets and priorities identified by Federal Member States and affected communities.
- **Integration:** Biodiversity should be incorporated into development, climate, land, water and sector financing instead of being treated solely as an environmental-sector responsibility.
- **Additionality:** New biodiversity finance should increase action and should not replace essential existing government responsibilities.
- **Diversification:** Domestic public finance, international finance, private investment, blended finance and community contributions should be combined appropriately.
- **Prioritization:** Limited resources should first address urgent biodiversity threats, essential enabling conditions and interventions offering significant ecological and livelihood benefits.
- **Equity:** Financing should recognize the rights, responsibilities and costs borne by women, youth, minority groups, displaced people, pastoralists, fishing communities and other natural-resource-dependent groups.
- **Subsidiarity:** Resources should be allocated to the institution and implementation level best placed to deliver and sustain the intended result.
- **Transparency:** Cost assumptions, funding sources, allocations, releases, expenditure and financing gaps should be documented.
- **Effectiveness:** Financing should be assessed by the biodiversity and social results achieved, not only by the amount committed or spent.
- **Sustainability:** Programmes should identify recurrent costs, maintenance responsibilities and post-project financing arrangements.
- **Do-no-harm:** Financing should not support activities that cause significant biodiversity loss, pollution, involuntary exclusion or inequitable restrictions on access to natural resources.
- **No double-counting:** Shared biodiversity, climate, land and development financing and results should be attributed transparently across national frameworks.

8.3 STATUS OF BIODIVERSITY FINANCE IN SOMALIA

Somalia has historically financed biodiversity through a combination of limited government allocations, international development assistance, environmental and climate projects, humanitarian and resilience programmes, private-sector activity and community management of natural resources.

However, the total level of biodiversity-related expenditure is not yet known because:

- biodiversity expenditure is not consistently identified in federal and State budgets;

- relevant expenditure is distributed across environment, agriculture, livestock, fisheries, water, infrastructure, disaster management and local-government programmes;
- donor-funded projects are not recorded in one consolidated national biodiversity-finance database;
- expenditure records often report commitments or project budgets instead of annual disbursements and actual expenditure;
- indirect biodiversity expenditure has not been assessed using nationally agreed attribution rates;
- information on private-sector and civil-society expenditure is incomplete; and
- in-kind contributions from communities and government institutions are rarely valued.

These gaps will be addressed through the BIOFIN analytical programme scheduled for 2026 and the preparation of Somalia's National Biodiversity Finance Plan in 2027.

Table 44 - Reference Points for NBSAP Financing through 2030

Reference	Amount	Period or coverage	Interpretation
Somalia NBSAP 2015	USD 302.36 million	Earlier Aichi-aligned strategy	Historical estimate; not directly transferable to the updated NBSAP
GBF-EAS target-level estimates	USD 109.15 million	Individually costed draft GBF targets, excluding the finance target	Preliminary and incomplete target-level estimate
GBF-EAS overall planning estimate	USD 500 million	Five years through 2030	Provisional national planning envelope
Average annual planning requirement	USD 100 million	2026–2030	Indicative annual resource-mobilization objective
International-finance ambition	At least USD 50 million annually	Through 2030	Provisional resource-mobilization benchmark requiring BIOFIN validation

The BIOFIN team should reconcile the different historical estimates and document why the final Financial Needs Assessment differs from them.

8.4 PROVISIONAL NBSAP FINANCING ENVELOPE

Pending completion of the Financial Needs Assessment, Somalia will use a provisional resource envelope of USD 500 million for 2026–2030. This envelope provides a planning basis for programme development and resource mobilization but does not represent confirmed finance.

The envelope should be interpreted as:

- an estimate of the potential scale of resources required;
- a ceiling for preliminary programme-pipeline development;
- a basis for sequencing and prioritizing investments;
- an input into discussions with government, development partners and financing institutions; and
- a figure subject to revision when detailed unit costs, baseline expenditure and confirmed financing are available.

It should not be interpreted as:

- an approved government budget;
- a confirmed donor commitment;
- a fully validated target-by-target cost;
- the value of the existing financing gap; or
- permission to divide the amount equally among institutions or regions.

8.5 INDICATIVE PROGRAMME ALLOCATION

The following allocation translates the provisional USD 500 million envelope into broad programme packages. It reflects the high cost of restoration, protected and conserved-area management, sustainable production, fisheries management, pollution control and climate-resilient ecosystem management.

Table 45 - Provisional Allocation of the NBSAP Resource Envelope, 2026–2030

Programme package	Related national-target areas	Share	Provisional allocation
Ecosystem restoration and land-condition improvement	Restoration, rangelands, forests, wetlands, soils, watersheds and degraded coastal areas	24%	USD 120 million
Protected areas, OECMs and ecological connectivity	Spatial planning, area-based conservation, site management and connectivity	20%	USD 100 million
Sustainable agriculture, livestock, forestry and nature-positive production	Sustainable production, land management, pollinators, crop diversity and value chains	15%	USD 75 million
Marine, coastal, fisheries and species conservation	Sustainable fisheries, bycatch reduction, threatened species, mangroves, reefs and marine management	11%	USD 55 million
Climate resilience and ecosystem services	Ecosystem-based adaptation, water security, drought resilience and nature-based risk reduction	10%	USD 50 million
Pollution, waste and invasive-species management	Pollution prevention, waste management, invasive-species surveillance, biosecurity and response	8%	USD 40 million
Biodiversity information, monitoring, research and knowledge management	Baselines, inventories, GIS, databases, monitoring, taxonomy and reporting	4%	USD 20 million
Biodiversity governance, mainstreaming and regulatory systems	Policies, planning, environmental assessment, business responsibility, incentives and biosafety	3%	USD 15 million
Community implementation, inclusion and benefit-sharing	Community agreements, local grants, livelihoods, gender equality and participation	3%	USD 15 million
Coordination, finance systems and institutional capacity	NBSAP coordination, State capacity, BIOFIN systems, training and resource mobilization	2%	USD 10 million
Total		100%	USD 500 million

These programme allocations should not be treated as final sector ceilings. The BIOFIN team should reallocate the envelope using costed actions, geographic coverage, implementation readiness and baseline expenditure.

Community participation, safeguards, gender responsiveness and monitoring should also be included within the budgets of every programme package. The separate allocations for community implementation and information systems cover cross-cutting or stand-alone functions and should not be used to remove these costs from sector programmes.

8.6 INDICATIVE ANNUAL FINANCING PATHWAY

A phased approach is required because Somalia will not have the same programme readiness or delivery capacity in every year. Expenditure is expected to increase as baselines, site plans, safeguards, institutions and finance-ready programmes are completed.

Table 46 - Indicative Annual NBSAP Financing Pathway

Year	Operational emphasis	Indicative requirement
2026	Institutional establishment, BIOFIN analysis, baselines, programme preparation and urgent actions	USD 65 million
2027	Completion of the Biodiversity Finance Plan, programme design, initial scaling and State implementation	USD 85 million
2028	Major expansion of restoration, conservation and sustainable-production programmes	USD 110 million
2029	Full implementation, improved geographic coverage and recurrent site management	USD 120 million
2030	Completion of priority outputs, consolidation, evaluation and post-2030 transition	USD 120 million
Total		USD 500 million

The annual profile is provisional. The BIOFIN team should revise it based on:

- realistic procurement and implementation periods;
- programme readiness;
- seasonal and security-related access;
- institutional absorption capacity;
- inflation and exchange-rate assumptions;
- capital and recurrent expenditure requirements;
- likely timing of financing approvals; and
- the need to avoid unrealistic concentration of expenditure in 2030.

8.7 NATIONAL BIODIVERSITY-FINANCE FRAMEWORK

Table 47 - National Biodiversity-Finance Framework

Financing function	Core question	Principal output	Lead responsibility
Policy and institutional review	Which institutions, laws, policies and economic	Policy and Institutional Review	BIOFIN team, MoECC and Ministry of Finance,

	drivers influence biodiversity finance?		Ministry of Planning, and UNDP
Expenditure review	What is currently being allocated and spent?	Biodiversity Expenditure Review	BIOFIN team, MoECC and Ministry of Finance, Ministry of Planning, and UNDP
Financial-needs assessment	What will implementation of the final NBSAP targets cost?	Costed NBSAP and Financial Needs Assessment	BIOFIN team, MoECC and Ministry of Finance, Ministry of Planning, and UNDP
Financing-gap analysis	What remains unfunded after existing and projected expenditure is considered?	Unmet Financial Needs Report	BIOFIN team, MoECC and Ministry of Finance, Ministry of Planning, and UNDP
Finance-solution assessment	Which mechanisms can generate revenue, realign expenditure, improve delivery or avoid future costs?	Prioritized finance solutions	BIOFIN team and Steering Committee
Finance-plan preparation	How will prioritized solutions be implemented?	National Biodiversity Finance Plan	BIOFIN team, MoECC and Ministry of Finance, Ministry of Planning, and UNDP
Budget integration	How will recurrent and priority costs enter public budgets?	Biodiversity-responsive budget submissions	Finance authorities and implementing institutions
Finance tracking	Were funds committed, released and spent as intended?	Periodic biodiversity-finance report	BIOFIN team, MoECC and Ministry of Finance, Ministry of Planning, and UNDP
Effectiveness review	Did expenditure produce intended biodiversity and social results?	Financing-effectiveness assessment	Steering Committee and oversight institutions

8.8 COSTING THE NBSAP

8.8.1 PURPOSE

Detailed costing should convert each national target into implementable and measurable actions. The Financial Needs Assessment should cost the final NBSAP rather than relying on estimates attached to earlier draft targets.

Costs should be consolidated by:

- national target and action;
- programme package;
- output and activity;
- responsible institution;
- Federal Member State and geographic area;

- year and implementation phase;
- capital and recurrent expenditure;
- direct and shared programme costs;
- confirmed, anticipated and unfunded amounts; and
- proposed financing source.

8.8.2 STANDARD COST CATEGORIES

Table 48 - Standard Cost Categories for NBSAP Implementation

Cost category	Examples
Personnel and technical services	Government staff time, specialists, field teams, community facilitators and technical assistance
Policy and institutional development	Legal reviews, regulations, standards, coordination systems and administrative guidance
Baselines and information	Surveys, inventories, GIS, monitoring, databases, equipment and data management
Infrastructure and equipment	Field stations, laboratories, nurseries, monitoring equipment, boats, vehicles and information systems
Conservation management	Site establishment, management plans, enforcement, surveillance and recurrent operations
Ecosystem restoration	Assessment, native materials, site preparation, implementation, maintenance and monitoring
Sustainable production	Extension, producer support, demonstration sites, certification and value-chain improvements
Community participation and benefits	Consultation, community agreements, local grants, livelihood measures and grievances
Safeguards and inclusion	Environmental and social assessment, gender measures, conflict sensitivity and accessibility
Communication and capacity	Training, professional development, awareness and knowledge products
Programme management	Procurement, financial management, supervision, coordination, reporting and audit
Security and access	Risk management, remote implementation and additional logistics in difficult-access areas
Contingencies	Inflation, climate shocks, price changes and other defined uncertainties
Recurrent and exit costs	Staffing, maintenance, replacement, monitoring and post-project operation

8.8.3 COSTING METHOD

The BIOFIN team and responsible institutions should:

1. confirm the final target, action and expected output;
2. specify the geographic scope and number of implementation sites;
3. identify physical inputs and quantities;
4. apply current and documented unit costs;

5. distinguish capital, operating and recurrent costs;
6. identify government, partner and community in-kind contributions;
7. include consultation, safeguards, gender and monitoring costs;
8. apply clearly justified contingencies;
9. document the source, date and confidence level of each assumption;
10. separate shared costs from target-specific costs;
11. eliminate double-counting across programme packages;
12. link costs with annual milestones and responsible institutions; and
13. subject major estimates to technical, financial and stakeholder review.

Where precise costs are unavailable, a range should be presented and classified as high, medium or low confidence.

8.9 BIOFIN POLICY AND INSTITUTIONAL REVIEW

The Policy and Institutional Review should identify the institutions, policies, laws, economic drivers and financial mechanisms influencing biodiversity finance.

The review should examine:

- formal responsibilities of the MoECC, Ministry of Finance, Ministry of Planning and sector ministries;
- federal–State financial and implementation relationships;
- biodiversity provisions in public-finance and investment systems;
- environmental taxes, fees, licenses, concessions and penalties;
- fisheries, livestock, forestry, agriculture, water and land-related revenue;
- international environmental and climate-finance arrangements;
- private-sector investment and financial-sector practices;
- potentially harmful and biodiversity-positive incentives;
- institutional barriers to budget integration and expenditure tracking; and
- opportunities to strengthen coordination between biodiversity and climate finance.

The Policy and Institutional Review should refine Sections 8.3, 8.11, 8.12, 8.13 and 8.16 of this chapter.

8.10 BIODIVERSITY EXPENDITURE REVIEW

The Biodiversity Expenditure Review should establish a baseline of allocations, releases and actual expenditure. It should cover federal, State, partner, private and civil-society expenditure where reliable information can be obtained.

Expenditure should be classified as:

- direct expenditure: biodiversity is the primary purpose;
- indirect expenditure: biodiversity is a significant secondary benefit;
- enabling expenditure: governance, capacity or information supports later biodiversity results; and
- potentially harmful expenditure: the expenditure or incentive may contribute to biodiversity degradation.

For indirect expenditure, the BIOFIN team should develop nationally appropriate attribution rates rather than counting the entire sector budget as biodiversity expenditure.

The assessment should examine at least the preceding five fiscal years where records permit, establish a current baseline and develop a business-as-usual projection through 2030.

Table 49 - Minimum Biodiversity Expenditure Review Dataset

Financing source	Government, partner, private, civil society or community
Institution	Budget holder or implementing organization
Programme	Name and description
Fiscal year	Year of allocation or expenditure
Budget status	Proposed, approved, released or spent
Amount	Value and currency
Biodiversity category	Direct, indirect, enabling or potentially harmful
Attribution rate	Percentage counted as biodiversity-related
National target	Target or targets supported
Geographic coverage	Federal Member State, district or site
Funding type	Capital, recurrent, grant, loan, equity or in-kind
Evidence source	Budget, financial statement, project record or verified estimate
Data quality	High, medium or low confidence

The Biodiversity Expenditure Review should refine the financing baseline, annual projections, source allocation and financing gap in Sections 8.4, 8.6, 8.14 and 8.17.

8.11 FINANCIAL NEEDS ASSESSMENT AND FINANCING GAP

The Financial Needs Assessment should determine the total cost of implementing the final national targets and compare this with projected biodiversity expenditure.

The financing gap should be calculated as:

Financing Gap= Validated NBSAP Financial Need - Projected Available Biodiversity Finance

The calculation should distinguish:

- existing annual expenditure;
- confirmed future finance;
- realistically anticipated finance;
- private and community contributions;
- finance that may be redirected or delivered more effectively; and
- the remaining unmet financing need.

Expressions of interest, unapproved project concepts and preliminary donor discussions should not be classified as confirmed finance.

Table 50 - Minimum Structure of the Financial Needs Assessment

Field	Required information
National target and action	Final NBSAP target and costable action
Expected output	Quantified deliverable
Geographic scope	National, State, district, landscape, seascape or site
Implementation period	Start, milestones and completion
Capital cost	Initial investment requirement
Recurrent cost	Annual operating and maintenance requirement
Total cost	Full implementation requirement
Existing expenditure	Current biodiversity-related expenditure
Confirmed finance	Formally approved financing
Anticipated finance	Advanced but unconfirmed financing
In-kind contribution	Verified staff, facilities, equipment or community contribution
Financing gap	Remaining requirement
Confidence level	High, medium or preliminary
Priority	Essential, high, medium or longer-term
Preferred source	Public, international, private, blended or other

The Financial Needs Assessment should replace the provisional USD 500 million envelope if detailed costing produces a materially different result.

8.12 DOMESTIC PUBLIC FINANCE

Domestic public finance is essential for ownership and continuity. Even if international finance covers a large share of capital investments, government financing will be required for recurrent institutional functions.

Priority domestic financing should support:

- NBSAP coordination and government focal points;
- environmental assessment and compliance;
- biodiversity information and reporting;
- protected and conserved-area administration;
- fisheries, wildlife, forestry and biosecurity functions;
- State and district technical capacity;
- maintenance of publicly financed restoration;
- community engagement and grievance systems; and
- participation in international biodiversity processes.

Table 51 - Public-Finance Entry Points for Biodiversity

Public-finance process	Required measure
National and State planning	Integrate NBSAP actions into development and sector plans
Medium-term expenditure planning	Identify multi-year capital and recurrent requirements

Annual budgeting	Include costed biodiversity outputs in institutional submissions
Budget classification	Pilot biodiversity budget tags or markers
Public-investment appraisal	Screen investments for biodiversity risks and contributions
Procurement	Include sustainable sourcing and biodiversity safeguards
Fiscal reporting	Report allocations, releases and actual expenditure
Audit	Review financial compliance and value for money
Programme completion	Confirm maintenance, restoration and recurrent obligations

The BIOFIN team should recommend a simple budget-tagging method that can operate within Somalia's existing public-financial-management arrangements.

8.13 INTERNATIONAL, CLIMATE AND DEVELOPMENT FINANCE

International finance is expected to remain a major source of NBSAP funding through 2030. Potential sources include multilateral environmental funds, climate funds, bilateral partners, United Nations agencies, multilateral development banks, regional organizations and philanthropic institutions.

Priority financing areas include:

- protected and conserved areas;
- restoration and sustainable land management;
- ecosystem-based adaptation;
- rangeland and drought resilience;
- mangrove and coastal restoration;
- sustainable fisheries;
- biodiversity information systems;
- pollution and waste management;
- institutional capacity; and
- community-based conservation and livelihoods.

Programmes contributing to the NBSAP, NDC 3.0, NAP and LDN targets should use coordinated geographic records and implementation arrangements while maintaining clear attribution of expenditure and results.

The earlier GBF-EAS assessment proposed mobilizing at least USD 50 million annually through international finance and donor support. This should remain a provisional benchmark until the BIOFIN team assesses:

- historical international disbursement;
- the existing project pipeline;
- Somalia's capacity to prepare and implement large programmes;
- the eligibility and programming cycles of different funds;
- co-financing requirements; and
- the proportion that can realistically be mobilized by 2030.

8.14 INDICATIVE RESOURCE-MOBILIZATION SCENARIO

The following scenario illustrates how the USD 500 million envelope might be financed. None of the amounts should be reported as confirmed finance unless supported by formal evidence.

Table 52 - Provisional Resource-Mobilization Scenario, 2026–2030

Source	Share	Indicative amount	BIOFIN refinement required
International biodiversity and environmental finance	30%	USD 150 million	Map approved projects, eligibility and realistic pipeline
Climate, land, water and development finance with biodiversity co-benefits	25%	USD 125 million	Apply attribution rates and prevent double-counting
Domestic federal and State public finance	10%	USD 50 million	Establish baseline and feasible annual growth pathway
Private-sector and financial-sector investment	10%	USD 50 million	Assess market readiness and investment barriers
Blended finance, guarantees and concessional instruments	10%	USD 50 million	Test feasibility, additionality and risk allocation
Bilateral, philanthropic and research finance	8%	USD 40 million	Map programmes and potential partnerships
Reformed expenditure and improved delivery efficiency	5%	USD 25 million	Quantify savings and redirected finance
Community, civil-society and verified in-kind contributions	2%	USD 10 million	Develop consistent valuation method
Total	100%	USD 500 million	Subject to BIOFIN validation

This scenario should not be used to conceal a financing gap. Following the Expenditure Review and Financial Needs Assessment, the table should be reorganized into confirmed finance, anticipated finance and unmet need.

8.15 PRIVATE-SECTOR AND INNOVATIVE FINANCE

Private-sector engagement should focus on activities that are both commercially viable and biodiversity-positive, including:

- sustainable fisheries and seafood traceability;
- sustainable livestock and agricultural value chains;
- native-seedling and restoration enterprises;
- recycling and pollution-reduction services;
- renewable energy and resource efficiency;
- sustainable tourism where conditions permit;
- digital biodiversity information and monitoring; and
- responsible financial products for nature-positive enterprises.

Potential instruments for assessment include:

- concessional credit;
- guarantees and risk-sharing;
- blended finance;

- sustainability-linked lending;
- payments for ecosystem services;
- conservation trust funds;
- watershed or resource-user fees;
- blue and green financing;
- carbon and blue-carbon finance;
- results-based restoration finance; and
- debt-for-nature or debt-for-climate arrangements.

No biodiversity-credit or offset mechanism should be introduced without a clear legal framework, reliable baselines, application of the mitigation hierarchy, independent verification and safeguards for land tenure, community rights and benefit-sharing.

The BIOFIN team should evaluate each proposed finance solution against:

- revenue potential;
- administrative cost;
- legal authority;
- institutional capacity;
- biodiversity additionality;
- environmental integrity;
- social and gender impacts;
- market and price risk;
- safeguards;
- political feasibility; and
- long-term sustainability.

8.16 INCENTIVES AND HARMFUL FINANCIAL FLOWS

For Target 18, the national baseline should cover both formal fiscal support and wider perverse incentives, including tax exemptions, under-priced permits, weakly enforced licensing, donor-supported inputs lacking biodiversity safeguards, informal revenue arrangements and procurement rules that unintentionally encourage ecosystem damage. Priority screening domains include charcoal and biomass, fisheries, agricultural inputs and irrigation, forestry and timber, water abstraction, energy and fuels, waste and plastics, construction materials and public procurement.

Reform should be phased and socially responsive: (i) establish definitions, an inter-ministerial mechanism and an initial inventory in 2026–2027; (ii) pilot reviews in forestry and charcoal, agricultural inputs, fisheries and water/irrigation in 2027–2028; (iii) amend fiscal, licensing and procurement instruments and scale just-transition and biodiversity-positive programmes in 2028–2029; and (iv) publish Target 18 results, evaluate biodiversity and social outcomes and adjust reforms in 2029–2030. Support should not be withdrawn abruptly where this would undermine food security, energy access or vulnerable livelihoods.

The earlier GBF-EAS review reported that Somalia had not formally identified biodiversity-harmful subsidies. This should not be interpreted as evidence that harmful incentives or financial flows do not exist. A structured assessment is required.

The BIOFIN team should examine:

- tax exemptions and concessions;
- natural-resource licensing and fee structures;
- support affecting fishing effort or extraction;
- land and water pricing;
- charcoal and forest-product value chains;
- infrastructure and settlement incentives;
- pollution and waste-disposal costs;
- agricultural and livestock support;
- enforcement practices; and
- public procurement.

Reform options should consider effects on food security, employment, pastoral and fishing livelihoods, vulnerable households and government revenue. Harmful incentives should not be removed abruptly where this would impose disproportionate costs without suitable alternatives.

BIOFIN finance solutions should address four complementary results:

1. generate additional revenue;
2. realign existing expenditure;
3. deliver existing finance more effectively; and
4. avoid future biodiversity-related costs.

8.17 COMMUNITY FINANCE AND BENEFIT-SHARING

Programme budgets should recognize that communities frequently bear the direct opportunity and implementation costs of conservation and restoration.

Community-finance arrangements should specify:

- eligible activities and beneficiaries;
- selection and decision-making procedures;
- community and institutional responsibilities;
- payment or transfer arrangements;
- financial controls;
- benefit-sharing rules;
- monitoring and verification;
- public disclosure;
- grievance procedures; and
- measures to prevent exclusion or elite capture.

Potential mechanisms include community grants, community contracts, sustainable-livelihood support, locally managed funds and performance-based restoration payments.

Community labour or land access should not automatically be treated as free co-financing. In-kind contributions should be voluntary, agreed and valued transparently.

8.18 PROGRAMME PIPELINE AND INVESTMENT PRIORITIZATION

8.18.1 EXISTING BIODIVERSITY-RELATED INVESTMENT PORTFOLIO

The portfolio mapped in Annex 5 identifies nine major ongoing or approved programmes relevant to biodiversity, ecosystem restoration, nature-based resilience, sustainable agriculture, rangelands, fisheries and rural livelihoods. Their stated total programme values amount to approximately USD 452.47 million. The portfolio includes financing from the Adaptation Fund, GEF, LDCF, GCF, IFAD, and involves MoECC, agriculture and fisheries institutions, Federal Member States, United Nations agencies, development finance institutions and national delivery partners.

These headline programme values shall not be treated as confirmed finance for the NBSAP or deducted automatically from the USD 500 million indicative envelope. Several programmes extend beyond 2030, include substantial non-biodiversity components or co-financing, and may overlap geographically or thematically. BIOFIN and the NBSAP Coordination Unit should therefore identify the biodiversity-attributable share, annual disbursement profile, geographic coverage, target alignment, committed and uncommitted amounts, implementation results and remaining financing gaps for each programme. The portfolio should be updated annually and used to coordinate investments, prevent duplication and develop complementary projects.

The NBSAP Coordination Unit should maintain a consolidated pipeline of programmes at different stages of readiness.

Table 53 - NBSAP Programme-Pipeline Stages

Stage	Minimum requirement	Decision
Strategic concept	Problem, target contribution, geographic focus and proposed lead	Confirm national relevance
Initial screening	Biodiversity value, stakeholders, safeguards, security and potential sources	Proceed, revise or discontinue
Concept development	Outcomes, intervention logic, partners and preliminary cost	Prioritize for preparation
Feasibility and design	Studies, consultation, safeguards, implementation arrangements and budget	Approve for proposal preparation
Finance-ready proposal	Complete requirements of selected financing source	Submit for financing
Approved programme	Financing, procurement, safeguards and reporting arrangements completed	Begin implementation
Implementation review	Expenditure, delivery, safeguards and results assessed	Continue, correct, scale or close

8.19 INSTITUTIONAL RESPONSIBILITIES

Table 54 - Institutional Responsibilities for Biodiversity Finance

Institution	Principal responsibility
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National Biodiversity Steering Committee	Strategic direction, review of financing gaps and resolution of high-level constraints
Ministry of Environment and Climate Change	NBSAP alignment, environmental policy leadership and biodiversity-finance coordination
Ministry of Finance	Public-finance integration, budget tagging, fiscal analysis, negotiations and expenditure tracking
National planning authority	Integration into national development and public-investment planning
NBSAP Coordination Unit	Costing records, financing-gap information, programme pipeline and consolidated reporting
BIOFIN Steering Committee	Oversight of BIOFIN analysis and finance-plan preparation
BIOFIN technical team	PIR, BER, FNA, finance solutions, risk analysis and Biodiversity Finance Plan
Sector institutions	Cost actions, submit budgets, prepare programmes and manage approved finance
Federal Member States	Identify State priorities, costs, expenditure and implementation arrangements
Districts and municipalities	Incorporate eligible biodiversity actions into local plans and budgets
Private and financial sectors	Assess biodiversity risks and develop responsible investments
Communities and civil society	Participate in programme design, oversight, delivery and benefit-sharing
Development partners	Align support, disclose financing and use coordinated national systems
Research institutions	Support economic analysis, baselines, costing and independent technical review

The MoECC, Ministry of Finance and Ministry of Planning should jointly guide biodiversity finance, with their respective responsibilities clearly defined. The BIOFIN Steering Committee should be aligned with the Chapter 7 coordination architecture to avoid parallel decision-making structures.

8.20 FINANCIAL TRACKING AND ACCOUNTABILITY

The costed implementation matrix is the initial NBSAP investment programme for 2026–2030. For every programme package, the responsible lead institution shall confirm annual workplans, financing assumptions, co-financing status, output and outcome indicators, expenditure and results. The NBSAP Coordination Unit shall consolidate annual implementation and financial reports, while responsible institutions shall provide verified data according to the reporting calendar in Chapter 9. Indicative costs and the USD 500 million envelope remain subject to refinement through BIOFIN, government planning and budgeting, and documented partner commitments.

Biodiversity-finance tracking should distinguish commitments, approvals, releases and actual expenditure.

8.21 IMMEDIATE ACTIONS

Table 55 - Immediate Actions for Financing NBSAP Implementation

No.	Priority action	Lead responsibility
1	Confirm the joint leadership and governance arrangements for BIOFIN	MoECC, and Ministry of Finance
2	Complete the Policy and Institutional Review	BIOFIN team
3	Approve the expenditure-assessment framework	Ministry of Finance and BIOFIN team

4	Conduct the Biodiversity Expenditure Review	BIOFIN team and participating institutions
5	Convert the final NBSAP actions into costable activities	Lead institutions and BIOFIN team
6	Complete the Financial Needs Assessment	BIOFIN team
7	Reconcile the USD 109.15 million, USD 302.36 million and USD 500 million reference figures	BIOFIN team
8	Revise the programme and annual allocations in this chapter	NBSAP Coordination Unit and BIOFIN team
9	Pilot biodiversity budget tagging	Ministry of Finance and selected institutions
10	Prepare priority finance-ready programmes	Lead institutions and Federal Member States
11	Assess incentives and potentially harmful financial flows	BIOFIN team and sector institutions
12	Develop the National Biodiversity Finance Plan	BIOFIN technical team
13	Establish consolidated finance tracking	Ministry of Finance and MoECC
14	Conduct a financing-effectiveness review	Steering Committee

8.22 CONCLUSION

Somalia will use a provisional biodiversity-finance planning envelope of USD 500 million for 2026–2030, equivalent to an average of USD 100 million annually. This updates the chapter by incorporating the overall planning estimate developed through the GBF Early Action Support process while recognizing that the individually listed preliminary target estimates total only approximately USD 109.15 million and that the 2015 NBSAP estimate was USD 302.36 million.

These differences must be resolved through detailed BIOFIN analysis. The USD 500 million envelope is therefore neither a confirmed budget nor a final Financial Needs Assessment. It is an interim resource-mobilization scenario used to guide costing, programme development and financing discussions.

During 2026, the BIOFIN team should complete the Policy and Institutional Review, Biodiversity Expenditure Review and Financial Needs Assessment. During 2027, the evidence should be converted into prioritized finance solutions, a risk-management framework, implementation scenarios and the National Biodiversity Finance Plan.

Once these assessments are complete, the provisional figures in this chapter should be replaced with:

- validated target- and action-level costs;
- actual and projected biodiversity expenditure;
- confirmed and anticipated finance;
- a quantified financing gap;
- prioritized finance solutions;
- annual and institutional allocations; and
- a monitored programme pipeline.

This approach allows Chapter 8 to guide immediate planning while also serving as a structured work programme for the BIOFIN team to refine Somalia's biodiversity-finance figures and establish a credible financing pathway through 2030.

CHAPTER 9 MONITORING, EVALUATION, REPORTING AND REVIEW FRAMEWORK

9.1 INTRODUCTION

Effective implementation of Somalia's National Biodiversity Strategy and Action Plan requires a monitoring, evaluation, reporting, learning and accountability system capable of showing whether agreed actions are being implemented, resources are reaching their intended purposes and national biodiversity targets are being achieved.

This chapter establishes the national framework for tracking implementation of the NBSAP through 2030. It links the national targets and programme packages established in earlier chapters with institutional responsibilities, financing information, biodiversity indicators, spatial data, implementation reports and national reporting under the Convention on Biological Diversity.

Somalia's biodiversity-monitoring system is developing from a limited and fragmented baseline. Relevant information is held by different federal institutions, Federal Member States, districts, universities, research organizations, communities, development partners and private organizations. Monitoring methods, geographic coverage, reporting cycles and data quality vary substantially. Some ecosystems and species have received limited recent assessment, while long-term datasets remain scarce.

The monitoring framework must therefore serve two purposes:

1. track immediate implementation using information that can reasonably be collected now; and
2. progressively strengthen the national capacity to measure biodiversity status, pressures, responses and benefits more accurately.

The framework is intended to:

- measure progress towards Somalia's national biodiversity targets;
- track implementation of the programme packages and priority actions;
- support preparation of national reports under the Convention on Biological Diversity;
- provide evidence for policy, planning and budget decisions;
- connect expenditure with implementation outputs and biodiversity results;
- identify delays, risks, data gaps and unintended impacts;
- improve accountability among responsible institutions;
- promote participation by Federal Member States, communities and rights-holders;
- support adaptive management and institutional learning; and
- establish the evidence required for the mid-term and final NBSAP reviews.

Monitoring should be proportionate, practical and progressively strengthened. The system should avoid creating reporting requirements that exceed the capacity of responsible institutions or duplicate established national and sector systems.

9.2 RESULTS-BASED MONITORING FRAMEWORK

The NBSAP monitoring system will apply a results chain connecting financial and institutional inputs with implementation activities, outputs, outcomes and biodiversity impacts.

Table 56 - NBSAP Results Chain

Results level	Monitoring question	Examples
Inputs	What resources and capacities were made available?	Budgets, personnel, equipment, technical assistance and institutional arrangements
Activities	What work was undertaken?	Surveys, restoration, planning, enforcement, consultations, training and policy development
Outputs	What immediate products or services were delivered?	Management plans, restored sites, trained personnel, regulations, databases and community agreements
Outcomes	What changes occurred in practices, management or ecosystem condition?	Improved management effectiveness, reduced harmful practices, sustainable production and increased community participation
Impacts	What longer-term biodiversity and societal changes occurred?	Improved ecosystem integrity, reduced species decline, restored ecosystem services and increased resilience
Enabling conditions	What institutional or policy improvements supported implementation?	Stronger coordination, increased finance, functioning information systems and integrated sector policies

Implementation monitoring should not be limited to counting activities. Where possible, it should examine whether completed activities have produced measurable changes in biodiversity condition, threat levels, institutional performance and community benefits.

However, ecological outcomes may require several years to become measurable. The framework should therefore combine:

- short-term activity and output indicators;
- medium-term management and behavioral indicators; and
- longer-term biodiversity outcome and impact indicators.

9.3 INDICATOR ARCHITECTURE

Somalia will use a layered indicator structure that aligns national priorities with the monitoring framework of the Kunming–Montreal Global Biodiversity Framework.

9.3.1 INDICATOR LEVELS

Table 57 - NBSAP Indicator Levels

Indicator level	Purpose	Application
Headline indicators	Support standardized assessment of progress under the Global Biodiversity Framework	Used where nationally relevant data and methods are available
Component indicators	Provide more detailed assessment of specific elements of the global targets	Selected according to national priorities and capacity
Complementary indicators	Capture nationally important issues not adequately measured by headline indicators	Used for Somalia-specific ecosystems, species, threats and governance issues

Binary indicators	Record whether required policies, plans, systems or measures exist and are operational	Used for legal, policy, planning and institutional targets
Programme indicators	Measure the delivery and results of Chapter 7 programme packages	Used for annual implementation management
Financial indicators	Track costs, allocations, releases, expenditure and financing gaps	Used for Chapter 8 finance monitoring
Community indicators	Capture locally observed ecological and livelihood changes	Used in community-based monitoring and site management

Somalia should not adopt every available global indicator automatically. Indicators should be selected based on their relevance to national targets, data feasibility, cost, institutional responsibility and ability to inform decisions.

9.3.2 STANDARD INDICATOR INFORMATION

Every approved NBSAP indicator should have a metadata sheet containing:

- indicator name and definition;
- related national target and action;
- purpose and policy relevance;
- unit of measurement;
- baseline value and year;
- national milestone and 2030 target value;
- data source;
- collection method;
- geographic coverage;
- required disaggregation;
- reporting frequency;
- responsible institution;
- quality-assurance arrangements;
- limitations and confidence level; and
- relationship with global, national and sector indicators.

Indicators should not be reported without recording their source, period and coverage.

9.3.3 SAFEGUARD AND CAPACITY-DEVELOPMENT INDICATORS

Annual monitoring shall include: the percentage of interventions screened before approval; required safeguard instruments approved and disclosed before implementation; habitat, pollution, labour and community-safety incidents and corrective actions; activities affecting land or resource access and implementation of agreed livelihood measures; participation and benefit data disaggregated by sex, age, disability and relevant vulnerability; grievances received, resolved and pending; safeguard inspections and non-compliance closure rates; personnel demonstrating required competencies; institutions meeting agreed staffing, equipment and operating standards; use of NBIS and geospatial systems; and evidence that trained personnel apply new skills in implementation and reporting.

9.3.4 ENGAGEMENT, SPATIAL AND GENDER-RESPONSIVE INDICATORS

The monitoring system will track: the number and geographic distribution of consultations; participation disaggregated by sex, age and disability; women's representation and leadership in NBSAP bodies; feedback-matrix publication and grievance resolution rates; stakeholder satisfaction; hectares under restoration; areas under effective protected-area or OECM management; number of spatial plans aligned with the National Integrated Spatial Plan; biodiversity finance reaching women-led or marginalized groups; and the distribution of livelihood and conservation benefits. Baselines should be established by 2027 and reviewed through the annual implementation cycle.

9.4 NATIONAL TARGET MONITORING MATRIX

The detailed implementation matrix should contain the final baseline, milestones and indicator metadata for each national target. The following framework identifies the minimum monitoring focus for the national target areas.

Within the first year of implementation, MoECC shall designate a minimum viable set of ten to twelve indicators that Somalia can produce annually with existing data and capacity, and shall record for each one the custodian institution, the named responsible officer, the calculation method, the data source, the reporting frequency and the baseline year. Priority should be given to indicators derivable from freely available remote sensing and routine administrative records - land-cover and woody-cover change, area under restoration, area and management status of recognised conservation areas, mangrove extent, licensed fishing effort and recorded landings, recorded illegal-wildlife and IUU incidents, number of community agreements in force, tagged biodiversity allocations and outturn, and number of Federal Member States reporting - because these can be produced without field access to insecure areas. Remaining indicators shall be phased in against a dated indicator-development plan. Where a baseline cannot be established in the first year, the first milestone for that indicator shall be the baseline study itself, with a named institution, cost and completion date.

Table 58 - Indicative National Target Monitoring Framework

No.	Target area	Core monitoring focus	Illustrative indicators	Principal data sources
1	Spatial planning and biodiversity-inclusive land and sea management	Coverage and effectiveness of participatory spatial planning	Percentage of national territory covered by biodiversity-inclusive spatial plans; number of plans informed by biodiversity data	National and State plans, GIS records, land-use and marine-planning records
2	Ecosystem restoration	Scale, survival and ecological results of restoration	Area under restoration; percentage of restored sites meeting survival or ecological-condition standards	Remote sensing, site surveys, project records and community monitoring
3	Protected areas and other effective area-based conservation measures	Coverage, representation, connectivity and management effectiveness	Terrestrial and marine coverage; number of operational sites; management-effectiveness score	Protected-area records, GIS, management assessments and site reports

4	Threatened species and genetic diversity	Status of priority species and effectiveness of conservation measures	Population trend of selected species; number of priority species with implemented recovery measures	Species surveys, fisheries data, wildlife records and research
5	Sustainable harvesting and trade	Legality, sustainability and traceability of wild-species use	Number of management systems established; compliance rates; recorded illegal trade incidents	Licensing, enforcement, customs, fisheries and community data
6	Invasive alien species	Prevention, early detection, control and management	Number of priority pathways assessed; occurrence and area affected; number of response actions	Biosecurity records, field surveys, port records and community alerts
7	Pollution reduction	Trends in priority pollutants affecting biodiversity	Waste reaching sensitive ecosystems; water-quality measures; number of pollution-control actions	Environmental monitoring, municipal records, coastal surveys and project data
8	Biodiversity and climate resilience	Ecosystem vulnerability and nature-based climate responses	Area under ecosystem-based adaptation; condition of priority climate-vulnerable ecosystems	Climate records, remote sensing, ecosystem assessments and project reports
9	Sustainable agriculture, livestock, fisheries and forestry	Adoption and results of biodiversity-positive production practices	Area under sustainable practices; number of producers participating; changes in habitat pressure	Sector statistics, extension records, surveys and remote sensing
10	Nature's contributions to people	Status of ecosystem services important for livelihoods and resilience	Condition of watersheds, rangelands, mangroves and coastal protection systems; beneficiary trends	Ecosystem assessments, household surveys, water and land data
11	Urban biodiversity and green space	Availability, accessibility and condition of nature in settlements	Urban green-space area; number of biodiversity-sensitive urban plans	Municipal plans, GIS, infrastructure and local surveys
12	Biodiversity mainstreaming	Integration of biodiversity into policies, plans and investments	Number and proportion of relevant plans incorporating biodiversity actions	Policy reviews, planning documents and public-investment records
13	Business and financial-sector responsibility	Assessment and reduction of biodiversity-related risks and impacts	Number of major businesses applying biodiversity safeguards or disclosure measures	Regulatory records, company reports and financial-sector assessments
14	Sustainable consumption and waste	Resource efficiency and reduction of harmful consumption impacts	Waste collection and recycling measures; food-loss reduction; sustainable procurement measures	Municipal, sector and procurement records
15	Biosafety and biotechnology	Operational capacity for biosafety risk management	Biosafety framework status; number of risk assessments and compliance actions	Regulatory and inspection records

16	Access and benefit-sharing	Legal, institutional and practical benefit-sharing arrangements	Status of national measures; number of agreements with equitable benefit-sharing provisions	Legal records, permits, community agreements and research authorizations
17	Harmful incentives and positive incentives	Identification, reform and redirection of incentives	Number and value of incentives assessed; reforms adopted; positive incentives introduced	Fiscal reviews, BIOFIN analysis and sector records
18	Finance and resource mobilization	Availability and effective use of biodiversity finance	Annual allocations, releases and expenditure; financing gap; number of finance-ready programmes	BIOFIN assessments, budgets and expenditure records
19	Knowledge, information and traditional knowledge	Availability, accessibility and protection of biodiversity knowledge	Operational information platform; datasets meeting standards; community knowledge protocols	National databases, research institutions and community records
20	Participation, capacity and cooperation	Institutional capacity and inclusive participation	Number of functioning coordination mechanisms; representation of women, youth and communities; personnel trained and retained	Meeting records, institutional assessments and training follow-up

9.5 BASELINES, MILESTONES AND TARGET VALUES

A credible monitoring framework requires a documented baseline against which progress can be measured. Where a complete national baseline does not exist, Somalia should use the best available evidence while clearly identifying its limitations.

Baselines may be established using:

- official government statistics;
- national and State administrative records;
- satellite imagery and geospatial analysis;
- field surveys and ecological assessments;
- fisheries, forestry, livestock, agriculture and water-sector records;
- environmental and social assessments;
- university and research studies;
- development-partner project information;
- community and local ecological knowledge; and
- carefully documented expert assessment where no other source exists.

Each baseline should be assigned a confidence classification.

Table 59 - Baseline Confidence Classification

Confidence level	Description	Required response
High	Recent, nationally representative and produced using an approved method	Use as the formal baseline and update according to the agreed cycle
Medium	Reliable but geographically incomplete, older or based on several compatible sources	Use provisionally and plan targeted improvement
Low	Based on limited surveys, proxy information or expert assessment	Use only for initial planning and prioritize baseline development
Not established	No suitable value is available	Define the baseline study, responsible institution, cost and completion date

Where possible, milestones should be established for 2027, 2028 and 2029 in addition to the 2030 target value. Milestones should reflect realistic implementation sequencing and should not assume that progress will occur at an equal rate every year.

The NBSAP Coordination Unit should maintain a baseline and indicator-development plan that identifies:

- missing baseline information;
- priority surveys and assessments;
- responsible institutions;
- expected completion dates;
- estimated costs;
- technical methods; and
- potential sources of support.

9.6 COMMUNITY-BASED MONITORING AND LOCAL KNOWLEDGE

Communities, pastoralists, farmers, fishing communities, women, youth and other local resource users possess knowledge that can improve biodiversity monitoring, particularly in areas where formal scientific information is limited.

Community-based monitoring may include:

- seasonal changes in vegetation, water and pasture;
- changes in the abundance or distribution of locally important species;
- wildlife sightings and mortality;
- invasive-species occurrence;
- changes in fish catch or composition;
- mangrove and coastal condition;
- restoration survival;
- fire and pollution incidents;
- compliance with community conservation agreements; and
- changes in access to ecosystem services.

Community-based information should complement scientific monitoring and should not be treated as a substitute for required technical assessments.

The national monitoring system should develop simple Somali-language tools and pictorial materials that can be used by community monitors with different levels of literacy.

9.7 NATIONAL BIODIVERSITY INFORMATION SYSTEM

Somalia should progressively establish a national biodiversity information system coordinated by MoECC. The system should function as a distributed platform connecting data held by federal institutions, Federal Member States, research institutions and approved partners rather than requiring all original data to be held in one location.

The information system should provide:

- a national catalogue of biodiversity datasets;
- approved indicator definitions and metadata;
- spatial layers and maps;
- national target progress records;
- programme implementation information;
- biodiversity-finance information;
- species and ecosystem records;
- reports and assessments;
- data-quality and confidence classifications;
- controlled access to sensitive data; and
- public access to appropriate non-sensitive information.

Table 60 - Minimum Biodiversity Information Standards

Standard area	Minimum requirement
Dataset identity	Title, institution, contact point and description
Geographic information	Defined coverage, coordinates or recognized administrative units
Time period	Date or period of data collection
Method	Documented collection and analysis method
Classification	Use of agreed ecosystem, land-cover, species and administrative classifications
Quality	Completeness, accuracy, limitations and confidence level
Version control	Date of update and record of revisions
Access	Public, restricted, confidential or sensitive classification
Interoperability	Formats that can be exchanged and used by relevant institutions
Safeguards	Protection of personal, community, cultural and sensitive species information
Citation	Source and conditions for reuse
Retention	Retention

9.8 DATA GOVERNANCE AND INSTITUTIONAL RESPONSIBILITIES

MoECC should provide overall coordination of the NBSAP monitoring framework, but data collection and validation will remain a shared responsibility.

Table 61 - Institutional Responsibilities for Monitoring and Reporting

Institution or mechanism	Principal responsibility
National Biodiversity Steering Committee	Review overall progress, resolve high-level constraints and approve major corrective recommendations
Ministry of Environment and Climate Change	Coordinate the monitoring framework, consolidate information and lead CBD reporting
NBSAP Coordination Unit	Maintain the indicator matrix, reporting calendar, implementation dashboard and consolidated progress records
National statistics authority	Support statistical standards, survey integration and official-data quality
Ministry of Finance	Provide biodiversity allocation, release and expenditure information
National planning authority	Link NBSAP results with development planning and national performance systems
Sector institutions	Collect, validate and report data for assigned targets and actions
Federal Member States	Coordinate State-level monitoring and submit validated State progress reports
Districts and municipalities	Monitor locally assigned actions and contribute administrative and site information
Research institutions and universities	Support methods, field assessments, data analysis, peer review and capacity development
Communities and civil society	Contribute local observations, implementation oversight and independent feedback
Private sector	Report required biodiversity risks, impacts, mitigation and contributions
Development partners	Provide timely information on financed activities, expenditure and results
Independent reviewers	Assess data quality, programme performance and selected outcomes

Each indicator should have one designated lead institution. Other institutions may contribute information, but responsibility for consolidating and submitting the indicator result should not remain undefined.

9.9 QUALITY ASSURANCE AND VALIDATION

All information used in official NBSAP reporting should undergo proportionate quality assurance.

The validation process should examine:

- consistency with the indicator definition;
- completeness of geographic and temporal coverage;
- application of the approved method;

- accuracy of calculations;
- consistency with other relevant datasets;
- duplication or double-counting;
- treatment of missing information;
- documentation of assumptions;
- uncertainty and confidence level; and
- appropriate authorization by the responsible institution.

Table 62 - Recommended Validation Levels

Information type	Minimum validation
Routine activity and output data	Confirmation by the responsible implementing institution
Financial data	Reconciliation with approved budget and expenditure records
State-level results	Validation by the responsible Federal Member State institution
National indicator values	Technical review by the lead institution and NBSAP Coordination Unit
Major ecological assessments	Independent technical or scientific peer review
Community-generated information	Community validation and technical review appropriate to the method
Information used in national CBD reports	Interinstitutional review and approval through the national reporting process

Disagreement between datasets should not be resolved by selecting the most favorable figure. The reporting institution should document the difference, assess the methods and present a justified conclusion or range.

9.10 REPORTING ARRANGEMENTS

Table 63 - NBSAP Monitoring and Reporting Cycle

Activity implementation update	Quarterly	Track delivery, constraints and immediate corrective measures	Implementing institutions
State progress report	Semi-annual	Consolidate implementation across each Federal Member State	State environment institution
National implementation report	Annual	Assess target, programme, finance and institutional progress	NBSAP Coordination Unit
Biodiversity-finance report	Annual	Track allocations, releases, expenditure and financing gaps	Ministry of Finance and MoECC
Indicator data update	According to metadata, normally annual or biennial	Update national target results	Indicator lead institutions
Thematic or ecosystem assessment	According to need and available resources	Provide detailed scientific evidence	Responsible technical institutions
Mid-term NBSAP review	2028	Assess progress and revise implementation priorities	Steering Committee and MoECC

Seventh National Report	In accordance with the CBD timetable	Report national implementation and GBF progress	MoECC
Final NBSAP evaluation	2030	Assess overall performance and guide the post-2030 strategy	Government-led independent evaluation

Quarterly reporting should remain concise and management-oriented. It should not require ecological indicators that can only be meaningfully updated annually or over longer periods.

9.11 INTEGRATION WITH NATIONAL AND INTERNATIONAL REPORTING

The NBSAP monitoring framework should support, and where possible draw information from:

national development reporting;

- State development and sector reporting;
- environmental assessment and compliance systems;
- national climate reporting;
- the Nationally Determined Contribution;
- the National Adaptation Plan;
- Land Degradation Neutrality and UNCCD reporting;
- Sustainable Development Goal reporting;
- fisheries, forestry, agriculture, livestock and water reporting;
- disaster-risk and resilience monitoring;
- national statistical systems; and
- reporting under biodiversity-related multilateral environmental agreements.

Shared indicators should use compatible methods, baselines and geographic units where appropriate. However, results should not be double-counted or presented as entirely attributable to the NBSAP where several national frameworks contributed.

The Seventh National Report should use information consolidated through this chapter. The national reporting process should also be used to identify deficiencies in the monitoring framework and agree on improvements before subsequent reporting cycles.

9.12 IMMEDIATE MONITORING AND REPORTING PRIORITIES

Table 64 - Immediate Actions for Operationalizing the NBSAP Monitoring Framework

No.	Priority action	Lead responsibility	Immediate output
1	Approve the national NBSAP monitoring framework and reporting calendar	MoECC and Steering Committee	Operational monitoring framework
2	Confirm the lead institution for every national target and indicator	MoECC and responsible institutions	Indicator responsibility matrix
3	Prepare metadata sheets for all priority indicators	NBSAP Coordination Unit and technical institutions	National indicator metadata catalogue
4	Review and validate available baselines	Indicator lead institutions	Baseline register with confidence ratings

5	Prepare a costed baseline-development plan	MoECC and partners	Prioritized programme for closing data gaps
6	Establish standardized federal and State reporting templates	NBSAP Coordination Unit	Common reporting package
7	Establish the national biodiversity dataset catalogue	MoECC and research institutions	Inventory of existing datasets
8	Develop national data-sharing and data-protection procedures	MoECC and participating institutions	Approved data-governance protocol
9	Establish priority ecosystem and species monitoring sites	Sector institutions and Federal Member States	Initial national monitoring network
10	Develop the community-based monitoring framework	Federal Member States, communities and MoECC	Agreed local monitoring tools and safeguards
11	Integrate biodiversity-finance fields into annual reporting	Ministry of Finance and MoECC	Linked finance and results records
12	Establish an NBSAP implementation dashboard	NBSAP Coordination Unit	Periodically updated national progress dashboard
13	Maintain an implementation risk and corrective-action register	NBSAP Coordination Unit	Active management record
14	Prepare the first annual NBSAP implementation report	MoECC and responsible institutions	Consolidated national progress report
15	Align monitoring outputs with Seventh National Report requirements	MoECC national reporting team	Consistent NBSAP and CBD reporting
16	Commission the 2028 mid-term review	Steering Committee	Independent assessment and corrective recommendations
17	Prepare the 2030 final evaluation and post-2030 transition process	MoECC and Steering Committee	Final evaluation and successor-strategy evidence

9.13 CONCLUSION

The monitoring, evaluation, reporting, learning and accountability framework established in this chapter provides the evidence system for Somalia's NBSAP through 2030. It connects the national targets with implementation programmes, institutional responsibilities, financial resources, environmental and social safeguards and national reporting under the Convention on Biological Diversity.

The system recognizes Somalia's current data and capacity constraints. It therefore combines immediate use of available administrative, spatial, field and community information with a phased programme for establishing baselines, improving indicators and strengthening the national biodiversity information system.

The immediate priorities are to confirm institutional responsibilities, finalize the indicator and metadata framework, validate available baselines, establish common reporting procedures and begin integrated monitoring of implementation, expenditure and results. The system should progressively move from reporting activities and outputs towards measuring changes in ecosystem condition, species status, threat levels, ecosystem services and equitable community benefits.

Annual reports will provide routine accountability, while the 2028 mid-term review will determine whether implementation is progressing at a sufficient pace and identify necessary corrections. The final evaluation in 2030 will assess achievement of the national targets and provide the evidence required for Somalia's post-2030 biodiversity strategy.

The effectiveness of the NBSAP will ultimately depend not only on the availability of information but on whether institutions use that information to make decisions. Monitoring findings must therefore inform planning, budgets, programme design, resource allocation and corrective action. Through this approach, Chapter 9 provides the accountability and learning foundation required to ensure that the implementation arrangements in Chapter 7 and the financing framework in Chapter 8 produce measurable, inclusive and lasting biodiversity results.

ANNEX 1 NBSAP IMPLEMENTATION MATRIX, 2026–2030

No.	National target / GBF	2030 result	Priority actions	Outputs and indicators	Delivery	Finance, evidence and risk
1 High	Biodiversity-inclusive Spatial Planning Area: Reducing threats GBF: 1	100% of FMS profiled; priority national terrestrial, freshwater and marine planning processes operational; loss in verified high-biodiversity areas brought close to zero.	Validate national ecosystem and land-cover maps; identify high-biodiversity and ecosystem-service areas; prepare FMS biodiversity profiles. Also: integrate biodiversity into land-use, watershed, coastal and marine plans; map pastoral corridors, drought refuges, wetlands, mangroves, reefs, seagrass and nursery grounds.	Outputs: Validated national ecosystem/land-cover atlas; priority-area and corridor maps; FMS spatial biodiversity profiles. Track: Area and share of priority geography covered by biodiversity-inclusive plans; number of FMS with approved plans; number of SEAs using biodiversity data.	Lead: MoECC Partners: Planning Ministry; FMS environment authorities; Lands; Water. Timing: 2026 mapping and protocols; 2027–2028 plans; 2029–2030 implementation and review	Finance: GEF/GBFF; national/FMS budgets; GCF. Verify: Approved maps and plans; GIS database; SEA reports. Gap: National baseline incomplete; spatial-prioritization products require validation. Risk: Tenure disputes, insecurity and incomplete data
2 High	Ecosystem Restoration Area: Reducing threats GBF: 2	At least 30% of baseline-identified degraded ecosystems under effective restoration with verified ecological gains.	Establish degradation/restoration baseline; select priority landscapes and seascapes; restore rangelands, watersheds, water-point surroundings, Juba and Shabelle riparian buffers, wetlands, mangroves and dunes. Also: expand farmer-managed natural regeneration and agroforestry; apply native-species and survival standards.	Outputs: National restoration baseline and opportunity map; restoration plans and agreements; restored sites. Track: Hectares and percentage of degraded ecosystems under effective restoration; hectares with improved vegetation, soil or hydrological condition; survival/regeneration rate.	Lead: MoECC Partners: FMS; Livestock; Agriculture; Water. Timing: 2026 baseline/pilots; 2027–2029 scale-up; 2030 effectiveness assessment	Finance: GEF/GBFF; GCF; Adaptation Fund. Verify: Remote sensing; field plots; restoration registers. Gap: Degraded-area denominator and effectiveness thresholds require validation. Risk: Drought, poor species selection, land conflict and short-term projects
3 High	Protected Areas and OECMs	At least 30% terrestrial/inland-water and 30%	Verify existing conservation areas; complete protected-	Outputs: Verified conservation-area register; gap	Lead: MoECC Partners: FMS;	Finance: GBFF/GEF; bilateral

	Area: Reducing threats GBF: 3	coastal/marine coverage, representative, connected and effectively managed.	area/OECM gap analysis; agree recognition and designation procedures. Also: prioritize KBAs and representative ecosystems; prepare financed management plans.	analysis; legal/recognition procedures. Track: Terrestrial/inland-water percentage conserved; coastal/marine percentage conserved; share with effective management.	Fisheries; Lands; local authorities. Timing: 2026 verification/gap analysis; 2027–2028 designation and planning; 2029–2030 management assessment	conservation funds; blue finance. Verify: Gazetted records; GIS registry; management plans. Gap: Legal status, boundaries and current effective coverage are not fully verified. Risk: Rights restrictions, displacement concerns, weak management finance and insecurity
4 High	Species Conservation and Recovery Area: Reducing threats GBF: 4	No confirmed human-induced extinction; recovery actions implemented for all agreed priority species; measurable improvement for selected monitored populations.	Update species inventories and national Red Lists; identify priority species and critical habitats; implement recovery plans. Also: operationalize marine turtle, shark, seabird and marine mammal NAPs; protect breeding/nesting/nursery areas.	Outputs: National priority-species list and assessments; recovery plans; protected critical habitats. Track: Species assessed; priority species with implemented plans; abundance/status trend for selected species.	Lead: MoECC Partners: Fisheries; FMS; CITES/CMS focal institutions; customs. Timing: 2026 priority list and protocols; 2027–2029 implementation; 2030 reassessment	Finance: GEF/GBFF; CMS/CITES mechanisms; PERSGA. Verify: Red List assessments; survey databases; patrol/trafficking logs. Gap: Most population, distribution and bycatch baselines remain incomplete. Risk: Limited taxonomic capacity, hidden trade, access constraints and low detection
5 High	Sustainable, Safe and Legal Use of Wild Species Area: Reducing threats GBF: 5	Priority fisheries and wild-resource value chains operate under enforceable sustainability, legality, safety and traceability arrangements.	Set precautionary harvest rules; improve stock assessments, landing and catch monitoring; strengthen licensing, vessel monitoring and IUU enforcement. Also: develop standards for gums, resins, medicinal plants and non-timber products; regulate wildlife trade.	Outputs: Harvest and trade regulations; fisheries data system; monitored landing sites. Track: Priority fisheries with management measures; share of recorded harvest from regulated sources; community agreements.	Lead: Ministry of Fisheries and Blue Economy Partners: MoECC; FMS fisheries/environment; Livestock; Agriculture. Timing: 2026 rules/data design; 2027–2029 monitoring and enforcement;	Finance: Fisheries revenue; GEF/GBFF; FAO. Verify: Licensing and VMS records; landing data; traceability audits. Gap: Catch, effort, wild-harvest and trade data are fragmented. Risk: IUU fishing, weak enforcement and livelihood dependence

					2030 compliance review	
6 Medium	Invasive Alien Species Area: Reducing threats GBF: 6	Priority pathways managed; no establishment of identified high-risk new IAS; impacts reduced at agreed priority sites.	Prepare IAS inventory and risk assessment; map Prosopis; assess ports, planting material and ballast pathways. Also: establish early detection and rapid response; implement integrated control and native restoration.	Outputs: National IAS inventory; pathway action plan; Prosopis distribution map. Track: Priority species/pathways assessed; hectares under control and restoration; new introductions detected and contained.	Lead: MoECC Partners: Agriculture; Livestock; ports; customs. Timing: 2026 inventory/risk analysis; 2027 pilots; 2028–2030 scale-up and surveillance	Finance: GEF/GBFF; agriculture and trade budgets; port fees. Verify: Inventory; inspection records; response logs. Gap: No comprehensive national IAS inventory; Prosopis extent requires harmonized mapping. Risk: Reinvasion, uncontrolled biomass markets and insufficient quarantine capacity
7 High	Pollution Reduction Area: Reducing threats GBF: 7	Significant reduction from validated baseline in priority pollutant loads and ecological risk at monitored hotspots.	Set biodiversity-sensitive standards; monitor hotspots; improve municipal collection and controlled disposal. Also: reduce plastic leakage; improve wastewater systems.	Outputs: Pollution standards and hotspot inventory; municipal/port systems; water-quality network. Track: Hotspots with active programmes; waste collected/diverted; priority municipalities with controlled disposal.	Lead: MoECC Partners: Municipalities; Health; Water; Agriculture. Timing: 2026 standards/baselines; 2027–2029 infrastructure and enforcement; 2030 impact assessment	Finance: Municipal budgets; polluter-pays fees; petroleum operator obligations. Verify: Water tests; waste manifests; facility records. Gap: National pollution monitoring and quantified leakage baselines are limited. Risk: Infrastructure cost, weak enforcement and rapid urban growth
8 High	Biodiversity and Climate Change Area: Reducing threats GBF: 8	Priority ecosystems and vulnerable communities covered by effective, socially safeguarded EbA/NbS with measurable resilience gains.	Align NBSAP with NAP/NDC; restore rangelands, watersheds, wetlands, mangroves and coastal vegetation; identify climate refuges and corridors. Also: climate-proof protected-area/species	Outputs: Joint NBSAP–NAP–NDC programme; EbA site portfolio; climate-refuge maps. Track: Area under EbA; climate plans incorporating biodiversity; refuges/coastal protection ecosystems managed.	Lead: MoECC Partners: SoDMA; Water; Agriculture; Livestock. Timing: 2026 vulnerability assessment; 2027–2029 implementation; 2030 resilience review	Finance: GCF; Adaptation Fund; LDCF. Verify: NAP/NDC reports; remote sensing; ecosystem monitoring. Gap: Climate exposure is documented; ecological vulnerability and resilience baselines need development.

			plans; develop ecosystem-based drought/flood interventions.			Risk: Extreme events, maladaptation and duplicate climate/biodiversity projects
9 High	Sustainable Nature-Based Livelihoods Area: Sustainable use and benefits GBF: 9	Documented increase in equitable benefits and income from verified biodiversity-compatible livelihoods without increased harvest pressure.	Develop sustainable fisheries, resin, honey, medicinal-plant and NTFP value chains; improve access to finance, storage, processing and markets; support alternatives to damaging activities. Also: pilot suitable ecotourism; recognize customary practices.	Outputs: Supported enterprises and producer groups; market/storage facilities; sustainability standards and certification. Track: Households benefiting; enterprises meeting standards; sustainable value-chain income.	Lead: Ministry of Commerce / MoECC Partners: Fisheries; Agriculture; Livestock; FMS. Timing: 2026 value-chain studies; 2027–2029 enterprise scale-up; 2030 outcome evaluation	Finance: Private investment; development banks; livelihood funds. Verify: Enterprise records; household surveys; sustainability audits. Gap: Livelihood and enterprise baselines should be established by programme and value chain. Risk: Market volatility, elite capture and commercialization increasing pressure
10 High	Sustainable Agriculture, Livestock, Fisheries and Forestry Area: Sustainable use and benefits GBF: 10	Sustainable-management coverage substantially expanded across priority production landscapes and fisheries with maintained or improved productivity and ecological condition.	Scale participatory rangeland and seasonal grazing systems; protect corridors/reserves/refuges; promote agroforestry, conservation agriculture, soil/water conservation and IPM. Also: protect river buffers and flows; implement ecosystem-based fisheries.	Outputs: Sustainable production standards and extension packages; rangeland agreements; biodiversity-friendly farms. Track: Area under participatory rangeland management; biodiversity-friendly agricultural area; fisheries with implemented measures.	Lead: Agriculture and Livestock ministries Partners: Fisheries; MoECC; Water; FMS. Timing: 2026 standards/baselines; 2027–2029 scale-up; 2030 sustainability assessment	Finance: Agriculture/livestock/fisheries programmes; climate finance; GEF/GBFF. Verify: Extension registers; land and fishery plans; farm/household surveys. Gap: Comparable national area and adoption baselines are incomplete. Risk: Climate shocks, weak extension and competing production incentives
11 High	Nature's Contributions to People Area: Sustainable use and benefits	Priority ecosystem services show maintained or improved condition and equitable access; natural-capital	Map nationally important ecosystem services; protect and restore watersheds, riparian vegetation, wetlands,	Outputs: Ecosystem-service maps; watershed/coastal management projects; valuation studies. Track: Area of service-providing	Lead: MoECC / National Bureau of Statistics Partners: Water; SoDMA; Finance; Planning.	Finance: Climate/DRR funds; public investment; GEF/GBFF. Verify: Ecosystem accounts; hydrological/erosion/coastal data; plans.

	GBF: 11	information routinely used in planning.	vegetation around settlements/farms /water sources, mangroves and dunes; integrate services into DRR. Also: value priority services; develop natural-capital accounts.	ecosystems effectively managed; planning processes using valuation; communities benefiting.	Timing: 2026 mapping/valuation design; 2027–2029 management and accounts; 2030 update	Gap: Service extent, condition, value and beneficiary baselines require targeted assessment. Risk: Valuation capacity gaps and inequitable benefit distribution
12 Medium	Biodiversity in Urban and Settled Areas Area: Sustainable use and benefits GBF: 12	Participating cities demonstrate measurable net gains in accessible, connected and ecologically appropriate green/blue space.	Adopt urban green/blue-space standards; map and protect wetlands, drainage corridors and coastal buffers; expand native tree planting and ecological restoration. Also: integrate biodiversity into municipal plans; improve waste, drainage and wastewater.	Outputs: Municipal green/blue plans; protected urban ecological corridors; restored sites. Track: Green space per resident; municipal plans incorporating biodiversity; restored wetlands/corridors/buffers.	Lead: Municipalities / Ministry of Public Works Partners: MoECC; FMS; Water; local planners. Timing: 2026 city baselines/standards; 2027–2029 investments; 2030 access and quality review	Finance: Municipal finance; urban resilience programmes; developer contributions. Verify: Municipal GIS; development plans; asset registers. Gap: City-level green-space, accessibility and condition baselines are generally unavailable. Risk: Water scarcity, poor maintenance, land pressure and unsuitable species
13 Medium	Genetic Resources and Benefit-Sharing Area: Sustainable use and benefits GBF: 13	Operational, rights-respecting ABS system with transparent permits, agreements, community consent and benefit-sharing.	Review ABS legal/institutional needs; assess Nagoya Protocol accession; designate competent authorities. Also: establish prior informed consent and mutually agreed terms procedures; protect traditional knowledge.	Outputs: ABS options and accession study; national ABS framework; designated authorities. Track: Framework adopted; applications and agreements processed; communities with protocols.	Lead: MoECC Partners: Justice; Foreign Affairs; Agriculture; Livestock. Timing: 2026 review; 2027 legal/institutional design; 2028–2030 operation and review	Finance: GEF; CBD capacity support; government. Verify: Laws/regulations; permits; agreements. Gap: No operational national ABS framework or systematic benefit records. Risk: Low awareness, unclear authority and misuse of traditional knowledge
14 High	Biodiversity Mainstreaming	All priority sector and FMS planning systems apply measurable	Integrate biodiversity into national/FMS plans and investment	Outputs: Mainstreaming guidelines; revised sector plans;	Lead: MoECC / Ministry of Planning Partners: Finance; all	Finance: Government budgets; sector programmes; GEF/GBFF.

	Area: Tools and mainstreaming GBF: 14	biodiversity criteria and report allocations/results.	programmes; mainstream across productive and infrastructure sectors and humanitarian response; strengthen SEA/ESIA. Also: include biodiversity in public-investment appraisal; appoint focal points.	biodiversity focal-point network. Track: Sector policies/plans with measurable commitments; major public investments screened; SEAs completed.	sector ministries; FMS; municipalities. Timing: 2026 guidance/focal points; 2027–2029 policy and budget integration; 2030 institutional review	Verify: Policies; planning and budget documents; appraisal records. Gap: A systematic baseline of sector integration and budget allocations should be completed. Risk: Institutional silos, overlapping mandates and weak compliance
15 Medium	Business and Financial-Sector Responsibility Area: Tools and mainstreaming GBF: 15	Large and high-impact entities assess, disclose and reduce biodiversity risks/impacts, with public compliance information and financial-sector screening.	Issue disclosure guidance; require high-risk sectors/projects to assess impacts and dependencies; strengthen compliance and public disclosure. Also: develop sector guidance for infrastructure, ports, fisheries, petroleum, mining, agriculture and finance; promote positive procurement/investment.	Outputs: Disclosure and sector guidance; corporate reports; financial screening tools. Track: Companies disclosing; major projects assessed; financial institutions screening.	Lead: MoECC / Ministry of Commerce Partners: Central Bank; Finance; Petroleum; Mining. Timing: 2026 entity baseline/guidance; 2027 pilots; 2028–2030 mandatory or phased compliance	Finance: Regulatory fees; private compliance expenditure; technical assistance. Verify: Company filings; lender records; ESIA/compliance inspections. Gap: No comprehensive inventory of covered entities or current disclosure practices. Risk: Business resistance, weak enforcement and greenwashing
16 Medium	Sustainable Consumption and Reduced Waste Area: Tools and mainstreaming GBF: 16	Measurable reduction in ecological footprint of priority commodities and waste streams, with sustained uptake of cleaner alternatives.	Promote clean/efficient household energy; reduce unsustainable charcoal; improve origin and sustainability information for forest/fisheries products. Also: reduce food loss through storage, transport and processing; support reuse, recycling and circular enterprises.	Outputs: Clean-energy and charcoal-transition schemes; commodity information/traceability; storage and processing facilities. Track: Households using clean/efficient cooking; sustainable charcoal/alternative-fuel volume; waste diverted.	Lead: Ministry of Commerce / Energy authorities Partners: MoECC; Agriculture; Fisheries; municipalities. Timing: 2026 baselines/policy design; 2027–2029 market measures; 2030 consumption/waste review	Finance: Private investment; municipal finance; climate finance. Verify: Household surveys; market/traceability data; waste audits. Gap: Consumption, charcoal-source, food-loss and waste-flow baselines require harmonization. Risk: Affordability constraints, informal markets and rebound effects

17 Medium	Biosafety and Biotechnology Area: Tools and mainstreaming GBF: 17	Operational biosafety system capable of transparent, science-based decisions, monitoring, border control and emergency response.	Review/update biosafety framework; implement Cartagena Protocol; clarify mandates. Also: establish risk assessment, authorization, inspection and monitoring; strengthen transboundary controls.	Outputs: Updated biosafety law/regulations; competent authorities; standard procedures. Track: Framework adopted; authorities operational; trained specialists.	Lead: MoECC / Agriculture Ministry Partners: Health; customs; standards bureau; universities/labs. Timing: 2026 readiness review; 2027 legal/SOP update; 2028–2030 capacity and operation	Finance: GEF biosafety support; government; Cartagena capacity mechanisms. Verify: Laws; SOPs; decisions. Gap: Institutional and technical readiness assessment required. Risk: Limited laboratory capacity, mandate ambiguity and low awareness
18 Medium	Reform of Harmful Incentives Area: Tools and mainstreaming GBF: 18	Priority harmful incentives progressively reformed and redirected, with expanded positive incentives and protection for vulnerable groups.	Review biodiversity-relevant subsidies/expenditures; identify harmful incentives in fisheries, land conversion, charcoal, water use and habitat degradation; assess distributional impacts. Also: design socially responsible reform; establish positive restoration/sustainable-production incentives.	Outputs: Incentive inventory and expenditure review; reform roadmap; distributional assessments. Track: Number/value harmful incentives identified; number/value reformed, redirected or eliminated; value positive incentives.	Lead: MoECC/ Ministry of Finance Partners: Planning; Fisheries; Agriculture; Livestock. Timing: 2026 inventory; 2027 reform design; 2028–2030 phased implementation and evaluation	Finance: Reallocated public expenditure; development policy finance; climate/biodiversity funds. Verify: Budget and subsidy records; policy decisions; beneficiary database. Gap: No consolidated biodiversity-relevant incentive inventory or monetary baseline. Risk: Political resistance and adverse impacts on poor/resource-dependent groups
19 High	Biodiversity Finance Area: Tools and mainstreaming GBF: 19	Substantial, sustained increase and diversification of finance, with transparent annual tracking and equitable subnational/community allocation.	Prepare BIOFIN-based finance plan; cost NBSAP and quantify finance gap; increase federal/FMS allocations. Also: develop GEF, GBFF, GCF and other proposals; link climate and biodiversity finance.	Outputs: Costed NBSAP; finance-needs and gap assessment; adopted biodiversity finance plan. Track: Annual domestic/international biodiversity expenditure; share of NBSAP needs secured; number/value funded programmes.	Lead: MoECC/ Ministry of Finance Partners: Planning; FMS finance/environment; Central Bank; private sector. Timing: 2026 costing/finance plan; 2027 system and pipeline;	Finance: Domestic budgets; GEF/GBFF; GCF. Verify: Budget documents; expenditure tags; donor systems. Gap: Previous estimates require refinement and reconciliation through BIOFIN and activity-based costing.

					2028–2030 mobilization and annual reporting	Risk: Overreliance on projects, double counting and weak fiduciary capacity
20 High	Capacity, Technology, Knowledge and Participation Area: Tools and mainstreaming GBF: 20, 21, 22, 23	Operational, interoperable national monitoring and knowledge system; all FMS reporting; stronger technical capacity and inclusive decision-making.	Establish National Biodiversity Information System; assign data custodians; adopt indicators and monitoring protocols. Also: strengthen universities, research institutions and labs; train specialists and community monitors.	Outputs: Operational NBIS and governance policy; indicator protocols and baseline programme; trained professionals/community monitors. Track: NBIS operational/public ; indicators with validated baselines and recurring data; people trained.	Lead: MoECC Partners: National Bureau of Statistics; universities; FMS; Education. Timing: 2026 system/capacity design; 2027 deployment; 2028–2030 routine monitoring and reporting	Finance: GEF/GBFF; government; universities. Verify: NBIS logs; data-quality audits; training records. Gap: Institutional capacity, staffing, datasets and participation baselines require an initial capacity assessment. Risk: Staff turnover, fragmented data, connectivity and token participation

ANNEX 2 POLICY COHERENCE AND BIODIVERSITY MAINSTREAMING PLAN

Somalia has an expanding environmental framework anchored in the Provisional Constitution (2012), National Environment Policy (2023) and Environmental Protection and Management Act (2024) but alignment with the KM-GBF remains uneven and implementation is constrained by incomplete regulations, weak enforcement, fragmented mandates, limited data and inadequate financing.

Alignment domain	Principal gap / coherence issue	KM-GBF linkage	Priority reform direction
Policy and implementation	Broad commitments exist, but many policies lack measurable biodiversity targets, implementation schedules, budgets and monitoring systems.	KM-GBF Targets 1, 2, 4, 14, 19, 21	Embed targets, indicators, costed actions and reporting duties in national/FMS plans and sector strategies.
Spatial planning and safeguards	No unified biodiversity inclusive spatial planning framework; sensitivity maps and ecological zoning are limited; SEA/ESIA practice is inconsistent.	Targets 1, 3, 14, 15	Issue spatial-planning, SEA, ESIA and biodiversity-screening regulations under the EPMA; require cumulative-impact assessment.
Protected areas and species	Protected-area legislation, national inventory, management categories and connected-area planning remain incomplete; wildlife enforcement is weak.	Targets 3, 4, 5	Adopt protected-area and wildlife regulations, OECM guidance, management standards and species recovery/anti-trafficking measures.
Land, forests and restoration	Land-use mandates overlap; no comprehensive national land policy; restoration commitments lack harmonized baselines and explicit 30% ecosystem coverage.	Targets 1, 2, 10, 11	Finalize land and forest legal instruments; establish a national restoration framework and FMS land-use plans.
Marine, freshwater and pollution	Marine spatial planning, environmental-flow standards, pollution control, plastics/waste systems and fisheries compliance remain fragmented.	Targets 1–3, 7, 9–12	Strengthen fisheries, water and pollution regulations; establish marine/coastal zoning and ecosystem-based management.
ABS, biosafety and knowledge	ABS/Nagoya measures, biosafety law, DSI rules and benefit-sharing systems are absent or incomplete; biodiversity information is scattered.	Targets 13, 17, 21	Adopt ABS and biosafety frameworks; designate competent authorities; establish a national biodiversity information system.
Finance, incentives and business	No biodiversity budget-tagging or business disclosure framework; harmful incentives are not systematically tracked; positive incentives are limited.	Targets 15, 18, 19	Introduce subsidy screening, green budgeting, biodiversity finance planning, disclosure rules and conservation incentives.

Alignment domain	Principal gap / coherence issue	KM-GBF linkage	Priority reform direction
Institutions, rights and inclusion	Federal/FMS mandates overlap; no legally mandated cross-government biodiversity mechanism; participation and gender/youth inclusion are inconsistently operationalized.	Targets 14, 20, 22, 23	Establish an inter-ministerial mechanism, clarify mandates and formalize inclusive participation and grievance arrangements.

SECTOR MAINSTREAMING PRIORITIES

Biodiversity risks, entry points and institutional responsibility

Sector	Main biodiversity risks	Mainstreaming entry point	Lead and responsible institutions
Agriculture	Land conversion; agrochemical pollution; soil and agrobiodiversity loss.	Agriculture policy/strategy, extension, input regulation, climate-smart and agroecological investment.	Ministry responsible for Agriculture; MoECC; FMS agriculture authorities.
Livestock & rangelands	Overgrazing, erosion, invasive species, blocked mobility and water-point pressure.	Rangeland plans, grazing agreements, fodder systems, veterinary programmes and drought plans.	Ministry responsible for Livestock; MoECC; FMS/local authorities.
Fisheries & blue economy	Overfishing, IUU fishing, destructive gear, by-catch and coastal habitat damage.	Licensing/MCS, fisheries plans, marine spatial planning, gear standards and blue-economy investment.	Ministry responsible for Fisheries/Blue Economy; MoECC; maritime and FMS authorities.
Forestry	Charcoal and fuelwood extraction, illegal timber, habitat fragmentation and mangrove loss.	Forest and charcoal regulations, community forestry, restoration, licensing and traceability.	MoECC/forestry authority; trade/customs; FMS and local authorities.
Water	Over-abstraction, wetland/riparian degradation, pollution and altered environmental flows.	Water allocation, abstraction permits, catchment plans, irrigation appraisal and WASH standards.	Ministry responsible for Water; Agriculture; MoECC; FMS water authorities.
Energy	Charcoal dependence, fuel-related pollution and poorly sited infrastructure.	Energy policy, clean-cooking incentives, renewable-energy siting and subsidy reform.	Ministry responsible for Energy; MoF; MoECC; FMS authorities.

Sector	Main biodiversity risks	Mainstreaming entry point	Lead and responsible institutions
Infrastructure & transport	Habitat fragmentation, sand/material extraction, road mortality and cumulative impacts.	Transport/infrastructure plans, SEA, ESIA, biodiversity offsets hierarchy and procurement standards.	Public Works/Transport; Planning; MoECC; FMS/local authorities.
Urban development	Loss of green/blue space, unmanaged waste/plastics, floodplain encroachment and pollution.	Urban plans, municipal by-laws, green infrastructure, waste systems and nature-based drainage.	Municipalities/BRA; Public Works; MoECC; FMS authorities.
Mining & extractives	Habitat destruction, river sand mining, contamination, water stress and weak rehabilitation.	Licensing, no-go areas, ESIA, mine closure/rehabilitation bonds and compliance inspection.	Ministry responsible for Petroleum/Minerals; MoECC; Finance; FMS authorities.
DRR & climate adaptation	Drought, flood, fire and maladaptation amplify ecosystem and livelihood vulnerability.	NAP/NDC, disaster plans, early warning, ecosystem-based adaptation and resilient public investment.	SoDMA; MoECC; Planning; sector ministries and FMS authorities.

Operational pathway for integrating biodiversity into development decisions and public finance

Instrument	Required biodiversity integration	Institutional route	Expected planning/budget effect
National Transformation Plan (NTP-I) 2025–2029 / Centennial Vision 2060	Include NBSAP targets, spatial priorities, indicators and financing needs in results frameworks and sector chapters.	Planning authority with MoECC and MoF	NBSAP results mapped to NTP-I outcomes and Centennial Vision 2060; annual progress reported.
FMS development plans	Translate national targets into state-specific ecosystem, restoration, protected-area and livelihood priorities.	FMS planning/environment ministries	FMS biodiversity actions costed, budgeted and monitored.
Sector strategies & investment plans	Require sector biodiversity risk analysis, mitigation hierarchy, targets and implementing budgets.	Line ministries with MoECC	Agriculture, livestock, fisheries, forestry, water, energy and infrastructure plans aligned.
Annual government budgeting	Introduce biodiversity budget tagging, expenditure tracking and ministry budget guidance.	MoF with MoECC and FMS finance ministries	Visible domestic allocations and improved reporting under KM-GBF Targets 18–19.
Public investment appraisal	Add biodiversity sensitivity, ecosystem-service valuation, climate/nature risk and alternatives analysis to project appraisal.	Planning/MoF; MoECC clearance	High-risk projects redesigned, relocated or rejected before commitment.
Strategic Environmental Assessment	Apply SEA to policies, plans and programmes with major cumulative or landscape-scale effects.	MoECC; Planning; sector ministries	Biodiversity addressed upstream, before individual projects are selected.
Environmental & Social Impact Assessment	Operationalize EPMA requirements through regulations, standards, review capacity, disclosure and compliance monitoring.	MoECC; sector regulators; FMS	Consistent mitigation hierarchy, public participation and enforceable management plans.
Biodiversity screening of major projects	Use sensitivity maps and a tiered screening checklist; trigger specialist surveys for critical habitats/species.	MoECC one-stop review with project authorities	Early identification of no-go areas, critical habitat and cumulative impacts.

MAINSTREAMING ACTION MATRIX

Priority reforms for 2026–2030; deadlines should be confirmed through the validation process

Reform / action	Lead institution	Supporting institutions	Instrument to be amended or created	Deadline	Expected result
Adopt biodiversity-inclusive spatial-planning and ecological-zoning framework.	MoECC / Planning	FMS, municipalities, sector ministries	National/FMS planning guidance; land-use plans	2027	Sensitive ecosystems mapped and considered in development approvals.
Issue SEA, ESIA and biodiversity-screening regulations under EPMA 2024.	MoECC	Planning, line regulators, FMS	EPMA regulations; appraisal manuals	2027	Consistent safeguards and early screening for major investments.
Establish a formal inter-ministerial biodiversity coordination mechanism.	MoECC	MoF, Planning, line ministries, FMS	Cabinet/ministerial instrument; mandates	2026	Reduced duplication and coordinated NBSAP implementation.
Integrate NBSAP targets and indicators into national and FMS development plans.	Planning authority	MoECC, MoF, FMS	National/FMS development-plan templates	2027	Biodiversity becomes a measurable development result.
Introduce biodiversity budget tagging and expenditure reporting.	MoF	MoECC, Planning, FMS finance	Budget circular; chart/classification guidance	2028	Domestic biodiversity spending is visible and trackable.
Finalize land, protected-area, wildlife and forest regulatory frameworks.	MoECC / relevant land authorities	Justice, Interior, FMS, communities	Sector laws, regulations and by-laws	2028	Clear rules for conservation, restoration and sustainable use.
Adopt ABS/Nagoya and national biosafety frameworks.	MoECC	Agriculture, Health, Trade, research bodies	ABS and biosafety laws/regulations	2028	Access, benefit sharing and biotechnology risks governed.
Mainstream biodiversity in priority sector strategies and investment plans.	Sector ministries	MoECC, Planning, MoF, FMS	Agriculture, livestock, fisheries, water, energy, transport plans	2028	Sector investments reduce risk and support nature-positive outcomes.

Reform / action	Lead institution	Supporting institutions	Instrument to be amended or created	Deadline	Expected result
Operationalize harmful-incentive review and positive-incentive programme.	MoF / MoECC	Sector ministries, private sector, FMS	Tax, subsidy, licensing and grant instruments	2029	Harmful incentives progressively reformed; positive incentives scaled.
Establish biodiversity information, accounting and disclosure systems.	MoECC / Statistics authority	MoF, universities, private sector	Data standards; accounting and disclosure guidance	2030	Evidence supports decisions, reporting and corporate accountability.

FULL POLICY-ALIGNMENT MATRIX: KM-GBF TARGETS 1–8

Consolidated from the June 2026 assessment; “partial” reflects policy recognition without complete operational instruments or implementation evidence.

Target	Alignment	Relevant national framework	Main gap	Priority alignment measure
1	Partially aligned	Constitution; EPMA 2024; Environment, Forest, Charcoal and Blue Economy policies.	No integrated biodiversity-inclusive spatial planning, ecological zoning or shared sensitivity maps.	Adopt national/FMS spatial-planning framework; map wetlands, riverine forests, mangroves, rangelands and coastal habitats.
2	Partially aligned	Constitution; EPMA; NTP-I 2025–2029; NDC 3.0; NAP 2026–2030; NCCAP 2025–2030; Environment, Forest and Disaster policies; Fisheries Master Plan.	No harmonized national restoration baseline or explicit 30% coverage across terrestrial, inland-water, coastal and marine ecosystems.	Adopt national restoration framework, hotspot map, standards, community roles and measurable ecosystem targets.
3	Partially aligned	EPMA provisions; environment/forest/marine instruments and emerging protected-area work.	Incomplete protected-area inventory, legislation, categories, management plans, connectivity and OECM recognition.	Finalize protected-area framework and expansion roadmap; equitable governance and effective-management indicators.
4	Partially aligned	Environment and forest frameworks provide broad species/habitat protection.	Limited threatened-species monitoring, recovery plans, enforcement capacity and ex-situ safeguards.	National red-list process, recovery plans, wildlife crime enforcement and genetic-resource conservation.
5	Partially aligned	Environment and wildlife-related provisions; controls on harmful exploitation exist in principle.	Wildlife law/enforcement gaps; illegal trade, hunting and unsustainable harvest continue.	Wildlife management law/regulations, licensing, CITES enforcement and regional cooperation.
6	Partially aligned	Environment and plant/land management measures; Prosopis actions emerging.	No comprehensive invasive-alien-species strategy, pathway controls, national inventory or coordinated surveillance.	Implement national IAS strategy, pathway risk assessment, mapping, rapid response and community control.
7	Partially aligned	EPMA; pesticide/fertiliser and sector policies contain pollution-related provisions.	Weak waste/plastics, wastewater, agrochemical and marine-pollution standards, monitoring and enforcement.	Pollution regulations, waste/EPR systems, chemical controls and quantified pollution-reduction indicators.

Target	Alignment	Relevant national framework	Main gap	Priority alignment measure
8	Partially aligned	NDC 3.0; NAP 2026–2030; NCCAP 2025–2030; LT-LEDS; NDC 3.0 Investment Plan; forest and disaster policies link ecosystems and resilience.	Climate and biodiversity plan insufficiently integrated; limited ecosystem monitoring and maladaptation safeguards.	Scale ecosystem-based adaptation; integrate biodiversity indicators into NAP/NDC and disaster planning.

Target	Alignment	Relevant national framework	Main gap	Priority alignment measure
9	Partially aligned	Constitution; environment, forest, fisheries and livelihood-related policies.	Sustainable use and customary/community benefit systems are weakly formalized and monitored.	Community-based management, sustainable-harvest standards, rights/benefit mechanisms and livelihood indicators.
10	Partially aligned	NTP-I 2025–2029; NDC 3.0; NAP 2026–2030; NCCAP 2025–2030; agriculture, livestock, forest and marine/fisheries frameworks.	Sector production targets often lack biodiversity safeguards, agroecology, rangeland limits and ecosystem indicators.	Mainstream sustainable production standards, extension, certification, spatial safeguards and restoration.
11	Partially aligned	NTP-I 2025–2029; NDC 3.0; NAP 2026–2030; NCCAP 2025–2030; environment, water, disaster and sector policies recognize ecosystem services.	Ecosystem services are not systematically valued or integrated in investment and land/water decisions.	Map/assess ecosystem services; apply nature-based solutions and environmental-flow standards.
12	Not/limited alignment	EPMA and Environment Policy provide a general enabling basis.	No clear national standards or targets for urban green/blue space, restoration and biodiversity-sensitive urban planning.	Urban biodiversity guidance, municipal indicators, green corridors, wetlands and nature-based drainage.
13	Not aligned / evidence gap	Somalia is Party to relevant CBD processes; general constitutional/environmental provisions apply.	No verified ABS framework, benefit records, competent authority, DSI measures or traditional-knowledge protocol.	Adopt ABS/Nagoya law and procedures; designate authority, checkpoints and benefit-sharing system.
14	Partially aligned	EPMA; Environment Policy; NTP-I 2025–2029; NDC 3.0; NAP 2026–2030; NCCAP 2025–2030; and sector planning provide entry points.	Biodiversity not consistently integrated into plans, budgets, SEA/ESIA, accounting and decisions; no SEEA evidence.	Mandatory mainstreaming guidance, SEA/ESIA rules, budget tagging, public investment screening and natural-capital accounting.
15	Limited alignment	EPMA Chapters 6–7 regulate pollution and environmental harm.	No biodiversity-risk/dependency disclosure database or corporate reporting/traceability regime.	Phased business disclosure, due diligence, compliance register and sector traceability requirements.

Target	Alignment	Relevant national framework	Main gap	Priority alignment measure
16	Limited alignment	NTP-I 2025–2029, NDC 3.0, NAP 2026–2030 and NCCAP 2025–2030 provide support; municipal/waste functions offer entry points.	No coherent sustainable-consumption policy, SDG 12 linkage, plastics/EPR framework or green procurement standards.	Consumption/waste guidance, plastics reduction, EPR, recycling and sustainable public procurement.

Target	Alignment	Relevant national framework	Main gap	Priority alignment measure
17	Not/limited alignment	Health Strategy, Environment Policy and broad constitutional safeguards.	No national biosafety policy/law, risk-assessment procedures, import controls or coordination framework for Cartagena Protocol implementation.	Adopt biosafety framework; designate authority; establish approval, monitoring, enforcement and emergency procedures.
18	Partially aligned	Fertilizer, WASH and land-degradation instruments; first NBSAP recognized harmful/positive incentives.	No systematic inventory, baseline, tracking, resource estimate or coordinated reform mechanism.	Inter-ministerial review; phased harmful-subsidy reform; positive incentives and Target 18 indicators.
19	Partially aligned	PFM Regulations; NTP-I 2025–2029; NDC 3.0 Investment Plan; LT-LEDS; NCCAP 2025–2030; draft Climate Finance Policy; NBSAP resource-mobilization direction.	No dedicated biodiversity finance plan, budget allocation/tracking framework or sustained domestic mechanism.	BIOFIN-informed finance plan, budget tags, financing-gap assessment and innovative/community finance.
20	Partially aligned	NTP-I 2025–2029; NDC 3.0; NAP 2026–2030; and education, human-capital, youth and culture strategies provide capacity entry points.	Major technical, institutional, equipment, research and FMS/local capacity gaps; fragmented technology transfer.	National capacity programme for monitoring, GIS, governance, enforcement, research and technology cooperation.
21	Partially aligned	Education and ICT strategies support access to knowledge and technology.	Biodiversity data are fragmented, inaccessible and inconsistent; limited national baselines, repositories and traditional-knowledge documentation.	National biodiversity information system, data standards, open access, research partnerships and knowledge safeguards.
22	Partially aligned	Constitution; NTP-I 2025–2029; NAP 2026–2030; Water Strategy; Gender and Environment policies contain participation/right entry points.	No comprehensive land policy; inconsistent participation, tenure recognition, FPIC-type procedures and defender safeguards.	Inclusive participation standards, grievance mechanisms, land/tenure reform and community governance/benefit sharing.

Target	Alignment	Relevant national framework	Main gap	Priority alignment measure
23	Partially aligned	Gender Policy; NTP-I 2025–2029; NDC 3.0; NAP 2026–2030; and development/environment frameworks recognize equality and women’s roles.	Gender-responsive indicators, budgets, leadership mechanisms and sex-disaggregated biodiversity data are limited.	Gender action plan, targets, budget markers, leadership quotas/roles, safeguards and disaggregated monitoring.

Purpose and scope. This Environmental and Social Safeguards Framework establishes the minimum requirements for identifying, avoiding and managing risks arising from the implementation of Somalia’s NBSAP II 2026–2030. It applies to all NBSAP-supported policies, programmes, projects, grants, contracts, restoration and conservation activities, research, area-based measures and partnerships implemented by public institutions or third parties. The Framework translates the findings of the national ESIA and the detailed Environmental and Social Management Framework into a concise and mandatory safeguards system for NBSAP implementation.

Safeguard principles

Legal compliance and accountability. Every intervention shall comply with the Federal Republic of Somalia’s Environmental Protection and Management Act (2024), the Somalia ESIA Regulations (2024), applicable sectoral laws and policies, and relevant international environmental and social safeguard commitments. No field activity shall commence until the required screening, assessment, consultation and approval have been completed. Safeguard requirements and costs shall be incorporated into annual work plans, budgets, procurement documents, partnership agreements and contracts.

Protection of ecosystems and species. Interventions shall conserve the integrity, connectivity and resilience of terrestrial, freshwater, coastal and marine ecosystems; prevent avoidable damage to critical habitats and threatened species; control pollution and invasive alien species; and maintain ecosystem services on which communities depend. Decisions shall apply the precautionary and ecosystem approaches and use the mitigation hierarchy: first avoid impacts; then minimize those that cannot be avoided; restore or rehabilitate affected values; and consider compensation or offsets only as a last resort, where legally permitted and supported by strong safeguards.

People, land and resource use. Activities shall protect community health and safety and recognize legitimate statutory, customary, communal, seasonal and livelihood-based uses of land, water, forests, rangelands, fisheries and coastal resources. Planning shall consider pastoral mobility, seasonal grazing, fishing access, displacement conditions and overlapping resource claims. Involuntary displacement and forced restriction of access shall be avoided. Where a restriction is unavoidable, it shall be preceded by meaningful consultation, documented agreement, fair mitigation and livelihood restoration proportionate to the impact.

Cultural heritage, labour and inclusion. Physical and intangible cultural heritage, sacred places, archaeological resources and traditional ecological knowledge shall be respected and protected, including through chance-find procedures. Workers shall receive fair treatment, safe working conditions, appropriate protective measures, a code of conduct and access to a worker grievance channel. Child labour, forced labour, exploitation, harassment and discrimination are prohibited. Women, youth, persons with disabilities, internally displaced persons, minority and marginalized communities and resource-dependent groups shall have equitable opportunities to participate in decisions and benefits.

Conflict sensitivity and stakeholder participation. All interventions shall apply a do-no-harm approach by assessing local conflict dynamics, clan and customary relations, resource competition, insecurity, displacement, elite capture and unequal distribution of conservation costs and benefits. Stakeholder engagement shall begin early, continue throughout implementation and use accessible languages and locally appropriate methods. Customary structures, including Xeer-based mechanisms, may support consultation and dispute resolution where they are consistent with national law, equality and the rights of affected persons.

Risk categories

Risk category	General characteristics	Minimum safeguard requirement
Low	Minimal, localized and readily manageable impacts.	Screening form and standard mitigation checklist.
Moderate	Limited, site-specific and generally reversible impacts.	Site-specific Environmental and Social Management Plan (ESMP).
Substantial	Significant or complex impacts requiring detailed analysis.	Targeted ESIA, social assessment or specialist plan.
High	Potentially severe, widespread, long-term or irreversible impacts.	Full ESIA and specialist studies; redesign, relocation or rejection may be required.

SCREENING AND RISK MANAGEMENT PROCESS

Every proposed NBSAP intervention shall pass through the following process before implementation. The level of due diligence shall be proportionate to the scale, location, sensitivity and potential consequences of the intervention, while cumulative, indirect and conflict-related impacts shall also be considered.

1. Screen the proposed intervention. The implementing institution, with support from the relevant safeguard focal point, shall complete the approved environmental and social screening form. Screening shall examine ecological sensitivity; threatened species and critical habitats; pollution and waste; community health and safety; labour and occupational risks; cultural heritage; land tenure and resource access; livelihood dependence; gender and social vulnerability; conflict and security conditions; cumulative impacts; and proximity to socially or ecologically sensitive areas.
2. Assign a risk category. The screening findings shall be used to classify the intervention as low, moderate, substantial or high risk. A separate flag shall be applied where an activity may restrict land, sea or natural-resource access or disrupt livelihoods. Risk classification shall consider the magnitude, geographic extent, duration, reversibility, probability and significance of impacts, as well as institutional capacity to manage them.
3. Undertake further assessment where necessary. Low-risk interventions may proceed with standard mitigation measures following approval. Moderate-risk interventions shall normally require a site-specific ESMP. Substantial- or high-risk interventions shall require a targeted or full ESIA and, where relevant, specialist assessments or plans covering biodiversity, livelihoods, cultural heritage, labour and occupational health and safety, stakeholder engagement, pollution control or other identified risks. Activities with unacceptable, irreversible or unmanageable impacts shall be redesigned, relocated or excluded.
4. Prepare mitigation measures. The responsible institution shall prepare practical measures applying the mitigation hierarchy. Each measure shall identify the risk addressed, responsible party, implementation schedule, monitoring indicator, reporting requirement and budget. Measures shall be incorporated into technical designs, work plans, procurement specifications, contracts and partnership agreements. Where access or livelihoods may be affected, mitigation shall be negotiated with affected people and may include seasonal-use arrangements, alternative access, transitional support, livelihood restoration or other proportionate measures.
5. Consult affected stakeholders. Consultation shall be undertaken early enough to influence the design and shall continue through implementation and closure. Information shall be provided in understandable language and through accessible channels. Separate or targeted consultations shall be arranged where needed to enable women, youth, persons with disabilities, IDPs, minorities and other vulnerable groups to participate safely and meaningfully.

Consultation records shall document concerns raised, responses provided, agreements reached and changes made to the proposed intervention.

6. Approve and disclose safeguard instruments. MoECC, or a formally delegated competent authority operating under MoECC oversight, shall review and approve the required safeguard instruments before financing, contracting or field implementation. Approved non-technical information shall be disclosed through suitable national, FMS, district and community channels, subject to legitimate confidentiality and security considerations. The approval decision and applicable conditions shall be recorded in the intervention file.
7. Monitor implementation and report performance. Implementing institutions shall conduct routine supervision and submit environmental and social performance reports. Monitoring shall combine field inspections, contractor records, ecological and social indicators, stakeholder feedback, incident reports and grievance data. District information shall be consolidated and verified at FMS level and analysed nationally by MoECC to support compliance decisions, adaptive management and NBSAP and CBD reporting.
8. Correct or suspend non-compliant activities. Where requirements are not met, the responsible institution shall issue a time-bound corrective action and verify its completion. Material or repeated non-compliance may result in redesign, withholding of payments, suspension of works, replacement of personnel or contractors, or cancellation of the activity. Activities presenting an imminent threat to people, biodiversity or cultural heritage shall be stopped immediately until the risk has been controlled and authorization to resume has been issued.

Implementation condition. No physical or field activity may begin until screening has been completed, the required instrument has been approved and disclosed, affected stakeholders have been consulted, and mitigation responsibilities and costs have been incorporated into the applicable work plan, budget, procurement document or contract.

Safeguard responsibilities and grievance mechanism

The MoECC shall provide national leadership and oversight for this Framework. It shall maintain and update safeguard procedures, screening forms and risk registers; review and approve safeguard instruments; coordinate capacity development; undertake compliance inspections and periodic audits; maintain national records; direct corrective action; and consolidate environmental and social performance for NBSAP and CBD reporting. MoECC shall ensure that safeguards are integrated into programme design, financing, procurement and partnership arrangements.

Implementing institutions and Federal Member States. Federal ministries, agencies and other implementing institutions shall conduct screening, prepare and finance required instruments, consult affected stakeholders, supervise contractors and partners, maintain documentation, report incidents and performance, and implement corrective measures. Each Federal Member State shall designate a safeguard focal point to coordinate subnational screening, verification, field monitoring, stakeholder engagement, grievance follow-up and reporting in collaboration with district authorities and community institutions.

Contractors, consultants and partners. All contractors, service providers, NGOs, development partners and other delivery partners shall comply with approved safeguard instruments, labour and occupational health and safety requirements, codes of conduct, community protection measures, incident-reporting procedures and corrective-action instructions. These obligations shall be binding contractual conditions. Contractors shall appoint competent personnel for environmental, social, health and safety management where the risk level requires it and shall remain responsible for the conduct of workers and subcontractors.

Incident reporting and response

Serious or potentially serious incidents shall be reported immediately through the institutional chain to the responsible implementing institution, the FMS safeguard focal point where applicable, and MoECC. Reportable incidents include significant habitat or species damage, pollution, worker or community safety events, major conflict linked to the intervention, unauthorized restriction of access, damage to cultural heritage, allegations of exploitation, abuse or harassment, and material non-compliance with approved instruments. The responsible institution shall secure the site, protect affected persons, preserve confidentiality, document and investigate the incident, identify root causes, implement corrective and preventive

measures and communicate follow-up actions to MoECC. Sensitive complaints shall be managed through confidential and survivor-centred referral arrangements.

Community-accessible grievance mechanism

A free, accessible, transparent, culturally appropriate and non-retaliatory grievance mechanism shall be available to communities and workers affected by NBSAP interventions. Complaints may be submitted orally or in writing through community, district, FMS or national channels, and anonymous or confidential submissions shall be accepted where practicable. The process shall comprise receipt and registration, acknowledgement, assessment and referral, investigation or facilitated resolution, communication of the outcome, appeal or escalation, and documented closure. Clear service standards shall be established, and grievance information shall be provided in relevant local languages and accessible formats. Community elders and Xeer-based structures may support resolution where appropriate, but shall not replace formal rights or prevent access to administrative or judicial remedies. Complaints involving exploitation, abuse or harassment shall not be handled through ordinary community mediation and shall be referred confidentially to appropriately qualified services.

Core safeguard monitoring indicators

Monitoring area	Core indicator
Screening and approval	Percentage of interventions screened before approval; percentage of required instruments approved and disclosed before implementation.
Biodiversity protection	Number and severity of incidents affecting sensitive habitats, ecosystem services or threatened species; corrective actions completed.
Land, access and livelihoods	Number of interventions involving access restrictions; percentage with documented agreements and implemented livelihood measures.
Participation and inclusion	Consultation and benefit data disaggregated by sex, age, disability and relevant vulnerability group; evidence that stakeholder inputs influenced decisions.
Labour and community safety	OHS inspections, worker/community incidents, code-of-conduct breaches and percentage of corrective actions closed.
Grievances and compliance	Grievances received, resolved, pending and average resolution time; inspections completed, non-compliance cases identified and corrective actions closed.
Incident reporting	Percentage of serious incidents promptly notified, investigated and closed with documented preventive measures.

Supporting instruments. Detailed environmental and social screening forms, site-specific assessment templates, risk registers, mitigation and monitoring plans, consultation records, incident forms and grievance logs shall be annexed to the detailed ESMF or maintained as controlled operational tools issued by MoECC. These instruments shall be applied consistently across Federal Government, Federal Member State and district implementation arrangements.

Capacity Needs Assessment

Successful implementation of Somalia's National Biodiversity Strategy and Action Plan (NBSAP II) 2026–2030 will depend on strengthening institutional, technical, and human capacities across all levels of governance. The national Capacity Gap Assessment, consultations undertaken during the NBSAP revision process, and the Capacity Development and Resource Mobilization Strategy consistently identified inadequate institutional capacity as one of the principal constraints to effective biodiversity governance. Although Somalia has made important progress through the Environmental Protection and Management Act (2024), the revision of the NBSAP, and strengthening environmental governance under the MoECC, implementation remains constrained by fragmented institutional coordination, shortages of technical expertise, weak biodiversity information systems, limited financial and human resources, and insufficient integration of biodiversity across development sectors. These capacity limitations reduce the country's ability to implement the Kunming–Montreal Global Biodiversity Framework (KM–GBF), mobilize biodiversity finance, monitor ecosystem change, and fulfil reporting obligations under the Convention on Biological Diversity (CBD).

Capacity development under the NBSAP therefore adopts a whole-of-government and whole-of-society approach that recognizes capacity as extending beyond individual technical skills to include institutional effectiveness, governance systems, partnerships, financing mechanisms, knowledge management, and enabling policy environments. Investments in capacity should be coordinated nationally while responding to the diverse implementation needs of Federal Government institutions, Federal Member States (FMS), local authorities, academia, civil society organizations, Indigenous and Local Communities, women, youth, and the private sector.

Individual Capacity

At the individual level, Somalia requires a larger cadre of skilled professionals capable of supporting biodiversity conservation, ecosystem restoration, environmental planning, and sustainable natural resource management. National consultations identified significant shortages of specialists in biodiversity assessment, taxonomy, ecology, protected-area management, ecosystem restoration, Geographic Information Systems (GIS), remote sensing, biodiversity-sensitive Environmental and Social Impact Assessment (ESIA), environmental safeguards, project preparation, biodiversity finance, monitoring, and CBD reporting. Strengthening technical competencies in these disciplines will improve evidence-based decision-making, enhance implementation of biodiversity programmes, and increase Somalia's ability to access international biodiversity financing and technical cooperation opportunities. Continuous professional development, mentoring, certification programmes, and leadership training should therefore become integral components of national capacity-building efforts.

Institutional Capacity

Institutional capacity remains uneven across ministries and agencies responsible for biodiversity management. While MoECC serves as the national focal institution for biodiversity governance, many institutions continue to face constraints relating to staffing, organizational systems, operational procedures, technical infrastructure, and inter-agency coordination. Existing institutions require strengthened planning systems, standardized operating procedures, environmental information management, financial management, procurement capacity, safeguards implementation, and performance monitoring. Institutional learning mechanisms, knowledge management systems, and internal coordination arrangements should also be strengthened to improve organizational effectiveness and accountability during NBSAP implementation.

Federal Government Capacity

At the Federal Government level, implementation of the NBSAP requires stronger coordination among MoECC and sector ministries responsible for agriculture, livestock, fisheries, forestry, water, planning, finance, education, tourism, and infrastructure. Capacity is particularly required for biodiversity mainstreaming, policy implementation, cross-sector planning, biodiversity finance, project development, monitoring, and international reporting. Establishment and operationalization of key national coordination mechanisms, including the National Biodiversity Steering Committee (NBSC), will require sustained institutional strengthening, technical assistance, and specialized training to support integrated implementation of the NBSAP and achievement of national biodiversity targets.

Federal Member State and District Capacity

Federal Member States and district authorities represent the primary implementation level for many biodiversity interventions and therefore require strengthened technical, institutional, and operational capacity. Priority needs include biodiversity planning, protected-area management, ecosystem restoration, land-use planning, biodiversity monitoring, GIS and spatial analysis, enforcement of environmental legislation, environmental safeguards, community engagement, and adaptive ecosystem management. Improved coordination between Federal Government institutions and FMS authorities will strengthen implementation consistency, improve monitoring, facilitate information sharing, and promote harmonized biodiversity management across Somalia's diverse ecological landscapes.

Community and Civil Society Capacity

Communities, civil society organizations, women, youth, pastoralists, fisherfolk, and Indigenous and Local Communities remain central actors in biodiversity conservation and sustainable natural resource management. However, consultations demonstrated that many local institutions require greater technical knowledge, organizational capacity, and access to information to participate effectively in biodiversity governance. Capacity development should therefore strengthen community-based natural resource management, biodiversity awareness, participatory monitoring, ecosystem restoration, sustainable livelihood approaches, environmental stewardship, and traditional ecological knowledge while promoting inclusive participation and equitable benefit-sharing. Particular emphasis should be placed on strengthening women's leadership, youth engagement, and local conservation initiatives that contribute directly to ecosystem resilience and sustainable development.

Enabling-System Capacity

Beyond institutional and individual competencies, successful implementation of the NBSAP depends upon strengthening the broader enabling environment for biodiversity governance. Priority investments are required to improve policy coherence, legal implementation, biodiversity financing systems, environmental data infrastructure, digital information management, research partnerships, knowledge exchange, monitoring systems, and national coordination mechanisms. Strengthening the National Biodiversity Information System, improving biodiversity inventories, expanding applied research, integrating biodiversity into national planning and budgeting processes, and enhancing collaboration with universities and regional centers of excellence will create the institutional foundation necessary for long-term implementation of the NBSAP and achievement of Somalia's commitments under the CBD and the KM-GBF.

Priority National Capacity Needs

Priority Capacity Area	Strategic Capacity Need
Policy and legal implementation	Strengthen implementation of biodiversity legislation, policy coordination, and environmental governance.
Biodiversity assessment	Improve ecological surveys, species inventories, ecosystem assessments, and applied research.
GIS and spatial planning	Expand national capacity in GIS, remote sensing, biodiversity mapping, and spatial decision-support systems.
Protected-area management	Develop competencies in protected and conserved area planning, management, and monitoring.
Ecosystem restoration	Strengthen technical expertise in restoration planning, implementation, and monitoring across terrestrial, freshwater, coastal, and marine ecosystems.

Environmental and social safeguards	Build institutional capacity to implement ESIA, safeguard frameworks, stakeholder engagement, and grievance mechanisms.
Gender and social inclusion	Strengthen gender-responsive biodiversity planning and inclusive participation of vulnerable groups.
Project development and biodiversity finance	Improve proposal preparation, project management, resource mobilization, and biodiversity finance mechanisms.
Monitoring, knowledge management and CBD reporting	Strengthen biodiversity indicators, National Biodiversity Information System (NBIS), monitoring frameworks, and national reporting to the CBD.

Capacity Development Programme

The Capacity Development Programme provides the strategic framework for strengthening the knowledge, institutional systems, technical competencies, and partnerships required for effective implementation of Somalia's National Biodiversity Strategy and Action Plan (NBSAP II) 2026–2030. The programme responds directly to the capacity gaps identified through the national assessment and stakeholder consultations and is designed to establish a coordinated, long-term approach to building national biodiversity capacity. Rather than implementing isolated training activities, the programme promotes continuous institutional learning, organizational strengthening, knowledge sharing, and technical support across all levels of biodiversity governance. Capacity development should therefore be integrated into national planning, annual budgeting processes, sector programmes, and Federal Member State implementation plans to ensure sustainability and national ownership.

Training and Professional Development

Developing a competent biodiversity workforce is fundamental to successful implementation of the NBSAP. A coordinated National Capacity Development Programme should therefore be established under the leadership of the MoECC in collaboration with Federal Member States, universities, research institutions, development partners, and regional centres of excellence. The programme should provide structured professional training in biodiversity assessment, ecological monitoring, Geographic Information Systems (GIS), remote sensing, protected-area management, ecosystem restoration, environmental and social safeguards, environmental economics, biodiversity finance, project development, monitoring and evaluation, and reporting under the Convention on Biological Diversity. Training programmes should be delivered through a combination of short professional courses, technical certification programmes, mentoring, field demonstrations, online learning, and continuous professional development to strengthen practical competencies across government institutions and partner organizations. Particular attention should be given to strengthening technical leadership among women and young professionals through scholarships, internships, mentorship programmes, and leadership development opportunities.

Institutional Strengthening

Capacity development must extend beyond individual skills to strengthen the effectiveness of institutions responsible for biodiversity governance. Institutional strengthening should focus on improving organizational structures, technical staffing, operational procedures, planning systems, financial management, procurement, information management, monitoring systems, and inter-agency coordination. MoECC should continue to strengthen its leadership role by operationalizing national coordination mechanisms, including the National Biodiversity Steering Committee, the National Biodiversity Information System, the Biodiversity Finance Unit, and other institutional arrangements proposed under the revised NBSAP. Similar institutional strengthening initiatives should be implemented within Federal Member State ministries and district authorities to improve coordination, implementation, compliance, and reporting across all levels of government.

Development of Tools, Manuals and Operational Guidelines

Effective implementation requires standardized technical guidance that promotes consistency across institutions and geographical areas. MoECC should therefore develop and periodically update operational manuals, technical guidelines, standard operating procedures, and practical toolkits covering biodiversity assessment, ecological monitoring, ecosystem restoration, protected-area management, biodiversity mainstreaming, environmental and social safeguards, gender-responsive planning, project development, financial management, and biodiversity monitoring. Standardized reporting templates, biodiversity indicators, monitoring protocols, and digital data collection tools should also be developed to strengthen implementation quality and facilitate national reporting under the Convention on Biological Diversity.

Equipment and Information Systems

Modern biodiversity management depends upon reliable scientific information and appropriate technical infrastructure. Priority investments should therefore support establishment and operationalization of the National Biodiversity Information System together with strengthening Geographic Information Systems, remote sensing capability, biodiversity databases, digital mapping platforms, environmental laboratories, ecological monitoring equipment, field survey tools, and information management systems. Investments in digital technologies should improve biodiversity inventories, habitat mapping, ecosystem monitoring, knowledge management, and evidence-based decision-making while strengthening coordination between Federal Government institutions, Federal Member States, research institutions, and development partners.

Peer Learning and Knowledge Exchange

Long-term institutional learning requires continuous exchange of knowledge and practical experience among practitioners working in biodiversity conservation and natural resource management. The Capacity Development Programme should promote regular national biodiversity forums, technical working groups, communities of practice, study visits, South-South cooperation, and collaboration with regional and international centres of excellence. These knowledge exchange platforms will facilitate dissemination of lessons learned, encourage innovation, strengthen technical cooperation among institutions, and support adaptive management throughout implementation of the NBSAP.

University and Research Partnerships

Universities and research institutions play a central role in developing the scientific knowledge and technical expertise required for effective biodiversity governance. MoECC should establish strategic partnerships with national and regional universities to strengthen biodiversity curricula, promote applied ecological research, support postgraduate education, expand biodiversity inventories, and improve access to scientific information. Collaborative research programmes should prioritize ecosystem restoration, biodiversity monitoring, protected-area management, climate resilience, ecosystem services, invasive alien species, and sustainable natural resource management. Strengthening these partnerships will also contribute to the development of a national biodiversity knowledge base capable of supporting evidence-based policy development and long-term implementation of the NBSAP.

Embedded Technical Assistance

Recognizing current institutional capacity limitations, the implementation of the NBSAP should be supported through strategically deployed technical assistance that strengthens national systems while promoting long-term institutional sustainability. Technical advisers, specialist consultants, and partner institutions should work alongside government personnel through structured mentoring, coaching, joint implementation, and institutional twinning arrangements rather than performing parallel implementation functions. Technical assistance should focus on strengthening national ownership, transferring knowledge, supporting institutional reforms, improving project preparation and resource mobilization, enhancing biodiversity monitoring systems, and building long-term institutional resilience. As national capacity increases, external technical assistance should progressively transition toward advisory and quality assurance roles while implementation responsibilities increasingly rest with national institutions.

Successful implementation of this Capacity Development Programme will require coordinated investment by the Federal Government, Federal Member States, development partners, universities, civil society organizations, and the private sector. Capacity development interventions should be prioritized according to national implementation needs, integrated within

annual work plans and budgets, and monitored using measurable performance indicators to ensure continuous institutional improvement and sustainable implementation of Somalia's NBSAP.

Capacity Development Matrix

The Capacity Development Matrix translates the strategic priorities identified in the Capacity Needs Assessment and Capacity Development Programme into an implementation framework that can guide investment, coordination, monitoring, and reporting throughout the implementation period of the National Biodiversity Strategy and Action Plan (NBSAP II) 2026–2030. The matrix identifies the principal capacity gaps, priority beneficiaries, recommended interventions, indicative implementing institutions, implementation timeframe, broad cost categories, and measurable indicators of success. The matrix is intended to guide annual work planning and resource allocation and should be reviewed periodically to reflect implementation progress, emerging priorities, and lessons learned.

Capacity Gap	Target Participants	Priority Intervention	Lead Provider	Indicative Timing	Cost Category	Success Measure
Limited policy and legal implementation capacity	MoECC, sector ministries, FMS environment ministries	Training on biodiversity policy implementation, environmental legislation, institutional coordination, and biodiversity mainstreaming	MoECC, UNDP, Regional Training Institutions	Short term	Medium	Increased institutional compliance and improved implementation of biodiversity legislation
Limited biodiversity assessment and ecological monitoring expertise	Government technical staff, universities, research institutions	Professional training in biodiversity assessment, ecological monitoring, taxonomy, and field survey methodologies	MoECC, Universities, Research Institutions	Continuous	High	Increased number of biodiversity assessments, inventories, and monitoring programmes completed
Weak GIS, remote sensing and spatial planning capacity	GIS specialists, technical officers, planners	Technical certification programmes and practical training in GIS, remote sensing, biodiversity mapping, and spatial planning	MoECC, Universities, Regional Centres of Excellence	Short to Medium term	High	Functional GIS capacity established across key implementing institutions
Limited protected-area planning and management capacity	Protected-area managers, FMS officers, district authorities	Capacity building in protected-area planning, governance, ecological monitoring, and adaptive management	MoECC, FMS Ministries, Development Partners	Medium term	Medium	Improved effectiveness of protected and conserved area management

Limited ecosystem restoration expertise	Technical officers, local authorities, community organizations	Demonstration projects, field-based restoration training, and ecosystem rehabilitation programmes	MoECC, FMS, Research Institutions	Continuous	High	Increased area of degraded ecosystems restored and monitored
Weak environmental and social safeguards implementation	Government institutions, project managers, implementing partners	Training on ESIA, safeguard frameworks, stakeholder engagement, grievance mechanisms, and environmental compliance	MoECC, UNDP, Environmental Specialists	Short term	Medium	Safeguard requirements consistently integrated into biodiversity interventions
Limited gender mainstreaming and social inclusion capacity	Government institutions, CSOs, community leaders	Capacity building on gender-responsive biodiversity planning, social inclusion, and equitable benefit-sharing	MoECC, Ministry responsible for Gender, CSOs	Continuous	Low	Increased participation of women, youth, and vulnerable groups in biodiversity programmes
Limited project preparation and programme management skills	Government institutions, FMS, research institutions	Training in project design, proposal writing, logical frameworks, procurement, financial management, and results-based management	MoECC, UNDP, Development Partners	Short term	Medium	Increased number of quality biodiversity project proposals developed and funded
Weak biodiversity finance and resource mobilization capacity	MoECC, Ministry of Finance, Biodiversity Finance Unit	Training in biodiversity finance, resource mobilization, expenditure tracking, and innovative financing mechanisms	MoECC, Ministry of Finance	Medium term	Medium	Increased domestic and international financing mobilized for biodiversity programmes
Weak biodiversity information management and monitoring systems	Technical institutions, NBIS staff, research organizations	Development and operationalization of the National Biodiversity Information System, biodiversity databases, digital monitoring tools, and reporting platforms	MoECC, NBIS Unit, Universities	Medium term	High	Operational National Biodiversity Information System supporting evidence-based decision-making

Limited monitoring, evaluation and CBD reporting capacity	MoECC, FMS, sector ministries	Training on biodiversity indicators, monitoring frameworks, data analysis, KM–GBF indicators, and CBD national reporting	MoECC, CBD Secretariat, UNDP	Continuous	Medium	Timely submission of high-quality national biodiversity reports and improved monitoring of NBSAP implementation
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The successful implementation of this Capacity Development Plan will require sustained political commitment, predictable financing, strong partnerships, and continuous coordination among the Federal Government, Federal Member States, local authorities, academia, civil society organizations, communities, the private sector, and development partners. Capacity development should be implemented as a continuous process rather than a series of stand-alone training activities, with regular monitoring to assess institutional performance, knowledge transfer, and application of newly acquired skills. As implementation progresses, lessons learned should inform periodic updates of national capacity priorities to ensure that Somalia continues to strengthen its institutional readiness for biodiversity conservation and fulfil its commitments under the Convention on Biological Diversity and the Kunming–Montreal Global Biodiversity Framework.

ANNEX 5 BIODIVERSITY-RELATED PROJECT AND INVESTMENT PORTFOLIO

Somalia is receiving a growing portfolio of international financing for biodiversity conservation, ecosystem restoration, sustainable natural resource management, nature-based solutions, climate-resilient agriculture, fisheries, and rural livelihoods. Mapping these projects within the updated National Biodiversity Strategy and Action Plan (NBSAP) is important for understanding existing biodiversity-related financial flows, identifying implementing institutions and financing partners, highlighting financing gaps, and strengthening future resource mobilization in alignment with the Kunming-Montreal Global Biodiversity Framework (KM-GBF).

No.	Project Name	Funding Source	Implementing Institution(s)	Key Biodiversity / Ecosystem Focus	Total Project Budget	Project Duration	Status
1	Enhancing Adaptation and Resilience through Nature-Based Solutions (EARNSS) in Somalia	Adaptation Fund	United Nations Environment Programme (UNEP); executing entities include Sadar Development and Resilience Institute (Sadar) and UNEP	Nature-based solutions (NbS); ecosystem-based adaptation; restoration and protection of ecosystems; reducing vulnerability to floods and droughts; strengthening ecosystem and community resilience	US\$5.0 million	5 years	Approved
2	Conserving Terrestrial and Marine Biodiversity and Restoring Ecosystem Services in Globally Relevant and Vulnerable Sites in Somalia (GEF Project ID 11414)	Global Environment Facility (GEF) Trust Fund	United Nations Development Programme (UNDP); MoECC	Terrestrial and marine biodiversity conservation; protected areas; ecosystem restoration; community-led conservation; land degradation management and ecosystem resilience	US\$18.95 million (US\$12.45 million GEF grant + US\$6.50 million co-financing)	6 years (2026–2032)	Under implementation

3	Building Urban Resilience to Climate Change and Transitioning to Green Economy in Somalia (GEF Project ID 11564)	Global Environment Facility (GEF), Least Developed Countries Fund (LDCF)	UNDP; MoECC	Urban ecosystem resilience; ecosystem-based adaptation; urban biodiversity and green spaces; climate-resilient urban planning; nature-based approaches and sustainable urban development	US\$13.93 million (US\$11.63 million GEF grant + US\$2.30 million co-financing)	60 months (5 years)	Under implementation
4	Green and Resilient Ecosystems for Somali Livelihoods (Hal-abuur)	Adaptation Fund	International Fund for Agricultural Development (IFAD); executing entity: Sadar Development and Resilience Institute, with relevant FGS institutions including MoECC.	Ecosystem restoration and resilience; sustainable natural resource management; land restoration; climate-resilient agriculture; addressing land degradation, drought and flood risks; Great Green Wall Initiative (GGWI)	US\$10.0 million	6 years (2026-2032)	Under implementation
5	Climate Resilient Agriculture in Somalia (Ugbaad) (FP246)	Green Climate Fund (GCF), with co-financing	Food and Agriculture Organization of the United Nations (FAO);	Restoration of productive landscapes; sustainable landscape management; climate-	US\$94.9 million (US\$79.71 million GCF financing + US\$15.19	7 years (2024-2031)	Under implementation

			MoECC & MoAI	resilient agriculture; sustainable water management; rangeland and pasture resilience; ecosystem services	million co-financing)		
6	Rural Livelihoods Resilience Programme (RLRP)	International Fund for Agricultural Development (IFAD), with domestic co-financing	Ministry of Agriculture and Irrigation (MoAI), Federal Government of Somalia, with relevant state-level institutions	Climate-resilient agriculture; sustainable smallholder production; community resilience; water and rural infrastructure ; climate-smart agriculture; sustainable crop and livestock production and natural resource management	US\$33.23 million (including US\$27.53 million IFAD financing)	2024-2032	Under implementation
7	Somali Sustainable Fisheries Development Project - Badmaal (BADMAAL) (P178032)	World Bank / International Development Association (IDA) and PROBLUE	Ministry of Fisheries and Blue Economy (MFBE), Federal Government of Somalia	Sustainable marine fisheries; marine and coastal ecosystem management; climate-informed fisheries management; sustainable use of marine resources; strengthened fisheries governance; resilient	US\$55.0 million (US\$50.0 million IDA + US\$5.0 million PROBLUE)	6 years	Under implementation

				coastal livelihoods			
8	Food Systems Resilience Program for Eastern and Southern Africa (Phase 3) - Somalia Food Systems Resilience Project (S-FSRP) (P177816)	World Bank / International Development Association (IDA)	Ministry of Agriculture and Irrigation (MoAI), Federal Government of Somalia, with relevant federal and Federal Member State institutions	Sustainable natural resource management; resilient agricultural landscapes; water and rangeland management; climate-smart agriculture and livestock systems; irrigation rehabilitation; sustainable land and landscape management	US\$180.0 million (including US\$30.0 million additional financing approved in 2025)	5 years	Under implementation
9	Adaptive Agriculture and Rangeland Rehabilitation Project (A2R2) – Somalia (GEF Project ID 10792)	Global Environment Facility (GEF), with additional project financing	International Fund for Agricultural Development (IFAD); Executing Agencies: Ministry of Agriculture and Irrigation, Federal Government of Somalia, and Sadar Development and Resilience Institute (SADAR)	Sustainable natural resource management; water resources and rangeland management; eco-agriculture and climate-resilient livelihoods; forest and habitat rehabilitation; land degradation neutrality; biodiversity conservation; and strengthened governance and information systems.	US\$41.46 million	21 September 2023 – 30 September 2028 (approximately 5 years)	Under implementation

Conclusion

Overall, these projects demonstrate significant ongoing investment in biodiversity conservation, ecosystem restoration, sustainable natural resource management, and nature-based resilience in Somalia. Mapping these investments within the updated NBSAP will help identify existing financing, strengthen coordination, highlight financing gaps, and support future resource mobilization for achieving Somalia's national biodiversity priorities and the KM-GBF targets.

Executive Summary

The revision of Somalia's National Biodiversity Strategy and Action Plan (NBSAP) represents a major policy milestone in strengthening national biodiversity governance and aligning Somalia's environmental management framework with global commitments under the Convention on Biological Diversity (CBD). National biodiversity strategies serve as the principal policy instruments through which countries translate international biodiversity obligations into national planning frameworks and implementation strategies.

Somalia's ecosystems; including extensive rangelands, mangrove forests, coral reefs, seagrass meadows, and coastal fisheries; play a fundamental role in sustaining livelihoods, food security, and economic resilience. Pastoralism and fisheries represent two of the most important livelihood systems in the country, and both depend heavily on healthy ecosystems and sustainable natural resource management practices. However, these ecosystems are increasingly threatened by environmental pressures including land degradation, deforestation associated with charcoal production, illegal fishing, unsustainable grazing practices, and climate-induced drought.

Recognizing these challenges, the NBSAP revision process aims to establish a comprehensive national strategy for biodiversity conservation, sustainable use of biological resources, and integration of biodiversity considerations into sectoral development policies. Achieving these objectives requires broad-based stakeholder participation. Biodiversity governance intersects with numerous sectors and institutions, including government ministries, regional authorities, private sector actors, civil society organizations, research institutions, and local communities whose livelihoods depend directly on ecosystem services.

This Stakeholder Engagement Plan (SEP) establishes a structured framework for ensuring inclusive participation throughout the NBSAP revision process. The plan outlines mechanisms for identifying stakeholders, facilitating consultations across sectors and governance levels, integrating stakeholder inputs into policy development, and maintaining transparency and accountability throughout the engagement process. By promoting participatory decision-making and inclusive dialogue, the stakeholder engagement process aims to strengthen policy legitimacy, enhance institutional coordination, and ensure that biodiversity policies reflect the priorities and knowledge of Somali stakeholders.

1. Introduction

The development and periodic revision of National Biodiversity Strategy and Action Plans are mandated under Article 6 of the Convention on Biological Diversity. Parties to the Convention are required to develop national strategies that integrate biodiversity conservation into broader economic and development planning processes. These strategies serve as key instruments for implementing international biodiversity commitments at the national level.

Globally, biodiversity loss has become one of the most pressing environmental challenges of the twenty-first century. Scientific assessments conducted by international bodies indicate that biodiversity decline is occurring at unprecedented rates due to habitat destruction, climate change, pollution, and unsustainable resource exploitation. Addressing these challenges requires coordinated action across governments, communities, and economic sectors.

In Somalia, biodiversity conservation is closely linked to socio-economic development and environmental resilience. The country's ecosystems provide essential ecosystem services including food production, water regulation, soil stabilization, and climate adaptation benefits. Pastoralist communities rely on rangeland ecosystems for livestock grazing, while coastal communities depend on marine resources for fisheries-based livelihoods.

However, biodiversity governance in Somalia faces significant challenges. Institutional capacity for environmental management remains limited, coordination among sectoral institutions is often fragmented, and environmental pressures continue to intensify due to climate variability and unsustainable resource use.

Stakeholder engagement is therefore essential for ensuring that biodiversity policies are both socially acceptable and practically implementable. Inclusive participation allows policymakers to incorporate local knowledge, build stakeholder ownership, and identify policy solutions that balance conservation objectives with livelihood needs.

2. POLICY AND INSTITUTIONAL CONTEXT

2.1 Constitutional Provisions

The Federal Republic of Somalia's 2012 Constitution provides the foundational legal basis for environmental protection and biodiversity conservation. Article 45 explicitly addresses environmental rights and responsibilities, stating that "The Federal Government shall give priority to the protection, conservation, and preservation of the environment against anything that may cause harm to natural biodiversity and the ecosystem." This constitutional mandate establishes biodiversity protection as a national priority and creates obligations for both government and citizens.

Furthermore, Article 45 establishes that "All people in the Federal Republic of Somalia have a duty to safeguard and enhance the environment," creating a shared responsibility framework that extends beyond government institutions to encompass all citizens. This provision supports the development of participatory conservation approaches and community-based natural resource management initiatives. The constitutional framework recognizes environmental protection as integral to sustainable development and establishes the legal foundation for comprehensive biodiversity legislation and policy development.

2.2 International Biodiversity Governance

Global biodiversity governance is primarily coordinated through the Convention on Biological Diversity. The Convention establishes international commitments related to biodiversity conservation, sustainable use of biological resources, and equitable sharing of benefits derived from genetic resources.

In 2022, Parties to the Convention adopted the Kunming–Montreal Global Biodiversity Framework (GBF), which establishes a set of global targets aimed at halting biodiversity loss by 2030 and restoring ecosystems worldwide. The GBF emphasizes the importance of inclusive governance systems and the participation of stakeholders including indigenous peoples, local communities, women, and youth.

Stakeholder participation is further supported by international environmental governance principles such as Principle 10 of the Rio Declaration, which emphasizes public access to environmental information and participation in decision-making processes.

2.3 National Governance Framework

Somalia's environmental governance structure operates within a federal system in which responsibilities for natural resource management are shared between federal institutions and Federal Member State governments. Ministries responsible for environment and climate change provide leadership on biodiversity policy development and coordination with international environmental agreements.

However, biodiversity governance intersects with multiple sectors including fisheries, livestock, agriculture, energy, and infrastructure development. Effective environmental governance therefore requires coordination among numerous government institutions as well as engagement with non-state actors.

3. Ecological and Socioeconomic Context

Somalia's ecosystems are characterized by significant ecological diversity. The country's terrestrial landscapes are dominated by arid and semi-arid rangelands that support pastoralist livelihoods. Coastal ecosystems include mangrove forests, coral reefs, and seagrass habitats that sustain marine biodiversity and fisheries production.

These ecosystems provide critical ecosystem services that support food security, economic development, and climate resilience. However, environmental pressures such as land degradation, deforestation, and marine resource overexploitation continue to threaten ecosystem health.

Addressing these challenges requires integrated policy approaches that combine biodiversity conservation with sustainable resource management and climate adaptation strategies.

4. Conceptual Framework for Stakeholder Engagement

Stakeholder engagement in environmental governance is supported by several theoretical frameworks. Stakeholder theory emphasizes the importance of including actors affected by policy decisions in decision-making processes. Collaborative governance models further highlight the value of structured dialogue among institutions, civil society organizations, and private sector actors in addressing complex environmental challenges.

Polycentric governance theory also provides useful insights for biodiversity governance. This framework suggests that environmental challenges are best addressed through decentralized governance systems involving multiple decision-making centers operating at different scales.

These theoretical perspectives provide the conceptual foundation for the Stakeholder Engagement Plan developed for Somalia's NBSAP revision.

5. Objectives of the Stakeholder Engagement Plan

The overall objective of the Stakeholder Engagement Plan is to ensure that the revision of Somalia's NBSAP is conducted through a transparent and participatory process that reflects the perspectives of diverse stakeholders.

Specific objectives include identifying stakeholders across sectors, facilitating consultations and dialogue among stakeholders, integrating stakeholder inputs into policy development, and ensuring transparency and accountability throughout the engagement process.

6. Methodology

The Stakeholder Engagement Plan was developed through a multi-stage methodology combining desk research, institutional analysis, and stakeholder consultations.

The first stage involved reviewing existing environmental policies, biodiversity strategies, and sectoral development plans. The second stage involved identifying stakeholders and analyzing their roles and interests in biodiversity governance. The third stage involved designing engagement mechanisms to ensure inclusive participation.

Analytical tools such as stakeholder mapping and power-interest matrices were used to identify stakeholders with significant influence or interest in biodiversity governance.

6.1 Stakeholder Identification and Mapping

The identification and mapping of stakeholders constitute a critical foundational step in the stakeholder engagement process for the revision of Somalia's National Biodiversity Strategy and Action Plan (NBSAP). Given the cross-sectoral nature of biodiversity governance, it is essential to systematically identify all relevant actors whose activities influence, or are influenced by, biodiversity conservation and sustainable resource management. Stakeholder identification for this process was conducted through a combination of institutional analysis, review of policy frameworks, and consultations with sector experts to ensure comprehensive coverage across governance levels and sectors.

Stakeholders were categorized into several broad groups, including federal government institutions, Federal Member State authorities, civil society organizations, private sector actors, academic and research institutions, and indigenous and local communities. Particular attention was given to identifying stakeholders whose livelihoods are directly dependent on biodiversity resources, such as pastoralist communities, artisanal fishers, and rural households. These groups often possess valuable traditional ecological knowledge and play a critical role in the sustainable management of natural resources. The mapping process also included development partners and international organizations supporting biodiversity conservation and environmental governance initiatives in Somalia.

The stakeholder mapping exercise further sought to capture not only the institutional roles of stakeholders but also their relationships, interactions, and influence within the broader environmental governance system. This approach recognizes that biodiversity governance is inherently multi-level and multi-actor in nature, requiring coordination among institutions operating

at different scales. By systematically identifying stakeholders and understanding their roles, the NBSAP revision process is better positioned to design engagement mechanisms that are inclusive, representative, and responsive to the diverse interests and capacities of stakeholders.

Table1: Stakeholder Mapping Matrix

Stakeholder Category	Primary Roles	Influence Level	Interest Level
Federal Government Ministries	Policy implementation, budget allocation	High	High
Federal Member State Governments	Local resource management, development	High	High
Traditional Authorities	Customary law, community welfare	Medium	Low
Agro-Pastoralist & fishing Communities	Rangeland access, food production	Medium	Medium
Women's Organizations	Gender equality, economic empowerment	Medium	Low
Environmental NGOs	Conservation outcomes, funding access	Medium	High
Private Sector	Economic opportunities, regulatory clarity	Low	High
International Partners	Global targets, funding disbursement	Medium	High
Academic Institutions	Research opportunities, capacity building	Low	High
Youth Organizations	Future opportunities, skill development	Low	Medium

6.2 Stakeholder Analysis (Power–Interest Matrix)

Following the identification and mapping of stakeholders, a structured stakeholder analysis was conducted to assess the relative influence and interest of different actors in biodiversity governance. This analysis utilized a power–interest matrix, a widely applied analytical tool in environmental governance and policy planning, which enables the categorization of stakeholders based on their level of influence over decision-making processes and their degree of interest in biodiversity outcomes. This approach provides a systematic basis for prioritizing engagement strategies and ensuring that interactions with stakeholders are tailored to their roles and capacities.

Stakeholders with high levels of influence and high levels of interest—such as federal ministries responsible for environment, fisheries, and agriculture—were identified as key decision-makers who require close collaboration throughout the NBSAP revision process. These actors play central roles in policy formulation, implementation, and enforcement, and their engagement is essential for ensuring policy coherence and institutional alignment. Stakeholders with high influence but lower direct interest, such as economic planning or infrastructure institutions, were recognized as important context-setters whose policies may indirectly affect biodiversity outcomes and therefore require targeted engagement to integrate biodiversity considerations into broader development planning.

Conversely, stakeholders with high interest but relatively lower influence—such as local communities, civil society organizations, and grassroots environmental groups—were identified as critical beneficiaries and knowledge holders whose perspectives must be actively incorporated into the NBSAP. Although these stakeholders may have limited formal authority, their participation is essential for ensuring that biodiversity policies are grounded in local realities and supported by those directly affected by environmental decisions. Stakeholders with lower levels of both influence and interest were also considered, particularly in terms of awareness-raising and capacity-building, as they may become more relevant over time as biodiversity issues gain prominence.

The application of the power-interest matrix provides a strategic framework for designing differentiated engagement approaches that reflect the diverse roles of stakeholders. By aligning engagement methods with stakeholder characteristics, the NBSAP revision process can enhance the effectiveness of consultations, promote inclusive participation, and ensure that all relevant actors contribute meaningfully to biodiversity policy development.

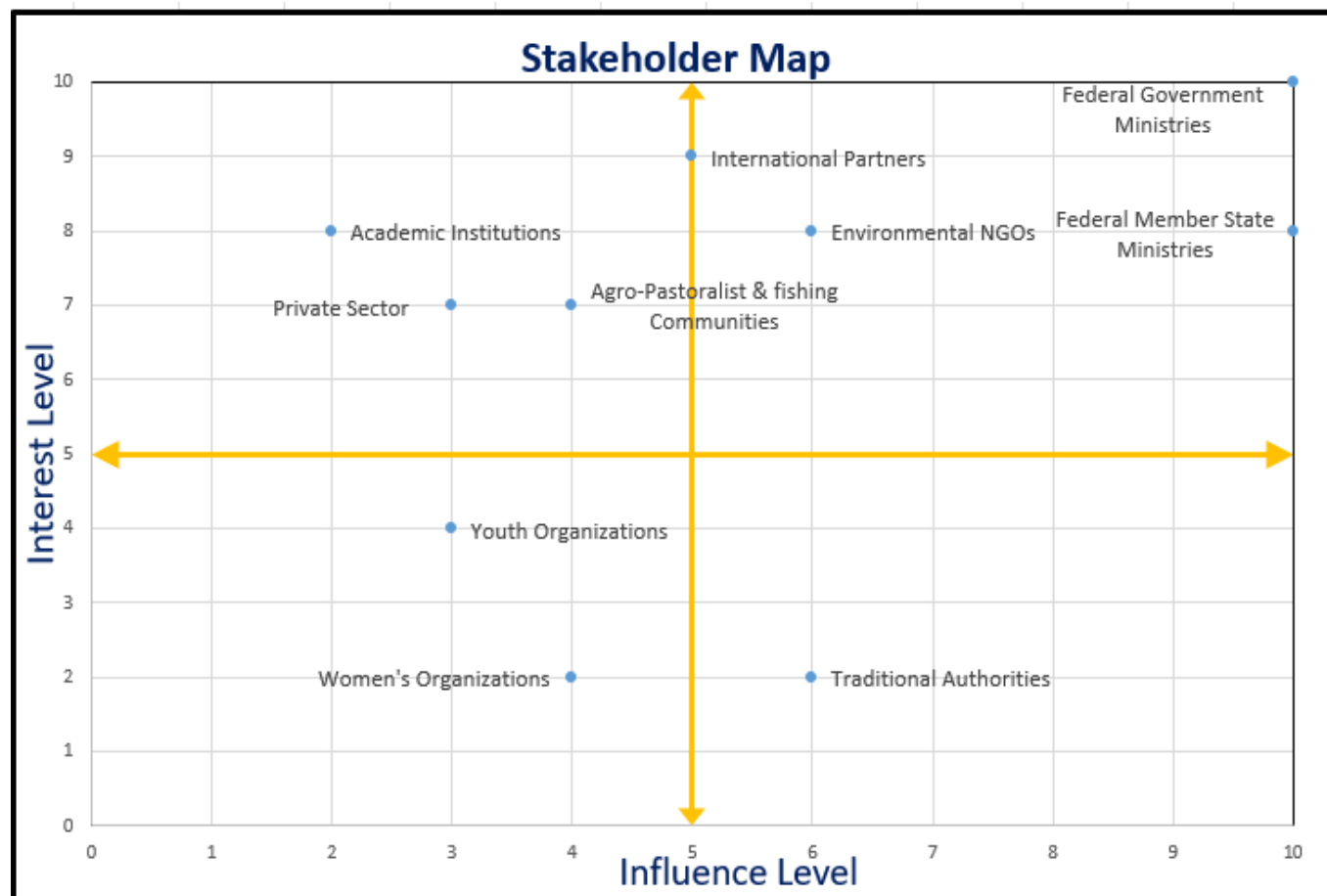


Chart 1: Power-interest Matrix

7. Stakeholder Engagement Strategy

The stakeholder engagement strategy for the revision of Somalia's National Biodiversity Strategy and Action Plan (NBSAP) is designed to ensure that participation is inclusive, structured, and responsive to the diverse institutional, socio-economic, and ecological realities of the country. Building on the stakeholder identification and analysis presented in Section 6, the strategy adopts a multi-level and multi-sectoral approach that recognizes the complexity of biodiversity governance and the need for coordinated action across different actors and governance scales. Effective stakeholder engagement is not limited to consultation alone but encompasses continuous dialogue, knowledge exchange, and collaborative decision-making processes that enhance both policy quality and implementation outcomes.

At the core of the engagement strategy is the principle of inclusivity; embracing whole-of-government whole-of-society approach that ensures all relevant stakeholder groups—including government institutions, civil society organizations, private sector actors, academic institutions, and indigenous and local communities—are able to participate meaningfully in the NBSAP revision process. In the Somali context, inclusivity is particularly important given the diversity of livelihood systems and the varying degrees of dependence on natural resources across regions. Pastoralist communities, artisanal fishers, and rural households rely directly on biodiversity for their livelihoods and therefore possess critical knowledge that must inform policy development. Ensuring their participation not only improves the relevance of biodiversity strategies but also strengthens local ownership and long-term sustainability of conservation initiatives.

The engagement strategy is structured across three interrelated levels: national, Federal Member State (FMS), and community levels. At the national level, engagement will focus on facilitating coordination among federal ministries whose mandates intersect with biodiversity governance. This includes ministries responsible for environment and climate change, fisheries and blue economy, livestock and rangelands, agriculture, planning, finance, and maritime affairs. Inter-ministerial workshops and technical working groups will be established to promote policy coherence and ensure that biodiversity considerations are integrated into sectoral development frameworks. Such coordination is essential for addressing the drivers of biodiversity loss, which often originate outside the environmental sector, including land-use change, infrastructure development, and resource extraction.

At the Federal Member State level, the engagement strategy emphasizes decentralized consultation processes that reflect regional ecological conditions and governance structures. Somalia's ecosystems vary significantly across regions, with coastal areas characterized by marine biodiversity and inland areas dominated by rangeland and dryland ecosystems. Regional consultations will therefore provide a platform for identifying location-specific challenges and opportunities, such as sustainable fisheries management in coastal states and rangeland restoration in inland regions. Engaging FMS authorities also strengthens institutional ownership of the NBSAP and supports the alignment of national biodiversity objectives with regional development priorities.

At the community level, the engagement strategy prioritizes participatory approaches that enable direct interaction with local stakeholders. Participatory rural appraisal methods, focus group discussions, and community dialogue sessions will be used to capture local knowledge and perspectives. These methods are particularly effective in contexts where formal institutional representation may be limited and where traditional knowledge systems play an important role in resource management. Research has demonstrated that community-based engagement approaches contribute to more effective and equitable environmental governance outcomes by incorporating local knowledge and fostering collective action.

In addition to these governance levels, the engagement strategy incorporates thematic engagement mechanisms designed to address specific biodiversity issues. Thematic working groups may be established to focus on areas such as marine biodiversity, terrestrial ecosystems, protected areas, biodiversity finance, and gender integration. These groups will bring together technical experts, policymakers, and practitioners to develop targeted policy recommendations and support evidence-based decision-making.

A critical component of the engagement strategy is the integration of gender-responsive and socially inclusive approaches. Women and youth represent key stakeholders in biodiversity governance, yet their participation in decision-making processes is often constrained by social and institutional barriers. The engagement strategy therefore includes targeted measures to promote the participation of women's organizations and youth networks, including dedicated consultation sessions, capacity-building initiatives, and efforts to ensure balanced representation in workshops and decision-making forums. Gender-responsive approaches not only enhance equity but also improve the effectiveness of biodiversity interventions by incorporating diverse perspectives and knowledge systems.

The strategy also recognizes the importance of engaging the private sector as a partner in biodiversity conservation. Economic activities in sectors such as fisheries, agriculture, livestock, and energy have significant impacts on ecosystems. Engaging private sector actors provides opportunities to promote sustainable practices, develop biodiversity-friendly business models, and mobilize financial resources for conservation initiatives. Incentive-based approaches, including certification schemes, green financing mechanisms, and public-private partnerships, can encourage private sector participation in biodiversity conservation.

Communication and information dissemination are integral to the stakeholder engagement strategy. Clear and consistent communication ensures that stakeholders are informed about the objectives of the NBSAP revision process, the opportunities for participation, and the outcomes of consultations. Communication channels may include official reports, policy briefs, media outreach, and digital platforms. Transparent communication enhances trust and encourages sustained stakeholder engagement throughout the process.

Finally, the engagement strategy is designed to be adaptive and iterative. Stakeholder engagement is not a one-time activity but a continuous process that evolves in response to feedback and changing circumstances. Monitoring and evaluation mechanisms will be used to assess the effectiveness of engagement activities and identify opportunities for improvement. Adaptive management approaches allow the engagement strategy to be refined over time, ensuring that it remains responsive to stakeholder needs and contributes effectively to the NBSAP revision process.

Through the implementation of this comprehensive stakeholder engagement strategy, Somalia aims to ensure that the revision of the NBSAP is inclusive, transparent, and grounded in the knowledge and priorities of diverse stakeholders. By fostering collaboration among institutions and communities, the strategy supports the development of biodiversity policies that are both scientifically sound and socially acceptable, thereby enhancing the likelihood of successful implementation and long-term sustainability.

8. Multi-Stakeholder Consultations and Dialogue

Multi-stakeholder consultations constitute a central pillar of the stakeholder engagement framework for the revision of Somalia's National Biodiversity Strategy and Action Plan. Such consultations provide structured platforms through which actors with diverse mandates, expertise, and interests can collectively deliberate on biodiversity governance priorities and contribute to policy development. In environmental governance literature, participatory consultation processes are widely recognized as essential mechanisms for improving the legitimacy, effectiveness, and sustainability of environmental policies.

In the Somali context, biodiversity governance involves a complex network of actors whose activities influence ecological outcomes. These include government ministries responsible for environmental regulation, fisheries management, livestock development, and agricultural policy; civil society organizations involved in conservation initiatives and environmental awareness; private sector actors whose economic activities interact with ecosystems; academic institutions that generate scientific knowledge; and local communities whose livelihoods depend directly on biodiversity resources. Multi-stakeholder consultations enable these diverse actors to exchange perspectives and negotiate policy priorities in a structured setting.

Consultation processes will be conducted through a combination of national workshops, regional consultation forums, thematic working groups, and community dialogue sessions. National workshops will focus on strategic policy discussions involving senior government officials, development partners, and representatives of major stakeholder groups. These workshops will provide opportunities to review draft policy proposals and discuss how biodiversity conservation objectives can be integrated into broader development planning processes.

Regional consultations will be conducted across Federal Member States to capture region-specific ecological challenges and priorities. Somalia's ecological diversity means that biodiversity governance issues vary significantly across regions. Coastal states face challenges related to marine resource management, coral reef degradation, and fisheries sustainability, while inland regions confront issues related to rangeland degradation, land-use planning, and forest conservation. Regional consultations therefore provide a mechanism for ensuring that biodiversity policies reflect local environmental conditions and governance realities.

Community-level consultations represent another critical component of the engagement process. Pastoralist communities and artisanal fishing groups often possess extensive traditional ecological knowledge derived from long-term interaction with ecosystems. Engaging these communities not only improves the quality of policy inputs but also strengthens local ownership of conservation initiatives. Research on community-based natural resource management demonstrates that policies developed through participatory processes are more likely to achieve sustainable outcomes because communities perceive them as legitimate and relevant to their livelihoods.

Multi-stakeholder consultations also provide opportunities to address potential conflicts between conservation objectives and livelihood needs. For example, proposals for marine protected areas or grazing restrictions may raise concerns among communities whose livelihoods depend on access to natural resources. Consultation processes enable stakeholders to explore trade-offs and identify solutions that balance ecological sustainability with socio-economic considerations.

Ultimately, multi-stakeholder consultations contribute to building collaborative governance networks that extend beyond the NBSAP revision process. Such networks facilitate ongoing communication among institutions and stakeholders, supporting adaptive management and continuous policy improvement.

9. Stakeholder Proposals for Somalia's NBSAP Revision (Consultation Outcomes)

9.1 Federal Government Institutions

During national-level consultations, federal ministries strongly emphasized the need for policy coherence and institutional coordination across sectors that influence biodiversity outcomes. Representatives from environment, fisheries, livestock, agriculture, planning, and finance institutions proposed the establishment of a national biodiversity coordination platform that brings together all relevant ministries under a formal inter-ministerial mechanism. Such a platform would ensure that biodiversity considerations are systematically integrated into sectoral planning processes, including fisheries management plans, rangeland policies, agricultural strategies, and infrastructure development frameworks.

Government stakeholders also proposed strengthening the legal and regulatory framework for biodiversity conservation, including the development or revision of environmental laws that address protected areas, wildlife conservation, marine resource management, and environmental impact assessment procedures. There is likely to be a strong emphasis on improving enforcement capacity, particularly in relation to illegal fishing, charcoal production, and land degradation.

Another key proposal from government actors involved enhancing data systems and national biodiversity monitoring frameworks. Ministries may highlight the need for establishing a centralized biodiversity information system that integrates ecological data, spatial mapping, and monitoring indicators aligned with GBF targets. This system would support evidence-based decision-making and reporting obligations under international agreements.

9.2 Federal Member State (FMS) Authorities

Federal Member State representatives in their turn emphasized the importance of decentralized biodiversity governance and the need for greater clarity regarding roles and responsibilities between federal and state institutions. They proposed the development of state-level biodiversity action plans aligned with the national NBSAP but tailored to regional ecological conditions and governance structures.

Regional authorities also advocated for increased financial and technical support to strengthen their capacity for environmental management. This includes training for environmental officers, development of regional monitoring systems, and support for enforcement of environmental regulations.

With respect to the marine realm of FMS, stakeholders proposed the development of marine spatial planning frameworks that regulate fishing activities, protect critical habitats such as coral reefs and mangroves, and support sustainable blue economy initiatives. In the hinterland, proposals focused on rangeland restoration programs, reforestation initiatives, and sustainable land management practices.

9.3 Civil Society Organizations (CSOs)

Civil society organizations on their take, emphasized the importance of community-based natural resource management approaches that empower local communities to participate in biodiversity conservation. CSOs propose the establishment of community conservation areas and co-management arrangements in which local communities share responsibility for managing protected areas and natural resources.

Another key proposal from civil society stakeholders involved strengthening environmental awareness and education programs. CSOs may advocate for integrating biodiversity education into school curricula, community outreach programs, and public awareness campaigns to promote sustainable environmental practices.

Civil society organizations also highlighted the need for improved transparency and accountability mechanisms in environmental governance. This could include public access to environmental information, participatory monitoring systems, and mechanisms for reporting environmental violations.

9.4 Private Sector Actors

Private sector stakeholders; including fisheries companies, livestock exporters, agricultural enterprises, and energy developers; emphasized the need for sustainable business practices that balance economic growth with environmental conservation.

In the fisheries sector, stakeholders proposed the introduction of sustainable fisheries certification schemes, improved regulation of fishing activities, and incentives for adopting environmentally responsible fishing practices. These measures could help reduce overfishing and protect marine biodiversity while supporting the long-term viability of the fisheries industry in Somalia.

Agricultural stakeholders concurrently proposed promoting climate-smart and biodiversity-friendly agricultural practices, including agroforestry, soil conservation techniques, and sustainable irrigation systems. These practices can enhance productivity while reducing environmental impacts.

Private sector actors also advocated for incentive-based approaches to biodiversity conservation, such as tax incentives, subsidies for sustainable practices, and access to green financing mechanisms. These incentives can encourage businesses to adopt environmentally responsible practices.

9.5 Academia and Research Institutions

Academic institutions underlined the importance of evidence-based policymaking and the need for strengthening research capacity in biodiversity science. Researchers suggested establishing national biodiversity research programs that focus on key ecosystems such as coral reefs, mangroves, seagrass beds, wildlife, forests, and rangelands.

Another key proposal from academic stakeholders involved developing long-term ecological monitoring systems that track changes in biodiversity and ecosystem health. Such systems are essential for evaluating the effectiveness of conservation interventions and informing adaptive management strategies.

Academia also encouraged stronger collaboration between research institutions and government agencies, including the establishment of science-policy interfaces that facilitate the translation of research findings into policy decisions.

9.6 Local Communities

Pastoralist groups, fishing communities, and rural households stressed the importance of recognizing and integrating traditional ecological knowledge into biodiversity governance. These communities often possess detailed knowledge of ecosystem dynamics, seasonal patterns, and sustainable resource management practices.

Community stakeholders pinpointed the establishment of secure land and resource tenure systems that provide legal recognition of community rights to natural resources. Such systems can incentivize sustainable resource management and reduce conflicts over land and resource use. Another important proposal from local communities was supporting alternative livelihood programs that reduce pressure on natural resources. For example, coastal communities proposed the development of sustainable fishing initiatives, while pastoralist communities advocated for diversification of income sources to reduce reliance on overgrazed rangelands.

9.7 Women's Groups and Gender Stakeholders

Women's organizations highlighted the need for gender-responsive biodiversity policies that recognize the roles of women in natural resource management. They proposed targeted interventions that support women's participation in environmental

decision-making processes and improve access to resources and training. Women's groups similarly upheld integrating gender considerations into biodiversity programs, including ensuring that conservation initiatives address the specific needs and priorities of women.

9.8 Youth and Civil Society Networks

Youth stakeholders proposed initiatives that promote youth engagement in biodiversity conservation, including environmental education programs, youth-led conservation projects, and participation in policy processes. Youth networks also emphasized the importance of leveraging digital technologies and innovation in biodiversity monitoring, awareness campaigns, and environmental data collection.

In a nutshell, The proposals emerging from stakeholder consultations highlighted the multi-dimensional nature of biodiversity governance in Somalia. Government institutions emphasized policy coordination and regulatory frameworks, civil society focused on community engagement and transparency, private sector actors highlighted sustainable economic practices, and local communities stressed the importance of livelihoods and traditional knowledge.

Integrating these diverse perspectives into the NBSAP revision process will enhance the effectiveness, legitimacy, and sustainability of biodiversity policies. Participatory engagement ensures that conservation strategies are not only scientifically sound but also socially acceptable and economically viable.

10. Transparency and Feedback Mechanisms

Transparency is a fundamental principle of effective stakeholder engagement and a critical factor in maintaining trust among participants in environmental governance processes. Without transparent decision-making procedures, stakeholder consultations risk being perceived as symbolic exercises rather than meaningful participatory mechanisms. Ensuring transparency in the NBSAP revision process therefore requires clear communication regarding how stakeholder inputs influence policy outcomes.

One of the primary transparency tools used in the engagement process will be a structured stakeholder feedback matrix. This matrix will document recommendations provided by stakeholders during consultations and indicate how these inputs have been incorporated into the revised NBSAP. The feedback matrix will categorize stakeholder inputs into three groups: recommendations that have been fully integrated into the strategy, recommendations that have been partially integrated, and recommendations that could not be incorporated due to policy constraints or conflicting priorities. Providing explanations for each decision ensures that stakeholders understand how their contributions were considered during the policy development process.

Public dissemination of consultation outcomes represents another important transparency mechanism. Consultation reports summarizing key discussion points, recommendations, and action items will be published through official communication channels. Disseminating these reports ensures that stakeholders who were unable to attend consultations can access information about the discussions and outcomes.

Digital communication platforms can also enhance transparency and accessibility. Online portals or dedicated NBSAP webpages can be used to share consultation materials, draft strategy documents, and feedback summaries. Such platforms enable broader participation and ensure that information is available to stakeholders across different regions.

Another important component of transparency is the establishment of grievance redress mechanisms. Stakeholders should have access to formal channels through which they can raise concerns regarding procedural fairness, representation, or consultation outcomes. These grievances can be reviewed by designated oversight bodies within the NBSAP coordination structure. Establishing such mechanisms enhances accountability and demonstrates institutional commitment to fair and inclusive engagement processes.

Transparent consultation processes not only strengthen trust but also improve policy outcomes. Studies on environmental governance indicate that transparent engagement processes increase stakeholder satisfaction and improve compliance with environmental regulations.

11. Gender and Social Inclusion

Gender equality and social inclusion are essential components of effective biodiversity governance. Environmental policies that fail to consider gender dynamics risk overlooking the contributions and needs of significant segments of society. Women often play central roles in natural resource management, particularly in rural and pastoralist communities where they are responsible for activities such as fuelwood collection, livestock care, food production, and water management.

Despite their important contributions, women frequently face barriers to participation in formal decision-making processes. These barriers may include limited access to education, cultural norms restricting public participation, and institutional structures that prioritize male leadership roles. Addressing these barriers is therefore essential for ensuring equitable participation in biodiversity governance.

The stakeholder engagement strategy for the NBSAP revision will incorporate gender-responsive approaches designed to promote equitable participation. These approaches include targeted consultations with women's organizations, ensuring gender balance among workshop participants, and incorporating gender perspectives into biodiversity policy discussions. Facilitators will also be trained to encourage inclusive dialogue and ensure that women's voices are heard during consultations.

Social inclusion considerations extend beyond gender to include youth, marginalized communities, and minority groups. Somalia's population is predominantly young, and youth engagement is increasingly recognized as a critical component of environmental governance. Youth networks often play active roles in environmental advocacy and awareness campaigns, and their participation in biodiversity policy discussions can bring innovative perspectives and long-term commitment to conservation efforts.

Inclusive engagement processes contribute to more equitable and sustainable environmental outcomes. Research has shown that conservation initiatives that involve diverse stakeholder groups are more likely to achieve long-term success because they incorporate multiple knowledge systems and address the needs of affected communities.

12. Monitoring and Evaluation

Monitoring and evaluation systems are essential for assessing the effectiveness of stakeholder engagement activities during the NBSAP revision process. Effective monitoring frameworks enable policymakers to track participation levels, evaluate consultation outcomes, and identify opportunities for improving engagement strategies.

Quantitative indicators used to assess stakeholder engagement may include the number of consultation workshops conducted, the geographic distribution of participants, the diversity of stakeholder groups represented, and gender balance among participants. Qualitative indicators may include stakeholder satisfaction levels, perceived transparency of consultation processes, and the extent to which stakeholder recommendations are reflected in policy outcomes.

Data collection methods for monitoring stakeholder engagement may include attendance records, participant surveys, consultation reports, and follow-up interviews. These data can be analyzed periodically to assess whether engagement objectives are being achieved.

Independent evaluations may also be conducted to provide objective assessments of engagement processes. External evaluations can identify strengths and weaknesses in consultation approaches and provide recommendations for improving future engagement initiatives.

Monitoring and evaluation findings will be integrated into the broader NBSAP revision process and used to inform adaptive management strategies. Adaptive management approaches allow policymakers to refine engagement mechanisms based on lessons learned during implementation.

13. Risk Management

Implementing stakeholder engagement activities in Somalia involves several potential risks that must be carefully managed to ensure the success of the consultation process. Security challenges in certain regions may limit the ability to conduct in-person consultations, while logistical constraints related to transportation and infrastructure may affect stakeholder participation.

Another potential risk is stakeholder fatigue, which can occur when stakeholders are repeatedly consulted without seeing tangible policy outcomes. Managing expectations and clearly communicating how consultation inputs influence policy decisions can help mitigate this risk.

Political sensitivities related to natural resource management may also affect stakeholder engagement processes. Environmental policies may intersect with economic interests or land-use conflicts, requiring careful facilitation of dialogue among stakeholders.

Mitigation strategies include flexible consultation formats that combine physical workshops with digital participation options where feasible, transparent communication regarding consultation objectives, and strong coordination among institutions responsible for the NBSAP revision process.

14. Alignment with the Kunming–Montreal Global Biodiversity Framework

The revision of Somalia’s NBSAP must align with the global targets established under the Kunming–Montreal Global Biodiversity Framework adopted by Parties to the Convention on Biological Diversity. The GBF establishes a comprehensive roadmap for biodiversity conservation through 2030 and emphasizes the integration of biodiversity considerations into national development policies.

Stakeholder engagement plays a critical role in achieving several GBF targets, particularly those related to governance, participation, and mainstreaming biodiversity across sectors. Target 21 explicitly calls for ensuring that stakeholders—including indigenous peoples, local communities, women, and youth—have access to information and participate in decision-making processes related to biodiversity governance.

Aligning the NBSAP revision process with this target requires ensuring that stakeholder engagement mechanisms are inclusive and transparent. The Stakeholder Engagement Plan therefore integrates consultation processes that allow diverse actors to contribute to biodiversity policy discussions and decision-making.

Other GBF targets also require stakeholder participation. Target 1 focuses on spatial planning and ecosystem conservation, which requires engagement with land-use planners, pastoralist communities, and conservation organizations. Target 2 addresses ecosystem restoration, which requires collaboration with local communities and private sector actors involved in land management.

Target 3 calls for the expansion of protected areas and other effective area-based conservation measures. Achieving this objective requires dialogue with communities whose livelihoods may be affected by conservation initiatives. Ensuring that these communities participate in decision-making processes helps build support for conservation measures and reduces potential conflicts.

By integrating stakeholder engagement into the NBSAP revision process, Somalia can strengthen the implementation of GBF targets and ensure that biodiversity conservation contributes to sustainable development.

15. Integration of Stakeholder Engagement into NBSAP Implementation

While the Stakeholder Engagement Plan primarily focuses on the revision process of the NBSAP, it is equally important to consider how stakeholder engagement will continue during the implementation phase of the strategy. Sustainable biodiversity governance requires ongoing collaboration between institutions, communities, and other stakeholders beyond the initial policy development process.

Institutionalizing stakeholder engagement mechanisms within environmental governance frameworks can help ensure that participation remains a continuous process rather than a one-time activity. For example, establishing national biodiversity advisory platforms or stakeholder forums can provide regular opportunities for dialogue and coordination among actors involved in biodiversity conservation.

Such platforms can also support monitoring and evaluation of NBSAP implementation by enabling stakeholders to review progress and provide feedback on policy outcomes. Regular dialogue between government institutions and stakeholders can

also facilitate adaptive management, allowing policies to be adjusted in response to changing environmental conditions or emerging challenges.

16. Conclusion

The revision of Somalia's National Biodiversity Strategy and Action Plan represents a significant opportunity to strengthen environmental governance and align national policies with global biodiversity commitments. Achieving these objectives requires meaningful engagement with a wide range of stakeholders whose activities influence biodiversity conservation and sustainable resource use.

The Stakeholder Engagement Plan presented in this report provides a comprehensive framework for ensuring inclusive participation in the NBSAP revision process. Through systematic stakeholder mapping, structured consultation mechanisms, transparent feedback processes, and continuous monitoring, the plan aims to ensure that biodiversity policies reflect the knowledge and priorities of diverse actors across Somalia.

Inclusive stakeholder engagement not only enhances the legitimacy of biodiversity policies but also improves their effectiveness and sustainability. When stakeholders are actively involved in policy development, they are more likely to support conservation initiatives and contribute to their implementation.

By implementing the engagement framework outlined in this report, Somalia can strengthen its biodiversity governance systems and contribute to the global effort to halt biodiversity loss while promoting sustainable development and community resilience.

Executive Summary

The revision of Somalia's National Biodiversity Strategy and Action Plan (NBSAP) represents a critical opportunity to align national biodiversity priorities with global commitments under the Convention on Biological Diversity and the Kunming–Montreal Global Biodiversity Framework. Central to this process is the integration of gender considerations, recognizing that biodiversity conservation and sustainable use are inherently linked to social equity, inclusive governance, and equitable access to resources and benefits.

This report provides a comprehensive framework for integrating gender into Somalia's NBSAP revision through three core components: a National Gender Analysis, a Gender Action Plan, and Gender Mainstreaming Guidelines. It is grounded in the understanding that women and men play distinct but complementary roles in biodiversity management across marine, coastal, pastoral, and agro-pastoral systems. However, persistent gender inequalities—particularly in decision-making, access to resources, and participation in formal governance structures—limit both the effectiveness of conservation efforts and the equitable distribution of benefits.

The gender analysis undertaken in this report highlights that women in Somalia are actively engaged in biodiversity-dependent livelihoods, including fisheries post-harvest activities, livestock management, natural resource use, and household-level environmental stewardship. Despite these contributions, they face structural barriers related to limited access to land and productive assets, restricted participation in decision-making platforms, and reduced access to capacity-building and financial opportunities. These challenges are further reinforced by socio-cultural norms and institutional gaps that constrain women's full participation in biodiversity governance.

At the same time, the analysis identifies significant opportunities for advancing gender-responsive biodiversity management. Women's extensive local ecological knowledge, their roles in community-based resource management, and emerging participation in small-scale enterprises provide a strong foundation for inclusive and sustainable conservation approaches. Leveraging these opportunities requires targeted interventions that address existing inequalities while strengthening institutional capacities and stakeholder engagement mechanisms.

In response, the Gender Action Plan presented in this report outlines a structured set of priority actions organized around four strategic areas: (i) inclusive governance and participation; (ii) equitable access to biodiversity resources and benefit-sharing; (iii) gender-responsive capacity development; and (iv) institutional strengthening and accountability. These actions are supported by a practical operational framework that includes clearly defined activities and indicators, enabling phased and realistic implementation within Somalia's institutional context.

Complementing the Action Plan, the Gender Mainstreaming Guidelines provide a process-oriented framework for integrating gender considerations into all stages of the NBSAP cycle. These guidelines emphasize the importance of inclusive stakeholder engagement, gender-responsive planning and implementation, capacity-building, and monitoring and evaluation systems that incorporate gender-sensitive indicators. Together, these components ensure that gender is embedded as a cross-cutting priority rather than treated as an isolated issue.

The report is further strengthened by the incorporation of stakeholder consultation outcomes, reflecting inputs from national and sub-national engagement processes. These consultations confirm the relevance of the identified gender gaps and priorities, while also providing practical recommendations for improving participation, access, and benefit-sharing. Importantly, they highlight the need for culturally appropriate and context-sensitive approaches to gender mainstreaming in Somalia, including the engagement of community leaders and local institutions.

The implementation of this framework will require strong institutional coordination, particularly by the MoECC, in collaboration with Federal Member States, sectoral ministries, civil society organizations, and development partners. It will also depend on sustained political commitment, adequate resource allocation, and continuous learning and adaptation.

In conclusion, integrating gender into Somalia's NBSAP is not only a requirement under international frameworks but also a strategic approach to enhancing the effectiveness, sustainability, and inclusivity of biodiversity conservation. By addressing

gender inequalities and leveraging the contributions of all stakeholders, Somalia can strengthen its biodiversity governance systems while advancing broader goals of sustainable development and resilience.

Section 1. Introduction and Background

1.1 Context and Rationale

Biodiversity forms the foundation of Somalia's ecological integrity, economic livelihoods, and long-term resilience to environmental change. With a coastline exceeding 3,300 km and an Exclusive Economic Zone (EEZ) of over 831,000 km², Somalia hosts diverse marine and coastal ecosystems alongside extensive rangelands and agro-pastoral systems that sustain the majority of the population. These ecosystems provide critical ecosystem services, including food provision, climate regulation, and income generation, particularly for rural and coastal communities. However, increasing pressures from overexploitation, habitat degradation, climate variability, and weak governance structures have significantly undermined the sustainability of these resources.

Somalia is currently undertaking the revision of its National Biodiversity Strategy and Action Plan (NBSAP) in alignment with the Convention on Biological Diversity and the Kunming–Montreal Global Biodiversity Framework. The revised NBSAP aims to provide a comprehensive and actionable framework for biodiversity conservation, sustainable use, and equitable benefit-sharing through 2030, while integrating cross-cutting priorities such as inclusive governance and stakeholder participation.

In the Somali context, gender dynamics significantly influence how biodiversity resources are accessed, utilized, and managed across marine, pastoral, and agro-pastoral systems. Women contribute extensively to fisheries post-harvest activities, livestock management, natural resource use, and household-level environmental stewardship. However, these contributions are not proportionately reflected in formal decision-making processes or access to resources and opportunities. This imbalance affects both social equity and the effectiveness of biodiversity governance.

Integrating gender considerations into the NBSAP revision is therefore a practical and strategic requirement. It enables more inclusive decision-making, improves the relevance of conservation interventions, and strengthens the sustainability of biodiversity outcomes. Aligning national efforts with global commitments under the GBF—particularly those related to participation and equity—requires approaches that are both technically sound and contextually appropriate.

This report contributes to this objective by providing a structured framework for incorporating gender into biodiversity planning and implementation, building on national priorities, stakeholder inputs, and established international guidance.

1.2 Objectives of the Report

The overall objective of this report is to support the integration of gender considerations into the revision and implementation of Somalia's NBSAP. It provides a structured and evidence-based framework to guide policymakers, technical experts, and stakeholders in applying gender-responsive approaches within biodiversity governance.

Specifically, the report aims to achieve four interrelated objectives. First, it conducts a national gender analysis focused on biodiversity management and policy, examining gender roles, responsibilities, and institutional dynamics across key sectors. Second, it identifies gender gaps, barriers, and opportunities in biodiversity-related decision-making, access to resources, and benefit-sharing mechanisms. Third, it develops a Gender Action Plan aligned with NBSAP goals, outlining priority actions and implementation pathways. Finally, it provides Gender Mainstreaming Guidelines to support the systematic integration of gender considerations into stakeholder consultations, capacity-building efforts, and institutional processes.

These objectives contribute to strengthening the inclusivity and effectiveness of biodiversity governance in Somalia while supporting national and international commitments under the Convention on Biological Diversity.

1.3 Scope and Structure of the Report

This report focuses on the integration of gender considerations into biodiversity management and policy within the context of Somalia's NBSAP revision. It covers key biodiversity sectors, including marine and coastal ecosystems, rangelands, forestry, and agro-pastoral systems, with particular attention to differentiated roles and contributions across these systems. The analysis

is informed by national policies, stakeholder consultations, and available data, while recognizing existing limitations in gender-disaggregated information.

Geographically, the report adopts a national perspective, while incorporating insights from Federal Member States and local contexts to reflect regional variability in gender dynamics and biodiversity use. It also considers institutional arrangements at both federal and sub-national levels, reflecting the decentralized nature of environmental governance in Somalia.

The report is structured to provide a logical progression from analysis to action. Section 2 presents the methodological framework for the gender analysis. Section 3 examines gender roles and responsibilities in biodiversity management, while Section 4 identifies key gender gaps, barriers, and opportunities. Section 5 outlines the Gender Action Plan, including both strategic priorities and operational components. Section 6 provides Gender Mainstreaming Guidelines for the NBSAP revision process. Section 7 presents stakeholder consultation outcomes, linking field-based insights to the analytical findings and proposed actions. Subsequent sections address implementation arrangements, monitoring and evaluation, and overall conclusions and recommendations.

This structure ensures coherence between analysis, stakeholder inputs, and policy recommendations, supporting the development of a practical and context-responsive NBSAP.

Section 2. Methodological Framework for the Gender Analysis

2.1 Analytical Approach and Conceptual Framework

The methodological framework for the national gender analysis is designed to generate policy-relevant, context-specific insights that can inform the integration of gender considerations into Somalia's NBSAP revision. Given the data limitations and institutional constraints within Somalia, the approach adopts a pragmatic, mixed-methods framework that combines qualitative analysis with targeted quantitative inputs, ensuring both analytical rigor and operational feasibility.

The analysis is guided by three interrelated dimensions: (i) roles and responsibilities in biodiversity management; (ii) access to and control over resources and benefits; and (iii) participation and influence in decision-making processes. These dimensions are widely recognized in gender analysis frameworks and are adapted here to reflect the ecological and socio-economic context of Somalia. Together, they provide a comprehensive lens for examining how gender dynamics shape biodiversity use, governance, and conservation outcomes.

The conceptual framework also incorporates a systems-based perspective, recognizing that gender inequalities are not isolated but are embedded within broader institutional, socio-cultural, and economic structures. This includes the interaction between formal policies and customary practices, which play a significant role in shaping access to resources and participation in decision-making in Somalia. By situating gender within this broader system, the analysis is able to identify both immediate and structural drivers of inequality.

Furthermore, the framework is aligned with international guidance on gender and biodiversity, particularly under the Convention on Biological Diversity and the Kunming–Montreal Global Biodiversity Framework, ensuring that the analysis contributes directly to national reporting obligations and global targets related to inclusive and equitable biodiversity governance.

2.2 Data Collection Methods

The data collection strategy combines primary and secondary data sources to ensure a comprehensive and triangulated understanding of gender dynamics in biodiversity management. This approach is particularly important in the Somali context, where formal datasets—especially gender-disaggregated data—are often limited or incomplete.

Primary data collection forms the core of the methodology and is based on participatory approaches that engage stakeholders across multiple levels. These include key informant interviews, focus group discussions, and national and sub-national consultation workshops. These methods are designed to capture qualitative insights into gender roles, resource use patterns, institutional dynamics, and perceived barriers and opportunities. Special attention is given to ensuring the inclusion of women,

youth, and marginalized groups, particularly those directly dependent on biodiversity resources such as small-scale fishers, pastoralists, and agro-pastoral communities.

Secondary data sources include national policy documents, sectoral strategies, previous NBSAPs, national reports submitted to the CBD, and relevant academic and grey literature. These sources provide important contextual information and support the triangulation of findings from primary data. However, due to known limitations in data availability, the methodology prioritizes contextual interpretation and stakeholder validation over purely quantitative analysis.

Data collection is structured to capture variability across ecological zones and livelihood systems, including coastal and marine areas, rangelands, and agricultural regions. This ensures that the analysis reflects the diversity of gender roles and challenges across Somalia's different socio-ecological contexts.

2.3 Stakeholder Engagement Approach

Stakeholder engagement is a central component of the methodological framework, reflecting the participatory nature of both gender analysis and the NBSAP revision process. The approach is designed to ensure that the perspectives, knowledge, and priorities of diverse stakeholder groups are systematically incorporated into the analysis.

Stakeholders are identified through a structured mapping process that includes government institutions, Federal Member State authorities, civil society organizations, academic institutions, private sector actors, and community representatives. Particular emphasis is placed on engaging women's groups, youth representatives, and marginalized communities, whose voices are often underrepresented in formal policy processes.

Engagement is conducted through a combination of consultative workshops, focus group discussions, and targeted outreach activities. These processes are designed to be inclusive and accessible, taking into account local languages, cultural norms, and logistical constraints. In some cases, separate consultation spaces may be established to enable more open participation by women and other underrepresented groups.

Importantly, stakeholder engagement is not treated as a one-time activity but as an iterative process that informs multiple stages of the analysis and validation. Findings from consultations are used to refine the gender analysis, validate identified gaps and opportunities, and inform the development of the Gender Action Plan. This approach enhances both the credibility and the practical relevance of the analysis.

2.4 Analytical Tools and Limitations

A range of analytical tools is employed to structure and interpret the data collected through the gender analysis. These tools are selected based on their relevance, simplicity, and applicability within Somalia's institutional context.

Key tools include stakeholder mapping matrices, gender roles frameworks, and access and control profiles, which are used to analyze the distribution of roles, resources, and decision-making power across different groups. In addition, simplified power-interest matrices are applied to assess stakeholder influence and engagement in biodiversity governance, with particular attention to gender disparities.

A Gender Gap Assessment Matrix is also utilized to systematically identify inequalities across key thematic areas, including participation, access to resources, capacity development, and institutional representation. This tool supports the translation of analytical findings into actionable recommendations for the Gender Action Plan.

Despite these methodological strengths, the analysis is subject to several limitations. The most significant constraint is the limited availability of gender-disaggregated data, which restricts the use of quantitative analysis in some areas. In addition, socio-cultural sensitivities may influence participation in consultations, particularly on topics related to gender roles and equality. Logistical challenges, including access to remote areas and security considerations, may also affect the breadth of data collection.

To address these limitations, the methodology emphasizes triangulation, participatory validation, and adaptive interpretation. By combining multiple data sources and engaging stakeholders throughout the process, the analysis seeks to ensure that findings are both credible and contextually grounded.

Section 3. Gender Roles and Responsibilities in Biodiversity Management in Somalia

3.1 Gender Roles in Coastal and Marine Ecosystems

In Somalia's coastal and marine ecosystems, gender roles are distinctly differentiated along the fisheries value chain, reflecting broader socio-cultural norms and economic structures. Men are predominantly engaged in offshore fishing activities, including vessel operation, navigation, and capture fisheries. They also tend to dominate formal fisheries institutions, cooperatives, and regulatory spaces. In contrast, women are primarily involved in post-harvest activities, including fish processing, drying, preservation, and local market distribution.

Women's roles are particularly significant in small-scale fisheries systems, where they contribute to value addition and local food security. In some coastal areas, women also engage in nearshore resource collection, such as shellfish and other marine invertebrates, which provide supplementary income and nutrition for households. Despite these contributions, women's participation remains largely informal and is often not recognized in policy frameworks or formal economic systems. This limits their access to financial services, infrastructure, and decision-making platforms within the fisheries sector.

The exclusion of women from higher-value segments of the fisheries value chain—such as export markets, ownership of fishing assets, and cooperative leadership—further reinforces gender disparities. Addressing these imbalances presents an opportunity to enhance both economic equity and the sustainability of marine resource use, as women's involvement in post-harvest management is closely linked to reducing waste and improving product quality.

3.2 Gender Roles in Rangeland and Pastoral Systems

Rangeland and pastoral systems form the backbone of Somalia's terrestrial ecosystems and rural livelihoods. Within these systems, gender roles are structured around the division of labor in livestock management and natural resource use. Men are typically responsible for herd mobility, grazing decisions, and engagement with livestock markets, reflecting their role in managing the economic dimensions of pastoralism.

Women, on the other hand, play a central role in livestock care, milk production, processing, and household-level resource management. They are also responsible for managing water resources, collecting firewood, and utilizing plant-based resources for food and traditional medicine. These responsibilities position women as key actors in maintaining ecosystem services and household resilience, particularly in the face of climate variability and environmental stress.

Importantly, women possess extensive local ecological knowledge related to seasonal patterns, pasture conditions, and resource availability. However, this knowledge is rarely incorporated into formal rangeland management or policy processes. Limited representation in community decision-making structures further constrains their influence on resource governance, despite their critical role in day-to-day ecosystem management.

3.3 Gender Roles in Agro-pastoral and Agricultural Systems

In agro-pastoral and agricultural systems, gender roles are similarly differentiated, with implications for biodiversity use and land management practices. Women are heavily involved in subsistence farming, seed selection, soil management, and small-scale irrigation, contributing directly to household food security and the conservation of agrobiodiversity. Their role in seed preservation and crop diversification is particularly important for maintaining resilience to climate variability.

Men are more likely to be involved in commercial agriculture, land ownership, and engagement with formal markets. This division of roles affects not only access to resources but also decision-making authority over land use and agricultural practices. Women's limited control over land and productive assets restricts their ability to invest in sustainable land management practices or participate in biodiversity-related initiatives.

These dynamics have important implications for ecosystem conservation and restoration efforts. Integrating women into agricultural extension services, climate adaptation programs, and land management initiatives can enhance both productivity and environmental sustainability, while addressing underlying gender inequalities.

3.4 Institutional Roles and Representation

At the institutional level, gender disparities are evident in the representation and participation of women in biodiversity governance structures. Government institutions, technical committees, and community-based natural resource management bodies are predominantly male-dominated, particularly in leadership positions. This imbalance limits the integration of gender perspectives into policy development, planning, and implementation.

Women's participation in formal institutions is often constrained by a combination of socio-cultural norms, limited access to education and professional opportunities, and institutional barriers that do not actively promote inclusivity. As a result, decision-making processes related to biodiversity conservation—such as protected area management, fisheries regulation, and ecosystem restoration—may not fully reflect the needs and priorities of all stakeholders.

Strengthening women's representation in these structures is essential for improving governance outcomes. This includes not only increasing numerical participation but also ensuring meaningful engagement and influence in decision-making processes.

3.5 Emerging Trends and Opportunities

Despite persistent challenges, gender roles in Somalia are evolving in response to broader socio-economic and environmental changes. Urbanization, increased access to education, and the growth of small-scale enterprises are creating new opportunities for women to engage in biodiversity-related activities and decision-making processes.

In coastal areas, for example, women are increasingly participating in small-scale fisheries enterprises and value-added processing activities. In rural areas, community-based initiatives related to natural resource management and ecosystem restoration are providing entry points for greater female participation. These trends highlight the potential for more inclusive and transformative approaches to biodiversity governance.

At the same time, there is growing recognition among policymakers and development partners of the importance of gender-responsive approaches. Aligning these emerging opportunities with structured interventions under the NBSAP can enhance both conservation effectiveness and social equity. Leveraging women's knowledge, skills, and leadership potential represents a critical pathway for strengthening biodiversity governance in Somalia.

To summarize, this analysis demonstrates that gender roles in Somalia's biodiversity sectors are both differentiated and complementary, with women and men contributing in distinct but interconnected ways. However, structural inequalities in access, participation, and representation limit the full realization of these contributions. Addressing these disparities through gender-responsive policies and interventions is essential for achieving sustainable biodiversity outcomes.

The findings presented in this section provide a critical foundation for identifying gender gaps, barriers, and opportunities in the next section, as well as for informing the development of the Gender Action Plan and mainstreaming strategies within the NBSAP framework.

Section 4. Gender Gaps, Barriers, and Opportunities in Biodiversity Governance

4.1 Participation and Decision-Making Gaps

A central challenge in Somalia's biodiversity governance is the limited participation of women in decision-making processes at community, sub-national, and national levels. While women are actively engaged in biodiversity-related livelihoods, their representation in formal governance structures—such as fisheries committees, rangeland management groups, and policy platforms—remains disproportionately low. Even where women are present, their participation is often nominal, with limited influence over decisions that affect resource management and allocation.

This imbalance reflects broader structural constraints, including limited access to education, restricted mobility in certain contexts, and socio-cultural norms that prioritize male leadership in public decision-making spaces. As a result, biodiversity policies and interventions may not fully incorporate the perspectives, knowledge, and priorities of women, leading to suboptimal outcomes in both conservation and livelihood development.

4.2 Access to Resources and Benefit-Sharing Constraints

Significant gender disparities exist in access to and control over biodiversity-related resources and benefits. Women's access to land, fisheries assets, credit, training, and market opportunities is often limited by both formal and informal systems of resource governance. In many cases, customary tenure systems favor men, restricting women's ability to own or control productive assets.

These constraints are particularly evident in fisheries and agricultural systems, where women are concentrated in lower-value segments of the value chain, such as processing and small-scale trading, while men dominate production and commercial activities. This unequal distribution of roles limits women's economic empowerment and reduces their capacity to invest in sustainable resource management practices.

In addition, benefit-sharing mechanisms associated with biodiversity initiatives—such as conservation programs or restoration projects—are not always designed to ensure equitable distribution. Without deliberate measures to include women and marginalized groups, these initiatives risk reinforcing existing inequalities rather than addressing them.

4.3 Capacity and Information Gaps

Capacity constraints represent another major barrier to gender-responsive biodiversity governance. Women often have limited access to education, technical training, and extension services related to natural resource management, climate adaptation, and sustainable livelihoods. This reduces their ability to adopt improved practices, participate in decision-making processes, and benefit from biodiversity-related opportunities.

Information gaps further exacerbate these challenges. Limited access to communication channels, training materials, and institutional networks restricts women's awareness of policies, programs, and opportunities related to biodiversity conservation. These constraints are particularly pronounced in rural and remote areas, where access to services and infrastructure is limited.

At the institutional level, capacity gaps also exist among government agencies and implementing partners, particularly in relation to gender analysis and mainstreaming. Without adequate training and tools, institutions may struggle to integrate gender considerations into biodiversity planning and implementation effectively.

4.4 Institutional and Policy Barriers

Although Somalia has made progress in developing environmental and biodiversity-related policies, the integration of gender considerations within these frameworks remains limited. Gender is often addressed implicitly rather than explicitly, resulting in a lack of clear guidance, targets, and accountability mechanisms for gender mainstreaming.

Institutional fragmentation further complicates this issue. Coordination between environmental institutions and gender-focused agencies is often weak, leading to gaps in policy coherence and implementation. In addition, the absence of gender-sensitive indicators within monitoring and evaluation systems limits the ability to track progress and assess the impact of interventions.

These institutional and policy-level barriers highlight the need for stronger integration of gender considerations into biodiversity governance frameworks, supported by clear roles, responsibilities, and coordination mechanisms.

4.5 Socio-Cultural Constraints

Socio-cultural norms play a significant role in shaping gender dynamics in Somalia and represent a critical barrier to inclusive biodiversity governance. Traditional roles and expectations often limit women's participation in public decision-making processes, access to economic opportunities, and engagement in formal institutions.

In some contexts, discussions around gender equality may be sensitive, requiring careful framing and culturally appropriate approaches. This includes engaging community leaders, religious scholars, and local institutions to foster acceptance and support for gender-responsive initiatives.

These socio-cultural constraints are not uniform across the country and may vary by region, community, and livelihood system. Understanding these variations is essential for designing interventions that are both effective and contextually appropriate.

4.6 Opportunities for Gender-Responsive Biodiversity Governance

Despite these challenges, there are significant opportunities to advance gender-responsive biodiversity governance in Somalia. Women's active involvement in natural resource management at the household and community levels provides a strong foundation for inclusive conservation approaches. Their local ecological knowledge—particularly in areas such as resource use, species behavior, and environmental change—represents a valuable asset for biodiversity planning and monitoring.

The ongoing NBSAP revision process itself presents a key opportunity to integrate gender considerations into national biodiversity strategies. Aligning this process with international frameworks such as the Kunming–Montreal Global Biodiversity Framework provides both a mandate and a framework for promoting inclusive and equitable governance.

Emerging economic opportunities in sectors such as sustainable fisheries, ecosystem restoration, and nature-based enterprises also offer pathways for enhancing women's participation and economic empowerment. Supporting women's engagement in these sectors can contribute to both conservation outcomes and livelihood improvement.

Finally, increasing recognition among policymakers and development partners of the importance of gender equality provides an enabling environment for advancing gender-responsive approaches. Leveraging this momentum requires coordinated action, institutional commitment, and the integration of gender considerations into all aspects of biodiversity governance.

In summary, The analysis presented in this section highlights the multifaceted nature of gender gaps and barriers in Somalia's biodiversity governance, spanning participation, access to resources, capacity, institutional frameworks, and socio-cultural norms. At the same time, it identifies clear opportunities for advancing more inclusive and effective approaches.

Addressing these challenges requires a combination of targeted interventions, institutional strengthening, and inclusive engagement strategies. The insights generated in this section provide a critical foundation for the development of the Gender Action Plan presented in the next section, ensuring that proposed actions are grounded in both evidence and context.

Section 5. Gender Action Plan for the NBSAP Revision

The Gender Action Plan provides a structured and operational framework for integrating gender considerations into Somalia's National Biodiversity Strategy and Action Plan (NBSAP). It translates the findings of the gender analysis into targeted, implementable actions that address inequalities in participation, access, capacity, and benefit-sharing across biodiversity sectors. The plan is designed to ensure that gender is not treated as a standalone component, but rather as a cross-cutting priority embedded throughout biodiversity governance, policy, and implementation processes.

This section is organized into two interlinked components. Section 5.1 outlines the strategic framework and priority areas, while Section 5.2 provides a detailed operationalization pathway, including activities and indicators aligned with Somalia's institutional and technical capacities. Together, these components establish a coherent approach for advancing gender-responsive biodiversity governance in line with national priorities and international commitments under the Convention on Biological Diversity and the Kunming–Montreal Global Biodiversity Framework.

5.1 Strategic Framework and Priority Areas

The strategic framework of the Gender Action Plan is anchored in four priority areas that reflect the key findings of the gender analysis and the identified gaps in biodiversity governance. These priority areas are designed to ensure that gender considerations are systematically integrated across all stages of the NBSAP cycle, from planning and consultation to implementation, monitoring, and reporting.

The first priority area focuses on inclusive governance and participation, recognizing that equitable biodiversity management requires the meaningful involvement of women and marginalized groups in decision-making processes. In Somalia, women remain underrepresented in formal governance structures related to fisheries, forestry, rangelands, and protected areas. Addressing this imbalance requires deliberate measures to enhance representation, strengthen leadership, and create enabling conditions for effective participation. This includes establishing participation benchmarks, supporting women's engagement in technical and community-level platforms, and ensuring that consultation processes are accessible and inclusive.

The second priority area addresses equitable access to biodiversity resources and benefit-sharing mechanisms. Despite their significant contributions to biodiversity-dependent livelihoods, women often face constraints in accessing productive resources such as land, fisheries assets, financial services, and markets. These disparities limit both economic opportunities and incentives for sustainable resource management. The Gender Action Plan therefore emphasizes interventions that improve access to resources, strengthen women's participation in biodiversity value chains, and promote fair and inclusive benefit-sharing arrangements.

The third priority area focuses on gender-responsive capacity development, which is essential for enabling both institutions and communities to implement gender-sensitive biodiversity interventions. Capacity gaps exist at multiple levels, including within government agencies, technical teams, and local communities. Addressing these gaps requires targeted training, awareness-raising, and the development of practical tools that support gender mainstreaming in biodiversity planning and implementation. Capacity-building efforts must also be adapted to local contexts, taking into account literacy levels, cultural norms, and existing knowledge systems.

The fourth priority area emphasizes institutional strengthening and accountability mechanisms. Sustainable gender mainstreaming requires the integration of gender considerations into institutional structures, planning processes, and monitoring systems. This includes the designation of gender focal points, the incorporation of gender indicators into the NBSAP monitoring and evaluation framework, and the establishment of coordination mechanisms between environmental and gender-focused institutions. Without such measures, gender integration risks remaining fragmented and inconsistent across sectors.

These four priority areas are mutually reinforcing and collectively contribute to achieving the objectives of GBF Targets 22 and 23, which call for inclusive, equitable, and gender-responsive biodiversity governance. Importantly, the strategic framework is designed to be adaptive and scalable, allowing Somalia to begin with achievable actions while progressively strengthening gender integration as institutional capacity and resources expand.

5.2 Operationalization of the Gender Action Plan

The operationalization of the Gender Action Plan translates strategic priorities into concrete actions, indicators, and implementation pathways. This process is structured into four interrelated components that reflect the core activities required for effective gender mainstreaming within the NBSAP revision process.

5.2.1 Conducting the National Gender Analysis

The national gender analysis serves as the foundational step for operationalizing the Gender Action Plan. Its purpose is to generate a comprehensive evidence base on gender roles, access patterns, and institutional dynamics across biodiversity sectors. In Somalia, where data availability is limited, the analysis relies on a combination of policy review, stakeholder engagement, and qualitative field-based methods.

The process begins with a review of relevant policies and institutional frameworks to assess the extent of gender integration and identify gaps. This is followed by stakeholder mapping to identify key actors, including women's groups, community

organizations, and marginalized populations. Primary data collection is conducted through interviews and focus group discussions across different ecological and livelihood zones, ensuring that the analysis captures regional and sectoral variations.

Table 1: Key Activities and Indicators

Activities	Indicators
Policy and institutional review	Number of policies reviewed; gender gaps identified
Stakeholder mapping	Stakeholder matrix completed; inclusion of women's groups
Field consultations	Number of consultations; sex-disaggregated participation data
Gender analysis reporting	Report completed and validated

5.2.2 Identification of Gender Gaps, Barriers, and Opportunities

This component focuses on identifying the structural and systemic factors that shape gender inequalities in biodiversity governance. It builds on the findings of the gender analysis to provide a clear understanding of participation gaps, resource access constraints, and institutional barriers.

The assessment includes analyzing representation in decision-making processes, evaluating access to biodiversity resources and benefits, and identifying socio-cultural and institutional constraints. At the same time, it highlights opportunities for strengthening women's roles in conservation, including participation in community-based initiatives, ecosystem restoration, and sustainable livelihood programs.

Table 2: Key Activities and Indicators

Activities	Indicators
Assess participation in governance	Baseline on women's representation established
Evaluate access to resources	Number of access gaps identified
Identify barriers	Barrier analysis report completed
Map opportunities	Priority opportunity areas identified

5.2.3 Development and Institutionalization

The third component focuses on translating analytical findings into a structured and implementable Gender Action Plan integrated within the NBSAP framework. This includes defining priority actions, developing gender-sensitive indicators, and establishing institutional mechanisms to support implementation.

A key element of this process is the development of a gender-responsive results framework, which links actions to measurable outcomes and ensures alignment with NBSAP targets. Gender-sensitive indicators are incorporated into the monitoring and evaluation system, enabling progress tracking and accountability. Institutionalization is further supported through the designation of gender focal points and the integration of gender considerations into planning and reporting processes.

Table 3: Key Activities and Indicators

Activities	Indicators
Develop results framework	Number of NBSAP targets with gender integration
Define priority actions	Gender Action Plan finalized and endorsed
Develop gender indicators	Indicators integrated into M&E framework
Institutional arrangements	Gender focal points designated

5.2.4 Integration into Consultations and Capacity-Building

The final component ensures that gender considerations are embedded in stakeholder engagement and capacity-building processes throughout the NBSAP revision and implementation. This involves designing inclusive consultation methodologies, establishing participation benchmarks, and conducting targeted outreach to underrepresented groups.

Capacity-building efforts are directed at both institutional and community levels, equipping stakeholders with the knowledge and tools required to implement gender-responsive biodiversity interventions. These efforts are critical for translating policy commitments into practical outcomes and for building long-term institutional capacity.

Table 4: Key Activities and Indicators

Activities	Indicators
Inclusive consultations	Percentage of women participating
Participation benchmarks	Adoption of gender participation targets
Targeted outreach	Increased participation of marginalized groups
Capacity-building programs	Number of trainings; participants (sex-disaggregated)

In conclusion, This Gender Action Plan establishes a comprehensive and practical framework for integrating gender considerations into Somalia's NBSAP revision. By combining a clear strategic vision with detailed operational guidance, it ensures that gender mainstreaming is both systematic and achievable within existing institutional constraints. The phased and adaptive approach allows for progressive implementation, while the inclusion of measurable indicators supports accountability and continuous learning.

Through this framework, Somalia is positioned to advance gender equality while strengthening biodiversity conservation outcomes, contributing to both national development priorities and global commitments under the Convention on Biological Diversity.

Section 6. Gender Mainstreaming Guidelines for the NBSAP Revision Process

The integration of gender considerations into Somalia's National Biodiversity Strategy and Action Plan (NBSAP) requires a systematic and practical set of guidelines to ensure that gender is effectively embedded across all stages of the policy cycle. These Gender Mainstreaming Guidelines provide a structured framework to support policymakers, technical experts, and implementing partners in translating gender commitments into operational practice. They are designed to complement the Gender Action Plan by outlining how gender should be integrated, rather than what actions should be undertaken.

These guidelines are aligned with international best practices under the Convention on Biological Diversity and the Kunming–Montreal Global Biodiversity Framework, while remaining grounded in Somalia’s institutional realities, socio-cultural context, and capacity constraints. They adopt a process-oriented approach, ensuring that gender considerations are incorporated into planning, stakeholder engagement, implementation, monitoring, and reporting.

6.1 Guiding Principles for Gender Mainstreaming

Gender mainstreaming within the NBSAP revision process should be guided by a set of core principles that ensure consistency, inclusivity, and effectiveness. These principles provide the normative foundation for all subsequent actions and interventions.

First, the principle of inclusivity and participation requires that women, men, youth, and marginalized groups are meaningfully involved in all stages of biodiversity governance. This goes beyond numerical representation to ensure that participation is substantive and influential. Inclusive processes enhance the legitimacy and effectiveness of biodiversity policies by incorporating diverse knowledge systems and perspectives.

Second, equity and non-discrimination must underpin all biodiversity-related interventions. This involves recognizing and addressing structural inequalities that limit access to resources, opportunities, and decision-making spaces. Gender-responsive approaches should aim to reduce these disparities and promote fair distribution of benefits derived from biodiversity.

Third, the principle of context sensitivity and cultural appropriateness is particularly important in Somalia. Gender mainstreaming efforts must be designed and implemented in a manner that respects local norms and values, while progressively promoting inclusivity and equity. Engaging community leaders, religious scholars, and local institutions is essential for fostering acceptance and sustainability.

Fourth, accountability and transparency are critical for ensuring that gender commitments are translated into measurable outcomes. This requires the establishment of clear indicators, reporting mechanisms, and institutional responsibilities to track progress and address gaps.

6.2 Integration of Gender into NBSAP Planning and Policy Development

Gender considerations must be systematically integrated into the planning and policy development stages of the NBSAP. This involves ensuring that gender analysis findings inform the formulation of goals, targets, and actions across all biodiversity sectors.

At the planning stage, all NBSAP components—including ecosystem conservation, restoration, sustainable use, and spatial planning—should explicitly assess gender implications. This includes identifying how proposed interventions may affect women and men differently, as well as opportunities to enhance gender equality through biodiversity actions. For example, restoration initiatives can be designed to create livelihood opportunities for women, while protected area management plans can incorporate mechanisms for inclusive governance.

Policy development processes should also ensure alignment between biodiversity objectives and national gender policies and strategies. This requires coordination between environmental institutions and gender-focused ministries or agencies, as well as the integration of gender considerations into policy language, objectives, and implementation frameworks.

6.3 Gender-Responsive Stakeholder Engagement and Consultation

Effective stakeholder engagement is central to the NBSAP revision process, and gender considerations must be embedded within all consultation activities. This requires the adoption of inclusive methodologies that ensure equitable participation and representation.

Consultation processes should be designed to capture sex-disaggregated data, enabling the assessment of participation levels and ensuring that gender disparities are identified and addressed. Targeted outreach should be conducted to engage women’s groups, youth representatives, and marginalized communities, particularly those directly dependent on biodiversity resources.

Facilitation approaches should be adapted to local contexts, including considerations of language, timing, and venue accessibility. In some cases, separate consultation sessions may be necessary to create safe spaces for women to express their views freely. These measures are essential for ensuring that consultation outcomes reflect diverse perspectives and are not dominated by a single group.

6.4 Gender Integration in Implementation and Institutional Arrangements

The effective implementation of gender-responsive biodiversity actions requires the integration of gender considerations into institutional structures and operational processes. This includes the designation of gender focal points within relevant institutions, as well as the incorporation of gender criteria into project planning, budgeting, and reporting.

Institutional coordination is particularly important in the Somalia context, where multiple actors are involved in biodiversity governance. Strengthening collaboration between the Ministry of Environment and Climate Change, Federal Member State institutions, and gender-focused agencies can enhance coherence and avoid duplication of efforts.

Implementation processes should also ensure that gender considerations are reflected in resource allocation and program design. This includes providing targeted support for women's participation in biodiversity-related activities, as well as ensuring equitable access to training, finance, and livelihood opportunities.

6.5 Gender-Responsive Capacity-Building

Capacity-building is a critical component of gender mainstreaming, enabling stakeholders to understand and apply gender-responsive approaches in biodiversity governance. Training programs should be developed for government officials, technical staff, and community stakeholders, focusing on practical tools and methodologies for integrating gender into biodiversity planning and implementation.

Capacity-building efforts should be tailored to different target groups and contexts. For example, technical training for government staff may focus on gender analysis and monitoring tools, while community-level training may emphasize inclusive resource management and benefit-sharing. Incorporating local knowledge and participatory learning approaches can enhance the effectiveness and relevance of these programs.

6.6 Monitoring, Evaluation, and Reporting

Monitoring and evaluation (M&E) systems are essential for tracking the progress of gender mainstreaming efforts within the NBSAP. Gender-sensitive indicators should be integrated into the broader M&E framework, capturing changes in participation, access, capacity, and benefit-sharing.

Data collection processes should prioritize sex-disaggregated data and, where possible, qualitative insights that capture changes in empowerment and decision-making dynamics. Regular reporting on gender outcomes should be included in national biodiversity reports and submissions to the Convention on Biological Diversity.

Learning and adaptation should also be integral to the M&E process. Lessons learned from implementation should be documented and used to refine strategies and interventions over time. This iterative approach ensures that gender mainstreaming remains responsive to evolving contexts and challenges.

Based on the above, it can be concluded that these Gender Mainstreaming Guidelines provide a practical and coherent framework for integrating gender considerations into Somalia's NBSAP revision and implementation. By embedding gender across all stages of the policy cycle—planning, consultation, implementation, and monitoring—they ensure that gender equality is not treated as an add-on, but as a fundamental component of biodiversity governance.

When applied effectively, these guidelines will enhance the inclusivity, equity, and sustainability of biodiversity interventions in Somalia, contributing to both national development objectives and global commitments under the Convention on Biological Diversity and the broader sustainable development agenda.

Section 7. Stakeholder Consultation Outcomes

7.1 Overview of the Consultation Process

As part of the NBSAP revision process, a series of stakeholder consultations were conducted at national and sub-national levels to inform and validate the gender analysis, Gender Action Plan, and Gender Mainstreaming Guidelines. These consultations were designed to ensure that the perspectives, experiences, and priorities of diverse stakeholder groups were systematically incorporated into the report, thereby enhancing its relevance, legitimacy, and practical applicability.

The consultation process included national workshops, thematic discussions, and targeted stakeholder engagements, bringing together representatives from government institutions, Federal Member States, civil society organizations, academia, private sector actors, and local communities. Particular attention was given to the inclusion of women, youth, and marginalized groups, in line with participatory principles under the Convention on Biological Diversity and global best practices on inclusive environmental governance.

These consultations were conducted in phases, allowing for iterative feedback and progressive refinement of the report. Initial consultations focused on identifying key gender roles, challenges, and priorities in biodiversity management, while subsequent sessions were used to validate findings and gather inputs on proposed actions and strategies. This phased approach ensured that stakeholder contributions were integrated throughout the analytical and planning stages of the NBSAP revision process.

7.2 Stakeholder Representation and Participation Analysis

The consultation process achieved broad representation across key stakeholder groups involved in biodiversity governance. Participants included officials from the Ministry of Environment and Climate Change and relevant sectoral ministries, representatives from Federal Member State institutions, non-governmental organizations, community-based organizations, academic experts, and private sector actors.

Efforts were made to ensure gender-balanced participation, with specific measures taken to encourage the inclusion of women and underrepresented groups. These measures included targeted outreach, facilitation approaches adapted to local contexts, and the creation of inclusive consultation environments. As a result, the consultations achieved a meaningful level of participation by women, particularly from civil society organizations and community groups.

However, disparities in participation were still observed, particularly in technical and decision-making discussions, where male representation remained dominant. This reflects broader structural challenges identified in earlier sections, including limited representation of women in formal governance and technical roles. These findings underscore the importance of strengthening inclusive participation mechanisms within the NBSAP process.

7.3 Key Findings from Consultations

7.3.1 Gender Roles and Local Knowledge

Stakeholder consultations confirmed that women and men play distinct but complementary roles in biodiversity management across Somalia's ecosystems. Participants highlighted the critical contributions of women in fisheries post-harvest activities, livestock management, natural resource use, and household-level environmental stewardship.

Women's knowledge of local ecosystems—particularly in relation to resource use, seasonal patterns, and environmental change—was consistently identified as a valuable but underutilized asset. Stakeholders emphasized the need to integrate this knowledge into biodiversity planning and decision-making processes, particularly in community-based conservation and monitoring initiatives.

7.3.2 Identified Barriers and Challenges

Consultations revealed several recurring barriers that limit women's effective participation in biodiversity governance. These include limited access to resources such as land, fishing equipment, and finance; restricted participation in decision-making platforms; and limited access to training and capacity-building opportunities.

Socio-cultural norms were also identified as a key constraint, particularly in relation to women's participation in public decision-making processes. In some cases, stakeholders noted that the framing of gender-related issues requires careful consideration to ensure cultural appropriateness and community acceptance. Institutional challenges, including limited coordination and the absence of gender-sensitive policies and indicators, were also highlighted as significant barriers.

7.3.3 Opportunities and Priority Actions

Despite these challenges, stakeholders identified a range of opportunities for advancing gender-responsive biodiversity governance. These include strengthening women's participation in community-based conservation initiatives, supporting women's engagement in biodiversity-related value chains, and enhancing access to training and financial resources.

Participants also emphasized the importance of integrating gender considerations into all aspects of the NBSAP, including planning, implementation, and monitoring. There was strong support for capacity-building initiatives targeting both institutions and communities, as well as for the development of practical tools and guidelines to support gender mainstreaming.

Importantly, stakeholders highlighted the need for context-sensitive approaches, including engagement with community leaders and religious scholars, to ensure that gender interventions are culturally appropriate and widely accepted.

7.4 Stakeholder Proposals for NBSAP Gender Integration

Stakeholders provided a number of concrete proposals to strengthen the integration of gender into the NBSAP revision process. These proposals include:

Establishing clear mechanisms to ensure women's participation in decision-making bodies and consultation platforms

Integrating gender-sensitive indicators into the NBSAP monitoring and evaluation framework

Expanding capacity-building programs targeting women and marginalized groups

Supporting women's access to biodiversity-related livelihood opportunities, including fisheries, agriculture, and restoration activities

Strengthening coordination between environmental institutions and gender-focused agencies

These proposals align closely with the Gender Action Plan presented in Section 5 and provide practical guidance for implementation. They also reinforce the importance of moving from policy commitments to concrete actions that address identified gaps and barriers.

7.5 Implications for the Gender Action Plan

The outcomes of the stakeholder consultations provide strong validation for the analytical findings and proposed actions outlined in this report. They confirm the relevance of the identified gender gaps and priorities, while also highlighting the importance of inclusive and participatory approaches to biodiversity governance.

The consultations have directly informed the development of the Gender Action Plan by ensuring that proposed interventions are grounded in stakeholder experiences and practical realities. They also underscore the need for adaptive and context-sensitive implementation, recognizing the diversity of socio-cultural and ecological conditions across Somalia.

Furthermore, the consultation outcomes highlight the importance of continuous stakeholder engagement throughout the NBSAP implementation process. Maintaining these engagement mechanisms will be critical for ensuring accountability, fostering ownership, and supporting the long-term sustainability of gender-responsive biodiversity interventions.

In conclusion, The stakeholder consultation process has played a central role in shaping and validating the gender integration framework presented in this report. By incorporating diverse perspectives and experiences, it has strengthened the relevance, legitimacy, and practicality of the proposed Gender Action Plan and Mainstreaming Guidelines.

These outcomes demonstrate that gender-responsive biodiversity governance is both a priority and a shared responsibility among stakeholders. Building on this foundation, the next section outlines the institutional arrangements and coordination mechanisms required to support effective implementation of the NBSAP.

Section 8. Implementation Arrangements and Institutional Framework

8.1 Roles and Responsibilities of Key Institutions

The effective implementation of the Gender Action Plan within Somalia's NBSAP requires clearly defined roles and responsibilities across national and sub-national institutions. Given the cross-cutting nature of gender and biodiversity, implementation must be coordinated across multiple sectors, including environment, fisheries, agriculture, livestock, planning, and gender affairs.

The Ministry of Environment and Climate Change (MoECC) will serve as the lead coordinating institution, responsible for overall oversight of NBSAP implementation and integration of gender considerations into biodiversity policy and planning. This includes ensuring alignment with national priorities and international commitments under the Convention on Biological Diversity.

Sectoral ministries—such as those responsible for fisheries, agriculture, livestock, and water resources—will play a critical role in implementing gender-responsive actions within their respective mandates. These institutions are responsible for integrating gender considerations into sectoral policies, programs, and service delivery mechanisms related to biodiversity conservation and sustainable use.

Federal Member State (FMS) institutions will be responsible for localized implementation, ensuring that national policies are adapted to regional contexts and that gender-responsive approaches are applied at the community level. This includes facilitating stakeholder engagement, supporting local governance structures, and monitoring implementation progress.

Gender-focused institutions, including ministries or departments responsible for women's affairs, will provide technical guidance on gender mainstreaming and support the integration of gender considerations into biodiversity initiatives. Collaboration between these institutions and environmental agencies is essential to ensure coherence and effectiveness.

Civil society organizations, community-based organizations, and academic institutions will also play a key role in implementation, particularly in relation to capacity-building, awareness-raising, and community-level engagement. Development partners will provide technical and financial support, helping to strengthen institutional capacity and facilitate the implementation of gender-responsive interventions.

8.2 Coordination Mechanisms

Effective coordination is essential for ensuring that gender considerations are consistently integrated across all components of the NBSAP. Given the multi-sectoral nature of biodiversity governance, coordination mechanisms must facilitate collaboration between institutions at national and sub-national levels.

A central coordination mechanism should be established within the MoECC, such as a Gender and Biodiversity Coordination Unit or focal point system, responsible for overseeing the implementation of gender-related actions within the NBSAP. This mechanism should work closely with sectoral ministries, FMS institutions, and gender-focused agencies to ensure alignment and information sharing.

Regular coordination meetings, joint planning sessions, and inter-ministerial working groups can help to strengthen collaboration and avoid duplication of efforts. These platforms should also include representation from civil society and development partners to ensure inclusivity and transparency.

At the sub-national level, coordination mechanisms should be adapted to local governance structures, ensuring that implementation is responsive to regional priorities and conditions. Strengthening vertical coordination between federal and FMS institutions is particularly important for maintaining consistency while allowing flexibility in implementation.

8.3 Partnerships and Stakeholder Engagement

Partnerships are a critical component of effective NBSAP implementation, particularly in the context of gender mainstreaming. The complexity of biodiversity governance and the cross-cutting nature of gender require collaboration across a wide range of stakeholders.

Civil society organizations and community-based organizations play a key role in facilitating engagement at the local level, particularly with women, youth, and marginalized groups. These organizations can support awareness-raising, capacity-building, and the implementation of community-based conservation initiatives.

Academic and research institutions contribute to knowledge generation, data collection, and the development of evidence-based approaches to gender-responsive biodiversity management. Their involvement is particularly important for strengthening monitoring and evaluation systems.

The private sector also has a role to play, particularly in relation to sustainable value chains, resource management, and investment in biodiversity-related enterprises. Engaging the private sector in gender-responsive approaches can enhance economic opportunities while supporting conservation objectives.

Development partners provide essential technical and financial support, enabling the implementation of programs and strengthening institutional capacity. Aligning partner support with national priorities and the Gender Action Plan is critical for ensuring coherence and sustainability.

8.4 Resource Mobilization

The implementation of gender-responsive biodiversity actions requires adequate and sustained financial resources. Resource mobilization should therefore be an integral component of the NBSAP implementation framework.

National budget allocations should incorporate gender considerations, ensuring that resources are allocated to support gender-responsive actions within biodiversity programs. This includes funding for capacity-building, stakeholder engagement, and the implementation of targeted interventions.

In addition to domestic resources, external funding from development partners, international organizations, and environmental financing mechanisms will be essential. Aligning funding proposals with global priorities—such as those under the Kunming–Montreal Global Biodiversity Framework—can enhance access to financial support.

Innovative financing mechanisms, including community-based financing models and partnerships with the private sector, may also provide opportunities to support gender-responsive biodiversity initiatives. Ensuring that resource mobilization strategies explicitly incorporate gender considerations is critical for achieving equitable and sustainable outcomes.

To summarize, The implementation of the Gender Action Plan within Somalia’s NBSAP requires a coordinated, multi-institutional approach that integrates gender considerations into all aspects of biodiversity governance. Clearly defined roles and responsibilities, effective coordination mechanisms, strong partnerships, and adequate resource mobilization are essential for ensuring successful implementation.

By strengthening institutional frameworks and fostering collaboration across stakeholders, Somalia can create an enabling environment for gender-responsive biodiversity governance. This will not only support the achievement of national biodiversity targets but also contribute to broader goals of social equity, resilience, and sustainable development.

Section 9. Monitoring, Evaluation, and Learning Framework

9.1 Gender-Sensitive Indicators

The integration of gender considerations into Somalia’s NBSAP requires a robust monitoring and evaluation (M&E) framework that captures both biodiversity outcomes and social equity dimensions. Gender-sensitive indicators are essential for tracking progress in participation, access to resources, capacity development, and benefit-sharing, ensuring that gender mainstreaming efforts are measurable and accountable.

These indicators should be embedded within the broader NBSAP results framework and aligned with national reporting obligations under the Convention on Biological Diversity. They should be designed to reflect both quantitative and qualitative changes, including shifts in representation, empowerment, and decision-making influence.

Examples of key gender-sensitive indicators include the percentage of women participating in biodiversity governance structures, the number of women benefiting from biodiversity-related livelihood initiatives, and the extent to which gender considerations are integrated into policies and programs. Where possible, indicators should be disaggregated by sex, age, and geographic location to capture disparities and inform targeted interventions.

The selection of indicators should prioritize simplicity, relevance, and feasibility, given the data limitations in Somalia. A phased approach may be adopted, starting with a core set of indicators and expanding over time as data systems and institutional capacity improve.

Table 5: Illustrative Indicators

Indicator Area	Example Indicators
Participation	% of women in biodiversity committees and decision-making bodies
Access to Resources	% of women with access to biodiversity-related resources (land, fisheries inputs, finance)
Capacity Development	Number of women trained in biodiversity management
Benefit-Sharing	% of biodiversity initiatives with equitable benefit-sharing mechanisms
Policy Integration	Number of policies/programs integrating gender considerations

9.2 Data Collection and Reporting Systems

Effective monitoring requires reliable data collection and reporting systems that can capture gender-related information across biodiversity sectors. In Somalia, where data systems are still developing, it is important to adopt practical and scalable approaches to data collection.

Data should be collected through a combination of administrative records, project reports, surveys, and stakeholder consultations. Integrating gender indicators into existing data collection systems—such as those used by sectoral ministries and development programs—can enhance efficiency and avoid duplication.

A key priority is the systematic collection of sex-disaggregated data, which enables the identification of gender disparities and supports evidence-based decision-making. Where quantitative data is limited, qualitative methods—such as case studies and stakeholder feedback—can provide valuable insights into changes in participation, empowerment, and governance dynamics.

Reporting should be conducted on a regular basis, aligned with national planning cycles and international reporting requirements. This includes contributions to national reports submitted to the Convention on Biological Diversity, as well as internal progress reports within the NBSAP implementation framework. Clear reporting templates and guidelines should be developed to ensure consistency and comparability of data across institutions.

9.3 Learning and Adaptive Management

Monitoring and evaluation should not be limited to tracking progress but should also support learning and adaptive management. This involves using data and stakeholder feedback to refine strategies, improve interventions, and respond to emerging challenges and opportunities.

Learning processes should include the documentation of good practices, lessons learned, and case studies related to gender-responsive biodiversity governance. These insights can inform future policy development, capacity-building programs, and implementation strategies.

Regular review processes—such as annual or mid-term evaluations—should be established to assess progress and identify areas for improvement. These reviews should involve multiple stakeholders, including government institutions, civil society, and community representatives, ensuring that diverse perspectives are incorporated into decision-making.

Adaptive management is particularly important in the Somali context, where environmental, social, and institutional conditions are dynamic. By adopting a flexible and iterative approach, the NBSAP can remain responsive to changing circumstances while maintaining its strategic objectives.

In summary, The Monitoring, Evaluation, and Learning Framework provides a critical mechanism for ensuring that gender mainstreaming efforts within Somalia's NBSAP are effective, accountable, and responsive. By integrating gender-sensitive indicators, strengthening data collection and reporting systems, and promoting continuous learning, this framework supports the achievement of both biodiversity and social equity objectives.

The successful implementation of this framework will depend on institutional commitment, capacity development, and coordination across stakeholders. When effectively applied, it will enable Somalia to track progress, demonstrate impact, and continuously improve its approach to gender-responsive biodiversity governance, in alignment with global commitments under the Convention on Biological Diversity and the Kunming–Montreal Global Biodiversity Framework.

Section 10. Conclusion and Policy Recommendations

10.1 Conclusion

The integration of gender considerations into Somalia's National Biodiversity Strategy and Action Plan (NBSAP) represents both a strategic necessity and an opportunity to strengthen biodiversity governance, social equity, and sustainable development outcomes. This report has demonstrated that gender dynamics are deeply embedded in the ways biodiversity resources are accessed, managed, and governed across Somalia's marine, coastal, pastoral, and agro-pastoral systems.

The gender analysis highlights that women play critical but often underrecognized roles in biodiversity-dependent livelihoods, including fisheries post-harvest activities, livestock management, natural resource use, and household-level environmental stewardship. Despite these contributions, structural inequalities persist in access to resources, participation in decision-making, and access to capacity-building opportunities. These disparities not only limit gender equity but also reduce the effectiveness and sustainability of biodiversity conservation efforts.

The identification of gender gaps, barriers, and opportunities provides a clear evidence base for action. Key challenges include limited representation of women in governance structures, unequal access to productive resources, capacity and information gaps, and socio-cultural constraints. At the same time, significant opportunities exist to leverage women's knowledge, strengthen inclusive governance, and promote equitable participation in biodiversity-related value chains and conservation initiatives.

In response, this report has developed a comprehensive Gender Action Plan and Gender Mainstreaming Guidelines tailored to Somalia's context. These frameworks provide both strategic direction and practical guidance for integrating gender into biodiversity planning and implementation. The inclusion of stakeholder consultation outcomes further strengthens the relevance and legitimacy of the proposed actions, ensuring that they are grounded in local realities and stakeholder priorities.

The successful implementation of these frameworks will require strong institutional coordination, sustained political commitment, and adequate resource allocation. It will also depend on the active participation of all stakeholders, including government institutions, Federal Member States, civil society organizations, communities, and development partners.

Ultimately, integrating gender into the NBSAP is not only about addressing inequalities but also about enhancing the overall effectiveness of biodiversity governance. By ensuring that all stakeholders are included and empowered, Somalia can achieve more sustainable, resilient, and equitable outcomes in line with its commitments under the Convention on Biological Diversity and the Kunming–Montreal Global Biodiversity Framework.

10.2 Policy Recommendations

Building on the findings of this report, the following policy recommendations are proposed to support the effective integration of gender into Somalia’s NBSAP revision and implementation:

10.2.1 Strengthen Gender Integration in Biodiversity Policies and Planning

Gender considerations should be explicitly incorporated into all biodiversity-related policies, strategies, and action plans. This includes aligning biodiversity objectives with national gender policies and ensuring that gender-responsive language, targets, and indicators are integrated into the NBSAP framework.

10.2.2 Enhance Women’s Participation in Decision-Making

Deliberate measures should be taken to increase the representation and influence of women in biodiversity governance structures at all levels. This includes establishing participation benchmarks, supporting women’s leadership development, and creating enabling environments for meaningful engagement in policy and community-level decision-making processes.

10.2.3 Improve Access to Resources and Benefit-Sharing Mechanisms

Policies and programs should address gender disparities in access to land, fisheries resources, financial services, training, and market opportunities. Targeted interventions should be developed to support women’s participation in biodiversity-related value chains and ensure equitable benefit-sharing in conservation and restoration initiatives.

10.2.4 Invest in Gender-Responsive Capacity-Building

Capacity-building programs should be designed and implemented to enhance the knowledge and skills of both institutional actors and community stakeholders. These programs should focus on gender analysis, inclusive governance, sustainable resource management, and climate resilience, and should be tailored to local contexts and needs.

10.2.5 Strengthen Institutional Coordination and Accountability

Clear roles and responsibilities should be established for integrating gender into biodiversity governance, including the designation of gender focal points within relevant institutions. Coordination mechanisms between environmental and gender-focused agencies should be strengthened, and gender-sensitive indicators should be incorporated into monitoring and evaluation systems.

10.2.6 Promote Inclusive Stakeholder Engagement

Stakeholder engagement processes should be designed to ensure inclusive participation, with targeted outreach to women, youth, and marginalized groups. Consultation methodologies should be adapted to local contexts, and mechanisms should be established to ensure that stakeholder inputs are systematically incorporated into decision-making processes.

10.2.7 Mobilize Resources for Gender-Responsive Biodiversity Actions

Adequate financial resources should be allocated to support the implementation of gender-responsive biodiversity initiatives. This includes integrating gender considerations into national budgets, leveraging external funding from development partners, and exploring innovative financing mechanisms aligned with global biodiversity priorities.

10.2.8 Strengthen Monitoring, Evaluation, and Learning Systems

Gender-sensitive indicators should be integrated into the NBSAP monitoring and evaluation framework, supported by reliable data collection and reporting systems. Regular review processes should be established to assess progress, document lessons learned, and inform adaptive management.

In a nutshell, these policy recommendations provide a practical roadmap for advancing gender-responsive biodiversity governance in Somalia. Their implementation will contribute to more inclusive, effective, and sustainable conservation outcomes, while supporting broader goals of social equity and national development.

By embedding gender considerations into the NBSAP and ensuring coordinated action across stakeholders, Somalia can strengthen its biodiversity governance systems in alignment with national priorities and global commitments².

Annex 1 – Gender Gap Assessment Matrix

This matrix provides a systematic assessment of gender gaps, barriers, and opportunities across Somalia's key biodiversity sectors. It is structured around five thematic areas derived from the National Gender Analysis (Sections 3 and 4 of the main report) and is intended to serve as a practical reference for NBSAP planning and implementation.

No.	Sector / Area	Dimension	Gender Gaps	Key Barriers	Opportunities
1	Coastal & Marine Ecosystems	Participation & Decision-Making	Women absent from fisheries committees, cooperatives, and regulatory bodies; decisions dominated by male vessel owners	Socio-cultural norms limiting women in public forums; limited mobility; lack of formal membership in fisheries associations	Establish gender quotas in fisheries governance bodies; train women leaders in coastal communities
		Access to Resources & Assets	Women lack ownership of boats, gear, and cold storage; excluded from formal credit for fisheries inputs	Customary norms on asset ownership; limited collateral for financial services; male-controlled cooperatives	Develop women-targeted micro-credit schemes for post-harvest equipment; pilot community asset-sharing models
		Value Chain Participation	Women concentrated in low-value post-harvest roles (drying, processing); excluded from export and high-value markets	Limited market linkages; inadequate infrastructure (cold chain, transport); low business skills	Support women's value-addition enterprises; link female processors to certified buyers and export platforms
		Knowledge & Capacity	Women's traditional knowledge of nearshore species and seasonal patterns not captured in fisheries data	No formal mechanism to document or validate traditional ecological knowledge (TEK); low literacy rates	Integrate TEK into stock assessments and co-management plans; provide literacy-linked fisheries training
2	Rangelands & Pastoral Systems	Participation & Decision-Making	Rangeland governance (e.g. Xeer customary councils) almost exclusively male; women's grazing priorities ignored	Patriarchal customary institutions; women's decisions confined to domestic sphere; restricted mobility during migration	Support women's advisory sub-groups within customary councils; document and advocate for recognition of women's rangeland roles

		Access to Resources & Assets	Women rarely own livestock formally; access to communal water points restricted during conflict or drought	Land and livestock inheritance norms favor men; weak land tenure documentation for women	Promote joint livestock registration; support women's water-user associations; integrate gender in rangeland tenure reform
		Livelihood & Food Security	Women bear disproportionate burden during drought (fodder, water, child nutrition) without commensurate support	Humanitarian and livelihood programs not designed around women's dual roles (productive + reproductive)	Gender-responsive drought response; female extension agents for pastoral households; diversified income programs for women
		Knowledge & Capacity	Women's knowledge of medicinal plants, soil indicators, and pasture cycles underutilized in rangeland management	Exclusion from technical rangeland workshops; training materials not adapted for low-literacy audiences	Facilitate women-led community mapping of rangeland resources; develop pictorial training materials
3	Agro-pastoral & Agricultural Systems	Participation & Decision-Making	Women perform most subsistence farming tasks but are excluded from agricultural extension advisory groups and cooperatives	Agricultural institutions assume male farmer as default; women's work treated as secondary	Mandate gender balance in agricultural cooperatives; deploy female extension workers to agro-pastoral zones
		Access to Land & Inputs	Women have limited secure tenure over agricultural land; minimal access to improved seeds, fertilizers, irrigation	Land allocated through male-dominated customary systems; input subsidies reach male household heads	Pilot community-based land registration with gender criteria; target input vouchers directly to women farmers
		Agrobiodiversity Conservation	Women are primary seed keepers but seed systems and gene banks do not formally recognize or compensate their role	Absence of benefit-sharing policy for traditional seed stewards; seed banks inaccessible or distant	Establish community seed banks co-managed by women; include women seed stewards in national ABS frameworks
		Climate Adaptation	Women's adaptive strategies (crop diversification, soil conservation) not incorporated into national adaptation plans	Climate-smart agriculture programs gender-blind; women rarely in farmer field schools	Integrate women's adaptation practices into NBSAP climate targets; expand female participation in climate-smart programs
4	Biodiversity Governance & Institutions	Representation	Women make up a minority of biodiversity governance bodies at federal, FMS, and community levels	Institutional culture favouring male leadership; no gender targets in environmental sector human resources	Set minimum 30% women's representation in all biodiversity governance structures; implement gender-responsive HR policies in MoECC
		Policy & Legal Frameworks	Gender considerations implicit or absent in existing environmental	Low priority given to gender in environmental legislation; limited coordination between	Conduct gender audits of all biodiversity-related legislation; formalize inter-ministerial

			laws, NBSAP drafts, and sectoral policies	MoECC and Ministry of Women's Affairs	coordination on gender and environment
		Monitoring & Data	Absence of sex-disaggregated data in fisheries, livestock, and land management datasets	Data systems not designed to capture gender variables; limited capacity for gender-sensitive data analysis	Integrate sex-disaggregated variables into all national biodiversity surveys; build MoECC staff capacity in gender data analysis
5	Civil Society & Local Communities	Women's Organizations	Women's NGOs and CBOs engaged in environment work but lack access to biodiversity program funding and technical support	Donor and government biodiversity programs do not systematically partner with women's organizations	Allocate dedicated funding streams for women-led environmental organizations; include them in NBSAP implementation partnerships
		Youth & Marginalized Groups	Youth (especially girls) and internally displaced persons largely absent from biodiversity consultations	Consultations held in formats and locations inaccessible to youth and mobile communities	Design youth-friendly and mobile consultation formats; partner with youth networks for awareness and monitoring

Note: This matrix is based on findings from stakeholder consultations, key informant interviews, and secondary data reviewed during the NBSAP revision process (2025–2026). Gaps and opportunities should be updated as new data becomes available.

Annex 2 – Gender Action Plan

This table operationalizes the four strategic priority areas of the Gender Action Plan (Section 5 of the main report). It specifies key activities, measurable indicators, implementation timelines, lead institutions, and partners for each action. It is designed to guide MoECC, Federal Member States, and implementing partners in translating policy commitments into concrete interventions.

Priority Areas: PA 1: Inclusive Governance | PA 2: Access & Benefit-Sharing | PA 3: Capacity Development | PA 4: Institutional Strengthening

Priority Area	Strategic Objective	Key Activity	Indicator	Timeline	Lead Institution	Partners
PA 1: Inclusive Governance & Participation	Increase women's representation in biodiversity decision-making	Establish gender participation benchmarks (minimum 30%) for all NBSAP consultations, technical committees, and governance bodies	% women in biodiversity committees (baseline + target)	2026	MoECC	FMS Ministries, UN Women, CSOs
	Increase women's representation in biodiversity decision-making	Conduct targeted outreach and capacity-building for women leaders in fisheries, rangeland, and agriculture governance	No. of women trained in governance and leadership roles	2026–27	MoECC, FMS	IUCN, NGOs, Community Leaders
	Ensure inclusive consultation processes	Design and implement gender-sensitive consultation protocols with separate sessions where needed, local language materials, and accessible venues	% consultations meeting gender-inclusion criteria	2026	MoECC	UNDP, FAO, Women's CSOs

	Ensure inclusive consultation processes	Integrate sex-disaggregated participation tracking into all NBSAP consultation records	Participation data disaggregated by sex in 100% of consultations	2026	MoECC	UN Women, UNDP
	Engage community and traditional leaders	Facilitate dialogue sessions with community leaders, religious scholars, and customary institutions to build acceptance of women's participation	No. of community leader dialogues held; documented commitments	2026–27	FMS Ministries	MoECC, Local NGOs, NAGAAD
PA 2: Equitable Access & Benefit-Sharing	Improve women's access to biodiversity resources	Conduct gender audit of land and fisheries tenure frameworks; develop recommendations for equitable access provisions	Gender audit report completed and shared with MoECC	2026	MoECC + Ministry of Agriculture	FAO, World Bank, Land tenure experts
	Improve women's access to biodiversity resources	Pilot women-targeted micro-credit and asset-sharing schemes linked to fisheries and agro-pastoral biodiversity enterprises	No. of women accessing biodiversity-linked financial services	2027	Ministry of Fisheries, MoA	IFAD, SIDA, Women's cooperatives
	Strengthen women's roles in biodiversity value chains	Map gender gaps across key biodiversity value chains (fisheries, rangelands, agrobiodiversity) and identify entry points for women's economic empowerment	Value chain gender analysis completed across 3 sectors	2026	Ministry of Fisheries, MoA	FAO, IFC, Women's business associations
	Strengthen women's roles in biodiversity value chains	Support women's entry into higher-value segments of fisheries and agro-pastoral value chains through training, infrastructure, and market linkage programs	No. of women participating in value-added biodiversity enterprises	2027–28	Ministry of Fisheries, MoA	UNDP, GEF, Private sector
	Ensure equitable benefit-sharing from biodiversity initiatives	Develop and institutionalize gender-responsive benefit-sharing guidelines for all NBSAP-linked conservation and restoration programs	% NBSAP programs with documented gender-equitable benefit-sharing mechanisms	2027	MoECC	CBD Secretariat, UNDP, UN Women
	Ensure equitable benefit-sharing from biodiversity initiatives	Recognize and compensate women's seed stewardship roles under national access and benefit-sharing (ABS) frameworks	No. of women seed stewards registered and recognized in ABS system	2027–28	MoECC, MoA	FAO, Bioversity International
PA 3: Gender-Responsive Capacity Development	Build institutional capacity for gender mainstreaming	Develop and deliver gender and biodiversity training curriculum for MoECC, FMS, and sectoral ministry staff	No. of government staff trained (disaggregated by sex and level)	2026	MoECC	UNDP, UN Women, IUCN
	Build institutional capacity for	Produce practical gender mainstreaming tools and reference guides tailored to	Tools developed and disseminated	2026	MoECC	UNDP, FAO, CBD Secretariat

	gender mainstreaming	biodiversity planning in the Somali context	to all relevant institutions			
	Strengthen community-level capacity	Conduct community-level trainings on gender-responsive resource management, targeting women and youth in coastal, pastoral, and agricultural communities	No. of community members trained (sex-disaggregated)	2026–27	FMS Ministries	Local NGOs, CBOs, NAGAAD, SWECC
	Strengthen community-level capacity	Document and validate women's traditional ecological knowledge (TEK) in fisheries, rangelands, and agrobiodiversity through participatory research	No. of TEK documentation initiatives; integration into NBSAP monitoring	2027	MoECC + Universities	UNEP, FAO, Academic institutions
	Support women in higher education and research	Establish gender scholarship and mentorship programs in environmental science, marine biology, and natural resource management at national universities	No. of women enrolled in biodiversity-related tertiary programs	2027–28	Ministry of Education	MoECC, UNDP, donor partners
PA 4: Institutional Strengthening & Accountability	Embed gender in NBSAP institutional structures	Designate gender focal points in MoECC and all FMS environment ministries; define roles and responsibilities	Gender focal points designated and operational in all institutions	2026	MoECC	UN Women, Ministry of Women's Affairs
	Embed gender in NBSAP institutional structures	Establish formal coordination mechanism between MoECC and Ministry of Women's Affairs for joint biodiversity and gender programming	MoU or coordination framework signed and operational	2026	MoECC + Ministry of Women's Affairs	UNDP, UN Women
	Align biodiversity policy with gender frameworks	Conduct gender audits of key biodiversity-related policies (fisheries law, rangeland policy, NBSAP drafts) and integrate gender-responsive provisions	No. of policies revised with gender-responsive language and targets	2026–27	MoECC, Legal Unit	IUCN, UN Women, CBD Secretariat
	Integrate gender into M&E and reporting	Incorporate gender-sensitive indicators into the NBSAP results framework; develop sex-disaggregated baseline data	Gender indicators adopted in NBSAP M&E framework; baseline established	2026	MoECC	UNDP, CBD Secretariat, UN Women
	Integrate gender into M&E and reporting	Include gender mainstreaming progress in national CBD reports and annual NBSAP implementation reviews	Gender section included in all national biodiversity reports	Annual	MoECC	CBD Secretariat, UNEP
	Mobilize resources for gender-	Develop dedicated budget lines for gender mainstreaming activities in	% of NBSAP budget allocated to gender-specific activities	2026–27	MoECC + Ministry of Finance	GEF, UNDP, development partners

	responsive biodiversity	NBSAP implementation plans and GEF project proposals				
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Abbreviations: MoECC = Ministry of Environment and Climate Change; FMS = Federal Member States; MoA = Ministry of Agriculture; CSOs = Civil Society Organizations; ABS = Access and Benefit-Sharing; M&E = Monitoring and Evaluation; GEF = Global Environment Facility; TEK = Traditional Ecological Knowledge.

Annex 3 – Monitoring, Evaluation & Learning Framework: Gender-Sensitive Indicators

This framework provides the full set of gender-sensitive indicators for tracking progress on gender mainstreaming within Somalia's NBSAP. Indicators are organized across five strategic areas aligned with the Gender Action Plan and the Gender Mainstreaming Guidelines (Sections 5–6 of the main report). Each indicator includes a description, baseline status, target, reporting frequency, and data source to support implementation and accountability.

No.	Strategic Area	Indicator	Description / Measure	Baseline	Target (2030)	Frequency	Data Source / Method
1.1	Participation & Governance	Women in biodiversity governance bodies	% of women members in fisheries, rangeland, agricultural and biodiversity committees at national and FMS levels	To be established	≥30%	Annual	MoECC administrative records; FMS reporting
1.2		Women in NBSAP consultations	% of female participants across all national, FMS, and community NBSAP consultations (sex-disaggregated attendance sheets)	To be established	≥40%	Per consultation	Consultation attendance registers
1.3		Women in leadership/decision-making roles	% of women holding leadership positions (chair, secretary, technical lead) in biodiversity governance structures	To be established	≥20%	Biennial	Institutional HR records; stakeholder survey
1.4		Gender-inclusive consultation processes	% of NBSAP consultations that meet agreed gender-inclusion criteria (separate sessions where needed, accessible venue, local language materials)	0%	100%	Annual	Consultation quality assessment checklist
1.5		Community-level women's participation	% of community natural resource management bodies with documented female membership and voice	To be established	≥35%	Biennial	Community governance mapping; FMS reports
2.1	Access to Resources	Women's access to biodiversity-linked finance	No. of women accessing micro-credit, grants, or financial services linked to fisheries, livestock, or agro-pastoral biodiversity enterprises	To be established	+50% vs. baseline	Annual	Financial institutions; program reports
2.2		Women's land and resource tenure	% of women with documented legal access to or secure tenure over biodiversity-related land or resources	To be established	Measurable increase vs. baseline	Biennial	Land registry data; household surveys

2.3		Women in biodiversity value chains	No. and % of women participating in higher-value segments of fisheries, agro-pastoral, and forest product value chains	To be established	+30% vs. baseline	Annual	Market surveys; enterprise program records
2.4		Women benefiting from biodiversity programs	% of direct beneficiaries of NBSAP-funded projects who are women	To be established	≥50%	Per project cycle	Project MIS / beneficiary records
2.5		Traditional ecological knowledge documented	No. of TEK initiatives led by or prominently involving women; extent to which TEK is integrated into NBSAP monitoring	0	≥5 documented TEK initiatives	Biennial	Research and documentation reports
3.1	Capacity Development	Government staff trained in gender & biodiversity	No. of government officials trained in gender mainstreaming for biodiversity (disaggregated by sex, level, institution)	0	≥200 staff trained	Annual	Training attendance records; post-training assessments
3.2		Community members trained	No. of community members (women and men) trained in gender-responsive natural resource management and sustainable livelihoods (sex-disaggregated)	0	≥500 community members	Annual	CSO/NGO program reports; FMS records
3.3		Gender mainstreaming tools available	No. of practical gender tools, guides, or curricula developed and disseminated to biodiversity institutions	0	≥5 tools	Biennial	MoECC publications list
3.4		Women in biodiversity-related tertiary education	No. and % of women enrolled in biodiversity-related tertiary programs at Somali universities	To be established	Measurable increase vs. baseline	Annual	University enrollment data; Ministry of Education
3.5		Female extension workers deployed	No. of female extension workers deployed in fisheries, agriculture, and livestock sectors	To be established	+25% vs. baseline	Annual	Sectoral ministry HR records
4.1	Institutional Integration	Gender focal points designated	No. of institutions (MoECC, FMS ministries) with an officially designated gender focal point with defined TOR	0	All key biodiversity institutions	Annual	MoECC / FMS institutional records
4.2		Policies integrating gender	No. of biodiversity-related policies, laws, or strategies revised to incorporate explicit gender-responsive provisions or targets	To be established	≥5 policies revised	Biennial	Policy tracking matrix; legal review reports
4.3		Inter-institutional gender coordination	Existence and functionality of coordination mechanism between MoECC and Ministry of Women's Affairs (e.g., joint work plan, meeting frequency)	None	Mechanism operational by 2026	Annual review	Meeting minutes; joint work plan documentation

4.4		Gender in NBSAP M&E framework	% of NBSAP results framework indicators that are sex-disaggregated or gender-sensitive	0%	≥30% of NBSAP indicators	Biennial	NBSAP M&E framework documentation
4.5		Gender reporting in CBD submissions	Inclusion of dedicated gender section or gender-disaggregated data in national reports submitted to the CBD	Partial	Full gender section in all reports	Per reporting cycle	CBD national reports
5.1	Benefit-Sharing	Equitable benefit-sharing mechanisms	% of NBSAP-linked conservation and restoration programs with documented gender-responsive benefit-sharing guidelines	0%	≥80% of programs	Per project cycle	Program design documents; benefit-sharing audits
5.2		Women seed stewards recognized under ABS	No. of women traditional seed stewards formally recognized or registered under national access and benefit-sharing (ABS) frameworks	0	≥50 women registered	Annual	ABS registry; MoA records
5.3		Budget allocated to gender activities	% of total NBSAP implementation budget explicitly allocated to gender-specific activities or targeted women's programs	To be established	≥10% of NBSAP budget	Annual	MoECC / GEF project financial reports

Note: Baselines marked 'To be established' should be determined through the National Gender Analysis process and first-year data collection. Targets are indicative and should be validated through a participatory M&E planning process involving MoECC, FMS institutions, and development partners. All indicators should be reviewed biennially and updated in line with NBSAP progress reviews.

This annex provides the technical documentation supporting Section 5.3 of the NBSAP (Spatial Planning and Area-Based Conservation Framework). It contains: **Part A**, the national map series; **Part B**, the GIS methodology used to derive the first approximation of spatial priorities and the protocol for its replication and refinement; **Part C**, the inventory of spatial datasets; and **Part D**, site-level priority tables for the nine priority systems and the twenty-one nationally designated protected areas. All outputs are first approximations prepared for planning purposes (MoECC 2026a); no map in this annex constitutes legal designation, zoning, or a statement on boundaries.

Part A. Detailed Maps

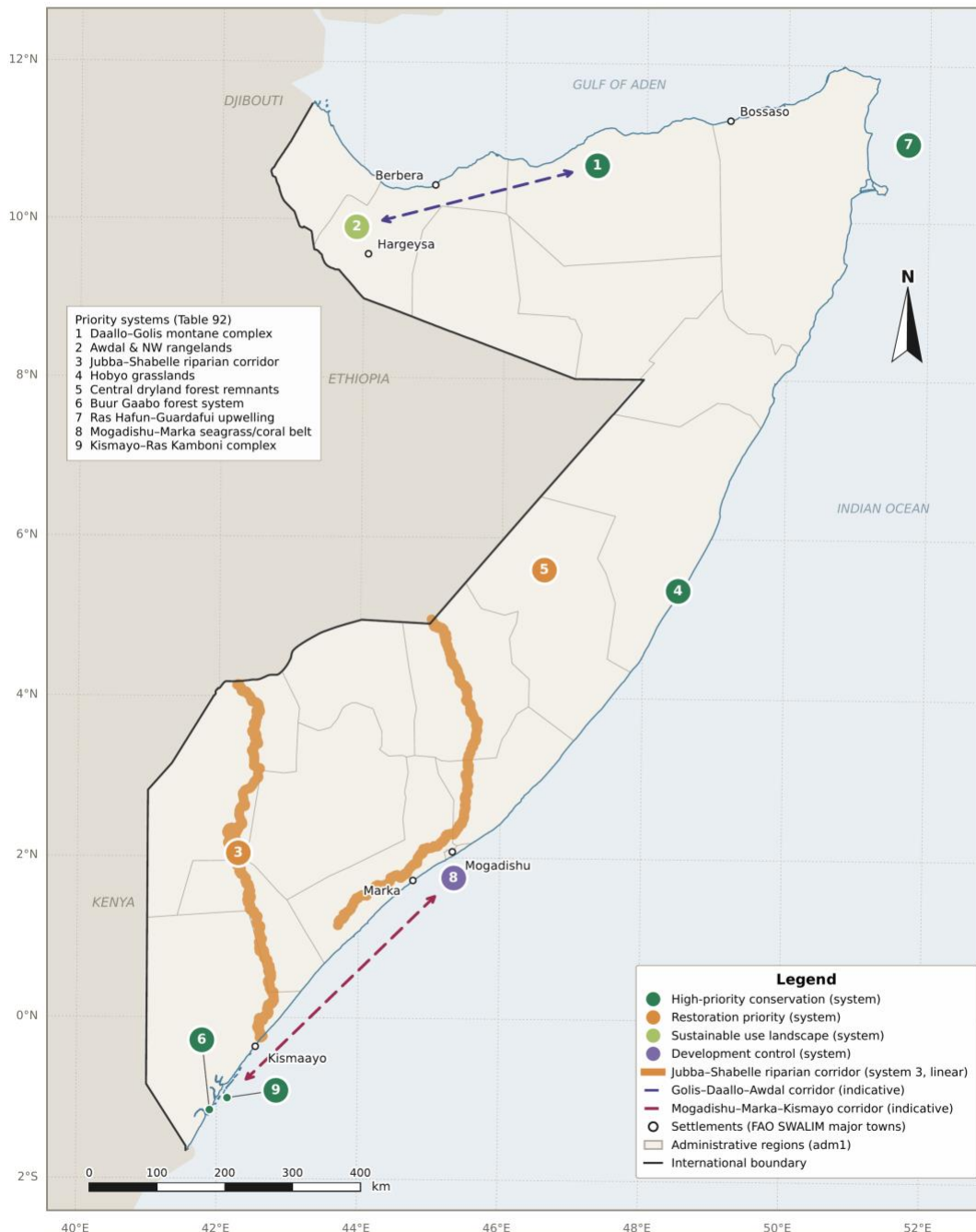
The map series comprises six maps (Maps A1–A6), all regenerated for this annex from authoritative national and global datasets; none is reproduced as a supplied image. All maps in this annex are drawn on the UN OCHA / ITOS Somalia Common Operational Dataset administrative boundaries (adm0 and adm1, valid on 8 March 2023), replacing the generalized Natural Earth 1:110m boundaries used in earlier drafts, and are projected to Africa Albers Equal Area Conic (ESRI:102022) on the WGS 84 datum (EPSG:4326) as specified in Section B.2

During NBSAP implementation, MoECC should coordinate with relevant national institutions and the WDPA data custodians to reconcile the protected-area inventory, verify site identities and coordinates, and establish an agreed national dataset for future reporting and mapping.

Map A1

Indicative National Spatial Priorities

Nine priority landscapes and seascapes — preliminary planning product, not a legal designation or zoning map



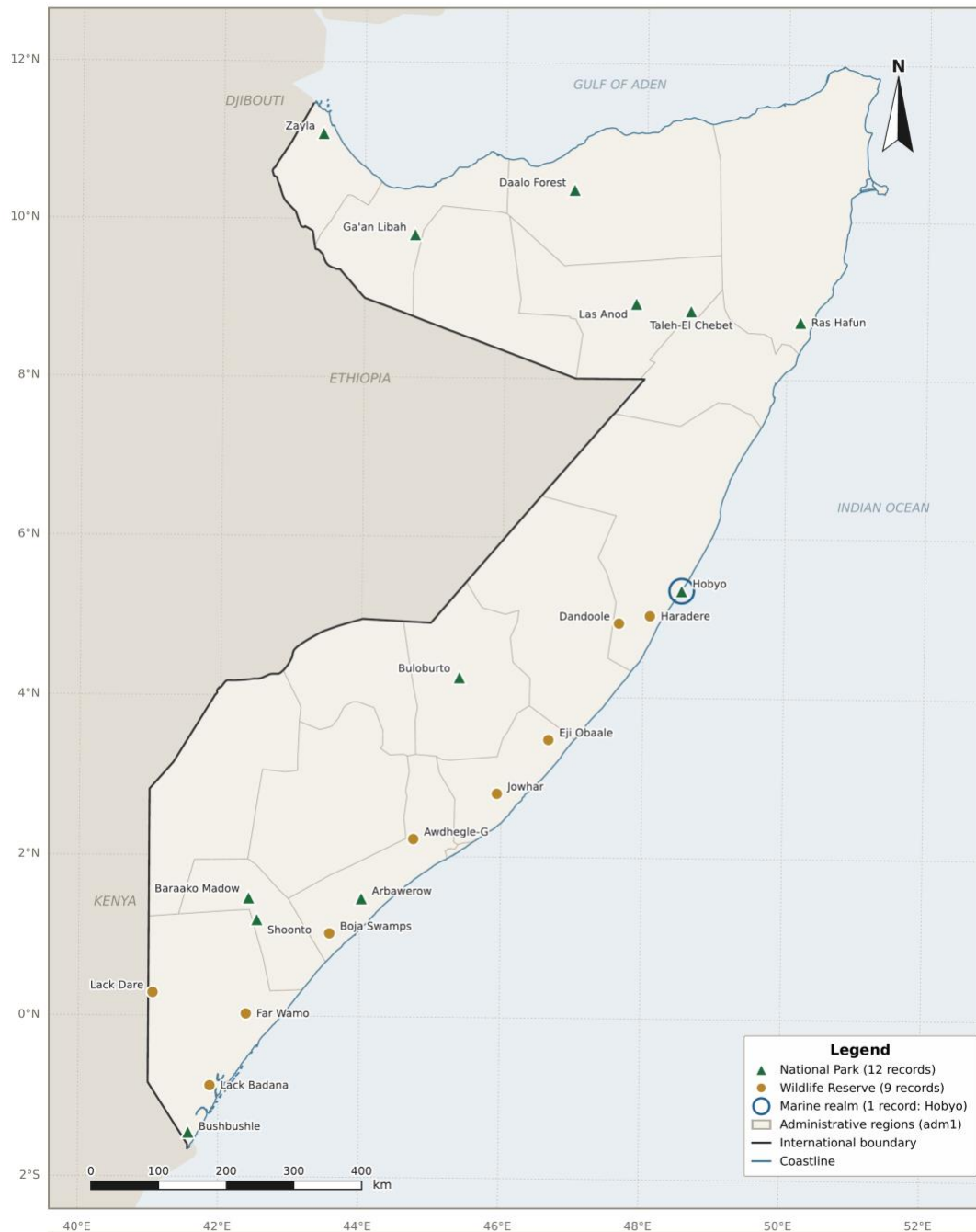
Sources: NBSAP Annex 8, Table 92; UN OCHA / ITOS Somalia COD-AB (2023); FAO SWALIM river network (2024).
CRS: Africa Albers Equal Area Conic (ESRI:102022), WGS 84.

Map A1. Indicative national spatial priorities: nine priority landscapes and seascapes, the four zone categories, and the two national ecological corridors. Preliminary planning product; system extents are schematic pending field verification (MoECC 2026a). Regenerated for the 2026–2030 implementation period on the national administrative boundary. System extents are not delineated: systems are shown at the indicative centroids of Table 92, and the two corridors as indicative connections only, because Section B.6 records that connectivity was assessed qualitatively rather than modelled

Map A2

Nationally Designated Protected Areas

Twenty-one World Database on Protected Areas point records — indicative locations, no reported boundaries



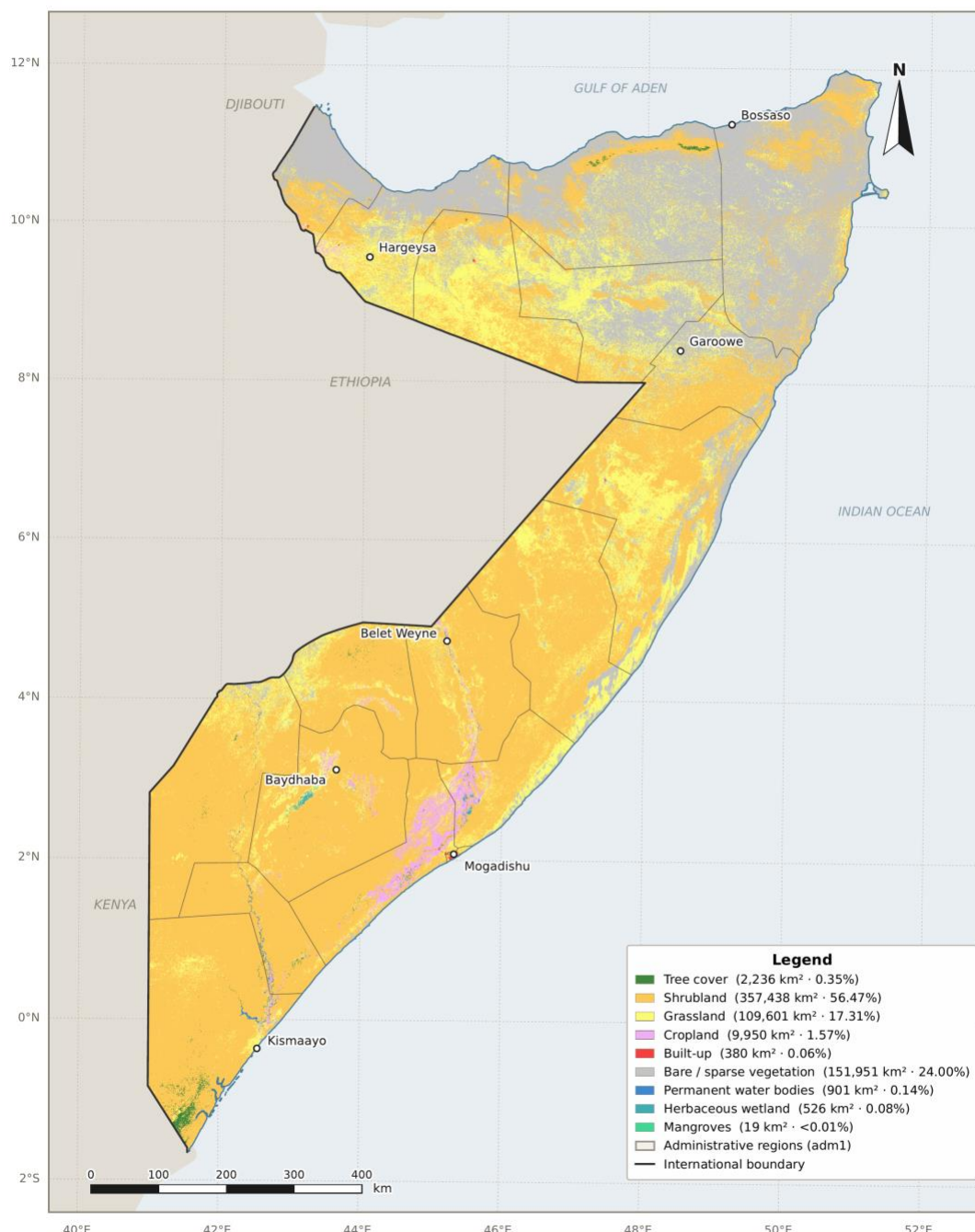
Sources: UNEP-WCMC and IUCN, Protected Planet / WDPA (September 2026); UN OCHA / ITOS Somalia COD-AB (2023).
CRS: Africa Albers Equal Area Conic (ESRI:102022), WGS 84.

Map A2. Nationally designated protected areas: 21 WDPA point records, classified by dominant habitat. Point locations are indicative; no site has reported boundaries and most have lacked functioning management since 1991 (UNEP-WCMC and IUCN 2024; MoECC 2026a).

Map A3

National Land Cover of Somalia

ESA WorldCover 2021 v200 national land-cover baseline



Sources: ESA WorldCover 2021 v200 (10 m); UN OCHA / ITOS Somalia COD-AB (2023).

CRS: Africa Albers Equal Area Conic (ESRI:102022), WGS 84.

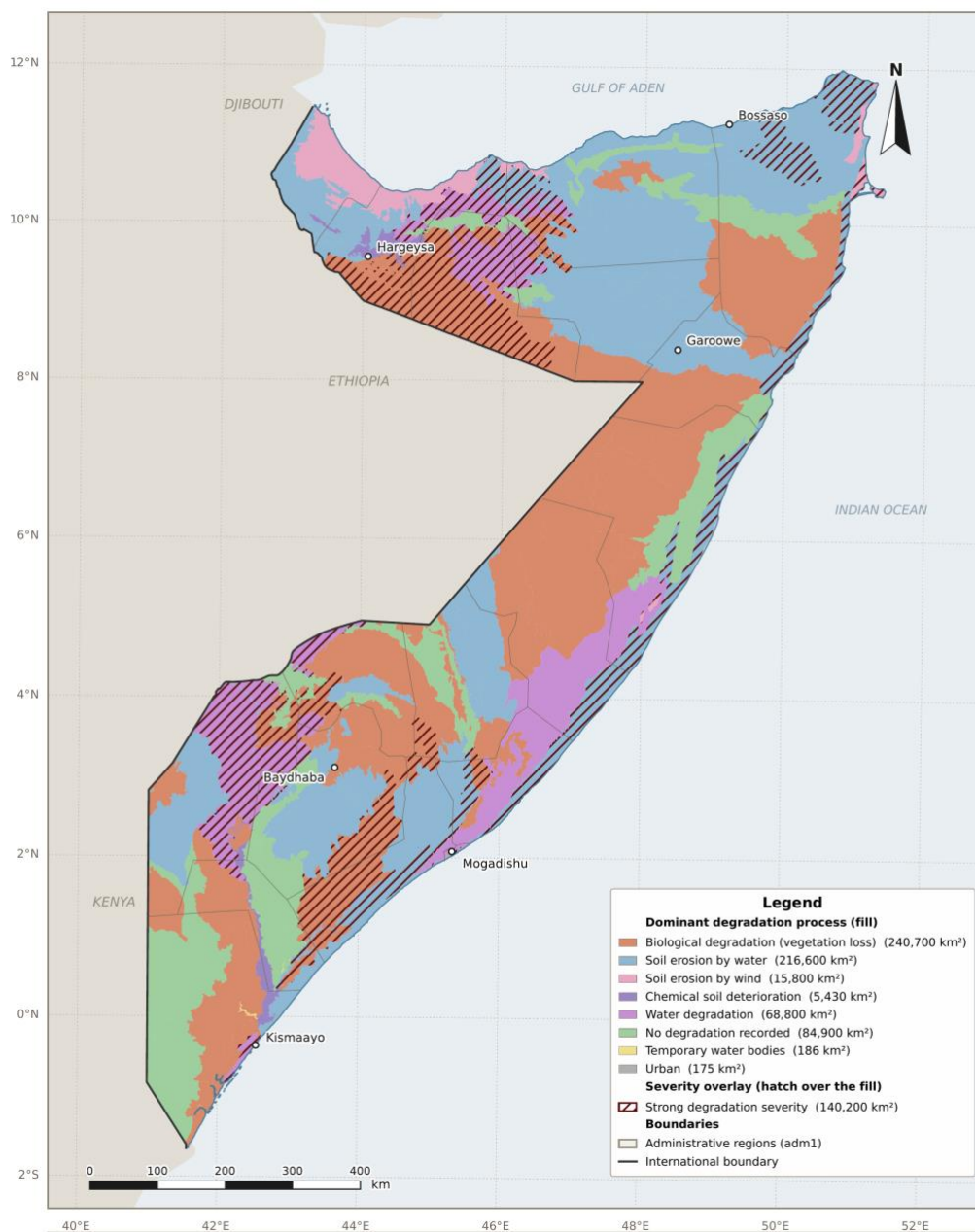
Note: Areas are computed at the native 10 m resolution; the sheet is displayed at 150 m, at which mangroves and built-up fall below page resolution.

Map A3. National land cover of Somalia, used as the primary ecosystem-extent layer in the multi-criteria evaluation. Rebuilt from ESA WorldCover 2021 v200 (10 m, European Space Agency), the land-cover baseline specified in Table 91 and Section B.3, and drawn on the national administrative boundary with title, legend, north arrow, kilometre scale bar, graticule, coordinate reference system, data year and source credits supplied. Class areas are computed at the native 10 m resolution; the sheet is displayed at 150 m, at which the built-up and mangrove classes fall below page resolution.

Map A4

Land Degradation Hotspots of Somalia

Dominant degradation process by mapping unit, with areas of strong degradation severity identified as hotspots



Sources: FAO SWALIM land degradation dataset (2024); UN OCHA / ITOS Somalia COD-AB (2023).

CRS: Africa Albers Equal Area Conic (ESRI:102022), WGS 84.

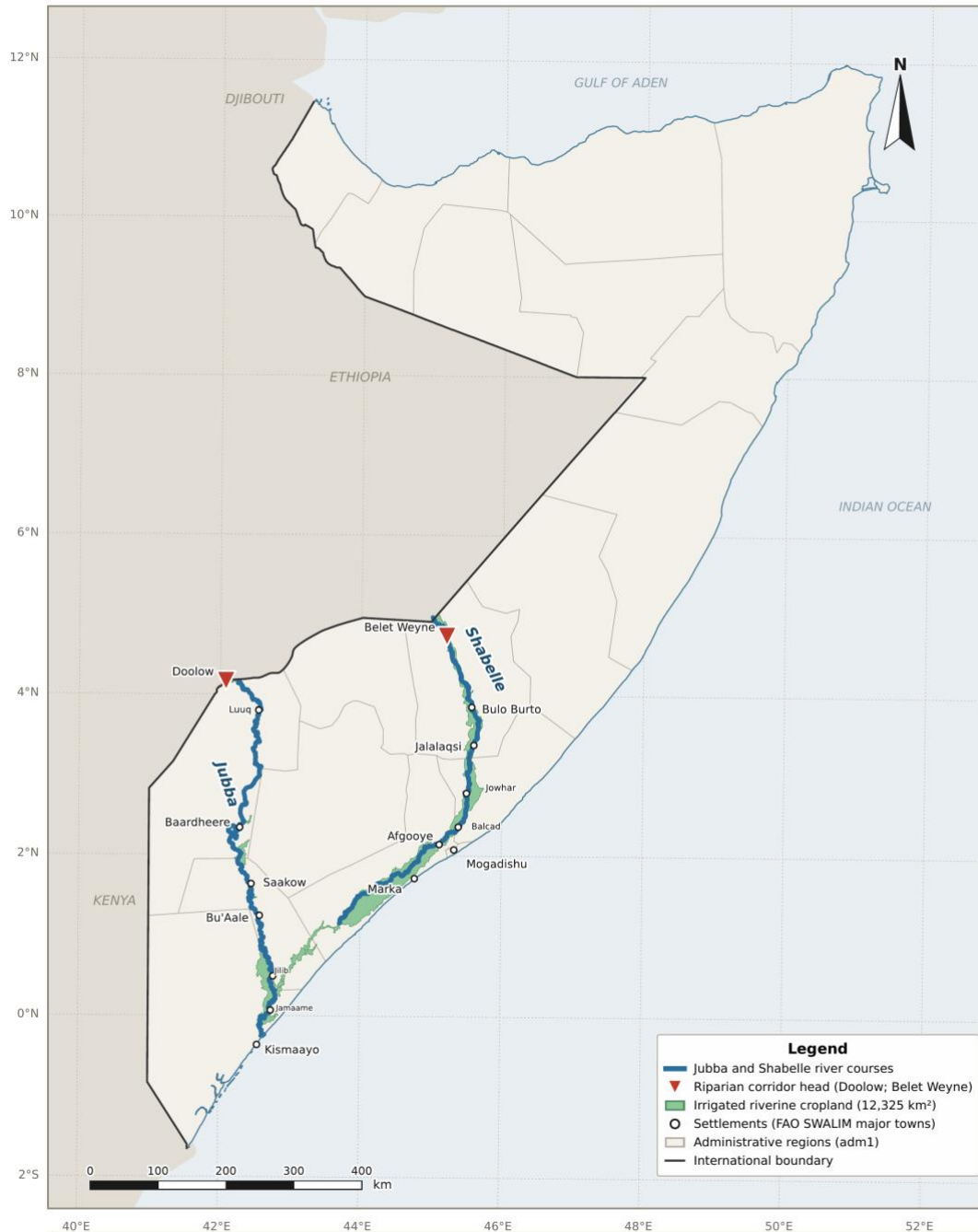
Note: Hatching is an overlay on the fill classes and is not additive to them.

Map A4. Land degradation hotspots, showing the dominant degradation process by mapping unit and the areas of strong degradation severity that constitute the hotspots, used as a principal terrestrial pressure layer and as an input to the restoration-opportunity overlay. Rebuilt from the FAO SWALIM land degradation dataset (fields Deg_Type_1 and Deg_Condit) with title, legend, north arrow, kilometre scale bar, graticule, coordinate reference system, data year and source credits supplied, and with legend classes defined by the source dataset. [Verification required] The undefined LADA-GLADA “hotspots / bright spots / green spots” land-productivity classes of the previous image are not equivalent to this classification; MoECC should confirm which classification is cited in Section B.3.

Map A5

Jubba-Shabelle Riverine System

Mapped river courses, irrigated floodplain cropland and the riparian restoration corridor



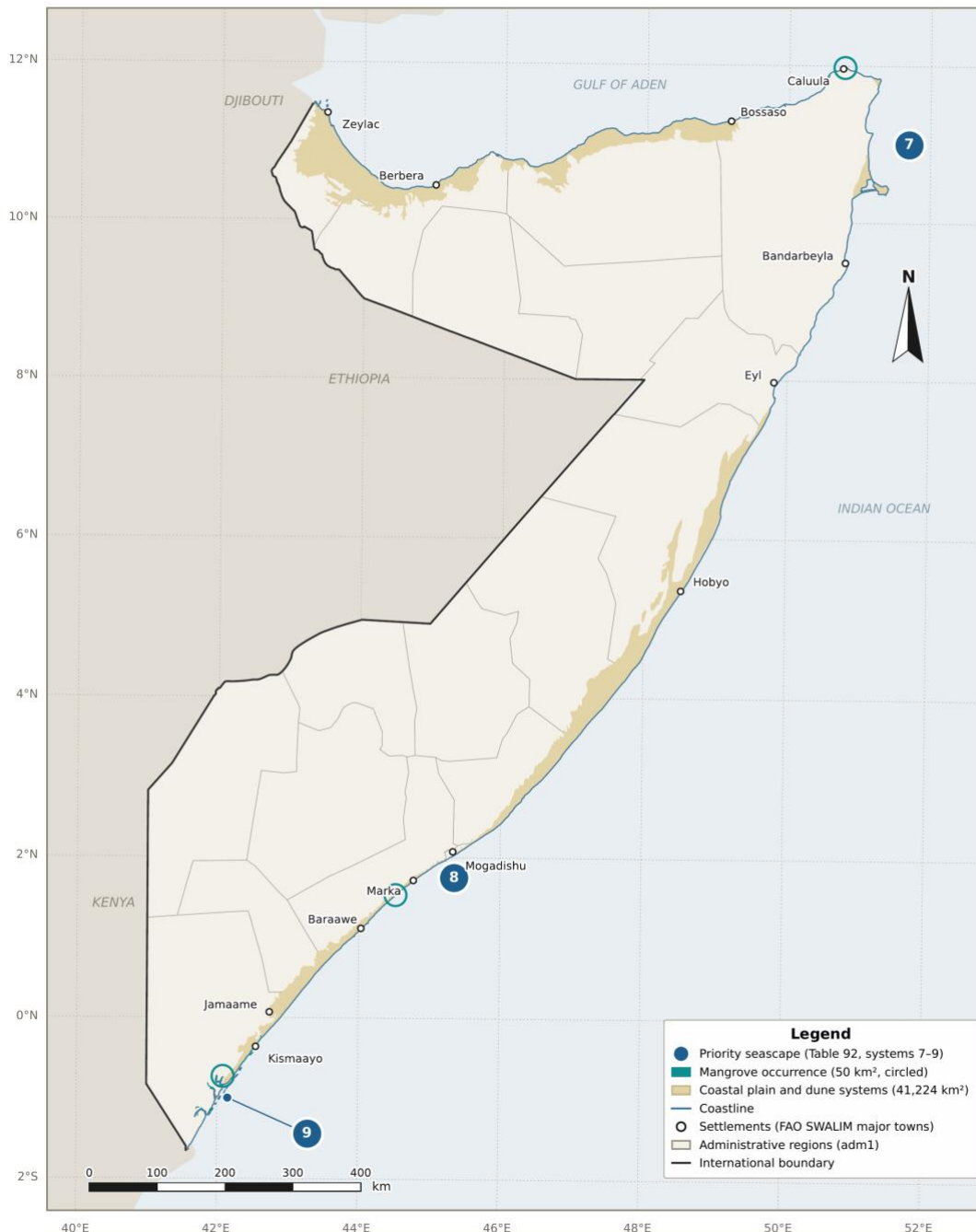
Sources: FAO SWALIM river network and land use datasets (2024); UN OCHA / ITOS Somalia COD-AB (2023).
CRS: Africa Albers Equal Area Conic (ESRI:102022), WGS 84.

Map A5. The Jubba–Shabelle riverine system, defining the freshwater analysis domain and the riparian restoration corridor of Table 92, system 3. Rebuilt at publication resolution from the FAO SWALIM river network and land use datasets, replacing the 250×250 pixel locator image of the previous draft, and showing both river courses, the irrigated floodplain cropland and the Doolow and Beledweyne to coast reach.

Map A6

Marine and Coastal Priority Areas

The three priority seascapes, mapped mangrove occurrences and the coastal zone



Sources: NBSAP Annex 8, Table 92; FAO SWALIM land use dataset (2024); UN OCHA / ITOS Somalia COD-AB (2023).
CRS: Africa Albers Equal Area Conic (ESRI:102022), WGS 84.

Map A6. Marine and coastal priority areas of the Somali coast, showing the three priority seascapes (Ras Hafun–Guardafui; Mogadishu–Marka; Kismayo–Ras Kamboni) at their indicative locations, together with mapped mangrove occurrences and coastal plain and dune systems along the coastline. Rebuilt from the FAO SWALIM land use dataset and the national coastline, replacing four screen captures of an interactive web mapping application which retained browser controls and third-party base-map attribution and one panel of which lay outside the three named seascapes. [Verification required] The Exclusive Economic Zone, coral reef and

seagrass extent and bathymetry are NOT shown and no maritime limit has been inferred: the UNEP-WCMC coral v4.1 and seagrass v7.1, Global Mangrove Watch v3, GEBCO and EEZ datasets listed in Table 91 were not available for this revision, and none was estimated, interpolated or drawn. Section B.9 records nearshore benthic mapping as the first data upgrade priority; the EEZ boundary should be added to it. The mangrove polygons shown are from the FAO SWALIM land use dataset, not Global Mangrove Watch: they total 49.9 square kilometres in twenty polygons, eighteen of them south of the equator, and almost certainly under-represent the national mangrove estate, particularly along the Gulf of Aden and the Bari coast. Global Mangrove Watch (Bunting et al. 2018; v3 baseline with 1996–2020 change) should replace this layer, and the area statistic, data year and source credit must be updated when it does.

Part B. GIS Methods

B.1 Analytical approach

The first approximation of spatial priorities was produced with a simplified, transparent, and replicable Multi-Criteria Evaluation (MCE), consistent with systematic conservation planning principles (Margules and Pressey 2000) and deliberately calibrated to Somalia's data and capacity conditions (MoECC 2026a). Three criterion groups were integrated: ecological value (ecosystem extent and condition, habitat importance, refugial function), anthropogenic pressure (deforestation, overgrazing, agricultural and urban encroachment, coastal development, fishing pressure), and socio-economic relevance (population density, pastoral mobility, artisanal fishing zones). Complex statistical modelling was intentionally avoided in favour of expert-informed scoring that national technical teams can update.

B.2 Coordinate reference systems and data standards

Storage and exchange: all layers are stored in WGS 84 (EPSG:4326) in the national biodiversity geodatabase (GeoPackage format recommended).

Area and distance analysis: layers are projected to Africa Albers Equal Area Conic (ESRI:102022) for national-scale area statistics, and to UTM zones 37N–39N (EPSG:32637–32639) for site-level work; the equatorial south uses UTM 37S–38S as required.

Analysis grids: a 1 km raster grid for terrestrial and freshwater analysis and a 500 m grid for the nearshore zone (coastline to 12 nm), with the offshore EEZ analysed at 5 km resolution.

Metadata: each layer carries ISO 19115-style metadata (source, vintage, resolution, processing steps, confidence rating) and a version number; superseded layers are archived, not overwritten.

B.3 Layer preparation and normalization

Source datasets (Part C) were clipped to the national land territory and EEZ, resampled to the analysis grids, and converted to relative scores. Normalization followed a simple 0–1 scaling in which classes within each dataset were assigned relative values by expert judgement and existing dataset classifications — for example, intact montane forest, mangrove, seagrass, and reef classes score high on ecological value; heavily degraded or converted classes score low (MoECC 2026a). Where quantitative layers exist (e.g., NDVI-based degradation), min–max scaling was applied; where only categorical or qualitative information exists, ordinal scoring (0, 0.25, 0.5, 0.75, 1) was used and flagged as lower confidence.

B.4 multi-criteria weighting and composite index

The composite spatial priority index was produced by weighted additive overlay:

$$\text{Priority Index} = 0.50 \times \text{Ecological Value} + 0.30 \times \text{Anthropogenic Pressure} + 0.20 \times \text{Socio-economic Relevance}$$

Criterion	Weight	Rationale
Ecological value	50%	Primary conservation objective of the NBSAP
Anthropogenic pressure	30%	Captures urgency and risk of irreversible loss
Socio-economic relevance	20%	Ensures livelihood relevance and implementation feasibility

Weights reflect expert consultation and policy relevance rather than statistical calibration, and were applied uniformly across domains (MoECC 2026a, Annex C). Sensitivity of results to ± 10 percentage-point weight shifts should be tested at each revision cycle; the broad spatial patterns reported in Section 5.3 were stable under qualitative sensitivity checks.

B.5 Zone classification

Composite index values were classified into the four planning categories used throughout Section 5.3 by combining index quantiles with the degradation layer: **High-Priority Conservation Zones** (upper index quantile, lower degradation), **Restoration Priority Zones** (upper index quantile intersected with high degradation), **Sustainable Use Landscapes** (middle quantiles with high socio-economic dependence), and **Development Control Zones** (ecologically sensitive cells adjoining urban expansion, infrastructure, or coastal development fronts).

B.6 Connectivity and restoration overlays

Connectivity was assessed qualitatively by identifying physically continuous or linked ecosystems — the Golis–Daallo–Awdal montane band and the Mogadishu–Marka–Kismayo coastal-marine pathway — rather than through least-cost or circuit modelling, which current data do not support. Restoration priorities were derived by intersecting high degradation with high ecological value or documented recovery potential (degraded mangroves, overgrazed rangelands, damaged reefs, encroached riparian sections). Both overlays are upgrade targets for the next revision (Section B.9).

B.7 Stakeholder validation

Draft spatial outputs were reviewed in consultations with Federal Member State authorities, local communities, fisheries and pastoral representatives, women's associations, civil society, and technical experts. Stakeholder knowledge was used to validate broad patterns, adjust indicative extents, and record seasonal-use and informal-boundary information absent from formal datasets (MoECC 2026a). Validation records (date, participants, adjustments made) are retained in the geodatabase as a documentation layer.

B.8 Replication protocol (QGIS workflow)

The full analysis is replicable in QGIS 3.x LTR with standard processing tools:

- Assemble source datasets (Part C) into a single GeoPackage; record metadata and confidence ratings.
- Clip all layers to the national land territory and EEZ; reproject working copies to the analysis CRS.
- Rasterize vector layers to the 1 km / 500 m analysis grids (GDAL rasterize).
- Normalize each layer to 0–1 (Raster Calculator; min–max or ordinal scoring per B.3).
- Compute the composite index with the weighted expression in B.4 (Raster Calculator).
- Classify into the four zone categories (Reclassify by Table, thresholds per B.5).
- Digitize corridor and restoration overlays; annotate with confidence flags.

- Produce map layouts (Print Layout) with the standard cartographic elements used in Part A: title, legend, scale, north arrow, graticule, datum note, and the preliminary-product disclaimer.
- Export layer package and layout templates to the national geodatabase; increment version number.

B.9 Limitations and planned upgrades

Marine habitats are substantially under-mapped; nearshore benthic mapping (Allen Coral Atlas verification, seagrass ground-truthing) is the first data upgrade priority.

Species distribution data are sparse; GBIF and IUCN range data should be treated as evidence of presence, not absence.

Several pressure layers are proxies (e.g., night-lights for urban expansion, AIS-based fishing effort that under-represents artisanal fleets); confidence flags accompany all proxy layers.

Planned upgrades for the next cycle: quantitative connectivity modelling, time-series degradation monitoring, field verification of priority-system extents, and boundary survey of the protected-area estate.

Part C. Dataset Inventory

Table C.1 inventories the spatial datasets underpinning the analysis and recommended for the national biodiversity geodatabase. Datasets marked with an asterisk (*) were used in the first approximation (MoECC 2026a, Annex C); the remainder are recommended additions for the refinement cycle.

Table C.1. Spatial dataset inventory

Dataset	Custodian	Type / resolution	Vintage	Role in analysis	Access
ESA WorldCover *	European Space Agency	Raster, 10 m	2021 (v200)	Ecosystem extent; land-cover baseline; degradation context	esa-worldcover.org
Global Mangrove Watch *	GMW consortium	Raster, ~25 m	1996–2020 (v3)	Mangrove extent and change; coastal restoration targeting	globalmangrovewatch.org
WDPA / Protected Planet *	UNEP-WCMC and IUCN	Vector (points for Somalia)	Updated monthly	Protected-area baseline (Table D.2)	protectedplanet.net
FAO-SWALIM environmental series *	FAO Somalia	Vector / raster, varied	2007–present	Land degradation, hydrology, land use, rangeland condition	faoswalim.org
Global Distribution of Coral Reefs *	UNEP-WCMC	Vector	v4.1 (2021)	Reef interpretation for priority seascapes	data.unep-wcmc.org
Global Distribution of Seagrasses *	UNEP-WCMC	Vector	v7.1	Seagrass interpretation (Mogadishu–Marka belt)	data.unep-wcmc.org
National / proxy socio-economic layers *	National sources; compiled by MoECC	Vector	Varied	Population, pastoral mobility, artisanal fishing zones	MoECC geodatabase

Dataset	Custodian	Type / resolution	Vintage	Role in analysis	Access
Allen Coral Atlas	Arizona State Univ. / partners	Raster, ~5 m benthic classes	2018–2021	Nearshore benthic habitat verification	allencoralatlas.org
Copernicus GLO-30 DEM	ESA / Airbus	Raster, 30 m	2021	Terrain, catchment delineation, corridor design	spacedata.copernicus.eu
CHIRPS rainfall	UC Santa Barbara CHG	Raster, 0.05°	1981–present	Climate context; drought exposure for resilience screening	chc.ucsb.edu/data/chirps
Global Forest Change (Hansen)	Univ. of Maryland GLAD	Raster, 30 m	2000–present	Tree-cover loss; charcoal-frontier monitoring	glad.earthengine.app
WorldPop	Univ. of Southampton	Raster, 100 m	Annual	Population-pressure layer	worldpop.org
VIIRS nighttime lights	NOAA / Earth Obs. Group	Raster, ~500 m	Monthly/annual	Urban-expansion proxy (Development Control Zones)	eogdata.mines.edu
Global Fishing Watch effort	Global Fishing Watch	Raster (AIS-derived)	2012–present	Industrial fishing-pressure proxy (EEZ)	globalfishingwatch.org
GBIF occurrence records	GBIF Secretariat	Point records	Continuous	Species-presence evidence for priority systems	gbif.org
IUCN Red List species ranges	IUCN	Vector	Continuous	Threatened-species habitat screening	iucnredlist.org
GEBCO bathymetry	GEBCO / IHO-IOC	Raster, 15 arc-sec	2023	Marine spatial planning; upwelling-system context	gebco.net
OpenStreetMap	OSM community	Vector	Continuous	Settlements, roads, infrastructure for conflict screening	openstreetmap.org

Part D. Site-Level Priorities

D.1 Priority landscapes and seascapes

Table D.1 details the nine national priority systems (Map A1) with indicative coordinates, zone classification, GBF target alignment, dominant pressures, proposed response, and implementation tier. Tiers sequence action by combined urgency and feasibility: Tier 1 initiates in 2026–2027, Tier 2 in 2027–2028, Tier 3 in 2028–2030. Extents and classifications are indicative pending field verification (MoECC 2026a, Annex B).

Table D.1. Site-level priorities — national priority systems

#	Priority system	Indicative centroid (lat, lon)	Domain	Zone class	GBF targets	Dominant pressures	Proposed response	Tier
1	Daallo–Golis montane complex	10.7, 47.3 (band 43.5–48.5°E)	Terrestrial	High-priority conservation + restoration	2, 3, 8	Charcoal, grazing, fire	Strict protection of core forest; assisted regeneration; catchment management	1
2	Awdal & NW rangelands	9.9, 43.9	Terrestrial	Sustainable use landscape	3, 9, 11	Overgrazing, fragmentation	Community conservancies / OECMs; grazing management; corridor safeguards	2
3	Jubba–Shabelle riparian corridor	River corridors, Dolow/Beledweyne to coast	Freshwater	Restoration priority	2, 3, 8, 11	Deforestation, sedimentation, encroachment	Riparian reforestation; bank stabilisation; connectivity maintenance	1
4	Hobyo grasslands	5.35, 48.5	Terrestrial (coastal)	High-priority conservation	3, 8	Dune mobility, grazing	Conservation and monitoring; re-activation of Hobyo NP designation	2
5	Central dryland forest remnants	5.6, 46.6 (Mudug–Galgaduud)	Terrestrial	Restoration priority	2, 3	Charcoal, degradation	Dry-forest restoration; connectivity between remnants	3
6	Buur Gaabo forest system	-1.15, 41.9	Terrestrial / coastal	High-priority conservation	2, 3	Clearance, conversion	Protection and restoration linked to Lag Badana complex	3
7	Ras Hafun–Guardafui upwelling	11.0, 51.7 (marine)	Marine	High-priority conservation (marine)	3, 9, 11	IUU fishing, bycatch	MPA designation; fisheries management;	3

#	Priority system	Indicative centroid (lat, lon)	Domain	Zone class	GBF targets	Dominant pressures	Proposed response	Tier
							monitoring partnership	
8	Mogadishu–Marka seagrass/coral belt	1.75, 45.35 (nearshore)	Coastal / marine	High-priority conservation + development control	2, 3, 11	Coastal development, pollution	Marine spatial planning; habitat protection; pollution control	1
9	Kismayo–Ras Kamboni complex	-1.0, 42.15 (nearshore)	Coastal / marine	High-priority conservation + restoration	2, 3, 8	Mangrove loss, destructive fishing	Co-managed MPA / locally managed marine area; mangrove restoration	2

D.2 National protected-area inventory and site-level actions

Table D.2 lists the 21 nationally designated protected areas (Map A2) with indicative WDPA point coordinates and the site-level priority action assigned under this framework. Verification of boundaries is the universal first task; sites within Tier 1 priority systems are sequenced first (UNEP-WCMC and IUCN 2024; MoECC 2026a, Annex A).

Table D.2. Designated protected areas — indicative locations and site-level actions

#	Protected area	Region / FMS	Designation	Lat	Lon	Status note	Site-level priority action
1	Daallo (Daloh) Forest Reserve	Sanaag	Forest / Mountain Reserve	10.7 17	47.2 50	Montane juniper forest; biodiversity refugium	Tier 1: boundary survey; re-gazettement; strict core protection
2	Ga'an Libah	Maroodi Jeex	Forest Reserve	9.65 0	44.6 50	Escarpment forest; degraded, unmanaged	Restoration assessment; community co-management
3	Zeila (Zayla)	Awdal	Wildlife / Coastal Reserve	11.3 50	43.4 70	Coastal wetlands and islands; Ramsar-quality	Tier 2: wetland verification; candidate coastal OECD/MPA
4	Buloburto	Hiiraan	National Park (declared)	3.88 0	45.5 70	Shabelle riverine; non-operational	Fold into riparian-corridor restoration programme
5	Arbawerow	Lower Shabelle	National Park (declared)	1.90 0	44.1 00	Dryland savanna; non-operational	Status verification; sustainable-use zoning
6	Baraako Madow	Bay	National Park (declared)	2.70 0	43.5 00	Acacia woodland; non-operational	Status verification; dry-forest restoration screening

#	Protected area	Region / FMS	Designation	Lat	Lon	Status note	Site-level priority action
7	Bushbushle (Lag Badana–Bushbush)	Lower Juba	National Park / WH Tentative	- 0.55 0	41.8 00	Coastal forest hotspot; ~3,340 km²	Tier 2: flagship landscape; World Heritage dossier support
8	Lag Badana	Lower Juba	National Park (declared)	- 1.20 0	41.9 50	Coastal forest and beaches; turtle nesting	Tier 2: co-managed protection; turtle-nesting monitoring
9	Kismayo	Lower Juba	National Park (declared)	- 0.36 0	42.5 50	Coastal scrub and dunes; non-operational	Integrate with Kismayo–Ras Kamboni seascape planning
10	Jilib	Middle Juba	National Park (declared)	0.49 0	42.7 90	Riverine forest remnant	Riparian restoration node within corridor programme
11	Hoby	Mudug	National Park (declared)	5.35 0	48.5 30	Coastal dune grasslands	Tier 2: re-activation; grassland conservation and monitoring
12	Ras Hafun	Bari	National Park / MPA interest	10.4 40	51.2 60	Upwelling coast; peninsula and lagoons	Tier 3: candidate MPA anchor for upwelling system
13	Shoonto (Shonto)	Bari	National Park (declared)	9.50 0	50.6 00	Coastal–montane transition	Status verification; connectivity screening
14	Taleh–El Chebet	Sool	National Park (declared)	9.13 0	48.4 20	Karst springs and escarpment	Status verification; water-source protection
15	Las'anod	Sool	National Park (declared)	8.48 0	47.3 60	Plateau rangeland	Status verification; sustainable-use assessment
16	Boja Swamps	Lower Shabelle	Wetland Reserve	1.70 0	44.0 50	Seasonal wetland; waterbirds	Wetland verification; candidate Ramsar-type site
17	Far Wamo	Lower Juba	Controlled Hunting Area	- 0.80 0	41.6 00	Adjacent to Lag Badana complex	Buffer / connectivity role in flagship landscape
18	Angole–Farbiddu	Middle Juba	Nature Reserve	1.00 0	42.4 00	Juba riverine forest	Riparian restoration node within corridor programme
19	Balcad	Middle Shabelle	Nature Reserve	2.36 0	45.3 90	Shabelle riverine forest; near Mogadishu	Tier 1: accessible pilot site for restoration and education

#	Protected area	Region / FMS	Designation	Lat	Lon	Status note	Site-level priority action
20	Geedka Cad / Northern juniper	Sanaag / Bari	Forest Reserve	10.800	48.000	Golis range juniper	Tier 1: montane complex component; boundary survey
21	Awdal Coastal Reserve	Awdal	Coastal / Marine interest	11.000	43.700	Gulf of Aden mangrove and reef	Tier 2: coastal habitat verification; community co-management

Note: The Bushbushle / Lag Badana–Bushbush coastal-forest landscape is on Somalia's UNESCO World Heritage Tentative List and overlaps several southern records. Coordinates are indicative point locations from the WDPA; they do not define boundaries.

MoECC (Ministry of Environment and Climate Change, Federal Republic of Somalia). 2026a. *First Approximation of Spatial Priorities and Specialized Action Plan for Area-Based Targets and Harmful Subsidy Elimination*. Revised draft report prepared by Abdulqadir Omar Ziyad. Mogadishu: MoECC.

Margules, Christopher R., and Robert L. Pressey. 2000. “Systematic Conservation Planning.” *Nature* 405 (6783): 243–253.

UNEP-WCMC and IUCN. 2024. *Protected Planet: The World Database on Protected Areas (WDPA)*. Cambridge: UNEP-WCMC and IUCN. <https://www.protectedplanet.net>.

ANNEX 9 REFERENCES

- African Development Bank. (2013). *Integrated safeguards system: Policy statement and operational safeguards*. African Development Bank Group.
- African Union Commission. (2015). *African Union strategic guidelines for the coordinated implementation of the Nagoya Protocol on access and benefit-sharing*. African Union.
- Amir, O. G (2024) The Checklist of Birds of Somalia, First Edition, Somali Wildlife and Natural History Society (SWNHS), Mogadishu
- Amir O. G. & Mumin, D. H. (2025) The Amphibian and Reptile of Somalia. First Edition, Somali Wildlife and Natural History Society (SWNHS), Mogadishu
- Convention on Biological Diversity. (2010). *Strategic plan for biodiversity 2011–2020 and the Aichi biodiversity targets* (Decision X/2). Secretariat of the Convention on Biological Diversity.
- Convention on Biological Diversity. (2014). *Fifth national report guidelines*. Secretariat of the Convention on Biological Diversity.
- Convention on Biological Diversity. (2022a). *Kunming–Montreal Global Biodiversity Framework* (Decision 15/4). Secretariat of the Convention on Biological Diversity.
- Convention on Biological Diversity. (2022b). *Mechanisms for planning, monitoring, reporting and review* (Decision 15/6). Secretariat of the Convention on Biological Diversity.
- Convention on Biological Diversity. (2023). *Guidance for revising or updating national biodiversity strategies and action plans in alignment with the Kunming–Montreal Global Biodiversity Framework*. Secretariat of the Convention on Biological Diversity.
- Federal Government of Somalia. (2012). *Provisional Constitution of the Federal Republic of Somalia*.
- Federal Government of Somalia. (2015). *Fisheries law of Somalia*.
- Federal Government of Somalia. (2020). *Somalia national development plan 2020–2024 (NDP-9)*.
- Federal Government of Somalia. (2021). *National disaster management policy*.
- Federal Government of Somalia. (2024). *Climate Change Act*.
- Federal Government of Somalia. (2024). *Environmental Protection and Management Act*.
- Federal Government of Somalia. (2024). *Environmental and social impact assessment regulations*.
- Federal Government of Somalia. (2025). *National Transformation Plan 2025–2029*.
- Food and Agriculture Organization of the United Nations. (2015). *Global guidelines for the restoration of degraded forests and landscapes in drylands: Building resilience and benefiting livelihoods*. FAO.
- Food and Agriculture Organization of the United Nations. (2018). *Pastoralism in Africa's drylands: Reducing risks, addressing vulnerability and enhancing resilience*. FAO.
- Food and Agriculture Organization of the United Nations. (2019). *The state of the world's biodiversity for food and agriculture*. FAO Commission on Genetic Resources for Food and Agriculture.
- Food and Agriculture Organization of the United Nations. (2020). *Global Forest Resources Assessment 2020: Main report*. FAO. <https://doi.org/10.4060/ca9825en>
- Food and Agriculture Organization of the United Nations. (2021). *The state of the world's land and water resources for food and agriculture: Systems at breaking point*. FAO. <https://doi.org/10.4060/cb9910en>

- Food and Agriculture Organization of the United Nations. (2022). *The state of world fisheries and aquaculture 2022: Towards blue transformation*. FAO. <https://doi.org/10.4060/cc0461en>
- Global Environment Facility. (2019). *Guidelines on the implementation of the GEF policy on environmental and social safeguards*. GEF.
- Global Environment Facility. (2024). *Umbrella programme to support development of biodiversity finance plans, 2024–2028* (GEF Project 11054). GEF.
- Global Environment Facility. (2024). *Umbrella programme to support NBSAP updating and the preparation of seventh national reports* (GEF Project 11414). GEF.
- Intergovernmental Panel on Climate Change. (2022). *Climate change 2022: Impacts, adaptation and vulnerability—Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press. <https://doi.org/10.1017/9781009325844>
- Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. (2018). *The IPBES regional assessment report on biodiversity and ecosystem services for Africa*. IPBES Secretariat.
- Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. (2019). *Global assessment report on biodiversity and ecosystem services*. IPBES Secretariat. <https://doi.org/10.5281/zenodo.3831673>
- International Finance Corporation. (2012). *Performance standards on environmental and social sustainability*. World Bank Group.
- International Treaty on Plant Genetic Resources for Food and Agriculture. (2009). *International treaty on plant genetic resources for food and agriculture*. Food and Agriculture Organization of the United Nations.
- International Union for Conservation of Nature. (2025). *The IUCN Red List of Threatened Species*. <https://www.iucnredlist.org>
- Margules, Christopher R., and Robert L. Pressey. (2000). Systematic Conservation Planning. *Nature* 405 (6783): 243–253.
- Ministry of Agriculture and Irrigation. (2020). *Agriculture sector strategic plan 2020–2025*. Federal Government of Somalia.
- Ministry of Environment and Climate Change. (2022). *Somalia national adaptation plan framework*. Federal Government of Somalia.
- Ministry of Environment and Climate Change. (2024). *National climate change policy*. Federal Government of Somalia.
- Ministry of Environment and Climate Change. (2024). *National environment policy*. Federal Government of Somalia.
- Ministry of Environment and Climate Change. (2024). *NBSAP technical working group meeting records, 2024–2025* [Unpublished meeting records].
- Ministry of Environment and Climate Change. (2025a). *Biodiversity assessment across Somalia’s Federal Member States* [Unpublished technical report].
- Ministry of Environment and Climate Change. (2025b). *Capacity-development and resource-mobilization assessment for Somalia’s updated National Biodiversity Strategy and Action Plan* [Unpublished technical report].
- Ministry of Environment and Climate Change. (2025c). *Environmental and social impact assessment for Somalia’s updated National Biodiversity Strategy and Action Plan* [Unpublished technical report].
- Ministry of Environment and Climate Change. (2025d). *Gender analysis and gender action plan for Somalia’s updated National Biodiversity Strategy and Action Plan* [Unpublished technical report].

- Ministry of Environment and Climate Change. (2025e). *National Biodiversity Strategy and Action Plan gap analysis against the Kunming–Montreal Global Biodiversity Framework* [Unpublished technical report].
- Ministry of Environment and Climate Change. (2025f). *Nationally determined contribution 3.0*. Federal Government of Somalia.
- Ministry of Environment and Climate Change. (2025g). *NBSAP priority targets: GBF-aligned strategic goals and national targets* [Unpublished technical report].
- Ministry of Environment and Climate Change. (2025h). *Policy alignment and biodiversity mainstreaming assessment for Somalia's updated National Biodiversity Strategy and Action Plan* [Unpublished technical report].
- Ministry of Environment and Climate Change. (2025i). *Somalia stakeholder consultation report for the updated National Biodiversity Strategy and Action Plan* [Unpublished consultation report].
- Ministry of Environment and Climate Change. (2025j). *Spatial priorities and action plans for national biodiversity Targets 1, 2, 3, 8, 9, 11 and 12* [Unpublished technical report].
- Ministry of Environment and Climate Change. (2026a). *Action plan for reforming biodiversity-harmful subsidies and incentives in Somalia* [Unpublished technical report].
- Ministry of Environment and Climate Change. (2025). *National action plans for marine turtles, sharks, marine mammals and seabirds in Somalia*. [Unpublished technical report]
- Ministry of Environment and Climate Change. (2026b). *Somalia's seventh national report to the Convention on Biological Diversity*.
- Ministry of Environment and Climate Change. (2026a). *First Approximation of Spatial Priorities and Specialized Action Plan for Area-Based Targets and Harmful Subsidy Elimination*. Revised draft report prepared by Abdulqadir Omar Ziyad. Mogadishu:.
- Ministry of Environment and Rural Development. (2015). *National Biodiversity Strategy and Action Plan of Somalia*. Federal Government of Somalia.
- Ministry of Fisheries and Blue Economy. (2023). *Somalia national blue economy strategy and implementation plan*. Federal Government of Somalia.
- Ministry of Livestock, Forestry and Range. (n.d.). *National charcoal policy*. Federal Government of Somalia.
- Ministry of Livestock, Forestry and Range. (n.d.). *National forest policy*. Federal Government of Somalia.
- National Biodiversity Strategy and Action Plan Project. (2025). *GBF Early Action Support project final report* [Unpublished project report]. Ministry of Environment and Climate Change.
- Somalia Biodiversity Finance Initiative. (2025). *Biodiversity finance policy and institutional review* [Unpublished technical report]. Ministry of Environment and Climate Change & United Nations Development Programme.
- Somalia Biodiversity Finance Initiative. (2025). *Biodiversity expenditure review* [Unpublished technical report]. Ministry of Environment and Climate Change & United Nations Development Programme.
- Somalia Biodiversity Finance Initiative. (2025). *Biodiversity financial-needs assessment* [Unpublished technical report]. Ministry of Environment and Climate Change & United Nations Development Programme.
- Somalia Biodiversity Finance Initiative. (2025). *Biodiversity finance-flow and harmful-incentives assessment* [Unpublished technical report]. Ministry of Environment and Climate Change & United Nations Development Programme.
- Somalia Biodiversity Finance Initiative. (2026). *National biodiversity finance plan for Somalia* [Unpublished technical report]. Ministry of Environment and Climate Change & United Nations Development Programme.

- Somalia National Bureau of Statistics. (2023). *Somalia population estimation survey and national statistical indicators*. Federal Government of Somalia.
- Stockholm International Peace Research Institute. (2019). *Climate-related security risks and peacebuilding in Somalia*. SIPRI.
- <https://www.scribd.com/document/1003031875/Somali-National-Petroleum-Policy-11>
- Thulin, M. (Ed.). (1993–2006). *Flora of Somalia* (Vols. 1–4). Royal Botanic Gardens, Kew.
- United Nations. (1992). *Convention on Biological Diversity*.
- United Nations. (1992). *United Nations Framework Convention on Climate Change*.
- United Nations. (1994). *United Nations Convention to Combat Desertification in those countries experiencing serious drought and/or desertification, particularly in Africa*.
- United Nations. (2015a). *Paris Agreement*.
- United Nations. (2015b). *Transforming our world: The 2030 Agenda for Sustainable Development* (A/RES/70/1).
- United Nations Convention to Combat Desertification. (Somalia 2020 Report). *Land degradation neutrality target-setting programme: Technical guide*. UNCCD Secretariat.
- United Nations Development Programme. (2021). *Social and environmental standards*. UNDP.
- United Nations Development Programme. (2024). *Umbrella programme to support the development of biodiversity finance plans, 2024–2028*. UNDP Biodiversity Finance Initiative.
- United Nations Development Programme. (2025). *Somalia biodiversity finance plan project: PIMS 9915* [Project document].
- United Nations Development Programme, & Ministry of Environment and Climate Change. (2025). *Somalia biodiversity and environmental baseline desk review* [Unpublished technical report].
- United Nations Environment Programme. (2020). *Global Biodiversity Outlook 5*. Secretariat of the Convention on Biological Diversity.
- United Nations Environment Programme. (2021). *Becoming #GenerationRestoration: Ecosystem restoration for people, nature and climate*. UNEP.
- United Nations Environment Programme. (2021). *For people and planet: The United Nations Environment Programme strategy for tackling climate change, biodiversity loss and pollution*. UNEP.
- United Nations Environment Programme. (2023). *State of finance for nature 2023: The big nature turnaround—Repurposing \$7 trillion to combat nature loss*. UNEP.
- United Nations Environment Programme, & Food and Agriculture Organization of the United Nations. (2020). *The United Nations Decade on Ecosystem Restoration: Strategy*. UNEP & FAO.
- United Nations Environment Programme World Conservation Monitoring Centre. (2018). *Protected Planet report 2018: Tracking progress towards global targets for protected areas*. UNEP-WCMC, IUCN, and National Geographic Society.
- United Nations Environment Programme World Conservation Monitoring Centre. (2024). *Protected Planet: The World Database on Protected Areas and World Database on Other Effective Area-Based Conservation Measures*. <https://www.protectedplanet.net>
- UNEP-WCMC and IUCN. (2024). *Protected Planet: The World Database on Protected Areas (WDPA)*. Cambridge: UNEP-WCMC and IUCN. <https://www.protectedplanet.net>.

- World Bank. (2017). *Environmental and social framework*. World Bank.
- World Bank. (2017). *Environmental and Social Standard 1: Assessment and management of environmental and social risks and impacts*. World Bank.
- World Bank. (2017). *Environmental and Social Standard 5: Land acquisition, restrictions on land use and involuntary resettlement*. World Bank.
- World Bank. (2017). *Environmental and Social Standard 6: Biodiversity conservation and sustainable management of living natural resources*. World Bank.
- World Bank. (2017). *Environmental and Social Standard 7: Indigenous peoples/Sub-Saharan African historically underserved traditional local communities*. World Bank.
- World Bank. (2017). *Environmental and Social Standard 10: Stakeholder engagement and information disclosure*. World Bank.
- World Bank. (2020). *Somalia country environmental analysis: Diagnostic study on trends and threats for environmental and natural resources challenges*. World Bank.
- World Bank. (2022). *Somalia country climate and development report*. World Bank Group.
- World Resources Institute. (2024). *Global Forest Watch: Somalia country dashboard*.
<https://www.globalforestwatch.org>