KINGDOM OF CAMBODIA
NATION - RELIGION - KING

NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN



January 2026

Preface

Biodiversity and natural resources are invaluable assets of the Kingdom of Cambodia. They form the foundation of our ecosystems, support the livelihoods and cultural identity of our people, ensure water and food security, and contribute significantly to national economic development and climate resilience. The conservation and sustainable use of biodiversity therefore remain a core responsibility and long-term priority of the Royal Government of Cambodia.

Peace, political stability, and national unity are the fundamental conditions that have enabled Cambodia to advance socio-economic development while strengthening environmental protection and natural resource management. Over past decades, under the wise leadership of **Samdech Akka Moha Sena Padei Techo Hun Sen, President of the Senate and former Prime Minister of the Kingdom of Cambodia**, the country had achieved peace, national reconciliation, and comprehensive development across all sectors. These achievements have created favorable conditions for expanding the protected area (PA) system, strengthening biodiversity conservation, and safeguarding natural heritage for present and future generations.

In the Seventh Legislature of the National Assembly, the Royal Government of Cambodia, under the leadership of **Samdech Moha Borvor Thipadei Hun Manet, Prime Minister of the Kingdom of Cambodia**, introduced Pentagonal Strategy Phase I (2023–2028) as the overarching framework for national development. In alignment with this vision, the Ministry of Environment has developed and is implementing the Circular Strategy on Environment (2023–2028), built upon the pillars of clean, green, and sustainable development. Together with the promulgation of the Environment and Natural Resources Code in 2023, these policy frameworks provide a strong legal and strategic foundation for advancing integrated and effective biodiversity management nationwide.

The **National Biodiversity Strategy and Action Plan (NBSAP) (2026–2030)** represents Cambodia's renewed commitment to conserving biodiversity while supporting sustainable and inclusive development. Building upon previous NBSAPs, this Strategy provides a comprehensive national roadmap to guide institutions at all levels in addressing biodiversity loss, enhancing ecosystem resilience, and ensuring the sustainable use of biological resources. It reflects Cambodia's determination to align national priorities with global biodiversity commitments while responding to emerging environmental, economic, and social challenges.

The successful implementation of the 2026 NBSAP requires the concerted efforts of all ministries and institutions, sub-national administrations, development partners, civil society organizations, indigenous peoples and local communities, the private sector, academia, women, and youth. Biodiversity conservation is a shared responsibility, and its success depends on strong coordination, adequate resources, and sustained cooperation among all stakeholders.

On behalf of the Royal Government of Cambodia and the Ministry of Environment, I am honored to officially present the 2026 NBSAP. I would like to express my sincere appreciation to all ministries, institutions, development partners, technical experts, civil society organizations, and indigenous and community representatives who have contributed their valuable efforts and cooperation to the preparation of this important national document. I trust that this good, collective partnership will continue throughout its implementation, ensuring the conservation, sustainable use, and equitable management of Cambodia's biodiversity for the long-term prosperity of the nation.

Minister of Environment

[signature]

H.E. Dr. EANG Sophalleth

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Acknowledgement

Cambodia's 2026 NBSAP was prepared under the overall leadership and coordination of the Ministry of Environment, the environment secretariate of the Royal Government of Cambodia through the MOE General Directorate of Policy and Strategy (MOE GDPS). The NBSAP updates and builds on the 2016 NBSAP, aligning Cambodia's national priorities with the Kunming–Montreal Global Biodiversity Framework (KM-GBF) and is hoped to strengthen the policy results, and implementation architecture required to achieve national biodiversity outcomes by 2030.

The MOE GDPS express its sincere appreciation to the Royal Government's senior leadership for sustained guidance, directions and commitment to biodiversity conservation, sustainable use of biological resources, and equitable benefit-sharing. Particular thanks are extended to the MOE leadership and relevant General Directorates and departments for their stewardship of the technical process, including facilitation of the evidence base, coordination of inputs, and consolidation of its validation.

This NBSAP is the product of extensive multi-sector collaboration through the Biodiversity Technical Working Group (BTWG). The MOE GDPS gratefully acknowledges the contributions of all BTWG member institutions, line ministries, sub-national administrations, academic and research institutions, and private-sector representatives, whose expertise and cooperation shaped the strategic targets, indicators, and implementation action plans.

We also acknowledge and thank the many technical experts who contributed analyses, thematic studies, data compilation, and NBSAP development. Their contributions strengthened the scientific rigor, policy relevance, and practicality of the NBSAP, and helped ensure coherence with national development priorities, environmental Cambodia's international commitments under the United Nations Convention on Biological Diversity.

The NBSAP was developed through a participatory and inclusive consultation process. The MOE GDPS extends appreciation to all stakeholders who engaged constructively through 18 stakeholder workshops and public consultations held across the country, and in numerous other discussions, feedback and dialogues. The perspectives provided by Indigenous Peoples and local communities, civil society organizations, community-based organizations, women's and youth groups, development partners, and the private sector significantly improved the quality, equity, and practicality of the 2026 NBSAP.

Finally, we convey our gratitude to development partners and donors for technical cooperation and support that enabled consultations, analysis, and coordination throughout the NBSAP update process, especially the United Nations Development Program and Global Environment Facility for financial and technical support. The MOE GDPS also recognizes the dedication and hard work of all staff and counterparts who contributed time, expertise, and sustained effort to finalize this 2026 NBSAP for national implementation soon in the future.

Secretary of State, Ministry of Environment

[signature]

H.E. Dr. CHUOP Paris

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List of Abbreviations

4Rs	Refuse, Reduce, Reuse, and Recycle
ABC	Association of Banks in Cambodia
ABS	Access and Benefit-Sharing
ABS-CH	Access and Benefit-Sharing Clearing-House
ACCB	Angkor Centre for Conservation of Biodiversity
ADB	Asian Development Bank
AFoCO	Asian Forest Cooperation Organization
ASEAN	Association of Southeast Asian Nations
BBNJ	Marine Biological Diversity of Areas Beyond National Jurisdiction
BIOFIN	Biodiversity Finance Initiative
BTWG	Biodiversity Technical Working Group
CamGAP	Cambodian Good Agricultural Practices
CBD	Convention on Biological Diversity
CBNRM	Community-Based Natural Resource Management
CBO	Community-Based Organizations
CBET	Community-Based Ecotourism
CDC	Council for the Development of Cambodia
CDP	Commune Development Plan
CEEM	Cambodia Energy Economics Model
CEMIS	Cambodia Environmental Management Information System
CEPA	Communication, Education and Public Awareness
CEPF	Critical Ecosystem Partnership Fund
CF	Community Forests
CFi	Community Fisheries
CFMP	Community Forestry Management Plan
CFR	Community Fish Refuges
CHM	Clearing-House Mechanism
CI	Conservation International
CIP	Commune Investment Plan
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CO_2e	Carbon dioxide equivalent
COP	Conference of the Parties
CPA	Community Protected Area
CR	Critically Endangered (IUCN Category)
CSDG	Cambodia's Sustainable Development Goals
CSE	Circular Strategy on Environment
CSO	Civil Society Organization
CSR	Corporate Social responsibility
DD	Data Deficient
DRR	Disaster Risk Reduction
DSI	Digital Sequence Information
EbA	Ecosystem-Based Adaptation
eco-DRR	Ecosystem-based Disaster Risk Reduction
eDNA	Environmental DNA
EDRR	Early Detection and Rapid Response
EIA	Environmental Impact Assessment
ELC	Economic Land Concession
ELSA	Essential Life Support Areas
EN	Endangered (IUCN Category)
ENR	Environment and Natural Resources
ERIP	Ecosystem Restoration Integrated Program
EPR	Extended Producer Responsibility
ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
ESG	Environmental, Social, and Governance
ESIA	Environmental and Social Impact Assessment

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ESRM	Environmental and Social Risk Management
EU	European Union
FA	Forestry Administration
FAO	Food and Agriculture Organization of the United Nations
F&F	Fauna & Flora
FiA	Fisheries Administration
FPIC	Free, Prior and Informed Consent
FSC	Forest Stewardship Council
GBIF	Global Biodiversity Information Facility
GDFW	General Directorate of Forestry and Wildlife
GIS	Geographic Information System
GM	Genetically Modified
GMO	Genetically Modified Organisms
GR-TK	Genetic Resources and Traditional Knowledge
IAS	Invasive Alien Species
IBA	Important Bird and Biodiversity Areas
ICLT	Indigenous Communal Land Title
IFM	Improved Forest Management
INGO	International Non-Governmental Organization
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPLC	Indigenous Peoples and Local Communities
IPM	Integrated Pest Management
IUCN	International Union for Conservation of Nature
JICA	Japan International Cooperation Agency
KAP	Knowledge, Attitudes and Practices
KBA	Key Biodiversity Area
KM-GBF	Kunming-Montreal Global Biodiversity Framework
KRA	Key Result Areas
LC	Least Concern
LDCF	Least Developed Countries Fund
LMAP	Land Management and Administration Project
LMMA	Locally Managed Marine Area
LMO	Living Modified Organism
LUCF	Land-Use Change and Forestry
LUMP	Land Use Master Plan
MAFF	Ministry of Agriculture, Forestry and Fisheries
MCFA	Ministry of Culture and Fine Arts
MCR	Ministry of Cults and Religion
MEA	Multilateral Environmental Agreement
MEF	Ministry of Economy and Finance
METT	Management Effectiveness Tracking Tool
MFMA	Marine Fisheries Management Area
MIH	Ministry of Industry and Handicraft
MIME	Ministry of Industry, Mining and Energy
MLMUPC	Ministry of Land Management, Urban Planning and Construction
MME	Ministry of Mines and Energy
MOC	Ministry of Commerce
MOD	Ministry of Defense
MOE	Ministry of Environment
MOEYS	Ministry of Education, Youth and Sport
MOFAIC	The Ministry of Foreign Affairs and International Cooperation
MOH	Ministry of Health
MOI	Ministry of Interior
MOJ	Ministry of Justice
MOINF	Ministry of Information
MOLVT	Ministry of Labor and Vocational Training
MOP	Ministry of Planning

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MOSVY	Ministry of Social Affairs, Veterans and Youth Rehabilitation
MOT	Ministry of Tourism
MOWA	Ministry of Women's Affairs
MOWRAM	Ministry of Water Resources and Meteorology
MPA	Marine Protected Area
MPWT	Ministry of Public Works and Transport
MRD	Ministry of Rural Development
MRV	Measurement, Reporting and Verification
MTEF	Medium-Term Expenditure Framework
NBFP	National Biodiversity Finance Plan
NbS	Nature-based Solutions
NBSAP	National Biodiversity Strategy and Action Plan
NCA	Natural Capital Accounting
NCCC	National Climate Change Committee
NCDD	National Committee for Sub-National Democratic Development
NCDM	National Committee for Disaster Management
NCLMUP	National Committee for Land Management and Urban Planning
NCSD	National Council for Sustainable Development
NDC	Nationally Determined Contribution
NE	Not Evaluated
NESAP	National Environmental Strategy and Action Plan (2016–2023)
NFMS	National Forest Monitoring System
NFP	National Forest Program
NGO	Non-Governmental Organization
NISSAP	National Invasive Species Strategy and Action Plan
NPASMP	National Protected Area Strategic Management Plan (2017–2031)
NR	National Report to the Convention on Biological Diversity
NSDP	National Strategic Development Plan
NT	Near Threatened (IUCN Category)
NTFP	Non-Timber Forest Product
OECM	Other Effective Area-based Conservation Measure
PA	Protected Area
PAME	Protected Area Management Effectiveness
PCA	Protected and Conserved Area
PDOE	Provincial Department of Environment
PES	Payment for Ecosystem Services
PIP	Public Investment Program
PLUP	Participatory Land Use Planning
PRSP	Poverty Reduction Strategy Paper
PWS	Protected Wildlife Sanctuary
R&D	Research and Development
REDD+	Reducing Emissions from Deforestation and Forest Degradation, plus conservation, sustainable management of forests and enhancement of forest carbon stocks
RGC	Royal Government of Cambodia
RLE	Red List of Ecosystems
RUA	Royal University of Agriculture
RUPP	Royal University of Phnom Penh
SAGE	Self-Assessment for Gender Equality
SCCF	Special Climate Change Fund
SDG	Sustainable Development Goal
SEA	Strategic Environmental Assessment
SEEA	System of Environmental-Economic Accounting
SERC	Securities and Exchange Regulator of Cambodia
SERCA	SMART–EarthRanger Conservation Alliance
SMART	Spatial Monitoring and Reporting Tool
SRI	System of Rice Intensification
STAR	Species Threat Abatement and Restoration

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TEK	Traditional Ecological Knowledge
TK	Traditional Knowledge
TSA	Tonle Sap Authority
TURF	Territorial Use Rights for Fishing
TWG	Technical Working Group
UN	United Nations
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNFCCC	United Nations Framework Convention on Climate Change
VU	Vulnerable (IUCN Category)
WCS	Wildlife Conservation Society
WDPCA	World Database on Protected and Conserved Areas
WRRT	Wildlife Rapid Rescue Team
WWF	World Wide Fund for Nature

A Glossary of Terms is provided as an Annex to this document.

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Executive Summary

Introduction

Cambodia's biodiversity and ecosystems underpin national development objectives, food and nutrition security, livelihoods, public health, cultural values, and climate resilience. Forest landscapes, the Mekong and Tonle Sap system, floodplains, wetlands, and coastal and marine ecosystems provide fisheries productivity, water regulation, soil fertility, pollination, timber and non-timber products, natural hazard buffering, and tourism potential. Biodiversity loss and ecosystem degradation therefore create direct risks to economic performance, human well-being, and long-term resilience.

This National Biodiversity Strategy and Action Plan (NBSAP) for 2026-2030 is the national framework for halting and reversing biodiversity loss by 2030, while strengthening nature's contributions to people. It aligns national priorities with the Kunming-Montreal Global Biodiversity Framework (KM-GBF), and it is designed to be implementation-ready. The NBSAP combines a national results framework with a consolidated Implementation Action Plan that links targets to strategic actions, responsible institutions, monitoring indicators, and delivery milestones. It is intended to guide spatial planning, Protected Area (PA) and landscape management, restoration, sustainable use, pollution control, climate action, incentive reform, biodiversity finance, business accountability, knowledge systems, and inclusive governance.

Biodiversity Status, Trends and Threats

Cambodia's Biodiversity

Cambodia is a biodiversity-rich country within the Indo-Burma Biodiversity Hotspot, spanning major forest types, the Mekong river and floodplain system, the Tonle Sap wetlands and coastal mangroves. This ecological diversity underpins critical ecosystem services, including fisheries, water regulation, timber and non-timber forest products, traditional medicines and rural livelihoods. Flora includes more than 3,000 recorded plant species and fauna includes more than 600 bird species and around 160 mammal species, alongside diverse reptiles, amphibians and fish. Cambodia supports at least 274 globally threatened species and remains a high conservation priority because it retains some of the most viable remaining populations of several wide-ranging species, especially those associated with deciduous dipterocarp forests and plains wetlands. Freshwater biodiversity is particularly significant, with the Mekong and Tonle Sap supporting high-concern species and migratory fish that are essential for food security.

Threats to Biodiversity

Cambodia's biodiversity is under intense pressure from ecosystem conversion, illegal and unsustainable logging and hunting, overfishing, illegal wildlife trade, expanding infrastructure, and limited enforcement capacity and financing. The most severe threats include plantation agriculture, dams and hydropower, wetland drainage and conversion, sand mining, and coastal development.

Agricultural expansion, encroachment and land grabbing continue to drive habitat loss and fragmentation, including around PAs, while forest fires, particularly in deciduous dipterocarp forests, further degrade habitats. Roads increase access to remote areas, thereby accelerating illegal logging, hunting, and settlement, fragmenting corridors, and reducing connectivity. Large mammals such as Asian Elephant, Gaur and Banteng are declining due to habitat loss and poaching, while widespread snaring and hunting for household use affect many smaller mammal species.

Wetlands and river systems are degraded by drainage, conversion, sand mining and water infrastructure that alters flows and disrupts migration, compounded by overfishing and pollution that threaten high-concern aquatic species including the Irrawaddy Dolphin and the Mekong Giant Catfish. Coastal ecosystems, including mangroves, seagrasses, and coral reefs, face pressure from unregulated fishing,

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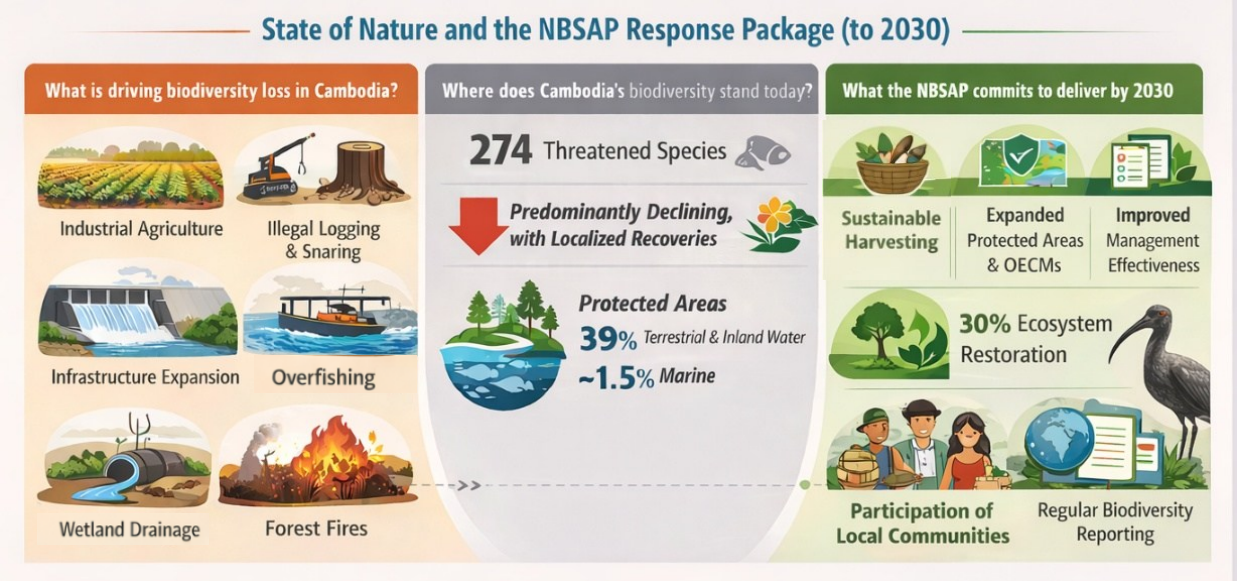
reclamation, tourism, aquaculture, and shipping, with climate change intensifying these impacts. Underlying these pressures are governance weaknesses, limited accountability and insufficient mainstreaming of biodiversity into land-use and investment decisions, with climate variability and extremes amplifying overall risk.

Biodiversity Trends

Reflecting global and regional trends, recent evidence indicates Cambodia's biodiversity is on a predominantly negative trajectory across ecosystems and species groups. Spatial analyses and stakeholder consultations report that major ecosystem types, forests, grasslands, wetlands, coastal zones and marine areas, are widely perceived to be degrading, consistent with ongoing tree cover loss and fragmentation in key forest types along agricultural, concession and infrastructure frontiers. Declines are also reported in Tonle Sap and Mekong seasonally inundated systems due to conversion for rice and aquaculture, and in coastal and mangrove systems under pressure from aquaculture, tourism and urban expansion.

Across taxa, stakeholders perceive widespread population declines in mammals, birds, reptiles and amphibians, freshwater fish and marine species, with few stable trends and only isolated improvements. Mammals are described as sharply declining, especially large-bodied species affected by snaring, poaching and habitat loss. Birds show mixed outcomes with some local stability in well-managed sites, but overall declines dominate. Freshwater fish in Tonle Sap and Mekong are reported to be in serious decline linked to hydropower, overfishing and ecosystem degradation, while marine trends are inferred from limited monitoring.

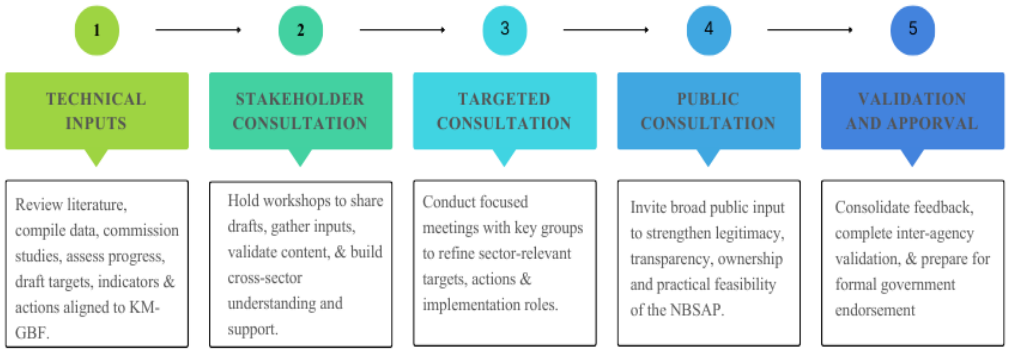
Site-based monitoring shows targeted, sustained conservation can stabilize or improve some species, including select waterbirds and Siamese crocodile in protected and actively managed sites. However, positive trends remain localized, and the prevailing national pattern is continued ecosystem degradation and increasing pressure on species populations.



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NBSAP Development Process and Stakeholder Engagement

The 2026 NBSAP was developed through a whole-of-government and whole-of-society approach, implemented across five major phases. These phases were designed to ensure that biodiversity priorities are informed by scientific evidence, aligned with sectoral policies, and shaped by the knowledge and perspectives of all relevant stakeholders.



Technical inputs involved 2016 NBSAP targets being mapped to the KM-GBF and updated into the 2026 NBSAP through commissioned studies, policy reviews and expert consultations to refine targets, indicators and actions. Stakeholder and public consultation involved a total of 17 stakeholder and public meetings. Seven stakeholder consultation meetings were conducted to further draft targets, indicators, and actions were discussed and refined. Targeted stakeholder consultations were then conducted with line ministries, Non-Governmental Organizations (NGOs), the private sector, and Indigenous Peoples and Local Communities (IPLC) groups. Public consultation aimed at the equitable inclusion of all groups. A public channel was set up on social media with over 250 participants, and there were 10 public consultations undertaken across the country.

Guiding Principles and Cross-Cutting Commitments

Cambodia's 2026 NBSAP is grounded in a set of guiding principles and cross-cutting commitments that underpin all strategy elements. The 2026 NBSAP integrates an ecosystem approach, a human-rights-based approach, gender equality, respect for Traditional Knowledge (TK), One Health and biodiversity–health linkages, and science-based decision-making. These principles reflect Cambodia's commitment to inclusive, equitable, and evidence-based biodiversity governance, engaging the whole of society and honoring inter-generational equity. They are also fully aligned with the Royal Government of Cambodia's Pentagonal Strategy Phase I (2023–2028), which places environmental sustainability, human capital, technological innovation, and social inclusion at the core of national development.

Progress and Lessons from 2016 NBSAP

Cambodia's 2016 NBSAP aligned national priorities with global biodiversity goals through four strategic objectives and 20 Aichi-aligned targets, supported by sectoral action plans and partial mainstreaming into national development and climate frameworks. A major achievement was rapid PA expansion, reaching about 41 percent of national territory by 2018 through new sites and corridors, complemented by ecosystem-specific policies and early Payment for Ecosystem Services (PES) pilots that linked conservation with community benefits. However, mainstreaming across high-impact sectors remained uneven, with continued habitat loss driven by agriculture, infrastructure, and mining, and limited cross-sector coordination and accountability.

Implementation expanded community-based conservation and stakeholder engagement through an inclusive inter-ministerial process and growth in Community Forests, Community Protected Area, and

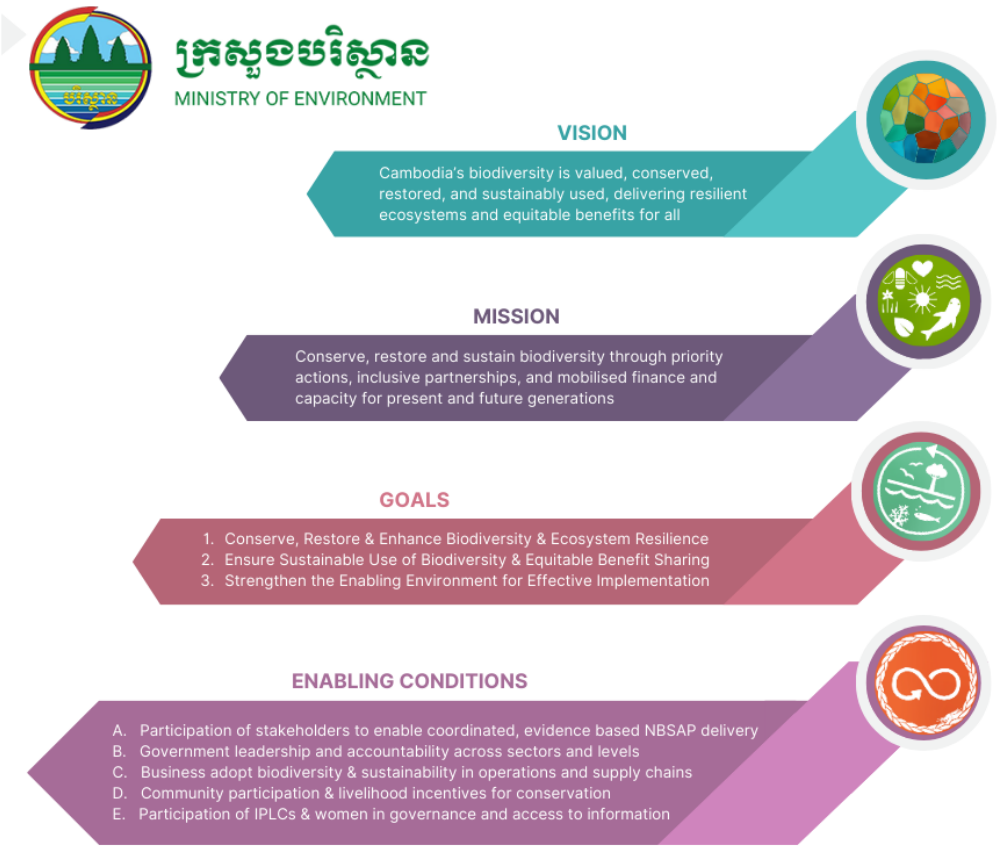
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Community Fisheries mechanisms, supported by civil society partnerships and increasing recognition of IPLCs as essential partners. Results were mixed due to resource and capacity constraints, unclear tenure in some areas, persistent illegal activities, and participation that was sometimes consultative rather than decision-influencing. Public awareness and education increased through communication, education and public awareness, and stronger integration into training and curricula, alongside efforts to strengthen biodiversity information through the Convention on Biological Diversity Clearing-House Mechanism (CHM) and development of Cambodia Environmental Management Information System (CEMIS), but impacts were not consistently measured, and data remained fragmented, with CHM inactive and CEMIS not yet fully operational. Across the cycle, weak monitoring, enforcement, and accountability limited results, and inclusion remained insufficient in practice, underscoring the need for clear mandates, durable financing, stronger coordination, operational M&E systems, and explicit equity measures in the 2026–2030 NBSAP.

Strategic Framework (Vision, Mission, Goals, and Enabling Conditions)

Cambodia's Vision to be realized through the implementation of the 2026 NBSAP:

By 2050, Cambodia's biodiversity and ecosystems are valued, conserved, restored, and sustainably used, sustaining essential ecosystem services, supporting a healthy and resilient environment, and delivering equitable benefits that enhance the well-being, cultural heritage, and sustainable development of all Cambodians.



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Over the next 5 years, Cambodia will take priority actions to conserve, restore, and expand natural habitats and strengthen resilience; ensure sustainable use and fair and equitable sharing of benefits; engage government, business, and underrepresented groups including women, youth, and Indigenous Peoples and Local Communities (IPLCs); and mobilize the means of implementation to safeguard nature for present and future generations.

NBSAP structure

The NBSAP is organized around three Goals, five Enabling Conditions, and six Key Result Areas that cluster the 23 Targets and their actions for planning, delivery, and reporting.

Goals

Goal 1: *Conserve, Restore and Enhance Biodiversity and Ecosystem Resilience.* This Goal aims to secure priority species, ecosystems, and ecological processes; restore degraded areas; and maintain ecological connectivity and ecosystem services, with an emphasis on critical habitats and Key Biodiversity Areas, the recovery of threatened species, and genetic diversity.

Goal 2: *Ensure Sustainable Use of Biodiversity and Equitable Benefit Sharing for Communities and the National Economy.* This Goal aims to manage the use of wild species, agricultural biodiversity, forests, inland waters, and marine and coastal resources within safe ecological limits so that benefits are stable over the long term for communities and the wider economy, supported by sustainable production landscapes and seascapes, biodiversity-positive value chains, and fair and equitable sharing of benefits from biodiversity and genetic resources.

Goal 3: *Strengthen the Enabling Environment for Effective NBSAP Implementation.* This goal aims to strengthen laws and policies, institutions, finance, science–policy linkages, rights-based and gender-responsive governance, and biodiversity information systems, including mainstreaming biodiversity into national planning and finance, strengthening capacity and partnerships, and improving incentives and accountability mechanisms so that public and private decisions align with NBSAP targets.

Enabling Conditions

The five Enabling Conditions below strengthen the systems, institutions, and partnerships needed to implement the Key Result Areas and Targets, align them with national priorities, and support Cambodia's commitments under the Kunming-Montreal Global Biodiversity Framework (KM-GBF). Each Enabling Condition is supported by a set of enabling actions that translate the framework into practical steps, with indicative lead institutions for implementation.

A. *Participation of all stakeholders to enable coordinated, evidence-informed 2026 NBSAP delivery.* This enabling condition strengthens coordination and adaptive management by further institutionalizing the Biodiversity Technical Working Group (BTWG), maintaining an integrated implementation action plan, supporting national learning and stocktaking, sustaining public awareness and behaviour change, and enabling structured alignment of NGO initiatives with national priorities.

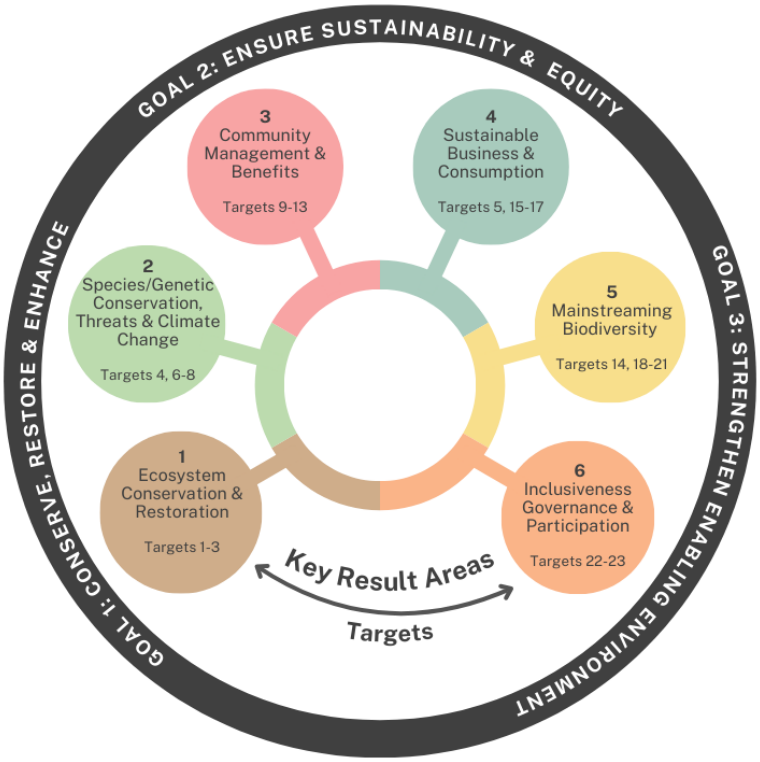
B. *Government leadership and accountability across sectors and levels.* This enabling condition reinforces multi-level governance by establishing sub-national mechanisms aligned to the BTWG model, providing targeted capacity development for planning and reporting, operationalizing environmental financing mechanisms under the Environment and Natural Resources (ENR) Code (2023), strengthening data integration and use through the Cambodia Environmental Management Information System (CEMIS), and institutionalising a science–policy interface.

C. *Business adoption of biodiversity-friendly practices.* This enabling condition supports the private-sector mainstreaming of biodiversity through applied evidence and case studies, a national business-biodiversity platform for public–private dialogue, practical sector guidance and training, transparency tools such as a registry of biodiversity-friendly businesses, and capacity building for business associations.

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D. *Community participation and livelihood incentives for conservation and sustainable use.* This enabling condition links conservation to improved livelihoods by establishing gender-responsive livelihood baselines, providing vocational training and enterprise support, strengthening biodiversity-friendly value chains and market access, supporting TK consistent with the United Nations Convention on Biological Diversity (CBD) Article 8(j), enabling accessible community finance mechanisms, and promoting participatory monitoring.

E. *Participation of IPLCs and women in biodiversity governance and access to information.* This enabling condition strengthens inclusion and accountability by maintaining a regularly updated IPLC database, compiling gender-disaggregated leadership and participation data, implementing practical reforms to address systemic exclusion, providing targeted capacity development for effective participation, and improving access to biodiversity information and data to support transparent, informed decision-making.



National Biodiversity Action Plan

For delivery to 2030, the 2026 NBSAP is structured around 23 national Targets—closely aligned with the KM-GBF Targets—organized into six Key Result Areas that cluster indicators and actions for planning, coordination, implementation, and reporting. Together, these provide a coherent pathway to achieving national biodiversity outcomes while fulfilling Cambodia's commitments under the KM-GBF.

Key Result Area 1 – Ecosystem Conservation and Restoration

This Key Result Area aims to ensure that Cambodia's terrestrial, freshwater, coastal, and marine ecosystems are planned and managed to avoid habitat loss, restore at least 30% of degraded terrestrial and at least 10% of degraded marine and coastal areas, and secure effective and equitable protection through PAs and Other Effective Area-based Conservation Measures (OECMs).

Target 1: Plan and Manage all Areas to Reduce Biodiversity Loss

By 2030, ensure that all areas of high biodiversity importance are identified and brought under participatory, integrated and biodiversity-inclusive spatial planning and management processes, with effective and equitable management addressing key drivers of land-use and sea-use change, and with natural habitat loss brought close to zero.

Background and context: Biodiversity-inclusive spatial planning is critical for reducing habitat loss and fragmentation as agriculture, infrastructure, and urban expansion continue to reshape forests, wetlands, and marine and coastal areas. Recent consultations indicate widespread ecosystem degradation and uneven monitoring, which limits timely, evidence-based planning decisions.

Policy frameworks: Cambodia has a strong base of planning and environmental instruments, including national spatial planning policy, land and urban planning laws, and environmental requirements for impact assessment and public participation under the ENR Code (2023). Sectoral frameworks for PAs, forestry, fisheries, and water resources provide additional entry points for zoning and management.

Gaps and challenges: Biodiversity values and ecosystem services are not consistently integrated into spatial plans, and overlapping mandates and fragmented processes undermine accountability at both national and subnational levels. Data remain dispersed and inconsistently shared, and subnational capacity for geospatial analysis and enforcement is often limited.

Opportunities: Delivery can be accelerated by making biodiversity-sensitive zoning and avoidance of high-value areas standard in national and subnational plans, supported by consistent geospatial prioritization and stronger PA and Marine Fisheries Management Area (MFMA) zoning and corridor planning. Operational CEMIS-linked data governance, combined with participatory planning that incorporates IPLC and gender considerations, can improve transparency, uptake, and investment screening.

Target 2: Restore up to 30% of degraded ecosystems

By 2030, at least 30% of the total area of degraded terrestrial, inland water, marine and coastal ecosystems will be defined, mapped, prioritized and under restoration to enhance biodiversity, connectivity, and ecosystem functions and services.

Background and context: Ecosystem restoration has become a national priority in Cambodia, which has experienced a long-term decline in forest cover and increasing degradation across forests, floodplains, wetlands, and coastal and marine ecosystems. Recent large-scale initiatives, including the Ecosystem Restoration Integrated Program in the Tonle Sap Basin and the Cambodia Sustainable Landscape and Ecotourism Project in the Cardamom Mountains–Tonle Sap landscape, demonstrate how restoration is linked to livelihoods, watershed protection, and ecotourism at meaningful scales.

Policy frameworks: Cambodia has a solid restoration policy base, including the Law on Forestry (2002), the community forestry (CF) framework, the Zoning Guideline for PAs (2017), and fisheries legislation that support the rehabilitation of forests, coastal, and marine ecosystems. More recent whole-of-government frameworks, including the ENR Code (2023), the Circular Strategy on Environment (2023–2028; CSE), National PA Strategic Management Plan (2017–2031), and climate commitments under the Long-Term

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Strategy for Carbon Neutrality (2021) and the Nationally Determined Contribution (NDC) 3.0 (2025), provide stronger mandates and program entry points for nature-based restoration.

Gaps and challenges: Restoration is constrained by continuing drivers of degradation, including deforestation, land conversion, infrastructure expansion, and unsustainable extraction, with freshwater and coastal systems under additional pressure from altered hydrology, sand mining, overfishing, aquaculture, and coastal development. Evidence cited highlights severe stress in the Tonle Sap and Mekong systems, substantial losses of mangrove and seagrass, persistent forest fragmentation along development frontiers, and weaker monitoring of marine trends, all of which complicate prioritization and performance tracking.

Opportunities: Practical delivery can scale quickly by building on recent experience, using remote sensing and spatial planning tools to define, map, and prioritize degraded ecosystems, and by embedding restoration targets into national and subnational plans. Financing prospects are also improving through alignment with climate and green investment agendas, including Reducing Emissions from Deforestation and Forest Degradation (REDD+) and blue carbon, phased expansion of PES, and emerging biodiversity and sustainable finance instruments, provided safeguards and credible measurement are in place.

Target 3: Effectively manage PAs and establish OECM sites

By 2030, at least 30 percent of terrestrial and inland water areas, and at least 10% of marine and coastal areas are conserved by the PA system and other effective area-based conservation measures (OECMs), with effective management in place to ensure the 2050 vision, while ensuring equitable participation with inclusive processes and outcomes, and recognizing the roles of indigenous peoples, local communities, women and youth.

Background and context: Cambodia's PA network has expanded rapidly and now covers a large share of the national territory, but ecological representativeness and management effectiveness are uneven, particularly for marine, coastal, wetland, grassland, karst, and riparian systems.

Policy frameworks: PAs are supported by a mature legal and planning framework, including PA classification and zoning provisions, PA system planning, and site-level management planning, with a clear basis to recognize OECMs where governance outside the PA system can deliver durable biodiversity outcomes.

Gaps and challenges: Persistent illegal logging, land conversion, poaching, and unsustainable resource use continue in and around many sites, compounded by underfunding, staffing constraints, incomplete zoning and management plans, and overlapping mandates that weaken enforcement and coordinated decision-making.

Opportunities: The fastest gains will come from completing zoning and management plans, targeting enforcement and financing to the most threatened sites, and using a national OECM framework to recognize effective community, customary, and private stewardship that secures underrepresented ecosystems and improves equity outcomes.

Key Result Area 2 – Species and Genetic Conservation, Threat Reduction and Climate Resilience

This Key Result Area aims to halt species extinction and conserve genetic diversity, preventing and managing Invasive Alien Species (IAS), reducing pollution to levels harmful to biodiversity, and integrating climate resilience and Nature-based Solutions (NbS) into policies, planning and implementation.

Target 4: Halt Species Extinction and Protect Genetic Diversity

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By 2030, halt the human-induced extinction of threatened species, reduce extinction risks and ensure the restoration of genetic diversity in wild and domesticated populations through in situ and ex situ conservation and sustainable management.

Background and context: Cambodia supports significant concentrations of globally threatened species and has demonstrated that focused interventions can stabilize or recover select taxa through *in situ* protection, conflict reduction, and targeted *ex situ* support.

Policy frameworks: Species and genetic conservation are anchored in PA and natural resource laws, species-focused planning instruments, community-based management mechanisms, and international commitments on biodiversity and wildlife trade that reinforce domestic regulation and compliance.

Gaps and challenges: Extinction risk remains driven by habitat loss and degradation, overexploitation and illegal trade, hydrological alteration, and escalating climate impacts, while baseline data, systematic trend monitoring, and coordinated recovery planning remain incomplete for many taxa and landscapes.

Opportunities: Scaling proven recovery models, strengthening national threat listings and enforcement systems, building a practical national species and genetic monitoring index, and expanding incentive-based community stewardship can deliver measurable reductions in extinction risk and support coexistence.

Target 6: Control and manage Invasive Alien Species

By 2030, major invasive alien species (IAS) and their pathways have been identified, prioritized and controlling measures determined and implemented to reduce and minimize rate of invasion and their impacts on biodiversity and ecosystem services.

Background and context: IAS are a growing cross-sector threat to Cambodia's wetlands, rivers, agriculture, and fisheries, with established invasives already degrading habitats and ecosystem services.

Policy frameworks: Cambodia has a policy basis for IAS prevention and control through national biodiversity planning, shared mandates across environment and agriculture agencies, border and quarantine functions, and an existing communications approach intended to shift behavior in high-risk pathways.

Gaps and challenges: Practical control is constrained by limited funding and technical capacity, fragmented distribution and impact data, uneven enforcement across pathways such as trade and aquaculture, and inconsistent coordination and public awareness at national and subnational levels.

Opportunities: Developing a prioritized national IAS list, strengthening pathway controls and inspections, establishing an early-detection and rapid-response system linked to community reporting, and targeting control efforts in high-value ecosystems and PAs can shift effort from reactive projects toward a durable national program.

Target 7: Reduce Pollution to Levels that are not Harmful to Biodiversity

By 2030, pollutant pressures on terrestrial and aquatic ecosystems are substantially reduced to levels that are not detrimental to ecosystem function and biodiversity, with effective measures in place to mitigate cumulative effects of pollution (nutrients, pesticides and other hazardous chemicals), and plastic pollution.

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Background and context: Pollution pressures are increasing from agricultural intensification, urban waste leakage, industrial and mining discharges, and river basin disturbance, with nutrient loading, plastics, and localized heavy metals affecting freshwater and coastal ecosystems.

Policy frameworks: Cambodia has established a layered pollution control framework through environmental quality standards, water pollution and solid waste regulations, pesticide and fertilizer management provisions, urban waste policies, and the ratification of international conventions that support national enforcement of chemicals and waste regulations.

Gaps and challenges: Diffuse pollution is difficult to monitor and regulate, enforcement capacity and inter-agency coordination remain limited, waste collection and recycling systems lag behind consumption growth, and climate extremes amplify risks to runoff and pollutant concentrations.

Opportunities: Tightening priority controls under the circular economy agenda, strengthening practical monitoring and public reporting, scaling safer, more efficient nutrient and pesticide management in key catchments, and mobilizing private-sector participation in waste reduction can reduce loads to ecologically safer levels.

Target 8: Minimize the Impacts of Climate Change on Biodiversity and Build Resilience

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By 2030, the impacts of climate change on biodiversity are reduced and minimized, through nature-based solutions, ecosystem-based approaches, climate mitigation and adaptation, and disaster risk reduction strategies.

Background and context: Climate hazards are already affecting ecosystems and livelihoods through droughts, floods, heat, and coastal salinity intrusion, and projected warming and increased rainfall variability will further stress freshwater, forest, coastal, and marine systems.

Policy frameworks: Climate resilience for biodiversity is supported by national climate commitments and adaptation planning, Disaster Risk Reduction frameworks, and cross-sector strategies that increasingly position NbS as core delivery mechanisms.

Gaps and challenges: Climate impacts interact with existing pressures, including altered hydrology, habitat fragmentation, and coastal degradation, while climate risk is not yet consistently embedded in conservation planning, site management, and investment screening across all sectors and provinces.

Opportunities: Prioritizing Ecosystem-based Adaptation and restoration in floodplains, watersheds, mangroves, and seagrass systems, linking biodiversity and climate Measurement, Reporting and Verification (MRV) through CEMIS, and aligning safeguards and finance with national climate frameworks can scale resilient conservation with community co-benefits.

Key Result Area 3 – Mainstreaming Biodiversity Across Government and Society

This Key Result Area aims to mainstream biodiversity across government and society by embedding biodiversity values in decision-making, reforming harmful and scaling up positive incentives, mobilizing sustainable finance, strengthening capacity and technology, and improving biodiversity knowledge systems to guide action.

Target 14: Integrate Biodiversity in Decision-Making at Every Level

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By 2030, biodiversity values are integrated into national, sub-national, local and private sector policies, regulations, planning and decision-making processes,

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ensuring that key public and private activities, fiscal policies and financial flows are progressively aligned with Cambodia's sustainable development goals and the Global Biodiversity Framework.

Background and context: Biodiversity and ecosystem service values are increasingly recognized in national planning, and practical pilots in natural capital accounting and ecosystem service mapping are beginning to influence land-use and investment decisions. Integration at the subnational level is emerging through alignment of community-based resource management with commune planning and public investment processes.

Policy frameworks: The ENR Code (2023) strengthens requirements to integrate biodiversity into decisions and reinforces Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) as mainstreaming tools. Earlier spatial planning and land management laws, plus sectoral frameworks in forestry, fisheries, and PAs, provide additional entry points to embed biodiversity in plans, budgets, and approvals.

Gaps and challenges: Biodiversity integration remains uneven beyond the environmental sector because valuation tools, technical guidance, and routine screening remain limited. SEA is rarely applied in practice, and biodiversity accounts and datasets remain project-based, fragmented, and not yet institutionalized in core planning and statistics systems.

Opportunities: Cambodia can scale integration by expanding System of Environmental-Economic Accounting-style accounting, strengthening SEA application in priority sectors, and requiring consistent biodiversity risk and dependency screening in public investment and major private projects. Scaling proven approaches for embedding Community Protected Areas (CPAs), CFs, MFMAs, and Community Fisheries (CFi) into commune and provincial plans, alongside clear Free, Prior and Informed Consent (FPIC) processes where relevant, can make biodiversity mainstreaming routine at the local level.

Target 18: Reduce Harmful Incentives and Scale Up Positive Incentives for Biodiversity

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By 2030, the elimination, phasing out, or reform of incentives, including subsidies, that are harmful to biodiversity and the scaling up of positive incentives for the conservation and sustainable use of biodiversity.

Background and context: Past incentive structures have often favored land and commodity expansion, short-term timber extraction, and unsustainable harvesting, contributing to habitat conversion and ecosystem decline. In practice, harmful incentives also arise from regulatory gaps and weak enforcement that implicitly reward overexploitation.

Policy frameworks: The 2016 NBSAP established a policy basis to reform harmful incentives and expand positive instruments such as eco-taxes and PES. The ENR Code (2023), the CSE (2023–2028), and broader development strategies provide stronger mandates to operationalize economic instruments and align fiscal policy with biodiversity objectives.

Gaps and challenges: Progress has been limited because entrenched sector incentives are difficult to unwind, and positive mechanisms remain small-scale and often donor-dependent. Weak inter-ministerial coordination, limited integration of biodiversity criteria into budgeting and investment rules, and the need for equitable safeguards for IPLCs constrain reform.

Opportunities: Biodiversity Finance Initiative (BIOFIN) methods can be used to quantify harmful incentives, build a practical phase-out pathway, and redirect spending toward biodiversity-positive

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measures with clear social safeguards. Scalable options include targeted PES expansion, tax and fee incentives for certified production, community conservation grants, and carefully governed green finance instruments that mobilize private capital.

Target 19: Mobilize funding from all sources to support NBSAP implementation

By 2030, Cambodia will mobilize funds for the development and implementation of the National Biodiversity Strategy and Action Plan through increased national budget, innovative financing, public-private/NGOs partnerships and international support.

Background and context: Biodiversity finance has relied on a mix of government budgets and substantial donor and NGO funding, with early growth in innovative mechanisms such as PES, REDD+, and biodiversity-friendly enterprises. Expenditure is spread across many ministries, which reinforces the need for whole-of-government finance tracking and alignment with 2026 NBSAP priorities.

Policy frameworks: The NBSAP remains the central financing framework, now reinforced by the ENR Code (2023), which includes provisions for environmental funds and incentive-based mechanisms. The CSE (2023–2028) and national development strategies, combined with BIOFIN diagnostics and finance planning, provide a coherent platform for diversifying and stabilizing funding sources.

Gaps and challenges: Cambodia remains dependent on external finance, and financing gaps persist when needs are compared to available resources using full-cost estimates. Some priority themes, including restoration, biosafety, and threatened species, have historically received low shares, and subnational allocations remain relatively limited as local service delivery responsibilities grow.

Opportunities: A quantified finance plan can shift the system from budget-growth reporting to results-based gap-closing and guide reforms such as budget tagging, efficiency gains, and stronger alignment of donor portfolios with national priorities. Scaling trust funds, PES, results-based payments, and carefully designed green instruments, alongside replication of proven business-community models, can progressively close gaps and secure long-term site financing.

Target 20: - Strengthen Capacity-Building, Technology Transfer and Scientific/Technical Cooperation for Biodiversity

By 2030, build national capacities for biodiversity conservation, promote technology and scientific transfer, foster joint technology development and joint scientific research among international, regional, national and IPLC organizations to implement the NBSAP.

Background and context: Capacity constraints in institutions, provinces, and communities have long limited biodiversity monitoring, enforcement, and evidence-based planning, even as foundations have improved through PA monitoring and REDD+ systems. Training needs extend beyond government to IPLCs, especially on Access and Benefit-Sharing (ABS), FPIC, and practical conservation and negotiation skills.

Policy frameworks: Successive NBSAPs position capacity building and technology transfer as cross-cutting priorities, and the ENR Code (2023) strengthens mandates for research, databases, and transparent, evidence-based decision-making. The Pentagonal Strategy Phase I (2023–2028) and the CSE (2023–2028)

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reinforce digital transformation, human capital development, and institutional strengthening as national priorities.

Gaps and challenges: Limited budgets, outdated equipment, and shortages of trained staff continue to restrict implementation, with weaker capacity at subnational levels. Progress is still heavily project-funded, and knowledge of ABS, biosafety, and biodiversity information systems remains uneven, which undermines continuity and scale.

Opportunities: Cambodia can consolidate gains by adopting multi-year training programs linked to practical tools such as Geographic Information System (GIS), remote sensing, biodiversity databases, and modern field methods, and by embedding these into core budgets and mandates. A national center of excellence, built with universities, the Angkor Centre for Conservation of Biodiversity, and NGO partners, can strengthen the science-policy interface and support joint research that integrates TK with applied conservation.

Target 21: Share Biodiversity Knowledge to Inform Decision Making and Guide Action

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By 2030, a user-friendly information system containing data and information on biodiversity (including its associated ecosystem services, values, functions, status, trends, threats and the consequences of its loss) has been established and maintained and is widely shared among stakeholders and the public.

Background and context: Biodiversity data collection is active but uneven, and information remains fragmented across ministries, universities, and NGOs, limiting the development of national baselines and trend assessments. Existing platforms such as CHM and the CEMIS provide a foundation for consolidating and sharing validated datasets in Khmer and in user-friendly formats.

Policy frameworks: NBSAP commitments on inventories and information exchange are reinforced by the ENR Code (2023), which requires biodiversity information to be collected, updated, and made available to support evidence-based decisions. Digital transformation priorities under the Pentagonal Strategy Phase I (2023–2028) and the CSE (2023–2028) strengthen the mandate to operationalize national data systems for routine use in planning and reporting.

Gaps and challenges: Data remain scattered, inconsistent, and often non-interoperable, and Cambodia lacks a dedicated, enforceable biodiversity data-sharing policy that sets standards, roles, and safeguards. Many subnational users and community groups also lack data literacy and support, and long-term sustainability of the system remains at risk without stable staffing and budgets.

Opportunities: Rapid progress is possible by making CEMIS the central, interoperable national repository with clear metadata standards, deposit requirements for publicly funded work, and links to regional and global platforms such as GBIF. Dashboards, maps, and a practical helpdesk, combined with clear rules on consent and ownership for IPLC-generated knowledge, can turn data availability into routine use in planning, EIAs, monitoring, and adaptive management.

Key Result Area 4 – Community-Based Management and Benefits

This Key Result Area focuses on empowering IPLCs and local communities to manage and use wild species sustainably, transition productive landscapes and fisheries toward biodiversity-friendly practices, enhance nature's contributions to people (including risk reduction), expand green and blue spaces in urban areas, and ensure gender-responsive, fair and equitable benefit-sharing from genetic resources and TK.

Target 9: Manage Wild Species Sustainably to Benefit People

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By 2030, the management and use of wild species is sustainable for the benefit of people, ensuring social, economic and environmental benefits while enabling sustainable use by Indigenous Peoples and Local Communities.

Background and context: Community-based Natural Resource Management (CBNRM) is already widespread, with CFs, CPAs, CFis, and community ecotourism providing formal entry points for customary use of fish, wild foods, and non-timber forest products that remain central to rural livelihoods and food security.

Policy frameworks: Sustainable use is supported by the PA zoning system; the Law on Forestry (2002) and community forestry regulations; the Law on Fisheries (2025) and community fisheries framework; and the ENR Code (2023), which reinforces customary-use provisions and links sustainable livelihoods to national environmental planning.

Gaps and challenges: Co-management outcomes remain uneven because local rules, zoning, and management plans are not consistently updated, codified, or enforced, and monitoring systems that would enable adaptive adjustments to seasons, quotas, or access remain patchy.

Opportunities: Cambodia can consolidate results by strengthening and regularly updating CBNRM plans with participatory zoning, community monitoring, and gender-responsive governance, while scaling proven livelihood models such as sustainable value chains, ecotourism, and incentive programs that reward compliance and stewardship.

Target 10: Enhance Biodiversity and Sustainability in Agriculture, Aquaculture, Fisheries and Forestry

By 2030, the areas used for agriculture, aquaculture, fisheries and forestry are managed sustainably, through the sustainable use of biodiversity, including environmental-friendly practices such as sustainable intensification, agroecological and other innovative approaches contributing to food security, restoring and conserving biodiversity, and maintaining nature's contributions to social and economic good, including ecosystem functions and services.

Background and context: Cambodia's production landscapes are extensive and diverse, with large areas under rice, cassava, and perennial crops, growing aquaculture and coastal fisheries, and continued dependence on surrounding forests for household energy and materials, alongside established biodiversity-friendly practices such as Integrated Pest Management, System of Rice Intensification, rice–fish systems, community fish refuges, Cambodian Good Agricultural Practices, CF, and reduced-impact logging.

Policy frameworks: The ENR Code (2023), CSE (2023–2028), and NDC 3.0 (2025) provide an enabling backbone for nature-positive production, complemented by input management law and standards, fisheries co-management instruments and sectoral strategies, and forestry law and community forestry provisions aligned with PA planning and zoning guidance.

Gaps and challenges: Key constraints include unsafe and inefficient pesticide use, uneven extension services, gaps in aquaculture biosecurity and effluent control, fisheries habitat loss and variable enforcement capacity, and continued forest loss and fragmentation driven by land conversion, weak incentives, and limited oversight.

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Opportunities: Scaling verified good practices through stronger extension, producer organization, and finance, paired with certification and deforestation-free supply chain approaches, can expand sustainable management across agriculture, aquaculture, fisheries, and forestry while maintaining food security and ecosystem functions.

Target 11: Restore, Maintain and Enhance Nature's Contributions to People

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By 2030, nature's contributions to people are restored, maintained and enhanced, including ecosystem functions and services, reduction in disease risk, and protection from natural hazards and disasters, through nature-based solutions and/or ecosystem-based approaches for the benefit of all people and nature.

Background and context: NbS are already delivering tangible benefits through community-led forest protection and restoration, community fish refuges that strengthen aquatic productivity, and coastal mangrove and seagrass restoration linked to livelihoods and emerging blue carbon opportunities.

Policy frameworks: Community restoration and ecosystem service protection are enabled through forestry, PA, and fisheries frameworks for CF, CPA, and CFis, reinforced by the ENR Code (2023), the CSE (2023–2028), National Protected Area Strategic Management Plan (2017–2031), and climate commitments that prioritize ecosystem-based adaptation and watershed protection.

Gaps and challenges: Continuing land conversion and illegal activities erode gains, and fragmented responsibilities, limited long-term finance, and weak data systems make it difficult to coordinate, measure, and sustain restoration outcomes across upland, floodplain, and coastal settings.

Opportunities: Cambodia can scale ecosystem-based disaster risk reduction and public health co-benefits by prioritizing critical catchments and coastal buffers, linking incentives and results-based payments to verified service outcomes, and embedding NbS delivery through existing community institutions and planning systems.

Target 12: Enhance Green Spaces and Urban Planning for Human Well-Being and Biodiversity

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By 2030, biodiversity-inclusive urban planning is promoted and substantially implemented to significantly increase the area, quality, connectivity and public access to green and blue spaces in cities and other densely populated areas, enhancing natural landscapes, native biodiversity, ecosystem services, and human health and well-being.

Background and context: Urban biodiversity and green-blue infrastructure are becoming more important as cities expand, heat island effects intensify, and wetlands and waterways are increasingly pressured by infill and real estate development, with Phnom Penh and secondary cities already piloting green city strategies.

Policy frameworks: Urban greening is supported by land management and urban planning law, the Phnom Penh Land Use Master Plan (2035), and national strategies that promote climate resilience, nature-based cooling, and biodiversity mainstreaming in urban and regional planning, including NDC 3.0 (2025).

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Gaps and challenges: Implementation remains uneven due to weak enforcement, fragmented mandates across agencies, limited municipal budgets and technical capacity, and the absence of updated ecological inventories and connectivity maps to guide practical zoning and design standards.

Opportunities: Updating city plans to protect remaining wetlands and corridors, setting workable green space and water-sensitive design standards, using GIS and climate-risk overlays to target investments, and mobilizing community-led greening and citizen science can deliver rapid co-benefits for health, flood risk, and urban biodiversity.

Target 13: Increase benefit-sharing with communities

By 2030, Cambodia initiates the fair and equitable sharing of benefits from genetic resources and traditional knowledge, contributing to national benefits while protecting rights and raising awareness.

Background and context: Cambodia's genetic resources and associated TK have clear research and commercial relevance, including crop diversity, medicinal plants, and pathogen strains, while the growing role of Digital Sequence Information (DSI) increases the urgency of ensuring benefits flow back to provider communities.

Policy frameworks: Cambodia has moved from preparatory steps under the Nagoya Protocol to an operational legal foundation through the ENR Code (2023) and Sub-Decree No. 104 on ABS, with designated authorities and procedures for FPIC and Mutually Agreed Terms.

Gaps and challenges: Implementation capacity and practical guidance are still developing, protection and enforcement mechanisms for TK remain limited, and DSI is not yet explicitly addressed in national instruments, creating a risk of missed benefits.

Opportunities: Cambodia can shift quickly to practice by piloting streamlined permitting and standard contracts in priority research partnerships, developing community protocols and training for FPIC and benefit-sharing, and updating tools to address DSI so benefits are transparent, enforceable, and locally realized.

Key Result Area 5 – Securing Biodiversity-Positive Business and Sustainable Consumption

his Key Result Area focuses on ensuring that wildlife use and trade are sustainable and legal, that businesses and financial institutions assess, disclose, and reduce their biodiversity impacts, and that consumption patterns and waste shift toward circular, sustainable models. It also strengthens biosafety and biotechnology governance so that benefits are fairly shared while risks to people and nature are minimised.

Target 5: Ensure Sustainable, Safe and Legal Harvesting and Trade of Wild Species

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By 2030, ensure that the use, harvesting, and trade of wild species is sustainable, safe, and legal, preventing overexploitation, minimizing impacts on non-target species and ecosystems, and reducing the risk of pathogen spillover.

Background and context: Wildlife harvest and trade, both legal and illegal, has been a persistent driver of biodiversity loss in Cambodia, shaped by domestic consumption, cross-border trafficking, and strong

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regional demand. Use remains significant in some landscapes due to cultural preferences and food security needs, even where PA rules apply.

Policy frameworks: Cambodia has an established legal and institutional framework to regulate harvest, transport, and trade in wild species through forestry and PA legislation, reinforced by the ENR Code (2023) and international obligations under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Operationally, MOE and the Ministry of Agriculture, Forestry and Fisheries (MAFF) work with enforcement partners and NGOs through mechanisms such as species action planning and specialized wildlife crime responses, with regional coordination as needed.

Gaps and challenges: Illegal take and trade remain widespread across multiple taxa, and enforcement is challenged by high-value markets, complex supply chains, and inconsistent compliance, including risks of laundering wild-caught animals through legal facilities. Data and monitoring are uneven for many traded groups, especially plants, invertebrates, and lesser-known species, which limits timely risk-based controls and adaptive management.

Opportunities: Intelligence-led enforcement, stronger chain-of-custody controls, and targeted action on priority taxa can build on existing capacity and partnerships to disrupt trade networks more effectively. Scaling community-based mechanisms and incentives, including livelihood alternatives, payments, and wildlife-friendly products, combined with Spatial Monitoring and Reporting Tool (SMART)-style monitoring and a Cambodia Species Index, can reduce offtake while improving accountability, and closer integration with One Health surveillance can simultaneously reduce spillover risk along trade chains.

Target 15: Businesses Assess, Disclose and Reduce Biodiversity-Related Risks and Negative Impacts

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By 2030, the negative impacts of business on biodiversity are reduced through measures that require monitoring, assessment and disclosure of biodiversity risks and impacts across operations and supply chains, promote compliance with access and benefit-sharing regulations, and encourage sustainable production and consumption practices that increase positive contributions to nature.

Background and context: Large-scale investments in agriculture, hydropower, infrastructure, and mining have been major direct and indirect drivers of habitat conversion, fragmentation, disruption of aquatic ecosystems, and localized pollution, with financing decisions often insufficiently screened for biodiversity risk.

Policy frameworks: The ENR Code (2023) provides a stronger legal basis for impact assessment, public participation, and access to environmental information, while emerging sustainable finance instruments, including the Cambodian Sustainable Finance Principles and Securities and Exchange Regulator of Cambodia guidance for green, social, and sustainable bonds, create entry points to integrate biodiversity safeguards into lending and capital markets.

Gaps and challenges: Compliance and enforcement remain uneven, especially at the subnational level, and financial sector standards are largely voluntary, resulting in inconsistent biodiversity risk screening and weak transparency of cumulative impacts.

Opportunities: Operational guidance on "no go" zones, mitigation hierarchy, SEA application, and transparent disclosure can be paired with finance-sector risk screening and incentives to progressively link access to capital to deforestation-free supply chains, ABS compliance, measurable impact reduction, and investable restoration partnerships.

Target 16: Enable Sustainable Consumption Choices to Reduce Waste and Overconsumption

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By 2030, reduce overconsumption and waste generation by at least 30% by promoting sustainable consumption choices.

Background and context: Cambodia's waste stream is increasingly dominated by organic waste, plastics, and packaging, with large shares still dumped or burned, contributing to pollution pressures on urban, freshwater, and coastal ecosystems.

Policy frameworks: The Refuse, Reduce, Reuse, and Recycle (4Rs) agenda and plastic bag management measures provide a solid foundation, strengthened by the ENR Code (2023) and moves towards a circular economy, which enables source separation, levies or restrictions on problematic plastics, and extended producer responsibility approaches.

Gaps and challenges: Separation at source remains rare, composting and recycling have not scaled, enforcement is uneven outside major cities, and volumes of difficult-to-recycle packaging such as multilayer materials continue to grow.

Opportunities: Rapid gains are feasible through mandatory separation in priority urban areas, scaled composting and biogas for organics, accelerated Extended Producer Responsibility and packaging redesign, and targeted fiscal and procurement measures that reward refill, reuse, and low-waste business models while reducing leakage to waterways.

Target 17: Strengthen Biosafety and Distribute the Benefits of Biotechnology

By 2030, biosafety legislation and administrative measures and tools are developed and functioning, including addressing participation in biotechnology research and the distribution of benefits from biotechnology.

Background and context: Cambodia maintains a precautionary approach to living modified organisms, prioritizing preparedness and public confidence as biotechnology expands across the region through trade, food systems, and research collaboration.

Policy frameworks: The Law on Biosafety (2008) and the ENR Code (2023) establish the regulatory and institutional basis for risk assessment and oversight, while the ABS framework, including Sub-Decree 104, strengthens pathways to ensure fair benefit sharing from biotechnology linked to Cambodian genetic resources and associated knowledge.

Gaps and challenges: Technical capacity for risk assessment, detection, laboratory analysis, and border control remains limited, and public understanding is still low, constraining informed participation and consistent implementation.

Opportunities: Clear technical guidelines, standard operating procedures, targeted training, and strategic laboratory investment can operationalize biosafety in practice, while aligning biosafety processes with ABS and TK protections ensure biotechnology research delivers tangible benefits to IPLCs and national institutions.

Key Result Area 6 – Inclusive Governance and Participation

This Key Result Area focuses on ensuring that biodiversity governance is equitable, participatory and gender-responsive, by securing meaningful involvement and rights of IPLCs, women, youth and other marginalized groups, strengthening access to information, justice and benefit-sharing, and transforming

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institutions so that women and girls have equal voice, leadership opportunities, and access to land and natural resources in all biodiversity-related decisions.

Target 22: Ensure Participation in Decision-Making and Access to Justice and Information Related to Biodiversity for all

By 2030, ensure equitable, inclusive and gender-responsive participation of Indigenous Peoples and local communities, women, youth, persons with disabilities, and other marginalized groups in biodiversity decision-making, in relation to their rights to lands, resources and traditional knowledge, as well as access to justice and information.

Background and context: Community-based regimes such as CPAs, CFs, and CFis, among others, provide important platforms for participation and benefit pathways, but vulnerable groups can still be excluded when large-scale investments proceed without effective consultation and safeguards.

Policy frameworks: The ENR Code (2023), the CSE (2023–2028), and national equity commitments strengthen participation, access to information, and grievance principles, complemented by community-based resource governance mechanisms and Nagoya Protocol obligations.

Gaps and challenges: Tenure insecurity, overlapping claims, uneven benefit sharing, and barriers to meaningful influence, including legal literacy, language, and gender norms, continue to limit fair participation and access to remedies, particularly in remote biodiversity landscapes.

Opportunities: Strengthening community institutions with minimum representation expectations, standardized FPIC and grievance procedures, and routine disclosure through CEMIS, combined with targeted leadership and negotiation support and equity indicators in monitoring, can shift participation from consultative to decision-influencing.

Target 23: Ensure Gender Equality and a Gender-Responsive Approach for Biodiversity Action

By 2030, gender equality in biodiversity conservation and NBSAP implementation is achieved and valued, assuring equal rights and access to land and natural resources, and equitable opportunities for meaningful participation and leadership at all levels, including the fair and equitable sharing of benefits arising from biodiversity and natural resources.

Background and context: Cambodia has strengthened gender institutions and increased women's representation in parts of government and society, yet biodiversity governance remains male-dominated, and women's roles and knowledge are still underrepresented in conservation decision-making and benefit pathways.

Policy frameworks: National gender strategies and policies, led by Ministry of Women's Affairs and reinforced through sector gender action plans, provide a robust basis to embed gender equality and gender-responsive implementation across biodiversity agencies and community governance structures.

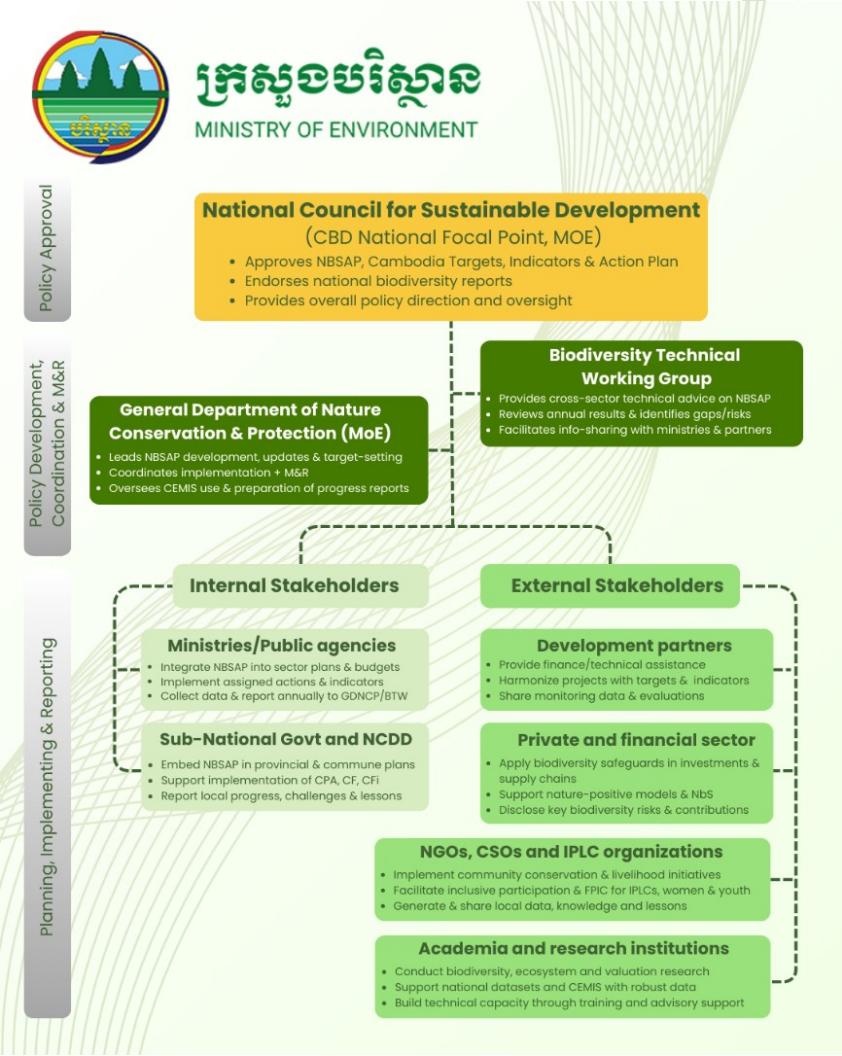
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Gaps and challenges: Persistent social norms, weak practical quotas, limited budget clarity for gender mainstreaming, and low representation of women in environment leadership and field roles constrain progress, with intersectional gaps including very limited inclusion of Indigenous women.

Opportunities: Time-bound representation targets, mandatory gender analysis and sex-disaggregated indicators, ringfenced implementation budgets, leadership development, and institutional culture change can be paired with support for women-led conservation enterprises and strengthened tenure and benefit rights to deliver genuinely gender-transformative outcomes.

Implementation Framework

Implementation will be delivered through a strengthened coordination framework led by the National Council for Sustainable Development (NCSD) for high-level oversight and cross-sector alignment, with the MOE, through its General Directorate of Policy and Strategy, serving as the national biodiversity focal agency responsible for day-to-day coordination, policy guidance, monitoring and data systems including CEMIS. Inter-ministerial coordination and technical validation will be supported through the BTWG, which will meet regularly to review progress, resolve bottlenecks, and ensure follow-through by line ministries. It will also strengthen links to sub-national institutions so national targets are translated into local planning and implementation with clearer mandates, reporting lines, and reduced duplication.



Sectoral ministries and agencies will mainstream 2026 NBSAP targets into their sector plans, policies and budgets, with clear lead and co-lead responsibilities set out in the implementation plan. MAFF will lead actions related to sustainable agriculture, forestry, fisheries and agrobiodiversity, the Ministry of Land Management, Urban Planning and Construction (MLMUPC) will integrate biodiversity into land-use planning, the Ministry of Water Resources and Meteorology (MOWRAM) will oversee wetland and water ecosystem conservation, and the Ministry of Education, Youth and Sport (MOEYS) will advance biodiversity education and awareness. MOE will provide technical guidance and standard tools to support consistent integration across sectors, while line ministries will report progress and contribute data through CHM and CEMIS for consolidated monitoring.

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Sub-national authorities will be central to delivery, as most biodiversity actions occur on the ground, supported by decentralization reforms led by the National Committee for Sub-National Democratic Development. These reforms transfer environmental management functions and resources to provincial administrations. Provincial Departments of Environment and relevant provincial line departments will implement and enforce actions, including PA management, land-use compliance and wildlife protection. MOE will support provinces and commune councils in using Commune Investment Plans as the main vehicle for local biodiversity actions, backed by capacity development, strengthened provincial and community committees, and structured feedback from community initiatives into national reporting.

Stakeholder engagement will be institutionalized through multi-stakeholder platforms that continue the consultative approach used during 2026 NBSAP preparation. The BTWG can draw on additional expert members as needed, while regular national biodiversity forums and consultation workshops will be used to review progress, address constraints, and strengthen collaboration across government, NGOs, IPLCs, women's organizations, youth, and the business community. A stakeholder engagement plan will strengthen the representation of IPLCs, women and youth, and CEMIS will support transparency and two-way information exchange.

Civil society organizations and NGOs will remain essential implementation partners because of their field presence, technical expertise and community engagement capacity. Their roles include outreach, piloting scalable conservation models, supporting research and training, and strengthening inclusiveness and accountability by helping bridge policy intent and on-the-ground delivery. Formal partnerships will support priority actions such as PA co-management, development of OECMs, environmental education and species monitoring, alongside coordinated engagement of development partners through established government-donor mechanisms.

Private-sector engagement will be expanded to reduce biodiversity impacts and mobilize additional resources and innovation through biodiversity-integrated corporate practices, public–private partnerships and green investment. Priority pathways include biodiversity-friendly standards in sectors such as agribusiness and tourism, sustainable supply chains, and financial products that support biodiversity-positive activities. MOE and the Ministry of Economy and Finance (MEF) will explore enabling measures and incentives, including fiscal and market instruments and stronger requirements for Environmental and Social Impact Assessments to address biodiversity impacts and, where appropriate, apply offsets and conservation investments within a robust safeguards framework.

Indigenous Peoples and Local Communities will be positioned as frontline stewards and active partners in implementation through participatory approaches and community-based mechanisms, such as MFMAs, CPAs, CF, CFis, and other OECMs. Institutional arrangements will formalize IPLC roles through community management committees that interface with MOE and line ministries. The IPLC support mechanism will be anchored in the Ministry of Rural Development (MRD) to coordinate recognition, cultural protection and engagement. Line ministries will coordinate with MRD when developing PA management plans and agrobiodiversity initiatives and will be complemented by capacity support to strengthen community leadership, livelihood outcomes, and respect for cultural heritage.

The 2026 NBSAP will be embedded within national development, climate and sectoral frameworks, so biodiversity is treated as a core development asset rather than a standalone environmental agenda. Alignment with the Pentagonal Strategy Phase I (2023–2028), the National Strategic Development Plan (2019-2023), relevant sectoral strategies and the NDC 3.0 (2025) is intended to enable joint planning and reporting. It will also allow the integration of biodiversity indicators into MRV and sustainable development monitoring systems, and unlock climate finance for nature-based actions with biodiversity co-benefits. NCSD will act as the bridging platform for coherence across agendas, MEF will coordinate the resource mobilization strategy within national budget and investment processes, and legal and institutional reforms under the NBSAP will be harmonized with broader reforms so development policies do not undermine biodiversity objectives.

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Resource Mobilization and Finance Plan (2026–2030)

This Resource Mobilization and Finance Plan sets out how Cambodia will finance implementation of the 2026 NBSAP across all targets, with particular emphasis on Target 19 and on mobilizing resources from national budgets, international partners, the private sector and appropriate innovative instruments. It translates strategic commitments into a coherent financing architecture for 2026–2030 and aligns biodiversity spending with the National Environment Strategy and Action Plan (2016–2023) and the priorities of NDC 3.0 (2025). Furthermore, it establishes a pathway to scale both public and private investment in nature through a whole-of-government approach that mainstreams biodiversity values in fiscal policy and public investment decisions while enabling market-compatible incentives for conservation and sustainable use.

Resource mobilization will be guided by four principles:

- **Additionality**, new finance should expand the total envelope for biodiversity while preventing simple re-labeling of existing lines.
- **Alignment**: financial flows should progressively align with biodiversity objectives by integrating nature into budget planning, public investment management and state-owned enterprise decisions, consistent with Target 14.
- **Equity**: mechanisms must deliver fair outcomes for IPLCs, including secure benefit-sharing and FPIC, where applicable, reinforcing Targets 22 and 23.
- **Effectiveness**: resources will be prioritized to interventions with the highest, measurable biodiversity returns, using evidence from national monitoring (including the Cambodia Species Index under Target 4), PA management effectiveness, and threat abatement metrics.

National public finance

Domestic budgets are the backbone of biodiversity finance, and Cambodia will increase biodiversity-tagged funding over 2026–2030. Budget execution will improve through program budgeting and stronger public financial management. In 2026, MEF may explore a biodiversity budget tagging pilot across MOE, MAFF, and selected sub-national administrations. Tagging will clarify baseline spending and support credible annual increases. Cambodia may also assess a trajectory to raise biodiversity-tagged spending by 2030, reflected in Medium-Term Expenditure Framework ceilings. Public investment management will strengthen biodiversity safeguards and improve screening. Major public projects will disclose biodiversity impacts and fund mitigation under the mitigation hierarchy. Offsets may be considered for residual impacts within a national framework, prioritizing like-for-like restoration in priority corridors.

International public finance will be sequenced to catalyze domestic and private capital through climate–nature investment windows. The Global Environment Facility will support reforms, transboundary conservation, species recovery systems, and biodiversity monitoring architecture. The Green Climate Fund will target EbA, resilient PA management, livelihood transitions, and blue-carbon opportunities. World Bank and Asian Development Bank programs will finance natural-capital investments in watersheds and coasts, including NbS for disaster risk reduction and water security. Bilateral partners and UN agencies will support priority landscapes, restoration, invasive species control, and biosafety, and co-finance reforms to shift harmful incentives toward positive ones. Development partners will use harmonized safeguards and report disbursements via biodiversity budget tagging.

Private sector engagement and green investment

Private finance will be mobilised through clear rules, risk-sharing instruments, and investable project pipelines. MEF, the Council for the Development of Cambodia, the National Bank of Cambodia, and MOE will explore aligning biodiversity investment screening and disclosure with the national Sustainable Finance Roadmap. Over time, sustainable finance guidelines can integrate biodiversity risks, mitigation hierarchy application, and nature-related reporting. This approach is anchored in government-

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led processes and links biodiversity to broader finance reforms. It also aligns with national visions and provides a realistic integration timeline.

Blended finance can help de-risk restoration, sustainable agriculture, and ecotourism investments that support priority targets. Performance-based incentives and results-based mechanisms can attract banks and impact investors where returns are emerging. Corporate offsetting may be considered only for residual, hard-to-avoid impacts under a transparent national framework. Offsets should prioritise in-country, like-for-like restoration linked to priority corridors and PAs. Biodiversity safeguards and positive incentives can also be strengthened in concessions and public–private partnerships. MOE will work with Council for the Development of Cambodia and regulators to improve safeguards in higher-risk sectors.

Innovative and blended finance mechanisms

Innovative and blended finance can complement public and donor funding and attract new partners to invest in biodiversity. These approaches support Target 19 and help deliver restoration, PA management, climate resilience, and sustainable livelihoods. Cambodia will frame innovative finance as mobilising resources from all sources and aligning financial flows with the 2026 NBSAP and the 2050 Vision. This will combine budget reforms, results-based mechanisms, and private-sector instruments, supported by safeguards to prevent perverse outcomes.

PES can be expanded gradually, building on pilots. Expansion should be phased because PES is not yet legally formalised. Cambodia can also scale up results-based mechanisms, including REDD+ and blue-carbon programs, in which verified outcomes generate performance-linked payments. To strengthen integrity and investor confidence, Cambodia will implement the National REDD+ Strategy using a nested approach. Nesting links project activities with national accounting and reduces double-counting risks. Key enabling elements include a forest reference level, a national forest monitoring system and MRV, a safeguards information system, and a transparent registry.

In the medium term, Cambodia may explore additional instruments as policy priorities, market conditions, and capacity allow. Options include green or sustainability-linked bonds to support restoration, PA infrastructure, urban greening, and pollution reduction. Cambodia may also pilot biodiversity credits under a government-endorsed framework with clear methods, safeguards, and verification. Early pilots should focus on measurable restoration outcomes and complement regulation. Registry functions would be integrated into CEMIS to support transparency and interoperability.

Cambodia and partners may assess a Nature and Climate Fund or similar platform to coordinate blended finance. This could include endowment, sinking, and revolving windows to channel performance-based resources to PAs and OECMs, and priority restoration programs. BIOFIN has already mapped public funds and revenue streams and identified gaps, including the non-operational PA fund foreseen under the Law on PAs (2008).

National Biodiversity Finance Plan (NBFP) and quantified needs

Cambodia's NBFP provides a quantified baseline for spending, estimated needs, and priority finance solutions. The BIOFIN Biodiversity Expenditure Review estimated biodiversity-related expenditure in 2018 at USD 112 million. This was about 2 percent of the national budget and 0.5 percent of GDP. The BIOFIN Finance Needs Assessment estimated a 2018 requirement of about USD 305 million. This implies a financing gap of about USD 195 million. The NBFP projected rising annual needs through 2022 and prioritized solutions such as PES, stronger REDD+ biodiversity outcomes, sustainable ecotourism, improved agricultural practices, and strengthened institutional capability for finance review. These estimates underpin the 2026–2030 Resource Mobilization and Finance Plan and should be updated to match the revised targets, actions, and indicators.

An updated NBFP aligned to the 2026 NBSAP will be prepared in 2026. It will publish target-level cost envelopes and consolidated 2026–2030 financing scenarios. These will include a domestic-led pathway that

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increases biodiversity-tagged spending within fiscal constraints. Scenarios will also include a co-financing pathway that uses international public finance for enabling reforms and early capital costs. A leveraged pathway will add private and innovative finance to close remaining gaps. Each scenario will show the expected mix of finance sources. The updated NBFP will also quantify harmful incentives for reform under Target 18 and propose practical phase-out timelines. It will identify compensatory measures to protect vulnerable households. Positive incentives, such as tax deductions for certified biodiversity-friendly production, can be costed and aligned with the MEF tax policy calendar.

Capacity-Building, Technology and Knowledge Management

The NBSAP adopts a systemic capacity-building, technology and knowledge management approach. This will address persistent constraints in enforcement, data handling, cross-sector coordination and support to community-led initiatives, aligning with KM-GBF Target 20 and national priorities including NDC 3.0 (2025). It prioritizes needs-based training and institutional strengthening across MOE, MAFF and sub-national administrations, including improved inter-ministerial coordination, upgraded PA management and law enforcement skills, and practical tools such as SMART and geospatial applications. Furthermore, IPLC capacity will be strengthened through structured support to CPAs, MFMAs, CFs, Cfis, and other OECMs, including governance, benefit-sharing, financial literacy, and participatory monitoring. The NBSAP also strengthens the science–policy interface through partnerships and a proposed national biodiversity research and training center, alongside a strong focus on data governance through CEMIS training, standardization and open-data practices, with regional cooperation through ASEAN, BIOFIN and the NBSAP Accelerator. Capacity to evaluate conservation effectiveness and socio-economic and cultural outcomes will also be strengthened so that 2026 NBSAP delivery improves over time.

Technology and knowledge management for 2026–2030 will strengthen evidence-based implementation. It will do this by establishing a national biodiversity monitoring and data-governance framework, standardizing indicators and protocols, and operationalizing CEMIS as the central platform for biodiversity and environmental information. This will reduce fragmentation, improve transparency, and support target tracking through dashboards and regular status reporting. The approach promotes open, interoperable data with clear mandates and data-sharing agreements. It links national systems to regional and global platforms such as Global Biodiversity Information Facility and the CBD CHM. It also mains to increases uptake through user-focused improvements, sustained staffing, and requirements to deposit publicly funded biodiversity data. Modern tools, including remote sensing, GIS, SMART-enabled patrols, mobile applications, drones and emerging methods such as environmental DNA and acoustic monitoring, will strengthen planning, enforcement and restoration. These will be complemented by citizen science and community monitoring those feeds into national reporting. TK will be documented and applied through participatory processes with consent, safeguards and benefit sharing.

Communication and Education

The 2026 NBSAP strengthens communication and education. This will help ensure the strategy is used routinely in planning and decision-making, not treated as a reference document. It builds on existing mandates in the 2016 NBSAP, National Environmental Strategy and Action Plan (2016–2023) and NDC 3.0 (2025). MOE will lead an expanded Communication, Education and Public Awareness (CEPA) approach aligned to Targets 20–23. It will link outreach and guidance to the operationalization of CEMIS. This will allow audiences to access practical products such as maps, indicators, datasets, technical notes and case studies. These products will make targets and progress visible and easier to integrate into policies, plans, budgets, and monitoring.

Activities will be tailored to government decision-makers and technical institutions. They will also target IPLCs in and around PAs, MFMAs, CFs, CFis, and other OECMs, the education sector and youth, and the private sector and media. Materials will be accessible and culturally appropriate and provided in Khmer. Delivery will use inclusive channels that reach women, youth, persons with disabilities and other vulnerable groups. Delivery will combine formal curriculum integration and teacher support with non-

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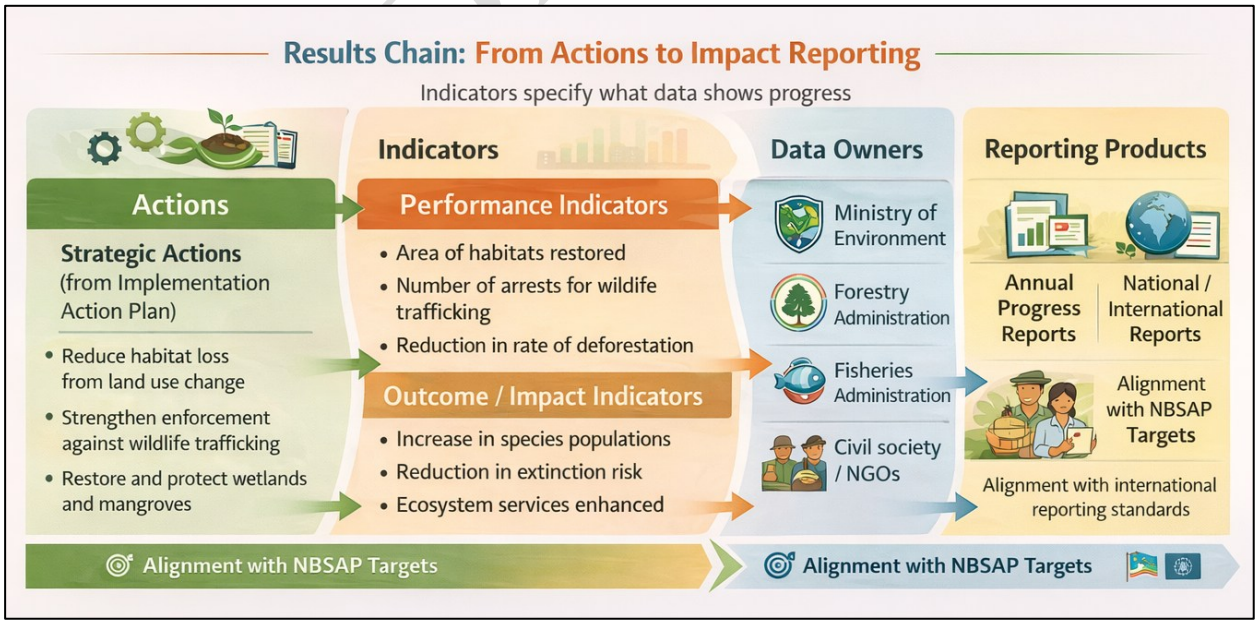
formal outreach through media and community events. It will also promote participatory knowledge generation and citizen science to connect awareness with monitoring. Performance will be tracked through the 2026 NBSAP indicator framework. This will include Knowledge, Attitudes and Practices surveys and CEPA program delivery under Target 20. It will also include CEMIS functionality and dataset sharing under Target 21. Measures of IPLC and women's participation under Targets 22 and 23 will also be tracked. Periodic review will be used to improve effectiveness over time.

Implementation Action Plan

The Implementation Action Plan is the NBSAP's main operational tool, translating the 23 national Targets into a practical work program by linking each target to agreed indicators, a focused set of priority actions, and clearly assigned lead and supporting institutions. It aligns with the KM-GBF planning and review logic, makes explicit how ministries, sub-national administrations and partners contribute to delivery, and addresses a key lesson from the 2016 NBSAP by improving traceability of responsibilities and performance monitoring. Organized by agency, it helps institutions integrate biodiversity commitments into annual workplans, budgets and performance frameworks, and it can be updated over time as plans, partnerships and data systems evolve, providing a living bridge between national strategy and day-to-day implementation

Monitoring, Evaluation and Reporting

Monitoring and evaluation are designed to make the 2026 NBSAP an operational, results-based instrument, using a single national framework of 23 Targets and associated Indicators. This will be supported by the Results Framework aligned with KM-GBF indicators and relevant national indicators including NDC 3.0 (2025) to reduce duplication across reporting obligations. The system tracks both implementation performance indicators, such as budgets, capacity, plans and areas restored, and outcome indicators that measure changes in species, ecosystems, ecosystem services and equity. There is also clear institutional ownership for each Indicator and annual reporting through a standard template. CEMIS will function as the national clearinghouse for datasets and indicator reporting, with annual national progress reports, contributions to international reporting and built-in adaptive management through regular reviews and a mid-term assessment to support course correction.



Part I – Introduction

1.1. Purpose and Context

Biodiversity underpins the planet's life-support systems and is fundamental to human well-being and economic stability [1,2]. It sustains ecosystem services that provide food, freshwater, building materials and medicinal resources; regulates climate, water quality, pollination and natural hazards; supports cultural values such as recreation, spirituality and identity; and maintains essential ecological processes, including nutrient cycling and soil formation, that enable ecosystems and societies to function [3]. Nonetheless, by the late 1980s, mounting scientific evidence revealed that biodiversity was undergoing a rapid and severe decline, driven by factors such as land-use change, overexploitation, climate change, pollution, and invasive alien species (IAS) [4]. This loss of species and degradation of ecosystems threatened not only species survival but also the resilience of societies and economies globally [2,5].

In this context, the United Nations Convention on Biological Diversity (CBD) was established in 1992 as the primary global agreement to coordinate collective action to address biodiversity loss. Cambodia ratified the Convention in 1995, thereby joining other Parties in committing to take measures for: (i) the conservation of biological diversity; (ii) the sustainable use of its components; and (iii) the fair and equitable sharing of benefits arising from the use of genetic resources [6]. Under Article 6 of the Convention, each Party is requested to develop a National Biodiversity Strategy and Action Plan (NBSAP) or adapt existing plans to meet these objectives, and to integrate biodiversity considerations into relevant sectoral and cross-sectoral policies. The NBSAP serves as the primary instrument for translating global biodiversity objectives, now including the Kunming–Montreal Global Biodiversity Framework (KM-GBF), into nationally relevant strategies and actions, enabling countries to identify priorities, address the drivers of biodiversity decline, and embed conservation and sustainable use objectives across all levels of governance. The KM-GBF is the global agreement adopted under the CBD at COP15 that sets four goals and 23 targets for 2030 to halt and reverse biodiversity loss and put nature on a path to recovery toward the 2050 vision of living in harmony with nature [7].

Cambodia adopted its first NBSAP in 2002, which provided a foundational framework for biodiversity conservation, focusing on protecting ecosystems, safeguarding endangered species, and promoting the sustainable use of biological resources in line with the CBD's Strategic Plan for Biodiversity 2002–2010. In 2016, Cambodia adopted its second NBSAP to align with the Aichi Biodiversity Targets (2011–2020) under the CBD. That plan placed greater emphasis on mainstreaming biodiversity into sectoral policies, strengthening Protected Area (PA) management, enhancing community-based natural resource management, and improving biodiversity data and monitoring systems. Together, these two strategies have guided national biodiversity actions over the past two decades and now form the basis for the 2026 NBSAP update.

1.2. Alignment with National Development Agenda

The 2026 NBSAP responds to Cambodia's evolving socio-economic priorities as outlined in the Pentagonal Strategy Phase I (2023–2028) and the Circular Strategy on Environment (2023–2028; CSE), both of which highlight the need to integrate environmental sustainability, pollution free ecosystems and biodiversity conservation into national and sub-national development planning. In parallel, the updated strategy aligns with the country's climate policy framework outlined in Cambodia's Nationally Determined Contribution (NDC) 3.0 (2025) [8] where ecosystem protection and restoration are recognized as essential for climate change mitigation and adaptation, and the clear commitment to coordinate biodiversity and climate action through Nature-based Solutions (NbS), integrated spatial planning and coordinated investment across terrestrial, freshwater and marine systems. The 2026 NBSAP also builds on the lessons and achievements of the previous strategies (see section 1.6) while addressing new and emerging challenges to biodiversity. By reflecting current scientific knowledge, policy priorities and the realities of a changing climate and

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economy, the 2026 NBSAP is designed to ensure that biodiversity conservation supports poverty reduction, food security, health, sustainable livelihoods and climate resilience. In doing so, 2026 NBSAP strengthens Cambodia's contribution to global biodiversity and climate goals while safeguarding the natural capital that underpins the well-being of its people and the resilience of its economy.

1.3. Biodiversity Status, Trends and Threats

Cambodia's Biodiversity

Cambodia is among the most biodiverse countries in Southeast Asia and lies within the Indo-Burma Biodiversity Hotspot, one of the world's most biologically important and threatened regions [9]. A tropical climate with distinct wet and dry seasons, combined with strong geographic variation, produces a wide range of habitats. These extend from the seasonally inundated grasslands and swamp forests around the Tonle Sap Great Lake, the largest freshwater lake in Southeast Asia, to the montane evergreen forests of the Cardamom Mountains [10,11]. This diversity of forest, freshwater, floodplain and coastal ecosystems supports numerous endemic and threatened species and underpins essential ecosystem services for local communities and the national economy [9].

Cambodia's ecosystems range from lowland evergreen and semi-evergreen rainforests to deciduous dipterocarp woodlands, wetlands, and coastal mangroves. Its flora is highly diverse, with over 3,000 identified plant species and many more yet to be described [12–18]. Forests support valuable timber species such as teak, mahogany and rosewood, historically important for logging and rural livelihoods, among which *Dalbergia cochinchinensis* (CR), *D. oliveri* (CR), *Afzelia xylocarpa* (EN) and Agarwood (*Aquilaria crassna*, CR) have been severely depleted by illegal logging and trade [14,19]. They also provide medicinal plants central to traditional healthcare systems, sustaining a rich heritage of traditional knowledge (TK), as well as non-timber forest products (NTFPs) including fruits, nuts, resins and fibers that contribute to subsistence and cash incomes [16,20].

Table 1. *Globally Threatened Species in Cambodia.*

Source: IUCN (2025), CEPF (2025)

Threat category	No. species
Critically Endangered	46
Endangered	99
Vulnerable	129
Globally threatened species	
Amphibians	10
Birds	37
Fish	32
Invertebrates	12
Mammals	48
Plants	110
Reptiles	25
Total	**274**

Cambodia's fauna is similarly diverse, with over 600 bird species, 160 mammal species, and a wide range of reptiles, amphibians and fish [12–18].

Cambodia supports at least 274 globally threatened species (Table 1). It holds some of the largest and most viable remaining populations for several wide-ranging species, especially those of deciduous dipterocarp forests and plains wetlands, and therefore provides the best prospects for their long-term survival [9]. Wetlands and forests provide critical habitat for globally significant bird assemblages, including the Giant Ibis (*Thaumatibis gigantea,* CR)—Cambodia's national bird—and White-shouldered Ibis (*Pseudibis davisoni*, CR), alongside globally threatened vultures and large waterbirds in the Northern Plains, Tonle Sap and Mekong wetlands [13].

Cambodia retains some of the largest remaining populations of Southeast Asia's threatened large mammals, including Gaur (*Bos gaurus*, VU) and Banteng (*B. javanicus*, EN), and is a regional stronghold for primates such as the Yellow-cheeked Crested Gibbon (*Nomascus gabriellae*, EN) and Indochinese Silvered Langur (*Trachypithecus germaini,* EN) [19,21]. It is also globally important for rare reptiles such as the Siamese Crocodile (*Crocodylus siamensis*, CR), Southern River Terrapin (or Royal Turtle; *Batagur affinis*, CR) and Asian Giant Softshell Turtle (*Pelochelys cantorii*, EN), and for several narrow-range amphibians [22].

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The Mekong River and Tonle Sap Lake make Cambodia a center of freshwater biodiversity richness, supporting Irrawaddy Dolphin (*Orcaella brevirostris,* EN) and giant migratory fish such as the Mekong Giant Catfish (*Pangasianodon gigas,* CR) and Giant Barb (*Catlocarpio siamensis*, EN), and providing seasonal wetlands essential for fish spawning and national food security [23]. Invertebrates remain under-studied but include rare dragonflies and freshwater mollusks, with at least one Key Biodiversity Area (KBA) identified specifically for conservation of invertebrate species [24].

Beyond plants and animals, Cambodia's biodiversity also includes a rich but under-documented diversity of fungi and micro-organisms. These groups underpin key ecosystem processes such as nutrient cycling and soil formation and are integral to traditional food processing (e.g., fermentation of fish, rice and vegetables). The 2026 NBSAP recognizes the importance of safeguarding these often-overlooked components of biodiversity and associated TK.

Threats to Biodiversity

Cambodia's biodiversity is under intense pressure from a combination of ecosystem conversion, illegal logging and hunting (including snaring), unsustainable resource use, and rapidly expanding infrastructure. These pressures are compounded by limited enforcement capacity and financing [25,26]. Recent national assessments and consultations with conservation professionals and other stakeholders confirm that the most severe and pervasive threats include illegal and unsustainable logging, large-scale plantation agriculture, overfishing in marine and freshwater systems, illegal wildlife trade and poaching, dams, wetland drainage and conversion, sand mining, and coastal development [9,27].

Overexploitation of forest resources has led to severe deforestation, prompting efforts to regulate logging and promote sustainable forestry practices [26]. Large-scale agricultural expansion for commodities such as rubber and other plantation crops, together with small-scale agricultural encroachment and land grabbing, continues to drive habitat loss and fragmentation, including in and around PAs (Figure 1a). Forest fires, particularly in deciduous dipterocarp forests, further degrade habitats, while new and upgraded roads open previously remote areas to illegal logging, wildlife hunting and settlement, fragmenting wildlife corridors and reducing connectivity for wide-ranging species [27].

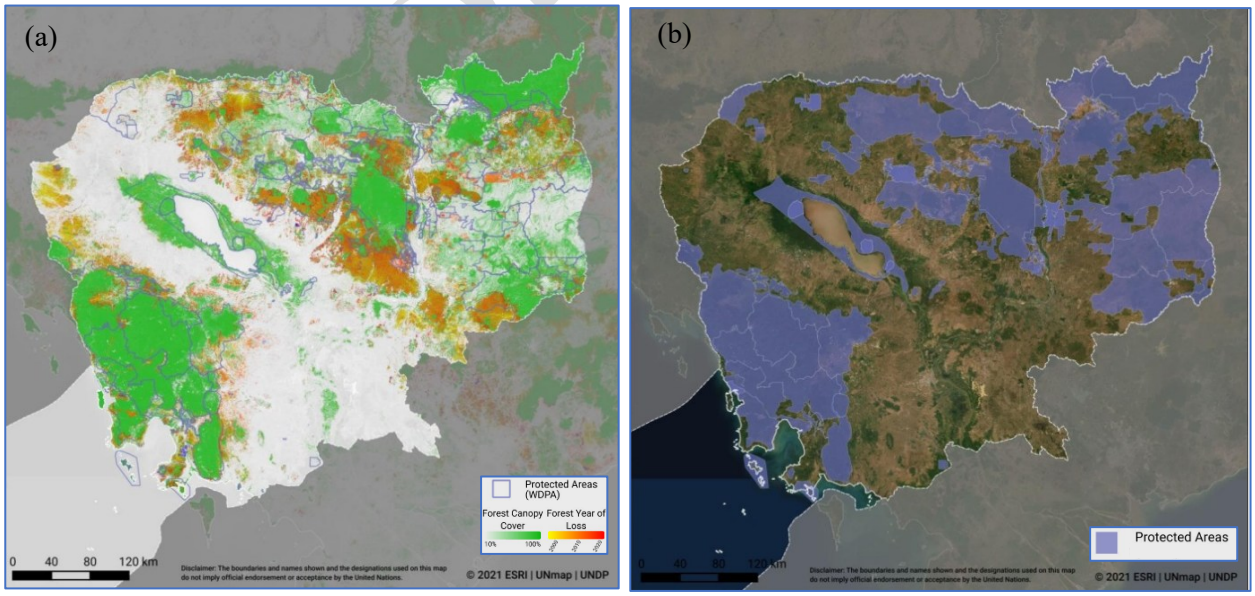


Figure 1. *Forest Cover, Forest Loss and Terrestrial Protected Areas in Cambodia. (a) Forest Cover and Forest Loss, and (b) Terrestrial Protected Areas. Source: SCBD, (2021)*

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Large mammals such as Asian Elephant (*Elephas maximus*), Gaur, and Banteng inhabiting Cambodia's forests face declining populations due to habitat loss and poaching [28]. Smaller mammals such as monkeys, deer, and otters also play critical roles in maintaining ecological balance, yet they are increasingly affected by snaring and habitat degradation. For example, research from the Cardamom Mountains found that wildlife continues to be widely hunted for household use, with more than 30 mammal species affected, including species already at risk of decline [11].

Some bird species are under significant threat from habitat destruction and hunting, including Cambodia's populations of ibises, vultures, and large waterbirds [13]. Wetlands, floodplains and riverine habitats are being lost or degraded through drainage, conversion for agriculture and aquaculture, sand mining, and hydropower and irrigation infrastructure. These pressures alter flows, disrupt migration routes and reduce the availability of key breeding and feeding habitats. Overfishing, pollution and dam construction threaten aquatic species such as the Irrawaddy Dolphin and the Giant Mekong Catfish, prompting efforts to implement sustainable fishing practices and protect vital aquatic habitats [17]. In coastal zones, mangroves, seagrass beds and coral reefs face mounting pressure from destructive and unregulated fishing, coastal reclamation, tourism, aquaculture and shipping, with climate change further intensifying bleaching, erosion and storm impacts [27].

According to stakeholders consulted in preparation for the 2026 NBSAP, underlying many of these direct threats are cross-cutting governance challenges, including weak enforcement, limited accountability in natural resource management, and insufficient integration of biodiversity into investment and land-use decisions. These governance challenges undermine conservation efforts and accelerate ecosystem conversion. Climate variability and change interact with these pressures, with changes in rainfall patterns, prolonged droughts, rising temperatures and more frequent extreme events increasing the vulnerability of Cambodia's terrestrial, freshwater and coastal ecosystems and the communities that depend on them [27].

Biodiversity Trends

Despite such successes, the prevailing trend from both survey evidence and published studies is that ecosystem quality is declining and species populations are under increasing pressure, with positive trends largely confined to specific sites and taxa where intensive, long-term conservation investment has been sustained [27].

A national assessment undertaken to inform the development of the 2026 NBSAP found that all major ecosystem types—forests, grasslands, wetlands, coastal zones, and marine areas—are widely perceived by conservation professionals and other stakeholders to be degrading or degrading significantly [27]. These expert perceptions are supported by evidence of ongoing tree cover loss and fragmentation in lowland evergreen, semi-evergreen and deciduous dipterocarp forests, particularly along agricultural frontiers, economic land concessions and infrastructure corridors [29,30]. Parallel declines are observed in seasonally inundated ecosystems around the Tonle Sap floodplain and Mekong flooded forests, where conversion to rice cultivation and aquaculture has reduced flooded forests and grasslands. Coastal and mangrove systems are also contracting under pressure from aquaculture, tourism development and urban expansion; Cambodia's mangroves are now assessed as Vulnerable at the global level [27,31].

Across taxonomic groups, species populations are likewise reported to be in decline. Most conservation professionals and other stakeholders consulted in development of the 2026 NBSAP perceive populations of mammals, birds, reptiles and amphibians, freshwater fish and marine species as declining or declining significantly, with relatively few cases of stability and only isolated examples of improvement [27]. Mammals are consistently described as undergoing sharp downward trends, especially large-bodied or slow-reproducing species that are vulnerable to snaring, poaching and habitat loss. Birds show more mixed trends, with some waterbirds and colonial nesters stable or recovering in well-managed sites, but overall declines remain the dominant pattern due to habitat loss, hunting and agricultural intensification [32]. Reptiles and amphibians are under-monitored but are still generally perceived to be declining, while freshwater fish populations, in the Tonle Sap and Mekong systems, are reported to be in serious decline, reflecting

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hydropower development, overfishing and broader ecosystem degradation. Marine fish and other marine species also appear to be declining, although the evidence base is weaker and trends are inferred from limited monitoring and expert observation [33].

The limited long-term field studies and site-based monitoring undertaken in Cambodia corroborate these overall patterns. For example, the South-East Asian subspecies of Bengal Florican (*Houbaropsis bengalensis blandini* CR) has undergone a catastrophic decline in Cambodia's Tonle Sap floodplain, with the number of displaying males falling by 55% between 2012 and 2018 placing it at imminent risk of extinction [32]. Since 2010 populations of the White-rumped Vulture (*Gyps bengalensis*, CR) and Red-headed Vulture (*Sarcogyps calvus*, CR) have also declined, a trend that is supported by evidence of reduced nesting success [34]. Hydropower-driven changes to river flow in the Mekong basin, combined with intensive fishing pressure and widespread ecosystem and habitat degradation, have led to alarming reductions in fish populations in the Tonle Sap [35]. A decade of systematic line transect surveys in Keo Seima Wildlife Sanctuary found that arboreal primates and Green Peafowl (*Pavo muticus*, EN) populations were stable or increasing, while ungulates and semi-arboreal primates were declining [35]. These results suggest that species that are more vulnerable to ground-based threats, such as snares and domestic dogs, fare worse than those occupying arboreal niches. Recent evidence from Prambei Mom Community Forest highlights similar pressures for large ungulates: a multi-year camera trap study found that Banteng persist in small groups but face severe snaring pressure, with 22% of adult males recorded showing snare injuries [36].

For some threatened species, sustained conservation action has contributed to stabilization or improvement in conservation status. For example, the status of the Greater Adjutant (*Leptoptilos dubius*, NT) and Lesser Adjutant (*L. javanicus*, NT) are now Near Threatened having improved from Endangered and Vulnerable, respectively, as targeted conservation measures implemented since the early 2000s have helped halt or reverse earlier steep population declines [37,38]. Likewise, the Critically Endangered Siamese crocodile, once thought extinct in the wild, has shown signs of recovery in sites where habitat protection and reintroduction programs have been maintained [39]. These local successes, together with initiatives to regulate logging and promote more sustainable forestry, strengthen PA management, implement sustainable fishing practices and safeguard key aquatic habitats [17,26], demonstrate that well-designed and adequately supported interventions can stabilize or increase populations of some species.

1.4. NBSAP Development Process and Stakeholder Engagement

The 2026 NBSAP was developed through a whole-of-government and whole-of-society approach, implemented across five major phases: technical inputs, stakeholder consultations, targeted stakeholder consultations, public consultation, and validation and government approval (Figure 2). These phases were designed to ensure that biodiversity priorities are informed by scientific evidence, aligned with sectoral policies, and shaped by the knowledge and perspectives of all relevant stakeholders.

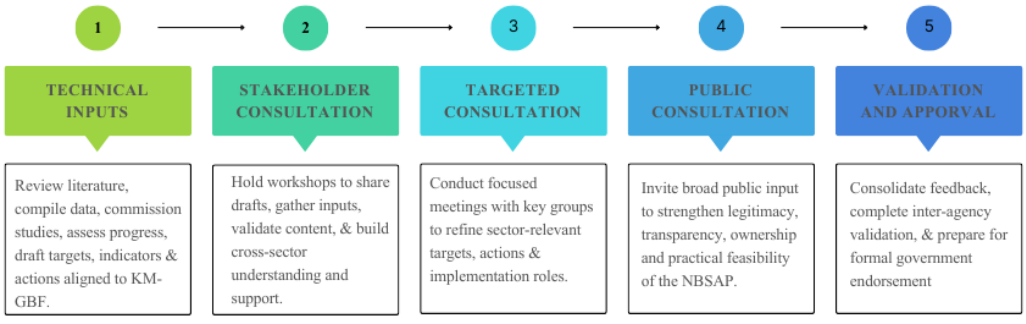


Figure 2. NBSAP Development Process and Stakeholder Engagement.

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Phase 1: Technical Inputs

This phase involved compiling and analyzing biodiversity-related data, reviewing national and sectoral policies, and assessing progress against previous NBSAP targets. The Biodiversity Technical Working Group (BTWG), led by the Ministry of Environment (MOE) and supported by thematic experts, developed initial proposals for updated targets, indicators, and actions, ensuring alignment with the KM-GBF and national development priorities. The major activities of this phase are as follows:

- Under the Early Action Support project, a preliminary in-depth analysis mapped 2016 NBSAP targets to the KM-GBF targets [40].
- The NBSAP 2016 targets were revised and new targets developed, together with associated indicators and actions for the 2026 NBSAP, based on the KM-GBF.
- Thematic studies were commissioned by MOE and development partners and prepared by local and international experts on subject such as gender mainstreaming, assessment of baseline and targets, and spatial planning [27,41,42].
- Relevant government policies, strategies and action plans were reviewed to ensure consistency with the 2026 NBSAP direction and to identify entry points for mainstreaming and implementation.
- Technical consultations were convened with government officials, conservation NGOs and other subject-matter experts to validate the evidence base and refine draft targets, indicators and actions.

Phase 2: Stakeholder Consultation

Stakeholder consultation involved official workshops held to share inputs from Phase 1, seek broader understanding among stakeholders, and refine the new targets, indicators, and actions. Major stakeholders include line ministries, development partners, academic institutions, conservation NGOs, the private sector, and Indigenous Peoples and local communities (IPLCs). Consultations in Phase 2 can be grouped into four types: inception workshops, input-solicitation workshops, validation workshops, and dissemination workshops. They were gender-responsive and aimed for equitable inclusion of all groups. There were seven such stakeholder consultation meetings held (Figure 3).

Inception Workshops – to introduce the NBSAP update process, outline objectives, and confirm the consultation roadmap.

- Input-Solicitation Workshops – to gather technical and policy inputs on proposed targets, indicators, and actions from relevant sectors.
- Validation Workshops – to review and confirm the draft NBSAP content, ensuring alignment with national priorities and stakeholder consensus.
- Dissemination Workshops – to share the final NBSAP with stakeholders, explain the implementation framework, and outline roles and responsibilities.

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Phase 3: Targeted Stakeholder Consultations

Consultations were conducted with line ministries, NGOs, the private sector, and IPLC groups to further discuss proposed targets, indicators, and actions. These meetings were to ensure alignment with existing sectoral policies, plans, and stakeholder priorities. They provided a platform for government to ensure policy coherence and cross-sectoral integration of biodiversity targets; for the business sector to assess feasibility and identify opportunities for sustainable investment and innovation; for communities and NGOs to incorporate local priorities, TK, and practical conservation experience; and for academic and research institutions to contribute technical evidence, monitoring methodologies, and analytical support.



Figure 3. *Stakeholder (left) and public (right) consultations meetings.*

Phase 4: Public consultation

Public consultation is a critical component of the NBSAP development process because it ensures that biodiversity strategies and actions reflect the perspectives, needs, and knowledge of all segments of society. This inclusive approach not only enhances the legitimacy and transparency of the NBSAP but also strengthens national ownership, fosters cross-sectoral cooperation, and increases the likelihood of effective implementation. By engaging the public, the NBSAP can better balance conservation priorities with socio-economic development needs, thereby aligning biodiversity objectives with the country's broader development agenda. This phase was also gender-responsive and aimed for equitable inclusion of all groups. A public channel was set up on social media with over 250 participants, and there were 10 public consultations undertaken during phase 4 (Figure 3).

Phase 5: Validation and approval

This phase focused on consolidating and addressing comments from Phases 2–4, undertaking final technical editing and consistency checks (including alignment across targets, indicators, and the implementation framework), and completing internal government review processes. MOE coordinated final inter-agency validation to confirm policy coherence, clarify institutional roles and responsibilities, and ensure the NBSAP is implementation ready. Following completion of these steps, the NBSAP was prepared for formal endorsement through the relevant government approval procedures and for final dissemination as the nationally adopted strategy for the 2026–2030 period.

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1.5. Guiding Principles and Cross-Cutting Commitments

Cambodia's 2026 NBSAP is grounded in a set of guiding principles and cross-cutting commitments that underpin all strategy elements. Elevating these principles up front ensures they inform planning, implementation, and monitoring across the board [7]. In line with global guidance (e.g., CBD COP Decision 15/6 Annex I) and best-practice criteria [43], the NBSAP integrates an ecosystem approach, a human-rights-based approach, gender equality, respect for TK, and science-based decision-making. These principles reflect Cambodia's commitment to inclusive, equitable, and evidence-based biodiversity governance, engaging the whole of society (government, civil, and private sectors) and honoring inter-generational equity so that the needs of future generations are not compromised by today's actions. They are also fully aligned with the Royal Government of Cambodia's Pentagonal Strategy Phase I (2023–2028), which places environmental sustainability, human capital, technological innovation, and social inclusion at the core of national development. Each principle is outlined below:

Ecosystem Approach

The 2026 NBSAP adopts the ecosystem approach as a fundamental guiding concept. This approach is defined under the CBD as "a strategy for the integrated management of land, water and living resources that equitably promotes conservation and sustainable use" (COP 5, Decision V/6) [44]. In practice, this means biodiversity planning will be holistic and integrative, managing ecosystems as interconnected units rather than in isolation. Actions will aim to conserve ecosystem structure and function, maintain ecosystem services, and balance the three objectives of the CBD (conservation, sustainable use, equitable benefit-sharing). The ecosystem approach also emphasizes participatory management, involving all relevant sectors and stakeholders in decision-making. By implementing the NBSAP based on ecosystem principles, Cambodia ensures that conservation and development decisions are made in an ecologically coherent manner, considering broader landscape-level connections and long-term sustainability. This directly supports the Pentagonal Strategy Phase I (2023–2028) Pillar 4 (Green Growth and Sustainable Development), which calls for integrated management of natural resources, green transition, and ecosystem restoration as drivers of resilient economic growth.

Human Rights-Based Approach

Cambodia's 2026 NBSAP is built on a human-rights-based approach to conservation. This means biodiversity policies and actions will respect, protect, promote, and fulfil human rights, including the recently recognized human right to a clean, healthy and sustainable environment [45]. In practical terms, the NBSAP affirms the rights of IPLCs, for example, their rights to lands, territories, resources, and TK are recognized and safeguarded. The strategy promotes inclusive decision-making, ensuring that IPLCs, women, youth, and other marginalized groups can participate meaningfully and safely in biodiversity governance. Consistent with KM-GBF Target 22 on inclusive participation, the NBSAP commits to full, equitable involvement of these rights-holders in biodiversity planning and access to justice. It also explicitly acknowledges the need to protect environmental defenders and uphold principles of fair Access and Benefit-Sharing (ABS). In line with international guidance, implementation of the NBSAP will follow human-rights-based approach principles at all levels – building capacity of duty-bearers and empowering rights-holders – so that conservation outcomes go together with social equity and justice. This aligns with the Pentagonal Strategy Phase I (2023–2028) Pillar 1 (Human Capital, Social Protection and Inclusion), which emphasizes protecting rights, enhancing well-being, and ensuring equitable participation of all citizens in national development. It ensures that the benefits of biodiversity are shared fairly and that conservation measures do not infringe upon the livelihoods or cultural values of local communities.

Gender Equality and Equity

Ensuring gender equality is a cross-cutting commitment woven throughout Cambodia's biodiversity strategy. The 2026 NBSAP adopts a gender-responsive approach to ensure that women, men, boys, and girls can equally benefit from and contribute to biodiversity conservation. In alignment with the KM-GBF

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Target 23, the plan seeks to ensure gender equality in implementation, meaning all women and girls have equal opportunities, capacities, and rights to participate and lead in biodiversity action. This includes recognizing women's vital roles and knowledge in managing natural resources and addressing the specific challenges they face. The strategy will mainstream gender considerations in all targets and actions, for example, by promoting women's leadership in community resource management, collecting sex-disaggregated data, and ensuring interventions do not inadvertently reinforce gender gaps. Consistent with international calls (e.g., CBD's Gender Plan of Action), Cambodia's NBSAP commits to gender-responsive governance, the empowerment of women and girls, and the reduction of inequalities. By integrating gender equality up front, the NBSAP guarantees that conservation efforts are more effective and just, leveraging the contributions of all genders while fairly sharing the benefits of biodiversity. This directly advances the Pentagonal Strategy Phase I (2023–2028) priority on Women's Empowerment and Gender Equality under Pillar 1, which calls for integrating gender perspectives in all national programs and ensuring equal opportunities in leadership and decision-making.

Traditional Knowledge and Customary Practices

Respect for and integration of TK is a guiding principle of the 2026 NBSAP. Indigenous and local knowledge systems – from community conservation practices to spiritual values – are recognized as valuable contributions to biodiversity management. The strategy affirms that IPLCs are crucial custodians of biodiversity, and it commits to honor their knowledge, innovations, and practices in implementing conservation measures. In practical terms, this means the NBSAP will promote the documentation and use of TK (with consent), integrate customary sustainable use practices into biodiversity planning, and uphold cultural heritage. Importantly, any use of TK will occur only with the free, prior and informed consent (FPIC) of the knowledge holders. This aligns with Article 8(j) of the CBD and KM-GBF guidance that the knowledge of IPLCs must be respected and accessed with their approval. The NBSAP also pledges to strengthen the capacities and roles of Indigenous communities in conservation such as by supporting Other Effective Area-based Conservation Measures (OECMs) including community conserved areas and recognizing customary tenure rights. By embedding TK and practices, Cambodia's strategy ensures that modern conservation science is complemented by millennia of local experience, and that policies are culturally appropriate and accepted by local stakeholders. This principle aligns with the Pentagonal Strategy Phase I (2023–2028) Pillar 3 (Culture, Education and Human Resource Development), which underscores the preservation of national identity, heritage, and cultural values while fostering community participation in sustainable development [46].

Cultural and spiritual values – "Nation, Religion, King"

Biodiversity conservation in Cambodia is rooted in cultural identity and spiritual values, encapsulated in the national motto "Nation, Religion, King". The 2026 NBSAP recognizes the essential role of religious institutions, pagodas, and spiritual leaders in promoting stewardship of nature, supporting community initiatives such as Monks Community Forests, and inspiring behavioral change. Collaboration with the Ministry of Cults and Religion (MCR) and faith-based networks will be strengthened to integrate biodiversity messages into religious education, ceremonies and outreach.

Science-Based Decision-Making

Science-based decision-making is a core commitment running through the 2026 NBSAP, ensuring that policies and actions are grounded in the best available evidence and knowledge. The strategy will utilize up-to-date scientific data, research, and technology to inform priority-setting and management decisions. In line with the KM-GBF, Cambodia will make biodiversity data and information accessible to decision-makers and the public to guide effective, transparent governance (i.e., through the Cambodia Environmental Management Information System (CEMIS) and other mechanisms). Monitoring and evaluation systems will be strengthened so that progress can be measured with robust indicators and adaptive management applied as new insights emerge. The 2026 NBSAP also encourages innovation and the science-policy interface, leveraging tools like Geographic Information System (GIS) mapping, biodiversity inventories,

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and climate modeling to improve planning. Importantly, this principle goes together with knowledge from indigenous and local communities – the framework calls for combining scientific evidence with TK for optimal outcomes. By basing decisions on sound science and data (while acknowledging uncertainty and the need for precaution in some cases), Cambodia's NBSAP can more effectively target the drivers of biodiversity loss and track the impact of interventions. This commitment to evidence-based action supports the Pentagonal Strategy Phase I (2023–2028) Pillar 5 (Digital Transformation and Technology), which promotes the use of innovation, data, and digital systems to strengthen evidence-based decision-making across sectors. This commitment to evidence-based action will help ensure resources are directed at strategies that achieve measurable conservation results.

One Health and Biodiversity–Health Linkages

Cambodia will adopt a One Health approach that recognizes the interdependence of human, animal, plant and ecosystem health and integrates this perspective across biodiversity, climate and disaster-risk policy frameworks [47]. In line with CBD COP 14 Decision 14/4 on health and biodiversity, the updated 2026 NBSAP will promote coherence between biodiversity strategies, national health plans, the NDC and disaster risk reduction instruments, ensuring that land-use planning, PA management and agricultural development explicitly consider zoonotic risk, antimicrobial resistance and food safety. Emerging evidence shows that key drivers of zoonotic spillover risks – including driver such as deforestation and forest fragmentation, expansion of agricultural frontiers, wildlife trade and consumption, intensive livestock production and rapid, often unplanned urbanization present in Cambodia – increase contact between wildlife, livestock and people, thereby heightening the probability of pathogen spillover and the emergence or re-emergence of zoonotic, vector-borne and food-borne diseases. Cambodia sits in the center of the most significant region where new emerging infectious diseases are most likely to originate [48]. Conversely, intact and well-managed ecosystems, diversified agro-ecosystems and reduced wildlife trade can lower these risks while sustaining nutrition and livelihoods. The 2026 NBSAP will therefore prioritize strengthened surveillance and early warning at wildlife–livestock–human interface, and systematic collaboration between environment, agriculture, health and disaster management authorities, so that biodiversity conservation simultaneously reduces health risks and enhances resilience for communities most exposed to climate and disease threats.

Inter-Generational Equity

Inter-generational equity is upheld as an overarching principle to ensure the long-term fairness of biodiversity conservation efforts. This principle recognizes that future generations have a right to inherit a rich and healthy natural heritage, and that current actions should not compromise the ability of those future generations to meet their own needs. Cambodia's 2026 NBSAP therefore takes a long-term view: it aims to secure biodiversity not just for the present, but for children and grandchildren to come. Practically, this means the strategy will favor sustainable use of resources, avoid irreversible environmental harm, and invest in restoration and education that benefit both current and future citizens. The principle of inter-generational equity also implies involving youth in biodiversity policy and decision-making, empowering younger generations as stakeholders in conservation today. By embedding inter-generational equity, the 2026 NBSAP aligns with the global vision of "Living in Harmony with Nature" by 2050 and ensures that the quest for economic development does not sacrifice the environmental foundations upon which future prosperity and well-being depend. This forward-looking commitment also reflects the Pentagonal Strategy Phase I (2023–2028) long-term vision for a Green, Sustainable, and Inclusive Economy, which prioritizes environmental protection and youth engagement as pillars of Cambodia's future resilience and prosperity [46]. This forward-looking commitment underpins all 2026 NBSAP targets, reminding policymakers that true sustainability bridges the needs of present and future Cambodians.

Each of these guiding principles – ecosystem approach, human-rights-based approach, gender equality, TK, science-based decision-making, and inter-generational equity – permeate the 2026 NBSAP's goals, targets, and actions. By affirming these principles up front, Cambodia sets the stage for an NBSAP that is inclusive,

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equitable, and effective, in line with international best practices and the Royal Government's Pentagonal Strategy Phase I (2023–2028). This strong principled foundation will help ensure that implementation of the 2026 NBSAP delivers benefits for biodiversity, for people, and for generations to come.

1.6. Progress and Lessons from 2016 NBSAP

A preliminary mapping of Cambodia's 2016 NBSAP national biodiversity targets against the KM-GBF found that most KM-GBF targets were corresponding, but that means-of-implementation and equity-oriented elements were comparatively underrepresented in the 2016 target set. In particular, the diagnostic indicated no clear counterparts for KM-GBF Goal D and Targets 12, 15, 17-18, 20 and 23, reinforcing the need for the updated NBSAP to strengthen finance, incentives, capacity, business engagement, access and benefit-sharing, and gender equality alongside biophysical outcomes [40].

Policy Integration and PA Expansion

Cambodia's 2016 NBSAP was formulated as a comprehensive framework aligning national priorities with global biodiversity goals. It set out four overarching strategic objectives: (A) improving biodiversity knowledge and awareness, (B) addressing threats and drivers of biodiversity loss, (C) enhancing conservation benefits for society, and (D) strengthening the enabling environment for implementation [25]. These objectives were translated into 20 national targets for 2015–2020 (aligned with the Aichi Targets) and a series of thematic action plans across sectors such as forestry, fisheries, agriculture, mining, and education. In policy terms, the 2016 NBSAP achieved a degree of integration: its vision and targets were mainstreamed into national development strategies (e.g., The Rectangular Strategy (2004) and were in line with sectoral plans like the National Protected Area Strategic Management Plan (2017–2031; NPASMP) and climate change commitments. This helped elevate biodiversity as a recognized priority in high-level policy discourse.

One of the most significant accomplishments under 2016 NBSAP was the expansion of Cambodia's PA network. By 2018, the PA system covered approximately 39% of the national territory, far exceeding the 17% land protection target under the Aichi Targets and 30% under the KM-GBF [49] [25]. New PAs and biodiversity corridors were designated, creating an extended network intended to conserve key ecosystems and species. This rapid expansion of PAs is a clear positive outcome of the 2016 NBSAP, ensuring that a large share of forests and other habitats gained legal protection. Cambodia has put in place important policies and guidelines for specific ecosystems, for example, national directives on coral reef and mangrove conservation and sustainable forest management, demonstrating improved policy integration for biodiversity [25]. The promotion of innovative financing mechanisms, such as Payment for Ecosystem Services (PES) schemes, further exemplifies the integration of biodiversity objectives into economic and rural development policies. The Sixth National Report (NR) to the CBD notes that pilot PES programs (e.g., wildlife nest protection incentives and community ecotourism initiatives) were implemented to incentivize conservation, directly benefiting local communities while conserving biodiversity [25].

Lessons from Policy Integration and Protected Area Expansion: Despite these policy-level successes, mainstreaming biodiversity across all sectors remained incomplete. The 2016 NBSAP's targets were officially linked with climate change and development plans, but in practice, biodiversity considerations often did not penetrate sectoral decision-making or budgeting beyond the environment sector. Key economic sectors, agriculture, infrastructure, and mining, continued to drive habitat loss and resource extraction, indicating that biodiversity objectives were not fully internalized in those domains. Consultations with stakeholders confirm that while the policy framework was "broadly sound," its implementation was weak due to limited cross-sector coordination and accountability [27]. In other words, the 2016 NBSAP helped put biodiversity on the national agenda, but integrating its goals into day-to-day development planning was only partially achieved. This gap between policy and practice is a critical lesson: simply adopting strategies is not enough without stronger mechanisms to embed biodiversity into all relevant governmental and economic processes.

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Community-Based Initiatives and Stakeholder Engagement

Stakeholder participation and community-based conservation were emphasized in the 2016 NBSAP and saw notable progress. That NBSAP was developed through a participatory process, an inter-ministerial technical working group (with representatives from nine ministries, NGOs, academia, and community and indigenous groups) was convened to guide its formulation [50]. This inclusive approach helped build broad ownership of the plan. During implementation, the government and partners expanded programs that devolve resource management to local communities. For example, by 2019, Cambodia had established 464 community forests (CFs) and 153 community protected areas (CPAs), among other community-managed sites, across the country, enabling local people to manage and benefit from forests and fisheries in their areas [25]. Community forestry and community fisheries programs, as well as co-management of certain PAs, provided platforms for grassroots engagement in conservation. These initiatives empowered communities, many of whom depend on forests, wetlands, and wildlife for their livelihoods, to take part in protecting those resources. They also fostered partnerships among government, NGOs, and local stakeholders; numerous projects were implemented with support from civil society (e.g., community patrols, ecotourism enterprises, and sustainable livelihood alternatives in buffer zones).

Public-private and civil society collaboration also improved. Several multi-stakeholder forums and projects were launched, such as partnerships for wildlife protection (with NGOs and local rangers) and dialogues on integrating biodiversity into local land-use planning. Awareness-raising and education efforts (discussed further below) actively involved youth, schools, and community leaders, indicating a widening base of stakeholder engagement. Overall, the period saw a growing recognition that conservation outcomes depend (in part) on engaging those who live closest to biodiversity. The inclusion of communities as partners, through CPAs, community fisheries committees, and consultation processes, is an important gain from implementation of the 2016 NBSAP. Stakeholder perspectives gathered in 2025 reflect this progress: conservation professionals acknowledge that IPLCs are now seen as essential partners in biodiversity initiatives, contributing TK and on-the-ground capacity [27].

Lessons from Community-Based Initiatives and Stakeholder Engagement: While community-based initiatives flourished in quantity, their effectiveness and sustainability were mixed. Many community forestry and CPA groups struggled with inadequate resources, limited technical capacity, and, at times, unclear legal rights to the land or resources they were managing. Studies noted that illegal logging and poaching continued even in areas with community management, highlighting that local engagement alone could not overcome stronger commercial pressures without additional enforcement support [25]. Stakeholder feedback indicates that coordination between government agencies and community groups was often ad hoc. In some cases, community participation remained symbolic or consultative rather than empowered. For example, community representatives might attend meetings but lack influence over final decisions [27]. Another lesson is the need for better incentives and benefit-sharing: unless communities tangibly benefit from conservation (through livelihoods, revenue-sharing, etc.), engagement can wane. Consultations with stakeholders found that they strongly support expanding community-led conservation but also stress the need to provide sufficient funding, authority, and capacity-building to those initiatives [27]. The 2016 NBSAP demonstrated the value of stakeholder engagement. However, it also revealed that for community initiatives to succeed, they must be supported by long-term funding, clear rights, and integrated into broader conservation planning.

Public Awareness, Education, and Data Management Systems

Enhancing public awareness and integrating biodiversity into education were high priorities under the 2016 NBSAP. National Target 1 aimed to have all Cambodians understand the value of biodiversity by 2020, and numerous Communication, Education and Public Awareness (CEPA) activities were undertaken. Government agencies, often in partnership with NGOs, organized awareness-raising workshops and outreach campaigns for various audiences, from local communities and farmers to students, teachers, and private sector actors. Environmental education has been incorporated into school curricula and university

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programs more systematically during this period [25]. For example, training programs were conducted for PA staff and community members on topics like wildlife conservation, sustainable farming, and ecosystem services. Public awareness campaigns (via radio, television, and community events) highlighted issues such as wildlife protection laws, the importance of wetlands, and sustainable fishing practices. These efforts, often supported by international projects, helped improve understanding of biodiversity issues, especially among youth and rural communities, who are the primary custodians of natural resources. According to national reports, awareness-raising and capacity-building sessions were held in all provinces, targeting local authorities, school children, and community leaders [25]. This has gradually built a culture of conservation, as evidenced by the growing number of community volunteers and youth environmental clubs engaged in activities such as tree planting, wildlife rescue, and anti-poaching campaigns.

At the same time, the 2016 NBSAP spurred the development of data management and information systems to support decision-making. Recognizing that sound policy requires good data, Cambodia established a national Clearing-House Mechanism (CHM) website under the CBD framework and initiated CEMIS (Box 5) as a central repository for environmental and biodiversity data. In principle, CEMIS and the CHM were meant to aggregate data from various ministries, research institutions and NGOs into a common platform (see Section 4.3.2 and Figure 11). The CHM is currently inactive, and the CEMIS came online in 2025. Academic output on biodiversity (e.g., through the Cambodian Journal of Natural History) also increased, contributing to the knowledge base. The Seventh NR will provide a comprehensive update on current biodiversity information.

Lessons from Public Awareness, Education, and Data Management Systems: Despite these advances, gaps in public awareness and data systems persisted. It remains challenging to measure how much public behavior or attitudes changed because of awareness programs, as there was no systematic monitoring of awareness levels in the population. Stakeholders have noted that awareness efforts need to be continuous and better targeted, especially for groups such as local decision-makers and private companies, where knowledge of biodiversity remains low [27]. On the data side, the vision of an integrated national biodiversity information system is still a work in progress. Data collection has been fragmented and project-driven, leading to inconsistent datasets. Biodiversity data in Cambodia are not yet standardized or regularly shared between institutions [27]. CEMIS is online but has not become a fully functional, widely used tool; many stakeholders are either unaware of it or do not understand its purpose. The absence of an operational centralized database was highlighted in the Sixth NR (2019) as a shortcoming that limited effective planning [25]. Investing in data infrastructure is crucial; the 2026 NBSAP will promote the establishment of robust monitoring and data management frameworks (with clear indicators, regular updates, and open access) to track progress and guide action. While environmental education has also expanded, there is a need to integrate biodiversity more deeply into formal education and vocational training, ensuring that the next generation of professionals across all sectors appreciates and accounts for biodiversity considerations. Raising awareness and improving information systems are long-term endeavors, the 2016–2020 period made important strides, but further commitment is needed to embed these components firmly in society and governance.

Gaps in Biodiversity Monitoring and Enforcement

Effective monitoring and enforcement are the backbone of any conservation strategy, and the experience of 2016 NBSAP revealed considerable shortcomings in both areas (see Section 4.3.2 and Figure 11). Biodiversity monitoring in Cambodia remained ad hoc and fragmented over the past decade. The 2016 NBSAP did not establish a dedicated monitoring and evaluation (M&E) framework with measurable indicators tracked on a regular schedule. As a result, assessing progress towards the 20 national targets proved difficult. The Fifth NR (2014) and Sixth NR (2019) attempted to compile available data, but they noted inconsistencies [25,51]. In addition, different indicators were used in 2014 vs. 2019, and data quality varied [27]. Key information, such as population trends of most species or the health of critical habitats, was often outdated or incomplete. Outside of certain well-supported PAs (where NGOs conduct wildlife surveys and ranger patrol data is collected), there was no nationwide system for biodiversity monitoring. The CHM

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and CEMIS were intended to support data sharing but were not fully operational. This gap meant that the country was "flying somewhat blind", policymakers lacked real-time evidence on whether conservation actions were effective, and emerging threats (e.g., rapid land use changes) were not always detected in time. Consultations with stakeholders underscore this, noting that Cambodia's biodiversity monitoring is "*fragmented, with limited standardization, coordination, and long-term financing*" [27]. In essence, the 2016 NBSAP did not put in place a strong monitoring regime, which is a lesson to correct going forward by creating an integrated national biodiversity monitoring program (with defined indicators, responsibilities, and reporting intervals).

Closely related is the challenge of law enforcement in biodiversity protection. Despite an expanded PA network and numerous environmental laws, enforcement on the ground remained generally weak during the implementation of 2016 NBSAP. The pressures of illegal logging, wildlife poaching and trafficking, illegal fishing, and encroachment into PAs continued to undermine conservation efforts. The Sixth NR (2019) explicitly noted that Cambodia failed to adequately address ongoing illegal activities and habitat loss [25]. For example, even as new sanctuaries were declared, reports of forest clearance and hunting persisted within many PAs, often outpacing enforcement efforts. The underlying causes include insufficient ranger numbers, poor equipment and training, vast and remote terrain to cover, and, at times, a lack of political will to crack down on powerful perpetrators. Penalties for environmental crimes exist but are not always consistently applied. Community rangers and patrol teams have been mobilized in some areas (often supported by NGOs), which is positive, but they too face resource and authority limitations. Stakeholders repeatedly highlighted weak enforcement capacity; they emphasized that without stronger on-the-ground protection, the existence of parks and laws alone would not secure biodiversity [27]. Some progress was made in specific initiatives (e.g., increasing prosecutions for wildlife trafficking in cooperation with international agencies), but overall enforcement did not meet the scale of the threat.

Lessons from Gaps in Biodiversity Monitoring and Enforcement: The shortcomings in monitoring and enforcement teach that a strategy is only as good as its implementation mechanisms. A key lesson is the need to establish a robust monitoring and accountability framework within the 2026 NBSAP. This means setting up clear indicators for each target, baseline data, and assigning responsibility for data collection and reporting. Regular progress reviews (e.g., annual or biannual) should be institutionalized, so that successes and failures are documented and acted upon in real time, not only at the five-year NR. On enforcement, the lesson is that laws and PA coverage must be accompanied by investment in enforcement capacity, rangers, community wardens, technologies like the Spatial Monitoring and Reporting Tool (SMART; see Section 4.3.2 and Annex 1 for a description of the tool), and inter-agency task forces to tackle wildlife crime. The period since 2016 has shown that, without such measures, many of the 2016 NBSAP's conservation outcomes have remained aspirational. Strengthening enforcement also ties back to governance: improving transparency, tackling governance and integrity risks, understanding the root causes and drivers of biodiversity loss, and ensuring that conservation agencies have the mandate and political backing to enforce regulations even when faced with economic interests. Filling the monitoring and enforcement gaps is essential; doing so will require dedicated resources and high-level commitment, lessons the government and partners are taking into the next NBSAP cycle [27].

Inclusion of Marginalized Groups

The 2016 NBSAP recognized the importance of inclusive conservation, mentioning indigenous communities and vulnerable groups in its vision of equitable benefit-sharing. In practice, marginalized groups remained underrepresented in biodiversity planning and in the benefits derived from it during the implementation period. Indigenous peoples and local ethnic minorities, who often live in biodiversity-rich areas, were engaged through community-based initiatives, but they seldom had a seat at the table in formal decision-making. For example, there were few indigenous representatives in national biodiversity committees or provincial conservation boards. Consultations with stakeholders noted that even where IPLCs participated, it was frequently *"ad hoc or symbolic, rather than embedded in formal governance structures"* [27]. This indicates that consultations occurred, but power dynamics did not shift substantially to

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include indigenous voices in managing PAs or in designing policies. Moreover, the issuance of Indigenous Community Land Titles, a mechanism to secure land tenure for indigenous communities, has been slow, limiting communities' ability to manage traditional lands in line with conservation. Gender and youth inclusion were similarly limited. Women play key roles in natural resource use and community life, yet they are underrepresented in leadership positions within environmental committees or ranger forces. The lack of inclusion of women and youth in the implementation of the 2016 NBSAP constrained its social impact [27]. Youth were involved mainly as volunteers or through education programs, but not in policy or planning roles. People with disabilities were largely absent from any biodiversity initiatives, reflecting a gap in outreach and inclusion strategies.

This underrepresentation is not merely a social issue but has practical consequences. Without fully engaging indigenous and local knowledge, some conservation actions may have been less effective or even conflicted with local needs. For example, PA regulations developed without community input sometimes created tensions or compliance issues on the ground. Likewise, the absence of women in planning led to missing perspectives on resource management and to overlooking the different ways biodiversity loss affects women (e.g., fuelwood scarcity impacting women's labor). One positive note is that awareness of these gaps grew toward the end of the period. Stakeholders in 2025 strongly emphasized that the 2026 NBSAP must be more inclusive. They endorsed greater involvement of indigenous peoples, women, and youth at all stages, from setting targets to monitoring progress [27]. There is also growing advocacy by civil society for gender-responsive, rights-based approaches to conservation, which is influencing policy directions.

Lessons from Inclusion of Marginalized Groups: The clear lesson is that equity and inclusion need to be built into biodiversity strategies, not treated as afterthoughts. Marginalized groups have invaluable knowledge and a stake in biodiversity; excluding them can undermine conservation outcomes and fairness. The 2016 NBSAP's shortfall in this area underscores the need for concrete measures to bring these groups into the fold. Such measures could include setting representation targets (e.g., minimum percentages of women or indigenous members on conservation committees), providing capacity-building and leadership training for marginalized stakeholders, and formalizing community co-management agreements that give local people recognized authority to manage resources. Another lesson is the importance of culturally appropriate approaches, such as integrating TK into scientific monitoring and using local languages and forums to engage communities. The 2026 NBSAP process itself should ensure that participatory consultation reaches women and members of minority groups (not just local elites). By learning from the implementation of the 2016 NBSAP, Cambodia's new strategy is poised to adopt a more inclusive approach. This will not only advance social justice in conservation but also improve effectiveness, as studies worldwide show that conservation is more successful when local and marginalized stakeholders are genuinely involved. Consultations with stakeholders reinforce this, recommending that all new targets for the 2026 NBSAP explicitly incorporate equity, gender, and IPLC participation aspects [27]. Embracing the diversity of stakeholders, including those historically left on the sidelines, is both an ethical imperative and a practical strategy for sustaining Cambodia's rich biodiversity in the long run.

Implementation Constraints and Institutional Limitations

Cambodia's experience with 2016 NBSAP underscored several fundamental constraints that impeded effective implementation. An important issue was limited institutional capacity and coordination. While the National Council for Sustainable Development (NCSD) and the MOE were designated to coordinate NBSAP implementation, in practice, there were overlapping mandates and weak collaboration among key ministries. For example, responsibilities for biodiversity fall across MOE (which manages PAs and overall policy) and the Ministry of Agriculture, Forestry and Fisheries (MAFF; which oversees forests, fisheries, and agriculture), as well as other bodies (rural development, land management, etc.). These agencies often worked in silos, and roles were not clearly delineated. The need to *"clarify roles of MAFF and MOE and improve inter-ministerial coordination"* was a recurring recommendation from stakeholders [27]. Without a strong coordinating mechanism, efforts were sometimes duplicative or worse, at odds, as when land concessions or infrastructure projects approved by one arm of government encroached on conservation

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areas managed by another. This institutional fragmentation hindered the 2016 NBSAP's goal of mainstreaming biodiversity across government.

Another major constraint was inadequate financing and human resources. The 2016 NBSAP had an ambitious agenda but did not come with a commensurate increase in domestic budget allocations. In fact, National Target 2 called for a 20% increase in biodiversity funding by 2020, yet the actual government budget for environmental agencies grew only marginally, leaving most conservation actions dependent on donor funding and NGO projects. This over-reliance on external funds made implementation piecemeal and project-based rather than programmatic. Many priority actions in the NBSAP remained partially implemented or on paper only, due to resource shortfalls. Technical capacity within institutions was also a limiting factor. There are still relatively few trained ecologists, park managers, and biodiversity experts in government service. At the subnational level, environmental officers often juggle multiple responsibilities and lack the tools or training to carry out specialized conservation tasks. These human capacity gaps meant that even when policies and plans were in place, follow-through was weak. The Sixth NR (2019) candidly noted that enforcement of regulations and implementation of management plans were falling short, mainly due to limited staff, skills, and equipment on the ground [25].

Governance challenges also played a role. Stakeholders have noted the lack of clear accountability mechanisms for NBSAP implementation [27]. No single entity was empowered to systematically track progress on the 2016 NBSAP's 98 actions and 20 targets. The NCSD and MOE produced national reports and convened meetings. However, there was no regular performance review, nor were there consequences for agencies that failed to deliver on their assigned actions. This lack of accountability, combined with weak monitoring (addressed below), meant the 2016 NBSAP functioned more as a guiding document than an operative plan. Furthermore, policy measures often did not translate into action on the ground, a point frequently raised by stakeholders who describe policies as "*well designed but weakly enforced*." [27]. For example, Cambodia has a robust legal framework (laws on PAs, forestry, fisheries, land use, etc.). However, enforcement and compliance remain low due to governance and integrity risks, and pressures favoring development projects. The net effect was that the enabling environment for biodiversity conservation, institutional coordination, funding, capacity, and governance, was not strong enough during 2016–2020 to implement the 2016 NBSAP fully. This is a critical lesson: achieving biodiversity targets depends on addressing these systemic issues. Future strategies must therefore include institutional strengthening measures (clear mandates, inter-agency committees, capacity-building, accountability and monitoring measures, and sustainable financing plans) as integral components, rather than assume existing structures can deliver ambitious results [27].

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Part II – Strategic Framework (Vision, Mission, Goals, and Enabling Conditions)

2.1 Vision

Cambodia's 2026 NBSAP sets a long-term direction to 2050 and defines the Mission, Goals, Enabling Conditions, and Targets required to deliver measurable progress to 2030.

By 2050, Cambodia's biodiversity and ecosystems are valued, conserved, restored, and sustainably used, sustaining essential ecosystem services, supporting a healthy and resilient environment, and delivering equitable benefits that enhance the well-being, cultural heritage, and sustainable development of all Cambodians.

2.2 Mission

To take priority actions to maintain Cambodia's rich biodiversity by conserving, restoring, and expanding natural habitats, and building their resilience; ensuring sustainable use and the fair, equitable sharing of benefits; engaging government, business, historically marginalized groups such as women, youth, and IPLCs; and mobilizing the means of implementation to safeguard nature for the well-being of present and future generations.

NBSAP structure

The NBSAP is organized around three Goals, supported by five Enabling Conditions and six Key Result Areas (KRAs) (Figure 4). The KRAs organize the 23 Targets, indicators, and actions into coherent clusters for planning, coordination, implementation, and reporting (Figure 5).

2.3 Goals

Goal 1: Conserve, Restore and Enhance Biodiversity and Ecosystem Resilience

By 2050, Cambodia's most important species, ecosystems, and ecological processes are secured, restored where degraded, and managed to remain resilient to climate change and other drivers of loss. This goal prioritizes the protection of critical habitats and KBAs, recovery of threatened species and genetic diversity, and maintenance of ecological connectivity and ecosystem services that underpin human well-being.

Goal 2: Ensure Sustainable Use of Biodiversity and Equitable Benefit Sharing for Communities and the National Economy

By 2050, wild species, agricultural biodiversity, forests, inland waters, and marine and coastal resources are used within safe ecological limits and managed to provide stable, long-term benefits for communities and the wider economy. This goal emphasizes sustainable production landscapes and seascapes, customary

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and community-based use, biodiversity-positive value chains, and fair and equitable sharing of benefits from biodiversity and genetic resources, particularly for IPLCs and other vulnerable groups.

Goal 3: Strengthen the Enabling Environment for Effective NBSAP Implementation

By 2050, Cambodia has a robust enabling environment for biodiversity action, including coherent laws and policies, effective institutions, adequate and diversified finance, strong science–policy interfaces, gender-responsive and rights-based governance, and accessible biodiversity information systems. This goal focuses on mainstreaming biodiversity into national planning and finance, building capacities and partnerships, ensuring inclusive participation and access to justice, and creating incentives and accountability mechanisms that align public and private decisions with NBSAP targets.

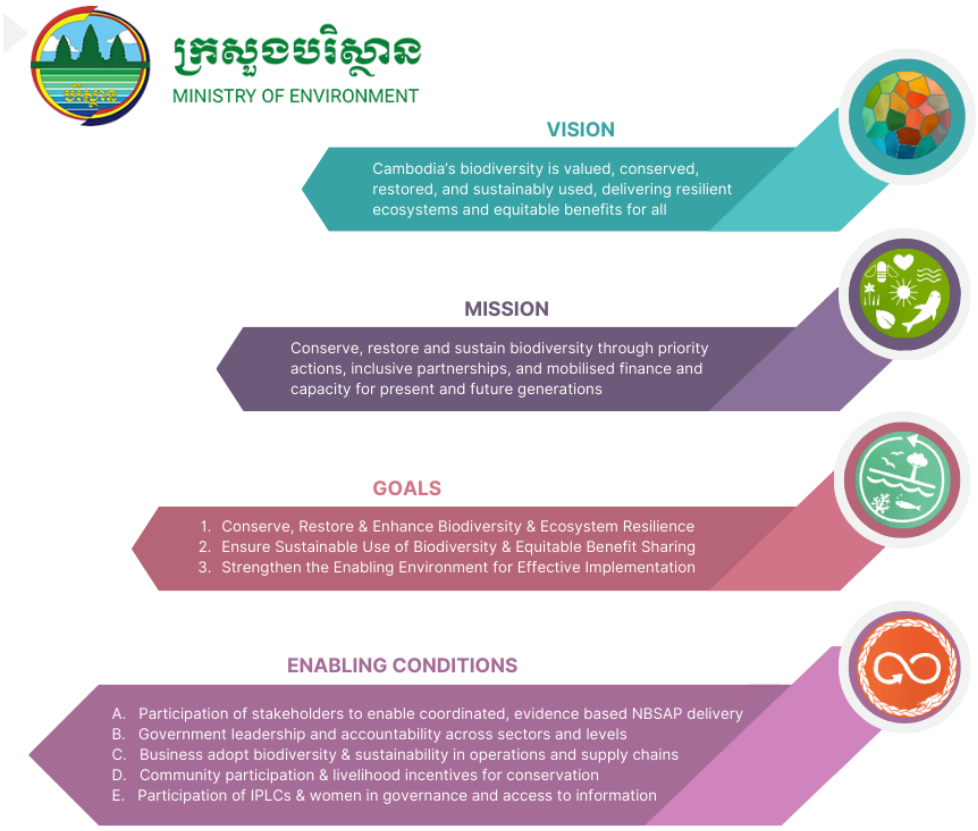


Figure 4. *Cambodia NBSAP's Vison, Mission, Goals and Enabling Conditions*

2.4 Enabling Conditions

The Goals flow directly to the KRAs and associated Targets, supported by cross-cutting Enabling Conditions that strengthen the systems, institutions, and partnerships needed for effective implementation. These Enabling Conditions align with national priorities under the Pentagonal Strategy Phase I (2023–2028), the CSE (2023-2028), NDC 3.0 (2025), and key sectoral policies, ensuring biodiversity is integrated into economic, social, and environmental development. Together, they help ensure the KRAs and Targets are implementable, financed, inclusive, and accountable, and embed biodiversity as a foundation for national prosperity, equity, and resilience, while supporting Cambodia's commitments under the KM-GBF. The enabling conditions are as follows:

A. Participation of all stakeholders to enable coordinated, evidence-based NBSAP delivery

Enabling Condition A strengthens coordination, operational planning, inclusive engagement, and adaptive management across all actors, supporting coherent implementation and learning.

B. Government leadership and accountability across sectors and levels

Enabling Condition B reinforces multi-level governance, institutional performance, predictable resourcing, and evidence-based decision making consistent with the Environment and Natural Resources (ENR) Code (2023).

C. Business adoption of biodiversity-friendly practices

Enabling Condition C supports private sector mainstreaming of biodiversity through evidence, dialogue platforms, practical guidance, transparency tools, and capacity building, contributing to green growth and responsible investment.

D. Community participation and livelihood incentives for conservation and sustainable use

Enabling Condition D links conservation and sustainable use to improve livelihoods through baseline evidence, targeted capacity building, value chain development, support for TK, and accessible finance mechanisms.

E. Participation of IPLCs and women in biodiversity governance and access to information

Enabling Condition E strengthens inclusion, empowerment, and accountability through recognition mechanisms, gender and leadership data systems, institutional reforms, capacity development, and improved access to biodiversity information, consistent with participation and access to information principles and Cambodia's commitments under the KM-GBF.

2.5 Enabling Conditions and Actions

2.5.1. Enabling Condition A: Participation of All Stakeholders to Enable Coordinated, Evidence-Based NBSAP Delivery

To enable effective NBSAP delivery across all Key Result Areas, Cambodia needs an enabling environment that strengthens coordination, operational planning, inclusive participation, and adaptive management. The Sixth NR (2019) highlighted the need for "*harmony, coherence, complementarity and synergy*" between biodiversity plans and other national strategies [25], reflecting persistent coordination and alignment challenges. The 2016 NBSAP similarly noted that limited cross-sectoral integration and overlapping institutional mandates hindered effective biodiversity management [50]. In practice, the absence of a consistently active coordination body has contributed to overlap in some initiatives and gaps in implementation [52]. To address these constraints, Table 2 sets out enabling actions that further institutionalize the BTWG as the standing coordination platform for NBSAP implementation, with clear membership, work planning, meeting schedules, and reporting lines (Table 2, a).

Coordination alone is not sufficient without a clear operational framework. Experience from the 2016 NBSAP showed that vague actions and overlapping mandates reduced implementation efficiency [25]. As reflected in Table 2, maintaining an integrated implementation action plan coordinated across relevant ministries, with clear priorities, sequencing, timeframes, responsible agencies, and accountability milestones, is essential to translate strategic intent into implementable steps and strengthen budgeting, performance tracking, and accountability (Table 2, b).

Active participation of all stakeholders is also necessary to maintain momentum and course-correct implementation. Biodiversity monitoring and reporting has often been irregular and dispersed across institutions, limiting timely synthesis for policy adjustment [50]. Table 2 therefore includes convening an annual national biodiversity symposium, ideally rotating locations, to provide a consistent national

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checkpoint for reviewing biodiversity status and implementation progress, sharing lessons, and updating priorities, while ensuring structured participation by women, youth, IPLCs, and other stakeholders (Table 2, c) [52]. This forum should produce agreed follow-up actions and recommendations that are then taken up through BTWG processes and reflected in updates to the implementation action plan.

For these enabling measures to take root beyond the institutional sphere, they must be matched by public awareness and support. The 2016 NBSAP identified low public understanding as a persistent barrier. Table 2 therefore includes sustained public awareness and behavior change campaigns tailored to diverse audiences and linked to implementation priorities (Table 2, d). Finally, NGOs are significant contributors to biodiversity outcomes, but efforts are often project-based and not systematically integrated into national priorities, which can contribute to duplication, uneven geographic coverage, and missed synergies. To address this, Table 2 includes establishing a structured mechanism for NGO and stakeholder coordination and alignment, including mapping initiatives to reduce duplication and increase visibility of contributions (Table 2, e) [52].

Table 2: *Enabling Actions for participation of all stakeholders to support coordinated NBSAP delivery*

Enabling Actions	Key institutions
a. Institutionalize and operationalize the BTWG as the standing coordination platform for NBSAP implementation, including agreed membership, workplan, meeting schedule, and reporting lines	MOE
b. Maintain an integrated NBSAP implementation action plan coordinated across ministries, with clear priorities, sequencing, timeframes, responsible agencies, and accountability milestones	MOE, MAFF, MRD, MOWRAM
c. Convene an annual national biodiversity symposium, rotating locations where feasible, to review status and progress, share lessons, and update priorities, with structured participation of women, youth, IPLCs, and other stakeholders	MOE, MAFF, MOWRAM
d. Deliver sustained public awareness and behavior change campaigns on biodiversity conservation and restoration, tailored to diverse audiences and linked to implementation priorities	MOE
e. Establish a structured mechanism for NGO and stakeholder coordination and alignment with national priorities, including mapping of initiatives to reduce duplication, improve geographic coverage, and increase visibility of contributions	MOE, MOWRAM, MAFF, MRD, MOT, MCFA

2.5.2. Enabling Condition B: Government Leadership and Accountability Across Sectors and Levels

Sustained government leadership and accountability for biodiversity requires institutional arrangements that work across sectors and administrative levels, supported by clear coordination mechanisms and strengthened capacity. Previous NBSAP assessments highlighted weak vertical integration between national and sub-national levels, which limited mainstreaming of biodiversity into local planning [25]. To address this, Table 3 focuses on enabling actions that extend coordination and accountability to sub-national levels through the establishment of sub-national BTWG mechanisms and targeted capacity development (Table 3, a-b). These measures strengthen institutional performance, improve policy coherence, and support coordinated delivery across sectors and tiers of government.

Long-term leadership also depends on predictable resources and evidence-based decision-making. Operationalizing environmental financing mechanisms under the ENR Code (2023) can strengthen

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sustained resource mobilization for biodiversity priorities (Table 3, c). In parallel, strengthening CEMIS will improve data integration, accessibility, and use for planning, monitoring, and reporting, reinforcing accountability and adaptive management (Table 3, d).

Government leadership is reinforced when the science–policy interface and national human capital are institutionalized. Table 3 therefore includes establishment of a Centre of Excellence for Biodiversity Research as a hub for applied research, innovation, and cross-sectoral collaboration, alongside development of biodiversity-related higher education curricula to build the next generation of professionals and sustain implementation over time (Table 3, e). These measures help ensure continuity in implementing national and global biodiversity agendas.

Table 3: *Enabling Actions for government leadership and accountability across sectors and levels*

Enabling Actions	Key institutions
a. Establish sub-national coordination mechanisms aligned to the BTWG model to strengthen vertical integration and local mainstreaming	MOE
b. Provide targeted capacity building for sub-national coordination mechanisms, including planning, monitoring, reporting, and facilitation skills	MOE, MAFF
c. Operationalize environmental financing mechanisms under the ENR Code (2023) to support predictable funding for biodiversity implementation	MOE, MEF
d. Strengthen CEMIS to improve data integration, accessibility, and use for decision-making, monitoring, and reporting	MOE
e. Establish a Centre of Excellence for Biodiversity Research and strengthen the science–policy interface, including development of biodiversity-related higher education curricula	MOE, MOEYS

2.5.3. Enabling Condition C: Business adoption of biodiversity-friendly practices

The private sector strongly influences land use, resource extraction, production systems, and market supply chains that affect biodiversity. In Cambodia, where growth is increasingly driven by agriculture, tourism, manufacturing, and extractive industries, integrating biodiversity into business operations and supply chains is essential to reduce ecological risks and unlock nature-based economic opportunities. The KM-GBF calls for whole-of-society engagement, while the ENR Code (2023) Article 19 requires environmental integration into development decision-making, including corporate strategies and investments.

To enable this shift, Table 4 sets out a practical package of enabling actions that builds the evidence base, institutionalizes dialogue, and provides tools and incentives for uptake. First, generating applied research and publishing Cambodia-specific case studies on biodiversity-positive business models will help businesses and financial institutions understand biodiversity-related operational and financial risks and identify opportunities that may align with sustainability-linked and green finance, supporting stronger corporate biodiversity targets and investment decisions (Table 4, a). Establishing a National Business and Biodiversity Platform will then provide a standing mechanism for public–private cooperation and knowledge exchange, functioning as a hub for sharing data, tools, and innovations and enabling coordinated engagement across relevant ministries and the private sector (Table 4, b). A relevant regional example is the ASEAN Business and Biodiversity Initiative, which was established through a partnership between ACB and ASEAN-BAC to catalyze private sector engagement in biodiversity mainstreaming and green investment, including a focus on enabling Micro, Small, and Medium Enterprises to adopt biodiversity-friendly practices [53].

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To reinforce market incentives and transparency, Table 4 also includes compiling and regularly updating a national list of biodiversity-friendly businesses, which can promote environmentally responsible practices and create positive reputational and market signals (Table 4, c) [54]. However, transparency tools work best when businesses also have practical guidance to translate principles into measurable actions. For this reason, Table 4 includes development of standardized guidance and training materials on biodiversity and natural-capital sustainability tailored to priority business sectors (Table 4, d), consistent with OECD approaches that support businesses to identify, manage, and report biodiversity risks through guidance and stakeholder dialogue [55]. To scale uptake across sectors, Table 4includes capacity building for business associations and chambers of commerce so they can support member companies to integrate biodiversity into corporate strategies, operations, and supply chains (Table 4, e).

Table 4: *Enabling Actions for business adoption of biodiversity-friendly practices*

Enabling Actions		Key institutions
a.	Conduct research studies and publish Cambodia case studies on biodiversity-positive business models and biodiversity risk management for business and finance	RUPP, RUA, ITC, NUM
b.	Establish a National Business and Biodiversity Platform to institutionalize public–private dialogue and share data, tools, and innovations	MOC, MOE, MAFF
c.	Compile and maintain a national list or registry of biodiversity-friendly businesses to increase transparency and create positive market incentives	MOE, MOC
d.	Develop practical guidance and training materials on biodiversity and natural-capital sustainability tailored to priority business sectors	MOE, MAFF, MOWRAM
e.	Build capacity of business associations and chambers of commerce to integrate biodiversity into corporate strategies, operations, and supply chains	MOE, MAFF

2.5.4. Enabling Condition D: Community Participation and Livelihood Incentives for Conservation and Sustainable Use

Strengthening community livelihoods in ways that support conservation and sustainable use depends on getting the enabling conditions right across the 2026 NBSAP, especially for IPLCs and other local resource users. A first step is establishing a clear baseline on how different groups within communities use and depend on biodiversity resources, and where vulnerabilities and inequities sit. As set out in Table 5, conducting gender-responsive livelihood dependency surveys provide the evidence needed to design targeted interventions that align conservation objectives with local priorities (Table 5, a) [56].

Building on this baseline, enabling conditions should support livelihood diversification so that households can reduce unsustainable reliance on biodiversity while maintaining resilience. Targeted and gender-responsive vocational training can equip IPLCs and other community members with practical alternatives and strengthen local capacity to engage in sustainable enterprises (Table 5, b) [57]. Complementary to training, enabling support for biodiversity-friendly value chains can help communities capture fair benefits from sustainable harvesting, processing, quality assurance, and market access, creating incentives that reinforce sustainable use (Table 5, c) [58].

Active community participation also requires that TK is documented and applied through participatory processes, safeguarding knowledge systems and supporting equitable benefit sharing consistent with CBD Article 8(j). Table 5 therefore includes compiling TK on biodiversity and ecosystems through research and participatory approaches (Table 5, d). Sustained participation is strengthened further when communities can access finance and practical tools that support biodiversity-friendly enterprises and local stewardship. Coordinating biodiversity-based financing mechanisms such as revolving funds, microfinance schemes,

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and similar community-accessible instruments can provide capital stability and keep incentives aligned with conservation outcomes (Table 5, e).

Participation is deeper and more durable when communities are enabled to contribute directly to monitoring and learning. Participatory, locally driven and gender-responsive monitoring approaches, supported by accessible digital platforms where appropriate, can generate reliable ecological information, improve adaptive management, and strengthen community ownership of conservation outcomes [59–61]. Over time, these enabling actions create a reinforcing cycle where improved livelihoods and stronger participation support more sustainable resource management [62].

Table 5: *Enabling Actions for community livelihoods and participation*

Enabling Actions	Key institutions
a. Conduct gender-responsive surveys of community livelihood dependence on biodiversity to inform targeted interventions	MOE, MRD, MAFF
b. Provide gender-responsive vocational training for IPLCs and local communities to diversify livelihoods and reduce unsustainable dependence on biodiversity	MRD, MOE, MOT
c. Strengthen enabling support for biodiversity-friendly value chains, including sustainable harvesting, processing, quality assurance, and market access, linked to community participation in monitoring	MOE, MAFF, MOWRAM
d. Compile TK on biodiversity and ecosystems through participatory research processes consistent with CBD Article 8(j)	MOE, MOT, MAFF, MOWRAM
e. Coordinate biodiversity-based financing mechanisms accessible to communities, such as revolving funds and microfinance, to sustain biodiversity-friendly enterprises and stewardship incentives	MOE, MAFF, MOWRAM

2.5.5. Enabling Condition E: Participation of IPLCs and Women in Biodiversity Governance and Access to Information

Active and equitable participation and empowerment of IPLCs in biodiversity governance is essential for effective conservation and sustainable use outcomes. Cambodia's ENR Code (2023) enshrines public participation (Article 11), access to information (Article 12), and gender equality as guiding principles in environmental decision-making. However, Cambodia's Sixth NR (2019) acknowledges persistent governance gaps including limited vertical integration between national and local levels, underrepresentation of women in leadership roles, weak IPLC participation, and inadequate access to biodiversity data [25]. These constraints reduce the ability of IPLCs and community institutions to influence policies and management decisions affecting their territories, livelihoods, and cultural values.

To address these gaps, Table 6 sets out enabling actions that strengthen both structural recognition and practical support for equitable participation. Establishing and regularly updating a national IPLC database provides a foundation for inclusive governance by making visible the communities who are custodians of biodiversity and enabling systematic inclusion in planning and management processes (Table 6, a) [63]. In parallel, compiling and updating gender-disaggregated leadership data is necessary to identify persistent inequalities and track progress, given women's underrepresentation in biodiversity decision-making and the frequent absence of gender-sensitive data systems (Table 6, b) [64,65].

Equity requires not only tracking gaps but correcting them. Institutionalizing gender ratios within biodiversity-related authorities and relevant governance structures is a practical reform to address systemic

exclusion and align implementation with national gender commitments and KM-GBF Targets 22 and 23 (Table 6, c). Capacity development is also required to remove barriers linked to confidence, skills, and access to opportunities. Table 6 therefore includes provision of gender-responsive training on strategic skills needed to participate effectively in biodiversity governance and implementation, learning from evidence that women in Cambodia face constraints including cultural norms, weak quotas, and limited access to technical training and leadership opportunities, including in Reducing Emissions from Deforestation and Forest Degradation (REDD+) contexts (Table 6, d) [1].

Equitable participation depends on transparency and access to information. Promoting public participation and improving access to biodiversity information enables communities to engage meaningfully in decision-making. Principles of effective PA governance include legitimacy, accountability, and fairness, which are strengthened when participation is real, processes are transparent, and information is readily available [66]. Table 6 therefore includes actions to promote equitable participation and access to biodiversity data for decision-making (Table 6, e).

Table 6: *Enabling Actions for participation of IPLC and women in biodiversity governance*

Enabling Actions	Key institutions
a. Establish and regularly update the national IPLC database to support systematic inclusion in planning and management	MRD, MOE, MAFF, MOWRAM
b. Compile and update gender-disaggregated leadership data within biodiversity-related authorities and community institutions to track representation and progress	MOWA, MOE, MAFF, MRD, MOWRAM
c. Institutionalize gender ratios within biodiversity-related authorities and relevant governance structures to address systemic exclusion	MOE, MOWA, MAFF
d. Develop and deliver gender-responsive training on strategic and technical skills needed to participate effectively in biodiversity governance and implementation	MOE, MOWA, MAFF
e. Promote equitable public participation and access to biodiversity information and data to support transparent and informed decision-making	MOE, MOWA, MAFF, MOWRAM



Figure 5. *The 23 action-oriented global targets set out under the KM-GBF for urgent action by 2030.*

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Part III – National Biodiversity Action Plan

The National Biodiversity Action Plan translates the 2026 NBSAP's three Goals into six interconnected Key Result Areas (KRAs) that reflect the country's ecological priorities, governance commitments, and social responsibilities (Figure 6):

Goal 1: Conserve, Restore and Enhance Biodiversity and Ecosystem Resilience

- Key Result Area 1 – Ecosystem Conservation and Restoration (covering Targets 1-3)
- Key Result Area 2 – Species/Genetic Conservation, Threat Reduction and Climate Change (Targets 4, 6-8)

Goal 2: Ensure Sustainable Use of Biodiversity and Equitable Benefit Sharing for Communities and the National Economy

- Key Result Area 3 – Community Management and Benefits (Targets 9-13)
- Key Result Area 4 – Sustainable Business and Consumption (Targets 5, 15-17)

Goal 3: Strengthen the Enabling Environment for Effective NBSAP Implementation

- Key Result Area 5 – Mainstreaming Biodiversity Across Government and Society (Targets 14, 18-21)
- Key Result Area 6 – Inclusive Governance and Participation (Targets 22-23)

Together, these KRAs provide a coherent pathway to achieving national biodiversity Goals while fulfilling Cambodia's commitments under the KM-GBF.

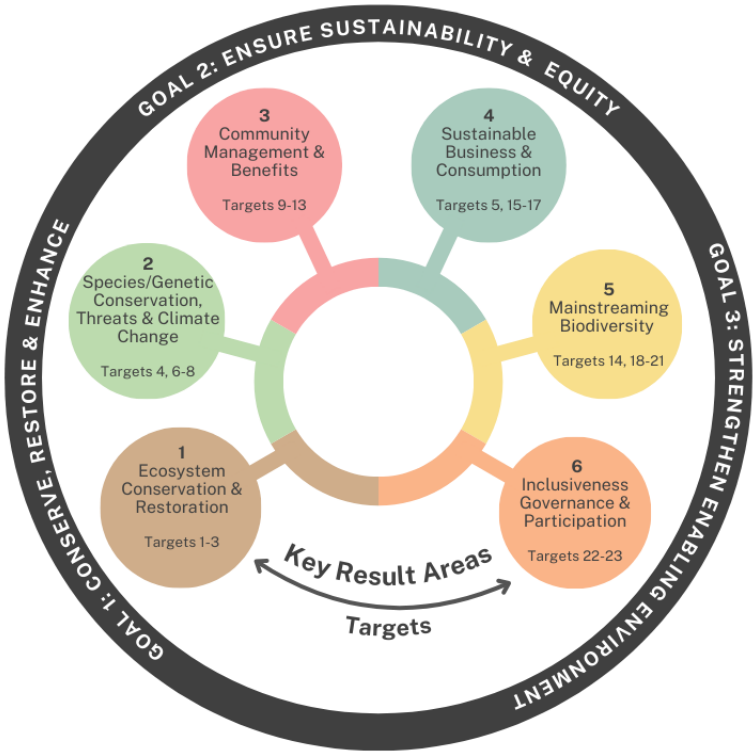


Figure 6. *The Six Interconnected Key Result Areas of the National Biodiversity Action Plan*

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3.1. Key Result Area 1 – Ecosystem Conservation and Restoration

This KRA encompasses Targets 1-3, which together aim to ensure that Cambodia's terrestrial, freshwater, coastal, and marine ecosystems are planned and managed to avoid habitat loss, restore at least 30% of degraded areas, and secure effective and equitable protection through PAs and OECMs.

3.1.1. Target 1: Plan and Manage all Areas to Reduce Biodiversity Loss

By 2030, ensure that all areas of high biodiversity importance are identified and brought under participatory, integrated and biodiversity-inclusive spatial planning and management processes, with effective and equitable management addressing key drivers of land-use and sea-use change, and with natural habitat loss brought close to zero.

Background and Context for biodiversity-inclusive spatial planning

Cambodia is among Southeast Asia's most biodiversity-rich countries, with globally significant terrestrial, freshwater and marine ecosystems, supporting at least 274 globally threatened species (see Table 1). Conservation professionals and stakeholders consulted in the development of the 2026 NBSAP highlight that the Mekong River and Tonle Sap Lake are also of global importance for freshwater biodiversity, yet biodiversity is under mounting pressure from deforestation, land conversion, infrastructure expansion and unsustainable resource extraction [27].

Cambodia has experienced major environmental pressures in recent decades, particularly land-use change, habitat degradation and resource exploitation linked to population growth and rising economic demands [15,67]. These pressures have driven substantial conversion of natural forests to agriculture and other land uses, with associated land degradation and pollution from unsustainable agricultural and industrial practices [50]. Rapid urbanization adds further risk to ecosystems and long-term sustainability [68]. Consultations undertaken for the 2026 NBSAP also emphasize that ecosystem degradation is widespread, while monitoring remains fragmented and uneven, limiting the ability to track trends and assess management effectiveness [27].

At the global level, Cambodia's approach is shaped by its obligations under the CBD's three objectives and Article 6, which require Parties to prepare or update an NBSAP and to integrate biodiversity considerations into sectoral and cross-sectoral policies [6]. Cambodia adopted its first NBSAP in 2002, emphasizing capacity building, community participation and cross-sector mainstreaming, and structured around 17 themes, 81 strategic objectives and 98 priority actions [69]. Implementation was constrained by limitations in human, financial and institutional capacity, low awareness of biodiversity's value, and insufficient integration of biodiversity into broader development planning [50]. In 2016, Cambodia updated its NBSAP to contribute to Aichi Biodiversity Target 17, informed by sectoral engagement, national and sub-national consultations and technical review. Assessments of progress reported advances, including expansion of PAs and corridors, while also identifying overlaps and the need for more measurable targets and clearer tracking arrangements [25].

Policy Frameworks for biodiversity-inclusive spatial planning and management

Recognizing downward trends in biodiversity values, the Royal Government of Cambodia developed a regulatory framework of policies, laws, strategies and plans intended to guide spatial development and support sustainable management of natural resources and biodiversity. The Cambodia's policy framework for biodiversity-inclusive spatial planning is anchored in the National Policy on Green Growth (2013), the

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National Policy on Spatial Planning (2011), and the Prakas on Land Development (2018), and related national and sub-national land-use planning instruments. The spatial planning policy sets a national approach to integrated territorial development and assigns the National Committee for Land Management and Urban Planning (NCLMUP), with the Ministry of Land Management, Urban Planning and Construction (MLMUPC) as secretariat, to implement spatial planning across four administrative levels, from national to commune levels [41]. Complementary efforts led by MOE and partners, including UNDP, have focused on integrating biodiversity data, ecosystem services and environmental mapping into land-use planning across administrative levels, supported by participatory and consultative processes under relevant technical working mechanisms. Biodiversity-inclusive spatial planning should be framed as an integrated, participatory process that explicitly addresses land- and sea-use change as a key driver of biodiversity loss, and that incorporates recognition of IPLC's rights and governance arrangements where relevant to effective area-based conservation and sustainable use outcomes [40]. A survey and wider consultations in preparation for the 2026 NBSAP, reinforce the need for practical, better-resourced approaches that connect spatial planning decisions to measurable biodiversity outcomes [27].

The legal basis for spatial planning and biodiversity integration is provided by the Law on Land (2001), which establishes land tenure and land administration foundations, and the Law on Land Management, Urban Planning and Construction (2016), which formalizes the spatial planning mandate and planning hierarchy under MLMUPC. Biodiversity safeguards are underpinned by the Law on Environmental Protection and Management of Natural Resources (1996), which designates MOE as the lead environmental authority and requires impact assessment and consultation on natural resource-related decisions, and the ENR Code (2023), which strengthens governance principles, including avoiding harm, public participation, access to information, the polluter pays principle, the precautionary principle, and evidence-based decision-making. These provisions reinforce the role of environmental impact assessments (EIA) and strategic environmental assessments (SEA) as a key mechanism for integrating biodiversity considerations into development planning, particularly when applied within clear land-use plans and zoning that identify ecologically sensitive areas [41].

Sectoral instruments, including the Law on PAs (2008), Law on Forestry (2002), Law on Water Resources Management (2007), and Commune/Sangkat land use planning procedures (Sub-Decree No. 72, 2009), provide additional zoning and resource-management layers that need to be reflected in spatial plans and environmental assessments [41].

Gaps and Challenges for Achieving Target 1

Despite the breadth of the regulatory framework, the implementation of biodiversity-inclusive spatial planning is constrained by policy and governance factors that limit consistent application. Biodiversity considerations are often treated as secondary to land allocation and economic development objectives, and the main spatial planning instruments provide a general framework for organized land use but do not consistently require explicit integration of biodiversity values and ecosystem services into spatial plans. This creates space for development decisions that encroach into PAs and other biodiversity-rich areas, contributing to land degradation and jurisdictional uncertainty [70].

One practical step is to make biodiversity inclusion explicit at the point of plan approval. MLMUPC, with MOE support, could adopt a standardized biodiversity inclusion checklist for reviewing land-use master plans. As a condition of approval, each plan should identify and map areas of high biodiversity importance and ecosystem services, specify avoidance and minimization measures to prevent habitat loss, and record implementation status in a registry to support monitoring and accountability.

Institutional responsibilities for biodiversity integration remain unclear in practice, particularly at the provincial and district levels, undermining accountability and enforcement and limiting the effectiveness of spatial planning as a conservation tool. Overlapping mandates and fragmented planning processes across MLMUPC, MOE, MAFF and the Ministry of Planning (MOP), which can lead to vertical "silos", weak integration of environmental safeguards into land-use decisions, and gaps in coordination and participation.

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Gaps in data availability, accessibility and interoperability across institutions further constrain implementation. Biodiversity and ecosystem-service data remain fragmented and often species-specific, with limited ecosystem-level coverage, and where data do exist, such as from camera traps, ranger patrols, or tools like Essential Life Support Areas (ELSA) mapping, they are frequently incompatible across ministries and shared inconsistently [15,71]. Conservation professionals and stakeholders consulted in the development of the 2026 NBSAP also emphasized that monitoring and data systems remain uneven and under-resourced, limiting the ability to apply evidence systematically in planning decisions [27]. These challenges are compounded by limited investment in geospatial infrastructure and capacity, particularly at the subnational level, where technical expertise in GIS and remote sensing is often insufficient to support integrated planning.

The effectiveness of the legal and policy framework is also undermined by weak enforcement. Despite a strong legal foundation, violations persist, including the allocation of economic land concessions (ELCs) within protected zones [72]. Urban expansion can proceed outside formal land-use plans, and local authorities face ongoing pressures from informal settlements and land disputes [73].

Opportunities for achieving Target 1

Achieving Target 1 depends as much on improving institutional coherence, data governance, and enforcement capacity as on developing additional policies or plans. Operationalizing existing coordination bodies, such as NCLMUP and BTWG is essential. In addition, improving data availability and sharing through a national spatial data infrastructure led by MLMUPC, complemented by CEMIS—the MOE-managed biodiversity data clearinghouse (Box 5)—supported by agreed standards, protocols and public access provisions, is also a high priority [41].

Cambodia has adopted multiple sub-national plans (including provincial spatial plans and commune/sangkat land-use plans), providing a practical entry point to systematically apply biodiversity layers and safeguards within the existing planning system [41]. A near-term opportunity is to agree on a single national map layer for areas of high biodiversity importance. This can be developed by consolidating existing KBA (Box 2), Important Bird and Biodiversity Areas (IBAs), ecosystem, PA and priority species datasets, validating them through expert review, and making the layer available to planners through CEMIS and the national spatial data infrastructure.

Cambodia has significant opportunities to accelerate biodiversity-inclusive spatial planning under this target (see Table 7). The existing legal and policy frameworks described above, along with the proposed improvements, provide a strong basis for formally integrating biodiversity data and ecosystem-service values into national, provincial, district, and commune land-use plans. Emerging tools such as ELSA—once institutionalized and operationalized—can provide decision-support layers for provincial and commune planning; this can be reinforced through a national spatial data infrastructure and accessible platforms for sharing agreed biodiversity layers with planners [41]. In addition, other geospatial prioritization analyses, including KBAs, together with ongoing PA zoning and planning, create a practical pathway to identify "no-go" zones for critical ecosystems and to guide biodiversity-sensitive design for infrastructure, agriculture, and urban expansion. For example, KBAs could be systematically integrated into national spatial planning and monitoring systems, including CEMIS and sectoral land-use plans, to better align land-use decisions with biodiversity priorities. With these layers in place, routine GIS overlay analysis can quantify the proportion of the KBA network and other high-biodiversity areas covered by approved spatial plans that explicitly recognize and manage them. The results can be reported periodically and used to prioritize plan updates, resourcing and enforcement.

Decentralization reforms and the mandates of the NCLMUP, BTWG and sub-national administrations also offer an opportunity to strengthen participatory, whole-of-government land-use planning that reflects local knowledge and the needs of IPLCs, women and other stakeholders. By establishing a national spatial data infrastructure, clarifying institutional coordination, and systematically using these tools in planning and

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investment decisions, Cambodia can substantially reduce habitat loss, improve connectivity, and ensure that future development aligns with biodiversity conservation and climate resilience objectives.

Table 7 outlines a series of strategic actions, the institutions responsible, and their role in achieving Target 1.

Table 7: *Action Plan for Target 1 on biodiversity-inclusive spatial planning*

Indicators	Strategic Actions	Key Institutions (and roles)
1.1. Number of biodiversity-inclusive spatial plans that are developed or updated **1.2.** All high-biodiversity areas identified and mapped **1.3.** Percentage of important high-biodiversity areas under biodiversity-inclusive spatial plans	• Integrate biodiversity into land-use planning at national and sub-national levels, including river basin and floodplain planning, so that spatial plans prevent habitat loss • Adopt and apply a standardized biodiversity inclusion checklist for the review and approval of land-use master plans, and maintain a registry of approved plans and their implementation status • Develop, validate and publish nationally agreed map layers for areas of high biodiversity importance, and use routine GIS overlay analysis to report the coverage of these areas by approved spatial plans • Adopt "no-go" zones for critical ecosystems and require biodiversity-sensitive design in development projects • Strengthen land-use planning governance with participatory processes to ensure equitable management • Require spatial plans to include minimum ecological safeguards (e.g., KBA retention, connectivity corridors) and compliance check before approval • Review and, where feasible, harmonize key legal provisions (e.g., Law on Land (2021) and ENR Code (2023) to clarify mandates and strengthen enforceable requirements for biodiversity-inclusive spatial planning • Explore options to strengthen transparency, including making adopted spatial plans and supporting biodiversity layers publicly accessible (e.g., via online publication), consistent with applicable laws and safeguards	• MLMUPC (spatial planning, land administration, construction and urban development) • MOE (biodiversity safeguards and environmental oversight in planning) • MOD (coordination where military land and facilities affect planning) • MOWRAM (integration of water resources, river basin, and food risk considerations) • Provincial and local authorities (sub-national spatial planning, approvals and enforcement) • NGOs/CSOs and development partners (technical advice, data support)

3.1.2. Target 2: Restore up to 30% of degraded ecosystems

By 2030, at least 30 percent of the total area of degraded terrestrial, inland water, marine and coastal ecosystems will be defined, mapped, prioritized and under restoration to enhance biodiversity, connectivity, and ecosystem functions and services.

Background and Context for restoring degraded ecosystems

Cambodia's forest cover has declined substantially over recent decades. Forest has declined from about 73% of the national land area in 1970, to 58% in 1997, and 38% by 2021 [74,74,75], reinforcing the need to scale up ecosystem restoration across forests and associated freshwater, riparian, and coastal systems.

Cambodia began rehabilitation and reforestation efforts from 1985, and the First Five Year Socioeconomic Development Plan 1996 to 2000 set an objective of restoring 5,000 ha per year, financed through local budgets and external assistance as needed. Reported plantation establishment during 1985 to 2002 totaled 11,125 ha [76].

The drivers of ecosystem degradation and habitat loss are diverse and reinforcing across terrestrial, freshwater, and coastal and marine systems, which means restoration needs to address both degraded condition and the underlying pressures. Major drivers include conversion of natural ecosystems to other land uses, illegal and unsustainable logging, and infrastructure expansion that increases access and accelerates encroachment. In freshwater systems, hydrological alteration and wetland conversion reduce habitat quality and ecosystem function, compounded by extractive pressures and overharvest. In coastal and marine systems, rapid development and habitat loss, combined with destructive and unsustainable fishing and increasing pollution loads, continue to degrade mangroves, seagrass beds, and reef-associated habitats and reduce resilience [27].

Current restoration programming includes large, multi-year initiatives linked to biodiversity, climate, and livelihoods outcomes. The Ecosystem Restoration Integrated Program (ERIP), funded by the Global Environment Facility and Conservation International, is intended to restore 255,000 ha within the Tonle Sap Basin, with an estimated mitigation benefit of 51 million tons of carbon dioxide emissions and direct benefits to 70,400 people [77,78] Since 2021, the Cambodia Sustainable Landscape and Ecotourism Project (CSLEP) has focused restoration in the Cardamom Mountains and Tonle Sap landscape, emphasizing rehabilitation of degraded forests, watersheds, and riparian zones within selected PAs and CPAs, supported by seedlings and technical assistance, and complemented by sustainable land management to reduce pressure on forests [79]. CSLEP is working within 275,425 ha and aims to reach 521,000 ha by the end of the project period.

Policy Frameworks for restoring degraded ecosystems

Cambodia's natural resources are supported by a range of legal and policy frameworks that provide mandates and instruments for ecosystem restoration across forests, inland waters, and coastal and marine systems. The Law on Forestry (2002) and Sub-Decree No. 79 on Community Forestry Management (2003) are the basis for forest rehabilitation, establishing community forestry, and sustainable use, which together support landscape restoration. The Law on PAs (2008) strengthens the mandate for ecosystem rehabilitation and biodiversity conservation through a zoning system that includes core, conservation, sustainable-use, and community zones, and includes provisions that enable habitat restoration within PAs. Formal guidelines for PA zoning support consistent application of these provisions [80]. The Law on Fisheries (2025) recognizes the importance of flooded forests, seagrass beds, and coral reefs, and mandates their protection and rehabilitation to support the long-term sustainability of inland and coastal fisheries.

Policy and strategic frameworks complement these legal mandates by setting objectives, priorities, and financing pathways for restoration at scale. The NPASMP (2017–2031) provides system-wide direction to restore degraded habitats, strengthen ecological connectivity, and mobilize resources, including through REDD+ and green growth initiatives. The Long-Term Strategy for Carbon Neutrality (2021) and NDC 3.0 (2025) similarly position for forest restoration and ecosystem rehabilitation as central to climate action and sustainable development.

More recently, the ENR Code (2023) and the CSE (2023–2028) consolidate the foundation for restoration by emphasizing NbS, climate resilience, and cross-ministerial coordination. Within the CSE (2023–2028), this is reflected in large-scale reforestation campaigns, including an annual target of one million trees planted nationwide, supported by tree nurseries producing indigenous and high-value species, linking policy commitments with practical restoration action that contributes to biodiversity conservation, carbon sequestration, and livelihoods.

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Gaps and Challenges for Achieving Target 2

Ecosystem degradation in Cambodia is evident across major ecosystem types including inland waters and floodplains, marine and coastal systems, and upland/mountain forests, with cumulative impacts on biodiversity, ecosystem services and rural livelihoods. Conservation professionals and stakeholders consulted in the development of the 2026 NBSAP emphasized that these pressures are driven by deforestation, land conversion, infrastructure expansion and unsustainable extraction, and that freshwater and coastal ecosystems are being destabilized by hydropower development, overfishing, sand mining, aquaculture and coastal development [27].

Cambodia's inland water systems, particularly the Tonle Sap Lake and the Mekong River, show severe ecological stress linked to changes in hydrology and resource use. The Tonle Sap reverse flow has declined by more than 56%, and the lake's wet-season area has shrunk by over 20%, reflecting a weakening flood pulse that underpins floodplain productivity. Local drivers highlighted include intensive dry-season irrigation and sand mining [81]. In some floodplain areas, groundwater extraction has contributed to land subsidence that can increase local water storage, illustrating complex and spatially uneven hydrological responses [82]. Cambodia's freshwater systems are being destabilized by hydropower development, overfishing and sand mining, with freshwater fish populations widely perceived to be in serious decline, an important concern given the central role of inland fisheries in food security and rural livelihoods [27]. More broadly, floodplains are being reshaped by agricultural expansion and infrastructure, including water management investments that modify the timing and magnitude of inundation; such changes reduce habitat quality for fisheries and other floodplain-dependent biodiversity [83].

Along the Gulf of Thailand, mangroves, seagrass beds and associated coastal habitats have declined substantially. Satellite-based analyses document significant mangrove loss in Koh Kong and Kampot since the 1990s, linked to aquaculture expansion, urban growth and illegal cutting [84–86]. Seagrass meadows have been damaged by destructive fishing practices (including trawling and push-net fishing), with additional pressure from port development and coastal tourism; dredging and reclamation around areas such as Sihanoukville and Kampot can cause direct and irreversible habitat loss [87,88]. Conservation professionals and stakeholders consulted in the development of the 2026 NBSAP identified mangroves and seagrass beds as coastal ecosystems under severe and ongoing threat from coastal development and overharvesting and noted that destructive fishing, tourism pressures and climate-driven impacts such as bleaching also threaten coral reefs. They further emphasized that trends in marine species are difficult to assess with confidence because monitoring is weaker than for many terrestrial systems, but available evidence and expert perceptions still point largely to decline [27].

Upland forests and mountain ranges that remain important biodiversity strongholds are under persistent pressure from habitat conversion and hunting. Camera-trap evidence from Cambodia's forest landscapes has highlighted the global significance of these ecosystems for threatened mammals, while also indicating declines associated with hunting and habitat loss [28]. Ongoing tree cover loss and accelerating fragmentation in lowland evergreen, semi-evergreen and deciduous dipterocarp forests is also occurring, with loss concentrated along agricultural frontiers, economic land concessions and infrastructure corridors [27]. Degradation of upland forests also undermines watershed regulation and downstream sediment dynamics, creating ecological and socio-economic risks [89].

Opportunities for achieving Target 2

There are important opportunities to accelerate ecosystem restoration under this target (see Table 8). Cambodia already has a strong policy base and practical experience from programs such as ERIP and CSLEP, which demonstrate how large-scale restoration of forests, wetlands, mangroves and riparian zones can be combined with community participation, ecotourism and climate-resilient livelihoods. Tools for spatial planning and remote sensing make it increasingly feasible for MOE, MAFF and the Ministry of Rural Development (MRD) to define, map, and prioritize degraded ecosystems across landscapes, and to embed clear restoration targets into national, provincial, and district land-use plans. For example, KBA data

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could guide where restoration is most strategic by helping identify priority ecosystems, ecological corridors, and sites where restoration would deliver the greatest biodiversity persistence and ecosystem service benefits (Box 2). At the same time, global and national restoration agendas, including REDD+, PES and emerging biodiversity credit and green finance mechanisms, create a favorable environment to mobilize sustainable financing at scale, especially when linked to Cambodia's NDC 3.0 (2025) and Long-Term Strategy for Carbon Neutrality (2021). By aligning these policy instruments, financial opportunities and community-based initiatives, Cambodia is well placed to increase its restoration ambition to 30% of degraded ecosystems by 2030, improve connectivity between key habitats, and regenerate ecosystem functions and services that underpin long-term resilience and rural well-being.

Table 8 outlines a series of strategic actions, the institutions responsible, and their role in achieving Target 2.

Table 8: *Action Plan for Target 2 on restoring degraded ecosystem areas*

Indicators	Strategic Action(s)	Key Institutions (and roles)
2.1. Number of ecosystem restoration policies/ strategies and tools established **2.2.** A national ecosystem map or database showing areas needing restoration **2.3.** Number of ecosystem restoration projects (incl. private/development partner involvement) **2.4.** Percent of degraded terrestrial, inland water, marine and coastal ecosystems under restoration	• Implement large-scale restoration programs for ecosystems (e.g., forests, wetlands, floodplains, mangroves, coral reefs, etc.,) combining natural regeneration with planting of native species and community participation • Embed restoration targets into national land-use plans and leverage sustainable finance (e.g., REDD+, PES, biodiversity credits) to support these efforts • Increase the restoration ambition to 30% of degraded ecosystems (up from 10% in previous plan) and secure financing mechanisms for restoration • Develop and improve policy, strategy, and regulatory frameworks to restore degraded ecosystems (e.g., guidelines on forest rehabilitation) • Prioritize restoration investments to sites where measurable recovery is feasible within plan cycles (e.g., canopy cover increase, native regeneration, invasive suppression) • Small scale habitat restoration and assist natural generation (silviculture) via community-based initiatives • Plan biodiversity corridors and ecological connectivity inside and around PAs to improve habitat linkages and species movement across landscapes	• MOE (forestry and ecosystem restoration programs) • MAFF (agro-forestry, fisheries/aquatic habitat restoration) • MOWRAM (rehabilitation and restoration of water-related ecosystems, reservoirs and basins) • MRD (community engagement in restoration) • Development partners (funding PES, REDD+) • NGOs/CSOs and development partners (site-based work, technical advice, data) • Private sector (restoration delivery, nurseries, carbon/PES)

3.1.3. Target 3: Effectively manage PAs and establish OECM sites

By 2030, at least 30 percent of terrestrial and inland water areas, and at least 10% of marine and coastal areas are conserved by the protected area system and other effective area-based conservation measures (OECMs), with effective management in place to ensure the 2050 vision, while ensuring equitable participation with inclusive processes and outcomes, and recognizing the roles of indigenous peoples, local communities, women and youth.

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Background and Context for PAs and OECMs

Cambodia established its first National Park around the Angkor Wat complex in 1925, making it the first such park in Southeast Asia [90]. By 1993, there were 23 PAs covering about 18% of Cambodia's territory. Since 2016, Cambodia's PA network has expanded significantly and now includes 49 PAs covering 7.4 million hectares or 39% of the country's land area (see Annex 2) [49]. PAs in Cambodia fall into eight categories: National Park, Marine National Park, Wildlife Sanctuary, Protected Landscape, Multiple Use Area, Ramsar Site, Natural Heritage Park, Biosphere Reserve and Other Natural Protected Areas. National Parks and Wildlife Sanctuaries make up most of the area protected (Annex 2).

Cambodia already exceeds the global target of 30% coverage for terrestrial area through its PAs and has amongst the highest proportions globally. PAs are unevenly distributed: most are concentrated in large forested terrestrial landscapes, while coastal and especially marine ecosystems remain underrepresented (MPAs currently cover only about 1.5% of Cambodia's 48,719 km² marine area [91] and there is less than 4% in total when other non-PA are included [92]), and important gaps persist in grasslands, wetlands, limestone karsts and riparian corridors.

To reach the 2026 NBSAP target of 10% marine coverage, and to address the uneven distributed in terrestrial and freshwater protection, Cambodia is exploring the use of OECMs (Box 1). These sites are outside the PA system yet governed and managed in ways that achieve sustained biodiversity benefits. Potential candidates include Community Fisheries (CFi), Marine Fisheries Management Areas (MFMAs), CFs, Indigenous Communal Land Titles (ICLTs), sacred forests managed under customary law, Fisheries Refugia and wetlands managed for ecosystem services, Community-Based Ecotourism (CBET) sites, and privately managed ecotourism or conservation concessions.

Box 1. Other Effective Area-Based Conservation Measures (OECMs)

OECMs are geographically defined areas, other than PAs, governed and managed to achieve positive and sustained long-term outcomes for in situ biodiversity conservation, with associated ecosystem functions and services and, where applicable, cultural and socioeconomic values. In Cambodia, OECMs can help deliver KM-GBF Target 3 (30x30), particularly for underrepresent marine and coastal areas, because both PAs and OECMs count toward national coverage. Cambodia does not yet have an official framework to recognize OECMs, but they are incorporated in NDC 3.0 (2025) targets and considered in 2026 NBSAP target setting. Site identification requires the site is/has: (1) not a PA, (2 geographically defined, (3) important biodiversity values, (4) institutions or mechanisms to govern and manage, (5) governance and management to achieve or are expected to achieve the in-situ conservation, (6) expected long term in-situ conservation, and (7) equity addressed by governance and management arrangements (Jonas et al. 2023).

In addition to its PAs and OECMs, Cambodia has a national network of KBAs identified using the global KBA Standard (Box 2). KBAs are sites that make a disproportionate contribution to global biodiversity persistence, based on criteria such as the presence of globally threatened species, geographically restricted species, ecological integrity, and biological processes. They therefore represent nationally and globally important sites and provide a scientifically grounded basis for prioritizing conservation action and investment [9].

Many of Cambodia's currently recognized KBAs were first delineated in the early 2000s using an earlier generation of KBA methods [93] that focused mainly on sites important for globally threatened species, individually range-restricted species and large demographic aggregations. Since then, global Red List assessments have expanded to cover hundreds of additional species, and many taxa assessed in the early 2000s have been re-evaluated. The adoption of a new KBA Standard [94], together with new tools such as the IUCN Red List of Ecosystems [31], creates important opportunities to refresh and expand Cambodia's KBA network, including by identifying sites for threatened ecosystems (Criterion A2) and under-represented taxonomic groups. Because of time and resource constraints, a full national KBA reassessment has not yet been undertaken. Stakeholders have recommended two new KBA sites for Cambodia (i.e., Anlung Pring Protected Landscape and Phnom Sampeu limestone karst) and four substantial boundary changes to existing KBAs (i.e., KHM13, 30, 32 and 34 in Figure 7) [9].

Terrestrial and freshwater KBAs in Cambodia encompass many of the country's most important landscapes and ecosystems. They include large forest blocks in the Cardamom Mountains, Northern Plains and Eastern Plains, and the Tonle Sap floodplain and associated wetlands, stretches of the Mekong and its major tributaries, and selected coastal and marine sites (Figure 7). These areas support globally threatened species and highly distinctive ecosystems such as seasonally inundated grasslands and swamp forests [9].[1]

Policy frameworks for PAs and OECMs

PAs in Cambodia are governed by a comprehensive legal and policy framework. The Law on Environmental Protection and Natural Resource Management (1996) laid the foundation for environmental governance, while the Law on PAs (2008) provided a dedicated legal basis for classification, zoning, and community participation in PA management. This framework was further modernized and harmonized through the ENR Code (2023), which integrates biodiversity conservation into national development planning and introduces mechanisms for sustainable financing and biosafety. At the strategic level, the NPASMP (2017–2031) guides long-term planning, zoning, biodiversity corridors, and management effectiveness across the entire PA system. At the operational level, each PA is governed by a PA Management Plan, which translates national strategies into site-specific actions, zoning regulations, community engagement, and monitoring measures. Together, these instruments ensure that Cambodia's PAs serve as the backbone of national biodiversity conservation and sustainable development.

Gaps and Challenges for Achieving Target 3

Given the current size of PAs in Cambodia, several challenges need to be addressed. First, the most pressing challenges relate to illegal activities, such as illegal logging, deforestation and land conversion, and weak governance and coordination [25,95,96]. Poaching, and unsustainable harvesting of non-timber forest products also remain widespread [16,97]. Encroachment for agriculture, settlements, and concessions continues to degrade forests, particularly in accessible areas close to roads and markets [98,99].

A second tier of challenges concerns planning and zoning, financing and human resources, infrastructure and development pressures. Many PAs still lack approved zoning and management plans, leaving them vulnerable to fragmented land-use decisions [25]. Underfunding, shortages of trained staff

Box 2. Key Biodiversity Areas (KBAs)

KBAs are sites that make a disproportionate contribution to the global persistence of biodiversity, identified using the global KBA Standard. They provide a science-based reference layer for prioritizing conservation action and investment because they are defined using consistent criteria, including globally threatened or geographically restricted species, ecological integrity, and key biological processes. Although not officially recognized in Cambodia, the KBA network could strengthen delivery of Targets 1–3 by informing integrated land-use planning, identifying ecological corridors, and helping target restoration and species-recovery actions. KBAs can also support a more representative and effective PA and OECM network by highlighting priority ecosystems and sites that may be under protected. Systematically integrating KBAs into national spatial planning and monitoring systems, including CEMIS and sectoral land-use plans, can improve alignment across ministries and ensure that limited resources are directed to the places that matter most for biodiversity persistence while delivering local ecosystem service and livelihood benefits. Maintaining an up-to-date KBA inventory using recent data is therefore a priority enabling step for planning, investment prioritization, and impact assessment.

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including rangers, and reliance on donor projects further constrain management effectiveness.

Therefore, to ensure that Cambodia's PA system can deliver its intended conservation and sustainable development outcomes, it is critical to strengthen effective PA management. This requires coordinated action in planning and zoning, governance reform, enhanced enforcement, and mobilization of sustainable financing mechanisms.



Figure 7. *Cambodia's KBA Network.*
See Table 9 for KBA names. Source: CEPF (2025) and WWF-Cambodia.

In terms of important areas for biodiversity, there is already a high level of protection, at least on paper. Overall, 53% of the area of all KBAs in Cambodia is within designated PAs [75]. Four KBAs are completely outside CPAs, and 13 are less than 20% protected (See Table 9). These "unprotected KBAs" often face pressures from land-use change, infrastructure development and overexploitation.

Opportunities for achieving Target 3

Cambodia's extensive terrestrial PA network (see Annex 2) and growing interest in OECMs offer strong opportunities to achieve this target. With 39% of the terrestrial area of the country already designated as PAs [49] (containing 193 CPAs as of 2024 [100]) the headline target of 30% coverage has already been met for terrestrial protection in Cambodia. An immediate opportunity is to expand marine coverage by increasing the extent and representativeness of MPAs, MFMAs, and marine and coastal OECMs to move from the current low baseline toward the 10% target. This should focus on priority coastal and offshore habitats, improved management effectiveness, and stronger compliance and enforcement in high-pressure seascapes, while also recognizing locally managed areas such as fish sanctuaries where they meet OECM criteria.

At the global level, Cambodia will also consider emerging ocean governance frameworks, including the agreement under United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction (BBNJ). Although Cambodia's jurisdiction is limited to its Exclusive Economic Zone, engagement with BBNJ implementation can help mobilize technical and financial support for marine biodiversity conservation, strengthen regional cooperation in the Gulf of Thailand and wider South China Sea, and help ensure that national MPA networks are consistent with broader ocean biodiversity objectives.

Another immediate opportunity is completing zoning and management plans for all PAs so that existing legal designations translate into effective, on-the-ground conservation. KBA data and maps could be used to strengthen the PA and OECM network by highlighting under-represented ecosystems and sites of global biodiversity importance, supporting prioritization of new designations, boundary adjustments, and management focus.

The development of a national OECM policy and framework can build on well-established community mechanisms such as CFs, CFis, ICLTs, MFMAs, sacred forests, fish sanctuaries and privately managed conservation or ecotourism areas, helping to secure under-represented ecosystems like wetlands and coastal habitats while recognizing IPLC stewardship. At the same time, the ENR Code (2023) and NPASMP (2017–2031) provide a basis for mobilizing increased and more predictable funding for rangers, monitoring and enforcement, including through partnerships with development partners and the defense sector. By expanding co-management arrangements with local communities in and around PAs and OECM sites and using corridor and buffer-zone planning to strengthen ecological connectivity, Cambodia can substantially improve PA management effectiveness, reduce illegal activities and forest loss, and ensure that conservation outcomes are more equitable and resilient over the long term.

Table 10 outlines a series of strategic actions, the institutions responsible, and their role in achieving Target 3.

Table 9. Cambodia's KBAs showing percentage within PAs and OECMS ('% Protected')

Codes refer to Figure 7. Source: CEPF (2025). Source: CEPF (2025).

Code	KBA Name and % Protected		Code	KBA Name and % Protected	
KHM1	Ang Tropeang Thmor	78%	KHM23	Phnom Bokor	93%
KHM2	Bakan		KHM24	Phnom Samkos	100%
KHM3	Bassac Marsh	0%	KHM25	Preah Net Preah/Kra Lanh/Pourk	10%

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KHM4	Boeung Chhmar/Moat Khla	83%	KHM26	Prek Chhlong	0%
KHM5	Boeung Prek Lapouv	54%	KHM27	Prek Toal	88%
KHM6	Central Cambodia Lowlands	95%	KHM28	Sekong River	73%
KHM7	Central Cardamoms	100%	KHM29	Sesan River	19%
KHM8	Central Oddar Meanchey	18%	KHM30	Snoul/Keo Sema/O Reang	67%
KHM9	Chhep	91%	KHM31	Southern Cardamoms	95%
KHM10	Chhnuck Tru	27%	KHM32	Sre Ambel	99%
KHM11	Dei Roneat	37%	KHM33	Srepok River	73%
KHM12	Kampong Laeng	9%	KHM34	Stung Kampong Smach	9%
KHM13	Kampong Trach	0%	KHM35	Stung Sen/Santuk/Baray	9%
KHM14	Kirirom	99%	KHM36	Stung/Chi Kreng/Kampong Svay	13%
KHM15	Koh Kapik	87%	KHM37	Stung/Prasat Balang	13%
KHM16	Koh Tang Archipelago	0%	KHM38	Thala Stueng Treng	9%
KHM17	Lomphat	60%	KHM39	Upper Srepok Catchment	96%
KHM18	Lower Stung Sen	95%	KHM40	Upper Stung Sen Catchment	67%
KHM19	Mekong River from Kratie to Lao PDR	47%	KHM41	Veal Srongae	21%
KHM20	Mondulkiri-Kratie Lowlands	68%	KHM42	Virachey	98%
KHM21	O Skach	86%	KHM43	Western Siem Pang	81%
KHM22	Phnom Aural	100%			

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Table 10: Action Plan for Target 3 on effectively managing PA and OECM sites

Indicators	Strategic Action(s)	Key Institutions (and roles)
3.1. Percentage of terrestrial and inland water area in PA and OECMs system **3.2.** Percentage of marine and coastal area in PA and OECM system **3.3.** Percentage of PAs with zoning and management plans completed and approved **3.4.** Number of OECMs established and recognized **3.5.** Rate of natural resource crimes reduced in PAs	• Expand and strengthen PA management: complete zoning and management plans for all PAs • Establish and operationalize OECMs policy and framework for recognition and monitoring of OECM • Identify OECMs to cover underrepresented ecosystems (e.g., wetlands, coastal areas, marine), and where appropriate establish new marine PAs • Improve PA management effectiveness by increasing funding and enforcement capacity • Promote co-management with local communities to ensure equity (e.g., community	• MOE (lead agency managing PAs and MPAs) • MAFF (forestry and fisheries agencies managing community forests/fisheries, MFMAs and fisheries refugia as OECMs) • Local communities and IPLCs (co-management roles and stewardship) • Law enforcement (rangers, park authorities)

Indicators	Strategic Action(s)	Key Institutions (and roles)
	forestry/fisheries in buffer zones) and connectivity between conserved areas • Integrate Target 3 into sub-national planning • Establish new PAs in high-value biodiversity and ecosystem sites • Concentrate management and partner support in priority PAs/OECMs where measurable reductions in habitat loss and illegal activity can be demonstrated, with annual retargeting based on results	• MOD (promote OECM activities within the army camps) • NGOs/CSOs and development partners (site-based work, technical support to policy and guideline development, data)

3.2. Key Result Area 2 – Species/Genetic Conservation, Threat Reduction & Climate Change

This KRA encompasses Targets 4 and 6-8 that collectively aim to halt species extinction and conserving genetic diversity, preventing and managing IAS, reducing pollution to levels not harmful to biodiversity, and integrating climate resilience and NbS into policies, planning and implementation.

3.2.1. Target 4: Halt Species Extinction and Protect Genetic Diversity

By 2030, halt the human-induced extinction of threatened species, reduce extinction risks and ensure the restoration of genetic diversity in wild and domesticated populations through in situ and ex situ conservation and sustainable management.

Background and Context for halting extinction and protecting genetic diversity

Cambodia supports at least 274 globally threatened species across multiple taxonomic groups (see Section 1.3 and **Table 1**) with particularly important strongholds in deciduous dipterocarp forests, plains wetlands, and the Mekong–Tonle Sap system. This context makes halting extinction risk and protecting genetic diversity a national priority, not only because many threatened taxa persist in small, fragmented, or declining populations, but also because Cambodia still retains some of the most viable remaining populations for several wide-ranging species, meaning national actions can disproportionately influence regional and global persistence. The same pressures that have degraded ecosystems, decimated wildlife populations also erode genetic diversity and reduce ecosystem integrity, while the degradation of wetlands, floodplains, and river systems threatens both species survival and the ecological processes that sustain recruitment, connectivity, and long-term population viability, as well as human livelihoods and wellbeing. In this setting, preventing local extirpations and genetic erosion requires both safeguarding remaining refugia and maintaining habitat connectivity and ecological function across all ecosystems, while strengthening protection for threatened taxa.

In situ conservation in Cambodia focuses on maintaining species and ecosystems in the wild through PA and OECM management, threat reduction, and readdressing the drivers of biodiversity loss. Despite a general trend in wildlife population declines, targeted conservation actions in Cambodia have been successful. For example, *in situ* conservation of vultures has resulted in Cambodia now hosting the largest remaining populations in Southeast Asia of the White-rumped, Slender-billed (*G. tenuirostris*), and Red-

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headed vultures, all classified by IUCN as Critically Endangered [19]. This success has been supported by coordinated actions within protected landscapes, including nest monitoring, anti-poisoning campaigns, and community-led "vulture restaurants," helping stabilize populations that have collapsed elsewhere in the region and reinforcing Cambodia's role as a regional stronghold for vulture survival [101].

Ex situ conservation complements *in situ* efforts through coordinated rescue, rehabilitation, and captive management for the most vulnerable species, supported by institutions such as the Phnom Tamao Wildlife Rescue Centre and the Angkor Centre for Conservation of Biodiversity (ACCB). Key programs include captive breeding for critically endangered species such as the Siamese Crocodile, the Bengal Florican, and the White-shouldered Ibis, and head-starting approaches that raise hatchlings to improve survival before release, as applied in the Royal Turtle conservation program [25]. *Ex situ* actions can also support broader recovery objectives for wild populations, including rebuilding prey populations of dry forest ungulates such as Banteng and Eld's Deer (*Panolia eldii*), a strategy proposed to help restore prey bases for potential tiger reintroduction and justified as valuable for conserving these globally and nationally imperiled species regardless of tiger plans [102]. The same integrated approach also extends to safeguarding genetic diversity in agricultural systems, including a rice variety gene bank [25].

Stakeholders have highlighted the erosion of local crop genetic resources, such as indigenous varieties of rice, maize, pumpkin and papaya, due to the rapid spread of imported and, in some cases, genetically modified seed. The 2026 NBSAP therefore promotes on-farm conservation of traditional varieties, community seed banks and measures to prevent unintended genetic contamination of local landraces.

Policy Frameworks for halting extinction and protecting genetic diversity

Cambodia's approach to halting human-induced extinctions, reducing extinction risk, and safeguarding genetic diversity combines legal protection of species and habitats, targeted species measures, community stewardship and incentive mechanisms, and international commitments that reinforce national implementation.

In situ conservation is centered on the PA system and its supporting legal and planning framework. The Law on PAs (2008) and the Law on Forestry (2002) provide the basis for regulating wildlife management and restricting destructive activities, while the NPASMP (2017–2031) sets longer-term direction for restoring degraded ecosystems and maintaining ecological connectivity. Species-focused planning, including action plans for priority threatened species such as the Asian Elephant, Giant Ibis, and the Royal Turtle, complements site-based protection by clarifying recovery and management needs within native habitats.

Ex situ conservation supports recovery and genetic safeguards where *in situ* measures alone are insufficient. Agricultural biodiversity is supported through the National Seed Policy and related genetic resource management frameworks that help maintain crop diversity and reduce genetic erosion in domesticated species important for food security.

Human–wildlife coexistence and community stewardship are advanced through community-based natural resource management, particularly CPAs, CF, and CFi, linking biodiversity outcomes with local livelihoods. Incentive mechanisms such as nest protection payments and wildlife-friendly rice (Ibis Rice) align community benefits with protection of threatened species, strengthening compliance and local support for conservation objectives [103].

International commitments provide an enabling layer that supports domestic action and alignment with global goals. As a Party to the CBD, Cambodia integrates biodiversity priorities into national strategies and reporting. Through the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Cambodia regulates trade in endangered species, and the Cartagena Protocol on Biosafety provides a framework for managing biosafety risks linked to genetic resources, with related measures addressed under Target 5.

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Gaps and Challenges for Achieving Target 4

Cambodia's biodiversity continues to face multiple, interlinked threats that erode ecosystem integrity and increase extinction risk. Habitat loss and degradation remain among the most significant pressures, driven by conversion of natural ecosystems to other land uses and by declining forest condition. Forest decline has been linked to commercial logging, land encroachment for settlements and farming, infrastructure development, and widespread fuelwood collection. Loss of forest quality is often more critical than net forest cover loss because logging typically removes commercially valuable, large trees first. Land conversion by large corporations has tended to affect larger ecosystem areas than small-scale exploitation by landless rural communities, and road construction has amplified threats by opening access to remote areas and enabling agricultural expansion, hunting and wildlife trade, illegal logging, mining, residential and tourism development, dam construction, and associated fragmentation. Mangrove forests have also been degraded through charcoal production, salt farm expansion, and shrimp aquaculture [25].

Climate change compounds these pressures and increases the vulnerability of ecosystems and species. Cambodia's high exposure to climate variability is heightened by reliance on rain-fed rice cultivation, with droughts and floods disrupting production and livelihoods. Sea level rise is expected to alter hydrology and freshwater fisheries, increase salinity intrusion into the Mekong and Tonle Sap, and reduce fish species diversity, with coastal zones at particular risk of habitat loss as water levels rise. Dam construction has further altered river systems, with negative impacts on fish populations that support both biodiversity and local livelihoods [25].

Additional challenges include the spread of IAS and genetic erosion, and in marine and coastal systems, unsustainable and destructive fishing practices, sedimentation, waste dumping, and rapid coastal development. These pressures, alongside population growth in coastal zones, continue to place marine biodiversity under severe stress and complicate achievement of Target 4 outcomes across taxa and ecosystems [25].

Several persistent gaps and constraints continue to limit progress toward Target 4. Governance and enforcement remain uneven across landscapes and seascapes, with road expansion and fragmented mandates enabling ongoing illegal logging, hunting, and wildlife trade, while compliance capacity and deterrence are often insufficient relative to the scale and profitability of extraction. Technical gaps also remain significant: species and genetic data are incomplete and not consistently standardized, long-term population monitoring is patchy across taxa and sites. Financing and human resources for sustained recovery programs, conflict mitigation, IAS control, and genetic conservation are not yet secure, and community-based mechanisms and incentive schemes are not consistently funded or scaled. One Health coordination across MOE, MAFF, MOH and research partners is still emerging and needs clear protocols, shared surveillance priorities, and sustained resourcing to reduce pathogen spillover risks at the wildlife–livestock–human interface

Opportunities for achieving Target 4

Despite the challenges and gaps, Cambodia has a strong foundation to accelerate threatened species recovery and protection of genetic diversity under this target (see Table 11). Existing successes in *in situ* and *ex situ* conservation – including vulture conservation, dry-forest ungulate recovery efforts, wildlife rescue and breeding centers, and agricultural gene banks – provide practical models that can be scaled into comprehensive species recovery programs for priority taxa.

A rapid prioritization of 48 globally threatened or Near Threatened bird species that breed in Cambodia ranked *ex-situ* needs using IUCN threat status, Cambodia's global importance, near-term risk of national loss, and existing *ex-situ* holdings. Five species were identified as high priority (White-Winged Duck (*Asarcornis scutulata*, CR), Masked Finfoot (*Heliopais personatus*, CR), Bengal Florican, White-Shouldered Ibis, Giant Ibis), with *ex-situ* programs already underway at ACCB for Bengal Florican, Giant

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Box 3. Cambodia Species Index (CSI)

The CSI will provide a standardized, scientifically rigorous measure of biodiversity change by tracking population trends of key species across terrestrial, freshwater, and marine ecosystems. Drawing on international best practice, including the WWF Living Planet Index methodology, the CSI would synthesize existing monitoring data from government agencies, NGOs, universities, and research institutions into a composite index of annual population change. Trends would be derived using meta-analysis, and potentially reported at multiple levels: species, taxonomic groups (amphibians, reptiles, birds, mammals, freshwater fish, marine fish, and invertebrates), and ecosystem types (forests, wetlands, grasslands, freshwater systems, and coastal and marine areas). The CSI could use a baseline year and communicate results through a traffic-light summary: green increasing, yellow stable, red declining. As a decision-support tool, it would help assess conservation effectiveness, identify emerging threats and priority areas, inform PA and OECM management and land-use planning, and strengthen reporting under the NBSAP, KM-GBF, CBD, and SDGs, while building national capacity through improved data integration and collaboration.

Ibis And White-Shouldered Ibis; urgent action is needed to develop options for Masked Finfoot and an insurance approach for Cambodia's small, declining White-Winged Duck population, while five medium-priority species should be monitored and periodically reassessed to trigger timely action if conditions worsen [104].

The growing body of Red List assessments, other analyses and site-based monitoring offers an opportunity to develop a national species monitoring system (including the Cambodia Species Index see Box 3) and regular biodiversity and ecosystem status reports, enabling evidence-based prioritization and adaptive management. Community-based mechanisms such as CPAs, CFs, MFMAs, and CFis, together with incentive schemes like nest protection payments and wildlife-friendly rice, create favorable conditions to expand human–wildlife coexistence measures and reduce conflict while supporting local livelihoods. At the same time, emerging One Health initiatives and post-pandemic attention to zoonotic disease risks provide a platform to establish inter-agency working groups linking MOE, MAFF, Ministry of Health (MOH) and research institutions to jointly address pathogen spillover at the wildlife–livestock–human interface. Ongoing legal and policy reforms under the ENR Code (2023) create a window to update wildlife legislation, national threatened species listings and enforcement tools in line with IUCN and CITES, ensuring that Cambodia's threatened species framework is scientifically robust and internationally aligned.

Table 11 outlines a series of strategic actions, the institutions responsible, and their role in achieving Target 4.

Table 11: *Action Plan for Target 4 on threatened species recovery*

Indicators	Strategic Action(s)	Key Institutions (and roles)
4.1. Cambodia Species Index established and operational **4.2.** The number of species stable or improving on the Cambodia Species Index of trends in populations of key terrestrial, freshwater and marine species **4.3.** Number of Species Conservation Action Plans for priority threatened species developed and implemented	• Establish a national biodiversity inventory and monitoring framework covering species, genetic resources, habitats and ecosystems, including regular assessments of status and trends • Compile time-series monitoring data for indicator species across terrestrial, freshwater and marine systems and apply standardized modelling and meta-analysis to produce and document a composite species population trend index Cambodia Species Index • Develop and implement recovery plans for all priority threatened species, including targeted reintroductions where feasible • Strengthen in-situ protection and complementary ex-situ safeguards such as captive breeding and gene banks for critically endangered taxa, including species-specific captive-breeding and reintroduction programs such as vultures • Prioritize prevention of irreversible loss including local extirpation and genetic erosion through refugia protection and targeted recovery actions, backed by ex-situ safeguards where needed	• MOE (wildlife conservation departments, PA authorities) • MAFF (FA for any remaining wildlife jurisdiction, domestic animal genetic resources) • Agriculture (gene banks for crops/livestock) • Academic and zoo/research institutions (ex-situ programs, captive breeding, research)

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Indicators	Strategic Action(s)	Key Institutions (and roles)
(incl. In-situ and Ex-situ) **4.4.** 3. National threatened species categories updated to align with the ENR Code (2023), while referencing IUCN Red List and CITES criteria	• Address human-wildlife conflict through community-based conflict management and establish inter-agency One Health working groups to reduce pathogen spillover risk • Update legal and regulatory frameworks including wildlife law and protected species listings in line with IUCN and CITES categories • Promote research partnerships between MoE, MAFF and relevant international agencies to strengthen monitoring, recovery science and implementation	• MOH (zoonotic disease aspects) • NGOs/CSOs and development partners (site-based work, technical advice, data) • Private sector (breeding/seed, natural products, corporate support)

3.2.2. Target 6: Control and manage Invasive Alien Species

By 2030, major invasive alien species (IAS) and their pathways have been identified, prioritized and controlling measures determined and implemented to reduce and minimize rate of invasion and their impacts on biodiversity and ecosystem services.

Background and Context for controlling and managing IAS

IAS represent a significant and escalating threat to Cambodia's globally important biodiversity. As a nation rich in unique ecosystems, from the vast Tonle Sap Lake to the dense Cardamom Mountains, the introduction of non-native species that become invasive can disrupt natural ecological balances, outcompete native flora and fauna, and degrade habitats. The Cambodian economy and the livelihoods of its rural population are deeply intertwined with natural resources, particularly agriculture, fisheries, and forestry [14]. The spread of invasive species directly threatens these sectors by reducing crop yields, diminishing native fish stocks, and altering the composition of forests, thereby impacting food security and economic stability.

Several invasive species have already established a destructive presence in the Cambodian landscape. Perhaps the most notorious is the Giant Sensitive Plant (*Mimosa pigra*) [25], considered one of the world's 100 most IAS [105], which forms dense, thorny thickets that choke out native vegetation in wetlands and along riverbanks, severely affecting access to water for local communities and degrading critical habitats for waterbirds and fish. In the nation's vital freshwater systems, invasive fish such as Common Carp (*Cyprinus carpio)*, Silver Carp (*Hypophthalmichthys molitrix*), and Bighead Carp (*Aristichthys niloticus*), several Tilapias (e.g., *Oreochromis niloticus, O. mossambicus*, and hybrids/Red Tilapia), African Catfish (*Clarias gariepinus*), and Giant Gourami (*Osphronemus gouramy*) have become established [106,106], posing a threat to the incredibly diverse native fish populations of the Mekong and Tonle Sap by competing for food and altering the aquatic environment.

The pathways for the introduction and spread of these species are largely linked to human activity and a globalized economy. The primary vectors include international trade in agricultural goods, aquaculture, and the ornamental plant industry, all of which can bring in new species either intentionally or accidentally [107]. Once introduced, their spread within the country is often facilitated by infrastructure development such as irrigation canals and hydropower dams, which alter aquatic connectivity and create new dispersal routes [108]. Furthermore, widespread deforestation, conversion of flooded forests around the Tonle Sap, and agricultural expansion are driving habitat degradation and fragmentation [25], processes that reduce ecosystem resilience and increase vulnerability to IAS. This reflects regional findings that disturbed or fragmented habitats are more readily colonized by opportunistic AIS than intact ecosystems [109].

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Policy Frameworks for controlling and managing IAS

The Royal Government of Cambodia formally recognizes the threat posed by IAS within its national environmental policy architecture. The cornerstone of this framework is the NBSAP, which serves as the country's primary road map for fulfilling its commitments under the CBD. The 2026 NBSAP includes specific national targets aimed at preventing the introduction of AIS, controlling their spread and impacts, or eradicating priority AIS. This strategic document provides the mandate for government ministries and their partners to develop and implement programs that address the drivers of biological invasions and mitigate their impacts on the nation's natural heritage.

The responsibility for managing IAS is shared across several government institutions, reflecting the cross-sectoral nature of the threat. The MOE, through its General Secretariat of the NCSD, holds the primary responsibility for developing biodiversity policy and coordinating national efforts to combat IAS. Concurrently, the MAFF plays a crucial operational role in managing biosecurity, implementing quarantine measures at borders to prevent new introductions, and controlling invasive species that directly impact crops, livestock, and fisheries [110]. While a single, comprehensive law dedicated solely to IAS does not yet exist, relevant articles within the Law on Environmental Protection and Natural Resource Management (1996), the Law on Forestry (2002), and the Law on Fisheries (2025) provide a legal basis for control and management activities.

Recognizing that policy and laws are only effective with public support and understanding, Cambodia has developed a National Communication Strategy for IAS Management. This strategy aims to build awareness among a wide range of stakeholders, from government officials and private sector importers to local communities and the public. The key objective is to educate people on the ecological and economic risks associated with IAS and to promote actions that can help prevent their introduction and spread. This includes promoting responsible practices in the agriculture, aquaculture, and pet and ornamental plant trades, and encouraging public participation in monitoring and reporting new potential invasions.

Gaps and Challenges for Achieving Target 6

Despite a solid policy foundation, Cambodia faces significant challenges in the practical management of IAS, primarily stemming from limited capacity and resources. Effective management of IAS requires substantial and sustained financial investment as well as specialized technical expertise in areas such as species identification, ecological risk assessment, and eradication methodologies. Cambodia's Sixth NR (2019) already acknowledges the need for more resources and technical capacity to address IAS. Regional assessments have similarly highlighted that financial limitations and gaps in technical expertise, particularly in taxonomy and risk analysis, are major barriers to effective prevention and control in the Lower Mekong Basin [109]. Without adequate investment and training, efforts to contain invasive species are often fragmented and short-lived, leading to reinvasion or failure to eradicate established populations.

A second major hurdle is the persistent gap in scientific data and the difficulties in enforcing existing regulations. For many invasive species in Cambodia, there is insufficient information on their exact distribution, rate of spread, and specific impacts on local ecosystems. The Sixth NR (2019) to the CBD highlights IAS as an emerging concern but notes that monitoring and data remain limited, particularly for aquatic invasives and lesser-known taxa. Similarly, an assessment of the Lower Mekong Basin found that information on invasive species occurrence and ecological impacts is fragmentary, with most data confined to a few well-studied plants such as Giant Sensitive Plant and aquatic pests like the Golden Apple Snail (*Pomacea canaliculata*) [109]. This lack of comprehensive baseline data poses significant challenges for prioritizing management actions and assessing long-term ecological risks.

A lack of widespread public awareness and inter-agency coordination hampers the effectiveness of national efforts. Many citizens, particularly in rural areas and within industries that trade in plants and animals, are not familiar with the concept of invasive species or the potential harm they can cause. This can lead to the unintentional spread of IAS through everyday activities. Furthermore, effective management requires

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seamless coordination between the MOE, MAFF, provincial authorities, and conservation NGOs. A fragmented approach, where different bodies work in isolation, can lead to inefficiencies and prevent the development of a unified, landscape-level strategy needed to control species that do not respect administrative boundaries.

Opportunities for achieving Target 6

Cambodia is well positioned to strengthen IAS prevention and control if it builds systematically on the foundations already in place (see Table 12). The 2026 NBSAP, existing National Communication Strategy for IAS management and the shared mandates of MOE and MAFF create an opportunity to develop a comprehensive, up-to-date national IAS list and management guidelines that prioritize the highest-risk species and pathways across agriculture, fisheries, trade and transport. Integrating IAS considerations into border quarantine, phytosanitary controls, EIA processes and routine inspections can significantly reduce new introductions, while an early-detection and rapid-response system, linked to research institutions and community reporting, would allow high-priority invaders to be contained or eradicated before they spread widely. Targeted control and eradication in sensitive wetlands, islands and PAs can demonstrate quick wins and protect high-value biodiversity sites, especially where combined with restoration and livelihood benefits for local communities. At the same time, scaling up awareness campaigns for traders, farmers, fishers and the public, using clear messaging on economic and ecological risks, offers a practical route to change behaviors that drive invasions. By using these policy, institutional and communication tools in a coordinated way, Cambodia can move from fragmented, project-based responses to a coherent, national IAS management system that reduces invasion rates and safeguards ecosystem services.

Table 12 outlines a series of strategic actions, the institutions responsible, and their role in achieving Target 6.

Table 12: *Action Plan for Target 6 on threatened species recovery*

Indicators	Strategic Action(s)	Key Institutions (and roles)
6.1. Updated National Invasive Species Strategy and Action Plan (NISSAP) to align with the ENR Code (2023) **6.2.** Number of awareness-raising campaigns or educational programs, outreach on IAS **6.3.** National inventory of IAS developed, regularly updated and disseminated **6.4.** Number of initiatives, tools and other measures to mitigate IAS risks **6.5.** 5. Number of priority IAS eradicated or under effective control in priority sites	• Identify and prioritize IAS and their pathways, and develop a national IAS list and management guideline • Enact a comprehensive IAS policy and legislation to mandate prevention and control measures • Implement an early-detection and rapid-response system for new invasions – this has proven cost-effective • Carry out targeted eradication or control programs for priority IAS in sensitive sites (e.g., wetlands, islands) • Increase public awareness (e.g., education campaigns at borders and communities) on IAS prevention and management • Strengthen quarantine and phytosanitary measures to prevent introductions (e.g., stricter border controls for high-risk species) • Promote community businesses involved in collecting and processing their products from invasive species	• MOE (environmental protection and biodiversity department) • MAFF (Plant Protection and Quarantine, Fisheries for biosecurity at borders and agricultural pests • MEF (Customs Department to enforce import controls • MOWRAM (rehabilitation and conservation of water-sources) • Research institutions (research, monitoring) • NGOs/CSOs and development partners (site-based work, technical advice, data)

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3.2.3. Target 7: Reduce Pollution to Levels that are not Harmful to Biodiversity

By 2030, pollutant pressures on terrestrial and aquatic ecosystems are substantially reduced to levels that are not detrimental to ecosystem function and biodiversity, with effective measures in place to mitigate cumulative effects of pollution (nutrients, pesticides and other hazardous chemicals), and plastic pollution.

Background and Context for reducing pollution

Pollution pressures on Cambodia's terrestrial, freshwater, and coastal ecosystems are increasing due to interacting drivers that include rapid industrialization in the Lower Mekong Basin, expansion of agriculture with associated habitat clearance, mining activities, and intensive logging and deforestation. These pressures affect water quality through agricultural and urban runoff, industrial discharges, untreated wastewater, and increased sediment loads from degraded and exposed soils that are transported into rivers and downstream coastal areas, reducing ecosystem function and biodiversity values [25]. Increased use of chemical inputs has also been linked to soil acidification, reduced soil biological activity, and declining soil fertility [25]. Monitoring and research indicate substantial nutrient transport in the Mekong River and Tonle Sap system, with large annual fluxes of nitrate (NO_3-) and total phosphorus (TP), particularly during flood seasons, consistent with strong nutrient inputs that can exacerbate eutrophication in sensitive aquatic habitats [111].

Pollution measures should explicitly address nutrients and pesticides (including through Integrated Pest Management (IMP), plastics and other pollutants, and cumulative impacts on biodiversity, with a focus on reducing risk to biodiversity and ecosystem functions while maintaining food security and livelihoods where relevant [40].

Plastic pollution is a growing concern in riverine and downstream marine environments. Estimates suggest that during the wet season Phnom Penh emits about 2.0 tons per day of plastic into the Mekong, equivalent to 42% of all plastic waste generated in the city, indicating substantial leakage with downstream impacts [112]. Plastic debris threatens aquatic species through ingestion, entanglement, and habitat alteration, and microplastics raise concerns about bioaccumulation through food chains and associated risks for ecosystems and human well-being [113]. Reports have highlighted very high rates of plastic ingestion in fish in some sampling contexts, with researchers and fishermen stating that "*around 90% of all fish now carry plastic particles in their stomachs*" [114].

Hazardous chemicals and heavy metals also pose risks to biodiversity, water quality, and health. Pollution can include persistent organic pollutants such as DDT, PCBs, and class 1 pesticides, as well as heavy metals including lead (Pb), cadmium (Cd), copper (Cu), and zinc (Zn) in water, sediments, and soils. Assessments in mining areas have identified pathways through which residents may be exposed to heavy metal contamination via environmental media and potentially food chains [115]. In the Chan Thnal reservoir in Kampong Speu Province, Cu, Zn, Pb, and Cd were measured in water and sediment, with Cu, Zn, and Pb in sediments exceeding background values, indicating anthropogenic inputs likely linked to runoff and other local sources [116].

Policy Frameworks for reducing pollution

Cambodia's national policy frameworks set the overall direction for pollution control in support of biodiversity conservation. The 2016 NBSAP identifies priority actions to reduce nutrient runoff, expand

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wastewater treatment, regulate hazardous chemicals, and restore wetlands. The National Environmental Strategy and Action Plan (2016–2023; NESAP) emphasizes cross-sectoral coordination, legal reform, monitoring, and integration of environmental protection into development planning. More recent instruments, including the CSE (2023–2028) and the ENR Code (2023), consolidate the legal and strategic foundation for pollution reduction, climate resilience, and sustainable resource management. The NPASMP (2017–2031) also links pollution control with objectives for restoring habitats and maintaining ecological integrity.

Sectoral laws and regulations provide the main instruments for managing pollution sources and setting standards. The Law on Environmental Protection and Natural Resource Management (1996) establishes an overarching framework for environmental quality standards. Sub-decrees on Solid Waste Management (1999) and Water Pollution Control (1999) establish rules for waste collection, effluent standards, and discharge permits, supported by Sub-Decree 103. Sub-Decree 235 addresses management of drainage and wastewater treatment systems, and the Law on Wastewater Systems (2024) regulates wastewater management from source to discharge, including a national goal of reaching 45% urban wastewater treatment by 2030. The National Water Resources Policy (2004) provides a foundation for integrated water resource management. The Law on Management of Pesticides and Fertilizers (2012) regulates agrochemical imports and use, with direct relevance to nutrient and chemical runoff. The National Policy on Urban Waste Management (2020–2030) and the Sub-decree on the Management of Plastic Bags (2017) strengthen measures to reduce plastic leakage and promote Refuse, Reduce, Reuse, and Recycle (4Rs), through improved urban waste management systems. Forestry and fisheries laws and associated sub-decrees also include provisions to reduce pollution pressures on forests, rivers, and aquatic ecosystems.

International commitments reinforce domestic action on chemicals and waste. Cambodia is a Party to the following international treaties:

- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (1989), designed to reduce hazardous waste generation and control and restrict transboundary movements of hazardous wastes through FPIC and environmentally sound management [117].
- Stockholm Convention on Persistent Organic Pollutants (2001), designed to eliminate or restrict the production and use of persistent organic pollutants (POPs) to protect human health and the environment [1].
- Rotterdam Convention on the FPIC Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (1998), designed to promote shared responsibilities in international trade in certain hazardous chemicals and pesticides through the FPIC procedure [118].
- Global Framework on Chemicals, for a Planet Free of Harm from Chemicals and Waste (2023), provides an overarching framework with strategic objectives and targets to manage chemicals across their full lifecycle, including products and waste, to protect human health and the environment [94].

As a Party to the CBD, and through the 2026 NBSAP, Cambodia has reaffirmed its commitments to curb nutrient pollution, hazardous chemical use, and plastic waste.

Gaps and Challenges for Achieving Target 7

Despite the breadth of Cambodia's policy frameworks, persistent challenges continue to limit effective action on pollution drivers. Enforcement remains a critical barrier. While instruments such as the Sub-Decree on Water Pollution Control (1999) and the Law on Environmental Protection and Natural Resource Management (1996) set standards, implementation is often constrained by limited institutional capacity, technical expertise, and financial resources [25]. Diffuse pollution is especially difficult to monitor and enforce because impacts are widespread and intermittent and sources are often not clearly attributable, making compliance monitoring resource-intensive and technically complex [119,120]. These constraints

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contribute to continued degradation of water quality in rivers and wetlands despite the presence of regulatory standards.

Economic growth and demographic change further complicate pollution management. Intensification of agriculture has increased reliance on fertilizers and pesticides, contributing to nutrient runoff into rivers and wetlands [1]. Rapid urbanization and rising consumption have increased solid waste generation, particularly plastic packaging, and leakage persists due to underdeveloped collection and recycling systems [2]. Industrial expansion and mining activities can generate untreated effluent and hazardous by-products, and oversight and accountability mechanisms are often insufficient to manage these risks effectively [121,122]. Climate variability can amplify pollution impacts, with floods increasing nutrient and chemical runoff and droughts reducing dilution capacity in rivers, increasing ecological risk from existing pollution loads [123,124].

Societal and institutional factors add further barriers. Public awareness of pollution risks remains limited and open dumping and burning of waste persists at household and community levels [125]. Incentives for recycling and for adopting safer chemical practices remain weak, slowing behavior change and uptake of preventive approaches [126]. Pollution management also depends on coordination among agencies with overlapping mandates. MAFF manages concessions, MOWRAM handles water quality monitoring, MLMUPC controls land titling and zoning, and MOE regulates PAs, which can result in competing decisions that affect land and water outcomes. Industrial oversight can be fragmented, with MISTI setting standards for factories and chemicals while MOE enforces pollution control. These overlaps can create silos and regulatory gaps across land management, industrial development, and project approvals, weakening environmental governance. Without stronger coordination, sustained financing, and mainstreamed preventive approaches, Cambodia risks falling short of the 2030 objective to substantially reduce nutrient runoff, hazardous chemical use, and plastic leakage.

Opportunities for achieving Target 7

Cambodia has strong opportunities to accelerate pollution reduction if existing policy tools and partnerships are used more strategically (see Table 13). The CSE (2023–2028), the ENR Code (2023) and recent sub-decrees on plastic bags and urban waste provide a solid basis for tightening regulations and enforcement, including targeted bans or restrictions on single-use plastics and the promotion of biodegradable alternatives. Ongoing work on water quality standards for freshwater and coastal waters can be leveraged to establish simple, practical monitoring systems that link pollution hot spots to enforcement actions and public reporting. At the same time, growing interest in sustainable agriculture and climate-smart farming offers an entry point to expand farmer training and incentives for reduced agro-chemical use, organic and integrated pest management, and better nutrient management in priority catchments. Rising public concern about plastic and visible pollution, combined with corporate interest in circular economy and Corporate Social responsibility (CSR), creates space to scale up nationwide awareness campaigns and voluntary initiatives such as recycling programs, waste segregation and cleaner production. By aligning these regulatory, technical and behavioral opportunities across MOE, MISTI, MAFF and MPWT, Cambodia can significantly cut pollutant loads to levels that are not harmful to biodiversity and ecosystem function by 2030.

Table 13 outlines a series of strategic actions, the institutions responsible, and their role in achieving Target 7.

***Table 13:** Action Plan for Target 7 on significant reduction of pollution on biodiversity*

Indicators	Strategic Action(s)	Key Institutions (and roles)
7.1. Number of awareness and engagement campaigns on pollution prevention	• Strengthen pollution control regulations and their enforcement: for example, introduce bans or restrictions on single-use plastics and promote biodegradable alternatives to cut plastic pollution	• MOE (pollution control, water quality monitoring) • MISTI (industrial pollution regulation)

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Indicators	Strategic Action(s)	Key Institutions (and roles)
7.2. Reduction in solid waste **7.3.** Water quality monitoring **7.4.** Reduction in the use of hazardous chemicals harmful to biodiversity and the environment	• Establish and enforce water quality standards (for freshwater and coastal waters) and improve monitoring (with education and enforcement programs) • Promote sustainable agricultural practices to reduce agro-chemical use (pesticides, herbicides, fertilizers) and run awareness campaigns for farmers on organic/eco-friendly alternatives • Implement nationwide pollution awareness programs targeting the public and industries (e.g., waste reduction campaigns, pollutant disposal training) • Encourage stakeholders (communities, businesses) to engage in pollution prevention initiatives (e.g., recycling programs, waste-to-energy projects)	• MAFF (regulation of agricultural chemicals) • MPWT (waste management infrastructure) • MOWRAM (water quality monitoring, basin -level pollution management, and prevention of water pollution for point sources and non-point sources in freshwater ecosystems) • NGOs/CSOs and development partners (technical advice) • Private sector (industry, agribusiness inputs, waste/recycling, wastewater)

3.2.4. Target 8: Minimize the Impacts of Climate Change on Biodiversity and Build Resilience

By 2030, the impacts of climate change on biodiversity are reduced and minimized, through nature-based solutions, ecosystem-based approaches, climate mitigation and adaptation, and disaster risk reduction strategies.

Background and Context for minimizing the impacts of climate change and building resilience

Cambodia is already experiencing multiple climate-related hazards, including prolonged droughts, increasing floods, extreme heat, and saline intrusion, with growing evidence that these patterns are linked to climate change and are already affecting ecosystems and biodiversity. Severe drought conditions in 2015–2016 caused widespread water shortages and were characterized as a once-in-50-year event [127]. Drought impacts are frequently documented through losses in crop production, particularly rice, highlighting increasing stress on production landscapes that also support biodiversity and ecosystem services [128]. Flooding has had especially severe impacts over the past two decades, with repeated events causing major loss of life, including extreme events in 2000 (347 deaths), 2011 (250 deaths), and 2013 (168 deaths), alongside more recent impacts in 2022 (15 deaths) and 2024 (27 deaths) [129–133].

Coastal areas, particularly Kampot and Koh Kong, face escalating risks from sea level rise and saline intrusion, with implications for coastal habitats, fisheries productivity, and livelihood resilience. In Koh Kong, salinity has been recorded in local water sources several kilometers inland, including tube wells, dug wells, and ponds, indicating the scale of saline intrusion in low-lying coastal zones [134]. Communities have also reported higher tides and more frequent storm surges that erode shorelines, inundate homes, and damage infrastructure, and shoreline recession has been observed over four decades in Koh Kong, linked to reduced fishery resources and increased vulnerability in coastal CFis [135–137].

Rainfall variability is also increasing, with evidence of more intense rainfall concentrated into shorter wet seasons and longer dry spells, which disrupts planting windows and increases production risk. Looking

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ahead, Cambodia is projected to warm by 3.1°C by the 2090s relative to 1986–2005 under RCP8.5. Rising temperatures and more frequent and intense heatwaves increase risks for ecosystems and for people, including outdoor workers and urban populations, where the "urban heat island" effect can further elevate temperatures, reaching up to 4°C higher in Phnom Penh than surrounding rural areas [138]. Projections also indicate increased frequency and intensity of heavy rainfall events, elevating flood risk, consistent with earlier expectations that maximum temperatures are rising and will increase crop stress and health risks [138,139].

Policy Frameworks for minimizing the impacts of climate change and building resilience

Addressing climate change impacts on biodiversity is a national priority reflected in Cambodia's international and domestic policy commitments. At the international level, Cambodia has formalized mitigation and adaptation commitments through its NDCs, with submissions in 2016, an update in 2020, and NDC 3.0 (2025) in 2025. Across these submissions, Cambodia has progressively increased its stated ambition, raising the greenhouse gas reduction target from 27% in the 2015 Intended NDC, to 41.7% in the 2020 Updated NDC, and to 55% in the NDC 3.0 (2025), relative to Business-as-Usual scenarios.

NDC 3.0 (2025) includes adaptation measures relevant to biodiversity resilience, with emphasis on policy integration, habitat restoration, and community engagement. It aligns with the 2026 NBSAP and identifies the need for improved tracking and integration of biodiversity-related data into CEMIS. Priority measures include restoration and sustainable management of mangroves, flooded forests, and aquatic habitats, conservation of High Conservation Value (HCV) areas, and improved management of coastal and marine PAs. The approach is intended to be inclusive and gender-responsive, strengthening and applying the TK of IPLCs and supporting their participation in ecosystem management.

At the national level, the Pentagonal Strategy Phase I (2023–2028) emphasizes sustainable and inclusive development, including environmental protection, natural resource management, and climate resilience as foundations for growth. This direction is reinforced through the CSE (2023–2028), led by MOE, which aims to strengthen environmental responses to climate change and support sustainable development, including measures that reduce deforestation and support ecosystem restoration. Implementation also depends on coordinated action across sector ministries, including MAFF, MRD, MOWRAM, MOT, and the Ministry of Culture and Fine Arts (MCFA), through their strategies and action plans, particularly where responsibilities overlap in land use, agriculture and fisheries, water management and disaster risk reduction, PAs and ecotourism, rural development, and cultural and natural heritage values.

Forest conservation, restoration, and sustainable management remain central to Cambodia's climate mitigation pathway, with strong biodiversity co-benefits. Cambodia's National REDD+ Strategy sets out a national framework to reduce emissions from deforestation and forest degradation and enhance forest carbon stocks, alongside institutional arrangements and phased implementation to support access to results-based finance. A nested REDD+ system can further strengthen alignment between project-level actions and national reporting while supporting safeguards and governance improvements [140–142].

Gaps and Challenges for Achieving Target 8

Cambodia's biodiversity is already experiencing adverse climate change impacts, and these are expected to intensify. In the Tonle Sap system, the flood pulse that underpins fish breeding cycles and wetland regeneration is becoming less predictable due to altered upstream hydrology [81]. Prolonged droughts further threaten declines in fish abundance and diversity, including large predators such as snakeheads (*Channa* spp.) that are sensitive to changes in habitat, flow, and fishing pressure [23,143]. In the Eastern Plains Landscape, rising temperatures and longer dry seasons are disrupting forest corridors used by wide-ranging species such as the Asian Elephant and Gaur, with changing moisture and vegetation conditions affecting movement patterns and increasing vulnerability [144] and human-wildlife conflict [145]. Along the mangrove-lined coasts of Koh Kong and Kampot, sea level rise and saline intrusion are undermining habitat integrity and contributing to degradation of seagrass meadows that support species such as Mangrove Crab (*Scylla*

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serrata) and Dugong (*Dugong dugon*), with impacts compounded by storm surges and coastal development [146,147].

Target 8 addresses these risks by ensuring that climate change is integrated into biodiversity conservation and management. It emphasizes NbS and ecosystem-based adaptation (EbA) to maintain ecological function and reduce vulnerability across species and ecosystems under changing climate baselines. It also reinforces implementation of Cambodia's Climate Change Strategic Plan (2024-2033), NDC 3.0 (2025), and the National Action Plan for Disaster Risk Reduction (2024-2028) by embedding ecosystem resilience within the broader climate response.

The updated target framing should explicitly cover both climate change and ocean acidification impacts on biodiversity, and link resilience measures to climate adaptation and Disaster Risk Reduction (DRR) through NbS and ecosystem-based approaches. It should also make explicit the intent to minimize negative and foster positive impacts of climate mitigation and adaptation actions on biodiversity, so climate actions deliver net biodiversity benefits [40].

Opportunities for achieving Target 8

Cambodia has strong opportunities to scale up nature-based climate action and build resilience for biodiversity by leveraging existing climate and disaster policy commitments (see Table 14). The increased ambition in NDC 3.0 (2025), together with the Climate Change Strategic Plan (2024-2033), National Action Plan for Disaster Risk Reduction (2024-2028) and the CSE (2023–2028), provides a coherent framework to mainstream EbA and mitigation across sectors, particularly through restoration of mangroves, seagrass beds, flooded forests and upland watersheds. Ongoing work to operationalize CEMIS and regularly update land-use GHG and carbon sequestration inventories creates an enabling environment to track the climate benefits of conservation and restoration, and to report these jointly under NBSAP and NDC processes. At the same time, growing experience with community forestry, community fisheries, PA co-management and climate-smart agriculture offers practical entry points to integrate NbS and EbA into local disaster risk reduction DRR plans, early warning systems and livelihood programs, reducing vulnerability of both people and ecosystems to floods, droughts, storms and heatwaves. Expanding renewable energy and low-carbon development, with appropriate biodiversity safeguards in site selection and design, can help reduce pressure on forests and hydrological systems while attracting climate finance to support ecosystem restoration and long-term resilience.

Table 14 outlines a series of strategic actions, the institutions responsible, and their role in achieving Target 8.

Table 14: *Action Plan for Target 8 on building climate resilience for biodiversity*

Indicators	Strategic Action(s)	Key Institutions (and roles)
8.1. Incorporate good and/or improved forest management practices to enhance forest carbon stocks as well as ecosystem integrity **8.2.** Number of initiatives that explicitly integrate biodiversity conservation into climate change mitigation and adaptation (e.g., REDD+, NbS, EbA, and landscape-based approaches **8.3.** Net emissions from land use and land-use change are	• Implement NbS for climate adaptation and mitigation – for example, restore mangroves and seagrass beds to protect coasts and store carbon (as emphasized in Cambodia's climate NDC) • Integrate biodiversity conservation into climate policies and action plans (e.g., include ecosystem-based adaptation in national climate strategies) • Expand ecosystems' role in DRR by protecting and restoring natural buffers (wetlands for flood control, forests for slope stabilization), integrating basin-level flood and drought risk management measures, and integrating these into disaster management plans • Strengthen collaboration between climate and biodiversity initiatives (e.g., align NBSAP targets with NDC 3.0 (2025) commitments on NbS) to regularly	• MOE (NCSD/Climate Change Department for NbS and climate policy integration) • National Committee for Disaster Management (DRR programs using ecosystems) • MOWRAM (flood and drought management, hydro-

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Indicators	Strategic Action(s)	Key Institutions (and roles)
declining and in line with Cambodia's NDC **8.4.** Percentage of forest loss **8.5.** Number or percentage of river basins, wetland and flood prone areas where flood and drought risk management measures are integrated to support ecosystem and biodiversity resilience	update carbon sequestration inventories and ensure biodiversity is part of climate reporting • Promote renewable energy and low-carbon development to reduce pressure on ecosystems (with safeguards for biodiversity in renewable projects) • Ensure NbS investments are screened for biodiversity outcomes and avoid sites where continued habitat loss would negate climate and biodiversity benefits. • Promote climate-smart and sustainable agricultural practices that build climate resilience, increase mitigation, and improve food security • Restore degraded ecosystems to improve carbon storage and biodiversity outcomes • Develop new REDD+ and other results-based projects	meteorological data, early-warning systems) • MAFF (climate-smart agriculture aligning with biodiversity) • NGOs/CSOs and development partners (site-based work, technical advice, data) • Private sector (finance/insurance, climate-smart production, resilient infrastructure, carbon)

3.3. Key Result Area 3 – Community Management and Benefits

This KRA encompasses Targets 9-13 that collectively focuses on empowering IPLCs and local communities to manage and use wild species sustainably, transition productive landscapes and fisheries toward biodiversity-friendly practices, enhance nature's contributions to people (including risk reduction), expand green and blue spaces in urban areas, and ensure gender-responsive, fair and equitable benefit-sharing from genetic resources and TK.

3.3.1. Target 9: Manage Wild Species Sustainably to Benefit People

By 2030, the management and use of wild species is sustainable for the benefit of people, ensuring social, economic and environmental benefits while enabling sustainable use by Indigenous Peoples and Local Communities.

Background and Context for Managing Wild Species Sustainably

Cambodia has made significant strides in involving local communities in the sustainable management of wild species through gender-responsive community-based natural resource management (CBNRM) approaches. CF, CPAs, CFis, MFMAs and Community Ecotourism (CTs) among other social entities in Cambodia have been widely established across the country, enabling IPLCs to sustainably use of NTFPs, regulate small-scale hunting and fishing, and maintain traditional practices that support biodiversity conservation. Based on the latest available data, there are 540 CFs (in 2023) covering 455,383 ha, 193 CPAs with 332,108 ha of land, 516 CFis with 836,496 ha inland areas and 143,188 ha in coastal areas, and 22 CTs covering 34,003 ha formally recognized, providing legal entry points for customary sustainable use within protected and production landscapes [148,149].

Wild capture fisheries, particularly those linked to the Tonle Sap Lake and Mekong floodplains, remain the cornerstone of customary biodiversity use for many rural IPLCs. The government's co-management systems with CFis, along with seasonal fishing bans and conservation areas, have provided mechanisms to

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sustain fish populations while ensuring that customary subsistence practices continue [150]. According to the Inland Fisheries Research and Development Institute (IFReDI), inland fisheries yield around 400,000–500,000 tons annually, making Cambodia one of the world's largest inland fish producers, directly sustaining the food security and livelihoods of millions [151].

In forested landscapes, IPLCs continue to rely on customary harvesting of NTFPs such as resin, rattan, bamboo, medicinal plants, and wild fruits, which provide both household consumption and supplemental income. CPAs within or near PAs explicitly allow sustainable harvesting zones, where community members collect resources under management plans approved by the responsible government agencies [152]. These practices not only maintain TK but also contribute to poverty reduction, gender roles in resource use, and ecological stewardship. For example, in Phnom Prich Wildlife Sanctuary (adjacent to forested communal landscapes), NTFP extraction is positively associated with local participation in forest conservation, providing incentives worth about USD 0.95/ha annually to households [153]. A broader recent review of Community Forest Management and REDD+ in Cambodia highlights that CF systems often embed NTFP harvesting (alongside timber when feasible) as part of livelihood benefit bundles to motivate local conservation and sustainable use [154]. Moreover, comparing Indigenous and non-Indigenous CFs across Cambodia shows that use patterns of firewood and NTFPs vary, reflecting cultural norms, resource availability, and management rules under CF agreements [155].

Policy Frameworks for Managing Wild Species Sustainably

Cambodia's biodiversity policies place strong emphasis on sustainable use. The 2016 NBSAP outlines specific actions under the theme of "Sustainable Use of Biodiversity," including strengthening CPAs, CF, and CFi schemes, as well as mechanisms for benefit sharing and livelihood diversification. The Law on PAs (2008) further provides the legal framework for sustainable use within the PA system, designating zones such as community zones and sustainable-use zones where CPAs may be established and managed.

The Law on Forestry (2002) and Sub-Decree No. 79 on Community Forestry Management (2003) enable CF agreements for sustainable NTFP use and local rulemaking. Similarly, the new Law on Fisheries (2025), together with the Royal Decree on the Establishment of Community Fisheries and the Sub-Decree on Community Fisheries Management, provides the legal basis for CFis, community fishing-area agreements, seasonal closures, and community-level enforcement.

Broadly speaking, the ENR Code (2023) consolidates sustainable-use mandates, recognizes CPAs within PA zones, and explicitly supports local communities' traditional and customary use of natural resources in conservation and sustainable-use zones. In parallel, the CSE (2023–2028) aligns biodiversity conservation, community development, and sustainable livelihoods with broader national strategies, thereby strengthening the integration of biodiversity into national planning.

Gaps and Challenges for Achieving Target 9

Strengthening gender-responsive CBNRM in Cambodia through developing, updating and implementing CBNRM Management Plans ensures the equitable and effective conservation and sustainable use of natural resources. Co-designed regulations have been shown to markedly improve compliance and conservation outcomes [156]. For inland fisheries, evidence from the Tonle Sap highlights that seasonal/area-based measures, closures, gear limits, and quotas, are the backbone of co-management, but they must be clearly codified and enforced to withstand market and enforcement pressures [157,158]. The targeted and gender-responsive training for CBNRM committees and rangers, and routine analysis of patrol/logbook data to support "learning by doing," improves patrol targeting and compliance, creating adaptive feedback loops that keep plans regularly updated with ecological change and community needs [159,160].

Community conservation and sustainable use are strongest when participatory zoning and mapping are explicit and backed up by community-based monitoring. In Cambodia, PA zoning guidance and legal analyses of the CPA framework emphasize co-produced maps that locate customary-use zones and translate

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them into enforceable rules, reducing conflict and clarifying rights [49,152]. Once zones and rules are codified, day-to-day oversight improves when communities keep patrol logbooks, use smartphones/GPS, and review data regularly; studies from Prey Lang and enforcement-learning work in PAs show that such monitoring sharpens patrol targeting and compliance [159,160]. Those studies also concluded that in inland fisheries, clearly mapped and codified local rules, such as seasonal closures and gear limits, underpin effective co-management and support livelihoods.

While strengthening sustainable harvesting and conservation, equal attention should go to strengthening community value chains, ecotourism, and conservation-compatible livelihoods, with a deliberate focus on gender. Evidence from Cambodia's forest landscapes shows that non-timber forest product value chains, such as resin tapping from *Dipterocarpus* species provides substantial income for forest-adjacent households, indicating the importance of market linkages, quality standards, and sustainable harvest protocols embedded in community plans [161]. A rigorous evaluation of the Chambok community-based ecotourism model located near Kirirom National Park reports measurable gains in household income and livelihood diversification, particularly where governance and benefit-sharing are transparent, supporting ecotourism as a complementary conservation livelihood within CPA/CF settings [162]. Likewise, PES, most notably the Ibis Rice scheme in northern Cambodia, have been shown to reduce deforestation and improve well-being when paired with explicit local rules and monitoring, offering a template for benefit-sharing clauses in community agreements [163]. Studies of gender in Cambodian forestry and small-scale fisheries highlight both barriers to women's participation and the governance gains when women are intentionally included; therefore, value-chain support, training, and monitoring should be gender-responsive and track sex-disaggregated outcomes [164,165].

Opportunities for achieving Target 9

Cambodia has strong opportunities to consolidate and scale sustainable use of wild species by building on its extensive CBNRM architecture and proven livelihood models (see Table 15). The large and growing network of CPAs, CFs, CFis MFMAs, and CTs provides ready-made governance platforms where co-management agreements, participatory zoning and community-based monitoring can be strengthened to keep use within sustainable limits while securing customary rights. Successful pilots such as Ibis Rice, community-based ecotourism (e.g., Chambok) and NTFP value chains (e.g., resin, bamboo, medicinal plants) offer practical templates for alternative livelihoods and benefit-sharing that can be replicated and integrated into community management plans, with deliberate attention to women's participation and leadership. At the same time, the development of national guidance on sustainable harvest of wild plants and animals, combined with legal reforms to recognize community tenure and sustainable use rights, creates an opportunity to formalize customary practices and give communities stronger authority to enforce local rules. Linking CBNRM sites to the Cambodia Species Index (Box 3) and other monitoring tools will enable adaptive management, using population trends of key use-targeted species to adjust quotas, seasons and access rules, so that wild species continue to provide food, income and cultural values for IPLCs while maintaining healthy, resilient populations to 2030 and beyond.

Table 15 outlines a series of strategic actions, the institutions responsible, and their role in achieving Target 9.

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Table 15: *Action Plan for Target 9 on customary sustainable use of wild species*

Indicators	Strategic Action(s)	Key Institutions (and roles)
9.1. Number of CPAs, CFs, CFis MFMAs, OECMs (or households) receiving sustainable and inclusive alternative livelihoods 9.2 Number of community-based sustainable wild species harvests with management plans 9.3 Number of legal frameworks on sustainable cultivation, use and trade of fauna and flora developed and adopted 9.4 Population trends in the Cambodia Species Index for species in cultivation or used stable or increasing	• Empower communities in sustainable use of biodiversity: expand and strengthen CPAs, Community Forests, and Community Fisheries with co-management agreements, alternative livelihood support, and benefit-sharing (e.g., ecotourism revenue-sharing, PES) • Provide training and resources for IPLCs to manage wild resources sustainably and develop biodiversity-friendly enterprises • Develop and disseminate guidelines for sustainable harvest of wild plants and animals (NTFPs, bushmeat, etc.) and ensure local compliance • Legally recognize community conservation and tenure rights, enabling communities to enforce rules and benefit from conservation • Establish a comprehensive policy or law on sustainable use and conservation of wild fauna and flora (covering quotas, seasons, permitting) • Monitor species used by humans (via the Cambodia Species Index) to ensure use is within sustainable limits (populations stable or increasing)	• MOE (CPAs in PAs) • MAFF (Community Forestry (FA) & Fisheries (FiA) • MRD (community livelihood development) • MOT (tourism-linked livelihood alternatives) • MOWRAM (farmer water-user communities) • Local community institutions (CPA committees, forestry and fishery communities, implementation with NGO support) • NGOs/CSOs and development partners (site-based work, technical advice, data)

3.3.2. Target 10: Enhance Biodiversity and Sustainability in Agriculture, Aquaculture, Fisheries and Forestry

By 2030, the areas used for agriculture, aquaculture, fisheries and forestry are managed sustainably, through the sustainable use of biodiversity, including environmental-friendly practices such as sustainable intensification, agroecological and other innovative approaches contributing to food security, restoring and conserving biodiversity, and maintaining nature's contributions to social and economic good, including ecosystem functions and services.

Background and Context for Enhancing Biodiversity and Sustainability in Production

Cambodia's production landscapes are dominated by agriculture and fisheries, and are central to food security, rural livelihoods, and biodiversity outcomes. Seasonal crops occupy about 2.7 million ha and permanent or perennial crops about 626,000 ha nationwide. Rice is the dominant crop, with non-aromatic rice covering 1,650,237 ha, aromatic rice 464,549 ha, and sticky rice 3,435 ha, while cassava is the main root-and-tuber crop with 421,346 ha. Among permanent crops, cashew is the largest at about 370,000 ha, rubber covers 111,500 ha, fruit crops include mango at 70,000 ha and banana at 10,500 ha, coconut covers 17,200 ha, and pepper about 6,900 ha. These production systems shape land use patterns and input use, and they influence pressures on adjacent natural ecosystems and the condition of biodiversity within agroecosystems.

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A range of biodiversity-friendly practices are already being applied in Cambodian agriculture. Integrated Pest Management (IPM), promoted through MAFF-led Farmer Field Schools, reduces routine pesticide use and supports natural enemies [166]. The System of Rice Intensification (SRI) has also been adopted through government and NGO programs and farmer networks, emphasizing young seedlings, wider spacing, intermittent irrigation, and organic soil inputs [167]. In rice landscapes, rice–fish production linked to Community Fish Refuges (CFRs) can sustain aquatic biodiversity and strengthen rice-field fisheries by protecting dry-season pools [168]. Cambodian Good Agricultural Practices (CamGAP), applied mainly in fruit and vegetable systems, supports safer input use, soil and water protection, hygiene, and traceability [169].

Aquaculture is an important and growing activity. The 2023 Census of Agriculture recorded 7,421 household holdings and 39 commercial holdings engaged in aquaculture [170]. Household aquaculture is widely distributed, with high concentrations in Prey Veng, while commercial aquaculture is concentrated in the flood plain, Tonle Sap, and Coastal zones. At village level, aquaculture participation is high in Mondulkiri, Prey Veng, and Svay Rieng, where around 40% of villages report involvement. At smallholder scale, pond fertilization using livestock manure and crop residues can stimulate natural plankton and reduce reliance on purchased feed and chemical fertilizers [171]. Rice–fish integration can also reduce pesticide and herbicide needs because fish suppress insects and weeds, while fish wastes improve soil fertility [172]. Integrated paddies can function as seasonal wetlands supporting native aquatic fauna and beneficial insects, and these systems are often strengthened by CFRs that protect dry-season broodstock and help repopulate rice fields during the monsoon [173].

Capture fisheries remain a major livelihood activity, particularly in coastal and floodplain systems with high participation in capture fisheries in the Coastal Zone, with Koh Kong having the highest rate nationally, with 77% of villages involved in fishing. In inland systems, particularly the Tonle Sap Lake, about 20% of villages are involved in both fishing and aquaculture, reflecting the linked role of these activities in inland livelihoods [170]. Biodiversity-friendly fisheries practices are often centered on community co-management through CFis, which enables local users to set and enforce rules on access, gear, and seasons [158]. CFRs are a core measure, acting as dry-season no-take refuges that support breeding and replenish adjacent rice-field fisheries [168]. Protection of flooded forests and other Tonle Sap floodplain habitats remains critical because these habitats provide nursery and feeding grounds for many floodplain-dependent and migratory fish species [174].

Forests are important for rural households, particularly through reliance on forest products for daily needs. For agricultural households, 19.5% of engage in forest-related activities, predominantly gathering firewood and harvesting bamboo, with only 0.5% of households having forest or wooded areas within their holdings [170], indicating that most household-level forestry depends on access to communal or public forests rather than private ownership. Biodiversity-friendly forestry practices center on community co-management through CF and CPAs, including patrols, fire control, and regulated NTFP use under approved plans. Fieldwork in Prey Lang found CF sites had fewer anthropogenic damages, higher above-ground biomass, and greater regeneration than matched controls [2]. Remote-sensing evaluations across multiple sites indicate CFs can reduce deforestation and degradation relative to surrounding areas, although consistent large recovery effects are not always evident [177,178]. In production forests, reduced-impact logging (RIL) can reduce residual tree damage compared with conventional logging, helping retain stand structure important for biodiversity [1]. Livelihood-focused approaches, including rule-based NTFP management, can also support household income while maintaining forest cover [153].

Policy Frameworks for Enhancing Biodiversity and Sustainability in Production

There are several policy frameworks in Cambodia to ensure biodiversity friendly practices. The overarching legal architecture is the ENR Code, 2023, which modernizes environmental planning, monitoring, compliance, and inter-sector coordination relevant to productive land- and seascapes [52]. The Code is complemented by the CSE (2023–2028), a government roadmap for green, climate-resilient development that explicitly links environmental integrity with sectoral implementation. The Long-Term Strategy for

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Carbon Neutrality (2021) and NDC 3.0 (2025), embed land-use, forestry and low-emission agri-food measures that reinforce biodiversity-friendly practice.

The Law on the Management of Pesticides and Fertilizers (2012) is the core risk-management instrument for inputs, anchoring registration, labeling, and enforcement to curb adverse impacts on agro-ecosystems and adjacent aquatic habitats. Practice standards are operationalized through CamGAP Certification Manual (2019), which sets farm-level requirements on soil and water protection, safer input use, hygiene, and traceability consistent with biodiversity-friendly production. The Agricultural Extension Policy (2015) guides pluralistic advisory services and investment toward sustainable agriculture.

The Law on Fisheries (2025) establishes conservation, management and aquaculture provisions, including the legal basis for CFis co-management. The CFi framework is specified by the Royal Decree on the Establishment of Community Fisheries (2005) and Sub-Decree No. 25 (2007) with implementing Prakas No. 316 (2007), which together define CFi establishment, by-laws, and management planning, tools central to community-led, biodiversity-compatible fisheries. The conservation and production are further aligned by the Strategic Plan for Fisheries Conservation and Management (2020–2029), and aquaculture sustainability is guided by the National Strategic Plan for Aquaculture Development (2016–2030).

Sustainable forest management and biodiversity outcomes are grounded in the Law on Forestry (2002) and Sub-Decree No. 79 on Community Forestry Management (2003), which enable community forestry agreements, management plans, and regulated use/NTFP governance. Strategic direction is provided by the National Forest Program (2010–2029), placing governance and community forestry at the heart of sustainable forest management and restoration. Within protected landscapes, the NPASMP (2017–2031) and the Zoning Guidelines for PAs (2017) institutionalize core, conservation, and sustainable-use zoning, and site-level planning that safeguard habitats while accommodating sustainable livelihoods, now being harmonized under the ENR Code (2023).

Gaps and Challenges for Achieving Target 10

Key constraints in agriculture include misuse and overuse of pesticides in smallholder systems. Field surveys have identified risky practices and residue concerns in vegetable and rice production, indicating gaps in input governance and farmer knowledge, including training, labeling, and inspection [179,180]. Adoption of biodiversity-friendly practices is also constrained by uneven extension capacity and limited advisory services, which slows uptake of IPM, soil health approaches, and water-saving techniques at scale [181].

In aquaculture, key challenges include feed constraints and limited biosecurity and health management, particularly for smallholders [182]. Finance and market access barriers further reduce the ability and incentives to adopt improved environmental practices. Effluent and sediment control also remain weak, and pond discharges into rice fields or wetlands can degrade water quality, reinforcing the need for stronger standards and services, fish health diagnostics, and residue monitoring.

In inland fisheries, hydrological alteration and habitat loss continue to undermine ecosystem function and fish productivity [174]. Declines in flooded forest around the Tonle Sap are linked to shifts in fish assemblages and recruitment, compounding pressures from exploitation and compliance gaps. Community co-management is widely established, but enforcement capacity, financing, and institutional coordination remain uneven, limiting consistent biodiversity outcomes across Community Fisheries and conservation zones [158].

Forest ecosystems remain challenged by deforestation and fragmentation driven by agricultural expansion and economic land concessions, and remote-sensing studies show elevated forest loss and leakage into PAs despite formal designations [96,183]. Community forestry and RIL offer pathways to reduce pressures and impacts, but implementation and monitoring constraints persist. Evidence indicates community-managed sites can improve local forest condition and RIL can reduce residual damage, but scaling remains constrained by tenure clarity, incentives, and oversight [175,176].

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Opportunities for achieving Target 10

Cambodia has strong opportunities to scale up biodiversity-friendly production systems by building on existing good practices and emerging market incentives (see Table 16). Widespread experience with IPM, SRI, rice–fish systems, CamGAP certification, CFs and CFs provides a practical foundation for expanding agroecological and nature-positive approaches across priority landscapes and value chains. Current work under the ENR Code (2023), the CSE (2023–2028), NDC 3.0 (2025) and sectoral strategies (agriculture, fisheries, forestry) creates a favorable policy environment to mainstream sustainable intensification, promote RIL and strengthen community co-management in both inland and coastal production systems. At the same time, growing domestic and export demand for sustainable and deforestation-free products (e.g., rice, cashew, rubber, fish, timber and NTFPs) offers an opportunity to use eco-certification, deforestation-free and jurisdictional agreements to reward producers who adopt biodiversity-friendly practices. By combining these policy instruments, extension services and market incentives, and by supporting community-based producer groups to access finance, technology and certification, Cambodia can increase the share of agricultural, aquaculture, fisheries and forest areas under verified sustainable management while maintaining food security, livelihoods and ecosystem functions to 2030 and beyond.

Table 16 outlines a series of strategic actions, the institutions responsible, and their role in achieving Target 10.

Table 16: *Action Plan for Target 10 on sustainability in agriculture, aquaculture, forestry & fish*

Indicators	Strategic Action(s)	Key Institutions (and roles)
10.1. Percentage of total agricultural area under sustainable agriculture and agroecological practices 10.2. Number of biodiversity-friendly value chains promoted and certified 10.3. Number of CBOS supplying products from biodiversity-friendly value chains (e.g., deforestation-free, wildlife-friendly) 10.4. Proportion of production forest under sustainable management (e.g., The Forest Stewardship Council (FSC) certified or similar)	• Promote nature-positive production systems in farming, aquaculture, and forestry – integrate wildlife-friendly, deforestation-free supply chains, agroforestry corridors, and biodiversity-friendly farming practices into local economies • Scale up agroecological approaches (organic farming, integrated pest management) to reduce chemical use and improve soil biodiversity • Certify and support sustainable products (e.g., eco-certification for rice, timber, fish) to create market incentives • Encourage jurisdictional "zero-deforestation" agreements that align producers, buyers, and local authorities to maintain natural habitats • Enhance sustainable fisheries by expanding community fisheries and fish conservation zones • Ensure that a significant share of agricultural and forest areas are under verified sustainable management by 2030 • Reinforce collaboration across government, communities, and partners to manage biodiversity and local livelihoods effectively • Implement "Green Army Camps" by introducing nature-positive agriculture and aquaculture on bases, training military families in IPM and organic inputs, and form producer cooperatives to market deforestation-free products	• MAFF (lead agency for agriculture and fisheries sustainability, forestry management) • MOE (integration of biodiversity into sectoral policies, e.g., EIA for agriculture projects) • MOWRAM (water allocation and efficiency use) • MOD (develop "Green Army Camps") • Certification bodies (e.g., Forestry Stewardship Council) • Private sector and community producer groups (agribusiness, plantations) • Provincial governors and local authorities (subnational implementation, compliance monitoring, local land-use planning and enforcement) • NGOs/CSOs and development partners (site-based work, technical advice, data)

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3.3.3. Target 11: Restore, Maintain and Enhance Nature's Contributions to People

By 2030, nature's contributions to people are restored, maintained and enhanced, including ecosystem functions and services, reduction in disease risk, and protection from natural hazards and disasters, through nature-based solutions and/or ecosystem-based approaches for the benefit of all people and nature.

Background and Context for Restoring, Maintaining and Enhancing Nature's Contributions

In Cambodia's upland zones, communities are engaged in both protection and restoration activities that help maintain watershed functions and biodiversity. A prominent example is the Monks Community Forest (MCF) in Oddar Meanchey, covering 18,261 hectares, where Buddhist monks and local villagers co-manage the area through patrolling, awareness-raising, and sustainable harvesting of non-timber forest products, with reported reductions in illegal logging and land clearing that help maintain forest integrity [184]. Complementing protection, the Asian Forest Cooperation Organization (AFoCO) is rehabilitating degraded community forests such as the 592-hectare Nakta Thmor Prong site in Preah Sihanouk, where local communities participate in tree planting, agroforestry trials, and soil stabilization measures [185].

In floodplain landscapes, Community Fish Refuges (CFRs) support aquatic ecosystem recovery and sustain food security. Embedded within rice-field systems around the Tonle Sap, CFRs function as no-take zones that provide dry-season refugia for fish, and analysis shows these community-managed refuges can increase fish biomass and species richness in surrounding rice fields [186]. Wetland rehabilitation efforts in the Lower Mekong have also focused on restoring degraded flooded forests and promoting agricultural practices with reduced chemical inputs, strengthening water retention and climate resilience for rural households [187].

In coastal areas, CFis play an important role in mangrove and seagrass restoration linked to livelihoods. In Kep Province, the Phum Tmey CFi has combined mangrove planting with participatory marine resource management, linking ecological rehabilitation with activities such as ecotourism and aquaculture [188]. More broadly, MAFF and NGOs have supported community planting efforts in Kampot and Koh Kong, including planting of more than 100,000 mangroves, strengthening coastal protection against storms and salinity intrusion [188]. A recent blue carbon assessment also highlights that stronger tenure and co-management in coastal CFis could deliver mitigation co-benefits by avoiding conversion and enabling restoration estimated to sequester about 46,500 tons of carbon dioxide equivalent (CO_2e) annually [189].

Policy Frameworks for Restoring, Maintaining and Enhancing Nature's Contributions

Several policy frameworks support restoration and the maintenance of ecosystem functions and services through community management. In the forestry sector, the Law on Forestry (2002) and the Sub-Decree on Community Forestry Management (2003) provide the legal basis for CF, enabling communities to restore degraded areas, replant native trees, and sustainably manage non-timber forest products. Within protected landscapes, the Law on PAs (2008) provides for CPAs, where local groups can participate in habitat restoration, enrichment planting, and sustainable resource use under co-management with MOE.

For inland and coastal systems, the Law on Fisheries (2025) and the Sub-Decree on Community Fisheries (2005) recognize CFis and provide a basis for community roles in restoring and protecting fish refugia, wetlands, and mangroves. These instruments enable CFis to support breeding habitats, rehabilitate mangrove areas, and strengthen the resilience of fishing grounds that contribute to rural livelihoods and food security.

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The NPASMP (2017–2031) and the ENR Code (2023) further position restoration as a national obligation, linking ecological rehabilitation with participation by communities. The CSE (2023–2028) promotes large-scale restoration through tree-planting campaigns and NbS. Climate frameworks, including the Cambodia Climate Change Strategic Plan (2024–2033) and NDC 3.0 (2025), embed EbA and recognize CF, CPA, and CFi mechanisms as important pathways for forest, wetland, and coastal restoration that strengthen resilience, support carbon storage, and sustain livelihoods.

Gaps and Challenges for Achieving Target 11

Community-led restoration faces persistent constraints that limit the scale and durability of benefits for ecosystem functions and services. Forest loss continues despite progress in expanding PA coverage, indicating that restoration must address both historical degradation and ongoing pressures from land conversion, concessions, and illegal activities that undermine CF, CPA, MFMAs, and CFi efforts [25].

Implementation is also constrained by institutional and planning weaknesses. Overlapping targets and weak measurability reduce clarity on priorities, responsibilities, and tracking, which complicates delivery of restoration across connected systems such as wetlands, mangroves, CFis, and MFMAs where mandates are shared across MOE and MAFF [25]. Fragmented coordination can reduce the consistency of guidance, enforcement support, and technical assistance available to communities, limiting replication and scaling of effective local models.

Financial and capacity gaps remain major barriers. Biodiversity and restoration actions depend heavily on external and project-based financing, including donor support, PES schemes, and ecotourism revenues, which can be time-bound and uncertain for sustaining long-term community restoration [25]. Limited access to reliable biodiversity data, monitoring systems, and technical expertise further constrains the ability of communities and supporting agencies to plan, evaluate, and adapt restoration efforts across forests, wetlands, and aquatic systems [25].

Opportunities for achieving Target 11

Cambodia has strong opportunities to restore, maintain and enhance nature's contributions to people by scaling up NbS and ecosystem-based approaches that are already in use across upland, floodplain and coastal systems (see Table 17). Existing CF, CPA and CFi structures, including models like Monks Community Forest, AFoCO restoration sites, Community Fish Refuges and coastal CFis in Kep and Kampot, provide immediate platforms to integrate ecosystem-based disaster risk reduction (eco-DRR) into local planning, using forests, wetlands and mangroves as natural infrastructure to buffer floods, droughts, storm surges and erosion. National frameworks such as the ENR Code (2023), NPASMP (2017–2031), CSE (2023–2028), NDC 3.0 (2025) and the Climate Change Strategic Plan (2024–2033) all prioritize EbA and watershed protection, creating a favorable environment to identify and safeguard critical catchments (e.g., Tonle Sap, Mekong and key coastal basins) and to link these to DRR and public health strategies. At the same time, emerging blue carbon and watershed valuation work provides a basis for demonstrating the socio-economic benefits of restored ecosystems, such as flood protection, fisheries productivity, and disease regulation, and for channeling incentives and PES-style mechanisms directly to IPLCs that manage these areas. By aligning these policy tools, community institutions and valuation initiatives, Cambodia can systematically embed NbS and eco-DRR into development planning, reduce disaster losses and water-related health risks, and ensure that the multiple benefits of healthy ecosystems are recognized, monitored and equitably shared.

Table 17 outlines a series of strategic actions, the institutions responsible, and their role in achieving Target 11.

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Table 17: *Action Plan for Target 11 on biodiversity restoration by IPLCs*

Indicators	Strategic Action(s)	Key Institutions (and roles)
11.1. Number of sites where restored, maintained and enhanced ecosystem services provide socio-economic benefits 11.2. Number of watershed protection measures implemented 11.3. Number of deaths and directly affected persons attributed to disasters 11.4. Reduction in disaster losses in communities implementing ecosystem-based DRR or NbS	• Implement ecosystem-based approaches for disaster risk reduction and livelihood (e.g., restore and protect critical watersheds such as Tonle Sap and Mekong to improve water regulation and quality • Use wetlands, mangroves, and forests as natural infrastructure to mitigate floods, droughts, and coastal storms, thereby reducing disaster impacts on communities • Promote ecosystem service valuation and incentives – identify sites where restored or conserved ecosystems provide direct socio-economic benefits (flood protection, fisheries productivity, pollination, disease regulation) and ensure those benefits reach local people • Integrate these NbS into development planning (so that hazard mitigation and public health strategies include ecosystem conservation) • Monitor and maintain nature's contributions (e.g., track water quality and disaster loss reductions as indicators of success) • Diversify livelihood options for local communities to reduce dependence on forest resources • Improve local revenue generation and financial sustainability through: (1) entrance fees and service charges, (2) revenue-sharing agreements, and (3) transparent financial management systems • Strengthen Indigenous Peoples committees' capacity to promote customary knowledge and culture that support the sustainable use and management of natural resources • Support indigenous communities to develop, adopt and implement internal regulations for land use and management of IPLCs	• MOE (integration of ecosystem-based solutions into environmental planning) • MOWRAM (watershed and water quality management) • National Committee for Disaster Management (promoting ecosystem-based DRR in local disaster plans) • MOH (link ecosystem health to disease risk reduction) • MRD (mainstream NbS into rural development planning and community infrastructure) • Local authorities and communities (implementing NbS at community level) • MOT (ecotourism in PA) • NGOs/CSOs and development partners (site-based work, technical advice, data)

3.3.4. Target 12: Enhance Green Spaces and Urban Planning for Human Well-Being and Biodiversity

By 2030, biodiversity-inclusive urban planning is promoted and substantially implemented to significantly increase the area, quality, connectivity and public access to green and blue spaces in cities and other densely populated areas, enhancing natural landscapes, native biodiversity, ecosystem services, and human health and well-being.

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Background and Context for Enhancing Green Spaces and Urban Planning

Cambodia has begun integrating biodiversity considerations into urban and regional planning through national and city-level initiatives. The Phnom Penh Green City Strategic Plan (2016–2025) was one of the earliest attempts to align urban growth with sustainability principles, focusing on tree planting, wetland protection, and eco-friendly transport systems [1]. The Plan includes green corridors and water-sensitive design, which are increasingly being incorporated into urban development projects, indicating a growing recognition that green-blue spaces are central to livability and biodiversity enhancement. This plan was complemented by the Phnom Penh Sustainable City Plan (2018–2030), which provides a framework for green infrastructure, low-carbon mobility, and waste management [2]. Secondary cities, such as Battambang, Kampong Cham, and Siem Reap, have also piloted similar strategies under the Sustainable City Strategic Plan (2020–2030) [192].

A recent study of urban climate resilience in Phnom Penh underscores the political and governance dimensions of biodiversity-friendly urban planning [193]. It shows that wetlands and green corridors, which provide ecosystem services and biodiversity niches, are increasingly fragmented by real estate development, creating tensions between growth and sustainability. This evidence adds to the recognition that biodiversity-inclusive planning is essential for sustainable and climate-resilient Cambodian cities.

The loss of green spaces, natural lakes, and wetlands through urban expansion increases flood risk and undermines ecosystem-based services. Urban areas in Phnom Penh and Siem Reap were 1.16°C and 1.19°C hotter than surrounding non-urban areas, reflecting a strong urban heat island effect [138]. To counter this, preserving green spaces and low-cost tree planting are possible measures.

Policy Frameworks for Enhancing Green Spaces and Urban Planning

The legal basis for biodiversity-inclusive urban planning is provided by the Law on Land Management, Urban Planning and Construction (1994), which mandates master plans and requires municipalities to balance development with environmental and cultural protection. Building on this, Sub-Decree No. 181 (2015) officially adopted the Phnom Penh Land Use Master Plan (2035), which establishes the capital's long-term framework for land use, including the designation of green and blue spaces.

National strategies have further consolidated this foundation. The CSE (2023–2028) emphasizes climate resilience, NbS, and cross-ministerial coordination to safeguard ecosystems in cities. The Long-Term Strategy for Carbon Neutrality (2021) identifies urban greening, water-sensitive drainage systems, and nature-based cooling as core mitigation and adaptation measures. Most recently, the NDC 3.0 (2025) commits Cambodia to mainstreaming biodiversity into urban and regional planning, expanding ecosystem rehabilitation, and integrating sustainable water management into city design.

Gaps and Challenges for Achieving Target 12

Despite these efforts, significant challenges persist. Implementation of master plans and city strategies remains uneven due to weak enforcement of urban regulations, fragmented responsibilities across ministries and municipal authorities, and limited resourcing at the local level. This fragmentation hampers efforts to deliver connected parks, tree corridors, and the protection of wetlands and lakes [2].

Competing land-uses also threaten biodiversity assets in urban settings. In Phnom Penh, infilling of lakes and wetlands for real estate and infrastructure development continues to reduce flood retention and degrade habitats for aquatic and terrestrial biodiversity [68,193]. Such practices undermine the connectivity of blue spaces and exacerbate climate-related risks for vulnerable communities.

Additionally, technical and financial barriers constrain progress. Cities in Cambodia lack updated ecological inventories, urban connectivity maps, and risk overlays to prioritize biodiversity-friendly planning. Local government units have limited fiscal and technical resources [2], while national diagnostics stress the need for increased financing capacity to deliver climate-resilient infrastructure and safeguard green-blue spaces [67]. While policies such as the CSE (2023–2028) and NDC 3.0 (2025) call for stronger

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urban greening, translating these high-level commitments into enforceable design standards and long-term funding mechanisms remains an ongoing challenge.

Opportunities for achieving Target 12

Cambodia has significant opportunities to enhance urban green and blue spaces by using existing city plans and national climate and environment commitments as a single, coordinated framework (see Table 18). Phnom Penh's green and sustainable city plans, together with sustainable city strategies for secondary cities, already provide a practical platform that can be updated to systematically integrate NbS, strengthen urban biodiversity corridors, and protect remaining wetlands and lakes. The core enabling policy direction is already in place through the national land management and urban planning framework and associated implementing instruments, together with the Phnom Penh Land Use Master Plan (2035), the CSE (2023–2028), the Long-Term Strategy for Carbon Neutrality (2021), and NDC 3.0 (2025), which together support biodiversity-inclusive urban planning through measures such as minimum green-space standards, water-sensitive design, and nature-based cooling.

Growing awareness of urban heat island effects and flood risks provides a clear entry point to prioritize tree planting, park creation, wetland restoration, and river and canal corridor rehabilitation in high-risk neighborhoods, improving both human well-being and habitat connectivity. Urban GIS mapping and climate risk overlays can support MLMUPC, MOE, municipalities, and MPWT to identify priority greening zones and embed biodiversity criteria into infrastructure design, including green roofs, bioswales, and shaded walkways. Citizen science and community-led greening initiatives can further engage residents in monitoring urban biodiversity, maintaining parks and canals, and co-designing local green spaces. By consolidating city plans under a shared set of urban NbS and biodiversity outcomes, Cambodia can expand the area, quality, connectivity, and accessibility of green and blue spaces in cities and towns, delivering co-benefits for climate resilience, public health, and urban biodiversity by 2030.

Table 18 outlines a series of strategic actions, the institutions responsible, and their role in achieving Target 12.

Table 18: *Action Plan for Target 12 on promoting urban blue and green spaces*

Indicators	Strategic Action(s)	Key Institutions (and roles)
12.1. Number of Districts with biodiversity and NbS inclusive urban plans 12.2. Percentage of urban population with access to green and blue spaces within a 30-minute walk 12.3. Number of green or blue spaces developed in urban areas 12.4. Number of green-urban infrastructure projects integrating biodiversity-friendly design	• Promote urban green and blue infrastructure development: establish more parks, urban forests, wetlands, and green corridors in cities to improve connectivity and public access to nature • Mandate biodiversity-inclusive urban planning – incorporate NbS into city master plans (e.g., floodplain parks, tree-lined roads, wildlife-friendly design standards) • Implement urban biodiversity initiatives such as city-level greening programs, rooftop gardens, and restoration of urban wetlands • Engage citizens in urban biodiversity monitoring and stewardship (e.g., support citizen science programs as noted in urban NbS plans) • Ensure inter-agency coordination so that urban development and land-use plans by municipalities integrate green space targets	• MLMUPC (lead for urban/spatial planning guidelines) • Municipal and city governments (implementing urban greening projects) • MOE (providing guidelines on urban biodiversity, environmental impact assessments for urban expansion) • MPWT (incorporating green design in infrastructure) • NGOs/CSOs and development partners (technical advice) • Private sector (developers, utilities, green infrastructure supply)

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3.3.5. Target 13: Increase benefit-sharing with communities

By 2030, Cambodia initiates the fair and equitable sharing of benefits from genetic resources and traditional knowledge, contributing to national benefits while protecting rights and raising awareness.

Background and Context for Increasing benefit-sharing with communities

ABS is one of the three objectives of the CBD and aims to ensure that benefits arising from the use of genetic resources and associated TK are shared fairly and equitably. The Nagoya Protocol (2010, in force since 2014) provides the international framework, including requirements related to FPIC and Mutually Agreed Terms (MAT).

Cambodia's biodiversity provides a strong basis for implementing ABS because of the diversity and value of its genetic resources. Molecular analyses of 179 Cambodian rice accessions confirm significant genetic variation, including traits related to grain size, panicle architecture, and stress tolerance [194,195]. This confirms Cambodia's importance as a reservoir of rice landraces relevant to food and nutritional security and climate-resilient agriculture. Cambodia's medicinal plant resources are also well documented. Agarwood, Turmeric (*Curcuma longa*), and Cinnamon (*Cinnamomum cambodianum*) are widely used, and screening of 28 Cambodian plants has shown anti-plasmodial activity, indicating pharmaceutical potential and ongoing scientific interest [196].

TK held by IPLCs further strengthens the context for ABS implementation. An ethnobotanical survey in Kampong Speu Province documented 50 medicinal plant species across 25 families used by traditional healers to treat common illnesses [197]. In Prey Lang Forest, Kuy and Khmer communities depend on forest products for food, medicine, and rituals, reflecting a living body of TK closely linked to biodiversity stewardship and local livelihoods [198]. These examples reinforce that equitable benefit-sharing must recognize IPLCs as custodians of TK associated with genetic resources.

Cambodia's genetic resources are also increasingly represented in digital sequence information (DSI) used in international research. Plasmodium falciparum strains collected in western Cambodia, where artemisinin resistance first emerged, have been sequenced and deposited in public databases, making the country's pathogen diversity globally significant [198] . Cambodian rice landrace genomes have also been included in GenBank and other repositories for breeding research. These advances highlight the benefits of open science, but they also raise equity concerns because provider countries risk being bypassed if benefit-sharing arrangements do not extend to DSI [199]. This underscores the importance of developing an ABS system that addresses both physical genetic resources and DSI.

Policy Frameworks for Increasing benefit-sharing with communities

Cambodia has developed a policy and legal foundation to operationalize ABS in line with the Nagoya Protocol. Following ratification in 2015, the General Secretariat of NCSD was designated as the Competent National Authority and steps were initiated to establish a national ABS Clearing-House (Sixth NR, 2019). Progress has included technical and institutional preparation, including an ABS Technical Working Group, GEF-6 support to draft an ABS law, and incorporation of ABS provisions into the ENR Code (2023) (Sixth NR, 2019). The 2016 NBSAP also identified the absence of dedicated ABS legislation and emphasized priorities around awareness raising, enabling legislation, and creating conditions for implementation, including recognition of customary sustainable use and TK.

The ENR Code (2023) and Sub-Decree No. 104 ANK.BK (2023) on Access to Genetic Resources and Benefit-Sharing provide the first comprehensive statutory basis for ABS in Cambodia. Together, they establish procedures for FPIC, set requirements for mutually agreed terms, and assign institutional

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responsibilities to support fair and equitable benefit-sharing from the utilization of genetic resources. The Sub-Decree recognizes the importance of TK associated with biodiversity, although it does not establish a standalone protection regime. These instruments represent a shift from interim arrangements toward a more operational ABS framework aligned with the Nagoya Protocol and national development priorities.

Important gaps remain. TK is acknowledged, but legal protection and enforcement mechanisms remain limited, leaving IPLCs vulnerable to misappropriation (Sixth NR, 2019). DSI is also not clearly addressed in existing provisions, despite its relevance for genetic resources such as Cambodian rice landraces and Plasmodium falciparum strains, which could limit Cambodia's ability to secure fair benefits as international research increasingly relies on DSI (Sixth NR, 2019). Addressing these gaps will require strengthening safeguards for TK and updating frameworks to cover DSI in ways consistent with evolving global ABS governance and the KM-GBF.

Gaps and Challenges for Achieving Target 13

Cambodia's ABS regime has remained largely in a preparatory phase. Cambodia ratified the Nagoya Protocol, designated the Competent National Authority, and initiated drafting of ABS provisions, but implementation still relied on interim measures and donor-supported capacity building rather than an operational ABS system. This limited institutional experience constrained enforcement, monitoring, and compliance. The need for implementing ministerial decision (i.e.,'Prakas'), including on provider identification, checkpoints, and an ABS fund, and for stronger institutional capacity and community participation was also highlighted, reflecting the administrative and coordination requirements for effective delivery (Sixth NR, 2019). Evidence from other contexts shows ABS frameworks tend to underperform where administrative capacity and enforcement structures are weak [200].

Implementation gaps have been particularly acute for TK. The 2016 NBSAP identified inadequate inter-sectoral coordination and limited institutional capacity to protect TK, and community-level support for IPLCs has largely been framed around capacity development rather than enforceable rights and safeguards (Sixth NR, 2019). While Sub-Decree 104 (2023) recognizes TK, it does not yet provide detailed safeguards or clear enforcement protocols. This remains a critical gap because fair benefit-sharing depends on explicit legal recognition of TK and its full integration into consent, participation, and compliance procedures [201].

Opportunities for achieving Target 13

Cambodia has strong opportunities to operationalize fair and equitable benefit-sharing by building on its new ABS legal framework and rich base of genetic resources and TK (see Table 19). The ENR Code (2023) and Sub-Decree No. 104 ANK.BK create an immediate platform for MOE, MAFF, MISTI and MCFA to pilot clear, practical procedures for access permits, FPIC and MAT in real bioprospecting and research partnerships, starting with well-documented resources such as rice landraces, medicinal plants and pathogen strains of global interest. NBSAP processes have already generated awareness and initial capacity among government ministries, researchers and IPLCs, which can be expanded into targeted training programs, community protocols and locally developed guidelines for TK protection and benefit-sharing.

At the same time, growing international attention on DSI under the KM-GBF creates a timely opportunity for Cambodia to update its ABS tools to explicitly cover digital use of genetic resources, ensuring that benefits from global research on Cambodian genomes and pathogen sequences are not lost. Developing model contracts, community–researcher agreements and "standard ABS packages" for universities, NGOs and private companies can help streamline compliance while strengthening community rights and benefits. By using these legal instruments, capacity-building efforts and emerging bio-prospecting partnerships together, anchored in robust FPIC and TK safeguards, Cambodia can move from concept to practice, increasing tangible, locally felt benefits for IPLCs and other provider communities by 2030.

Table 19 outlines a series of strategic actions, the institutions responsible, and their role in achieving Target 13.

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Table 19: *Action Plan for Target 13 on increasing benefit-sharing with communities*

Indicators	Strategic Action(s)	Key Institutions (and roles)
13.1. Number of access permits (or equivalent authorizations) issued for genetic resources and associated TK 13.2. Number of community protocols or local guidelines established for FPIC and TK protection for IPLCs 13.3. Number of national policies, guidelines, tools and administrative measures on ABS developed and implemented 13.4. Number of ABS capacity development programs conducted and awareness-raising materials disseminated	• Strengthen the ABS legal framework in line with the Nagoya Protocol: develop or update national ABS legislation, regulations, and administrative measures • Establish clear procedures for access permits to genetic resources and associated TK, ensuring FPIC of IPLCs and protection of their rights • Build capacity and raise awareness on ABS – conduct training programs and disseminate materials so that stakeholders (communities, researchers, private sector) understand ABS processes • Protect TK by supporting community protocols and legal measures, and ensure fair, localized benefit-sharing from any bio-prospecting or biotechnology that uses genetic resources • Develop bio-prospecting partnerships that provide monetary or non-monetary benefits back to provider communities	• MOE (CBD/ABS National Focal Point, ABS policy, permit system, compliance and coordination) • MAFF (plant/animal genetic resources in agriculture) • MISTI (biotechnology oversight) • MCFA (TK aspects) • MOC (on production of goods from plants and animals) • MOWRAM (farmer water-user communities) • IPLC representatives (TK governance, FPIC, benefit sharing engagement) • Private sector (biotech/pharma/cosmetics, research partnerships, compliance)

3.4. Key Result Area 4 – Sustainable Business and Consumption

This KRA encompasses Targets 5 and 15–17. It focuses on making wildlife use and trade sustainable and legal, ensuring that businesses and financial institutions assess, disclose, and reduce biodiversity impacts, shifting consumption and waste toward circular and sustainable models, and strengthening biosafety and biotechnology governance so benefits are fairly shared and risks to people and nature are minimized.

3.4.1. Target 5: Ensure Sustainable, Safe and Legal Harvesting and Trade of Wild Species

By 2030, ensure that the use, harvesting, and trade of wild species is sustainable, safe, and legal, preventing overexploitation, minimizing impacts on non-target species and ecosystems, and reducing the risk of pathogen spillover.

Background and Context for Ensuring Sustainable Harvesting of Wild Species

Wildlife trade for domestic and international markets, both legal and illegal, has been a long-standing driver of biodiversity loss in Cambodia, with wildlife products extracted, transported, and sold for food, traditional medicine, luxury pets, and decorative markets [202].Regional demand and border trade dynamics create strong incentives for illicit trafficking. In some remote areas, use of wild meat and fish remains common even where PA regulations exist, reflecting cultural preferences, food security needs, and limited livelihood alternatives [11].

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Cambodia has strengthened efforts across the illegal wildlife trade chain, with an emphasis on improving monitoring, patrolling, and enforcement in protected and conservation areas, supported by awareness raising and capacity building for local communities, patrol teams, educators, and ministry staff. These actions aim to discourage illegal hunting, fishing, logging, and domestic and cross-border trade, while improving coordination and effectiveness of field operations [25].

Complementary measures have focused on mobilizing finance and strengthening the evidence base for planning and decision-making. Cambodia is advancing PES and has sought to expand access to resources beyond domestic budgets, alongside increased involvement of universities and research institutions in generating data relevant to conservation and sustainable use (Sixth NR, 2019). This includes work on wild relatives of food crops such as Vigna spp. and Oryza spp., and native ornamental plants such as orchids, through collections, characterization, and both in-situ and ex-situ conservation [25].

Pressures remain high, with 143 vertebrate, 79 invertebrate, and 37 plant species listed as threatened, and conservation responses ranging from species action plans to broader habitat and restoration programs. Partner organizations have also supported priority species conservation, including Fauna & Flora's (F&F) efforts reported in 2017 to conserve 76 priority species with indirect benefits to additional species [25].

Policy Frameworks for Ensuring Sustainable Harvesting of Wild Species

MOE and MAFF work with development partners and NGOs to develop endangered species action plans, including action plans for 12 species produced with F&F. Collaboration at national and regional levels has also strengthened efforts to address illegal trade. In 2016, the Wildlife Rapid Rescue Team (WRRT) conducted more than 400 undercover operations, rescued over 3,200 animals, apprehended 66 traders, and received over 1,400 calls to the wildlife crime hotline. In 2017, government institutions, NGOs, and international partners met to coordinate responses to trafficking, and the Mondulkiri Department of Environment, together with the Wildlife Conservation Society (WCS), held bilateral meetings with Vietnamese provinces to strengthen cooperation on combatting illegal wildlife trafficking.

Cambodia has established legal instruments to address wildlife trade and regulate the harvesting, transport, and trade of wild species. The Law on Environmental Protection and Natural Resource Management (1996) established broad principles for conservation and enforcement. The Law on Forestry (2002) includes provisions regulating forest products, including wildlife and timber. The Law on PAs (2008) reinforces protection measures within Cambodia's extensive PA system. The ENR Code (2023) consolidates biodiversity provisions, clarifies ministerial mandates, and embeds key principles including the precautionary principle, the polluter-pays principle, and the user-pays principle. At the international level, Cambodia has been a Party to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) since 1997 and has incorporated its provisions into national law, although challenges of compliance and enforcement remain.

Gaps and Challenges for Achieving Target 5

Despite ongoing efforts, hunting and trade pressures continue to threaten a wide range of taxa in Cambodia. The most severe declines are reported among primates, freshwater turtles and other reptiles, large waterbirds, large mammals, high-value timber species, and some invertebrates [27].

Primates remain among the most heavily traded wild species. The long-tailed macaque (*Macaca fascicularis*) has been particularly targeted due to international demand from the biomedical research industry, and reports indicate that wild-caught macaques have been laundered through registered breeding facilities, raising sustainability concerns [203,204]. Unsustainable hunting of primates remains a major threat, reinforcing the need for stronger enforcement and compliance with CITES [25].

Freshwater turtles and other reptiles are also under strong pressure. The southern river terrapin, or Royal Turtle, and the yellow-headed temple turtle (*Heosemys annandalii*) are targeted for food, pets, and traditional medicine [205,206]. Despite measures such as nest protection and head-starting, illegal collection

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persists [102,207]. Other reptiles, including pythons and monitor lizards, are exploited for skins, meat, and the pet trade, and Cambodia can function as both a source and transit country [208].

Hunting and collection also affect priority bird species that continues to contribute to declines in many species, including around the Tonle Sap and Mekong floodplains [25]. Community-based approaches, including nest protection payments and wildlife-friendly rice (Ibis Rice), have helped create incentives for local protection [103].

Large mammals such as Banteng, Gaur, and Eld's Deer have been severely depleted through hunting for wild meat and trophies [209]. The Kouprey (*B. sauveli*) is likely extinct due to overhunting [210]. Pangolins (*Manis javanica*) remain heavily poached for meat and scales despite strict international protections [202]. Wildlife trade and overexploitation have long been recognized as key threats requiring stronger enforcement of relevant laws [50,69].

Overexploitation and illegal trade also affect plant species, particularly luxury hardwoods such as rosewoods and other high-value timber taxa, which are sought for construction and artisanal uses and remain vulnerable to unsustainable harvesting. These pressures are reinforced by ongoing illegal logging and the removal of valuable timber species despite existing laws and enforcement mechanisms [11].

Invertebrates are also affected. Seventy-nine invertebrate species are classified as threatened, and harvesting and trade contribute to pressures in addition to habitat loss [11]. Tarantulas are widely collected and sold as a local delicacy and for medicinal use. Wildlife are collected and sold for medicinal use, raising concerns about sustainability of wild populations, with one study reporting that, among species used in Cambodia, six are classified as Vulnerable, six as Endangered, and one as Critically Endangered on the IUCN Red List of Threatened Species, and that 10 of these species are included in the CITES Appendices I, which prohibits international commercial trade [211]. Trade for traditional medicine can involve plants and animals, including invertebrates, but is less systematically monitored than higher-profile species groups [20]. These patterns reinforce the need for stronger monitoring and enforcement across a wider set of taxa and trade pathways.

Opportunities for achieving Target 5

Cambodia has strong opportunities to ensure that harvesting and trade of wild species become sustainable, safe and legal by building on existing enforcement, community co-management and species-recovery efforts (see Table 20). The long-standing collaboration between MOE, MAFF, enforcement agencies and partners (e.g., WRRT, customs, judiciary) provides an operational platform to further professionalize wildlife crime detection, intelligence-led patrols and CITES implementation, including targeted crackdowns on priority taxa such as primates, turtles, pangolins, luxury timber and high-value invertebrates. At the same time, the expanding network of CPAs, CFs, CBETs, MFMAs, CFis and community wildlife initiatives offers a practical entry point for community-based wildlife management that combines clear local rules, sustainable harvest guidelines and alternative livelihoods (e.g., ecotourism, PES, wildlife-friendly products) to reduce unsustainable offtake. Emerging tools such as the Cambodia Species Index (Box 3) and SMART-based law-enforcement monitoring can be used to track trends in hunted and traded species, adjust quotas or bans, and identify areas where prey recovery is feasible to support predator reintroduction and recovery programs. Closer integration of wildlife trade control with public health and One Health surveillance creates an opportunity to address zoonotic spillover risk at the same time as biodiversity loss, by strengthening hygiene, biosecurity and market controls along trade chains. Together, these legal, institutional, community and monitoring innovations can shift Cambodia's wildlife use and trade toward a regime that is ecologically sustainable, socially just, health-secure and fully compliant with national law and CITES obligations by 2030.

Table 20 outlines a series of strategic actions, the institutions responsible, and their role in achieving Target 5.

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Table 20: *Action Plan for Target 5 on sustainable, safe and legal harvesting and trade of wild species*

Indicators	Strategic Action(s)	Key Institutions (and roles)
5.1. Number of natural resources crime cases involving hunting brought to court 5.2. Number of cases for CITES Appendix I species in illegal trade reported 5.3. National One Health framework and integrated zoonotic surveillance system operationalized	• Strengthen enforcement against wildlife poaching and trafficking, and overall environmental crime, including bolstering ranger patrols, interdicting illegal wildlife trade (implementing CITES regulations), and prosecuting offenders (improve wildlife crime cases brought to court) • Promote sustainable harvesting programs for wild species used by communities, coupled with monitoring of harvest levels and adaptive quotas • Increase prey populations in key ecosystems (e.g., through hunting bans in core zones) to aid predator recovery • Establish community-based wildlife management and alternative livelihood options to reduce unsustainable offtake • Establish a legal framework on pathogen spillover and zoonotic diseases using the One Health approach • Focus enforcement and demand-reduction efforts on the highest-risk trade routes and priority species, measured by interdiction-to-prosecution conversion and crime network disruption • Strengthen existing mechanism of cross-provincial working groups by coordinating intelligence and operations along known trade routes, markets, transits, and restaurants • Form informant networks at village, district, and market levels to collect data on traders, middlemen, transport methods, seasonal trade patterns including information sharing between provinces through law-enforcement coordination units	• MOE (enforcement inside PAs) • MAFF (enforcement outside PAs, CITES Management Authority, forestry/fisheries agencies for regulating harvest of wild plants and fish) • MOI (law enforcement, customs police for anti-poaching and trade control • MEF (link with Customs) • MOH (link ecosystem health to disease risk reduction) • MOFAIC (Legal document support) • Private sector (transport, e-commerce, traders, tourism, traceability) • Judiciary (courts to prosecute wildlife crimes) • NGOs/CSOs and development partners (site-based work, technical advice, data, awareness, community outreach, monitoring, enforcement support) • IPLCs (community surveillance, reporting)

3.4.2. Target 15: Businesses Assess, Disclose and Reduce Biodiversity-Related Risks and Negative Impacts

By 2030, the negative impacts of business on biodiversity are reduced through measures that require monitoring, assessment and disclosure of biodiversity risks and impacts across operations and supply chains, promote compliance with access and benefit-sharing regulations, and encourage sustainable production and consumption practices that increase positive contributions to nature.

Background and Context for Businesses Reducing Biodiversity-Related Risks

Large-scale land-based investments continue to place considerable pressure on Cambodia's biodiversity. The granting of ELCs for industrial agriculture has historically accelerated deforestation and habitat fragmentation, and remote sensing evidence indicates that ELCs were among the most significant drivers

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of deforestation during the 2000s, contributing to conversion of natural forests into monoculture plantations and the loss of critical ecosystem services [1]. Agriculture and settlement expansion remain among the leading drivers of biodiversity decline [25].

Beyond agriculture, hydropower and infrastructure development financed by large companies and investors have altered aquatic ecosystems and fragmented ecosystems. Hydropower dams on the Mekong and its tributaries have disrupted fish migration routes and sediment flows, with cascading impacts on fisheries and freshwater biodiversity [1]. Improved road networks and hydropower projects can open access to previously isolated areas, intensifying habitat loss and overexploitation pressures [25].

The mining sector is another area of concern, as mineral extraction and processing often overlap with forested landscapes and PAs. Mining and quarrying remain sources of localized biodiversity pressure where cumulative impacts are not adequately assessed [11]. Past NBSAPs also acknowledged that mining can contribute to habitat destruction, pollution of watercourses, and long-term ecosystem degradation where safeguards are not enforced.

Financial institutions and development finance also shape these outcomes. Investment flows are not always screened for biodiversity impacts, which can allow projects with high ecological risks to proceed without adequate safeguards. Indirect drivers, including rapid economic growth, weak governance, and financial incentives for large-scale projects, continue to exacerbate biodiversity pressures, underlining the importance of integrating biodiversity considerations into business and financial decision-making [25].

Policy Frameworks for Businesses Reducing Biodiversity-Related Risks

Cambodia has introduced several frameworks that directly support the integration of biodiversity safeguards into business and finance. The ENR Code (2023) establishes legally enforceable disclosure and reporting requirements, including Environmental and Social Impact Assessments (ESIA), public participation, and access to environmental information. These provisions form the backbone of Cambodia's legal approach to ensure large companies disclose impacts and integrate biodiversity safeguards.

On the finance side, the Cambodian Sustainable Finance Principles, adopted by the Association of Banks in Cambodia, guide financial institutions to implement Environmental and Social Risk Management (ESRM) systems, aligning with international disclosure norms [213]. Similarly, the Securities and Exchange Regulator of Cambodia (SERC) has issued guidelines for green, social, and sustainable bonds, requiring issuers to report on biodiversity-related safeguards [214]. These frameworks support the gradual integration of biodiversity safeguards into both corporate operations and financial markets.

Cambodia's growing portfolio of Geographical Indications (such as Kampot pepper and other regionally branded products) illustrates the potential to link biodiversity conservation with high-value, sustainable agro-industry. By maintaining traditional production landscapes, conserving agro-biodiversity and promoting low-impact practices, Geographical Indication schemes can strengthen rural livelihoods while rewarding biodiversity-friendly value chains. The NBSAP encourages the expansion of such models and their integration into agricultural and trade policies.

Gaps and Challenges for Achieving Target 15

Despite these advances, implementation and enforcement remain limited. While the ENR Code (2023) sets strong disclosure and participation requirements, ensuring compliance across provinces is resource-intensive, and enforcement actions remain sporadic. Weak capacity at subnational levels and the need for coordination across ministries make it difficult to systematically monitor biodiversity risks associated with large projects [25].

Financial institutions also face competing incentives. While the Cambodian Sustainable Finance Principles exist, they are voluntary rather than mandatory, resulting in uneven adoption across the sector. Without binding regulatory enforcement by the National Bank of Cambodia or SERC, biodiversity risks are not consistently factored into lending and investment decisions.

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Large projects often carry significant political and economic influence, which can limit transparency and accountability. The lack of comprehensive biodiversity accounting systems, coupled with limited public access to corporate environmental data, hampers the ability to track cumulative impacts. These challenges underscore the urgency of moving from voluntary commitments to enforceable disclosure, reporting, and biodiversity-friendly business practices.

Opportunities for achieving Target 15

Cambodia has strong opportunities to reduce biodiversity-related business impacts by leveraging its emerging legal and financial frameworks and aligning them with international best practice (see Table 21). The ENR Code (2023) already provides a solid legal basis to require more rigorous EIAs/ESIAs, SEAs and public disclosure of biodiversity risks for high-impact projects, which can now be operationalized through detailed guidelines on "no go" zones, mitigation hierarchies, offsets and compensatory restoration. At the same time, the Cambodian Sustainable Finance Principles and SERC's green/sustainable bond guidelines offer an entry point for banks, investors and listed companies to systematically integrate biodiversity risk screening and reporting into their Environmental, Social, and Governance (ESG) and ESRM systems, and to link access to finance with compliance on biodiversity safeguards, ABS provisions and deforestation-free supply chains. By combining these tools with incentives such as tax breaks, concessional finance and public recognition for biodiversity-leading companies, Cambodia can encourage businesses in agriculture, hydropower, mining, infrastructure and tourism to publish sustainability reports disclosing their biodiversity footprint, adopt metrics such as Species Threat Abatement and Restoration (STAR) to quantify and reduce impacts, and engage in public–private partnerships for habitat restoration and conservation banking. This, in turn, will help shift private and public investment flows towards activities that minimize harm and generate measurable positive outcomes for ecosystems and local communities by 2030.

Table 21 outlines a series of strategic actions, the institutions responsible, and their role in achieving Target 15.

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Table 21: *Action Plan for Target 15 on disclosing biodiversity practices in business*

Indicators	Strategic Action(s)	Key Institutions (and roles)
15.1 Number of businesses publishing sustainability reports disclosing biodiversity risks and impacts 15.2 EIA processes strengthened, including compensatory/corrective measures 15.3 Percentage of PAs with EIAs/SEAs completed for high-risk investments 15.4 STAR metric applied to assess business-related biodiversity impacts 15.5 Number of policies and incentives for environmental or biodiversity-inclusive business practices	• Strengthen environmental assessment and permitting for development projects – require rigorous EIAs and SEAs that include biodiversity risk assessment, and enforce measures like offsets or compensatory restoration for any residual impacts • Introduce policies that require companies to monitor and disclose their biodiversity footprint (e.g., in annual sustainability reports) • Encourage and incentivize biodiversity-friendly business practices (e.g., certification schemes, sustainable sourcing standards, and corporate biodiversity action plans • Develop market-based and fiscal incentives such as tax breaks for companies investing in conservation, or public recognition for biodiversity leaders • Promote the use of metrics like the STAR to quantify and reduce business impacts on biodiversity • Foster public-private partnerships where businesses support conservation (conservation banking, habitat restoration projects) to offset their impacts • Develop market-based social, environmental, and biodiversity safeguard policies, regulations, and guidelines to encourage biodiversity-inclusive businesses to access an evolving international market	• MOE (enforcing EIA law and developing corporate disclosure guidelines) • CDC (investment facilitation and private sector engagement) • MOC and MISTI (engaging industries in sustainability standards) • MEF (designing tax or fiscal incentives for green practices) • Business associations and chambers (adopt and promote biodiversity risk management) • NGOs/CSOs and development partners (technical advice) • Private sector (safeguards, disclosure, certification, finance screening)

3.4.3. Target 16: Enable Sustainable Consumption Choices to Reduce Waste and Overconsumption

By 2030, reduce overconsumption and waste generation by at least 30% by promoting sustainable consumption choices.

Background and Context for Enabling Sustainable Consumption

Waste generation in Cambodia is increasingly dominated by food waste, plastic waste, and packaging waste. Organic matter, particularly food waste from households, markets, and food service businesses, constitutes the largest portion of municipal solid waste. Surveys in Phnom Penh and other urban centers indicate that organic fractions consistently represent more than half of the waste stream, ranging from 52% to 64% [215,216]. Organic waste also remains the dominant component of solid waste nationwide, while efforts at composting and recycling have not yet scaled sufficiently [25].

Plastic waste has expanded rapidly alongside urbanization and changing consumption patterns. In Phnom Penh, plastics account for approximately 21% of total municipal waste, equating to more than 213,000 tons annually [217]. Unsustainable consumption and waste have been identified as growing drivers of biodiversity

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loss, reinforcing the need to scale reduction, reuse, and recycling measures [50]. Phnom Penh generates over 3,500 tons of waste daily, of which about 80% is dumped or burned, contributing to clogged drainage, air pollution, and biodiversity pressures [25].

Packaging waste, including multilayer plastics, cartons, and other hard-to-recycle materials, is less systematically studied but increasingly evident in Cambodia's waste profile. Packaging and plastic bag waste are rising, prompting regulatory interventions such as the Sub-Decree on Plastic Bag Management (2017) [25]. The ENR Code (2023) includes provisions to promote biodegradable alternatives and apply special state levies on non-recyclable packaging. Emerging initiatives also include campaigns supported by UNDP and the development of an Extended Producer Responsibility (EPR) Roadmap for packaging waste management [25].

Policy Frameworks for Enabling Sustainable Consumption

Measures already in place include the 2008 National 3Rs Strategy (Reduce, Reuse, Recycle), which sought to promote composting of food waste and expand recycling capacity, and the 2017 Sub-Decree No. 168 on Plastic Bag Management, which introduced standards for bag thickness, levies on distribution in large markets, and incentives for biodegradable alternatives. Municipal-level actions have included the expansion of waste collection services and pilot composting facilities, although these have remained limited in scope [25].

Building on these measures, the ENR Code (2023) provides a comprehensive legal basis for solid waste management, with dedicated chapters on urban solid waste, plastic waste, and industrial solid waste. The Code mandates the MOE to develop guidelines for waste separation, regulate plastic-free zones, and impose special state levies on non-recyclable or hard-to-recycle packaging. Citizens and businesses are required to reduce plastic use and adopt cloth, compostable, or biodegradable alternatives, and open burning or dumping of waste in streets, canals, or open spaces is explicitly prohibited.

Plastic and packaging waste are identified as direct drivers of ecosystem degradation, particularly in urban and coastal areas, reinforcing the need to integrate biodiversity and ecosystem service considerations into waste governance. Emerging instruments, including the draft EPR Roadmap and 4Rs campaigns supported by UNDP and development partners, provide additional mechanisms to align waste management with broader implementation frameworks, including the CSE (2023–2028) [25].

Geographical Indications Gaps and Challenges for Achieving Target 16

Despite policy progress, Cambodia continues to face systemic challenges in addressing food, plastic, and packaging waste. Composting and recycling targets have not been met, as separation at source remains rare and most organic waste is mixed with other fractions, then burned or dumped in unmanaged sites [25]. Food waste, while the dominant component, therefore remains largely untapped for recovery, contributing to greenhouse gas emissions and public health risks [215].

Plastic waste remains a critical driver of environmental degradation. Weak collection systems, heavy reliance on informal waste pickers, and low recycling rates result in large volumes of plastics being burned, illegally dumped, or leaking into waterways. Unmanaged plastics directly threaten biodiversity, and marine litter studies indicate that Cambodia's coastlines face some of the highest densities of plastic debris in Asia [218]. Regulatory instruments and campaigns have been introduced, but implementation and enforcement remain uneven, especially beyond Phnom Penh [25].

Packaging waste poses additional challenges. Multilayer plastics, sachets, and coated cartons are particularly difficult to recycle under Cambodia's current systems. Progress has been slow due to inadequate infrastructure and weak integration of ecosystem service values into waste policies, and packaging waste continues to grow in scale and complexity while EPR schemes and circular economy models remain at an early stage of development [25]. Without stronger institutional coordination and

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investment, non-recyclable packaging will continue to exert pressure on biodiversity, ecosystems, and urban environments.

Opportunities for achieving Target 16

Cambodia has strong opportunities to reduce overconsumption and waste by building on existing legal and policy instruments and rapidly scaling practical circular-economy solutions (see Table 22). The ENR Code (2023), the CSE (2023–2028) and the Sub-Decree on Plastic Bag Management (2017) already provide a mandate for source separation, bans or levies on problematic plastics, and the promotion of biodegradable alternatives; these can be operationalized through city-wide 4Rs campaigns, mandatory separation of organic and recyclable waste in major urban areas, and expansion of composting and biogas initiatives that convert food waste into soil amendments and energy. At the same time, the emerging Extended Producer Responsibility Roadmap (2021) and sustainable finance instruments create an entry point to require producers, importers and retailers to take back or redesign high-impact packaging, and to support businesses that adopt refill systems, bulk sales, reusable containers and other low-waste models. By combining these measures with eco-labelling and certification for deforestation-free, wildlife-friendly and sustainably sourced products, green public procurement, and targeted tax/fee reforms that penalize unnecessary packaging while rewarding circular practices, Cambodia can shift both business models and consumer behavior. Implemented in partnership between government, municipalities, private sector and civil society, these opportunities provide a realistic pathway to achieve at least average waste per capita to 0.84 kg/capita/day by 2030, the target for both 2026 NBSAP and NDC 3.0 (2025).

Table 22 outlines a series of strategic actions, the institutions responsible, and their role in achieving Target 16.

Table 22: *Action Plan for Target 16 on reducing food waste and sustainable consumptions*

Indicators	Strategic Action(s)	Key Institutions (and roles)
16.1 Recycling rates increased 16.2 Number of deforestation-free, wildlife-friendly and sustainably sourced products available to consumers 16.3 Number of innovative technologies or practices introduced or scaled up by government agencies to reduce waste generation, material consumption, or pollution intensity 16.4 Percentage of businesses adopting circular economy practices (e.g., waste-to-resource initiatives, extended producer responsibility programs) 16.5 Number of government policies promoting sustainable consumption (e.g., tax incentives for waste reduction, eco-labeling programs)	• Promote sustainable consumption and waste reduction through public campaigns and education – encourage consumers to minimize single-use plastics, waste, and unsustainable products • Increase recycling and circular economy initiatives: expand recycling facilities and programs, and encourage businesses to adopt waste-to-resource practices (e.g., incentivize companies to implement take-back schemes or upcycling) • Introduce and support eco-labeling and certification for products that are deforestation-free, wildlife-friendly, and sustainably sourced, making it easier for consumers to choose green products • Develop government policies and incentives to shift consumption patterns – e.g., tax incentives for products or businesses that reduce waste, subsidies for clean technology, and stricter regulations on excessive packaging • Encourage innovation in retail and product design to cut waste (e.g., refill systems, biodegradable materials) • Reduce waste and overconsumption from the 2025 baseline through these measures	• MOE (lead agency for waste management policy and awareness campaigns) • MOC (promoting and regulating eco-labeled products in the market) • MEF (tax incentives and subsidies for sustainable products/practices) • MISTI (support for circular economy tech and standards) • Consumer protection agencies and civil society (encourage behavior change) • Private sector (retail/brands, packaging, circular services, take-back)

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3.4.4. Target 17: Strengthen Biosafety and Distribute the Benefits of Biotechnology

By 2030, biosafety legislation and administrative measures and tools are developed and functioning, including addressing participation in biotechnology research and the distribution of benefits from biotechnology.

Background and Context for Strengthening Biosafety and Benefits of Biotechnology

Cambodia has established a legal and institutional framework for biosafety but has not yet authorized the cultivation or use of living modified organisms (LMOs) in agriculture or food production. The country maintains a precautionary approach, focusing on awareness raising, institutional preparedness, and regulatory development rather than approving commercial use or field trials. This cautious stance places Cambodia among ASEAN member states that prioritize risk prevention and public confidence before considering adoption of LMOs [219].

By contrast, some countries in the region have moved ahead with practical applications of biotechnology. The Philippines was the first Asian country to commercialize a genetically modified (GM) crop (Bt corn in 2003) and later approved Golden Rice in 2021 [220]. Vietnam approved GM maize varieties for commercial cultivation in 2014 to strengthen livestock feed security [221], while Myanmar permits the planting of Bt cotton as a cash crop [222]. These examples illustrate a spectrum of regional practices, ranging from active adoption to precautionary regulation, within which Cambodia aligns with the more cautious group.

Policy Frameworks for Strengthening Biosafety and Benefits of Biotechnology

Cambodia has established a comprehensive legal and institutional framework to govern biosafety and biotechnology. The Law on Biosafety (2008) is the foundation, setting out procedures for LMOs, including requirements for prior approval, mandatory risk assessment, documentation, and monitoring. It designates the MOE as the National Competent Authority and establishes advisory structures such as the Scientific Advisory Team and the National Steering Committee on Biosafety. The ENR Code (2023) further reinforces these provisions by embedding biosafety into the broader framework of environmental governance, mandating measures for risk prevention, public awareness, and alignment with the Cartagena Protocol. In addition to safeguards to prevent "gene pollution", Cambodia's biosafety framework will include safeguards to protect local crop diversity.

Complementing this, Cambodia has advanced in benefit-sharing through the Sub-Decree No. 104 on Access to and Sharing of Benefits Arising from the Utilization of Genetic Resources (2023). This sub-decree implements the Nagoya Protocol domestically and sets out procedures for FPIC, MATs, and benefit-sharing mechanisms to ensure that communities and the state derive fair benefits from biotechnology research and development. Together, these instruments demonstrate Cambodia's commitment to regulating biotechnology responsibly, safeguarding biodiversity, and ensuring equitable outcomes.

Gaps and Challenges for Achieving Target 17

Despite having the legal frameworks in place, Cambodia faces significant challenges in operationalizing biosafety. Technical capacity for conducting risk assessments remains limited, with a shortage of trained experts and laboratories capable of analyzing LMOs. Enforcement at border points and monitoring within the country depend heavily on continuous training and resource allocation, which are not yet consistently available. Public awareness of biosafety and biotechnology is also relatively low, making it difficult to build informed participation and trust in regulatory decisions.

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At the same time, there are drivers for strengthening biosafety capacity. Regional developments in ASEAN show that countries such as the Philippines, Vietnam, and Myanmar are already cultivating or using GM crops, while others like Malaysia and Thailand have structured regulatory systems. These experiences highlight both the opportunities and risks Cambodia may face in the future, especially regarding cross-border trade, food and nutritional security, and agricultural competitiveness. Strengthening national biosafety capacity and ensuring fair and equitable benefit-sharing from biotechnology will therefore be essential for Cambodia to safeguard biodiversity, protect human health, and maintain public confidence as modern biotechnologies expand in the region.

Opportunities for achieving Target 17

Cambodia is well positioned to strengthen biosafety and ensure fair distribution of biotechnology benefits by building on its existing legal architecture and emerging ABS system (see

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Table 23). The Law on Biosafety, the ENR Code (2023) and Sub-Decree 104 on ABS together provide a platform to develop clear technical guidelines, standard operating procedures and checklists for risk assessment, LMO detection and border control that can be rolled out across key sectors (i.e., environment, agriculture, health, customs). Implementing targeted capacity-building programs for regulators, researchers and border officials, combined with strategic investment in accredited laboratories and genetically modified organisms (GMO)/DSI monitoring systems, would allow Cambodia to operationalize precautionary biosafety in practice while enabling safe research on priority topics such as climate-resilient crops, disease diagnostics and vaccines. At the same time, aligning biosafety procedures with ABS requirements and TK protections can ensure that any biotechnology Research and Development (R&D) using Cambodian genetic resources delivers concrete benefits to IPLCs and local institutions through things such as co-authorship, technology transfer, scholarships and community development funds. Regional cooperation within ASEAN and South–South partnerships offer further opportunities for training, harmonized standards and joint research platforms, reducing implementation costs while increasing Cambodia's voice in global biosafety and biotechnology governance.

Table 23 outlines a series of strategic actions, the institutions responsible, and their role in achieving Target 17.

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Table 23: *Action Plan for Target 17 on assuring biosafety from modern technology*

Indicators	Strategic Action(s)	Key Institutions (and roles)
17.1 Number of biosafety programs and awareness-raising initiatives developed and implemented 17.2 Number of biosafety legal frameworks and supporting document updated or adopted 17.3 Number of institutions and biotech companies complying with biosafety protocols/legal frameworks 17.4 Capacity and effectiveness of biosafety governance structures assessed and strengthened (including National Competent Authority, National Focal Point, Technical Working Group, designated checkpoints and key stakeholders)	• Establish and enforce a biosafety framework – develop comprehensive biosafety legislation and regulations (if not already in place) that cover GMO use, handling, transport, and research • Set up or strengthen the National Biosafety Authority/Focal Point and technical working group, clarifying roles of various ministries and checkpoints (customs, quarantine) • Implement biosafety capacity-building and awareness programs for researchers, border officials, and the public, to ensure safe biotechnology practices and understanding of regulations • Monitor and ensure compliance from public research institutions and private biotech companies with biosafety protocols (e.g., containment measures, risk assessments) • Develop mechanisms to share benefits from biotechnology innovations (linking with ABS under Target 13)	• MOE (National Biosafety focal point under the Cartagena Protocol, coordinating biosafety policy) • MAFF (regulation of GMOs in agriculture, quarantine inspections) • MOH (biosafety for medical biotechnology) • MOEYS (research institutions' compliance) • MEF (Customs and border control agencies to enforce import/export rules on GM materials) • Private sector (biotech/agritech, labs/importers, traceability)

3.5 Key Result Area 5 – Mainstreaming Biodiversity Across Government and Society

This KRA encompasses Targets 14 and 18-21 that collectively aim to mainstream biodiversity across government and society by embedding biodiversity values in decision-making, reforming harmful and scaling up positive incentives, mobilizing sustainable finance, strengthening capacity and technology, and improving biodiversity knowledge systems to guide action.

3.5.1 Target 14: Integrate Biodiversity in Decision-Making at Every Level

By 2030, biodiversity values are integrated into national, sub-national, local, and private sector policies, regulations, planning and decision-making processes, ensuring that key public and private activities, fiscal policies and financial flows are progressively aligned with Cambodia's sustainable development goals and the Global Biodiversity Framework.

Background and Context for integrating biodiversity into decision-making

Cambodia has increasingly recognized biodiversity and ecosystem service values in national planning frameworks. The 2016 NBSAP called for biodiversity to be incorporated into national development and poverty reduction strategies, alongside efforts to raise awareness of biodiversity's value. Biodiversity priorities were aligned with major national planning instruments, although integration tools and valuation data remained underdeveloped [25].

Biodiversity has also been progressively mainstreamed into sectoral strategies, particularly forestry and land use. The National REDD+ Strategy incorporates the value of carbon sequestration and forest ecosystem services, framing forests as both ecological and economic assets. System of Environmental-Economic Accounting (SEEA) approaches have been applied to quantify trade-offs between forest conservation and agricultural conversion, demonstrating the economic benefits of maintaining forest cover [223]. Ecosystem service mapping and valuation have also supported provincial land-use planning, showing how biodiversity assessments can inform decisions on agriculture, forestry, and PA management [224].

At the subnational level, integrating biodiversity into Commune Development Plans (CDPs) and Commune Investment Programs (CIPs) is an emerging practice. While capacity gaps remain [25], recent experience has demonstrated practical pathways. Work on harmonizing CBNRM with CDPs shows how CPAs, CFs, MFMAs, and CFis can align with commune planning and public investment processes, including through the incorporation of activities such as reforestation, NTFP management, and ecotourism into commune rolling investment programs. This helps embed biodiversity priorities within local government systems and strengthen links between community-level conservation and formal planning and budgeting processes.

Robust valuation studies provide a strong economic justification for integrating biodiversity into planning and investment decisions. Integrated Economic-Environmental Model (CEEM) assessments of Cambodia's natural capital show that ecosystem services, particularly water regulation and forest products, already generate substantial economic value, while sustainable forest management pathways could deliver far greater long-term benefits. Full implementation of forest and other land-use measures under the Long-Term Strategy for Carbon Neutrality (2021) and the NDC 3.0 (2025) would reduce cumulative CO_2 emissions by about 1.6 billion tons by 2050, increase cumulative GDP by roughly USD 3.6 billion and national wealth by around USD 118 billion, and enhance regulating and provisioning ecosystem service flows by an additional USD 6.6 billion The total return on investment would be approximately USD 31 billion, but only

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around 12% of this (about USD 3.7 billion) would be visible if changes in natural capital and environmental quality were not valued [225], demonstrating that accounting for biodiversity and ecosystem services is essential to reveal the full development benefits of Cambodia's climate and conservation policies.

Complementing this macro-level evidence, site-level valuation studies underscore the local benefits of ecosystem conservation. For example, the multiple ecosystem services from peri-urban wetlands in Phnom Penh are valued at USD 30 million annually, supporting wastewater management and urban planning [226]. The estimated value of ecosystem services from Veun Sai–Siem Pang National Park is around USD 130 million per year [227], from the intact forests in the Pursat River Basin at least USD 99 million [228], and the loss in ecosystem services in Mondulkiri Province between 2010 and 2030 is estimated at USD 1.1 billion if the business as usual scenario is followed [224], illustrating the substantial economic value generated by intact landscapes.

Cambodia has also linked biodiversity to public investment decision-making. Through the Biodiversity Finance Initiative (BIOFIN), the country completed key diagnostics (i.e., policy review, expenditure baseline, finance needs assessment) and produced a National Biodiversity Finance Plan (NBFP), which provides mechanisms to align biodiversity priorities with the Public Investment Program (PIP) and medium-term budgeting [229–231]. These efforts demonstrate growing momentum in operationalizing Target 14, even though systematic SEEA adoption and universal biodiversity screening are still in progress.

Policy Frameworks for integrating biodiversity into decision-making

Cambodia has progressively consolidated its biodiversity-related legislation to provide a foundation for integrating ecosystem values into planning. The Law on Environmental Protection and Natural Resource Management (1996) and the Environmental Impact Assessment Sub-Decree (1999) established early requirements for evaluating development impacts. These have been expanded by the ENR Code (2023), which provides a comprehensive framework for environmental governance, sustainable resource use, and integration of biodiversity values into decision-making processes. The Code strengthens legal tools such as EIA and SEA, requiring biodiversity-inclusive assessments for development projects and programs.

Cambodia's EIA and SEA systems serve as key instruments for biodiversity mainstreaming. The Sub-Decree on EIA (1999) requires project-level biodiversity screening, while the ENR Code (2023) make SEA mandatory for policies, plans, and programs. In practice, SEA has been applied only in a limited number of pilots, including an Asian Development Bank (ADB)-supported SEA of the tourism sector in 2008, and has also been used in some sub-national planning exercises (e.g., the Mondulkiri Provincial Spatial Plan). However, SEA remains largely advisory and is not yet applied systematically as a binding requirement across sectors [232]. This highlights that while the legal framework for biodiversity-inclusive assessment exists, systematic application of SEA in national and sectoral planning is still at an early stage, with most integration continuing to rely on EIA processes [41].

Gaps and Challenges for Achieving Target 14

Biodiversity values are still only partly integrated into national and sectoral development planning, reflecting gaps in valuation tools, technical guidance, and awareness among planners. Although high-level strategies such as the NSDP (2019-2023) and NESAP (2016–2023) reference biodiversity, practical uptake in sectors such as agriculture, industry, and infrastructure remains limited [25]. Experience elsewhere shows that integration often remains symbolic unless valuation frameworks are institutionalized and backed by clear mandates, incentives, and capacity support, and ecosystem services should not be treated as a silver bullet if methods and capabilities are weak [233].

At subnational level, CDPs and LUMPs rarely include explicit biodiversity objectives or spatial priorities, and this is reinforced by limited technical capacity, tenure insecurity, and competing land uses [234]. Similar barriers are reported across Southeast Asia, particularly overlapping mandates and tenure uncertainty that undermine subnational mainstreaming [235], which helps explain why biodiversity is often marginal in commune investment priorities even where livelihoods depend on natural resources.

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Cambodia has piloted SEEA-based ecosystem accounts, including the Pursat River Basin assessment, but these efforts remain project-based rather than embedded in national statistics and routine planning systems [223]. Fragmented data and limited indicators also constrain the use of biodiversity accounts in public investment screening, and EIA procedures are applied inconsistently in practice. Global reviews show that without standardized data, accounting systems, and routine screening requirements, biodiversity values rarely influence investment and budget decisions [236,237].

Opportunities for achieving Target 14

Cambodia has strong opportunities to deepen biodiversity integration in decision-making by building on tools and reforms already underway (see Table 24). The SEEA pilots (e.g., Pursat River Basin [228]) and BIOFIN processes provide an evidence base and methodologies to expand natural capital accounting into national statistics, planning and budget frameworks, enabling MOE, the Ministry of Economy and Finance (MEF) and MOP to align public investment and financial flows with biodiversity objectives. Recent legal advances under the ENR Code (2023) create a favorable window to strengthen EIA and institutionalize SEA so that biodiversity risks, ecosystem-service values and "no-go" areas for critical habitats are systematically considered in policies, plans and major projects. At subnational level, emerging practice in integrating CPAs, CFs, MFMAs, and CFis into CDPs/CIPs and LUMPs demonstrates how commune and provincial plans can explicitly recognize biodiversity-based livelihoods, which can be scaled up through targeted training for planners and local councils. Cross-sector coordination platforms linking MOE with core economic ministries (i.e., finance, planning, agriculture, infrastructure, industry) and clear FPIC requirements for projects affecting IPLCs and other vulnerable groups offer additional opportunities to embed biodiversity values in routine decision-making. By using these analytical, legal and institutional levers together, Cambodia can move from ad hoc pilots to a coherent, nationwide system where biodiversity is routinely factored into policies, plans and investments across all levels of government and the private sector.

Table 24 outlines a series of strategic actions, the institutions responsible, and their role in achieving Target 14.

Table 24: *Action Plan for Target 14 on mainstreaming biodiversity into policies and planning*

Indicators	Strategic Action(s)	Key Institutions (and roles)
5.4. Number of sectoral policies, regulations, planning and decision-making processes incorporating biodiversity values 5.5. Biodiversity mainstreamed into national budgeting and public investment systems 5.6. Percentage of public and private investment projects requiring ESIA that complete documented FPIC or stakeholder consultation processes 5.7. National ecosystem services valuation reports available and updated for government agencies to	• Embed biodiversity in all sectoral policies and plans (mainstreaming): ensure that national and sectoral development plans (agriculture, forestry, fisheries, mining, infrastructure, education, etc.) systematically integrate biodiversity considerations • This includes incorporating natural capital values into planning and budgeting processes and aligning financial flows with biodiversity objectives • Strengthen requirements for environmental impact assessments and strategic environmental assessments so that biodiversity risks are accounted for in project and policy approvals (with "no go" zones for critical habitats) • Promote cross-sector coordination (e.g., MOE with finance, planning, sectoral ministries) to reduce policy conflicts and ensure biodiversity goals are shared • Implement training for decision-makers on biodiversity values and require FPIC for projects affecting IPLCs	• MOE (coordination across sectors) • MOP (include biodiversity in NSDP (2019-2023) • MEF (integrate natural capital accounting in budgeting) • MOEYS (schools' curriculum and activities on cleaning); • MOT (Green Tourism and Ecotourism Policy) • MOWRAM (integration of biodiversity into water resources and climate related principles and plans) • Sectoral ministries (Agriculture, Fisheries, Tourism, Mining, Energy, etc.) aligning their policies

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Indicators	Strategic Action(s)	Key Institutions (and roles)
integrate into their planning process 5.8. Number of sector policies and plans in water and climate sector that integrate biodiversity considerations into river basin planning, flood management and drought responses	• Regularly review and update sector plans to track integration of biodiversity (e.g., number of ministries using ecosystem service valuation in their reports) • Integrated biodiversity considerations into river basin plans, water infrastructure planning, and climate adaptation strategies, consistent with Integrated Water Resources Management (IWRM) principles	• Private sector companies and banks (adopting biodiversity safeguards and risk management)

3.5.2 Target 18: Reduce Harmful Incentives and Scale Up Positive Incentives for Biodiversity

By 2030, the elimination, phasing out, or reform of incentives, including subsidies, that are harmful to biodiversity and the scaling up of positive incentives for the conservation and sustainable use of biodiversity.

Background and Context for Reducing Harmful Incentives and Increasing Positive Incentives

In Cambodia's agriculture sector, harmful incentives have often been embedded in the policy framework for land and crop expansion. ELCs, promoted as a development tool, became a mechanism that incentivized large-scale forest clearance and conversion to monocultures such as rubber and cassava, frequently at the expense of biodiversity-rich landscapes [238]. Research also shows that such concessionary arrangements weakened tenure security for rural communities and undermined more sustainable, smallholder practices [239]. In addition, surveys of rice farming households reveal a strong reliance on pesticide inputs, reflecting a system that indirectly incentivizes intensive chemical use with negative implications for aquatic biodiversity, soil health, and human well-being [240].

The forestry sector illustrates how concessionary regimes and weak governance structures created harmful incentive practices. Studies of Cambodia's forestry concessions demonstrate how policies reclassified forest areas as "degraded" land, thereby legitimizing timber extraction and conversion under investment projects [241]. This effectively subsidized deforestation by providing legal cover for logging while discouraging conservation and sustainable forest management. The concession system also incentivized short-term exploitation over long-term stewardship, leading to habitat loss and biodiversity decline [238]. These perverse incentives undermined Cambodia's PA system and contributed to ongoing forest degradation.

In the fisheries sector, harmful incentives emerge from regulatory gaps and weak enforcement rather than explicit subsidies. Long-term ecological monitoring of the Tonle Sap Lake shows that indiscriminate fishing practices have been sustained by unclear or weakly enforced rules, acting as de facto incentives for overharvesting [242]. The drastic 88% decline in overall fish populations, documented across 17 years of catch data, reveals the severe ecological cost of a system that lacks effective incentives for sustainability [242]. The study's findings show how this failure has incentivized indiscriminate and unsustainable harvesting, leading to a widespread collapse affecting over 74% of all species studied, regardless of their prior conservation status. Governance studies of community and co-management reforms around Tonle Sap further reveal that

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inadequate enforcement and unclear rights created a perverse incentive environment, encouraging destructive practices while eroding trust in collective management [158].

Policy Framework for Reducing Harmful Incentives and Increasing Positive Incentives

The 2016 NBSAP was the first national framework to explicitly call for the elimination or reform of harmful subsidies while promoting positive incentives such as eco-taxes, biodiversity-friendly certification, and PES. It created a foundation for aligning national development with biodiversity conservation, even though it did not provide a detailed roadmap for monitoring or reforming harmful incentives.

The ENR Code (2023) strengthened this policy direction by introducing a legal basis for economic instruments such as PES, biodiversity offsets, and eco-taxes. This Code represents a significant step toward operationalizing incentive reform and providing ministries with tools to embed biodiversity into fiscal and regulatory systems. Its provisions lay the groundwork for integrating biodiversity safeguards into economic planning at both national and sub-national levels.

Complementing these instruments, the CSE (2023–2028) promotes positive incentives through circular economy principles, eco-certification, and biodiversity-friendly livelihoods, even though it does not explicitly address harmful subsidy reform. Other frameworks, including the Circular Economy Strategy and Action Plan (2021) and the Green Growth Roadmap (2009), also encourage eco-taxes and green business models. At the highest level, the Pentagonal Strategy Phase I (2023–2028) embeds environmental sustainability into Cambodia's overall development priorities, providing political backing for mainstreaming biodiversity into economic and social policies.

Gaps And Challenges for Achieving Target 18

Despite strong policy commitments, progress in reforming harmful incentives has been limited. Few subsidies or incentives had been removed or restructured, while positive mechanisms such as PES and REDD+ remained small in scale and dependent on donor financing [25]. This points to a persistent gap between policy ambition and practical implementation, especially in addressing entrenched sectoral incentives.

Harmful incentives remain active drivers of biodiversity loss across agriculture, forestry, and fisheries. Previous top-down approaches often created disincentives for conservation by reinforcing land conversion, resource over-extraction, and short-term economic gains. Although biodiversity-positive mechanisms have demonstrated localized success, they have not yet been mainstreamed into fiscal planning or national development programs, leaving reforms fragmented and insufficient.

Governance challenges further complicate reform. Inter-ministerial coordination remains weak, with line ministries often operating in silos, and biodiversity criteria are rarely integrated into budget circulars or investment planning. At the sub-national level, limited technical and financial capacity hampers the adoption of biodiversity incentives within commune and district planning. Equity is also a concern, as reforms must ensure that IPLCs benefit fairly from new incentive systems. Without addressing these governance and equity gaps, Cambodia's ability to reform harmful incentives and expand biodiversity-positive mechanisms will remain constrained.

Opportunities for achieving Target 18

Cambodia is well placed to accelerate reform of harmful incentives and scale up positive incentives for biodiversity by capitalizing on recent policy and finance advances (see Table 25). The ENR Code (2023) and CSE (2023–2028) create a legal and strategic platform for MEF and MOE to systematically review subsidies and incentive schemes in agriculture, forestry, fisheries and energy, and to redesign them so they no longer drive habitat loss or overuse of natural resources. At the same time, tools developed through BIOFIN provide concrete evidence and methodologies to quantify harmful incentives and to make the case for redirecting public expenditure toward biodiversity-positive measures. These include PES schemes, tax credits for sustainable farming and forestry, grants for community conservation initiatives and eco-

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certification programs that reward biodiversity-friendly practices, all of which can be embedded in sectoral budgets and public investment programs. Growing interest in green finance, such as conservation trust funds, biodiversity offsets and green bonds, offers additional opportunities to crowd in private capital and make conservation financially attractive for businesses and investors. If these instruments are designed with clear social safeguards and benefit-sharing for IPLCs and other stakeholders, Cambodia can simultaneously advance equity objectives and biodiversity outcomes while steadily phasing out the most damaging incentives by 2030.

Table 25 outlines a series of strategic actions, the institutions responsible, and their role in achieving Target 18.

Table 25: *Action Plan for Target 18 on reforming harmful incentives on biodiversity*

Indicators	Strategic Action(s)	Key Institutions (and roles)
9.4. Number of nationally recognized biodiversity-positive incentive mechanisms with implementation at national or sub-national level 9.5. Number of sectoral incentives or policy frameworks that address potential negative impacts on biodiversity	• Identify and reform harmful subsidies and incentives – for example, review subsidies in sectors like agriculture, fisheries, forestry, energy that drive habitat loss or overuse, and redesign or phase them out • Concurrently, introduce or expand positive incentives for conservation: e.g., PES schemes, tax credits for sustainable farming or forestry, grants for community conservation initiatives, and eco-certification programs that reward biodiversity-friendly practices • Ensure that new incentive programs are well-targeted and monitored for effectiveness • Encourage the private sector through green finance mechanisms (like conservation trust funds, biodiversity offsets, green bonds) that make conservation financially attractive • Incorporate social safeguards (e.g., ensure reforms recognize IPLCs' rights and include them in benefit-sharing) • Reduce or eliminate all major incentives harmful to biodiversity, re-directing those resources to positive conservation incentives	• MEF (lead on subsidy review/reform and fiscal incentive programs) • MOE (identifying harmful incentives and designing PES/positive incentive schemes) • Sectoral ministries (implement changes in their subsidy programs) • Financial institutions (banks and funds supporting green financing) • Private sector (affected sectors, business associations, green finance shift)

3.5.3 Target 19: Mobilize funding from all sources to support NBSAP implementation

By 2030, Cambodia will mobilize funds for the development and implementation of the National Biodiversity Strategy and Action Plan through increased national budget, innovative financing, public-private/NGOs partnerships and international support.

Background and Context for Mobilizing Funding for NBSAP Implementation

Cambodia's implementation of the 2016 NBSAP has been supported primarily through a combination of domestic budget allocations and international donor assistance. Cambodia set a target to increase by 20% the national budget allocation for biodiversity conservation and sustainable use by 2020, compared to 2014 levels. This was measured through the budgets of biodiversity-related ministries (MOE, MAFF, and Ministry of Education, Youth and Sport (MOEYS). By 2019, these budgets had increased greatly,

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suggesting that the country exceeded the target [25]. These allocations demonstrate the government's recognition of biodiversity as a national priority, aligning with broader development strategies such as the Rectangular and Pentagonal Strategies.

In 2018, biodiversity-related expenditure across 12-line ministries totaled approximately USD 112 million, of which around USD 33 million (29%) was financed through the Royal Government of Cambodia's recurrent budgets for those ministries. By comparison, sub-national administrations accounted for only USD 1.7 million (1.6%) [229]. As sub-national administrations assume greater service delivery responsibilities, a larger share of biodiversity finance is expected to be channeled through provincial and district offices.

Nearly half of biodiversity-related expenditure across ministries comes from the two agencies central to biodiversity management: MAFF (35%) and MOE (14%). Significant additional shares are attributable to sectoral ministries whose mandates strongly influence ecosystems, including MOWRAM (11%) for water resources, MRD (9%) for rural roads and local development, MLMUPC (8%) for land management and registration, MPWT (7%) for national roads, and Ministry of Mines and Energy (MME) (6%) for energy, while each remaining ministry contributes less than 5% (see Figure 8).

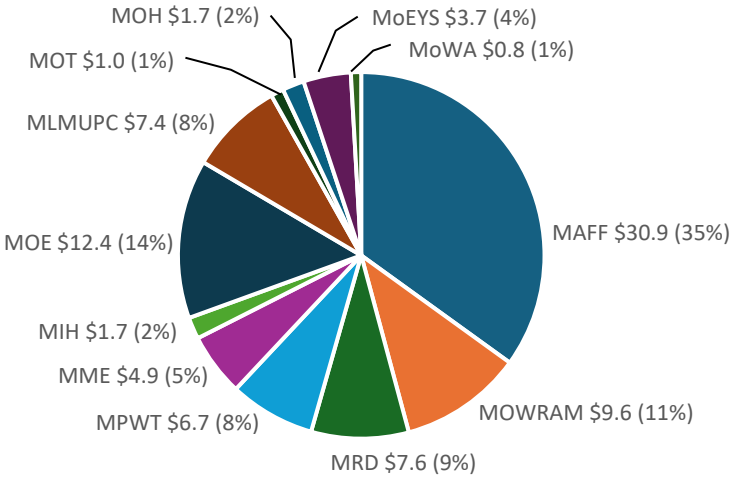


Figure 8. *Biodiversity-related public expenditure by Ministry. Source: UNDP Cambodia BIOFIN (2021)*

Despite increasing national budget allocation, Cambodia continues to rely heavily on international finance to meet biodiversity targets, with external conservation investment expanding rapidly in 2020–2024 [9]. Non-government biodiversity funding nearly doubled from about USD 98 million (2015–2019) to USD 188 million (2020–2024). Around half of the 2020–2024 total (USD 95 million; Figure 9) came from bilateral donors (including Germany, Japan, France, Sweden and the United States, plus major EU and USAID programs), while multilateral sources contributed USD 63 million (33%) (including World Bank, FAO and GEF). The GEF STAR biodiversity allocation rose from about USD 3.4 million (GEF-7) to USD 4.7 million (GEF-8), strengthening predictable support for NBSAP implementation. Philanthropic funding contributed about USD 13 million (9%), typically targeted to species conservation, PA management and civil society, and a further USD 17 million (7%) came from other donors (including companies, high-net-worth

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individuals and zoos) [9]. Overall, the scale and diversity of external finance reinforce the need to better align donor and NGO investments with national NBSAP priorities and domestic budget allocations.

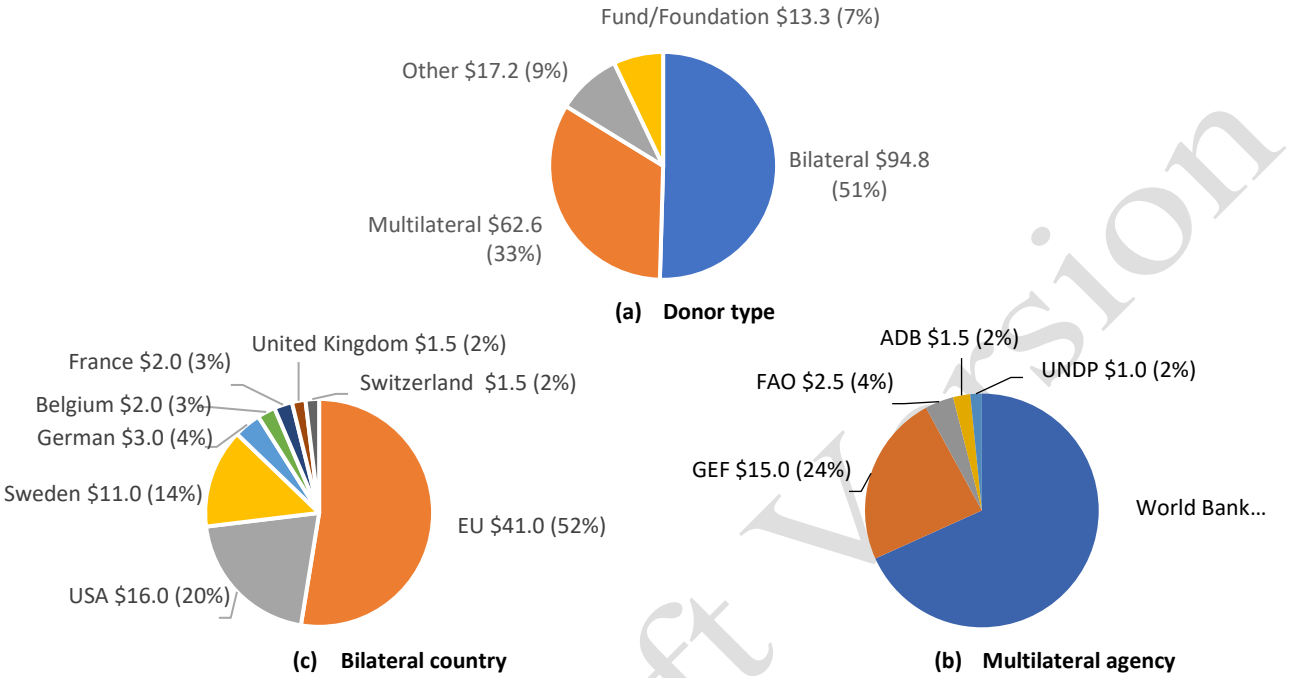


Figure 9. *External conservation investment in Cambodia 2020-2024. (a) donor type, (b) bilateral country, and (c) multilateral agency. Figures in USD millions. Source: CEPF (2025)*

In recent years, innovative financing mechanisms have emerged as complementary sources of funding for NBSAP implementation. PES schemes, REDD+ initiatives such as the Keo Seima Wildlife Sanctuary REDD+ project, and biodiversity-friendly business models like Ibis Rice and CBETs have contributed both financial and livelihood benefits.

UNDP's BIOFIN provides a structured approach to identify biodiversity expenditures, estimate financing needs, and define finance solutions. The work is led by the MOE and implemented by the General Secretariat of the NCSD, and has included preparatory analyses such as a Policy and Institutional Review [230], Biodiversity Expenditure Review [229], and Finance Needs Assessment [231].

Policy Frameworks for Mobilizing Funding for NBSAP Implementation

The 2016 NBSAP was the central policy instrument guiding biodiversity financing in Cambodia. In addition to setting a target of increasing national budget allocations, it also called for diversification of funding sources, including donor contributions, and the promotion of innovative financing such as PES, REDD+, and biodiversity-friendly enterprises.

Since 2023, new frameworks have been introduced to ensure more sustainable and long-term financing. The ENR Code (2023) established legal instruments for resource mobilization, including the creation of environmental funds, biodiversity offsets, and incentive-based mechanisms. Complementing this, the CSE (2023–2028) serves as Cambodia's latest overarching environmental framework, emphasizing green finance, resource mobilization, and integration of biodiversity values into the national budgeting and

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planning process. Together, these frameworks create a stronger legal and strategic basis for securing sufficient funding for biodiversity.

At the broader development level, the Pentagonal Strategy Phase I (2023–2028) provides political momentum by prioritizing sustainable natural resource management and environmental protection as part of Cambodia's growth agenda. In parallel, Cambodia's participation in BIOFIN supports the government with an agreed framework for identifying biodiversity finance gaps, developing a NBFP (Box 4), and aligning domestic budgets, expenditure-avoidance measures, donor contributions, and private sector investment [229–231,243].

This multi-level policy framework, spanning NBSAPs, the ENR Code (2023), the CSE (2023–2028), the Pentagonal Strategy Phase I (2023–2028), and BIOFIN, ensures that biodiversity conservation, protection, and sustainable use are backed by diversified and sustainable financial sources.

Box 4. National Biodiversity Finance Plans (NBFPs)

The NBFP is a standardized framework developed under UNDP's BIOFIN to help countries identify, mobilize, and align financial resources for biodiversity. More than forty countries across all regions have completed or are implementing NBFPs.

Each NBFP provides a quantitative and policy foundation for biodiversity finance by reviewing national biodiversity expenditures, estimating the full cost of implementing NBSAP targets, identifying financing gaps, and developing concrete finance solutions such as budget tagging, fiscal reforms, PES, green bonds, trust funds, biodiversity credits, and blended finance.

Countries use NBFPs to integrate biodiversity into medium-term expenditure frameworks, negotiate budget allocations with ministries of finance, and report progress under Target 19 of the KM-GBF.

Cambodia completed a NBFP UNDP's BIOFIN in August 2021, providing an initial expenditure baseline, estimated financing needs and gaps, and a prioritized package of finance solutions to support NBSAP implementation, including sustainable ecotourism, PES, strengthening REDD+ outcomes for biodiversity, and improved efficiency and coordination of biodiversity spending. Building on this foundation, an updated NBFP aligned to the 2026 NBSAP will be prepared in 2026 to refine cost envelopes, update the finance gap, and strengthen implementation of Target 19 and related resource-mobilization targets (Sophal, 2021).

Gaps and Challenges for Achieving Target 19

Cambodia has moved beyond fixed benchmarks for biodiversity funding and is now applying more comprehensive approaches under BIOFIN (Box 4). As part of this process, Cambodia has started assessing the full landscape of biodiversity expenditures, financing needs, and potential funding sources. This involves a Biodiversity Expenditure Review to track how much is currently being spent by government ministries, donors, and NGOs, and to identify gaps relative to national biodiversity targets. The approach provides a clearer picture of financial flows than earlier budget-based targets, which only tracked increases in specific ministries' allocations.

As an initial quantified baseline, BIOFIN's Biodiversity Expenditure Review estimated biodiversity-related expenditure in 2018 at approximately USD 112 million (about 2% of the national budget and 0.5% of GDP) and with recurrent expenditure, the estimate was about USD 124 million. Development partners accounted for roughly 63% of this spending, with government funds around 37%, underscoring continued dependence on external finance. A large share of biodiversity-relevant expenditure is embedded in sectors such as public works/transport and mines/energy, reinforcing the need for whole-of-government finance tracking and safeguards, not only environment-sector budgeting. Some priority themes received very low shares of biodiversity expenditure in 2018, including restoration and biosafety, and threatened species financing was particularly limited, highlighting areas where the NBFP can test reallocation and targeted scaling-up [229].

The BIOFIN process includes a Finance Needs Assessment, which estimates the total cost of meeting Cambodia's biodiversity goals, and a NBFP (Box 4), which sets out practical mechanisms to bridge the resulting gap. The Finance Needs Assessment estimated total needs rising from approximately USD 305 million (2018) to about USD 650 million (2022), and identified an indicative 2018 financing gap of about USD 193 million [231].

The NBFP will be updated in 2026 and will propose a balanced package of solutions, ranging from increasing national budget allocations and improving efficiency in public spending, to mobilizing donor resources, private investment and community-based finance, and to prioritize tools such as environmental

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trust funds, biodiversity offsets, PES and green tax or fee systems, building on existing pilots such as REDD+ and Ibis Rice.

By applying BIOFIN's gap analysis, Cambodia is shifting towards a results-based financing framework that aligns with the KM-GBF. Instead of only reporting percentage increases compared to a baseline year, the country can now calculate the actual shortfall between available and required resources for NBSAP implementation. This evidence-based approach strengthens the case for mobilizing new financial flows and for integrating biodiversity priorities into the Pentagonal Strategy Phase I (2023–2028) and the CSE (2023–2028). It also provides an institutional tool to engage ministries of finance and planning, ensuring biodiversity funding is seen not just as an environmental issue but as a national development priority.

Opportunities for achieving Target 19

Cambodia has strong opportunities to scale up financing for 2026 NBSAP implementation by building on the momentum of recent policy and BIOFIN reforms (see

Table 26). The ENR Code (2023), CSE (2023–2028) and Pentagonal Strategy Phase I (2023–2028) together provide a clear mandate for MEF, MOE and MOP to increase domestic budget allocations for biodiversity and to treat biodiversity spending as an investment in long-term resilience and growth rather than a discretionary cost. BIOFIN's Expenditure Review, Finance Needs Assessment and emerging NBFP offer a robust, evidence-based platform to quantify funding gaps and to prioritize mechanisms such as environmental trust funds, PES schemes, REDD+, biodiversity credits, green bonds and debt-for-nature swaps, which can attract both public and private capital. At the same time, the success of models like Ibis Rice, CBET and landscape-level REDD+ projects demonstrates that well-designed public–private partnerships and CSR investments can generate sustainable revenue streams for conservation and local livelihoods and can be replicated in other PAs and OECMs. Where REDD+ and other results-based mechanisms contribute to NBSAP financing, associated revenues and performance metrics should be tracked transparently through the finance dashboard and linked registry functions within CEMIS, consistent with national REDD+ requirements for Measurement, Reporting and Verification (MRV), safeguards information, and avoidance of double counting [141]. By using analytical tools and policy frameworks to align domestic budgets, donor portfolios and private investment with 2026 NBSAP priorities, and by requiring that each target and key conservation area has a dedicated financing plan, Cambodia can progressively close its biodiversity finance gap and ensure stable, diversified funding from all sources by 2030.

Table 26 outlines a series of strategic actions, the institutions responsible, and their role in achieving Target 19.

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Table 26: *Action Plan for Target 19 on financing for biodiversity*

Indicators	Strategic Action(s)	Key Institutions (and roles)
10.4. Percentage increase in non-government funds (i.e., private, NGO, and development partners) mobilized for the development	• Increase domestic funding for biodiversity: secure higher annual budget allocations from the government for NBSAP activities	• MOE (lead agency for NBSAP implementation,

Indicators	Strategic Action(s)	Key Institutions (and roles)
and implementation of NBSAP targets 10.5. Percentage increase in the national budget allocated to biodiversity and NBSAP implementation 10.6. Value of public and private sector investments in biodiversity-friendly activities (e.g., forest restoration, REDD+, carbon credits, ecotourism, renewable energy) 10.7. Value of projects or programs financed through innovative mechanisms (e.g., PES, green bonds, blended-finances, debt-swaps, and biodiversity credits)	(aim for a significant rise over current levels) • Develop and scale innovative financing mechanisms (e.g., implement PES schemes, issue green bonds, pursue debt-for-nature swaps, and pilot biodiversity credit programs to attract private and international funding) • Strengthen public-private partnerships and encourage private sector contributions (e.g., conservation trust funds, corporate social responsibility investments in conservation) • Access international finance by developing high-quality project proposals for donors, GEF, GCF, etc. • Ensure that by 2030, all NBSAP targets have dedicated funding streams and that key conservation areas (PAs/OECMs) have sustainable financing plans in place • Pursue new and additional philanthropic/private-sector funding opportunities	coordinates funding mechanisms) • MEF (increase national budget and facilitate innovative finance • Development partners and international donors (finance, technical assistance, catalytic/blended funding) • Private sector (banks/investors, market mechanisms, PES/blended finance) • CDC (facilitate investment and development) • MOP (integrating biodiversity in development financing) • NGOs/CSOs and development partners (site-based work, technical advice, data)

3.5.4 Target 20: Strengthen Capacity-Building, Technology Transfer and Scientific/Technical Cooperation for Biodiversity

By 2030, build national capacities for biodiversity conservation, promote technology and scientific transfer, foster joint technology development and joint scientific research among international, regional, national and IPLC organizations to implement the NBSAP.

Background and Context for Capacity-Building, Technology Transfer and Cooperation

Cambodia has progressively recognized that building institutional and human capacity is fundamental to implementing biodiversity plans. The 2016 NBSAP identified education, training, and technology transfer as cross-cutting needs, highlighting limited capacity across ministries and sub-national levels to monitor biodiversity or apply modern conservation technologies. It also acknowledged gaps in scientific research coordination and weak linkages between biodiversity data and decision-making. Similarly, the Sixth NR (2019) reported that while Cambodia has strengthened biodiversity research through PA monitoring and species assessments, significant limitations remain in access to technology, modern equipment, and dedicated financial support. These constraints have slowed progress in building a robust science-policy interface.

Emerging efforts are starting to address these gaps. Capacity-building activities have been undertaken that involved government agencies, researchers, and local communities in biodiversity assessment, scenario analysis, and policy engagement. Training for IPLCs on legal literacy around ABS, FPIC, and negotiating

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MAT, underscoring that capacity development must reach beyond state institutions. These processes show how biodiversity governance in Cambodia is gradually incorporating scientific, technical, and community knowledge into planning.

At the technical level, Cambodia has developed the National Forest Monitoring System (NFMS) under REDD+, which includes a satellite land monitoring system and national forest inventory. While initially designed for climate reporting, these systems also provide a foundation for biodiversity monitoring and cross-sector data integration. Together, these initiatives illustrate that while Cambodia has laid important foundations in scientific cooperation and monitoring, capacity gaps in government, academia, and communities continue to limit the scale and sustainability of implementation.

Policy Frameworks for Capacity-Building, Technology Transfer and Cooperation

Cambodia's policy foundation for strengthening capacity, technology, and scientific cooperation is anchored in its NBSAPs. The 2002 NBSAP emphasized awareness, education, and institutional coordination as critical tools for biodiversity management. Building on this, the 2016 NBSAP placed greater focus on systematic training, the development of biodiversity monitoring systems, and the use of South–South and North–South partnerships to close knowledge and technology gaps. Together, these frameworks establish a long-term vision that positions human resource development and scientific cooperation as central pillars of biodiversity governance in Cambodia.

This direction has been reinforced through more recent legal reforms. The ENR Code (2023) provides Cambodia with its most comprehensive mandate to modernize biodiversity governance. It charges the MOE with advancing research, establishing genetic banks and biodiversity databases, coordinating national reporting, and leading international negotiations. Importantly, the Code institutionalizes principles such as access to information, public participation, and evidence-based decision-making, ensuring that science and technology are not only generated but also integrated into transparent policy processes. In this way, the Code creates a legal environment that mirrors the emphasis of the KM-GBF on robust science–policy interfaces.

At the broader development level, national strategies have further embedded the role of capacity and technology in achieving biodiversity and sustainability goals. The Pentagonal Strategy Phase I (2023–2028) identifies digital transformation and human capital development as two of its five pillars, underscoring the importance of education, innovation, and modern technology in realizing Cambodia's Vision 2050. Complementing this, the CSE (2023–2028) explicitly calls for digital administration, institutional capacity-building, and expanded cooperation in environmental and biodiversity governance. These policy directions are already being put into practice through initiatives such as the Sixth NR (2019), which brought together government, academia, and IPLCs in collaborative research and scenario-building. Collectively, these frameworks demonstrate a coherent policy foundation for Target 20, where biodiversity planning is supported by innovation, cooperation, and strengthened technical capacity across institutions and communities.

Gaps and Challenges for Achieving Target 20

Despite the strong policy and legal frameworks, Cambodia continues to face persistent challenges in realizing the vision of Target 20. Limited budgets, outdated technical equipment, and a shortage of trained staff are key barriers to strengthening biodiversity research and monitoring [25]. These constraints weaken the ability of ministries to systematically understand and track biodiversity trends, while also limiting how effectively scientific information informs decision-making. Capacity is particularly uneven between national and sub-national levels, leaving provincial authorities under-equipped to develop and implement biodiversity plans.

Beyond financial and technical gaps, there are also knowledge and awareness challenges. The 2016 NBSAP highlighted that concepts such as ABS, biosafety, and biodiversity information systems remain poorly understood among local officials, legal practitioners, and communities. This lack of familiarity prevents

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Cambodia from fully leveraging international agreements like the Nagoya Protocol and weakens local participation in benefit-sharing arrangements. Similarly, although digital tools such as the CHM and NFMS exist, their use is not yet routine or fully integrated across biodiversity sectors.

Addressing gaps in fundamental biodiversity research is a prerequisite for effective monitoring and management. The NBSAP will therefore support national biodiversity and taxonomic research, reference collections and digitization of biodiversity records, in collaboration with universities and research institutes, and promote citizen science to expand biodiversity understanding and knowledge.

Sustainability remains a major concern. Much of Cambodia's recent progress in capacity-building has been achieved through externally funded projects, such as REDD+, and GEF-supported initiatives. While these efforts have delivered valuable training and systems, their continuity is uncertain once donor cycles end. Recognizing this, the Circular Strategy (2023–2028) calls for mobilizing domestic financing and strengthening national institutions to access international funds. Yet until biodiversity monitoring and training are embedded into core government budgets and mandates, Cambodia risks continued dependency on international partners. Overcoming these challenges will require sustained financing, institutionalized training cycles, and stronger integration of biodiversity monitoring into the country's digital and administrative systems.

Opportunities for achieving Target 20

Cambodia has strong opportunities to accelerate capacity-building, technology transfer and scientific cooperation by consolidating the foundations already in place (see Table 27). The ENR Code (2023), CSE (2023–2028) and REDD+/NFMS initiatives provide a ready platform to design systematic, multi-year training programs for government staff, rangers, IPLC leaders and young professionals, linking conservation skills and project management with modern tools such as GIS, remote sensing, biodiversity databases and DNA-based monitoring. Universities, research institutes and centers such as ACCB, together with international conservation NGOs, offer a natural basis for establishing a national "Center of Excellence" for biodiversity research and development that can coordinate joint R&D projects with global partners and embed traditional knowledge from IPLCs into species inventories, ecosystem mapping and conservation technologies. At the same time, expanding CEPA programs and Knowledge, Attitudes and Practices (KAP) surveys creates opportunities to tailor communication and education to the needs of different stakeholder groups and to measure learning outcomes over time. By aligning these legal mandates, technical platforms and partnerships, and ensuring that training, CEPA and core monitoring tools are progressively integrated into domestic budgets, Cambodia can build the sustained human and institutional capacity needed to implement the 2026 NBSAP effectively to 2030 and beyond.

Table 27 outlines a series of strategic actions, the institutions responsible, and their role in achieving Target 20.

Table 27: *Action Plan for Target 20 on building capacity of stakeholders for biodiversity*

Indicators	Strategic Action(s)	Key Institutions (and roles)
11.4. Number of national capacity-building programs on biodiversity science, technology and cooperation implemented and evaluated for effectiveness 11.5. Number of KAP surveys conducted to guide participatory NBSAP implementation. 11.6. Number of CEPA programs implemented to support	• Implement comprehensive capacity-building programs for biodiversity at national and sub-national levels – train government staff, rangers, community leaders, and young professionals in conservation skills, biodiversity monitoring, and project management • Launch CEPA initiatives to foster broader public and stakeholder understanding of biodiversity (workshops, school curricula, media)	• MOE (capacity-building programs and international cooperation) • MAFF (capacity-building programs) • MOEYS for research and higher education partnerships • Universities and research institutes

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Indicators	Strategic Action(s)	Key Institutions (and roles)
participatory NBSAP implementation. 11.7. Number of biodiversity monitoring and conservation tools and technologies transferred, developed, adopted and operationalized 11.8. Number of joint R&D projects between international, regional, national, and IPLC institutions producing peer-reviewed outputs or applied conservation tools	• Establish a Center of Excellence for Biodiversity research and development to facilitate technology transfer and scientific cooperation • Promote joint research projects between Cambodian and international scientists (and with IPLCs incorporating TK) (e.g., on species inventories, ecosystem mapping, and conservation technologies) • Facilitate access to modern tools (GIS, remote sensing, DNA analysis, etc.) and ensure they are adopted in country • Build human and technical capacity to enable effective implementation of all NBSAP actions • Provide capacity building and training on community-based monitoring, citizen science, and data analysis for NBSAP monitoring and reporting • Strengthen coordination platforms by moving from ad-hoc to structured cooperation through strengthening Provincial Steering Committees and relevant Technical Working Groups and by sharing progress, challenges, and lessons learned	(training and applied research) • International conservation NGOs and research partners (technology transfer and training) • IPLC organizations and CSOs (training community members in biodiversity skills) • PDOE, Provincial Governor Office, other provincial agencies, and District Governor Office (sub-national capacity building, coordination and implementation support)

3.5.5 Target 21: Share Biodiversity Knowledge to Inform Decision Making and Guide Action

By 2030, a user-friendly information system containing data and information on biodiversity (including its associated ecosystem services, values, functions, status, trends, threats and the consequences of its loss) has been established and maintained and is widely shared among stakeholders and the public.

Background and Context for Sharing Knowledge

Cambodia has long recognized that robust biodiversity data is critical for evidence-based decision-making, yet data collection and accessibility have remained uneven. The 2016 NBSAP identified the need for inventories and monitoring systems but noted that biodiversity datasets were fragmented across ministries, universities, and NGOs. The Sixth NR (2019) echoed this, highlighting that limited capacity and outdated tools prevent systematic collection and sharing of information. This fragmentation reduces the ability of stakeholders to assess trends, design management plans, or evaluate conservation outcomes.

Recent initiatives have sought to consolidate information. The Sixth NR (2019) combined scientific data with TK and local knowledge to produce a more comprehensive

Box 5. The Cambodia Environmental Management Information System (CEMIS)

The CEMIS is a digital platform created by the MoE to collect, manage, and disseminate environmental and biodiversity data in Cambodia. It was developed with UNDP technical assistance and World Bank financial support under the Cambodia Sustainable Landscape and Ecotourism Project. CEMIS is a centralized repository for geospatial and biodiversity data, focusing on PA management, ecotourism, and environmental decision-making. It is based on a Spatial Data Infrastructure framework, ensuring standardized, quality-controlled, and interoperable data across sectors. CEMIS improves transparency and accessibility of environmental data, supporting biodiversity conservation, natural resource management, and sustainable development.

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picture of biodiversity. Similarly, Cambodia's CHM was a platform for storing and sharing datasets, and CEMIS (Box 5) when fully operational later in 2026 will be an even more powerful tool. Target 21 prioritizes the consolidation of existing datasets and ensuring that validated information is uploaded into CEMIS and CHM, complete with metadata standards, periodic updates, and user-friendly formats accessible in Khmer.

Importantly, biodiversity data must not only be stored but also actively used. To this end, Target 21 envisions making national datasets a requirement for planning and reporting, including PA management plans, restoration strategies, environmental assessments, REDD+ and PES proposals. By embedding the use of CEMIS data into routine project design and monitoring, Cambodia can ensure that biodiversity information directly informs conservation, sustainable use, and benefit-sharing.

Policy Frameworks for Sharing Knowledge

Cambodia's policy and legal frameworks provide a strong foundation for this target. Previous NBSAPs called for systematic inventories, coordinated research, and wider dissemination of biodiversity data. Building on this, the ENR Code (2023) explicitly requires the MOE to collect, update, and make biodiversity information publicly available while embedding evidence-based decision-making as a legal principle.

National development strategies reinforce these commitments. The Pentagonal Strategy Phase I (2023–2028) identifies digital transformation as a core pillar of Cambodia's long-term vision, while the CSE (2023–2028) emphasizes digital administration, institutional strengthening, and expanded cooperation. These frameworks align directly with Target 21's call to make biodiversity data mandatory in planning and to provide technical support so that government agencies, NGOs, and consultants integrate national datasets into project design.

Beyond national systems, Target 21 also emphasizes capacity building and inclusivity. This includes gender-responsive and inclusive training for commune councils, community institutions (e.g., CFs, CPAs, CFis), and NGOs in biodiversity data literacy (e.g., GIS, SEEA accounts), while also translating datasets into maps and infographics for non-specialists. Establishing a helpdesk within MOE to assist stakeholders will ensure that information is not only available but also usable by a wide range of actors.

Gaps and Challenges for Achieving Target 21

Despite progress, Cambodia continues to face structural challenges in making biodiversity data universally accessible. Datasets remain scattered and inconsistent across agencies, limiting the development of a national biodiversity baseline [25]. Addressing this will require not only consolidating existing information but also enforcing data standards and creating interoperable systems that connect CEMIS, CHM, and sectoral databases.

Capacity gaps remain another barrier. Many sub-national officials and community groups lack the skills to interpret biodiversity datasets, which can limit participation in conservation planning. While communities can play a vital role in knowledge generation, sustained investment in training programs and simplified communication tools will be needed to scale this model [25]. Actions such as training, translation of datasets, and establishing support units are therefore critical to empower IPLCs, NGOs, and local governments to access and use biodiversity data effectively.

Governance and sustainability issues present ongoing challenges. Although the ENR Code (2023) provides a legal framework, Cambodia still lacks a dedicated biodiversity data-sharing policy. Without such a policy, data-sharing remains voluntary and inconsistent, raising risks around duplication, restricted access, or even the misuse of sensitive information. Similarly, gender-responsive and IPLC-led monitoring systems remain under-supported. Scaling these up, with proper agreements on data ownership and consent, and linking them into CEMIS, would ensure that community knowledge is integrated alongside scientific research. Awareness of the CEMIS and CHM is also limited; under half of conservation professionals and other

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stakeholders surveyed in the preparation of the 2026 NBSAP reported they were aware of CEMIS or the CHM, and regular use of the latter was not widespread [27].

Overcoming these challenges will require embedding biodiversity data-sharing into national budgets and institutional mandates, ensuring that Cambodia moves from donor-dependent pilots to sustainable, government-led systems, and raising awareness that powerful information management tools are available.

Opportunities for achieving Target 21

Cambodia has strong opportunities to turn existing data platforms and policy commitments into a genuinely shared biodiversity knowledge system (see Table 28). The establishment of CEMIS as the central environmental information system, together with the CHM dataset, provides an immediate foundation to consolidate scattered biodiversity records into a single, interoperable national database that can also connect to global platforms such as Global Biodiversity Information Facility (GBIF) and the ASEAN CHM. The ENR Code (2023) and CSE (2023–2028) create a favorable legal and strategic environment to adopt a national data-sharing policy and standards that require government agencies, research institutions and NGOs to deposit validated biodiversity datasets into CEMIS and use them for 2026 NBSAP monitoring, EIAs, SEA and sectoral planning. At the same time, the Pentagonal Strategy Phase I (2023–2028)'s emphasis on digital transformation and the growing availability of GIS and open-source tools offers practical entry points to develop user-friendly dashboards, maps and decision-support tools in Khmer, making biodiversity information accessible to planners, commune councils, IPLCs and the wider public. By combining these digital platforms with targeted training, helpdesk support and clear rules on data ownership and consent, especially for IPLC-generated knowledge, Cambodia can move from fragmented, project-based information systems to a sustainable, government-led knowledge infrastructure where biodiversity data routinely informs decisions at all levels.

Table 28 outlines a series of strategic actions, the institutions responsible, and their role in achieving Target 21.

Table 28: *Action Plan for Target 21 on sharing biodiversity data to inform decision making*

Indicators	Strategic Action(s)	Key Institutions (and roles)
21.1. CEMIS established, interoperable, functioning and accessible to all stakeholders 21.2. Number of biodiversity records and datasets updated, verified and shared through CEMIS 21.3. Number of biodiversity-related awareness and education programs conducted using CEMIS data products 21.4. Percentage of biodiversity datasets interoperable with regional and global platforms (e.g., GBIF, The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), ASEAN CHM)	• Establish and operationalize CEMIS as the central biodiversity database • Populate CEMIS with up-to-date, verified biodiversity data (species occurrences, ecosystem maps, etc.) and continuously update it • Develop a national data-sharing policy and standards to ensure all biodiversity data collected (by government, researchers, NGOs) are deposited in CEMIS and also shared to global platforms like GBIF • Institutionalize CEMIS use – require that NBSAP monitoring and reporting draw from CEMIS, and that agencies contribute data to it • Add functionality to CEMIS to document traditional knowledge and community-generated data to support NBSAP monitoring and reporting (i.e., a Citizen Science Knowledge Hub) • Enhance public access: create user-friendly tools and dashboards so that policymakers, researchers, and communities can retrieve information for decision-making	• MOE (host and manage CEMIS) • Relevant line ministries and universities (data providers to feed data into CEMIS) • NCSD (integrate data into national reporting) • International platforms (interoperability, e.g., GBIF) • NGOs/CSOs and development partners (technical advice, data)

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Indicators	Strategic Action(s)	Key Institutions (and roles)
	• Conduct outreach and training so stakeholders know how to use and contribute to CEMIS	

3.6 Key Result Area 6 – Inclusive Governance and Participation

This KRA encompasses Targets 22–23 and focuses on equitable, participatory, and gender-responsive biodiversity governance. It aims to ensure meaningful involvement and rights of IPLCs, women, youth, and other marginalized groups, strengthen access to information, justice, and benefit-sharing, and strengthen institutions so that women and girls have equal voice, leadership opportunities, and access to land and natural resources in biodiversity-related decisions.

3.6.1 Target 22: Ensure Participation in Decision-Making and Access to Justice and Information Related to Biodiversity for all

By 2030, ensure equitable, inclusive and gender-responsive participation of Indigenous Peoples and local communities, women, youth, persons with disabilities, and other marginalized groups in biodiversity decision-making, in relation to their rights to lands, resources and traditional knowledge, as well as access to justice and information.

Background and Context for Ensuring Participation and Access to Justice and Information

Cambodia has increasingly recognized that equitable participation and access to information and justice are essential for effective biodiversity governance, particularly because women, Indigenous Peoples, youth, persons with disabilities, and poor rural households often depend directly on biodiversity for livelihoods and cultural identity. Community-based regimes such as CPAs, CFs, MFMAs, and CFis now cover significant areas of high biodiversity value and provide established mechanisms for community involvement in decision-making, co-management, and benefit-sharing.

These systems also provide practical entry points for biodiversity justice by creating recognized processes for participation, local rulemaking, and resource access. CPAs support collective co-management within PAs, while MFMAs, CFs, and CFis help secure community roles in forest and aquatic resource management, often linked with ecotourism or externally supported conservation financing. Strengthening the integration of TK and community perspectives into planning and implementation remains important to ensure that biodiversity decisions reflect local realities and rights [25].

Despite progress, gaps remain. Evidence from land and forest concessions shows that vulnerable groups can be excluded or lose rights when large-scale investments proceed without adequate consultation [239]. Studies on PES highlight that benefit-sharing can be effective, but it requires safeguards so marginalized households are not bypassed [244]. Experience from CPAs indicates that women and Indigenous leaders are increasingly involved in resource governance, but barriers persist in leadership roles and equitable benefit distribution [245].

Policy Frameworks for Ensuring Participation and Access to Justice and Information

Several national frameworks support the realization of biodiversity justice. The ENR Code (2023) enshrines principles of public participation, access to information, grievance redress, and equitable benefit-sharing from biodiversity use. The CSE (2023–2028) prioritizes clean, green, and sustainable development with

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explicit commitments to enhance local communities' livelihoods and participation. The Pentagonal Strategy Phase I (2023–2028) emphasizes equity and inclusiveness as key pillars of sustainable development.

Earlier strategies, such as the 2016 NBSAP, identified community-based regimes (e.g., CPA, CF, CFi) as mechanisms for inclusive participation and benefit-sharing. Cambodia is also a Party to the Nagoya Protocol on ABS, which reinforces the principle of fair and equitable sharing of benefits from the use of genetic resources. In practice, the MOE, MAFF, and Ministry of Women's Affairs (MOWA) have introduced guidelines for gender mainstreaming, Indigenous participation, and grievance redress in conservation and development projects.

Gaps and Challenges for Achieving Target 22

Despite progress, several challenges constrain the realization of biodiversity justice. Tenure insecurity and overlapping claims in forest and aquatic ecosystems limit the effectiveness of community regimes. When economic land concessions or infrastructure projects proceed without FPIC, local communities risk losing access to critical resources [238,241]. Benefit-sharing mechanisms remain uneven, with limited financial flows reaching women, Indigenous Peoples, and other marginalized groups [244].

Participation is not always meaningful. While communities may be formally represented in conservation or REDD+ projects, barriers such as limited legal literacy, language differences, or gender norms restrict their ability to influence decisions [165]. The undervaluation of biodiversity and ecosystem services in national policy decisions often leads to inequities, as the costs of degradation fall disproportionately on vulnerable groups [25]. Access to grievance and legal support mechanisms is still limited in rural areas. Many communities lack knowledge of their rights, and existing redress systems are either underused or inaccessible, especially for women, persons with disabilities, and Indigenous Peoples.

Opportunities for achieving Target 22

Cambodia has strong opportunities to advance biodiversity justice by using existing community regimes and new legal frameworks as platforms for more inclusive governance (see Table 29). CPA, CF, MFMA and CFi institutions already provide formal entry points for IPLCs to participate in decision-making; these can now be systematically strengthened by requiring minimum representation of women, youth and persons with disabilities on management committees, linking inclusive membership to approval or renewal of management plans, and integrating community rules and TK directly into PA, fisheries and forest plans. At national and sub-national levels, the ENR Code (2023) and CSE (2023–2028) can be operationalized through clear procedures for FPIC, standard grievance redress mechanisms, and public access to biodiversity information, with CEMIS serving as a key tool for transparency and participation. Targeted leadership, legal literacy and negotiation training for under-represented groups, coupled with support to Civil Society Organizations (CSOs) and IPLC organizations to act as facilitators and watchdogs, would enhance the quality of participation. Embedding equity indicators (e.g., representation, ABS, access to remedies) into 2026 NBSAP monitoring frameworks and sectoral plans offers a practical opportunity to ensure that biodiversity actions systematically reduce vulnerabilities and distribute benefits more fairly across communities.

Table 29 outlines a series of strategic actions, the institutions responsible, and their role in achieving Target 22.

Table 29: *Action Plan for Target 22 on biodiversity inclusiveness*

Indicators	Strategic Action(s)	Key Institutions (and roles)
22.1 Percentage of governance and	• Institutionalize inclusive governance mechanisms for biodiversity: ensure IPLCs, women, youth, and disabled	• MOE (ensuring participatory

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Indicators	Strategic Action(s)	Key Institutions (and roles)
decision-making processes that have IPLCs, women, youth and people with disabilities representation 22.2 Number of policies, programs, or initiatives that recognize and apply TK with active IPLC participation 22.3 Number of plans, processes or decisions led by IPLC or jointly developed with them formally adopted 22.4 Number of grievance mechanisms established in PAs and other projects related to NBSAP implementation	groups have seats or representation in decision-making bodies (e.g., national biodiversity committees, PA co-management boards) • Establish or strengthen platforms for public participation and access to information (e.g., regular stakeholder forums, citizen councils, or online portals where communities can input into biodiversity plans) • Recognize and integrate TK: develop policies or guidelines so that customary practices and knowledge of IPLCs are respected and inform conservation (e.g., community rules included in management plans) • Remove barriers to justice by implementing and enforcing legal rights to information and participation (e.g., Access to Information laws, and ensuring environmental grievance mechanisms are accessible to local communities) • Build capacity of underrepresented groups (through training in leadership and technical skills) to effectively participate • Promote public access to biodiversity data for informed decision-making, which goes hand-in-hand with including these groups in decisions • Develop communication tools to educate and raise awareness among IPLCs, women, youth, and people with disabilities • Establish a Citizen Science Partnership for Biodiversity Conservation to advance recognition of citizen science knowledge and data in biodiversity monitoring and governance	processes in environmental governance) • MRD (engagement with Indigenous and local communities) • MOWA (mainstreaming gender in environment) • MOI (decentralization and community representation in local governance) • MOSVY (children and youth participation considerations) • CSOs (facilitating community participation and legal empowerment)

3.6.2 Target 23: Ensure Gender Equality and a Gender-Responsive Approach for Biodiversity Action

By 2030, gender equality in biodiversity conservation and NBSAP implementation is achieved and valued, assuring equal rights and access to land and natural resources, and equitable opportunities for meaningful participation and leadership at all levels, including the fair and equitable sharing of benefits arising from biodiversity and natural resources.

Background and Context for Ensuring Gender Equality

The case for women's equal participation and leadership in biodiversity governance is well established. Evidence shows that women, particularly Indigenous women and other marginalized groups, can be disproportionately affected by unjust biodiversity governance and biodiversity loss, and that their meaningful participation is linked to more equitable and effective outcomes. Because many women's livelihoods and cultural practices are closely connected to biodiversity and ecosystem services, biodiversity loss and restrictive management decisions can intensify vulnerability and deepen inequality [246–248]. Research also indicates that women can be excluded from decision-making on biodiversity management structures, and that stronger representation and leadership across levels can reduce disparities and improve outcomes [165,249]. Where PAs or co-management arrangements result in enclosure, women's access to customary

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resources, including traditional food sources, can be reduced, which reinforces the need for gender-responsive governance and safeguards [250].

Cambodia's progress toward gender equality is supported by established institutional arrangements and broader gains in women's representation in the public sector, economic activity, and education. Since its establishment in 1996, MOWA has led efforts to mainstream gender across government institutions, including through gender working groups and gender action plans. These efforts have been sustained through successive Neary Rattanak strategies, and reinforced by laws addressing discrimination, domestic violence, and human trafficking [251].

Women's representation in public service and decision-making has increased, although progress is uneven across levels. According to Neary Rattanak VI, women accounted for 23% of civil servants in 2015, rising to 41% in 2018 and 42% in 2022. Women's representation in decision-making roles, from Vice Chief of Office to Director General, also rose from 24.33% in 2018 to 27% in 2022 (244). At sub-national levels, gains have been more modest. As of 2022, women held two provincial governor positions (8%) and seven governor positions at municipal, district, and khan levels (3.43%), while the share of female Commune/Sangkat chiefs increased from 17.7% in 2017 to 22% in 2022. Women's participation in economic activity and education is also substantial. In 2021, 79% of women aged 15–64 were reported as economically active, and in the 2022–2023 academic year, women and girls accounted for 57.37% of high school graduates, with 49.7% enrolling in higher education [251].

Policy Frameworks for Ensuring Gender Equality

Policy frameworks for gender equality in Cambodia provide a clear basis for applying a gender-responsive approach to biodiversity governance and 2026 NBSAP implementation. Government commitments are reflected across national development and sector frameworks, including the Pentagonal Strategy Phase I (2023–2028), the National Policy on Gender Equality (2024–2034), Neary Rattanak VI (Five-Year Strategic Plan for Promoting Gender Equality and Empowering Women and Girls (2024-2028), the CSE (2023–2028), the NPASMP (2017–2031), and the Gender Mainstreaming Strategic Plan for the Environment (2026–2030).

Gender mainstreaming in Cambodia and elsewhere is increasingly framed as moving toward "gender transformation," which emphasizes structural change rather than standalone activities [249,251]. MOWA's approach through Neary Rattanak VI sets out interconnected strategies that include institutionalizing gender across government systems, strengthening monitoring and evaluation, clarifying responsibilities across ministries and institutions, and shifting social attitudes and behaviors that sustain inequality. In this framing, institutionalization includes improving accountability among leaders and stakeholders, strengthening supportive policies and mechanisms, fostering workplace conditions that enable women's advancement, and investing in leadership development [251].

Within biodiversity-related institutions, MOE and MAFF have established Gender Working Groups and developed gender action plans, although implementation is constrained by limited government budget allocations. MOE's Gender Mainstreaming Strategic Plan in Environment (2021-2025) is grounded in a stated commitment to gender transformation and includes priorities that span entrepreneurship, leadership and representation, education, health, institutional strengthening, and workplace integration [252].

Gaps and Challenges for Achieving Target 23

Despite progress in national policy development and increases in women's representation in some sectors, gender equality remains a persistent challenge in Cambodia's biodiversity governance. Gender norms, political structures, and continued underrepresentation of women shape expectations about women's roles and constrain participation in decision-making [253]. Evidence from feminist political ecology research in the Tonle Sap context links women's social reproductive roles, including caregiving and household responsibilities, to unequal influence in fisheries conservation and resource governance. These dynamics

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are reinforced by institutional authority and decision-making processes that tend to normalize male leadership and limit women's voice in environmental governance [247].

Women's participation in leadership and decision-making is further constrained by structural barriers, including education levels, household responsibilities, and lower social value assigned to women, which together make it difficult to reach parity with men in senior roles [254255]. This matters for biodiversity outcomes, since studies have found that women's knowledge of sustainable resource management can be high but is often not reflected in decisions when women are underrepresented in governance structures [165].

Representation gaps remain evident within biodiversity institutions and community-based governance. Decision-making positions within MOE remain largely male dominated, women in decision-making roles account for only 10%, and 36 out of 116 rangers were women in 2025. Within CPAs, only 2 out of 113 leaders are women. Intersectional gaps are also reported, with no Indigenous women employed within MOE to date, except within Provincial Departments of Environment (PDOE). Limited and ambiguously defined national budget allocations for gender mainstreaming within government institutions further constrain implementation, despite the existence of policy commitments.

In response to these constraints and in line with existing government agendas, Target 23 prioritizes a shift toward gender transformation in biodiversity governance. This includes strengthening women's representation across levels of biodiversity management, advancing institutional cultural change, and improving monitoring and evaluation to track progress and outcomes.

Opportunities for achieving Target 23

Cambodia is well-positioned to accelerate gender-transformative biodiversity governance by building on the existing institutional foundations led by MOWA and sectoral ministries (e.g., MOE, MAFF) and the robust policy architecture established through the National Policy on Gender Equality (2024–2034), Neary Rattanak VI, and sectoral gender action plans. In the biodiversity arena, the immediate opportunity lies in translating these high-level frameworks into concrete, resourced measures: setting time-bound targets or quotas for women's representation in MOE and MAFF leadership, PA and CBNRM committees (CPA, CF, CFi), and technical working groups; embedding mandatory gender analysis and sex-disaggregated indicators in all 2026 NBSAP-related programs and monitoring tools; and ringfencing budget lines for gender mainstreaming within environmental institutions, including exploring gender budgeting approaches consistent with MOWA guidance [42]. Leveraging MOWA's methodologies and tools (e.g., gender M&E frameworks, leadership training curricula) alongside instruments such as Self-Assessment for Gender Equality (SAGE) or equivalent project-level gender assessments can help shift from "add-on" approaches toward genuine institutional culture change, including in recruitment, promotion and field postings (e.g., rangers, PA staff). Target 23 can drive practical convergence between gender and biodiversity goals by supporting women-led conservation enterprises and value chains, strengthening Indigenous and rural women's tenure and benefit rights, and ensuring that gender equality commitments under the Pentagonal and Circular Strategies are explicitly reflected in 2026 NBSAP implementation plans and annual performance reviews across all biodiversity-related agencies.

Table 30 outlines a series of strategic actions, the institutions responsible, and their role in achieving Target 23.

Table 30: *Action Plan for Target 23 on gender transformation for biodiversity*

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Indicators	Strategic Action(s)	Key Institutions (and roles)
23.1 Percentage of women represented in CPA, CFs MFMAs, and CFi committees and other leadership and decision-making roles in biodiversity governance compared 23.2 Percentage of women engaged in biodiversity-related education, training and capacity-building programs 23.4 Number and percentage of biodiversity projects that are gender-inclusive in design and implementation including completed governance and equity assessments (e.g., SAGE or equivalent tool) 23.5 Number of capacity-building manuals/guidelines/roadmaps developed and operationalized for women leaders and key agents	• Mainstream gender equality in all biodiversity programs: set and enforce targets or quotas for women's representation in environmental decision-making bodies (community committees, technical working groups, leadership positions) • Build the capacity of women and girls through targeted training, education, and funding so they can effectively participate and benefit from biodiversity initiatives • Develop programs to train women in conservation leadership and provide small grants for women-led conservation enterprises (addressing the identified need for more women-led initiatives and access to funding) • Ensure that biodiversity projects are gender-responsive – use tools like SAGE or similar to design projects that consider gender-differentiated impacts and benefits • Establish a standardized sex-disaggregated reporting template across MOE, MAFF, and community governance structures and collect sex-disaggregated data and undertake periodic gender assessments/audits to evaluate progress, barriers and corrective actions • Conduct a baseline gender assessment/audit of biodiversity governance and practices and repeat periodically; establish a standardized sex-disaggregated reporting template across MoE/MAFF/community governance structures; and include a brief, regular narrative on challenges and improvements in NBSAP implementation reporting. • Secure women's land and resource rights in conservation areas (aligning with broader land rights efforts under Target 22) • Develop capacity-building manuals/guidelines/roadmaps for women and run training on them	• MOE (NBSAP lead implementation, ensuring gender criteria are met) • MOWA (gender mainstreaming and women-focused programs) • MLMUPC (women's land/resource rights) • NGOs and CBOs (community level empowering and inclusion) • All biodiversity-related institutions (women's inclusion in committees and staffing)

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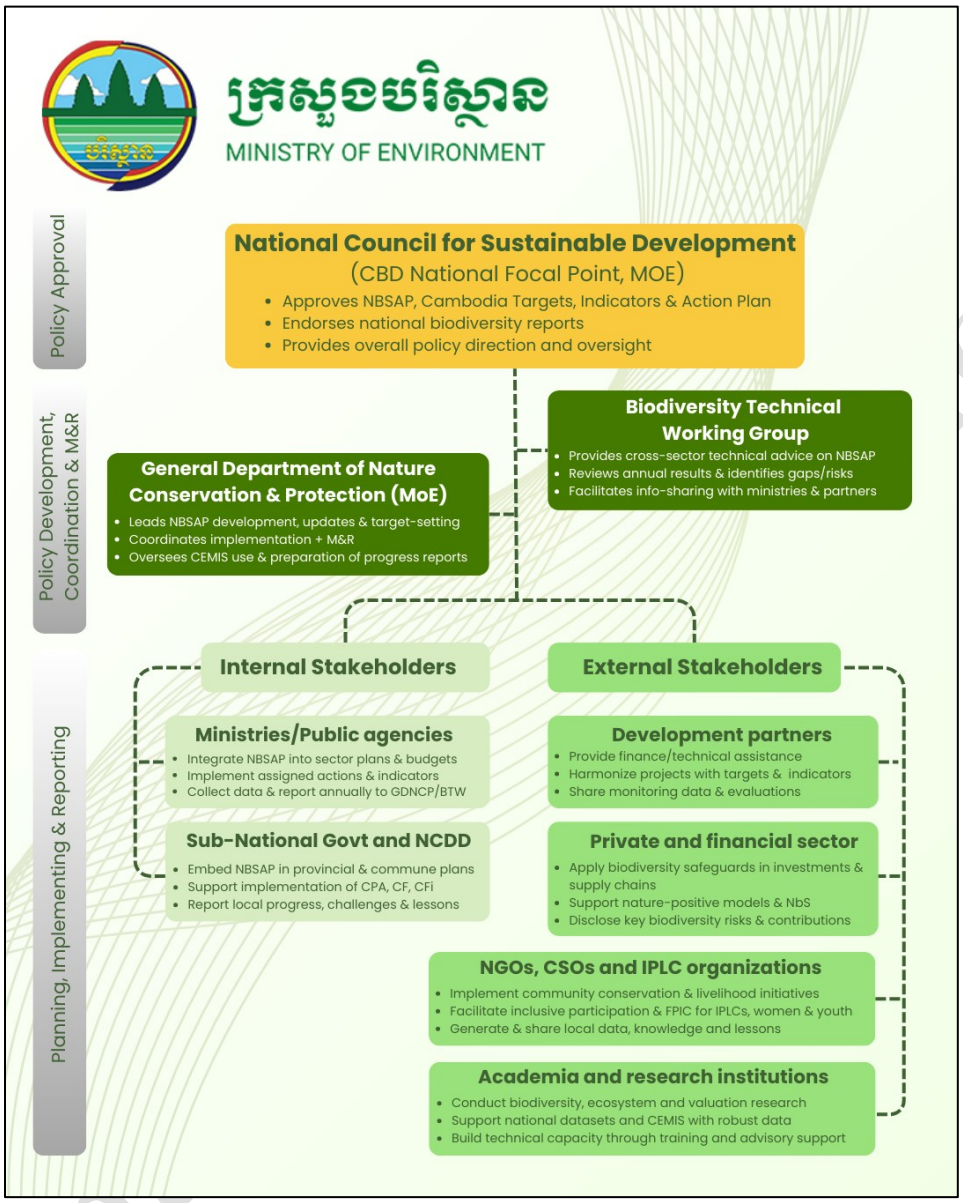


Figure 10. *Institutional arrangements for NBSAP*

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Part IV – Implementation Framework

4.1. Institutional Arrangements and Coordination

Cambodia's 2026 NBSAP will be implemented through a strengthened institutional framework that builds on existing governance structures. MOE will lead this framework, ensuring high-level oversight and cross-sector coordination. MOE (through the General Directorate of Policy and Strategy) acts as the national focal agency for biodiversity, coordinating the development and implementation of strategies, plans and legal instruments related to biodiversity conservation. This arrangement mirrors the climate governance approach, emphasizing strong coordination and clear roles at all levels. This institutional architecture will be key to delivering cross-cutting targets such as Target 1 (mainstreaming biodiversity), Target 14 (integrated spatial planning), and Target 22 (inclusive decision-making).

Implementation of forest-related climate mitigation and associated sustainable finance will be coordinated with Cambodia's existing REDD+ governance architecture, including the REDD+ Taskforce and its supporting structures (including the REDD+ Secretariat and REDD+ Policy Unit), to ensure that 2026 NBSAP actions on enforcement, PA management, restoration, and sustainable livelihoods remain consistent with REDD+ policy measures, safeguards, and reporting requirements. Strengthening coordination between the 2026 NBSAP institutional framework and REDD+ structures will also support clearer institutional roles for data supply and quality assurance (for example MRV and safeguards information), and improve transparency and accountability for results-based and market-linked finance flows [140].

The Ministry of Environment

As the lead agency, MOE is responsible for overall 2026 NBSAP coordination, policy guidance, and monitoring. MOE will convene and support inter-ministerial bodies to guide 2026 NBSAP execution. In line with the 2015 institutional reforms, MOE has a mandate to clarify the jurisdictions of various institutions and reduce overlapping responsibilities in biodiversity management. It will work with partner ministries to define clear roles and ensure each target or action of the 2026 NBSAP has an accountable lead. Strategically, MOE (through its Department of Biodiversity and related departments) will develop communication and outreach programs to raise awareness of the 2026 NBSAP and promote broad stakeholder participation. MOE also manages technical tools such as the national CHM and CEMIS to facilitate data sharing across institutions. Adequate resourcing of MOE's coordinating units is recognized as critical, given past constraints of limited funding and capacity for coordination noted in the 2016 NBSAP implementation. Strengthening MOE's coordination capacity will enable more effective support to other agencies and adaptive management of 2026 NBSAP actions. MOE's leadership is particularly central to implementing enabling targets such as Target 20 (resource mobilization), Target 21 (capacity development), and Target 17 (knowledge and data).

National Coordination Bodies

NCSD will serve as the high-level steering platform for 2026 NBSAP implementation, embedding biodiversity objectives into national sustainable development agendas (Figure 10). Major policy decisions and progress reviews on 2026 NBSAP targets will be tabled at its regular meetings. To support implementation, the BTWG comprising 36 representatives from line ministries, academic institutions and local communities (see list in Annex 2) will facilitate inter-ministerial coordination and be used as scientific and technical advisory body for direction and validation of the 2026 NBSAP. The BTWG will meet at least twice a year to review progress, address bottlenecks, and ensure decisions are carried out by line ministries. A similar model has been successful in the climate change domain (the Climate Change Technical Working Group). The BTWG will also coordinate with the National Committee for Sub-National Democratic Development (NCDD) to link national targets with sub-national action. By institutionalizing such coordination mechanisms, Cambodia aims to overcome the weak inter-agency collaboration and data

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fragmentation that have hindered past biodiversity efforts. Notably, stakeholders in a recent assessment highlighted that clarifying institutional mandates and improving cross-sector collaboration are essential steps for effective 2026 NBSAP delivery. In response, the 2026 NBSAP will formalize coordination roles and establish clear reporting lines among ministries. This structure supports the integrated implementation of diverse targets, including Target 2 (restoration), Target 10 (sustainable use), and Target 15 (ecosystem services).

Roles of Sectoral Ministries

Line ministries and agencies will integrate 2026 NBSAP targets into their sectoral plans and are accountable for implementation in their areas of mandate. For example, MAFF will lead actions on sustainable agriculture, forestry, fisheries and agrobiodiversity; the MLMUPC will integrate biodiversity into land-use planning; MOWRAM and MOE will oversee wetland and water ecosystem conservation; and MOEYS will promote biodiversity education and awareness. Each ministry is expected to mainstream biodiversity into its policies and budgets, aligned with the 2026 NBSAP. The 2026 NBSAP framework will serve as the common sustainable development agenda to be inclusively mainstreamed and/or aligned into sectoral strategies, plans and policies. The 2026 NBSAP's implementation plan will detail which ministry leads or co-leads each strategic objective or target, ensuring shared ownership (see Section 4.5). MOE will provide technical guidance to line ministries, for instance by developing standard guidelines or toolkits (e.g., for integrating biodiversity into EIA processes or provincial development plans). In turn, line ministries will report back on implementation status and contribute data to the CHM/CEMIS platform for consolidated monitoring. This two-way coordination (guided by MOE and executed by line ministries) is designed to create a feedback loop, so that policies can be adjusted and resources redirected as needed. Figure 10 illustrates the institutional coordination structure for 2026 NBSAP implementation, highlighting the linkages between the MOE, sectoral ministries, sub-national authorities, and stakeholders. This approach enables sector-specific contributions to targets such as Target 7 (pollution reduction), Target 8 (climate adaptation), and Target 16 (sustainable consumption and production).

Sub-National Involvement

As successful implementation of biodiversity actions occurs at the ground level, provincial and local authorities play a crucial role, as they are often responsible for implementing biodiversity actions resulting from national-level decision-making. The 2026 NBSAP will be implemented in part through decentralization reforms led by NCDD, which is transferring functions and resources for environmental management to provincial administrations. PDOEs (as well as relevant provincial line department offices, such as Forestry Administration (FA) cantonments under MAFF) will be on the frontline of 2026 NBSAP execution – from managing PAs to enforcing regulations on land use and wildlife. MOE will develop practical guidance and capacity-building and development support for provincial and commune councils to use the existing CIPs as the main vehicle for biodiversity action, particularly under the environment budget line. By strengthening how CIPs integrate and implement biodiversity-related activities, biodiversity priorities from the 2026 NBSAP will be embedded in commune and provincial development planning processes. Mechanisms such as provincial conservation committees or community management committees (for community forests, fisheries and OECMs) will be strengthened to support implementation on the ground. Local knowledge and community inputs are critical; therefore, feedback from community-based conservation initiatives will be channeled upwards through MOE's reporting system (Figure 10). By empowering local authorities and IPLCs, the 2026 NBSAP aims to achieve more effective on-site management and to ensure national targets translate into tangible local outcomes. Capacity-building and development programs (training, technical assistance) will also be provided to sub-national staff to enhance their ability to carry out new responsibilities under the 2026 NBSAP. The Royal Government recognizes that active collaboration between central agencies and sub-national authorities is needed to tackle challenges such as land-use conflicts and habitat loss, which span local jurisdictions. Through the NCDD framework, vertical coordination will be improved to address these challenges. This is essential for

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achieving place-based outcomes under Target 3 (PAs/MFMAs), Target 5 (species conservation), and Target 11 (urban biodiversity).

Stakeholder Engagement and Partnerships

Broad stakeholder involvement is a guiding principle of the 2026 NBSAP implementation. Across the five phases of developing the 2026 NBSAP (Figure 2) there were seven stakeholder consultation meetings and 10 public consultations (see Section 1.4). Building on this, the implementation phase will institutionalize multi-stakeholder platforms to continue engagement. The BTWG can co-opt expert members from academia or the NGO community to advise on specific issues. Regular National Biodiversity Forums or stakeholder consultation workshops will be held to gather feedback on 2026 NBSAP progress and to foster collaboration among government, NGOs, IPLCs, women's organizations and associations, youth, and the business community. A stakeholder engagement plan will ensure that IPLCs, women and youth are adequately represented, addressing a noted shortcoming of past efforts where local community inclusion was insufficient. Platforms such as the CEMIS website will facilitate information exchange and transparency, allowing stakeholders to access data and contribute knowledge. Broad stakeholder involvement supports Targets 22 and 23, which emphasize inclusive participation and gender equality in biodiversity governance.

Civil Society and NGOs

National and international NGOs and CSOs will continue to be essential partners in implementing the 2026 NBSAP. They often have on-the-ground presence and technical expertise in biodiversity conservation and community development. Their role includes community outreach, piloting conservation models, and supporting government with research and training. Crucially, NGOs/CSOs help bridge the gap between policy and practice, ensuring that actions are inclusive and grounded in community needs. The 2026 NBSAP coordination framework will involve NGOs through consultative bodies (e.g., an NGO representative may be invited to BTWG meetings or sub-committees on biodiversity). Cambodia's experience has shown that involving NGOs and community-based organizations leads to more transparent and equitable outcomes. NGOs also serve as advocates for vulnerable groups and can hold stakeholders accountable to 2026 NBSAP commitments. Under the 2026 NBSAP, formal partnerships (MoUs) may be pursued with NGOs for implementing specific Action Plan components (e.g., PA co-management, development of OECMs, environmental education programs, or species monitoring; See section 4.5). Development partners (bilateral and multilateral donors) are similarly engaged as part of civil society forums and through the Government-Development Partner Coordination Committee. Civil Society and NGOs will partner to enhance the implementation of 2026 NBSAP's priority actions through their various initiatives, pilot projects and the joint implementation of sectorial activities. NGO partnerships are particularly relevant for Target 16 (access to benefits), Target 19 (knowledge sharing), and Target 20 (mobilizing technical cooperation).

Religious institutions and faith-based organisations ae also important strategic partners for communication and education, building on Cambodia's "Nation, Religion, King" ethos to motivate long-term respect and care for nature.

Private Sector

The engagement of the private sector is recognized as increasingly crucial for achieving biodiversity goals. The 2026 NBSAP will encourage private sector participation in several ways: integrating biodiversity considerations into corporate practices, promoting public–private partnerships in conservation (e.g., ecotourism concessions, sustainable forestry), and leveraging private finance for green investments. Stakeholders widely view the private sector as having both a responsibility to mitigate its environmental impacts and an ability to contribute resources and innovation to conservation. For example, agribusiness and tourism companies can adopt biodiversity-friendly standards, and banking/finance institutions can develop green financing products. The BTWG provides a platform where private sector voices (e.g.,

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business associations or chambers of commerce) can be heard in the context of mutual benefits for sustainable development. The 2026 NBSAP includes incentives for private sector involvement, such as recognizing companies that meet biodiversity-friendly certification or encouraging biodiversity offsets and conservation investments. Recent surveys in Cambodia indicate that introducing regulatory, fiscal and market incentives will be essential to mobilize meaningful private sector support for biodiversity. Therefore, MOE in collaboration with the MEF will explore incentives like tax breaks for conservation projects, or requirements for Environmental and Social Impact Assessments (ESIA) to incorporate biodiversity offsets. By creating an enabling environment, the 2026 NBSAP aims to harness private sector capacity for innovation, sustainable supply chains, and financing – thereby augmenting public and donor efforts. Ultimately, increased private participation sector supports Targets 15 and 18, which focus on business engagement and sustainable production.

Indigenous Peoples and Local Communities (IPLCs)

IPLCs are frontline stewards of biodiversity in Cambodia and will be actively involved in 2026 NBSAP implementation. The plan emphasizes participatory approaches: community-based conservation initiatives (community forests, community fisheries, community PAs and other OECMs) are key instruments to achieve 2026 NBSAP targets on sustainable use and equitable benefit sharing. Institutional arrangements will formalize the role of IPLCs through mechanisms such as community management committees, which liaise with MOE and line ministries. The 2026 NBSAP stakeholder engagement strategy will ensure that indigenous knowledge and needs are incorporated through the IPLC support mechanism anchored in the Ministry of Rural Development (MRD). In line with the National Policy on the Development of Indigenous Peoples [256], which designates MRD as the competent authority for indigenous community recognition and policy coordination, the support mechanism will be anchored in MRD and its Ethnic Minority Development Department, which will serve as the lead government body for engagement, recognition, cultural protection, and coordination of support.

When developing PA management plans or agrobiodiversity projects, MOE, MAFF and other sectoral ministries will coordinate with MRD to consult and partner with IPLCs. The 2026 NBSAP will support capacity-building for community-based organizations to empower local leaders in decision-making. This approach responds to the lessons learned that local participation, cooperation and coordination with communities were previously limited and need strengthening. By elevating IPLCs in the institutional framework, the 2026 NBSAP seeks to ensure conservation actions also improve local livelihoods and respect cultural heritage, in line with the principles of the CBD. Participatory approaches with IPLCs will help fulfill Target 9 (IPLC roles), Target 13 (access to genetic resources), and Target 22 (equity and rights).

Embedding 2026 NBSAP in National Plans and Frameworks

A critical aspect of coordination is embedding the 2026 NBSAP within broader development, climate, and sectoral frameworks so that biodiversity is not treated in isolation. The 2026 NBSAP is explicitly aligned with Cambodia's national strategies such as the NSDP (2019-2023). Cambodia's biodiversity targets were adopted in line with the Rectangular Strategy (2004) and the NESAP (2016–2023). They are also coherent with sector-specific strategies like the National PA System Management Plan (2017–2031) and have been developed in phase with Cambodia's Sustainable Development Goal (CSDG) commitments. This means the 2026 NBSAP's goals (e.g., Target 1 on planning and managing all areas to reduce biodiversity loss; Target 3 on effectively managing PAs and OECMs to conserve at least 30% of land and water; Target 10 on enhancing biodiversity and sustainability in agriculture, aquaculture, fisheries and forestry; Target 14 on mainstreaming biodiversity into policies and planning; and Target 18 on reforming harmful incentives and aligning financial flows with biodiversity goals) are reflected in the indicators and activities of national and sub-national development plans. The NCSD serves as the bridging platform to integrate the biodiversity framework and actions into the Rio Convention, green growth and other policy development programs. For example, the Cambodia Climate Change Strategic Plan (2024–2033) and the updated Nationally Determined Contribution (NDC) 3.0 under the Paris Agreement identify ecosystem-based adaptation and

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mitigation actions that overlap with 2026 NBSAP (e.g., reforestation, wetland protection, and coastal zone management). The governance arrangements leverage NCSD to ensure that 2026 NBSAP implementation contributes to and benefits from climate initiatives. In practice, this means joint planning and reporting: when Cambodia tracks NDC progress, it will also track related biodiversity outcomes. The NDC 3.0 (2025) explicitly recognizes the role of healthy ecosystems in climate resilience and commits to targets like halving deforestation by 2030, restoring mangroves, seagrasses and coral reefs, and expanding PAs, all of which reinforce 2026 NBSAP objectives. By aligning 2026 NBSAP targets with NDC targets and indicators, Cambodia can unlock climate finance for biodiversity (e.g., REDD+ results-based payments or Green Climate Fund projects that have co-benefits for biodiversity). Likewise, biodiversity indicators will be integrated into the national MRV system for climate and the sustainable development monitoring system, ensuring transparency and avoiding duplicate efforts. This cross-sectoral embedding of biodiversity aligns directly with Target 1 (mainstreaming biodiversity across sectors), Target 14 (integrated spatial planning for ecosystem integrity), and Target 18 (reducing biodiversity-harmful subsidies and aligning financial flows with biodiversity goals).

Importantly, policy coherence will be maintained through the NCSD and the Council of Ministers so that new economic development policies do not undermine biodiversity goals. The 2026 NBSAP will be adopted by the government as a whole, making it a policy instrument binding on all sectors. Environment and biodiversity considerations will thus be mainstreamed into national budget planning and public investment programs. MEF will coordinate the resource mobilization strategy for the 2026 NBSAP, aligning it with budget allocations in the NSDP (2019-2023) and climate finance. Legal and institutional reforms recommended under the 2026 NBSAP (e.g., strengthening PA law enforcement, establishing biosafety regulations, or ABS mechanisms) will also be harmonized with ongoing reforms in forestry, fisheries, land, and environmental codes. This integrated approach addresses previous gaps where biodiversity was sometimes "peripheral to national development planning". By embedding biodiversity into the country's broader planning frameworks, Cambodia aims to create synergies, for example, reforestation programs that count toward both climate targets and biodiversity targets, or sustainable agriculture policies that simultaneously advance food and nutritional security and conservation.

The institutional arrangements for the 2026 NBSAP center on clarified roles, enhanced coordination mechanisms, and multi-stakeholder participation. The MOE will drive a concerted effort across government, ensuring that each ministry and stakeholder group contributes to the 2026 NBSAP's delivery according to their mandate and capacity. These arrangements draw on the principles of good governance outlined in Cambodia's NDC 3.0 (2025), inclusiveness, transparency, and integration with development priorities, thereby embedding the 2026 NBSAP as a foundational element of Cambodia's journey towards sustainable, resilient development. Through the BTWG, stakeholder forums, and alignment with national plans, the 2026 NBSAP will be implemented in a coordinated manner that maximizes synergies (with climate and development programs) and mobilizes all available resources and expertise toward achieving Cambodia's biodiversity targets. Ultimately, this coordinated institutional framework is expected to improve implementation effectiveness, address past challenges (e.g., limited inter-agency cooperation and resource gaps), and support the realization of the 2026 NBSAP's vision for 2030 in harmony with the country's sustainable development path.

4.2. Resource Mobilization and Finance Plan (2026–2030)

Purpose and scope

This Resource Mobilization and Finance Plan sets out how Cambodia will finance implementation of the 2026 NBSAP across all targets, with a special focus on Target 19 to mobilize resources from national budgets, international partners, the private sector and innovative instruments. It translates strategic commitments into a coherent financing architecture for 2026–2030, aligns biodiversity expenditures with the National Environment Strategy and Action Plan (2016–2023) and Cambodia's NDC 3.0 (2025), and establishes a pathway to scale public and private investment in nature. The plan adopts a whole-of-

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government approach, mainstreaming biodiversity values in fiscal policy and public investment decisions while enabling market-compatible mechanisms that reward conservation and sustainable use.

Strategic framework and principles

The following four principles will guide mobilization:

- **Additionality**, new finance should expand the total envelope for biodiversity while preventing simple re-labeling of existing lines.
- **Alignment**: financial flows should progressively align with biodiversity objectives by integrating nature into budget planning, public investment management and state-owned enterprise decisions, consistent with Target 14.
- **Equity**: mechanisms must deliver fair outcomes for IPLCs, including secure benefit-sharing and FPIC, where applicable, reinforcing Targets 22 and 23.
- **Effectiveness**: resources will be prioritized to interventions with the highest, measurable biodiversity returns per Riel, using evidence from national monitoring (including the Cambodia Species Index under Target 4, see Box 3), PA management effectiveness, and threat abatement metrics.

National public finance

Domestic budgets are the backbone of biodiversity finance. Over 2026–2030 Cambodia will progressively increase biodiversity-tagged appropriations and improve execution rates through program budgeting and strengthened public financial management.

MEF will explore leading a biodiversity budget tagging pilot in 2026, potentially covering the MOE, the General Directorate of Forestry and Wildlife (GDFW)/MAFF, Fisheries Administration (FiA)/MAFF, and selected sub-national administrations with significant PAs. Budget tagging would be used to help identify baseline biodiversity expenditure and could support more credible annual increases over time. Subject to the findings of the 2026 NBFP (see below) and government fiscal decisions and priorities, a pragmatic option to be assessed is to establish a trajectory to increase biodiversity-tagged expenditure toward a defined share of total public spending by 2030. If adopted, the resulting parameters would be reflected in Medium-Term Expenditure Framework (MTEF) ceilings for MOE, MAFF, and other co-implementing ministries.

Public investment management will be strengthened to integrate better biodiversity safeguards and, where feasible, positive screening. Large projects proposed for inclusion in the Public Investment Program (2025–2027) will be expected to disclose potential impacts and dependencies on biodiversity, consistent with evolving EIA/SEA provisions, and to set out funded mitigation measures following the mitigation hierarchy. Where residual impacts remain, and where appropriate, offset options may be considered within a national framework that prioritizes the restoration of like-for-like habitats in priority corridors identified under Targets 1–3. Offsetting would not be intended to substitute for avoidance and minimization, and options to improve transparency and tracking of any associated financial flows, including through the NBFP dashboard, will be explored.

International and donor finance

International public finance will be sequenced to crowd in domestic and private capital. Cambodia will prioritize climate-nature windows that deliver co-benefits for Targets 2-4, 7-8 and 11. The Global Environment Facility will support enabling policy and institutional reforms, transboundary conservation, species recovery systems and the national biodiversity monitoring architecture. The Green Climate Fund will be targeted for ecosystem-based adaptation in floodplains and mangroves, resilient PA management and community livelihood transitions, including blue-carbon opportunities under Target 8. World Bank IDA and ADB programs will be coordinated to finance natural capital investments in watersheds and coastal zones, including NbS for disaster risk reduction and water security.

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Bilateral partners and UN agencies will support priority landscapes, restoration at scale, invasive species control and biosafety (Targets 2-3, 6, 17), and will co-finance enabling reforms under Target 18 to phase out incentives harmful to biodiversity while scaling positive incentives. Development partner programs will adopt harmonized safeguards and report disbursements using the national biodiversity budget tagging schema to ensure comparability and reduce transaction costs. A rolling three-year donor pipeline will be maintained within the NBFP to synchronize missions, fiduciary reviews and co-financing opportunities with the national budget calendar.

Private sector engagement and green investment

Private finance will be mobilized through clear rules, risk-sharing instruments, and investable project pipelines. In this context, MEF, together with the Council for the Development of Cambodia (CDC), the National Bank of Cambodia, and MOE, is expected to explore opportunities to align biodiversity-related investment screening and disclosure practices with the national Sustainable Finance Roadmap currently being developed with support from the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP). As this roadmap evolves, Cambodia may progressively integrate biodiversity and ecosystem considerations into forthcoming sustainable finance guidelines and green investment frameworks, providing a coherent basis for assessing biodiversity risks and impacts, applying the mitigation hierarchy, and reporting on nature-related dependencies and opportunities. Such integration would help guide public and private capital toward environmentally responsible projects, reinforcing the objectives of the Cambodia Vision 2050, the Cambodia Sustainable Development Goals, and the NSDP (2019-2023). Such a framing would achieve four things:

- Anchors firmly in verified government processes – the Sustainable Finance Roadmap led by NBC/MEF/UN ESCAP (2024–2026).
- Links biodiversity finance to broader sustainable finance architecture, rather than creating a standalone or speculative instrument.
- Connects to national visions (Vision 2050, CSDGs, NSDP (2019-2023) and mid-term frameworks (Rectangular Strategy (2004), Green Growth Framework).
- Provides a realistic timeline for biodiversity integration into national finance regulations.

Blended finance approaches could be explored to help de-risk investments in restoration, sustainable agriculture, and ecotourism ventures that support Targets 2, 9, 10, and 12. In collaboration with development partners and financial institutions, MOE will encourage the use of instruments such as performance-based incentives to attract domestic banks and impact investors where commercial returns are still emerging. Where feasible, results-based mechanisms could reward verified biodiversity outcomes such as hectares restored that meet ecological performance criteria or measurable reductions in illegal activity within PAs.

Corporate offsetting may be considered only for residual, hard-to-avoid impacts, within a transparent framework that encourages in-country, in-kind restoration consistent with Target 2 and the national PA system under Target 3. Similarly, opportunities may arise to

Box 6. Siema REDD+ Project: A Model for Results-Based Biodiversity Finance.

The Siema REDD+ project in Mondulkiri Province provides a leading example of how results-based financing can contribute to both climate mitigation and biodiversity conservation in Cambodia. Implemented through a partnership between the MOE, WCS, and IPLCs. The project covers approximately 180,000 hectares within and around the Keo Seima Wildlife Sanctuary—one of Cambodia's most biodiverse landscapes.

The project aims to reduce emissions from deforestation and forest degradation while safeguarding critical habitats that support globally significant species such as the Black-shanked Douc (*Pygathrix nigripes*), Yellow-cheeked Crested Gibbon, and Asian Elephant. Verified carbon credits generated under the Verified Carbon Standard and Climate, Community and Biodiversity Standard have enabled the project to attract international results-based payments from voluntary carbon markets. These revenues are reinvested locally to strengthen PA management, fund community development initiatives, and support livelihood alternatives that reduce pressure on forest resources.

By linking measurable emissions reductions with biodiversity outcomes, Siema demonstrates how REDD+ can function as a blended finance model—leveraging private sector demand for carbon credits to sustain conservation and community benefits.

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strengthen biodiversity-related provisions in concessions and public–private partnerships within protected landscapes, including mechanisms for revenue-sharing that help sustain management costs and community benefits. MOE will continue to collaborate with the Council for the Development of Cambodia and relevant sectoral regulators to encourage inclusion of biodiversity safeguards and positive incentives within investment approvals for higher-risk sectors such as energy, transport, mining, and agro-industry.

Innovative and blended finance mechanisms

Cambodia is increasingly recognizing the potential of innovative and blended finance to complement public and donor resources and attract new partners to invest in biodiversity and climate-linked initiatives. These approaches can help advance Target 19 on resource mobilization while supporting practical delivery of ecosystem restoration, sustainable livelihoods, and PA management under Targets 2-3, 8 and 11.

To align more directly with KM-GBF Target 19, innovative and blended finance in Cambodia should be framed as mobilizing resources from all sources, including private finance, and progressively aligning public and private financial flows with the 2026 NBSAP and the 2050 Vision for biodiversity. In practice, this implies a deliberate mix of domestic budget measures and reforms, results-based mechanisms, and private-sector oriented instruments, with safeguards to maintain integrity and avoid perverse outcomes [40].

Building on early experiences, PES could be gradually expanded, building from existing pilots such as Phnom Kulen and Kbal Chhay and recognizing that PES has not yet been legally formalized. Where appropriate, tariff- or tax-linked PES models could be examined in partnership with utilities and municipal authorities, ensuring affordability and equitable benefit-sharing with IPLCs consistent with Target 22. Any future expansion would be phased, allowing robust baselining, verification, and adaptive learning before scaling.

Cambodia will also continue to engage with results-based mechanisms, including REDD+ and blue-carbon programs, where high-integrity emissions reductions and carbon sequestration can generate performance-linked payments. Such projects have already channeled finance toward PA management, community livelihoods, and restoration of degraded ecosystems (see Box 6).

To strengthen integrity, scalability, and investor confidence in results-based finance from REDD+, Cambodia will continue implementing the National REDD+ Strategy through a nested approach that links project-level REDD+ activities with national accounting and reporting. Nesting provides a framework for managing interactions among multiple REDD+ initiatives, aligning baselines and MRV, and reducing double counting risks as carbon market activity expands. The approach is expected to be supported by progressively operationalizing key national elements identified in Cambodia's REDD+ framework, including a national forest reference level suitable for nesting, an integrated National Forest Monitoring System and MRV, a safeguards information system, and a national registry to transparently track REDD+ activities and units, including where relevant any requirements related to corresponding adjustments. This will help ensure that performance-linked payments reinforce forest governance outcomes, protected area management, and equitable benefit sharing for Indigenous Peoples and local communities [141,142].

Looking at the medium term, several additional instruments could be explored as and when policy priorities, market conditions and institutional capacity allow. In coordination with the MEF and the National Bank of Cambodia, and drawing on the forthcoming Sustainable Finance Roadmap, Cambodia may consider designing green or sustainability-linked bond instruments to support activities such as ecological restoration, PA infrastructure, urban greening, and pollution reduction. Where appropriate, development partner support could be sought for instrument design, market development, or partial credit enhancement.

On a cautious and voluntary basis, Cambodia may also examine options for piloting biodiversity credit schemes within a government-endorsed framework that sets out methodologies, social safeguards, and verification standards. Early pilots could focus on restoration outcomes with measurable ecological indicators (e.g., riparian forest recovery), ensuring that any crediting complements rather than substitutes

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for public regulation. Integration of a registry function within the CEMIS platform could be explored to promote transparency, safeguard integrity, and enable interoperability with regional and global systems.

Depending on the structure of Cambodia's public debt and creditor interest, opportunities for debt-for-nature swaps could also be assessed, where financial and legal analysis indicates that restructuring suitable bilateral or commercial debt would be feasible. Such mechanisms would aim to secure predictable domestic funding streams through well-governed endowment or sinking funds, contributing to the long-term financing of PAs and species recovery.

Over time, and subject to further analysis and stakeholder dialogue, the government and its partners may also assess options for establishing a Nature and Climate Fund or similar trust-fund platform to coordinate concessional and blended capital. The structure could include endowment, sinking, and revolving windows operating under investment and grant-making policies acceptable to MEF and development partners. Such a mechanism would provide a transparent vehicle for channeling performance-based resources to PA authorities, CPAs, and priority restoration programs, thereby strengthening the overall ecosystem for innovative and blended finance in support of national biodiversity and climate goals. Design options should be learned from existing arrangements, including the (currently non-operational) PA Fund provisions and prior PA trust fund experience such as the Central Cardamom Mountains National Park fund structure.[a]

In parallel, the NBFP completed under BIOFIN mapped and tracked biodiversity-relevant public funds and revenue streams, including the Environmental Endowment Fund and the National Forestry Development Fund, and noted that the statutory PA Fund foreseen under the Law on PAs was not yet operational [229,243].

National Biodiversity Finance Plan (NBFP) and quantified needs

Cambodia NBFP (2021) provides a quantified baseline of biodiversity expenditure, estimated financing needs, and prioritized finance solutions to close gaps (Box 4). The Biodiversity Expenditure Review estimated biodiversity-related expenditure in 2018 at USD 112 million (about 2% of national budget expenditure and 0.5% of GDP), while the Finance Needs Assessment estimated the 2018 requirement at around USD 305 million, implying a financing gap of about USD 195 million [229,231].

The NBFP also projected rising annual financing needs through 2022, reaching USD 652 million by 2022, and prioritized finance solutions for implementation, including PES, strengthening REDD+ impact on biodiversity conservation, sustainable ecotourism, good agricultural practices to avoid biodiversity harm, and strengthening institutional capability for biodiversity finance review. These quantified estimates and priority solutions provide the foundation for the 2026–2030 Resource Mobilization and Finance Plan and should be updated and re-costed where necessary to align with the new NBSAP targets, actions, and indicators [2].

Building on the NBFP (2021), an updated NBFP aligned to the 2026 NBSAP will be prepared in 2026. This plan will publish target-level cost envelopes and a consolidated 2026–2030 financing scenario, including: (i) a conservative domestic-led pathway that increases biodiversity-tagged spending annually within fiscal constraints; (ii) a co-financing pathway where international public finance underwrites enabling reforms and early capital expenditures; and (iii) a leveraged pathway that adds private and innovative finance to close remaining gaps. Each scenario will present the expected composition of finance by source.

The updated NBFP will also identify harmful incentives for reform under Target 18, quantifying fiscal transfers and subsidies that drive habitat conversion or over-exploitation and proposing practical phase-out timelines and compensatory measures that protect vulnerable households. Positive incentive schemes, such as tax deductions for certified biodiversity-friendly production, could be costed and integrated into the MEF tax policy calendar.

[a] The CCMNP trust fund was launched by Conservation International in 2016 to raise USD 10 million for long-term conservation financing. In the absence of a Cambodian trust law, it was established offshore in Singapore. https://legacylandscapes.org/non-technical-summary-central-cardamom-mountains/ Accessed 21 January 2026

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Implementation roadmap and responsibilities (2026–2030)

MEF and MOE play crucial roles in resource mobilization and allocation with possible mandates to oversee biodiversity-related budget tagging and support its integration with the Medium-Term Expenditure Framework and Public Investment Program, as well as development partners fundings. Subject to agreement, such a group might review and clear a budget tagging manual and the data model for a biodiversity finance dashboard and could propose an initial list of programs to be tagged in the first year.

MOE, in collaboration with MEF and sub-national administrations, could explore options to publish an inventory of revenue instruments applicable to PA and biodiversity management, identify potential legal amendments to expand fee retention, and develop draft guidance on transparent revenue sharing to community structures.

From 2026 to 2030, Cambodia could progressively scale up PES programs in selected watersheds and coastal landscapes, expand the use of results-based payments, and test at least one voluntary biodiversity-credit pilot with third-party verification, subject to safeguards and market demand. Periodic reviews would be expected to recalibrate financing targets and adjust the mix of instruments in line with emerging performance, institutional lessons, and market signals.

Monitoring, reporting and learning under Target 19

Progress will be tracked through the Target 19 indicator set and integrated into the 2026 NBSAP Monitoring and Evaluation system and the CEMIS platform. Key metrics are total resources mobilized from all sources; percentage increase in national budget allocations tagged to biodiversity; value and number of public-private investments in biodiversity-friendly activities; number and value of innovative-finance transactions; and the number of PAs and OECMs with secured long-term financing. Each indicator will have a 2025 baseline and annual targets through 2030, disaggregated by source and by target linkage where attribution is feasible.

Financial data quality will be assured by aligning definitions with the budget classification and by adopting a simple but robust verification protocol. Disbursement and output data will be reconciled annually to test effectiveness, for example comparing spending on restoration with verified hectares meeting ecological performance thresholds or comparing PA finance with observed reductions in illegal activity rates. A mid-term finance review in 2027 will assess whether the financing mix remains fit for purpose and whether reforms under Target 18 are delivering reallocation of harmful subsidies.

Risks and safeguards

The primary risks are fiscal constraints, limited capacity for absorbing complex instruments, and uncertainty in voluntary credit markets. Mitigation measures include sequencing reforms to ensure foundational domestic finance and policy alignment are established first; utilizing guarantees and blended structures to share risk prudently; setting conservative assumptions for revenue-generating instruments; and ensuring rigorous social safeguards and equitable benefit-sharing, particularly in IPLC territories. All innovative mechanisms will adhere to a do-no-harm standard that prioritizes avoidance and minimization before compensation, and that does not substitute private payments for core state obligations.

How this plan supports the full 2026 NBSAP while emphasizing Target 19

The plan finances system-level enablers (spatial planning, management effectiveness and enforcement under Targets 1 and 3), funds measurable ecological outcomes at scale (restoration under Target 2, species recovery under Target 4, invasive species control under Target 6, pollution reduction under Target 7, climate resilience under Target 8), accelerates sustainable use and value-chain transitions (Targets 9, 10 and 16), and embeds biodiversity in public and private decision-making (Targets 14, 15 and 18). By tying resource mobilization to clear indicators and by publishing an annual biodiversity finance annex backed by budget tagging and the NBFP, Cambodia will convert high-level commitments into predictable, diversified and accountable finance for nature through 2030.

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4.3. Capacity-Building, Technology and Knowledge Management

4.3.1 Capacity Building

Cambodia's 2026 NBSAP will reinforce human and institutional capacities at all levels to implement biodiversity strategies effectively, drawing on international best practices and aligning with Target 20 of the KM-GBF. This entails a comprehensive approach to developing skills, institutions, data systems, and partnerships needed for achieving the 2026 NBSAP's goals. Global experience consistently shows that investing in capacity-building, technology transfer, and knowledge-sharing is essential for successful and sustainable biodiversity outcomes. The Royal Government of Cambodia, through MOE, MAFF, and partners, will strengthen education, training, and data governance systems to support biodiversity conservation and sustainable use across national and subnational levels.

Capacity-building will be delivered through an adaptive learning loop that links research and monitoring to implementation decisions: identify priority questions, pilot and implement actions, monitor outcomes, evaluate what works (biological and socio-economic), and revise guidance, budgets, and enforcement priorities accordingly through annual and mid-term reviews. This will help ensure the 2026 NBSAP is evidence-led, not only activity-led, and that investments are redirected toward interventions with demonstrated biodiversity and livelihood outcomes.

Strategic Context of Capacity Building

At regional level, ASEAN's emerging biodiversity framework emphasizes capacity development, knowledge-sharing and technical cooperation as key means to help ASEAN Member States implement the KM-GBF and their 2026 NBSAPs, while ASEAN reports such as the ASEAN Biodiversity Outlook highlight that limited human and financial capacity has hampered 2026 NBSAP implementation in the region [53]. In line with ASEAN's emphasis on capacity development and support for 2026 NBSAP implementation, Cambodia's 2026 NBSAP will place weight on structured, needs-based training for PA governance, species conservation and biodiversity mainstreaming.

Cambodia's earlier 2016 NBSAP and the National Environment Strategy and Action Plan (2016–2023) also recognized limited human resources, technical expertise, and institutional coordination as major constraints to biodiversity management. These challenges were reaffirmed by the stakeholders during consultations for the development of the 2026 NBSAP, which identified capacity weaknesses in enforcement, data handling, and cross-sector coordination, as well as insufficient support for community-level initiatives, biodiversity research, and environmental education [27]. Cambodia's NDC 3.0 (2025) likewise emphasizes the need for continuous learning, digital literacy, and project development skills, particularly at the subnational level. In response, the 2026 NBSAP adopts a more systemic approach, grounded in evidence, partnership, and inclusivity, to ensure all stakeholders have the skills, tools, and institutional support necessary to implement the plan effectively.

Objectives of Capacity Building

The capacity-building program aims to ensure that all stakeholders, Royal Government of Cambodia institutions, IPLCs, civil society, the private sector, and academia, possess the technical and institutional capabilities to plan, implement, and monitor biodiversity actions. Specific objectives include:

- Strengthening institutional capacity at national and subnational levels for biodiversity governance, enforcement, finance, and coordination;
- Enhancing technical and operational capacity across ministries, PA authorities, and local organizations;
- Expanding the reach and quality of biodiversity-related education, monitoring, and research systems to support adaptive, evidence-based decision-making;

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- Embedding knowledge management and data governance systems to promote transparency, open access, and policy integration;
- Enabling community-based conservation efforts, particularly those led by women, youth, and Indigenous groups;
- Building capacity to evaluate conservation effectiveness and socio-economic and cultural outcomes, including costs, equity, behavior change, and the effectiveness of incentives and enforcement, so that NBSAP delivery improves over time.

Strengthening Human and Institutional Capacity

Building human capacity is a cornerstone of the 2026 NBSAP implementation strategy. Cambodia will expand training programs for biodiversity professionals, decision-makers, and community stakeholders to strengthen their ability to manage ecosystems, enforce regulations, and apply scientific and TK in conservation. International experience, including regional ASEAN guidance on 2026 NBSAP implementation, stresses that structured, needs-based training is critical for translating national biodiversity plans into effective action, highlighting the value of targeted, modular training on PA governance, species conservation, ecological restoration, and biodiversity mainstreaming. Drawing on these models, MOE will lead periodic capacity needs assessments, followed by formal training plans that prioritize inclusive access and long-term knowledge retention.

Institutional capacity building will focus on strengthening the mandates and functions of key institutions such as MOE's General Directorate of Natural Resources and the relevant departments of MAFF. Attention will be given to improving inter-ministerial coordination and clarifying mandates for biodiversity-related oversight. Drawing on ASEAN's experience with secondment and peer-learning schemes, Cambodia will consider establishing bilateral staff exchanges and mentoring arrangements with other ASEAN countries. These exchanges will foster practical knowledge transfer and regional integration of biodiversity governance approaches.

At the subnational level, capacity-building will target provincial and district administrations responsible for environmental management, PAs, and spatial planning. Training will cover biodiversity-inclusive land use planning, environmental law enforcement, and stakeholder engagement. Commune-level training will incorporate gender-responsive and youth-oriented content, integrating biodiversity with climate adaptation and community-based development planning. PAs managers and rangers will receive updated training in surveillance, intelligence-led law enforcement, community engagement, and the use of technologies such as SMART monitoring (see Section 4.3.2), mobile applications, and geospatial analysis tools.

Community-Level and Indigenous Capacity Models

The 2026 NBSAP will invest in strengthening the capacity of local and Indigenous institutions to lead and participate in biodiversity conservation, prioritizing the representation of youth and women, including Indigenous women and women's associations and organizations. CPAs, CFs, MFMAs, and CFis will be supported through structured training programs in governance, participatory planning, benefit-sharing mechanisms, biodiversity monitoring, and financial literacy. Drawing on lessons from BIOFIN countries and the 2026 NBSAP Accelerator Partnership, Cambodia will emphasize peer-learning, gender equality, and community co-design of training content. Educational materials will be developed in Khmer and Indigenous languages to support accessibility and cultural relevance.

Community-based monitoring approaches will be expanded using tools such as gender-responsive participatory mapping, biodiversity journals, and mobile data applications. Youth-focused initiatives, such as community ranger programs, eco-clubs, and citizen science platforms, will receive technical support and small grants to foster biodiversity stewardship, local leadership and inter-generational change. Provincial environment departments will be equipped to facilitate the development of Local Biodiversity Action Plans in partnership with communities, enabling a feedback loop between local needs and national priorities. This

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decentralized capacity-building aligns with Cambodia's Rectangular Strategy (2004) and broader public administration reforms, reinforcing inclusive participation and sustainability.

Research, Education, and Professional Development

Research and education will be strengthened through partnerships. The 2026 NBSAP will support the establishment of a national biodiversity research and training center to coordinate field research, curriculum development, and professional certification. Universities will be encouraged to expand value-based and policy-relevant research and academic programs in conservation science, ecology, environmental and economic valuation of biodiversity and ecosystem products and services, and restoration ecology, incorporating field-based learning and practical internships with PA authorities, and linking relevant research to ABS frameworks where genetic resources and associated knowledge are involved.

Research support will be organized around an applied research agenda focused on decision needs for 2026 NBSAP delivery. Priority themes will include: (i) species and ecosystem status and trends (including drivers and tipping points); (ii) effectiveness of interventions (e.g., PA management, restoration methods, human–wildlife coexistence, and enforcement models); (iii) socio-economic and financial performance (cost-effectiveness, distributional impacts, incentives, and market drivers of habitat conversion and overexploitation); and (iv) cultural and TK priorities defined with IPLCs (including culturally significant species and sites, customary governance practices, and biocultural indicators).

Professional development opportunities for Royal Government of Cambodia officials, community leaders, and private sector actors will be facilitated through tailored workshops, online courses, and joint programs with ASEAN and international institutions. Joint research projects with regional universities, particularly under the ASEAN Centre for Biodiversity (ACB), will promote exchange of knowledge, datasets, and technical methods. MOE will assist early-career scientists and students in accessing scholarships and research grants with a focus on underrepresented groups including women and Indigenous scholars. Public awareness programs will complement these efforts, ensuring that biodiversity education reaches learners across all age groups and education levels, from secondary schools to vocational institutions.

Data, Information, and Knowledge Governance

Capacity-building for data and information systems will ensure stakeholders can generate, access, and apply biodiversity knowledge in decision-making. This includes comprehensive training on the CEMIS, which will serve as the national clearinghouse for biodiversity and environmental data. Officials from national and subnational government bodies, community organizations, and NGOs will be trained in data entry, retrieval, analysis, and reporting using CEMIS. Data standardization and open-data principles will be emphasized to improve interoperability with global platforms such as the GBIF and the ASEAN and CBD CHMs.

Where feasible, data governance arrangements could also address quality assurance, version control, and handling of sensitive information, including locations of threatened species and culturally sensitive knowledge. Data-sharing agreements may specify minimum metadata and ethical requirements (including consent where TK is involved), while supporting the production of validated datasets that are usable for planning, enforcement targeting, impact assessment, and reporting.

Regular data validation workshops, coordinated by the CHM Secretariat within MOE, will promote collaboration across agencies and ensure data integrity. Community groups will be supported to contribute biodiversity data through participatory monitoring, integrating local knowledge with formal systems. Biodiversity literacy will be promoted across all sectors to increase the use of data in policy planning, enforcement, and natural resource management. This strategic emphasis on data capacity aligns with emerging global best practice and ensures the foundation for adaptive, transparent, and inclusive biodiversity governance.

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Partnerships and Regional Cooperation

Cambodia will leverage bilateral, regional, and global partnerships to enhance technical cooperation and institutional learning. Active participation in ASEAN biodiversity programs, the UNDP BIOFIN initiative, and the 2026 NBSAP Accelerator will continue, with a focus on joint capacity-building, regional exchanges, and co-development of tools and methodologies. Cooperation with international institutions and international research centers will support technology transfer, innovation, and scientific collaboration. Cambodia will also explore participation in regional secondment and biodiversity fellowships, and host regional events and training courses to contribute expertise and deepen engagement.

To support evidence-informed delivery, a science–policy function could be delivered through the BTWG, helping to prioritize applied research questions, encourage consistent indicator methods, and translate key findings into practical guidance for planners and managers. This could take the form of periodic technical reviews and brief evidence syntheses convened through the BTWG, with MOE, MAFF and research partners as appropriate, to inform work planning and adaptive management.

Implementation and Monitoring

A National Capacity-Building and Knowledge Development Plan (2026–2030) will be developed under MOE coordination in 2026. The plan will outline priority capacity needs, institutional roles, financing options, and timelines for delivery. It will also include specific indicators such as the number of personnel trained (disaggregated by gender and level), the number of institutions supported, quality of biodiversity data systems, and local participation in planning and monitoring. Monitoring will be integrated into the 2026 NBSAP Monitoring and Evaluation Framework and linked to CEMIS. Progress reports will be reviewed annually, with mid-term evaluations to adapt training priorities and delivery mechanisms.

In addition to training metrics, the capacity-building plan could track selected knowledge outputs and uptake, such as applied studies completed, decision briefs or guidance notes produced, datasets validated and deposited in CEMIS, and examples of management adjustments informed by evidence. This would help demonstrate that knowledge management is improving implementation quality as well as expanding capacity.

4.3.2 Technology and Knowledge Management

Cambodia's biodiversity goals for 2026–2030 will be underpinned by robust technology and knowledge management systems. Recognizing that effective implementation of the 2026 NBSAP depends on data-driven decision-making and information sharing, the Royal Government of Cambodia is prioritizing improvements in biodiversity monitoring, data governance, information management, and technology transfer as key enablers of all strategic targets. In alignment with Target 20 (capacity-building and cooperation) and Target 21 (knowledge and information), national efforts will focus on building the infrastructure, skills, and policies needed to generate, share, and apply biodiversity knowledge across all stakeholder groups. This section outlines how Cambodia will strengthen its biodiversity information systems, notably through the CEMIS, and promote the integration of modern technologies and TK to support adaptive management and stakeholder empowerment.

Strengthening Biodiversity Monitoring and Data Governance

The 2026 NBSAP will establish a comprehensive national framework for biodiversity monitoring that links scientific research, community observations, and institutional reporting. A cornerstone of this effort is improving data governance – setting standards, policies, and institutional arrangements to ensure that biodiversity data are collected consistently, quality-checked, and shared openly. To address past fragmentation and inconsistency in monitoring, Cambodia plans to adopt standardized indicators and protocols (e.g., for species populations, habitat extent, PAs management) aligned with the KM-GBF reporting requirements. A national biodiversity data-sharing policy will be developed to define data standards, access rights, and licensing, thereby encouraging all agencies and partners to contribute to a

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common information pool. Clear mandates will designate a lead governmental body to coordinate biodiversity data management across ministries, supported by formal data-sharing agreements and integration of databases. Strengthening data governance also involves securing long-term financing for monitoring programs and reinforcing institutional roles so that collected data inform policy before issues become crises. In line with Target 20, the Royal Government of Cambodia will pursue international technology transfer and scientific cooperation to access cutting-edge tools and expertise, ensuring Cambodian scientists and practitioners can leverage global innovations for biodiversity assessment. This includes partnerships to obtain remote sensing data, wildlife survey technologies, and training opportunities, which will build national capacity to implement the 2026 NBSAP effectively. By 2030, Cambodia intends to have significantly enhanced its national capacities for biodiversity monitoring, data analysis, and reporting, thus laying a strong foundation for evidence-based conservation action.

CEMIS: Cambodia's Central Platform for Biodiversity Data

A pivotal priority is to fully operationalize CEMIS as Cambodia's central hub for environmental and biodiversity information. Developed by MOE with support from development partners, CEMIS is an online platform that consolidates biodiversity records, land-use and forest-cover maps, PA data, pollution metrics and climate information (Figure 11). It serves as a national clearinghouse where data from ministries, NGOs, research institutions and citizen initiatives can be stored, curated and accessed for decision-making. By reducing fragmentation and duplication, a fully operational CEMIS will improve coordination, transparency and efficiency in monitoring 2026 NBSAP implementation and reporting against global biodiversity targets.

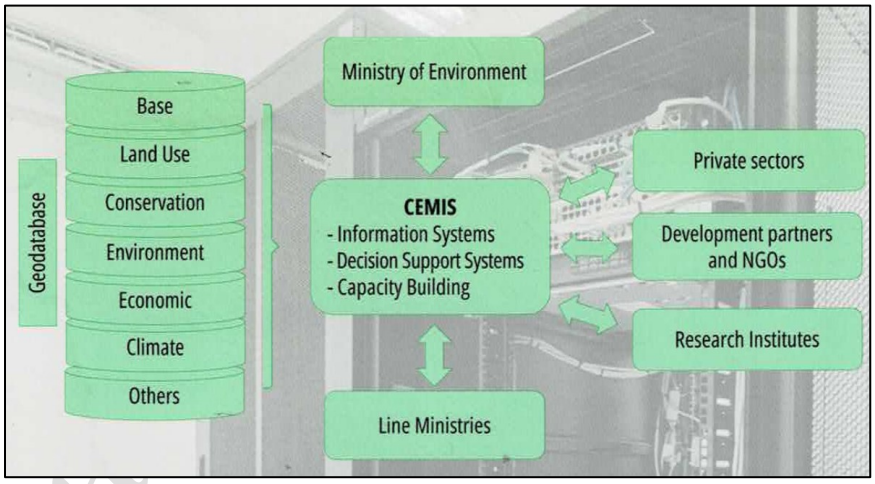


Figure 11. *Cambodia Environmental Management Information System scope and components. Source: MOE & World Bank (n.d.)*

Awareness and use of CEMIS among conservation professionals remains limited, with fewer than half of surveyed respondents familiar with the system. The 2026 NBSAP therefore calls for stronger promotion of CEMIS, improved user-friendliness and systematic integration into Royal Government workflows. Priority actions include securing sustainable funding and staffing, requiring that publicly funded biodiversity data be deposited in CEMIS, and using the platform to track progress on 2026 NBSAP targets through a centralized dashboard and periodic "State of Biodiversity" reporting. These efforts are consistent with NDC 3.0 (2025), which envisages a biodiversity tracking tool linked to CEMIS and aims for full operationalization by 2030.

CEMIS has been designed with a modular architecture, open standards and FAIR data principles (Findable, Accessible, Interoperable, Reusable), role-based access and bilingual interfaces (Khmer and English). It provides tools for data upload and verification, geospatial visualization, map generation and secure data

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sharing, enabling users to discover and download, for example, forest maps, species records or ecosystem-service layers for spatial planning and environmental assessments. Over the next five years, the Royal Government of Cambodia will formalize governance arrangements for CEMIS, clarify responsibilities for data contribution and use, and set targets for data coverage. In doing so, CEMIS will become the digital backbone of Cambodia's biodiversity knowledge management, strengthening data sovereignty and continuity beyond individual projects.

Integration with Global and Regional Information Platforms

To maximize the utility of national data and fulfil international commitments, Cambodia will actively link its information systems with regional and global biodiversity platforms. Chief among these is the GBIF – a worldwide network and database for species occurrence records. Cambodia is already an Associate Participant in GBIF, with the MOE serving as the national node and over 1.3 million species records from Cambodia published to GBIF to date. Under the 2026 NBSAP, the country will deepen this engagement: CEMIS will be configured as a strategic interface to GBIF so that data can be easily formatted to international standards and shared globally. In practice, this means publishing Cambodia's authoritative national species checklists and new biodiversity datasets to GBIF and even requiring that all biodiversity data collected in Cambodia be published on GBIF (with appropriate safeguards) as a default practice. Such integration ensures that national data gains international visibility and peer review, and it helps Cambodia meet reporting obligations under the CBD and Sustainable Development Goals (SDGs) with minimal duplication. By contributing to GBIF, Cambodia also gains access to a wealth of global data, tools, and analytics that can inform local conservation planning (e.g., understanding species distributions, migration patterns, or conservation gaps in a broader context). Ultimately, anchoring national data in CEMIS for management and GBIF for global interoperability provides a "backbone for a modern, evidence-based conservation strategy".

Regionally, Cambodia will strengthen its participation in the ASEAN CHM and the ACB's networks. The CHM under the CBD is an international platform to facilitate sharing of biodiversity data, knowledge, and tools among member countries. Cambodia's national CHM website (managed by the MOE) will be restored, enhanced and closely linked with CEMIS, so that any updates in the national database can be reflected in CHM portals and vice versa. Currently, awareness and usage of the CHM in Cambodia is modest – barely half of the 80 conservational professionals and other stakeholders surveyed in preparation for the 2026 NBSAP were aware of it, and only a quarter use it in their work [27]. The 2026 NBSAP will therefore promote the CHM as a complementary tool to CEMIS, especially for sharing information with international audiences and accessing resources from other countries. By connecting CEMIS to the CHM, Cambodia can automatically align its data with global frameworks like the KM-GBF and make its progress visible on the international stage. Cambodia will also engage in ASEAN collaborative platforms such as the ASEAN Biodiversity Dashboard and data-sharing initiatives coordinated by the ACB. This regional cooperation will facilitate knowledge exchange on best practices (e.g., how neighboring countries are monitoring certain species or managing PAs data) and may enable technology transfer within the region. In alignment with Target 21's vision of an interoperable and user-friendly biodiversity information system by 2030, Cambodia's strategy is to ensure CEMIS not only serves national needs but is fully interconnected with global and regional systems like GBIF and the CHM. This will allow seamless flow of information – from local communities uploading data, to national databases, onward to regional networks – creating a two-way exchange where international knowledge also informs local action.

Promoting Open Data Access and Interoperability

Open access to biodiversity information is a guiding principle of Cambodia's knowledge management approach. The Royal Government of Cambodia recognizes that making data widely available (while respecting sensitive information) will empower researchers, communities, and decision-makers to collaborate and respond adaptively to conservation challenges. Therefore, the 2026 NBSAP commits to open data policies and interoperability standards that enable different systems to communicate. CEMIS

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itself is being built on open-data principles, using interoperable formats and ensuring that datasets can be reused and shared without proprietary barriers. Wherever possible, biodiversity datasets (e.g., species observations, habitat maps, research findings) will be published under open licenses, allowing free access and reuse for education, science, and management purposes. Interoperability will be ensured by adopting international standards such as Darwin Core for species occurrence data and various geospatial standards for mapping, so that data from Cambodia can plug into global databases and analytical tools smoothly. The emphasis on interoperability also means upgrading legacy data: many organizations still use disparate systems like spreadsheets, standalone databases, or even paper records for biodiversity information. Through capacity-building, the Royal Government of Cambodia will encourage migration of these records into modern systems and use of common taxonomies and data schemas.

Open access and integrated systems directly support adaptive management. When policymakers and practitioners have timely access to reliable data, they can adjust strategies based on what is working or not. For example, if CEMIS data show a declining trend in a certain species or increasing deforestation in a PAs, authorities can swiftly investigate and reinforce conservation measures. The Royal Government of Cambodia will institutionalize processes for regular data analysis and feedback: annual biodiversity status reports generated from CEMIS will summarize key indicators and recommend management responses. These reports, alongside interactive dashboards, will be accessible to all stakeholders to ensure transparency and accountability. Moreover, open data sharing is expected to spur innovation and co-creation. Academics, NGOs, and citizen scientists can use national biodiversity data to generate new insights (e.g., habitat connectivity models or climate vulnerability assessments) and feed those back to policymakers. To facilitate this, Cambodia plans to create an open "biodiversity knowledge portal" under CEMIS where curated datasets, maps, and even TK documentation can be easily searched and downloaded by users countrywide. By breaking down information silos, the 2026 NBSAP's open data approach will cultivate a culture of evidence-based decision-making and collective learning. This reflects emerging international best practice, where countries leverage open biodiversity data to engage the public and attract scientific collaboration. In Cambodia's context, improved data accessibility is not just a technical matter but a driver of empowerment: when communities, educators, and local officials have information at their fingertips, they are better equipped to participate in and influence conservation outcomes.

Modern Technologies for Monitoring, Enforcement, and Restoration

Advances in technology are expanding the possibilities for biodiversity conservation. Cambodia will harness a suite of modern tools – GIS, remote sensing, drones, mobile applications, and more – to improve spatial planning, habitat monitoring, law enforcement, and ecosystem restoration efforts. High-resolution GIS and satellite remote sensing will be systematically used to map and monitor land cover changes, forest loss, wetland health, and other habitat dynamics. For example, the MOE can use satellite imagery to identify deforestation events or monitor mangrove regrowth, enabling proactive management responses. Key biodiversity indicators like forest cover and land-use change will be tracked through remote sensing data integrated into CEMIS and the National Forest Monitoring System, developed under MAFF. This geospatial approach supports better spatial planning by overlaying biodiversity values (e.g., KBAs or critical wildlife corridors) with development plans to guide decisions on land use, PAs and OECM expansion/reorganization, or restoration site selection. Cambodia intends to regularly produce interactive habitat maps and risk alerts (e.g., early warning of habitat fragmentation or fire) to inform both national and sub-national planners.

For wildlife and enforcement monitoring, the Royal Government of Cambodia and conservation partners will expand use of tools like SMART[b] and other mobile data collection apps. Ranger and community patrols

[b] SMART is currently transitioning into a new global non-profit structure under the SMART–EarthRanger Conservation Alliance (SERCA), which brings together the longstanding SMART Partnership and the EarthRanger team into a single alliance to steward the SMART platform, integrate SMART and EarthRanger into a unified conservation technology suite, and provide stronger technical, governance, training and funding support to users worldwide. https://www.earthranger.com/ accessed 5 November 2025.

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In Cambodia equipped with GPS-enabled devices and SMART software record poaching incidents, wildlife sightings, and illegal activities in real time, uploading this data to a central system for analysis. This technology, combined with remote-sensing surveillance (e.g., detecting forest encroachment via satellite), greatly enhances the ability to detect and deter illegal activities in PAs. Stakeholders in Cambodia strongly favor integrating SMART, remote sensing, and prosecution tracking to strengthen enforcement chains. Drones are another modern tool planned for wider use – they can perform aerial patrols over rugged terrain, monitor large restoration sites, or even assist in tree planting and seed dispersal in reforestation projects. The 2026 NBSAP also encourages emerging technologies to detect species presence such as eDNA (environmental DNA) sampling and acoustic sensors (e.g., testing water samples for DNA traces of fish or amphibians or using bioacoustics monitors to track bird and frog populations). These methods can complement traditional field surveys and cover more ground efficiently.

Crucially, technology will not replace people but augment and connect their efforts. The strategy emphasizes pairing high-tech approaches with community-based and citizen science initiatives. For example, mobile applications tailored for community use may be introduced, allowing local volunteers, including IPLCs and youth to record observations (like sightings of key species or incidences of human-wildlife conflict) which feed into CEMIS. Suggestions from stakeholders included deploying mobile data collection to improve timeliness and coverage of monitoring, particularly in remote areas. By training local rangers and citizen scientists in using smartphones or tablets for data entry, Cambodia will both increase the data stream and build grassroots engagement in conservation. These participatory technologies can also function offline – important for rural areas – and later sync with central databases, as recommended by users who requested offline functionality for tools like CEMIS. The Royal Government of Cambodia will also explore integrating crowdsourcing platforms (e.g., iNaturalist or community reporting hotlines) to gather widespread observations on biodiversity, thereby enriching the knowledge base.

Integrating Traditional Knowledge and Local Knowledge Systems

Cambodia's TK related to biodiversity held by IPLCs, is recognized as a vital complement to scientific data. The 2026 NBSAP's knowledge management strategy therefore includes mechanisms to respect, document and use TK in biodiversity planning. Many communities have long observed seasonal patterns, species behavior and local ecological change; this knowledge offers context and nuance that formal datasets may miss. In partnership with IPLCs, the Royal Government of Cambodia will support the documentation of relevant TK through community consultations, ethnobiological surveys and participatory mapping, with appropriate consent, benefit-sharing and safeguards. Where appropriate, key information will be incorporated into national databases and decision-making processes, and CEMIS may host dedicated spaces for community-contributed knowledge, including local languages.

Integration of TK and scientific knowledge will occur primarily through co-management and participatory monitoring. Existing examples include Indigenous people taking part in wildlife monitoring and the use of community ecological calendars to inform patrols. Building on this experience, the 2026 NBSAP promotes institutionalizing participatory monitoring so that IPLCs and other local groups are partners in data collection and analysis. This may be achieved through CPAs recording biodiversity or climate impacts using simple forms or mobile tools that feed into district and national reporting. Authorities will provide feedback to communities on how this information is used, reinforcing a two-way knowledge exchange and supporting adaptive management in PA and species planning.

Respect for TK is closely linked to Target 22 on IPLC participation and Target 21 on knowledge and information. A core principle is the fair and equitable sharing of benefits and the protection of intellectual property rights. Implementation of the Nagoya Protocol on ABS will help establish clear procedures for using genetic resources and associated TK with prior consent and fair returns to communities.

Putting this into practice requires bridging local and scientific knowledge systems. Scientists and officials will require training in approaches that value and effectively utilize community knowledge, while community members will need opportunities to enhance their basic scientific and monitoring skills.

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Educational materials in Khmer and Indigenous languages can help translate scientific findings for local use and, conversely, convey local classifications and concepts to technical audiences. To support this, Cambodia will promote forums such as biocultural workshops and community mapping sessions where IPLC representatives and scientists jointly analyze biodiversity issues. Treating TK as a legitimate and valued source of evidence will help generate more culturally appropriate conservation measures, strengthen community ownership, and encourage innovative combinations of traditional practices and modern tools on the path toward the 2050 vision of living in harmony with nature.

5.4. Communication and Education

The 2026 NBSAP is designed for practical use in day-to-day decision-making and planning, as recommended by conservation professionals and other stakeholders surveyed in preparation for the 2026 NBSAP. Although awareness of the 2016 NBSAP was high among conservation professionals and other stakeholders, only 6% reported using it regularly in their work, with most referring to it only sometimes or rarely [27]. The 2026 NBSAP, therefore, has a much more deliberate focus on communication and education to function as a living framework rather than a document consulted only occasionally. Existing national policies already provide a strong foundation for this. The 2016 NBSAP mandates the MOE, as NBSAP coordinator, to develop and implement a communication and outreach strategy to raise awareness and preparedness, and to promote broad participation by ministries, IPLCs, civil society, the private sector and knowledge institutions. The NESAP (2016–2023) set Strategic Objective 4 to raise public awareness, build capacities, and utilize science and technology, and calls for the incorporation of environmental and natural resource objectives into education curricula, research and innovation policies, along with free access to environmental information. Cambodia's NDC 3.0 (2025) further emphasizes education, information and awareness-raising as enabling conditions, including eco- and safe-school programs, climate-related curriculum revisions, and upgraded non-formal education to build green competencies.

The 2026 NBSAP communication and education component builds on these frameworks and consultations to improve data accessibility, provide clearer guidance, strengthen alignment with sectoral policies, and expand biodiversity education and awareness. It is closely linked to Targets 20–23 in the revised target framework, particularly those related to capacity and cooperation, biodiversity information, participation, and gender equality.

Alignment with targets and indicators

Communication and education will directly support Target 20 on capacity and cooperation, which includes indicators on KAP surveys and on CEPA programs implemented to inform participatory 2026 NBSAP implementation. It will also help operationalize Target 21 on biodiversity information, including the establishment and functioning of CEMIS, the number of updated and shared biodiversity datasets, and the number of biodiversity-related awareness and education programs conducted.

The communication component will contribute to Target 22 on IPLC participation, which tracks inclusive governance, recognition of TK and public platforms for community participation in biodiversity governance, as well as Target 23 on gender equality, which includes indicators on women's involvement in biodiversity-related education and training. In addition, several thematic targets (e.g., on pollution and invasive species) include awareness and education measures and indicators that the 2026 NBSAP communication and education efforts will support.

Key audiences

Communication and education activities under the 2026 NBSAP will be tailored to several main groups, always ensuring gender integration and equitable inclusion.

For government and decision-makers, the focus will be on national and sub-national authorities responsible for the environment, agriculture, fisheries, land use, planning, education, finance, and related sectors, as well as inter-ministerial coordination bodies under the BTWG. The aim is to support informed

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environmental decision-making in line with NESAP (2016–2023) Objective 4.2, by making 2026 NBSAP targets and measures more visible and easier to integrate into policies, plans, budgets and monitoring frameworks.

Communication for conservation professionals and technical institutions, including public agencies, universities, research institutes and NGOs, will prioritize user-friendly technical notes, guidance documents and data products linked to CEMIS, as well as regular updates on 2026 NBSAP progress.

For IPLCs, particularly those living in or near PAs, CPAs and other OECMs, communication will build on the gender-responsive participatory approach already articulated in the 2016 NBSAP, which emphasizes recognition of TK and the integration of community perspectives. Materials and channels will need to be accessible, culturally appropriate and available in Khmer, and to support community-led management and monitoring.

For the education sector and youth, communication and education activities will draw on existing measures in NDC 3.0 (2025) and NESAP (2016–2023) that call for integration of environmental and climate content into curricula, eco-school and safe-school initiatives, and upgraded non-formal education to build green competencies. The 2026 NBSAP will align biodiversity-related content and messaging with these efforts, positioning biodiversity as an integral part of climate resilience, sustainable development and green skills.

For the private sector and media, the emphasis will be on sectors whose activities significantly affect biodiversity, and on media organizations that can amplify messages on biodiversity and ecosystem services. This builds on the broader NDC 3.0 (2025) emphasis on access to information, targeted campaigns and use of diverse communication channels, including television, radio and social media, particularly for vulnerable groups, IPOs and DPOs.

Approaches and instruments

The communication and education component will build on the communication and outreach role already assigned to MOE in the 2016 NBSAP, which envisaged a strategy targeting line ministries, inter-ministerial committees, IPLCs, civil society, the private and business sectors and knowledge institutions. The 2026 NBSAP will maintain this broad framing but place greater emphasis on practical use of the 2026 NBSAP and on linkages with existing climate and environmental communication programs.

Integration with CEMIS and related platforms will be a core approach. Target 21 indicators call for a functioning, accessible biodiversity information system, with updated and shared datasets, as well as biodiversity-related awareness and education programs. Communication materials, maps, indicators and case studies derived from CEMIS will be used to make 2026 NBSAP targets and progress visible and relevant to different stakeholder groups, and to support both formal education and non-formal outreach.

Formal education at primary, secondary, and tertiary levels will be supported by encouraging the linking biodiversity topics to ongoing curriculum revisions and eco-school initiatives, as documented in NDC 3.0 (2025). These include integrating learning outcomes on climate change, pollution, biodiversity and environmental conservation, as well as strengthening teacher training and upgrading non-formal education curricula to build green competencies. The 2026 NBSAP will encourage the incorporation of biodiversity and ecosystem services into these processes in a manner consistent with existing education policy frameworks.

Non-formal education and CEPA programs will continue to use communication tools already highlighted in the 2016 NBSAP and NESAP (2016–2023), including radio, television, newspapers, mobile and web-based channels, public outreach events and environmental performance reporting. These programs will be aligned with specific 2026 NBSAP targets and will be tracked through indicators on the number and reach of awareness and education initiatives.

Participatory knowledge generation and citizen science, when ordinary people (non-professionals) help collect or analyze information for research and monitoring, will be encouraged to link communication and

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education with data collection and monitoring. This responds to stakeholder recommendations to expand biodiversity education and awareness and to recognize IPLC stewardship and aligns with indicators under Targets 20–22 on tools and technologies, joint research and initiatives that integrate TK.

Inclusive and rights-sensitive communication will be a cross-cutting principle. In line with NDC 3.0 (2025) and the revised targets, communication and education activities will aim to be gender-responsive and youth-inclusive, and to ensure that women, IPLCs, persons with disabilities and other vulnerable groups have access to information and opportunities to participate in 2026 NBSAP implementation.

Monitoring, learning and adaptive improvement

Monitoring of communication and education will rely on the indicators outlined for the 2026 NBSAP target framework. For Target 20, this includes tracking KAP surveys and CEPA programs related to 2026 NBSAP implementation and biodiversity issues more broadly. For Target 21, it includes monitoring the operational status of CEMIS, the number of updated and shared biodiversity datasets and the number of awareness and education programs conducted. For Targets 22 and 23, it includes measures of IPLC and women's participation in biodiversity-related decision-making, education and training.

Findings from these indicators, together with periodic stakeholder feedback, will be used to review which communication and education approaches most effectively increased awareness, change practices, and improve the practical use of the 2026 NBSAP. This will allow the communication component to be adjusted over time, ensuring that the 2026 NBSAP becomes more widely known, more accessible and more useful as a guiding framework for biodiversity action across Cambodian society.

5.5. Implementation Action Plan

The Implementation Action Plan is the main operational tool for linking the 23 national biodiversity targets to concrete actions and institutional responsibilities. It translates the 2026 NBSAP from a strategic framework into a practical schedule of work by showing, for each target, the agreed indicators, the strategic actions that will drive progress, and the lead and supporting institutions responsible for implementation (Table 31). This directly addresses lessons from the 2016 NBSAP, where numerous actions were difficult to track, and responds to the recommendation that responsibilities and indicators for 2026–2030 be set out more clearly.

The plan is structured to align with the KM-GBF's planning, monitoring and review logic. Each row anchors a national target in the approved targets and indicators framework and then links that target to a small set of priority strategic actions and the best agencies placed to deliver them. By doing so, it makes explicit how ministries, sub-national administrations, and non-state partners will contribute to achieving each target, and which indicators will be used to monitor their performance.

The content of the plan builds on the consolidated table of targets, indicators and strategic actions developed during 2026 NBSAP preparation. That work mapped each of the 23 Cambodia Targets to the 2026 NBSAP strategic objectives and indicative measures, and was refined using the Baseline and Target Assessment, the 2016 NBSAP where still relevant, and the emerging 2026 NBSAP working draft. The plan therefore represents a synthesis of existing commitments and new measures needed to generate data for the agreed indicators.

Organizing the plan by agency clarifies institutional ownership and makes it easier to integrate biodiversity into sectoral and sub-national planning and budgeting. For each ministry, institution or administration, the plan aggregates the actions for which it is the leading or supporting agency across multiple targets. This allows institutions to see at a glance their portfolio of biodiversity-related commitments and associated indicators, and to reflect these in their annual workplans, performance frameworks and program budgets. The structure is consistent with the multi-agency arrangements already used under the 2026 NBSAP technical working group, while providing a more operational, target-linked view of roles and responsibilities

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As institutions refine their internal plans, enter new partnerships or improve their data systems, the plan can be updated without changing the core 2026 NBSAP text. In this way, the Implementation Action Plan serves as a living bridge between Cambodia's biodiversity vision, the national targets and indicators, and day-to-day decision-making, resource allocation and performance monitoring across government and society.

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Table 31. *Implementation Action Plan*

Target	Indicators	Strategic Action(s)	Key Institutions (and roles)
Target 1: Spatial planning and management *(Manage all areas to reduce biodiversity loss)*	1.1. Number of biodiversity-inclusive spatial plans that are developed or updated 1.2. All high-biodiversity areas identified and mapped 1.3. Percentage of important high-biodiversity areas under biodiversity-inclusive spatial plans	• Integrate biodiversity into land-use planning at national and sub-national levels, including river basin and floodplain planning, so that spatial plans prevent habitat loss • Adopt and apply a standardized biodiversity inclusion checklist for the review and approval of land-use master plans, and maintain a registry of approved plans and their implementation status • Develop, validate and publish nationally agreed map layers for areas of high biodiversity importance, and use routine GIS overlay analysis to report the coverage of these areas by approved spatial plans • Adopt "no-go" zones for critical ecosystems and require biodiversity-sensitive design in development projects • Strengthen land-use planning governance with participatory processes to ensure equitable management • Require spatial plans to include minimum ecological safeguards (e.g., KBA retention, connectivity corridors) and compliance check before approval • Review and, where feasible, harmonize key legal provisions (e.g., Law on Land (2021) and ENR Code (2023)) to clarify mandates and strengthen enforceable requirements for biodiversity-inclusive spatial planning • Explore options to strengthen transparency, including making adopted spatial plans and supporting biodiversity layers publicly accessible (e.g., via online publication), consistent with applicable laws and safeguards	• MLMUPC (spatial planning, land administration, construction and urban development) • MOE (biodiversity safeguards and environmental oversight in planning) • MOD (coordination where military land and facilities affect planning) • MOWRAM (integration of water resources, river basin, and food risk considerations) • Provincial and local authorities (sub-national spatial planning, approvals and enforcement) • NGOs/CSOs and development partners (technical advice, data support)
Target 2: Ecosystem restoration *(Restore 30% of degraded ecosystems)*	2.1. A national ecosystem map or database developed showing areas needing restoration 2.2. Number of ecosystem restoration policies/ strategies and tools established 2.3. A national ecosystem map or database showing areas needing restoration 2.4. Number of ecosystem restoration projects (incl.	• Implement large-scale restoration programs for ecosystems (e.g., forests, wetlands, floodplains, mangroves, coral reefs, etc.,) combining natural regeneration with planting of native species and community participation • Embed restoration targets into national land-use plans and leverage sustainable finance (e.g., REDD+, PES, biodiversity credits) to support these efforts • Increase the restoration ambition to 30% of degraded ecosystems (up from 10% in previous plan) and secure financing mechanisms for restoration	• MOE (forestry and ecosystem restoration programs) • MAFF (agro-forestry, fisheries/aquatic habitat restoration) • MOWRAM (rehabilitation and restoration of water-related ecosystems, reservoirs and basins) • MRD (community engagement in restoration)

Target	Indicators	Strategic Action(s)	Key Institutions (and roles)
	private/development partner involvement) 2.5. Percent of degraded terrestrial, inland water, marine and coastal ecosystems under restoration	• Develop and improve policy, strategy, and regulatory frameworks to restore degraded ecosystems (e.g., guidelines on forest rehabilitation) • Prioritize restoration investments to sites where measurable recovery is feasible within plan cycles (e.g., canopy cover increase, native regeneration, invasive suppression) • Small scale habitat restoration and assist natural generation (silviculture) via community-based initiatives • Plan biodiversity corridors and ecological connectivity inside and around PAs to improve habitat linkages and species movement across landscapes	• Development partners (funding PES, REDD+) • NGOs/CSOs and development partners (site-based work, technical advice, data) • Private sector (restoration delivery, nurseries, carbon/PES)
Target 3: Conserve land, waters and seas *(Conserve ≥ 30% of terrestrial and inland water areas; ≥ 10% of marine and coastal areas)*	3.1. Percentage of terrestrial and inland water area in PA and OECMs system 3.2. Percentage of marine and coastal area in PA and OECM system 3.3. Percentage of PAs with zoning and management plans completed and approved 3.4. Number of OECMs established and recognized 3.5. Rate of natural resource crimes reduced in PAs	• Expand and strengthen PA management: complete zoning and management plans for all PAs • Establish and operationalize OECMs policy and framework for recognition and monitoring of OECM • Identify OECMs to cover underrepresented ecosystems (e.g., wetlands, coastal areas, marine), and where appropriate establish new marine PAs • Improve PA management effectiveness by increasing funding and enforcement capacity • Promote co-management with local communities to ensure equity (e.g., community forestry/fisheries in buffer zones) and connectivity between conserved areas • Integrate Target 3 into sub-national planning • Establish new PAs in high-value biodiversity and ecosystem sites • Concentrate management and partner support in priority PAs/OECMs where measurable reductions in habitat loss and illegal activity can be demonstrated, with annual retargeting based on results	• MOE (lead agency managing PAs and MPAs) • MAFF (forestry and fisheries agencies managing community forests/fisheries, MFMAs and fisheries refugia as OECMs) • Local communities and IPLCs (co-management roles and stewardship) • Law enforcement (rangers, park authorities) • MOD (promote OECM activities within the army camps) • NGOs/CSOs and development partners (site-based work, technical support to policy and guideline development, data)
Target 4: Species and genetic conservation *(Halt species extinction, protect genetic diversity and manage human-wildlife conflict)*	4.1. Cambodia Species Index established and operational 4.2. The number of species stable or improving on the Cambodia Species Index of trends in populations of key terrestrial, freshwater and marine species	• Establish a national biodiversity inventory and monitoring framework covering species, genetic resources, habitats and ecosystems, including regular assessments of status and trends • Compile time-series monitoring data for indicator species across terrestrial, freshwater and marine systems and apply standardized modelling and meta-analysis to produce and document a composite species population trend index Cambodia Species Index • Develop and implement recovery plans for all priority threatened species, including targeted reintroductions where feasible	• MOE (wildlife conservation departments, PA authorities) • MAFF (FA for any remaining wildlife jurisdiction, domestic animal genetic resources) • Agriculture (gene banks for crops/livestock)

Target	Indicators	Strategic Action(s)	Key Institutions (and roles)
	4.3. Number of Species Conservation Action Plans for priority threatened species developed and implemented (incl. In-situ and Ex-situ) 4.4. National threatened species categories updated to align with the ENR Code (2023), while referencing IUCN Red List and CITES criteria	• Strengthen in-situ protection and complementary ex-situ safeguards such as captive breeding and gene banks for critically endangered taxa, including species-specific captive-breeding and reintroduction programs such as vultures • Prioritize prevention of irreversible loss including local extirpation and genetic erosion through refugia protection and targeted recovery actions, backed by ex-situ safeguards where needed • Address human-wildlife conflict through community-based conflict management and establish inter-agency One Health working groups to reduce pathogen spillover risk • Update legal and regulatory frameworks including wildlife law and protected species listings in line with IUCN and CITES categories • Promote research partnerships between MoE, MAFF and relevant international agencies to strengthen monitoring, recovery science and implementation	• Academic and zoo/research institutions (ex-situ programs, captive breeding, research) • MOH (zoonotic disease aspects) • NGOs/CSOs and development partners (site-based work, technical advice, data) • Private sector (breeding/seed, natural products, corporate support)
Target 5: Sustainable wildlife use and trade *(Sustainable use of wild species, benefit people/communities)*	5.1. Number of natural resources crime cases involving hunting brought to court 5.2. Number of cases for CITES Appendix I species in illegal trade reported 5.3. National One Health framework and integrated zoonotic surveillance system operationalized	• Strengthen enforcement against wildlife poaching and trafficking, and overall environmental crime, including bolstering ranger patrols, interdicting illegal wildlife trade (implementing CITES regulations), and prosecuting offenders (improve wildlife crime cases brought to court) • Promote sustainable harvesting programs for wild species used by communities, coupled with monitoring of harvest levels and adaptive quotas • Increase prey populations in key ecosystems (e.g., through hunting bans in core zones) to aid predator recovery • Establish community-based wildlife management and alternative livelihood options to reduce unsustainable offtake • Establish a legal framework on pathogen spillover and zoonotic diseases using the One Health approach • Focus enforcement and demand-reduction efforts on the highest-risk trade routes and priority species, measured by interdiction-to-prosecution conversion and crime network disruption • Strengthen existing mechanism of cross-provincial working groups by coordinating intelligence and operations along known trade routes, markets, transits, and restaurants • Form informant networks at village, district, and market levels to collect data on traders, middlemen, transport methods, seasonal trade	• MOE (enforcement inside PAs) • MAFF (enforcement outside PAs, CITES Management Authority, forestry/fisheries agencies for regulating harvest of wild plants and fish) • MOI (law enforcement, customs police for anti-poaching and trade control • MEF (link with Customs) • MOH (link ecosystem health to disease risk reduction) • MOFAIC (Legal document support) • Private sector (transport, e-commerce, traders, tourism, traceability) • Judiciary (courts to prosecute wildlife crimes) • NGOs/CSOs and development partners (site-based work, technical advice, data,

Target	Indicators	Strategic Action(s)	Key Institutions (and roles)
		patterns including information sharing between provinces through law-enforcement coordination units	awareness, community outreach, monitoring, enforcement support) • IPLCs (community surveillance, reporting)
Target 6: Invasive species control *(Identify and control major invasive species and pathways)*	6.5. Updated NISSAP to align with the ENR Code (2023) 6.6. Number of awareness-raising campaigns or educational programs, outreach on IAS 6.7. National inventory of IAS developed, regularly updated and disseminated 6.8. Number of initiatives, tools and other measures to mitigate IAS risks 6.9. Number of priority IAS eradicated or under effective control in priority sites	• Identify and prioritize IAS and their pathways, and develop a national IAS list and management guideline • Enact a comprehensive IAS policy and legislation to mandate prevention and control measures • Implement an early-detection and rapid-response system for new invasions – this has proven cost-effective • Carry out targeted eradication or control programs for priority IAS in sensitive sites (e.g., wetlands, islands) • Increase public awareness (e.g., education campaigns at borders and communities) on IAS prevention and management • Strengthen quarantine and phytosanitary measures to prevent introductions (e.g., stricter border controls for high-risk species) • Promote community businesses involved in collecting and processing their products from invasive species	• MOE (environmental protection and biodiversity department) • MAFF (Plant Protection and Quarantine, Fisheries for biosecurity at borders and agricultural pests • MEF (Customs Department to enforce import controls) • MOWRAM (rehabilitation and conservation of water-sources) • Research institutions (research, monitoring) • NGOs/CSOs and development partners (site-based work, technical advice, data)
Target 7: Pollution reduction *(Reduce pollution to safe levels in land, water & air)*	7.1. Number of awareness and engagement campaigns on pollution prevention 7.2. Reduction in solid waste 7.3. Water quality monitoring 7.4. Reduction in the use of hazardous chemicals harmful to biodiversity and the environment	• Strengthen pollution control regulations and their enforcement: for example, introduce bans or restrictions on single-use plastics and promote biodegradable alternatives to cut plastic pollution • Establish and enforce water quality standards (for freshwater and coastal waters) and improve monitoring (with education and enforcement programs) • Promote sustainable agricultural practices to reduce agro-chemical use (pesticides, herbicides, fertilizers) and run awareness campaigns for farmers on organic/eco-friendly alternatives • Implement nationwide pollution awareness programs targeting the public and industries (e.g., waste reduction campaigns, pollutant disposal training) • Encourage stakeholders (communities, businesses) to engage in pollution prevention initiatives (e.g., recycling programs, waste-to-energy projects)	• MOE (General Directorate of Environmental Protection for pollution control, water quality monitoring) • MISTI (industrial pollution regulation) • MAFF (regulation of agricultural chemicals) • MPWT (waste management infrastructure) • MOWRAM (water quality monitoring, basin -level pollution management, and prevention of water pollution for point sources and non-point

Target	Indicators	Strategic Action(s)	Key Institutions (and roles)
			sources in freshwater ecosystems) • NGOs/CSOs and development partners (technical advice) • Private sector (industry, agribusiness inputs, waste/recycling, wastewater)
Target 8: Climate change resilience *(Enhance biodiversity & ecosystem resilience to climate change)*	8.1. Incorporate good and/or improved forest management practices to enhance forest carbon stocks as well as ecosystem integrity 8.2. Number of initiatives that explicitly integrate biodiversity conservation into climate change mitigation and adaptation (e.g., REDD+, NbS, EbA, and landscape-based approaches 8.3. Net emissions from land use and land-use change are declining and in line with Cambodia's NDC 8.4. Percentage of forest loss 8.5. Number or percentage of river basins, wetland and flood prone areas where flood and drought risk management measures are integrated to support ecosystem and biodiversity resilience	• Implement NbS for climate adaptation and mitigation – for example, restore mangroves and seagrass beds to protect coasts and store carbon (as emphasized in Cambodia's climate NDC) • Integrate biodiversity conservation into climate policies and action plans (e.g., include ecosystem-based adaptation in national climate strategies) • Expand ecosystems' role in DRR by protecting and restoring natural buffers (wetlands for flood control, forests for slope stabilization), integrating basin-level flood and drought risk management measures, and integrating these into disaster management plans • Strengthen collaboration between climate and biodiversity initiatives (e.g., align 2026 NBSAP targets with NDC 3.0 (2025) commitments on NbS) to regularly update carbon sequestration inventories and ensure biodiversity is part of climate reporting • Promote renewable energy and low-carbon development to reduce pressure on ecosystems (with safeguards for biodiversity in renewable projects) • Ensure NbS investments are screened for biodiversity outcomes and avoid sites where continued habitat loss would negate climate and biodiversity benefits • Promote climate-smart and sustainable agricultural practices that build climate resilience, increase mitigation, and improve food security • Restore degraded ecosystems to improve carbon storage and biodiversity outcomes • Develop new REDD+ and other results-based projects	• MOE (NCSD/Climate Change Department for NbS and climate policy integration) • National Committee for Disaster Management (DRR programs using ecosystems) • MOWRAM (flood and drought management, hydro-meteorological data, early-warning systems) • MAFF (climate-smart agriculture aligning with biodiversity) • NGOs/CSOs and development partners (site-based work, technical advice, data) • Private sector (finance/insurance, climate-smart production, resilient infrastructure, carbon)
Target 9: Manage wild species sustainably *(Ensure wild species use is sustainable & benefits local communities)*	9.1. Number of CPAs, CFs, CFis (or households) receiving sustainable and inclusive alternative livelihoods	• Empower communities in sustainable use of biodiversity: expand and strengthen CPAs, Community Forests, and Community Fisheries with co-management agreements, alternative livelihood support, and benefit-sharing (e.g., ecotourism revenue-sharing, PES)	• MOE (CPAs in PAs) • MAFF (Community Forestry (FA) & Fisheries (FiA) • MRD (community livelihood development)

Target	Indicators	Strategic Action(s)	Key Institutions (and roles)
	9.2. Number of community-based sustainable wild species harvests with management plans 9.3. Number of legal frameworks on sustainable cultivation, use and trade of fauna and flora developed and adopted 9.4. Population trends in Cambodia Species Index for species in cultivation or used stable or increasing	• Provide training and resources for IPLCs to manage wild resources sustainably and develop biodiversity-friendly enterprises • Develop and disseminate guidelines for sustainable harvest of wild plants and animals (NTFPs, bushmeat, etc.) and ensure local compliance • Legally recognize community conservation and tenure rights, enabling communities to enforce rules and benefit from conservation • Establish a comprehensive policy or law on sustainable use and conservation of wild fauna and flora (covering quotas, seasons, permitting) • Monitor species used by humans (via the Cambodia Species Index) to ensure use is within sustainable limits (populations stable or increasing)	• MOT (tourism-linked livelihood alternatives) • MOWRAM (farmer water-user communities) • Local community institutions (CPA committees, forestry and fishery communities, implementation with NGO support) • NGOs/CSOs and development partners (site-based work, technical advice, data)
Target 10: Sustainable production *(Adopt sustainable practices in agriculture, aquaculture, forestry & fisheries)*	10.1. Percentage of total agricultural area under conservation agriculture/ sustainable/ agroecological practices 10.2. Number of biodiversity-friendly value chains promoted and certified 10.3. Number of CBOs supplying products to biodiversity-friendly value-chains 10.4. Proportion of production forest under sustainable management	• Promote nature-positive production systems in farming, aquaculture, and forestry – integrate wildlife-friendly, deforestation-free supply chains, agroforestry corridors, and biodiversity-friendly farming practices into local economies • Scale up agroecological approaches (organic farming, integrated pest management) to reduce chemical use and improve soil biodiversity • Certify and support sustainable products (e.g., eco-certification for rice, timber, fish) to create market incentives • Encourage jurisdictional "zero-deforestation" agreements that align producers, buyers, and local authorities to maintain natural habitats • Enhance sustainable fisheries by expanding community fisheries and fish conservation zones • Ensure that a significant share of agricultural and forest areas are under verified sustainable management by 2030 • Reinforce collaboration across government, communities, and partners to manage biodiversity and local livelihoods effectively • Implement "Green Army Camps" by introducing nature-positive agriculture and aquaculture on bases, training military families in IPM and organic inputs, and form producer cooperatives to market deforestation-free products	• MAFF (lead agency for agriculture and fisheries sustainability, forestry management) • MOE (integration of biodiversity into sectoral policies, e.g., EIA for agriculture projects) • MOWRAM (water allocation and efficiency use) • MOD (develop "Green Army Camps") • Certification bodies (e.g., Forestry Stewardship Council) • Private sector and community producer groups (agribusiness, plantations) • Provincial governors and local authorities (subnational implementation, compliance monitoring, local land-use planning and enforcement)

Target	Indicators	Strategic Action(s)	Key Institutions (and roles)
			• NGOs/CSOs and development partners (site-based work, technical advice, data)
Target 11: Ecosystem services & livelihoods *(Protect and restore ecosystem services that support people's livelihoods and disaster risk reduction)*	11.1. Number of sites where restored/ maintained ecosystem services provide socio-economic benefits 11.2. Number of watershed protection measures implemented 11.3. Number of deaths and directly affected persons attributed to disasters 11.4. Reduction in disaster losses in communities implementing eco-DRR/NbS	• Implement ecosystem-based approaches for disaster risk reduction and livelihood (e.g., restore and protect critical watersheds such as Tonle Sap and Mekong to improve water regulation and quality • Use wetlands, mangroves, and forests as natural infrastructure to mitigate floods, droughts, and coastal storms, thereby reducing disaster impacts on communities • Promote ecosystem service valuation and incentives – identify sites where restored or conserved ecosystems provide direct socio-economic benefits (flood protection, fisheries productivity, pollination, disease regulation) and ensure those benefits reach local people • Integrate these NbS into development planning (so that hazard mitigation and public health strategies include ecosystem conservation) • Monitor and maintain nature's contributions (e.g., track water quality and disaster loss reductions as indicators of success) • Diversify livelihood options for local communities to reduce dependence on forest resources • Improve local revenue generation and financial sustainability through: (1) entrance fees and service charges, (2) revenue-sharing agreements, and (3) transparent financial management systems • Strengthen Indigenous Peoples committees' capacity to promote customary knowledge and culture that support the sustainable use and management of natural resources • Support indigenous communities to develop, adopt and implement internal regulations for land use and management of IPLCs	• MOE (integration of ecosystem-based solutions into environmental planning) • MOWRAM (watershed and water quality management) • National Committee for Disaster Management (promoting ecosystem-based DRR in local disaster plans) • MOH (link ecosystem health to disease risk reduction) • MRD (mainstream NbS into rural development planning and community infrastructure) • Local authorities and communities (implementing NbS at community level) • MOT (ecotourism in PA) • NGOs/CSOs and development partners (site-based work, technical advice, data)
Target 12: Urban biodiversity *(Improve biodiversity in urban areas and green/blue spaces)*	12.1. Number of Districts with biodiversity and NbS-inclusive urban plans 12.2. Percentage of urban population with access to green/blue spaces within 30-minute walk 12.3. Number of green/ blue spaces developed in urban areas	• Promote urban green and blue infrastructure development: establish more parks, urban forests, wetlands, and green corridors in cities to improve connectivity and public access to nature • Mandate biodiversity-inclusive urban planning – incorporate NbS into city master plans (e.g., floodplain parks, tree-lined roads, wildlife-friendly design standards) • Implement urban biodiversity initiatives such as city-level greening programs, rooftop gardens, and restoration of urban wetlands	• MLMUPC (lead for urban/spatial planning guidelines) • Municipal and city governments (implementing urban greening projects) • MOE (providing guidelines on urban biodiversity, environmental impact

Target	Indicators	Strategic Action(s)	Key Institutions (and roles)
	12.4. Number of green-urban infrastructure projects integrating biodiversity-friendly design	• Engage citizens in urban biodiversity monitoring and stewardship (e.g., support citizen science programs as noted in urban NbS plans) • Ensure inter-agency coordination so that urban development and land-use plans by municipalities integrate green space targets	assessments for urban expansion) • MPWT (incorporating green design in infrastructure) • NGOs/CSOs and development partners (technical advice) • Private sector (developers, utilities, green infrastructure supply)
Target 13: Access & Benefit-Sharing *(Implement ABS policies and Nagoya Protocol mechanisms)*	13.1. Number of access permits issued for genetic resources and associated TK 13.2. Number of community protocols or guidelines for FPIC/TK protection 13.3. Number of national ABS policies, guidelines, tools and administrative measures developed 13.4. Number of ABS capacity programs and awareness materials disseminated	• Strengthen the ABS legal framework in line with the Nagoya Protocol: develop or update national ABS legislation, regulations, and administrative measures • Establish clear procedures for access permits to genetic resources and associated TK, ensuring FPIC of IPLCs and protection of their rights • Build capacity and raise awareness on ABS – conduct training programs and disseminate materials so that stakeholders (communities, researchers, private sector) understand ABS processes • Protect TK by supporting community protocols and legal measures, and ensure fair, localized benefit-sharing from any bio-prospecting or biotechnology that uses genetic resources • Develop bio-prospecting partnerships that provide monetary or non-monetary benefits back to provider communities	• MOE (CBD/ABS National Focal Point, ABS policy, permit system, compliance and coordination) • MAFF (plant/animal genetic resources in agriculture) • MISTI (biotechnology oversight) • MCFA (TK aspects) • MOC (on production of goods from plants and animals) • MOWRAM (farmer water-user communities) • IPLC representatives (TK governance, FPIC, benefit sharing engagement) • Private sector (biotech/pharma/cosmetics, research partnerships, compliance)
Target 14: Mainstreaming biodiversity *(Integrate biodiversity in all sectoral policies and plans)*	14.1. Number of sectoral policies, regulations, planning and decision-making processes incorporating biodiversity values 14.2. Biodiversity mainstreamed into national budgeting and public investment systems	• Embed biodiversity in all sectoral policies and plans (mainstreaming): ensure that national and sectoral development plans (agriculture, forestry, fisheries, mining, infrastructure, education, etc.) systematically integrate biodiversity considerations • This includes incorporating natural capital values into planning and budgeting processes and aligning financial flows with biodiversity objectives	• MOE (coordination across sectors) • MOP (include biodiversity in NSDP (2019-2023) • MEF (integrate natural capital accounting in budgeting)

Target	Indicators	Strategic Action(s)	Key Institutions (and roles)
	14.3. Percentage of public and private investment projects requiring ESIA that complete documented FPIC or stakeholder consultation processes 14.4. National ecosystem services valuation reports available and updated for government agencies to integrate into their planning process 14.5. Number of sector policies and plans in water and climate sector that integrate biodiversity considerations into river basin planning, flood management and drought responses	• Strengthen requirements for environmental impact assessments and strategic environmental assessments so that biodiversity risks are accounted for in project and policy approvals (with "no go" zones for critical habitats) • Promote cross-sector coordination (e.g., MOE with finance, planning, sectoral ministries) to reduce policy conflicts and ensure biodiversity goals are shared • Implement training for decision-makers on biodiversity values and require FPIC for projects affecting IPLCs • Regularly review and update sector plans to track integration of biodiversity (e.g., number of ministries using ecosystem service valuation in their reports) • Integrated biodiversity considerations into river basin plans, water infrastructure planning, and climate adaptation strategies, consistent with IWRM principles	• MOEYS (schools' curriculum and activities on cleaning); • MOT (Green Tourism and Ecotourism Policy) • MOWRAM (integration of biodiversity into water resources and climate related principles and plans) • Sectoral ministries (Agriculture, Fisheries, Tourism, Mining, Energy, etc.) aligning their policies • Private sector companies and banks (adopting biodiversity safeguards and risk management)
Target 15: Business impacts *(Reduce negative impacts from business/investment)*	15.1. Number of businesses publishing sustainability reports disclosing biodiversity risks and impacts 15.2. EIA processes strengthened, including compensatory/corrective measures 15.3. Percentage of PAs with EIAs/SEAs completed for high-risk investments 15.4. STAR metric applied to assess business-related biodiversity impacts 15.5. Number of policies and incentives for environmental or biodiversity-inclusive business practices	• Strengthen environmental assessment and permitting for development projects – require rigorous EIAs and SEAs that include biodiversity risk assessment, and enforce measures like offsets or compensatory restoration for any residual impacts • Introduce policies that require companies to monitor and disclose their biodiversity footprint (e.g., in annual sustainability reports) • Encourage and incentivize biodiversity-friendly business practices (e.g., certification schemes, sustainable sourcing standards, and corporate biodiversity action plans • Develop market-based and fiscal incentives such as tax breaks for companies investing in conservation, or public recognition for biodiversity leaders • Promote the use of metrics like the STAR to quantify and reduce business impacts on biodiversity • Foster public-private partnerships where businesses support conservation (conservation banking, habitat restoration projects) to offset their impacts • Develop market-based social, environmental, and biodiversity safeguard policies, regulations, and guidelines to encourage	• MOE (enforcing EIA law and developing corporate disclosure guidelines) • CDC (investment facilitation and private sector engagement) • MOC and MISTI (engaging industries in sustainability standards) • MEF (designing tax or fiscal incentives for green practices) • Business associations and chambers (adopt and promote biodiversity risk management) • NGOs/CSOs and development partners (technical advice) • Private sector (safeguards, disclosure, certification, finance screening)

Target	Indicators	Strategic Action(s)	Key Institutions (and roles)
		biodiversity-inclusive businesses to access an evolving international market	
Target 16: Sustainable consumption *(Reduce waste and over-consumption by ≥ 30%)*	16.1. Recycling rates increased 16.2. Number of deforestation-free, wildlife-friendly and sustainably sourced products available to consumers 16.3. Number of innovative technologies and best practices to reduce waste and consumption developed and implemented 16.4. Percentage of businesses adopting circular economy practices (e.g., waste-to-resource initiatives, extended producer responsibility programs) 16.5. Number of government policies promoting sustainable consumption (e.g., tax incentives for waste reduction, eco-labeling programs)	• Promote sustainable consumption and waste reduction through public campaigns and education – encourage consumers to minimize single-use plastics, waste, and unsustainable products • Increase recycling and circular economy initiatives: expand recycling facilities and programs, and encourage businesses to adopt waste-to-resource practices (e.g., incentivize companies to implement take-back schemes or upcycling) • Introduce and support eco-labeling and certification for products that are deforestation-free, wildlife-friendly, and sustainably sourced, making it easier for consumers to choose green products • Develop government policies and incentives to shift consumption patterns (e.g., tax incentives for products or businesses that reduce waste, subsidies for clean technology, and stricter regulations on excessive packaging) • Encourage innovation in retail and product design to cut waste (e.g., refill systems, biodegradable materials) • Reduce waste and overconsumption from the 2025 baseline through these measures	• MOE (lead agency for waste management policy and awareness campaigns) • MOC (promoting and regulating eco-labeled products in the market) • MEF (tax incentives and subsidies for sustainable products/practices) • MISTI (support for circular economy tech and standards) • Consumer protection agencies and civil society (encourage behavior change) • Private sector (retail/brands, packaging, circular services, take-back)
Target 17: Biosafety & biotechnology *(Strengthen biosafety regulations, participation & benefit sharing)*	17.1. Number of biosafety programs and awareness-raising initiatives implemented 17.2. Number of biosafety legal frameworks and supporting document updated or adopted 17.3. Number of institutions and biotech companies complying with biosafety protocols/legal frameworks 17.4. Capacity and effectiveness of biosafety governance	• Establish and enforce a biosafety framework – develop comprehensive biosafety legislation and regulations (if not already in place) that cover GMO use, handling, transport, and research • Set up or strengthen the National Biosafety Authority/Focal Point and technical working group, clarifying roles of various ministries and checkpoints (customs, quarantine) • Implement biosafety capacity-building and awareness programs for researchers, border officials, and the public, to ensure safe biotechnology practices and understanding of regulations • Monitor and ensure compliance from public research institutions and private biotech companies with biosafety protocols (e.g., containment measures, risk assessments) • Develop mechanisms to share benefits from biotechnology innovations (linking with ABS under Target 13)	• MOE (National Biosafety focal point under the Cartagena Protocol, coordinating biosafety policy) • MAFF (regulation of GMOs in agriculture, quarantine inspections) • MOH (biosafety for medical biotechnology) • MOEYS (research institutions' compliance) • MEF (Customs and border control agencies to enforce

Target	Indicators	Strategic Action(s)	Key Institutions (and roles)
	structures assessed and strengthened		import/export rules on GM materials) • Private sector (biotech/agritech, labs/importers, traceability)
Target 18: Incentive reform *(Phase out harmful subsidies; scale up positive incentives)*	18.1. Number of nationally recognized biodiversity-positive incentive mechanisms with implementation at national or sub-national level 18.2. Number of sectoral incentives or policy frameworks that address potential negative impacts on biodiversity	• Identify and reform harmful subsidies and incentives – for example, review subsidies in sectors like agriculture, fisheries, forestry, energy that drive habitat loss or overuse, and redesign or phase them out • Concurrently, introduce or expand positive incentives for conservation (e.g., PES schemes, tax credits for sustainable farming or forestry, grants for community conservation initiatives, and eco-certification programs that reward biodiversity-friendly practices) • Ensure that new incentive programs are well-targeted and monitored for effectiveness • Encourage the private sector through green finance mechanisms (like conservation trust funds, biodiversity offsets, green bonds) that make conservation financially attractive • Incorporate social safeguards (e.g., ensure reforms recognize IPLCs' rights and include them in benefit-sharing) • Reduce or eliminate major incentives harmful to biodiversity, re-directing those resources to positive conservation incentives	• MEF (lead on subsidy review/reform and fiscal incentive programs) • MOE (identifying harmful incentives and designing PES/positive incentive schemes) • Sectoral ministries (implement changes in their subsidy programs) • Financial institutions (banks and funds supporting green financing) • Private sector (affected sectors, business associations, green finance shift)
Target 19: Biodiversity finance *(Secure funding for 2026 NBSAP implementation)*	19.1. Percentage increase in non-national budget funds (i.e., private, NGO, and development partners) mobilized for the development and implementation of 2026 NBSAP targets 19.2. Percentage increase in national budget allocated to biodiversity and 2026 NBSAP 19.3. Value of investments in biodiversity-friendly activities	• Increase domestic funding for biodiversity: secure higher annual budget allocations from the government for 2026 NBSAP activities (aim for a significant rise over current levels) • Develop and scale innovative financing mechanisms (e.g., implement PES schemes, issue green bonds, pursue debt-for-nature swaps, and pilot biodiversity credit programs to attract private and international funding) • Strengthen public-private partnerships and encourage private sector contributions (e.g., conservation trust funds, corporate social responsibility investments in conservation) • Access international finance by developing high-quality project proposals for donors, GEF, GCF, etc. • Ensure that by 2030, all 2026 NBSAP targets have dedicated funding streams and that key conservation areas (PAs/OECMs) have sustainable financing plans in place • Pursue new and additional philanthropic/private-sector funding opportunities	• MOE (lead agency for 2026 NBSAP implementation, coordinates funding mechanisms) • MEF (increase national budget and facilitate innovative finance • Development partners and international donors (finance, technical assistance, catalytic/blended funding) • Private sector (banks/investors, market mechanisms, PES/blended finance) • CDC (facilitate investment and development)

Target	Indicators	Strategic Action(s)	Key Institutions (and roles)
	19.4. Number and value of projects financed via innovative mechanisms		• MOP (integrating biodiversity in development financing) • NGOs/CSOs and development partners (site-based work, technical advice, data)
Target 20: Capacity & cooperation *(Enhance technical capacity and collaboration for biodiversity)*	20.1. Number of national capacity-building programs on biodiversity science, technology and cooperation implemented and evaluated 20.2. Number of KAP surveys conducted 20.3. Number of CEPA programs implemented 20.4. Number of biodiversity monitoring/conservation tools and technologies transferred or operational 20.5. Number of joint R&D projects producing outputs or applied tools	• Implement comprehensive capacity-building programs for biodiversity at national and sub-national levels – train government staff, rangers, community leaders, and young professionals in conservation skills, biodiversity monitoring, and project management • Launch CEPA initiatives to foster broader public and stakeholder understanding of biodiversity (workshops, school curricula, media) • Establish a Center of Excellence for Biodiversity research and development to facilitate technology transfer and scientific cooperation • Promote joint research projects between Cambodian and international scientists (and with IPLCs incorporating TK) (e.g., on species inventories, ecosystem mapping, and conservation technologies) • Facilitate access to modern tools (GIS, remote sensing, DNA analysis, etc.) and ensure they are adopted in country • Build human and technical capacity to enable effective implementation of all 2026 NBSAP actions • Provide capacity building and training on community-based monitoring, citizen science, and data analysis for 2026 NBSAP monitoring and reporting • Strengthen coordination platforms by moving from ad-hoc to structured cooperation through strengthening Provincial Steering Committees and relevant Technical Working Groups and by sharing progress, challenges, and lessons learned	• MOE (capacity-building programs and international cooperation) • MAFF (capacity-building programs) • MOEYS for research and higher education partnerships • Universities and research institutes (training and applied research) • International conservation NGOs and research partners (technology transfer and training) • IPLC organizations and CSOs (training community members in biodiversity skills) • PDOE, Provincial Governor Office, other provincial agencies, and District Governor Office (sub-national capacity building, coordination and implementation support)
Target 21: Biodiversity information system *(Establish comprehensive biodiversity data and sharing platform)*	21.1. CEMIS established, interoperable, functioning and accessible to all stakeholders 21.2. Number of biodiversity records/datasets updated, verified and shared via CEMIS	• Establish and operationalize CEMIS as the central biodiversity database • Populate CEMIS with up-to-date, verified biodiversity data (species occurrences, ecosystem maps, etc.) and continuously update it • Develop a national data-sharing policy and standards to ensure all biodiversity data collected (by government, researchers, NGOs) are deposited in CEMIS and also shared to global platforms like GBIF	• MOE (host and manage CEMIS) • Relevant line ministries and universities (data providers to feed data into CEMIS) • NCSD (integrate data into national reporting) • International platforms (interoperability, e.g., GBIF)

Target	Indicators	Strategic Action(s)	Key Institutions (and roles)
	21.3. Number of awareness and education programs using CEMIS products 21.4. Percentage of biodiversity datasets interoperable with regional/global platforms	• Institutionalize CEMIS use – require that 2026 NBSAP monitoring and reporting draw from CEMIS, and that agencies contribute data to it • Add functionality to CEMIS to document traditional knowledge and community-generated data to support 2026 NBSAP monitoring and reporting (i.e., a Citizen Science Knowledge Hub) • Enhance public access: create user-friendly tools and dashboards so that policymakers, researchers, and communities can retrieve information for decision-making • Conduct outreach and training so stakeholders know how to use and contribute to CEMIS	• NGOs/CSOs and development partners (technical advice, data)
Target 22: Participation & justice *(Ensure participation in decision-making and access to justice and information related to biodiversity)*	22.1. Percentage of governance and decision-making processes that have IPLCs, women, youth and people with disabilities representation 22.2. Number of policies or initiatives recognizing and applying TK with active IPLC participation 22.3. Number of plans/processes led by or co-developed with IPLCs and formally adopted 22.4. Number of grievance mechanisms established in PAs and other projects related to 2026 NBSAP implementation	• Institutionalize inclusive governance mechanisms for biodiversity: ensure IPLCs, women, youth, and disabled groups have seats or representation in decision-making bodies (e.g., national biodiversity committees, PA co-management boards) • Establish or strengthen platforms for public participation and access to information (e.g., regular stakeholder forums, citizen councils, or online portals where communities can input into biodiversity plans) • Recognize and integrate TK: develop policies or guidelines so that customary practices and knowledge of IPLCs are respected and inform conservation (e.g., community rules included in management plans) • Remove barriers to justice by implementing and enforcing legal rights to information and participation (e.g., Access to Information laws, and ensuring environmental grievance mechanisms are accessible to local communities) • Build capacity of underrepresented groups (through training in leadership and technical skills) to effectively participate • Promote public access to biodiversity data for informed decision-making, which goes hand-in-hand with including these groups in decisions • Develop communication tools to educate and raise awareness among IPLCs, women, youth, and people with disabilities • Establish a Citizen Science Partnership for Biodiversity Conservation to advance recognition of citizen science knowledge and data in biodiversity monitoring and governance	• MOE (ensuring participatory processes in environmental governance) • MRD (engagement with Indigenous and local communities) • MOWA (mainstreaming gender in environment) • MOI (decentralization and community representation in local governance) • MOSVY (children and youth participation considerations) • CSOs (facilitating community participation and legal empowerment)

Target	Indicators	Strategic Action(s)	Key Institutions (and roles)
Target 23: Gender equality *(Ensure Gender Equality and Social Inclusion in biodiversity action)*	23.1. Percentage of women in CPA, CF and CFi committees and other leadership roles in biodiversity governance 23.2. Percentage of women engaged in biodiversity-related education, training and capacity-building programs 23.3. Number and percentage of biodiversity projects that are gender-responsive 23.4. Number of capacity-building manuals/guidelines/roadmaps developed and operationalized for women leaders and key agents	• Mainstream gender equality in all biodiversity programs: set and enforce targets or quotas for women's representation in environmental decision-making bodies (community committees, technical working groups, leadership positions) • Build the capacity of women and girls through targeted training, education, and funding so they can effectively participate and benefit from biodiversity initiatives • Develop programs to train women in conservation leadership and provide small grants for women-led conservation enterprises (addressing the identified need for more women-led initiatives and access to funding) • Ensure that biodiversity projects are gender-responsive – use tools like SAGE or similar to design projects that consider gender-differentiated impacts and benefits • Establish a standardized sex-disaggregated reporting template across MOE, MAFF, and community governance structures and collect sex-disaggregated data and undertake periodic gender assessments/audits to evaluate progress, barriers and corrective actions • Conduct a baseline gender assessment/audit of biodiversity governance and practices and repeat periodically; establish a standardized sex-disaggregated reporting template across MoE/MAFF/community governance structures; and include a brief, regular narrative on challenges and improvements in NBSAP implementation reporting. • Secure women's land and resource rights in conservation areas (aligning with broader land rights efforts under Target 22) • Develop capacity-building manuals/guidelines/roadmaps for women and run training on them	• MOE (NBSAP lead implementation, ensuring gender criteria are met) • MOWA (gender mainstreaming and women-focused programs) • MLMUPC (women's land/resource rights) • NGOs and CBOs (community level empowering and inclusion) • All biodiversity-related institutions (women's inclusion in committees and staffing)

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Part V – Monitoring, Evaluation and Reporting

5.1 Monitoring and Indicators

Monitoring and evaluation are central to making the 2026 NBSAP an operational instrument rather than a static policy document. Cambodia will track both the implementation of actions and the resulting status and trends of biodiversity, using the agreed national framework of 23 Cambodia Targets and their associated indicators. This framework, together with the detailed Results Framework (Table 32), provides the primary reference for monitoring 2026 NBSAP implementation and is aligned, as far as possible, with the KM-GBF indicators and with relevant national indicators under NDC 3.0 (2025) and other strategies. In this way, a single, coherent set of indicators supports reporting to the CBD, the UNFCCC and other multilateral environmental agreements, avoiding duplication and improving consistency.

The 2026 NBSAP monitoring system distinguishes between two broad types of indicators. The first are performance or implementation indicators, which describe inputs, processes and outputs such as budget allocations, staff trained, plans adopted, or hectares restored. These indicators are largely derived from data routinely collected by line ministries, sub-national administrations, and implementing partners, and are reflected in the Implementation Action Plan (Table 31, Section 5.5). The second category comprises outcome and impact indicators, which track the condition of species, ecosystems and ecosystem services, as well as social and economic outcomes such as livelihoods, equity and participation. These outcome indicators correspond directly to the national targets and, where possible, to KM-GBF headline or component indicators. Together, the two categories make it possible to link what is being done to the changes observed in biodiversity and in people's well-being.

The 23 Cambodia Targets each have a defined set of indicators, baselines and 2030 end targets as detailed in the Results Framework (Table 32). For each Target, the Results Framework and the Implementation Action Plan (Table 31, Section 5.5) link the approved indicators to specific strategic actions and to the agencies responsible for implementation. This ensures that every major action can be traced back to one or more indicators and that each indicator has clear institutional "owners" responsible for data provision, quality control and interpretation. Where relevant, indicators are also aligned with national climate indicators under NDC 3.0 (2025) (e.g., for NbS, land-use related greenhouse gas inventories and eco-DRR), so that the same data streams support both biodiversity and climate reporting.

Cambodia's monitoring architecture builds on the arrangements established under the 2016 NBSAP but is updated to reflect the enhanced transparency and review mechanism agreed at COP 15. MOE working through the BTWG and relevant inter-ministerial mechanisms, will coordinate monitoring, evaluation and reporting for the 2026 NBSAP. Line ministries such as MAFF, MEF, MISTI, MOEYS, MOWA and sub-national administrations will collect and report data for the indicators that fall within their mandates. Civil society, academic institutions, private sector actors and IPLCs will contribute data and knowledge, particularly for community-based conservation, TK, business and biodiversity, and gender and social equity. There is a dedicated reporting template that organizations, line agencies, and sub-national governments undertaking activities will fill annually to track progress (Annex 4).

Data management and transparency are underpinned by CEMIS, which serves as the national clearinghouse for environmental and biodiversity information. As described in the knowledge management section (Section 4.3.2 and Figure 11), CEMIS will host core datasets for the 2026 NBSAP indicators, including species records, ecosystem maps, land-cover and land-use change, PA and OECM statistics, pollution and climate-related variables, as well as socio-economic and governance indicators where appropriate. Over time, the system will be progressively integrated with sectoral databases and with community-based monitoring tools and will be made interoperable with regional and global platforms (e.g., GBIF and ASEAN mechanisms), allowing Cambodia to meet the KM-GBF expectation for open and accessible biodiversity information.

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Monitoring will be continuous where feasible, with different indicators updated at different intervals depending on data availability and cost. Many implementation indicators (e.g., budget execution, number of plans adopted, area under restoration) can be updated annually from administrative records and project reports. Outcome indicators such as forest cover, ecosystem extent, key species populations, water quality or disaster impacts will typically be updated every two to five years, drawing on remote sensing, field surveys and statistical data. Knowledge, attitude and practice (KAP) surveys and other social indicators will be repeated periodically to track changes in awareness, participation and equity. For each indicator, the results framework specifies the indicator name, definition, baseline year, data source, methodology, frequency of measurement, responsible institution and 2030 end target (Table 32).

Reporting will occur at several levels and timescales. At the national level, the MOE will coordinate the preparation of 2026 NBSAP implementation progress reports every 12 months, using the indicators and agency-level information from the Implementation Action Plan (Table 31) and the Results Framework (Table 32). These reports will support national policy reviews, budget discussions and communication with the public. At the international level, the same indicator framework will underpin Cambodia's national reports under the CBD and will also contribute to reporting under NDC 3.0 (2025), the SDGs and other relevant agreements. In line with the KM-GBF's enhanced review mechanism, Cambodia will participate in the global stock take of biodiversity progress by providing standardized indicator data and narratives on implementation challenges and lessons learned.

Adaptive management is built into the monitoring and indicators system. Regular review of indicator trends and implementation performance will inform adjustments to actions, institutional arrangements and, where necessary, to the targets themselves. Mid-term reviews during the 2026–2030 period will examine whether the chosen measures are delivering the expected changes at reasonable cost, and will identify where additional efforts, new partnerships or different approaches are required. In this way, monitoring is not an end but a tool for learning and course correction, ensuring that the 2026 NBSAP remains responsive to emerging threats, new opportunities and the evolving scientific and socio-economic context.

Some baseline values not reported here will be updated for the Cambodia's Seventh NR to CBD.

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Table 32. *Results Framework for 2026 NBSAP*

Indicator Name[3]	Definition / Description	Data	Data Source	Data Collection Method	Institutions	Baseline[4]	End target (2030)
Target 1: Spatial planning and management *(Manage all areas to reduce biodiversity loss)*							
1.1. Number of biodiversity-inclusive spatial plans that are developed or updated	Count of approved land-use master plans that explicitly identify areas of high biodiversity importance, include measures to avoid or minimize habitat loss, and are under implementation	Annual	Official land-use master plan from MLMUPC, MoE, MAFF	Review of approved plans against a biodiversity-inclusion checklist; extraction of plan status (approved / under implementation); Comparison of plan coverage with conservation areas	Lead: MLMUPC Support: MAFF, MoE	[TBD] LUMP (2025)	At least 40 LUMP
1.2. All high-biodiversity areas identified and mapped	Indicator showing whether all nationally agreed "areas of high biodiversity importance" (e.g., important wetlands, critical habitats) are mapped and available	2029	National ecosystem mapping; CEMIS, ELSA files	Consolidation of existing KBAs, IBAs, ecosystems, PA and species data; production of a national map layer; expert validation	Lead: MOE Support: MAFF, universities, CEPF; NGOs	0% of KBA network (2025) [Other high-biodiversity areas TBD]	100% of KBA network updated. 100% of other high-biodiversity areas
1.3. Percentage of important high-biodiversity areas under biodiversity-inclusive spatial plans	Proportion of KBAs covered by spatial plans that explicitly recognize and manage them for conservation and sustainable use	2029	Overlays of high-biodiversity maps and spatial plans; CEMIS	GIS overlay analysis of high-biodiversity layers with approved plans; calculation of area coverage	Lead: MOE, MLMUPC	[Baseline TBD]	At least 50%
Target 2: Ecosystem restoration *(Restore 30% of degraded ecosystems)*							
2.1. Number of ecosystem restoration policies/ strategies and tools established	Number of formally adopted policies, strategies, guidelines or technical tools to support planning and implementation of ecosystem restoration	2029	Legal and policy gazettes; MOE, MAFF policy records	Legal/policy review to identify and classify restoration-relevant instruments; update every two years	Lead: MOE Support: MAFF	[Baseline TBD]	A restoration policy framework in place
2.2. A national ecosystem map or database showing areas needing restoration	An interoperable national ecosystem geodatabase that classifies terrestrial, freshwater, coastal and marine ecosystem types, and maps degraded ecosystems and restoration priority areas using an agreed national typology aligned with global standards (including the IUCN Global Ecosystem Typology), with scope to link over time to ecosystem risk assessment (national Red List of Ecosystems) and restoration planning	2 yearly	National ecosystem and land-cover datasets, CEMIS, remote sensing products, ELSA and other prioritization analyses, PA zoning layers	Compile and harmonize existing ecosystem and land-cover layers, classify ecosystems using the agreed typology, apply degradation and restoration-priority criteria using remote sensing and available field information, validate through expert review, publish versioned datasets and metadata	Lead: MOE Support: MAFF, universities, NGOs, development partners	None	A national ecosystem geodatabase is established and operational
2.3. Number of ecosystem restoration projects (incl.	Count of restoration projects (public, community, private, donor) that meet national criteria for ecosystem	Annual	Project registries (MOE, MAFF); donor databases; CEMIS	Compilation of project lists; verification of restoration component; classification by	Lead: MOE Support: MAFF, development partners	[Baseline TBD]	50% increase on 2025 baseline

[3] See Table 31 for full indicator name.

[4] Those baselines enclosed by square brackets are to be updated and reported in the Seventh NR to the CBD.

Indicator Name[3]	Definition / Description	Data	Data Source	Data Collection Method	Institutions	Baseline[4]	End target (2030)
private/development partner involvement)	restoration (forests, wetlands, mangroves, reefs, etc.)		MOP records the number of projects shared by all ministries.	ecosystem and financing source	PIP from MOP Conservation NGOs.		
2.4. Percent of degraded terrestrial, inland water, marine and coastal ecosystems under restoration	Total area of degraded terrestrial, freshwater, coastal and marine ecosystems identified in 2.1 above under active, documented restoration (natural regeneration plus assisted measures) in line with national restoration guidelines	Annual	Restoration project reports; PA and CF/CPA/CFis records; remote sensing (forest, wetlands, mangroves); CEMIS	Compilation of project and PA reports; GIS/remote sensing analysis to map restored areas; periodic field verification in sample sites	Lead: MOE Support: MAFF, MRD, development partners	[Baseline TBD]	At least 30%
Target 3: Conserve land, waters and seas *(Conserve ≥ 30% of terrestrial and inland water areas; ≥ 10% of marine and coastal areas)*							
3.1. Percentage of terrestrial and inland water area in PA and OECMs system	Percentage of Cambodia's total terrestrial and inland water area that is within legally designated PAs and formally recognized OECMs, based on official boundary datasets	Annual	MOE PA database, national OECM registry and spatial layers (as established), national administrative boundary and base layers, and relevant supporting datasets (e.g., World Database on Protected and Conserved Areas (WDPCA) as a cross-check)	GIS-based spatial analysis using official boundaries, updated when new PAs/OECMs are designated or boundaries revised, with version control and documentation of assumptions (projection, inland water extent)	Lead: MOE Support: relevant line agencies responsible for terrestrial OECMs	39%	At least 30%
3.2. Percentage of marine and coastal area in PA and OECM system	Percentage of Cambodia's marine and coastal area within legally designated PA and formally recognized OECMs, based on official boundary datasets. Calculated separately for (i) marine waters and (ii) defined coastal zone, using agreed national definitions for each, and reported as two values	Annual	MOE PA database; National OECM registry and spatial layers; Relevant supporting datasets (e.g., WDPCA as a cross-check)	GIS-based spatial analysis using official boundaries. Apply an agreed national definition for "coastal area" (e.g., shoreline buffer or coastal administrative zone) and document it consistently for time series reporting	Lead: MOE Support: relevant line agencies responsible for marine/coastal OECMs	1.5% marine [Coastal TBD]	At least 10%
3.3. Percentage of PAs with zoning and management plans completed and approved	Share of legally designated PAs (terrestrial and marine) that have formally approved zoning and management plans consistent with national PA guidelines	Annual	MOE PA database; legal gazettes; CEMIS	Inventory of PAs; review of management plan status; classification as "approved and current", "in draft", or "not yet developed"; calculation of percentage	Lead: MOE Support: PDOEs, local PA authorities	[Baseline TBD]	75%
3.4. Number of OECMs established and recognized	Total number of sites formally recognized as OECMs under the national framework	Annual	National OECM register; CEMIS; GIS	Compilation of OECM designations; map publication	Lead: MOE	0 formally recognized OECMs	At least 30 OECMs are established and

Indicator Name[3]	Definition / Description	Data	Data Source	Data Collection Method	Institutions	Baseline[4]	End target (2030)
							officially recognized
3.6. Rate of natural resource crimes reduced in PAs	Change in the number of recorded illegal activities (logging, encroachment, hunting, etc.) in PAs relative to 2025 baseline	Annual	Ranger patrol data (SMART/EarthRanger); law enforcement statistics	Standardized analysis of patrol data (incidents per unit effort) and enforcement records in sample PAs	Lead: MOE	[Baseline TBD]	Sustained decline in illegal activities across the PA system
Target 4: Species and genetic conservation *(Halt species extinction, protect genetic diversity and manage human-wildlife conflict)*							
4.1. Cambodia Species Index established and operational	Composite index tracking population trends of selected terrestrial, freshwater and marine species groups (including threatened and use-species), based on standardized monitoring and meta-analysis	2027	Species monitoring programs; PA surveys; research projects; CEMIS	Selection of indicator species; compilation of time-series data; statistical modelling to derive index values; documentation of methods and species list	Lead: MOE Support: MAFF, universities, NGOs	No Index	Cambodia Species Index established and operational
4.2. The number of species stable or improving on the Cambodia Species Index of trends in populations of key terrestrial, freshwater and marine species	(See 4.1 above)	2 yearly	(See 4.1 above)	(See 4.1 above)	Lead: MOE Support: MAFF, universities	NA	The overall index remains stable or is increasing, with improved trends for priority threatened and use-species
4.3. Number of Species Conservation Action Plans for priority threatened species developed and implemented (incl. In-situ and Ex-situ)	Number of nationally prioritized threatened species for which formally adopted recovery or action plans exist and are under implementation	2030	Species conservation strategy documents; MOE and MAFF records	Compilation of priority species list; review of existing plans; scoring of plan existence and implementation status	Lead: MOE Support: MAFF, NGOs	[Baseline TBD]	At least 25% of priority threatened species have Species Conservation Action Plans under implementation
4.4. National threatened species categories updated to align with the ENR Code (2023), while referencing IUCN Red List and CITES criteria	Official national threatened species list and categories issued under ENR Code (2023), informed by IUCN Red List assessments and CITES listings, with documented criteria and sources	2030	MOE records; NGO and academic institution records; online sources (e.g., Red List)	Review MOE legal/technical records for adoption or updates, cross-check species against IUCN Red List and CITES, and confirm publication and update status	Lead: MOE Support: MAFF, NGOs, academic institutions	National threatened species list/categories	National threatened species categories updated to align with the ENR Code (2023), while referencing IUCN Red List and CITES criteria
Target 5: Sustainable wildlife use and trade *(Sustainable use of wild species, benefit people/communities)*							
5.1. Number of natural resources crime cases involving hunting brought to court	The annual number of cases related to wildlife and forest crime formally prosecuted	Annual	Court/Prosecutor statistics; MOE/MAFF enforcement reports	Compilation and coding of court cases by offence type	MOE, MAFF, MOJ, MOI	[Baseline TBD]	Continuous increase in detection and successful prosecution of serious cases

Indicator Name[3]	Definition / Description	Data	Data Source	Data Collection Method	Institutions	Baseline[4]	End target (2030)
5.2. Number of cases for CITES Appendix I species in illegal trade reported	Number of recorded illegal trade incidents involving Appendix I species	Annual	CITES reports; enforcement data	Extraction from CITES and customs records	FA (CITES), Cambodia CITES Management Authority, Customs	[Baseline TBD]	Progressive decline in the illegal trade of Appendix I species
5.3. National One Health framework and integrated zoonotic surveillance system operationalized	Adoption and implementation of a national One Health framework for zoonotic spillover prevention and management, evidenced by an endorsed multisectoral coordination mechanism, integrated surveillance and data sharing, and routine joint risk assessment and response	2029	MOH surveillance reports and databases, One Health coordination mechanism records	Review of endorsed protocols, compilation of surveillance and laboratory reports, verification of joint investigations and response timeliness	MOH, MOE, MAFF, and relevant partners	[Baseline TBD]	National One Health framework operational, integrated multisectoral surveillance and data sharing in place
Target 6: Invasive species control *(Identify and control major invasive species and pathways)*							
6.1. Updated NISSAP to align with the ENR Code (2023)	Status of updating, alignment and implementation of NISSAP	2030	NISSAP implementation reports	Review and the update of implementation progress assessment	MOE, MAFF, MOWRAM, MRD, MOJ	NISSAP (2016)	NISSAP updated
6.2. Number of awareness-raising campaigns or educational programs, outreach on IAS	Count of campaigns/educational activities on IAS prevention and management	Annual	Campaign reports; MOE, MAFF, NGOs	Compilation of activities; participant counts	MOE, MAFF	[Baseline TBD]	At least 3 IAS outreach programs nationwide
6.3. National inventory of IAS developed, regularly updated and disseminated	Existence and regular updating of an official national IAS list and associated guidance (impacts, risk levels, management advice), and evidence of dissemination to relevant agencies and the public	2 yearly	Official IAS list and related regulations; MOE and MAFF websites; CEMIS; awareness materials	Review of legal/technical documents; documentation of update cycles; inventory of dissemination channels (workshops, online, border points); stakeholder feedback surveys	Lead: MOE Support: MAFF, MEF (Customs), research institutions	No comprehensive, regularly updated national IAS list	A comprehensive IAS list and guidance are in place, updated at least every 3 years, and used to guide prevention, control and eradication efforts
6.4. Number of initiatives, tools and other measures to mitigate IAS risks	Count of prevention, early detection, control or eradication initiatives and tools implemented	Annual	Project reports; MOE/MAFF programs	Inventory of IAS projects and tools	MOE, MAFF	[Baseline TBD]	Increased range of IAS risk-mitigation initiatives
6.5. Number of priority IAS eradicated or under effective control in priority sites	Count of priority IAS with successful eradication or sustained control in agreed high-value sites	2 yearly	Site management reports; field surveys	Monitoring of IAS populations in target sites	MOE, MAFF	[Baseline TBD]	An increase in the number of Priority IAS eradicated/controlled at key sites
Target 7: Pollution reduction *(Reduce pollution to safe levels in land, water & air)*							
7.1. Number of awareness and engagement	Count of campaigns, trainings, or outreach events on pollution affecting biodiversity and ecosystems	Annual	MOE, NGOs campaign records	Event inventory and participant counts	MOE, MISTI, NGOs	[Baseline TBD]	At least 3 nationwide campaigns

Indicator Name[3]	Definition / Description	Data	Data Source	Data Collection Method	Institutions	Baseline[4]	End target (2030)
campaigns on pollution prevention							
7.2. Reduction in solid waste	Indicator tracking reduction in solid waste	Annual	Municipal waste data	Analysis of municipal records	Lead: MOE Support: MISTI, MAFF, MPWT, municipalities	[Baseline TBD]	Reduce average waste per capita to 0.84 kg/capita/day
7.3. Water quality monitoring	Indicator tracking establishment and enforcement of water quality standards relevant to biodiversity	2 yearly	MOE pollution monitoring; lab water-quality datasets; CEMIS	Regular water-quality sampling in representative freshwater and coastal sites; comparison with national standards	Lead: MOE Support: MISTI, MAFF, MPWT, municipalities	[Baseline TBD]	The net number of sites with improved water quality increasing
7.4. Reduction in the use of hazardous chemicals harmful to biodiversity and the environment	Reduction in the use of hazardous chemicals harmful to biodiversity and the environment: Decrease, relative to the baseline year, in the use of priority hazardous chemicals measured using national import/sales and use records	2 yearly	Agricultural input statistics; import data	Trend analysis of chemical sales/usage per hectare	MAFF, MOE, MoH, MISTI, MOEYS	[Baseline TBD]	Substantial reduction in hazardous chemical use
Target 8: Climate change resilience *(Enhance biodiversity & ecosystem resilience to climate change)*							
8.1 Incorporate good and/or improved forest management practices to enhance forest carbon stocks as well as ecosystem integrity	Strengthen sustainable forest management to maintain forest ecosystem health and productivity, support livelihoods and climate resilience, and balance conservation, sustainable use and restoration, through: forest management plans for PAs, CPAs, CFs and CFis; demarcation and registration to secure tenure; guidance for planning, reforestation and rehabilitation; ecotourism and other sustainable uses; and incentives such as market access, credit, certification and results-based finance for community organizations	2029	CEMIS, National Forest Monitoring; REDD+ Project Databased/ registry, Forest Inventory and Forest Resources assessment; NDC 3.0 (2025)	GIS/remote sensing analysis; periodic field verification in sample sites	Lead: MoE for PA & CPA domain with Lead: MAFF / FA/FiA for Production forest, CF & CFi	530,498 ha under the management of CF; 87,755 ha of CF under Community Forestry Management Plans (CFMPs); 26,000 ha under Improved Forest Management (IFM) for sustainable wood harvesting	50% of forests under forest management by 2030
8.2. Number of initiatives that explicitly integrate biodiversity conservation into climate change mitigation and adaptation (e.g., REDD+, NbS, EbA, and landscape-based approaches	Count of national or sub-national initiatives that explicitly integrate biodiversity conservation into climate change mitigation/adaptation and disaster-risk-reduction measures (e.g., mangrove restoration for coastal protection, watershed restoration for flood control)	Annual	Project/program registers (MOE climate units, NCDM, MAFF, MOWRAM); NDC reporting; CEMIS	Screening of climate and DRR programs against biodiversity/NbS criteria; tagging and recording qualifying initiatives and their geographic coverage	Lead: MOE/Climate Change) Support: NCDM, MAFF, MOWRAM	[Baseline TBD]	At least 5 major NbS climate and DRR initiatives integrating biodiversity

Indicator Name[3]	Definition / Description	Data	Data Source	Data Collection Method	Institutions	Baseline[4]	End target (2030)
8.3. Net emissions from land use and land-use change are declining and in line with Cambodia's NDC	Net emissions from LU/LULUCF inventories including biodiversity-relevant NbS	2 yearly	NDC/NIR reports; NDC 3.0 (2025); MOE climate unit	Review of inventory reports; NDC 3.0 (2025). GHG inventory process (under UNFCCC)	MOE	Total GHG emissions of 118.5 Mt CO_2e (2020 baseline)	A downward trend consistent with economy-wide reduction targets (16 % unconditional, 55 % conditional by 2035)
8.4. Percentage of forest loss	Tracks annual forest loss as a percentage of total forest area, alongside gains from reforestation and agroforestry. Measures combined impacts of protection, restoration, and sustainable land use under Cambodia's climate (i.e., NDC 3.0 (2025)) and biodiversity goals	2 yearly	CEMIS; National Forest Monitoring System; MOE/MAFF biennial forest-cover reports; REDD+ registry and progress reports; Safeguards Information System; inputs consolidated in Biennial Transparency Report	National wall-to-wall forest-cover change analysis (remote sensing) using the NDC's FOLU approach (historical deforestation rates applied to shrinking forest base for BAU); site-level REDD+ MRV and verification; administrative consolidation via CEMIS/NFMS for reporting	Lead: MOE Co-lead/support: MAFF (forest administration, CF/CPA/CFi data); inputs from REDD+ projects to national systems; reporting through Biennial Transparency Reports (BTRs)	Deforestation rate (average 2014–2020): 2.58% (REDD+ forest definition) and 2.19% (national forest definition)	Deforestation rate: 1.38% (REDD+ forest definition) and 1.1% (national forest definition)
8.5. Number or percentage of river basins, wetlands and flood prone areas where flood and drought risk management measures are integrated to support ecosystem and biodiversity resilience	Proportion of basins and priority wetlands/floodplains with flood-drought plans integrating ecosystem-based measures for biodiversity resilience	Annual	MOWRAM basin/IWRM plans; NCDM flood-drought plans; MOE wetland maps/CEMIS	Plan screening checklist; record plan status; GIS link to basin/wetland boundaries	Lead: MOWRAM Support: MOE, NCDM, MAFF, provinces	[Baseline TBD]	[End target TBD]
Target 9: Manage wild species sustainably *(Ensure wild species use is sustainable & benefits local communities)*							
9.1. Number of CPAs, CFs, CFis (or households) receiving sustainable and inclusive alternative livelihoods	Number of CPAs, CFs, and CFis (or households) that have operational livelihood programs explicitly linked to sustainable use and conservation of wild species	Annual	CPA/CF/CFi registers; MOE and MAFF reports; NGO project reports; CEMIS	Consolidation of community management unit lists; review of management plans and project documentation to identify livelihood components; verification through periodic field checks	Lead: MOE, MAFF Support: MRD, local community institutions, NGOs	[Baseline TBD]	At least 30 CPAs, CFs, and CFis
9.2. Number of community-based sustainable wild species harvests with management plans	Total CPAs/CFs/CFis with documented sustainable-use regimes for wild species (management plan)	Annual	CPA/CF/CFi records; CEMIS	Mapping of community areas; tally of sites with sustainable-use plans	MOE, MAFF	[Baseline TBD]	Annual increase in number

Indicator Name[3]	Definition / Description	Data	Data Source	Data Collection Method	Institutions	Baseline[4]	End target (2030)
9.3. Number of legal frameworks on sustainable cultivation, use and trade of fauna and flora developed and adopted	Status of integrated legal or policy framework for sustainable use	2030	Legal gazette	Review of national law/policy	MOE, MAFF, MOJ	No framework in place	Single coherent framework in force
9.4. Population trends in Cambodia Species Index for species in cultivation or used stable or increasing	Change in index values for species subject to use	2 yearly	Species Index data	Subset analysis of "use" species	MOE, MAFF	NA	At least 70% of assessed cultivated or used species exhibit stable or increasing population trends
Target 10: Sustainable production *(Adopt sustainable practices in agriculture, aquaculture, forestry & fisheries)*							
10.1 Percentage of total agricultural area under conservation agriculture/ sustainable/ agroecological practices	Share of national agricultural land managed under recognized sustainable or agroecological practices (e.g., organic, IPM, agroforestry, certified sustainable systems)	2 yearly	Agricultural statistics; certification bodies; MAFF surveys; CEMIS	Agricultural census and sample surveys; compilation of certified and program areas; estimation of total area under sustainable/agroecological management relative to national agricultural area	Lead: MAFF Support: MOE, certification bodies, producer organizations	[Baseline TBD]	25% expansion
10.2. Number of biodiversity-friendly value chains promoted and certified	Count of value chains (e.g., rice, NTFPs, fish, timber) with biodiversity-friendly or deforestation-free certification	Annual	Certification bodies; MAFF; MOC	Inventory of certified schemes and value chains	MAFF, MOE, MOC	[Baseline TBD]	At least 5 value chains
10.3. Number of CBOs supplying products to biodiversity-friendly value-chains	Count of producer groups linked to certified or verified biodiversity-friendly markets	Annual	MAFF, NGOs, cooperatives	Compilation of CBO lists and certification status	MAFF, MOE	[Baseline TBD]	Increase of at least 25 CBOs
10.4. Proportion of production forest under sustainable management	Share of production forest area under sustainable management plans or certification (e.g., FSC or equivalent)	2 yearly	Forestry inventories; certification records	GIS and management-plan review	MAFF (FA)	[Baseline TBD]	At least 25% increase
Target 11: Ecosystem services & livelihoods *(Protect and restore ecosystem services that support people's livelihoods and disaster risk reduction)*							
11.1. Number of sites where restored/ maintained ecosystem services provide socio-economic benefits	Count of priority sites (e.g., watersheds, wetlands, coastal zones) where documented restoration or maintenance of ecosystem services delivers measurable socio-economic benefits (livelihoods, DRR, health) to communities, especially IPLCs	2 yearly	Project evaluations; socio-economic surveys; DRR and livelihood statistics; CEMIS, ERIP	Identification of candidate sites; assessment combining ecological and socio-economic data; documentation of benefits (income, reduced losses, improved health indicators)	Lead: MOE Support: MOWRAM, NCDM, MOH, local authorities	[Baseline TBD]	At least 50% increase

Indicator Name[3]	Definition / Description	Data	Data Source	Data Collection Method	Institutions	Baseline[4]	End target (2030)
11.2. Number of watershed protection measures implemented	Count of watershed interventions (e.g., reforestation, erosion control, wetland conservation) in key basins through various forms including IWRM	Annual	MOWRAM, MOE project files, CSLEP & ERIP	Inventory of watershed measures; mapping	MOWRAM, MOE, MAFF	[Baseline TBD]	At least 15
11.3. Number of deaths and directly affected persons attributed to disasters	Indicator of human impacts from disasters (floods, storms, etc.) in biodiversity/NbS-relevant areas. This indicator will only be reported if comparable events occur	2030	NCDM disaster data; MOH	Analysis of reported disaster impacts in relevant provinces/communities	NCDM, MOH, MOE	[Baseline TBD]	Reduced loss of life in eco-DRR/NbS areas if comparable events occur
11.4. Reduction in disaster losses in communities implementing eco-DRR/NbS	Change in economic/household losses compared to similar non-intervention areas	2030	Household surveys; damage assessments	Comparison study using baseline and follow-up surveys	NCDM, MOE	[Baseline TBD]	Demonstrated reduction in losses
Target 12: Urban biodiversity *(Improve biodiversity in urban areas and green/blue spaces)*							
12.1. Number of Districts with biodiversity and NbS-inclusive urban plans	Number of urban jurisdictions (cities/towns) with approved urban/spatial plans that integrate biodiversity and NbS (e.g., green/blue networks, urban parks, ecosystem-based flood management, heat-mitigation through vegetation, or passive cooling)	2 yearly	MLMUPC and municipal plans; MOE urban EIA records; CEMIS	Review of urban plans against a biodiversity/NbS inclusion checklist; validation with implementing authorities; registration of qualifying plans	Lead: MLMUPC Support: MOE, municipalities, MPWT	[Baseline TBD]	At Least 3 major cities and 10 secondary towns
12.2. Percentage of urban population with access to green/blue spaces within 30-minute walk	Proportion of residents with a park/green or waterbody accessible on foot within ~30 minutes	2 yearly	Urban plans; GIS; household surveys	Network analysis of green space access; sampling surveys	MLMUPC, municipalities	[Baseline TBD]	At least 25% increase
12.3. Number of green/ blue spaces developed in urban areas	Count of new or upgraded parks, wetlands, green corridors and blue-space projects	Annual	Municipal works records	Project inventory	Municipalities, MOE	[Baseline TBD]	At Least 3 in major cities and 5 in secondary towns
12.4. Number of green-urban infrastructure projects integrating biodiversity-friendly design	Count of infrastructure projects using features such as green roofs, permeable surfaces, wildlife-friendly designs	Annual	EIA/SEA records; municipal planning	Screening project approvals for biodiversity-friendly features	MOE, MLMUPC	[Baseline TBD]	At least 5% annual increase
Target 13: Access & Benefit-Sharing *(Implement ABS policies and Nagoya Protocol mechanisms)*							
13.1. Number of access permits issued for genetic resources and associated TK	Annual number of legally issued permits or equivalent authorizations for access to genetic resources and associated TK under the national ABS framework	Annual	ABS permit registry; MOE and ABS Committee records; CEMIS	Compilation of permits issued by competent authorities; classification by resource type and involvement of IPLCs; verification of compliance with FPIC requirements	Lead: MOE (ABS focal point) Support: MAFF, MISTI, MCFA	[Baseline TBD]	At least 10

Indicator Name[3]	Definition / Description	Data	Data Source	Data Collection Method	Institutions	Baseline[4]	End target (2030)
13.2. Number of community protocols or guidelines for FPIC/TK protection	Count of IPLC-developed protocols or locally agreed guidelines for TK and FPIC	2 yearly	IPLC organizations; MOE; NGOs	Collection and registration of protocols	MOE, MRD, IPLC orgs	[Baseline TBD]	At least 5
13.3. Number of national ABS policies, guidelines, tools and administrative measures developed	Count of ABS-related instruments adopted and operational	2 yearly	ABS committee records	Legal/policy review	MOE, MAFF, MISTI	No ABS policies, guidelines or tools	Full ABS toolkit in place
13.4. Number of ABS capacity programs and awareness materials disseminated	Number of trainings and information products on ABS	2 yearly	Training logs; communication outputs	Activity inventory	MOE, partners	[Baseline TBD]	At least 5
Target 14: Mainstreaming biodiversity *(Integrate biodiversity in all sector policies and plans)*							
14.1. Number of sectoral policies, regulations, planning and decision-making processes incorporating biodiversity values	Number of national and provincial sector strategies and plans (agriculture, energy, transport, tourism, etc.) that explicitly incorporate biodiversity values, objectives or safeguards	2 yearly	Sectoral strategy documents; MOP, MOE records; CEMIS	Systematic review of sectoral plans against biodiversity integration criteria; scoring and counting of compliant plans; documentation of key biodiversity provisions	Lead: MOE, MOP Support: MEF, all sector ministries	[Baseline TBD]	At least 3
14.2. Biodiversity mainstreamed into national budgeting and public investment systems	Qualitative and quantitative assessment of how effectively biodiversity objectives are embedded in national budgeting, public investment programs, and financial policy instruments (e.g., budget tagging, investment screening, and sectoral budget guidance)	2 yearly	National budget documents, Budget Tagging Reports, Public Investment Program, and sector financing strategies	Structured biodiversity finance review, using a standard alignment scorecard/checklist; cross-check of budget lines, investment criteria, and policy instruments against 2026 NBSAP targets	Lead: MEF with technical input from MOE	Partial alignment: biodiversity policies referenced but not consistently tagged or reflected in budget or public investment criteria	Full operational alignment: biodiversity fully integrated into national budget tagging and public investment screening, with 100% of new public investment proposals and annual budgets reviewed for biodiversity relevance and tagged where applicable
14.3. Percentage of public and private investment projects requiring ESIA that complete documented FPIC or stakeholder consultation processes	Share of high-risk projects in IPLC areas with documented FPIC processes	Annual	EIA permits; project files	Screening EIAs and social safeguards documentation	MOE, MOI, MRD	[Baseline TBD]	At least 50%

Indicator Name[3]	Definition / Description	Data	Data Source	Data Collection Method	Institutions	Baseline[4]	End target (2030)
14.4. National ecosystem services valuation reports available and updated for government agencies to integrate into their planning process	Count of agencies using NCA Ecosystem Service valuation in planning or reporting	2 yearly	Sector reports; MOE, MEF	Review of official documents for NCA references	MOE, MEF	[Baseline TBD]	At least 5
14.5. Number of sector policies and plans in water and climate sector that integrate biodiversity considerations into river basin planning, flood management and drought responses	Count of approved water and climate sector policies, strategies, plans or guidelines that explicitly include biodiversity and ecosystem considerations in river basin planning, flood management and drought response (e.g., ecosystem-based measures, safeguards, or environmental flow and wetland protection provisions).	2 yearly	MOWRAM sector policies and plans (IWRM, basin plans, flood and drought plans); MOE climate policy documents; NCDM DRR plans; MOP plan registry; CEMIS	Document review against a biodiversity-integration checklist; record and count qualifying instruments; retain evidence excerpts and approval status	Lead: MOWRAM Support: MOE, NCDM, MOP (and relevant basin authorities/provinces as applicable)	[Baseline TBD]	[End target TBD]
Target 15: Business impacts *(Reduce negative impacts from business/investment)*							
15.1. Number of businesses publishing sustainability reports disclosing biodiversity risks and impacts	Annual count of companies that publish sustainability or ESG reports with specific disclosure of biodiversity risks, dependencies and impacts in their operations and supply chains	Annual	Company sustainability reports; stock-exchange/SECC filings; MOE/MOC databases	Desk review of company reports and registries; application of a simple biodiversity-disclosure screening tool; compilation of qualifying businesses by sector and size	Lead: MOE Support: MOC, MISTI, business associations	[Baseline TBD]	At least 100 major businesses or 200% increase on baseline whichever is greater
15.2. EIA processes strengthened, including compensatory/corrective measures	Qualitative indicator tracking whether EIAs systematically include biodiversity impact assessment and restoration/offset measures	2 yearly	EIA guidelines; sample EIAs	Structured EIA quality review	MOE	Existing EIA system	Fully biodiversity-inclusive EISAs
15.3. Percentage of PAs with EIAs/SEAs completed for high-risk investments	Share of PAs affected by major projects where EIAs/SEAs have been completed	2 yearly	EIA register; PA maps	Overlay analysis and document review	MOE	[Baseline TBD]	100% of PAs with EIAs/SEAs completed for high-risk investments
15.5. STAR metric applied to assess business-related biodiversity impacts	Status/number of applications of STAR or similar metrics in corporate or national assessments	2 yearly	Corporate reports; MOE studies	Review of assessments that use STAR	MOE, partners	[Baseline TBD]	At least 10 or 50% increase on baseline whichever is greater
15.6. Number of policies and incentives for environmental or biodiversity-inclusive business practices	Count of business-targeted policies, guidelines, incentives	2 yearly	MOE, MOC, MEF	Policy review and inventory	MOE, MOC, MEF	[Baseline TBD]	At least 3

Indicator Name[3]	Definition / Description	Data	Data Source	Data Collection Method	Institutions	Baseline[4]	End target (2030)
Target 16: Sustainable consumption *(Reduce waste and over-consumption by ≥ 30%)*							
16.1. Recycling rates increased	Proportion of total municipal solid waste (or selected streams) that is recycled or recovered, as opposed to landfilled or unmanaged, in line with national definitions	Annual	Municipal waste data; MPWT and MOE waste management statistics; CEMIS	Collection of waste generation and treatment data from municipalities and service providers; calculation of recycling rate; trend analysis	Lead: MOE, MPWT Support: municipalities, MISTI	[Baseline TBD]	At least 30% increase
16.2. Number of deforestation-free, wildlife-friendly, sustainable products available	Count of products certified/verified as such in Cambodian markets	Annual	Certification/labelling data; retail surveys	Product inventory and classification	MOC, MAFF, MOE	[Baseline TBD]	At least 10 or 50% increase on baseline whichever is greater
16.3. Number of innovative technologies or practices introduced or scaled up by government agencies to reduce waste generation, material consumption, or pollution intensity	Count of technologies/practices adopted (e.g., refill systems, composting, reuse platforms)	Annual	Project and business reports	Inventory of innovations in use	MOE, MISTI	[Baseline TBD]	At least 5 or 50% increase on baseline whichever is greater
16.4. Percentage of businesses adopting circular economy practices	Share of companies with documented circular economy measures (reuse, recycling, EPR, etc.)	2 yearly	Business surveys; ESG reports	Survey and document review	MOE, MISTI, MOC	[Baseline TBD]	At least 100 or 200% increase on baseline, whichever is greater
16.5. Number of government policies promoting sustainable consumption	Count of regulations, incentives and programs promoting sustainable consumption	2 yearly	Legal/policy review	Document inventory	MOE, MEF, MOC	[Baseline TBD]	At least 5
Target 17: Biosafety & biotechnology *(Strengthen biosafety regulations, participation & benefit sharing)*							
17.1. Number of biosafety programs and awareness-raising initiatives implemented	Annual number of biosafety capacity-building programs, awareness campaigns or training events implemented for regulators, researchers, border officials and the public	Annual	MOE biosafety unit reports; MAFF and MOH training records; project reports	Compilation of biosafety-related activities from relevant ministries and projects; classification by type and audience; simple participant counts	Lead: MOE (biosafety focal point) Support: MAFF, MOH, MOEYS, customs	[Baseline TBD]	At least 5
17.2. Number of biosafety legal frameworks and supporting document updated or adopted	Count of biosafety-related legal and policy instruments	2 yearly	Legal gazette; MOE	Legal review ENR Code (2023)	MOE, MOH, MAFF	Partial framework	Comprehensive biosafety framework
17.3. Number of institutions and biotech companies complying with	Count of institutions checked and found compliant to GMO and LMO (biosafety).	2 yearly	Inspection reports	Compliance audits	MOE, MOH, MAFF, MOC, MISTI	0	Widespread compliance

Indicator Name[3]	Definition / Description	Data	Data Source	Data Collection Method	Institutions	Baseline[4]	End target (2030)
biosafety protocols/legal frameworks							
17.4. Capacity and effectiveness of biosafety governance structures assessed and strengthened	Qualitative indicator tracking assessments and subsequent improvements of governance (authority, checkpoints, etc.)	2 yearly	Assessment reports; action plans	Review of governance assessments and follow-up actions	MOE	0	5 functional and resourced biosafety governance structures
Target 18: Incentive reform *(Phase out harmful subsidies; scale up positive incentives)*							
18.1. Number of nationally recognized biodiversity-positive incentive mechanisms with implementation at national or sub-national level	Number of fiscal, financial or regulatory incentive mechanisms (new or reformed) that explicitly promote biodiversity-friendly practices and/or remove harmful subsidies	Annual	MEF, MOE, sector-ministry policy and budget documents; CEMIS	Review of subsidy and incentive schemes; classification of reforms as "harmful phased-out/reformed" or "positive incentive introduced"; documentation of scope and sectors	Lead: MEF, MPWT, MoE Support: Sector ministries	[Baseline TBD]	At least 5
18.2. Number of sectoral incentives or policy frameworks that address potential negative impacts on biodiversity	Count of sectoral incentive schemes or policy frameworks that have been reviewed and updated, adopted, or implemented to avoid, reduce, or remove provisions that may negatively affect biodiversity	Annual	MEF budget and incentive records; MOE coordination and review reports	Document review and verification of sectoral incentives and policies against agreed biodiversity screening criteria, recording frameworks with documented measures to address negative biodiversity impacts.	MEF, MOE, relevant sector ministries	[Baseline TBD]	[TBD] sectoral incentives or policy frameworks revised or adopted with documented measures to address negative biodiversity impacts
Target 19: Biodiversity finance *(Secure funding for 2026 NBSAP implementation)*							
19.1. Percentage increase in non-national budget funds (i.e., private, NGO, and development partners) mobilized for the development and implementation of 2026 NBSAP targets	Total annual non-government (private, NGO and international) allocated to 2026 NBSAP-related activities, in national currency and/or USD	Annual	Project and donor databases; private investment data; CEMIS	Compilation of donor and private project finance; aggregation for annual totals; disaggregation by source and target area	Lead: MOE Support: donors, private sector	USD 38 million p.a. (Based on USD 188 million (2020–2024) [9]	Sustained real-term increase
19.2. Percentage increase in national budget allocated to biodiversity and 2026 NBSAP	Change in budget allocation compared to baseline year	Annual	National budget; MEF tagging	Budget tagging and analysis	Lead: MEF Support: MOE	USD 33 million	Sustained real-term increase
19.3. Value of investments in biodiversity-friendly activities	Value and number of public/private investments in reforestation, REDD+, ecotourism, etc.	Annual	Project finance databases	Finance tracking and classification	MOE, MEF, sector ministries	[Baseline TBD]	Substantial growth

Indicator Name[3]	Definition / Description	Data	Data Source	Data Collection Method	Institutions	Baseline[4]	End target (2030)
19.4. Number and value of projects financed via innovative mechanisms	Projects using PES, green bonds, blended finance, biodiversity credits, debt swaps	Annual	Finance and project records	Inventory and valuation	MOE, MEF	[Baseline TBD]	Diverse portfolio
Target 20: Capacity & cooperation *(Enhance technical capacity and collaboration for biodiversity)*							
20.1. Number of national capacity-building programs on biodiversity science, technology and cooperation implemented and evaluated	Count of national or large sub-national programs providing structured capacity-building in biodiversity science, technology and cooperation, with documented evaluation of effectiveness	Annual	MOE and MOEYS training records; university and NGO program reports; CEMIS	Inventory of capacity-building programs; classification by theme and scale; review of evaluation reports; recording of completed programs per year	Lead: MOE Support: MOEYS, universities, NGOs	[Baseline TBD]	At least 3
20.2. Number of KAP surveys conducted	Count of KAP surveys on biodiversity and 2026 NBSAP implementation	Annual	Survey reports	Survey implementation and reporting	MOE, MOEYS	[Baseline TBD]	At least 5
20.3. Number of CEPA programs implemented	Count of major biodiversity CEPA programs conducted	Annual	MOE, NGOs	Program inventory	MOE, NGOs	[Baseline TBD]	At least 5
20.4. Number of biodiversity monitoring/conservation tools and technologies transferred or operational	Count of tools (e.g., apps, RS platforms, genetic tools) in operational use	2 yearly	Project and research reports; CEMIS	Inventory and validation of tools in use	MOE, MOEYS, MISTI	[Baseline TBD]	At least 10
20.5. Number of joint R&D projects producing outputs or applied tools	Count of collaborative research projects (national/ international/IPLCs) with tangible outputs	2 yearly	University and project records	Project inventory and output review	MOEYS, MOE, universities	[Baseline TBD]	At least 5
Target 21: Biodiversity information system *(Establish comprehensive biodiversity data and sharing platform)*							
21.1. CEMIS established, interoperable, functioning and accessible to all stakeholders	Status indicator capturing whether CEMIS operates as a national biodiversity information system with core functionalities (data storage, visualization, access), defined governance, and interoperability with regional/global platforms	Annual (status assessment)2 yearly (technical review)	CEMIS system documentation; usage statistics; interoperability tests (e.g., with GBIF); governance records	Annual qualitative and quantitative assessment against agreed criteria (governance, content, use, interoperability); review of user statistics; checks of data exchange with external platforms	Lead: MOE Support: contributing line ministries, technical partners	CEMIS partially operations	CEMIS is fully operational, widely used by agencies and stakeholders, and interoperable with regional and global platforms
21.2. Number of biodiversity records/datasets updated, verified and shared via CEMIS	Count of datasets/records updated and made accessible annually	Annual	CEMIS usage logs	Data ingestion and QA tracking	MOE, data-providing agencies	0	Continuous growth in high-quality datasets
21.3. Number of awareness and education	Count of outreach/education activities that use CEMIS maps/data	Annual	Program reports; training logs	Simple inventory	MOE, MOEYS	0	Widespread use of CEMIS in CEPA

Indicator Name[3]	Definition / Description	Data	Data Source	Data Collection Method	Institutions	Baseline[4]	End target (2030)
programs using CEMIS products							
21.4. Percentage of biodiversity datasets interoperable with regional/global platforms	Share of key datasets that meet technical and policy criteria for sharing (GBIF, ASEAN CHM)	2030	CEMIS, GBIF/CHM logs	Interoperability tests; dataset review	MOE, technical partners	[Baseline TBD]	[End target TBD]
Target 22: Participation & justice *(Ensure participation in decision-making and access to justice and information related to biodiversity)*							
22.1. Percentage of governance and decision-making processes that have IPLCs, women, youth and people with disabilities representation	Share of positions in selected biodiversity-related governance bodies (national committees, PA management, CPA/CF/CFi committees) occupied by IPLC representatives, women, youth and persons with disabilities	2 yearly	Membership lists of relevant committees/boards; MOE, MRD, MOWA records	Compilation of governance bodies; collection of member characteristics (self-reported); calculation of representation percentages by group and level	Lead: MOE Support: MRD, MOWA, MOI, IPLC organizations	[Baseline TBD]	Women represented in 100% of the selected governance bodies/processes and at least 25% for IPLCs, youth and people with disabilities
22.2. Number of policies or initiatives recognizing and applying TK with active IPLC participation	Count of policies/programs that formally recognize TK and include IPLCs in design and implementation	2 yearly	Policy docs; program reports	Document review; stakeholder validation	MOE, MRD, IPLC orgs	[Baseline TBD]	At least 3
22.3. Number of plans/processes led by or co-developed with IPLCs and formally adopted	Count of biodiversity, livelihood or land-use plans with documented IPLC leadership/co-development and formal adoption	2 yearly	Plan approvals; minutes	Review of plan preparation and adoption records	MOE, MRD, local authorities	[Baseline TBD]	At least 10
22.4. Number of grievance mechanisms established in PAs and other projects related to 2026 NBSAP implementation	Number of operational grievance mechanisms established for protected areas and 2026 NBSAP-related projects, with documented procedures and accessible channels for submitting and resolving complaints	Annual	MOE and PA authority records; project safeguards documents; NGO/development partner reports	Compile annual inventory, verify existence and operational status (procedure, focal point, log of cases), remove duplicates, document coverage and access	Lead: MOE Support: PA authorities, implementing ministries, NGOs/development partners	[Baseline TBD]	At least 30
Target 23: Gender equality *(Ensure Gender Equality and Social Inclusion in biodiversity action)*							
23.1. Percentage of women in CPA, CF and CFi committees and other leadership roles in biodiversity governance	Proportion of leadership and committee positions in community-based and formal biodiversity governance structures held by women	2 yearly	CPA/CF/CFi committee records; MOE, MAFF and MOWA databases	Collection of committee composition data; identification of leadership roles; calculation of women's representation at different governance levels; sex-disaggregated analysis	Lead: MOE, MOWA Support: MAFF, local authorities, NGOs	[Baseline TBD]	At least 50% participation and at least 20% in leadership roles

Indicator Name[3]	Definition / Description	Data	Data Source	Data Collection Method	Institutions	Baseline[4]	End target (2030)
23.2. Percentage of women engaged in biodiversity-related education, training and capacity-building programs	Share of participants in biodiversity-related capacity activities who are women	Annual	Training logs; attendance lists	Compilation of sex-disaggregated participation data	MOE, MOEYS, MOWA	[Baseline TBD]	Increasing share of women consistently across programs
23.3. Number and percentage of biodiversity projects that are gender-responsive	Count and share of projects assessed as gender-responsive in design and implementation (e.g., using SAGE or equivalent), project gender action plans	2 yearly	Project documents; evaluation reports	Gender Assessment Report on project portfolio	MOE, MOWA	[Baseline TBD]	At least 75%
23.4. Number of capacity-building manuals/guidelines/roadmaps developed and operationalized for women leaders and key agents	Number of gender-responsive capacity-building manuals, guidelines or roadmaps produced and in use to support women leaders and key agents in biodiversity governance and 2026 NBSAP implementation	Annual	MOE and MOWA records; training program files; NGO/development partner reports	Compile inventory annually, confirm publication and use (training delivered or adopted in programs), document target audience and implementation settings	Lead: MOE Support: MOWA, NGOs/development partners, academic institutions	[Baseline TBD]	At least 3

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5.2 Reporting and Review Mechanisms

Effective reporting and periodic review are essential to keep the 2026 NBSAP on track and to ensure it remains a living framework rather than a one-off plan. Cambodia will therefore pair the monitoring and indicator system with a clear schedule and institutional process for reporting on progress, learning from experience, and adjusting implementation where necessary. This approach responds directly to experience, where the 2016 NBSAP was widely seen as quickly out of date and not regularly referenced by stakeholders, and aligns with the enhanced review mechanism agreed under the KM-GBF.

The MOE and the Biodiversity Technical Working Group will coordinate reporting and review of 2026 NBSAP implementation. Line ministries, sub-national administrations, civil society and development partners will be responsible for reporting on the actions and indicators assigned to them in the Implementation Action Plan (Table 31, Section 4.5) using the 2026 NBSAP Annual Results Reporting Template (Annex 4). These data will be consolidated into national progress reports that describe advances toward each of the 23 Cambodia Targets, highlight enabling reforms and financing mobilized, and identify bottlenecks or emerging risks. CEMIS will play a central role as the platform where much of the underlying information is stored and from which summary dashboards and analyses can be generated.

Reporting will be structured around three main cycles: (1) an annual internal progress update, (2) a mid-term review of 2026 NBSAP implementation (2027/28) and (3) an end-of-term evaluation will be carried out in before the Eight NR is due in June 2029.

The annual internal progress update led by the MOE

These updates will draw on the most recent indicator values and qualitative information from implementing agencies and partners. They will be used to inform annual work planning, budget discussions and adjustments to the Implementation Action Plan (Table 31). To the extent possible, a public-facing summary of these annual updates will be made available through official channels and CEMIS, promoting transparency and maintaining stakeholder engagement.

The mid-term review of 2026 NBSAP implementation will be undertaken in 2028

This review will assess whether the chosen strategic actions and institutional arrangements are delivering measurable progress toward the 2030 targets, with a particular focus on areas where indicators are off-track or data remain weak. The mid-term review will combine quantitative assessment of indicator trends with qualitative input from government agencies, IPLCs, civil society, the private sector and development partners. Where warranted, the Implementation Action Plan (Table 31) and, if necessary, selected targets or milestones may be adjusted to reflect lessons learned, new scientific information or changes in national and sub-national development priorities, while maintaining consistency with the KM-GBF.

The end-of-term evaluation will be carried out in 2030.

This evaluation will feed directly into Cambodia's preparations for the Eight NR to the CBD and any subsequent global target-setting process. This evaluation will provide a comprehensive assessment of the extent to which the 23 Cambodia Targets have been achieved, the effectiveness and cost-efficiency of the main policy instruments and financing mechanisms, and the distribution of benefits and costs across different groups, including IPLCs, women and youth. It will also review the performance of the monitoring, reporting and coordination arrangements themselves, identifying what should be retained, scaled up or redesigned in a post-2030 NBSAP.

International reporting obligations under the CBD will continue to serve as key milestones in this cycle. The 2026 NBSAP's indicator framework has been designed to feed into standardized CBD reporting formats, so that the same data and analyses can be used for Cambodia's Seventh and Eight NRs, for the global stock take under the KM-GBF, and for related commitments such as NDC 3.0 (2025). By aligning domestic review cycles with these international reporting deadlines, Cambodia can minimize

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duplication of effort and ensure that national progress and challenges are reflected in global assessments of the KM-GBF implementation.

To strengthen accountability and credibility, Cambodia will also open its 2026 NBSAP reporting to independent scrutiny. This may include technical peer review of draft progress reports and evaluations by universities and research institutes, invited reviews by development partners, and structured consultations with civil society, IPLCs and the private sector. Where feasible within national legal and institutional frameworks, relevant oversight bodies may be invited to review 2026 NBSAP implementation as part of their regular audit or performance-review mandates. While Cambodia does not currently have a legislated biodiversity commissioner or equivalent, the 2026 NBSAP commits to transparent progress reporting and to responding to well-founded recommendations arising from such independent reviews.

Taken together, these reporting and review mechanisms are designed to ensure that the 2026 NBSAP remains current, evidence-based and responsive. Regular reporting, a planned mid-term review and a comprehensive 2030 evaluation will allow Cambodia to learn from experience, adjust course where needed, and feed lessons back into future NBSAP updates. This helps avoid the perception of the 2026 NBSAP as quickly obsolete and instead positions it as a dynamic framework guiding biodiversity action, investment and partnership over the full 2026–2030 period and beyond.

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Annexes

Annex 1. Glossary of Terms

Access and Benefit-Sharing (ABS): The legal framework that regulates access to genetic resources and associated traditional knowledge and ensures fair and equitable sharing of benefits arising from their use.

Adaptive management: An approach where monitoring results and learning are used to regularly adjust actions, institutions and sometimes targets to improve effectiveness over time.

Agroecological practices: Farming approaches that apply ecological principles (e.g., crop diversity, soil health and biological pest control) to make agriculture more sustainable and resilient.

Bioacoustic monitoring: Use of automatic sound recorders and analysis tools to monitor species and ecosystems through their vocalizations or other sounds.

Biodiversity budget tagging: A method for classifying and tracking government budget allocations and expenditures that contribute to biodiversity objectives to improve transparency, planning, and accountability.

Biodiversity credits: Tradable units that represent verified biodiversity outcomes (e.g., restored habitat or improved species status) and can be purchased to support conservation, under strict social and environmental safeguards.

Biodiversity footprint: The overall impact that an activity, company or value chain has on biodiversity through its pressures on species, habitats and ecosystems.

Biodiversity literacy: The level of understanding people has about biodiversity, ecosystems and conservation issues, enabling informed choices and participation.

Biodiversity mainstreaming: Integrating biodiversity considerations into policies, plans, budgets and practices of sectors such as agriculture, energy, infrastructure and education.

Biodiversity offsets: Measurable conservation outcomes designed to compensate for residual, unavoidable biodiversity impacts of development projects.

Biodiversity Technical Working Group (BTWG): A standing multi-sector technical coordination body convened to support NBSAP implementation through joint work planning, technical review, learning, and reporting.

Bioprospecting: The exploration of biodiversity and genetic resources to identify compounds, genes or organisms with potential commercial, pharmaceutical or agricultural applications.

Biosafety: Measures and regulations designed to prevent unintentional exposure to, or release of, biological agents and genetically modified organisms that could harm people, animals or the environment.

Biotechnology: The use of living organisms, cells or biological systems to develop or modify products and processes for specific uses, such as agriculture, medicine or industry.

Blended finance: The strategic use of public or philanthropic funds to reduce risk or improve returns so that additional private investment is mobilized for biodiversity or climate-related projects.

Blue carbon: Carbon stored in coastal and marine ecosystems such as mangroves, seagrasses and tidal marshes, which can generate climate finance when conserved or restored.

Cambodia Environmental Management Information System (CEMIS): The national platform that stores, manages and shares core environmental and biodiversity datasets housed in MOE.

Circular economy: An economic model that aims to keep materials and products in use for as long as possible through reuse, repair, remanufacturing and recycling, reducing waste and resource extraction.

Citizen science: Biodiversity monitoring or research where non-professionals (e.g., students, community members or visitors) help collect or analyze data for research and monitoring alongside scientists or authorities.

Citizen science: Biodiversity monitoring or research where non-professionals (e.g., students or community members) help collect or analyze data alongside scientists or authorities.

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Co-management: Shared governance arrangements where government and communities jointly plan, manage and monitor natural resources or PAs.

Commune Investment Plan (CIP): The rolling three-year plan prepared by each commune that sets local development priorities and budgets, including for environment and biodiversity.

Communication, Education and Public Awareness (CEPA) programs: Structured activities (campaigns, trainings, outreach) designed to increase understanding, engagement and behavior change on biodiversity and environmental issues.

Community fishery (CFi): A fishery area managed by a local community under recognized rules for sustainable use and conservation.

Community forest: A forest area formally allocated for management and use by a local community under an approved community forestry framework.

Community protected area (CPA): An area inside or near a PA that is co-managed by local communities and government, with agreed rights and responsibilities.

Community-based conservation initiatives: Conservation activities where local communities take a lead role in managing and protecting natural resources under agreed rules.

Debt-for-nature swap: A financial arrangement where part of a country's external debt is reduced or restructured in exchange for commitments to invest in agreed conservation or climate actions.

Decentralization and reconcentration reforms: Reforms that transfer selected powers, functions and resources from central government to provincial, district and commune levels.

Disaster risk reduction (DRR): Measures taken to prevent or reduce damage and loss of life from hazards such as floods, storms and droughts.

Early detection and rapid response (EDRR): A management approach that focuses on quickly finding and acting on new invasive or emerging threats before they become widespread and costly.

Economic Land Concessions (ELCs): Long-term leases granted by the government to private companies to develop state land for agro-industrial production or other commercial uses, typically involving large land areas and associated land-use change

Ecosystem resilience: The ability of an ecosystem to absorb disturbances (e.g., climate shocks or human pressures) and still maintain its basic structure, functions and services.

Ecosystem services: The benefits people obtain from nature, such as clean water, food, climate regulation, flood protection and cultural values.

Ecosystem-based adaptation (EbA): The use of biodiversity and ecosystem services (e.g., forests, wetlands and mangroves) to help people adapt to climate change impacts.

Ecosystem-based disaster risk reduction (eco-DRR): Use of healthy ecosystems (e.g., mangroves, wetlands, forests) to reduce disaster risks and impacts on people and infrastructure.

Endowment, sinking and revolving funds: Types of funding windows in a conservation or climate fund: endowments invest capital and spend only returns; sinking funds spend down capital over time; revolving funds are replenished from dedicated revenue streams.

Environmental and Social Impact Assessment (ESIA): A process to identify and manage potential environmental and social impacts of a proposed project before decisions are made.

Environmental and Social Risk Management (ESRM): The process of identifying, assessing, managing, and monitoring environmental and social risks for projects, programmes, and finance instruments, including safeguards implementation.

Environmental DNA (eDNA): Genetic material collected from environmental samples (e.g., water or soil) used to detect the presence of species without directly observing them.

Environmental fiscal instruments: Taxes, fees, charges, subsidies or other fiscal tools designed to influence behavior and raise revenue in ways that support environmental and biodiversity goals.

Essential Life Support Areas (ELSA) mapping: An integrated spatial planning approach that combines nationally selected spatial data layers to identify and map areas where protecting, sustainably managing, or restoring ecosystems can best deliver national priorities across biodiversity, climate, and sustainable development

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Evidence-based decision-making: Systematic use of data, research and monitoring results to design, implement and adjust policies and actions.

Ex-situ conservation: Conservation of components of biodiversity outside their natural habitats (e.g., seed banks, captive-breeding centers, gene banks).

Extended producer responsibility (EPR): A policy approach in which producers are made responsible for the environmental impacts of their products throughout the product life cycle, especially for take-back, recycling and final disposal.

FAIR data principles: International principles stating that data should be Findable, Accessible, Interoperable and Reusable.

Free, Prior and Informed Consent (FPIC): The right of Indigenous Peoples and Local Communities to give or withhold consent to activities that may affect their lands, resources or knowledge, based on full information and without coercion, before decisions are made.

Gender-responsive biodiversity governance: Biodiversity policies and institutions that recognize gender roles and inequalities and ensure women and men participate and benefit on an equal basis.

Genetic resources: Genetic material of plant, animal, microbial or other origin that has actual or potential value for research, breeding, biotechnology or other uses.

Genetically modified organism (GMO): An organism whose genetic material has been altered using modern biotechnology techniques in ways that do not occur naturally through mating or natural recombination.

Geographic Information System (GIS): Computer systems that capture, store, analyze and display spatial or geographic data for mapping and decision-making.

Good governance principles: Core principles such as transparency, accountability, participation, equity and rule of law applied to how biodiversity is managed and decisions are made.

Green and blue infrastructure: Networks of natural or semi-natural areas and features in and around cities (e.g., parks, trees, rivers, lakes, wetlands) that provide ecosystem services and improve urban livability.

Green and sustainability-linked bonds: Bonds where the proceeds are dedicated to environmental or sustainability objectives, and/or where financial terms are partly tied to achieving pre-agreed performance indicators.

Green competencies: Knowledge, skills and behaviors that enable people to support environmentally sustainable, climate-resilient and low-carbon development.

Harmful incentives (to biodiversity): Subsidies, tax breaks or other policy measures that encourage activities leading to habitat loss, over-exploitation or pollution and therefore undermine biodiversity goals.

Headline and component indicators (KM-GBF): The global CBD indicator tiers, where headline indicators track high-level progress on KM-GBF goals and component indicators provide more detailed measures.

Human–wildlife conflict: Situations where the needs or activities of people and wildlife negatively affect each other (e.g., crop damage, livestock predation, attacks on people).

Improved Forest Management (IFM): The application of improved or sustainable forest management practices in existing forests, often including reduced-impact or better-regulated harvesting, to maintain or increase forest carbon stocks and ecosystem integrity relative to business-as-usual management.

Innovative finance: Non-traditional financial instruments and structures (e.g., green bonds, guarantees or biodiversity credits) used to mobilize new and additional funding for biodiversity.

In-situ conservation: Conservation of species and ecosystems in their natural habitats (e.g., inside PAs or community-managed sites).

Integrated pest management (IPM): A structured approach that combines biological, cultural, mechanical and chemical methods to control pests in ways that minimize risks to people and biodiversity.

Interoperability: The ability of different information systems and datasets to work together and exchange data using shared standards.

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Invasive alien species (IAS): Species introduced outside their natural range that establish and spread, causing harm to biodiversity, ecosystems, the economy or human health.

Implementation Action Plan: The operational plan that translates NBSAP targets into sequenced actions with timeframes, responsible institutions, and accountability milestones, updated as needed during implementation.

Jurisdictional zero-deforestation approaches: Area-wide agreements at province, landscape or national level that commit producers, buyers and authorities to eliminating deforestation from supply chains within that jurisdiction.

Key Result Area (KRA): A thematic cluster that groups related targets, indicators, and actions to support coherent planning, implementation, coordination, and reporting.

Knowledge management: Organized processes and tools for collecting, storing, sharing and using information and experience to support better decisions.

Knowledge, Attitudes and Practices (KAP) surveys: Surveys that assess what people know, how they feel and how they behave in relation to biodiversity and conservation.

Knowledge, Attitudes and Practices (KAP) surveys: Surveys that measure what people know, how they feel and how they behave in relation to specific topics, such as biodiversity conservation.

Local Biodiversity Action Plan (LBAP): A locally developed plan (e.g., at commune or district level) that sets out priority biodiversity actions, responsibilities and timelines.

Measurement, Reporting and Verification (MRV): A structured system for collecting, checking and reporting data on agreed indicators, such as emissions, forest cover or biodiversity status.

Mitigation hierarchy: A framework for managing environmental impacts that prioritizes first avoiding impacts, then minimizing them, then restoring affected areas, and only as a last resort offsetting residual impacts.

National Biodiversity Strategy and Action Plan (NBSAP): The national plan that sets Cambodia's overall vision, goals and priority actions for conserving and sustainably using biodiversity.

Natural Capital Accounting (NCA): The process of calculating the total stocks and flows of natural resources and services in an ecosystem or region. It integrates economic and environmental data to better understand the value of natural assets, such as water, soil, and biodiversity, and their contributions to the economy and human well-being.

Nationally Determined Contribution (NDC): Cambodia's climate pledge under the Paris Agreement, setting national mitigation and adaptation targets, including nature-based actions.

Nature-based solutions (NbS): Actions that protect, restore or sustainably manage ecosystems to address societal challenges (e.g., climate adaptation, disaster risk reduction or water security) while providing biodiversity benefits.

"No go" zones: Areas of very high biodiversity or cultural value where damaging activities and developments are prohibited under policy or law.

One Health: An integrated approach that recognizes the close links between human health, animal health and ecosystem health, and manages risks (e.g., disease spillover) across these domains.

Open data: Data that can be freely accessed, used and shared by anyone, subject to minimal technical or legal restrictions.

Other Effective Area-based Conservation Measures (OECMs): Areas that are not formally PAs but are managed in ways that deliver long-term, effective in-situ conservation of biodiversity. These could include CFs, CFis, MFMAs, ICLTs, sacred forests managed under customary law, and privately managed ecotourism or conservation concessions.

Payments for Ecosystem Services (PES): Arrangements where beneficiaries of ecosystem services (e.g., clean water or flood protection) provide payments or rewards to those who manage the ecosystems that supply those services.

Peer-learning: A capacity-building approach where practitioners learn directly from each other's experiences through exchanges, mentoring or joint work.

Protected Area (PA): A clearly defined geographical space recognized and managed to achieve long-term conservation of nature and associated ecosystem services and cultural values.

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Public–private partnership in conservation: A formal arrangement where public authorities and private actors share roles, risks and benefits to deliver conservation or eco-tourism outcomes.

REDD+: A framework under the UNFCCC to reduce greenhouse gas emissions by avoiding deforestation and forest degradation, and by promoting conservation, sustainable forest management and

Remote sensing: Use of satellite or airborne sensors to collect information about the Earth's surface, such as land cover and habitat change.

Results-based payments (results-based finance): Payments that are made only when agreed outputs or outcomes, such as emissions reductions or hectares restored, have been independently verified.

Results Framework: The structured set of targets, indicators, baselines, milestones, and data responsibilities used to track progress and support annual reporting and adaptive management.

Spatial Monitoring and Reporting Tool (SMART): A modular conservation management platform used by rangers, PA authorities and community teams to collect georeferenced field data (patrol effort, threats, wildlife observations and management actions), analyze trends and performance, and plan adaptive responses. It can be implemented as a local desktop and mobile system and can be extended through SMART Connect to enable cloud-based data sharing and analysis, centralized multi-site database management, near real-time data transfer from the field, and integration with other systems and sensors. In 2025 SMART became part of the SMART-EarthRanger Conservation Alliance, intended to steward the platform and integrate SMART and EarthRanger within a unified conservation technology suite with strengthened global support.

Spatial planning (biodiversity-inclusive): Land- and sea-use planning that explicitly maps and considers biodiversity values so that development avoids or minimizes habitat loss and fragmentation.

Species recovery plan: A targeted plan that sets out actions needed to restore a threatened species' population and reduce the risk of extinction.

Strategic Environmental Assessment (SEA): A systematic process for evaluating the environmental and social effects of policies, plans or programs before they are adopted.

Technology transfer: The process of sharing equipment, software, methods and know-how between organizations or countries to improve biodiversity management.

Traditional knowledge (TK): Knowledge, know-how, skills and practices related to biodiversity, ecosystems and genetic resources that are developed, maintained and transmitted over generations by individuals and communities, often as part of their cultural or spiritual identity and frequently held collectively. This is consistent with "Associated Traditional Knowledge" in Cambodia's ABS Sub-Decree (No. 104 ANK.BK, 2023) and CBD Article 8(j). Sometimes it is also called 'Traditional Ecological Knowledge'.

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Annex 2. List of Protected Areas in Cambodia.

Protected Area Name	Area (Ha)	Protected Area	Area (Ha)
National Park (12)			**1,720,269**
Preah Soramarith Kosamak "Kirirom"	35,232	Virachey	332,500
Preah Munivong "Bokor"	154,458	Vensai Siempang	57,469
Kep	1,152	Central Cardamom	401,313
Pheah Sihanouk "Ream"	15,000	O'Yadao	101,348
Botum Sakor	171,250	Southern Cardamom	410,392
Preah Cheyvarama "Phnom Kulen"	37,500	Koh Rong	2,655
Wildlife Sanctuary (18)			**3,684,328**
Phnom Aural	253,750	Snoul	75,000
Peam Krasop	23,750	Prey Lang	431,683
Phnom Somkos	333,750	Preah Roka	90,361
Ronien Daun Sam	178,750	Western Siempang	65,389
Kulen Promtep	402,500	Chhaeb	190,027
Beng Per	242,500	Tatai	144,275
Lomphat	250,000	Koe Seima	292,690
Phnom Prich	222,500	SrePok	372,971
Phnom NamLyr	47,500	Siem Pang	66,932
Protected Landscape (8)			**149,347**
Angkor	10,800	North Tonle Sap	31,159
Banteay Chhmar	81,200	Boeung Prek Lpov	8,305
Preah Vihear	5,000	Ang Trapeng Thmor	12,650
An Long Pring	217	Boeng Prektub	16.30
Multiple Use Area (8)			**409,669**
Dong Peng	27,700	Prek Toal Core Area[a]	(21,342)
Samlaut	60,000	Stung Sen Core Area[a]	(6,355)
Tonle Sap Biosphere Reserve	316,250	Punchearkrek	199
Boeng Chhmar Core Area[i]	(14,560)	Kbal Chay	5,520
Ramsar Sites (4)			**4,600**
Stung Treng	14,600	Boeng Chhmar[a]	(14,560)
Koh Kapik[ii]	(1,200)	Prek Toal[a]	(21,342)
Natural Heritage Park (1)			**24,654**
Phnom Tberng	24,654		
		TOTAL	**7,430,808**

[i] Part of the Tonle Sap Biosphere Reserve; [ii] Part of Peam Krasaop Wildlife Sanctuary

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Annex 3. Members of the Biodiversity Technical Working Group (BTWG)

No.	Institutions	Position
1	Ministry of Environment	Chair
2	Ministry of Environment	Permanent Vice Chair
3	DBD/Ministry of Environment	Second vice Chair
4	GDANCP Ministry of Environment	Third Vice Chair
5	GDLC Ministry of Environment	Member
6	GDEKI Ministry of Environment	Member
7	GDEP Ministry of Environment	Member
8	Ministry of Justice	Member
9	Ministry of National Defense	Member
10	Ministry of Foreign Affairs and International Cooperation	Member
12	Ministry of Land Management and Urban Development	Member
13	Ministry of Rural Development	Member
14-15	GDCAM Ministry of Commerce (two departments)	Member
16	Ministry of Education, Youth and Sport	Member
17	Ministry of Transport and Public works	Member
18	Ministry of Planning	Member
19	FA Ministry of Agriculture, Forestry and Fisheries	Member
20-21	GDA Ministry of Agriculture, Forestry and Fisheries (two departments)	Member
22	Ministry of Tourism	Member
23	Ministry of Water Resource and Meteorology	Member
24	Ministry of Women's Affairs	Member
25	Ministry of Information	Member
26	Ministry of Economic and Finance	Member
27-28	Ministry of Interior (two departments)	Member
29	Ministry of Health	Member
30	Royal University of Phnom Penh	Member
31	Royal University of Agriculture	Member
32	NCDD	Member
33	CCC	Member
34	DBD/GSSD	Member

Annex 4. NBSAP Annual Results Reporting Template.

This annex presents the standard reporting template to be used by line ministries, sub-national administrations, CSOs, IPLC representatives, and development partners for annual reporting on implementation of the 2026 NBSAP.

The template is designed to operationalize the national Results Framework and the Implementation Action Plan from the 2026 NBSAP. It has two main components:

A. An indicator reporting form, structured around the agreed Cambodia Targets and indicators.
B. An action reporting form, structured around the strategic actions for which each institution is lead or supporting agency.

The Ministry of Environment (MOE) will pre-fill the template with the: Target and Indicator definitions; baseline, midline and endline values. Reporting organizations are only required to enter current-year values and brief explanations in the designated fields. Data submitted through this template will be consolidated for NBSAP progress reporting, national reporting to the Convention on Biological Diversity, and relevant indicators under NDC 3.0 (2025) and the Sustainable Development Goals.

A. Indicator Reporting Form

The indicator reporting form is completed annually for each indicator for which the organization has reporting responsibility. The core fields are shown below; in practice, these will be provided in an Excel format to facilitate consolidation and analysis. MOE will provide the indicator reporting form as a protected Excel sheet, with all metadata pre-filled and only the current-year fields open for editing by reporting organizations.

Indicator Reporting Form

Field	Description	Completed by	Format
Reporting Year	Calendar year for which data are reported.	Reporting organization	Year (YYYY)
Agency / Organization	Name of the reporting institution or organization.	Organization	Text
Target No.	Reference to the Cambodia Target supported by this indicator.	Pre-filled by MOE	Code (T1–T23)
Indicator Name	Official indicator name as defined in the Results Framework.	MOE	Text
Indicator Description	Short definition explaining what the indicator measures.	MOE	Text
Unit	Measurement unit used for the indicator.	MOE	Text
Baseline (year & value)	Baseline year and value for the indicator.	MOE	Text / numeric
2030 End Target	Approved 2030 ambition for the indicator.	MOE	Text / numeric
Geographic Coverage	Geographic area covered by the reported data.	Organization	Text
Disaggregation	Relevant disaggregation applied (e.g., sex, IPLC/non-IPLC, age group).	Organization	Text
Reporting Year Value	Numerical value of the indicator for the reporting year.	Organization	Numeric / text

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Field	Description	Completed by	Format
Data Source (this year)	Primary data source(s) used to calculate the value.	Organization	Text
Methodology (this year)	Short description of the method used for this year's data.	Organization	Text
Data Collection Period	Time period over which data were collected.	Organization	Text
Data Quality (H/M/L)	Self-assessment of data quality, with reference to coverage, consistency and verification.	Organization	Coded (H/M/L)
Evidence /File Reference	Reference to supporting documentation or datasets, preferably uploaded to CEMIS.	Organization	Text / hyperlink
Trend vs Last Year	Simple classification of change relative to previous year.	Organization	Coded
Comments / Explanation	Brief explanation of major changes, anomalies or caveats.	Organization	Text

B. Action Reporting Form

The action reporting form is used to track implementation of strategic actions in the Implementation Action Plan. Each reporting organization completes one line per strategic action for which it is designated as lead or supporting agency.

Where possible, reporting organizations should align their internal work-planning and monitoring systems with this template, to minimize duplication of effort. Over time, the MOE will integrate these reporting forms with the CEMIS platform, allowing annual uploads and automated consolidation of results.

Action Reporting Form

Field	Description	Completed by
Reporting Year	Calendar year for which implementation progress is reported	Organization
Agency / Organization	Name of the institution responsible for implementation	Organization
Target No.	Target to which the action primarily contributes	MOE
Strategic Action ID / Code	Unique identifier used in the Implementation Action Plan	MOE
Strategic Action (short description)	Concise description of the strategic action	MOE
Agency Role	Role of the reporting organization for this action	MOE
Status (this year)	Current implementation status	Organization

Field	Description	Completed by
Key Outputs Delivered (this year)	Main deliverables achieved during the reporting year	Organization
Budget Planned (this year)	Total budget planned for this action in the reporting year	Organization
Budget Spent (this year)	Total expenditure incurred for this action in the reporting year	Organization
Linked Indicator(s)	Indicator codes/names to which this action directly contributes	Organization
Main Challenges / Constraints	Key implementation barriers encountered during the year	Organization
Planned Next Steps (next year)	Major activities planned and milestones for the following year	Organization

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