



Kingdom of Cambodia
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Royal Government of Cambodia

**National Protected Area Strategic Management Plan
2017-2031**

Ministry of Environment
2017

Samdech Akka Moha Sena Padei Techo HUN SEN
Prime Minister of the Kingdom of Cambodia

MESSAGE

Protected areas play a critical role in conserving biodiversity and promoting sustainable development. The world's agricultural systems depend upon biodiversity to sustain genetic plant and animal diversity, to provide pollination services, and to maintain irrigation services. Urban cities depend upon biodiversity to provide clean drinking water to their growing populations. Coastal communities depend upon the natural infrastructure of coral reefs, sea grass beds, and mangroves to buffer them from the impacts of climate change, including sea-level rise and increased storm surges. Rural communities depend upon the natural infrastructure of forests, grasslands and wetlands to buffer them against increased drought, flooding, disease and natural disasters.

While protected areas provide the fundamental goods and services upon which all life depends, it is particularly important to the most vulnerable groups of our society. In Cambodia, indigenous ethnic groups and remote rural communities depend critically upon biodiversity to provide them with basic necessities such as food, water, shelter, medicine and their livelihoods.

As nations begin to plan for a green growth and climate-resilient future, they will be looking for ways to find innovative solutions to meet both their social development needs and their biodiversity conservation goals. Protected areas represent one of the most efficient and effective strategies available for addressing the global challenges of alleviating poverty, while adapting to and mitigating climate change, and maintaining key ecosystem services. Although the upfront investments in protected areas are high, the long-term ecological, social and economic dividends can be enormous.

Today, the protected areas system represents about 39% of the Royal Kingdom of Cambodia. This is one of the highest percentages of national territory within protected areas in the world. In Asia, only Bhutan has a higher percentage of their land protected. However, this network of protected areas is now under heavy pressure and, in response, we have taken important steps to make sure this important national heritage will be protected for future generations in Cambodia. We have given the responsibility for safeguarding all protected areas and biodiversity corridors to the Ministry of Environment and embarked on several reforms to support more effective and efficient management of natural resources, including protected areas.

In this regard, it is my great honour and pleasure on behalf of the Royal Government of Cambodia to announce the official promulgation of the **National Protected Area Strategic Management Plan** (NPASMP). The NPASMP has reflected our political will and our firm commitment to safeguard a network of protected areas that contributes to the country's economy and sustainable development, including poverty reduction, through the conservation and sustainable use of its biological, natural and cultural resources and other ecosystem services.

The NPASMP will guide the Ministry of Environment and assist non-governmental organizations and development partners in developing concrete and appropriate measures and actions to strengthen the effectiveness of protected areas in contributing to the National Strategic Development Plan, the National Strategic Plan on Green Growth, the Cambodia Climate Change Strategic Plan, the National

REDD+ Strategy and the National Environmental Strategy and Action Plan.

I would like to express my sincere gratitude and appreciation to the Ministry of Environment and its line departments, development partners, and non-governmental organizations that have contributed to making this NPASMP possible.

In closing, I strongly encourage all stakeholders from the Government, private sector, national and international non-governmental organizations and development partners to continue their close cooperation with the Ministry of Environment in the implementation of the NPASMP, which would contribute to the development of Cambodia towards a green, climate resilient, equitable and sustainable society.

Phnom Penh, 30 June 2017

HUN SEN

PREFACE

On behalf of the National Council for Sustainable Development and the Ministry of Environment, I would like to express my profound respect and sincere gratitude to **Samdech Akka Moha Sena Padei Techo HUN SEN**, Prime Minister of the Kingdom of Cambodia, for his full support and strong commitment to strengthen the contribution of protected areas to the national development process. The National Protected Area Strategic Management Plan (NPASMP) 2017-2031 is the first comprehensive strategy document for protected areas in Cambodia and represents an important milestone in moving towards a climate-resilient future for our country.

The globally and regionally significant biodiversity values of Cambodia's protected areas are an essential part of our country's *natural capital*. Few places on Earth demonstrate so dramatically the fundamental links between people and nature. For many poor forest-dependent communities, protected areas represent food security and livelihoods, crucial components of their well-being and participation in our society. Protected areas also represent hope for future generations to enjoy and benefit from this natural heritage.

We can make history by ensuring our protected areas are well managed and well connected. Recent environmental reforms have been designed to safeguard protected areas by establishing additional biodiversity corridors and to allow for more participation of local authorities and communities in the management of our protected areas. Together we will be stronger and better able to ensure natural resources are both protected and used sustainably. However, reforms can only be sustained by having the necessary laws in place and that is the primary purpose for developing the Environment and Natural Resources Code for Cambodia.

The NPASMP has been prepared based on a broad consultation process to ensure consensus and ownership of the Plan by all relevant stakeholders. Much emphasis is placed on building institutional capacity and knowledge to strengthen conservation management and enforcement, expand community livelihood opportunities, and support sustainable uses of protected area resources. The NPASMP is action-oriented and implementation will require a renewed investment in protected area management that can only be realized through strong collaboration with other Ministries, development partners, private sector "champions" and local communities. It is our duty and responsibility to build and protect this natural legacy for our children so they, in turn, can make sure the Royal Kingdom of Cambodia remains "green" for generations to come.

I would like to take this opportunity to express my deep appreciation to line departments and agencies, development partners and experts for their valuable inputs, assistance and active participation in the development process of the NPASMP in a timely and effective manner.

Phnom Penh, 05 April, 2017

Say Samal
Minister of Environment

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ACRONYMS

AOP	Annual Operating Plan
BCC	Biodiversity Conservation Corridor
CBD	Convention on Biological Diversity
CITES	Convention on International Trade in Endangered Species
CPA	Community Protected Area
EIA	Environmental Impact Assessment
ELC	Economic Land Concession
FA	Forestry Administration (in MAFF)
FiA	Fisheries Administration (in MAFF)
GDEKI	General Directorate for Environmental Knowledge and Information
GDLC	General Directorate for Local Community
GDANCP	General Directorate of Administration for Nature Conservation and Protection
GEF	Global Environment Facility
GIS	Geographical Information System
GMS	Greater Mekong Subregion
Ha	hectar
IBA	Important Bird and Biodiversity Area
IUCN	International Union for the Conservation of Nature
KBA	Key Biodiversity Area
MAFF	Ministry of Agriculture, Forestry and Fisheries
MEF	Ministry of Economy and Finance
MIST	Management Information System
MLMUPC	Ministry of Land Use Management, Urban Planning and Construction
MOE	Ministry of Environment
MOT	Ministry of Tourism
NBSAP	National Biodiversity Strategy and Action Plan
NCSD	National Council for Sustainable Development
NGO	Non-Governmental Organization
NP	National Park
NPASMP	National Protected Area Strategic Management Plan
NRS	National REDD+ Strategy
NSDP	National Strategic Development Plan
NTFP	Non-timber Forest Product
PA	Protected Area
PES	Payments for Environmental Services
RAPPAM	Rapid Assessment and Prioritization of Protected Areas Management
REDD+	Reducing Emissions from Deforestation and Forest Degradation and the role of conservation, sustainable management and enhancement of forest carbon stocks
RS	Rectangular Strategy
SMART	Spatial Monitoring and Reporting Tool
SO	Strategic Objective
UNDP	United Nations Development Programme
UNFCCC	Framework Convention on Climate Change
WCPA	World Commission on Protected Areas
WS	Wildlife Sanctuary

SUMMARY

There are currently 49 protected areas and a number of biodiversity corridors covering over 7.4 million ha (41% of Cambodia) under the authority of the Ministry of Environment (MOE) through its General Directorate of Administration for Nature Conservation and Protection (GDANCP) and the newly created General Directorate for Local Community (GDLC). The protected area estate of the Royal Kingdom of Cambodia now represents one of the highest percentages of national territory within protected areas in the world. In Asia, only Bhutan has a higher percentage (around 41%) of their land protected.

Today, the network of protected areas in Cambodia is under heavy pressure and concerns remain about its effectiveness in safeguarding significant conservation values and providing sustainable livelihood opportunities. As is the case for most protected areas in the Asia Region, the main threats relate to habitat degradation and the unsustainable use of natural resources precipitated by high population densities and increasing demands from a globalized market. Conversion of lands within protected areas to agro-industrial plantations has contributed to a change in forest cover and natural habitats. Other key development activities inside protected areas, such as hydropower, mining and road construction, also result in direct habitat losses. Indirectly, the improved access provided by new roads can facilitate more pressures on protected areas, including illegal encroachments, and unsustainable uses of wildlife and forest products. The illegal trade in wildlife has resulted in significant population declines and local loss of species leaving some protected areas void of the biodiversity they were originally created to protect.

While these physical threats remain significant, our biggest and most immediate challenges relate to the governance of protected areas and our ability to effectively implement the provisions of the 2008 Protected Area Law. The challenges include:

- Lack of boundary demarcation (land registration), management and zoning plans to clearly identify and protect core and conservation zones inside protected areas;
- Difficulties of ensuring the sustained reduction or eradication of illegal activities;
- Limited contributions of existing protected areas to local rural livelihoods;
- Complexities of resolving land use conflicts in and around protected areas;
- Limited collaboration between Ministries;
- Insufficient technical training of Rangers and protected area staff; and,
- Inadequate government funding to maintain effective management of protected areas.

The Royal Government of Cambodia recognizes the challenge of limited human and financial resources available and will prioritize the actions that are needed to quickly secure those protected areas that are under severe threats, that represent the highest value for biodiversity conservation, and that are most likely to make sustainable contributions to local livelihoods.

The Protected Area Law stipulates the development of a **National Protected Area Strategic Management Plan (NPASMP)** to guide the future planning and management of individual protected areas. The NPASMP includes the following components:

Vision: <i>Cambodia's protected area system contributes to the country's economy and sustainable development, including poverty reduction, through the conservation and sustainable use of its biological, natural and cultural resources and other ecosystem services.</i>
Mission: <i>Achieve the most effective, efficient and equitable management of the national protected area system in the Royal Kingdom of Cambodia.</i>
Goals: <ol style="list-style-type: none">1. Maintain and enhance the ecological and cultural values of protected areas;2. Promote participatory community engagement and support for conservation management;

<p>3. Develop innovative approaches to conservation and development, including opportunities for sustainable ecotourism and financing mechanisms;</p> <p>4. Provide accurate, timely and relevant information for effective management of protected areas;</p> <p>5. Strengthen protected area management effectiveness and working partnerships with government agencies, local authorities, conservation NGOs, and development partners.</p>			
Strategic Objectives (SOs)			
SO1. Prioritize and Strengthen Conservation	SO2. Enhance Sustainable Management	SO3. Expand Community Participation and Benefits	SO4. Strengthen Institutional Capacity and Collaboration
➤ Secure PA boundaries, zones and management plans	➤ Harmonize development with conservation	➤ Increase local participation in PA management	➤ Ensure adequate staff with appropriate capacity and resources
➤ Enhancement of law enforcement and threat reduction	➤ Connect the PA system	➤ Establish and support collaborative management mechanisms	➤ Enhance collaboration for research, planning and policy actions
➤ Promote biodiversity conservation and restoration		➤ Expand livelihood opportunities	
➤ Expand international cooperation			

The Strategic Objectives are designed to comply with the provisions proposed for the new Environment and Natural Resources Code.

SO1. Prioritize and Strengthen Conservation

Over the next five years (2017-2021), at least 25 protected areas and 50% of the newly established biodiversity corridors will have their outer boundaries demarcated and registered. At least 20 priority protected areas with high conservation values will have approved zonation plans that define and protect core and conservation zones from future developments and unauthorized activities. Most protected areas will initially operate based on simplified management plans (*PA Profiles*) with clear objectives, strategic priorities and defined budgets.

Law enforcement capacity will be strengthened by providing specialized training to at least another 500 Rangers over the next 5 years and investing in modern equipment. Active collaboration with indigenous ethnic groups and local communities will raise awareness for the objectives of protected area management and broaden support for the enforcement of relevant laws and regulations.

Given the importance of protected areas in providing habitats for wildlife species at risk, MOE will collaborate with MAFF, local authorities, conservation NGOs, development partners, and universities to improve the knowledge base, support conservation and restoration action plans, and actively address threats to species and ecosystems. International cooperation for strengthening protected areas management will be expanded, to share best practices, innovative approaches and new technologies.

SO2. Enhance Sustainable Management

With the recent transfer of Economic Land Concessions (ELCs) within protected areas to the Forestry Administration (MAFF-FA), there is a need to work in close collaboration to ensure legislative requirements of EIAs are fulfilled and that the existing ELCs contribute to local livelihood enhancement. Opportunities for non-commercial and sustainable harvests of natural resource products by local communities will be encouraged, where appropriate. Similarly, local communities will also be directly involved in carrying out reforestation and regeneration activities in degraded areas.

The recent expansion of the protected area estate under MOE jurisdiction has resulted in large, continuous conservation landscapes linked by biodiversity corridors to facilitate movements of large

or migratory wildlife species between protected areas. Integrated ecosystem mapping will be used to identify additional corridor areas and to fill gaps in representation of key ecosystems.

SO3. Expand Community Participation and Benefits

As part of decentralization efforts, training and capacity building will be provided for local authorities on collaborative management mechanisms in protected areas. Awareness raising campaigns will focus on communicating the importance of natural resources conservation as a means of linking livelihood opportunities with sustainable resource management.

Providing opportunities for direct and meaningful participation by both men and women in sustainable use initiatives in protected areas will reduce pressures on natural resources and offer increased livelihood alternatives for local communities. By developing opportunities that can replace unsustainable uses of natural resources, local communities are also more likely to collaborate in efforts to monitor and safeguard protected area resources. This will include promoting new technologies for enhanced agricultural yields; facilitating small business development and access to microcredit schemes; engaging in forest and ecosystem restoration and monitoring programmes; and, developing “high quality-low impact” ecotourism products with active local community involvement.

SO4. Strengthen Institutional Capacity and Collaboration

A renewed investment of government funding will be essential in developing a cadre of professional staff at both central and provincial levels that are equipped, ready and motivated to meet the challenges facing protected areas in Cambodia. The technical capacity of professional staff needs to be urgently upgraded in order to provide the necessary oversight, support and training for PA staff and local authorities to assume a greater role in protected area management. Three Regional Training Centers will be established for the purpose of bringing provincial and local authorities, Rangers and PA staff closer together and promoting collaborative management.

Active collaboration between line Ministries and with universities, conservation NGOs and development partners will be necessary to mobilize support for, and scale up, best practices in protected area management. This includes agreeing on joint priorities for future work, developing shared biodiversity monitoring/reporting tools, and generating support for a centralized conservation database in MOE to inform management planning processes in individual protected areas

Financing resources

Implementation of the National Protected Area Strategic Management Plan (2017-2031) is estimated to require additional financing in the order of USD 46.8 million for the first 5 years, over and beyond the core salary and operational funding currently provided by MOE.

A resource mobilization strategy will be developed using a diversified set of funding sources to address the urgent needs of protected areas. Currently, there is no overall mechanism to direct external funding or revenues collected from fees, fines and taxes back into the protected area system to cover operational costs, infrastructure investments, or ecosystem restoration efforts. As part of fiscal reform, consideration will be given to directing these and other revenues into an operationalized Protected Area Fund that could be used by GDANCP and GDLC to enable investments in protected areas over and beyond what is available from national budget allocations. Furthermore, the benefits and costs of protected areas must be mainstreamed into national development strategies and budgets.

When properly managed, protected areas represent one of the most efficient and effective strategies available for simultaneously addressing the global challenges of alleviating poverty, adapting to and mitigating climate change, and maintaining a host of ecosystem services. Although the initial investments in protected areas may be high, the long-term ecological, social and economic dividends can be enormous.

1. INTRODUCTION

There are currently 49 Protected Areas in 8 categories¹ and a number of recently established Biodiversity Conservation Corridors covering over 7 million ha (39% of Cambodia) under the authority of the Ministry of Environment (MOE) through its General Directorate of Administration for Nature Conservation and Protection (GDANCP) and the newly created General Directorate for Local Community (GDLC). Annex 1 provides a summary of the designation and size of these protected areas in Cambodia and Annex 2 shows a map their location.

Cambodia now has one of the highest percentages of national territory within protected areas in the world. In Asia, only Bhutan has a higher percentage (around 40%) of their land protected. The CBD Aichi Biodiversity Target (#11) calls for countries to protect by 2020 at least 17% of their territorial and inland water areas, and 10% of their coastal and marine areas. Cambodia has already surpassed the target for terrestrial and inland water areas but has still work to do to ensure adequate protection of important coastal and marine areas.

Cambodia is located within the Indo-Burmese Peninsula that is recognized as a Global Biodiversity Hotspot and has the largest contiguous block of natural forest remaining on the Asian continent's mainland. It is estimated that about 30% of the carbon stock in Cambodia is located within protected areas which means these areas have an important role to play in preserving carbon-rich forests, promoting REDD+ safeguards and achieving "co-benefits" (i.e. supporting biodiversity conservation and local livelihoods). Five of nine high priority biodiversity conservation corridors in the Greater Mekong Sub-region are in Cambodia. The country's protected areas provide sanctuaries to almost 2% of globally threatened species on IUCN's Red List, including 34 mammals, 39 birds, and 20 reptiles. Some of the most commercially productive areas of Cambodia include protected areas, such as Tonle Sap Lake and Angkor Protected Landscape.

The regionally (and globally) significant biodiversity values of Cambodia's protected area system are an essential part of the country's *natural capital*. It is estimated that at least 40% of the world's economy and 80% of the needs of the poor are derived from biological resources, and that same biodiversity enhances our ability to adapt and build resilience to new challenges, such as climate change. Protected areas provide a diversity of products and services that are an important source of protein, medicines, and non-timber forest products (NTFPs) for forest-dependent communities. Protecting these areas enhances inclusion of these populations in Cambodia's future growth, and ensures they both benefit from, and have the ability to contribute to, the nation's development. Poverty alleviation is the underlying theme of national development strategies, and increasingly, the importance of protected areas will be measured in terms of their poverty alleviation performance – i.e. their contribution and effectiveness in supporting local communities in sustainable livelihoods and sector developments that bring local benefits.

While Cambodia currently ranks 143 of 188 countries in terms of the UNDP's Human Development Index (2015), significant recent achievements have been made in poverty reduction from 53% in 2004 to 20% in 2012, achieving the Millennium Development Goals (ranked 5th among developing countries), and improving social indicators (ranked 1st in the Asia-Pacific region).

In September 2015, the UN General Assembly including the Government of Cambodia adopted the 2030 Agenda for Sustainable Development which included 17 Sustainable Development Goals (SDGs) including SDG 15 (sustainable management of natural resources). To sustain this progress and to contribute the country's efforts to achieve key national policies and SDGs, it is important to

¹ These include National Parks, Wildlife Sanctuaries, Protected Landscapes, Multiple Use Areas, Ramsar Sites, Biosphere Reserves, Natural Heritage Sites and Marine Parks (see Annex 1).

invest in the natural capital and infrastructure provided by protected areas as a foundation for sustainable development and Green Growth strategies into the future.

This **National Protected Area Strategic Management Plan (NPASMP)** represents the first comprehensive strategic document for protected areas in Cambodia and is intended to guide the future development and management of national protected areas while complementing other national strategies.

2. VISION, MISSION and GOALS

VISION: Cambodia's protected area system contributes to the country's economy and sustainable development, including poverty reduction, through the conservation and sustainable use of its biological, natural and cultural resources and other ecosystem services.

MISSION: Achieve the most effective, efficient and equitable management of the national protected area system in the Royal Kingdom of Cambodia.

The Mission will be achieved by the following GOALS:

1. Maintain and enhance the ecological and cultural values of protected areas;
2. Promote participatory community engagement and support for conservation management;
3. Develop innovative approaches to conservation and development, including opportunities for sustainable ecotourism and financing mechanisms;
4. Provide accurate, timely and relevant information for effective management of protected areas; and,
5. Strengthen protected area management effectiveness and working partnerships with government organizations, local authorities, conservation NGOs, and development partners.

3. GUIDING PRINCIPLES

The following Guiding Principles will be used in the future management of protected areas:

A) Protection First

Protection of biodiversity is the primary purpose of a protected area. All activities on protected areas, on the land or at sea, have to be considered within this priority. This is achieved through legal securement of land and regulation, demarcation, zoning, permitting, enforcement, assessment and monitoring as per the Protected Area Law (2008) and to be further prescribed in the new Environment and Natural Resources Code.

B) Addressing Equity

For many poor and vulnerable groups of society, protected areas represent food security and livelihood opportunities. We will make special efforts to ensure these groups are involved in, and benefit from, decision making related to protected area management.

C) Knowledge-based Planning and Management

Good knowledge provides the foundation for planning, designating and managing protected areas that are representative of major ecosystems and well connected. An understanding of the wildlife, habitats and ecosystems to be conserved forms the core of this knowledge base while social, economic and political considerations along with traditional and local community knowledge provide additional layers of important information.

D) Protected Areas Designed and Managed for the Future

The protected areas network must be designed and managed to adapt to future ecological change, including changes expected to occur as a result of global warming. This requires an adaptive approach to conservation where resource assessments and monitoring are used to collect new knowledge that can help inform conservation planning.

E) **Landscape-level Management of Protected Areas**

We recognize that protected areas are integral parts of broader landscapes managed by agencies, organizations and individuals to which protected areas also provide ecological goods and services. We will therefore work with others to complement capacities and to foster greater awareness and respect for biodiversity conservation.

4. STRATEGIC ANALYSIS

4.1 Governance context

Most of the national protected areas now under the authority of the Ministry of Environment (MOE) were originally created by the Royal Decree *Concerning the Creation and Designation of Protected Areas* (1993). The **Nature Protection Areas (Protected Area) Law** of 2008² provides the legal foundation for the management, conservation and development of the country's protected areas. Specifically, the Protected Area Law promotes the use of global IUCN categories for designating protected areas and stipulates the use of management zoning systems for each protected area to ensure:

- adequate protection of areas with high conservation values;
- appropriate development of areas with high economic value; and
- inclusive participation and benefits for local communities and indigenous ethnic minorities.

The Protected Area Law also stipulates the development of a **National Protected Area Strategic Management Plan (NPASMP)** to guide the development of individual protected area management plans and subsidiary regulations, and to ensure alignment with other national strategies.

Several other related laws, especially the Forestry Law (2002), the Fisheries Law (2006), the Law on Water Resources Management (2007), the Land Law (2001) and the Law on Environmental Protection and Management of Natural Resources (1996) influence the management of Cambodia's protected areas. In addition, national policies reflect development and conservation strategies of the Royal Government of Cambodia (RGC) and include the:

- National Strategic Development Plan (2014-2018);
- Rectangular Strategy Phase III (2013-2018);
- National Strategic Plan on Green Growth (2013-2030);
- Cambodia Climate Change Strategic Plan (2014-2023);
- Cambodia National REDD+ Strategy (2017-2026); and,
- National Environment Strategy and Action Plan (2016-2023) – under development.

The Cambodia National REDD+ Strategy (NRS) provides a roadmap for the implementation of policies and measures to address the drivers of deforestation and forest degradation. The NRS is of particular relevance to the NPASMP as it promotes the expansion and improved management of protected areas to secure more forest lands (and their carbon) and to achieve substantial biodiversity-related co-benefits. The Royal Government of Cambodia has also ratified a number of international conventions that reflect the management of the country's protected areas, including CBD, CITES, UNFCCC, and the Convention on Wetlands of International Importance (Ramsar Convention).

² The Environment and Natural Resources Code (currently under development) will replace the 2008 PA Law.

The **National Committee for Sub-national Democratic Development (NCDD)** is the inter-ministerial mechanism for promoting democratic development through decentralization and devolution reforms throughout Cambodia. These reforms are particularly relevant with respect to enhancing the role and responsibility of local authorities in the management of natural resources, including protected areas.

MOE and the **National Council for Sustainable Development (NCSDD)** have led the inter-ministerial effort to review, revise and update the country's **National Biodiversity Strategy and Action Plan (NBSAP)** that was originally developed in 2002. As a result, an updated NBSAP was approved in 2016 and the NPASMP is aligned with the strategic objectives and key priorities recommended for protected areas.

In March 2015, the Royal Government of Cambodia announced its intent to develop an **Environment and Natural Resources Code** that would establish overarching legal principles to guide the implementation of existing laws related to natural resource management in support of sustainable development. The Code will propose statutory changes to ensure legal harmonization and to clarify the roles and mandates for governing natural resources among different Ministries.

The **Ministry of Environment (MOE)** is entrusted by the Royal Government of Cambodia to lead and manage environmental protection, biodiversity conservation, and sustainable use of natural resources. As part of jurisdictional reforms in natural resource management, RGC has now transferred the responsibility for all forestry and fisheries protection and conservation areas (previously under the Ministry of Agriculture, Fisheries and Forestry - MAFF) to MOE while MAFF will take over responsibility for the Economic Land Concession areas previously under the jurisdiction of MOE (Sub-decree No. 34 dated 04 March 2016).

To effectively deliver on its new, broader mandate, MOE has undergone a recent re-organization (Sub-decree No.135 dated 05 July 2016). The **General Directorate of Administration for Nature Conservation and Protection (GDANCP)** is still responsible for biodiversity protection, conservation, and the rational and sustainable use of natural resources data base management within Cambodia's national protected area system. However, there are now seven Departments within GDANCP to achieve that responsibility³. The new **General Directorate of Local Community (GDLC)** includes the Departments of Community Livelihoods, Heritage Sites and Ecotourism and will be responsible for managing and coordinating the development of local communities and protected area communities to strengthen the management, protection and conservation of protected areas. The **General Directorate of Environmental Knowledge and Information (GDEKI)** is responsible for managing environmental data (through its Department of Geographic Information Service) and leading/coordinating environmental education and outreach. Close collaboration between these three General Directorates will be important in implementing the proposed strategies and actions related to collaborative management, spatial mapping, awareness raising and environmental education.

4.2 Challenges

The recent transfer of conservation areas from MAFF to MOE has more than doubled the protected area estate under the jurisdiction of MOE - it now covers almost 40% of the entire country of Cambodia. This rapid change presents a challenge for the Ministry with its limited financial and human resources. Furthermore, protected areas continue to be under heavy pressure and concerns remain about the effectiveness of existing protected areas in safeguarding conservation values of global and national importance, and in providing sustainable livelihood opportunities.

³ These include the Departments of Eastern Mekong River Protected Landscape; Southern Tonle Sap Lake Protected Landscape, Northern Tonle Sap Lake Protected Landscape; Freshwater Wetland Conservation; Marine and Coastal Area Conservation; Inspection and Law Enforcement; and, Administration, Planning and Finance.

As is the case for most protected areas in the Asia Region, the main threats that hinder protected areas in Cambodia from being effective in conserving biodiversity and contributing to sustainable development relate to habitat degradation and the unsustainable use of natural resources precipitated by high population densities and increasing demands from a globalized market.

Deforestation, forest degradation and habitat fragmentation are resulting in deleterious and irreversible impacts on the integrity of protected areas, and the functioning of their ecosystems. Development activities inside protected areas, such as agro-industrial plantations, hydropower, mining and road construction, can result in direct natural habitat losses. Indirectly, the improved access provided by new roads can facilitate more pressures on protected areas, including illegal encroachments, and unsustainable uses of wildlife and forest products. The illegal trade in wildlife, fueled by growing demand for wildlife products from neighboring countries, has resulted in significant population declines leaving some protected areas void of the biodiversity they were originally created to protect.

While these physical threats remain significant, our biggest and most immediate challenges relate to the governance of protected areas and our ability to effectively implement recent national strategies. The challenges include:

- Lack of boundary demarcation (land registration), management and zoning plans to clearly identify and protect core and conservation zones inside protected areas. As a result, development activities have in some cases been placed within sensitive parts of protected areas, often with significant biodiversity impacts. Furthermore, the lack of clear land tenure designations within protected areas result in conflicting and, often, unauthorized activities that further compromise the integrity of protected areas;
- Difficulties of ensuring the sustained reduction or eradication of the most serious threats to protected areas, especially those associated with illegal logging, hunting, trapping and fishing; land encroachment and migration; and the unsustainable use of NTFPs;
- Limited contributions of existing protected areas to local rural livelihoods which are essential in programmes to enlist local community support to sustainably manage protected areas;
- Complexities of resolving land use conflicts in and around protected areas involving local communities and commercial interests;
- Limited collaboration between line Ministries with responsibilities for natural resources or land management;
- Inadequate resources and training for Rangers who are responsible for the day-to-day patrolling, monitoring and enforcement throughout protected areas, as well as limited capacity of professional staff in technical aspects of protected area management; and,
- Finally, and perhaps most importantly, inadequate levels of government funding to effectively and efficiently safeguard biodiversity and strengthen conservation of a protected area system that now covers almost one third of the entire Kingdom of Cambodia.

4.3 Responses

The Royal Government of Cambodia recognizes the challenge of limited human and financial resources available and will prioritize the actions that are needed to quickly secure those protected areas that are under severe threats, that represent the highest value for biodiversity conservation, and that are most likely to make sustainable contributions to local livelihoods.

Securing ecological and cultural values

There is a clear need to complete boundary demarcation and land registration for existing protected area boundaries and the newly established biodiversity conservation corridors. Guidelines for zoning will be developed and applied in priority protected areas with an emphasis on defining core and

conservation zones for protection⁴. Simplified management plans that summarize conservation values, strategic priorities and urgent actions will be developed for each protected area.

Law enforcement training and capacity building will be accelerated for Rangers and for local authorities through the Unified Commanding Committees that will play an important role in suppressing illegal activities in protected areas.⁵ Closer collaboration with local communities will be important to facilitate their involvement in monitoring and reporting, to provide alternative livelihood opportunities, and to raise awareness for protected area objectives and regulations.

Given the importance of protected areas in providing natural habitats for wildlife and plant species at risk, MOE will collaborate with other Ministries, conservation NGOs and universities to improve the knowledge base, support conservation and restoration action plans, and strengthen the enabling environment for addressing threats to species and ecosystems. International cooperation for strengthening protected areas management and conservation will also be expanded, especially in the regional context, to share best practices, innovative approaches and new technologies.

Balancing conservation and development priorities

The moratorium on issuing new ELCs in protected areas provides an opportunity to accelerate the zoning within individual protected areas to identify and secure core and conservation zones that must be protected from further commercial development. To ensure existing ELCs provide benefits for both conservation and local livelihoods, the Ministry of Environment will work closely with the Forestry Administration (MAFF-FA) to enhance monitoring of active ELCs and enforce legal requirements (including EIAs). Non-commercial and sustainable harvesting of natural resource products by local communities will be supported, where appropriate. Reforestation and regeneration of degraded areas will be facilitated with full community involvement.

A protected area “system” should be representative of the key species and ecosystems it is trying to protect. Furthermore, the system should be well connected to reduce habitat fragmentation and allow for movements between protected areas by large or migratory wildlife species. Improving connectivity is also one of the most effective actions for enabling climate change adaptation. Ministry of Environment will use integrated ecosystem mapping to identify opportunities for landscape level conservation planning and for the establishment of corridors between existing protected areas. Spatial planning using integrated ecosystem mapping will be carried out to identify best options for establishing and managing biodiversity corridors as well as including key ecosystems that are not yet well represented in the existing protected area system. Spatial planning will also identify heavily degraded lands that may no longer be considered parts of a protected area.

Promoting collaborative management

A more proactive approach will be used in engaging local communities and indigenous ethnic minority groups in collaborative management that will respect the needs and aspirations of these communities while also promoting the conservation purposes for which the protected areas were originally created. Experiences from the establishment of Community Protected Areas (CPAs) and the traditional (non-commercial) use of natural resources will help strengthen collaborative management efforts within protected areas. Expanding sustainable livelihood opportunities and benefits will be an important contribution to socio-economic development and gender equity. For example, there is considerable scope to further develop the ecotourism potential in Cambodia, not only as a potential income generator for local communities and protected area management, but also as a tool to

⁴ The establishment of four separate zones within each protected area was stipulated in the Protected Area Law (2008) and includes **Core Zones, Conservation Zones, Sustainable Use Zones** and **Community Zones**.

⁵ As per RGC’s Circular on Necessary Measures for Strengthening Natural Resource Management (22 Sep. 2016)

promote, and raise awareness for, the importance of protected areas as ecotourism destinations for domestic and foreign visitors.

Recent decentralization reforms led by the National Committee for Sub-National Democratic Development (NCDD) have been used by the Ministry of Environment to delegate a number of functions related to protected area management to local authorities. These include delegating community involvement to Commune/Songkat Administrations (MOE Prakas #37 dated 10 Feb. 2016) and responsibilities for awareness raising, livelihoods development and enforcement to Municipal/District Administrations (MOE Prakas #36 dated 10 Feb. 2016). These reforms will bring management planning, implementation and enforcement closer to local communities living in and near protected areas.

Enhancing management effectiveness and efficiency

The recent expansion of the size of the protected area estate under the jurisdiction of MOE and its main implementing agencies (GDANCP and GDLC) will require substantial upgrades both in terms of capacity and resources in order to effectively and efficiently safeguard these areas for the benefit of all Cambodian citizens now and in the future. The addition of 300 Rangers in MOE, the transfer of some technical staff from FA (MAFF), and the delegation of protected area management functions to local authorities will assist in managing the work load for the expanded protected area system. However, fundamental challenges still remain and include the limited technical capacity of GDANCP/GDLC staff at the central level, and Department of Environment staff at Provincial levels, to be able to provide the oversight and support required by local authorities in the planning, management and sustainable use of protected areas. Given the complexities of natural systems, it is essential that the science and research capacity of particularly GDANCP is upgraded to provide the necessary guidance and training for provincial and local authorities. Priority areas include wildlife management, integrated ecosystem mapping and valuation of natural resources in protected areas.

The quality of existing baseline biodiversity information for protected areas in Cambodia varies from good (usually in those areas supported by external funding and technical assistance) to very limited. A general lack of coordination and data sharing makes the limited available information even more difficult to use for planning and management purposes. Recurring assessments of biodiversity are fundamental to the effective management of protected areas and provide essential information for managers to detect, and respond to, environmental change. There is a need to encourage more science-based assessments and to standardize simple biodiversity monitoring protocols that can be used by Rangers, as well as local communities, during their regular activities. Research institutions, conservation NGOs, and development partners will be encouraged and facilitated to contribute to the development of science-based assessments across protected areas.

As part of strengthening institutional infrastructure, technology should be leveraged to provide the necessary tools for the development and use of appropriate data base management systems for protected areas. These systems will inform the research, planning, policy and enforcement components that serve as the foundations for the operational management of protected areas.

A priority for resource assessments is the valuation of the natural assets present in key protected areas to document their importance and to better evaluate the relative benefits (and costs) associated with investment for development purposes versus protection. Valuations should include both provisioning services (e.g. timber, firewood, NTFPs and agriculture) and regulating services (e.g. carbon storage and water). This type of economic analysis is key to sustaining financial support for protected areas as part of a national Green Growth strategy. A priority for policy development is to ensure natural resource laws and policies recognize and promote the value of protected areas in providing ecosystem services and maintaining livelihoods. The new Environment and Natural Resources Code will include provisions to enable these concepts to be put to practice.

5. STRATEGIC OBJECTIVES (SOs)

To address the threats and challenges facing protected area management in Cambodia, the National Protected Area Strategic Management Plan (NPASMP) consists of four Strategic Objectives (SOs) each of which is composed of its own series of sub-Strategic Objectives. These are:

- SO1: Prioritize and Strengthen Conservation;**
SO2: Enhance Sustainable Management;
SO3: Expand Community Participation and Benefits; and,
SO4: Strengthen Institutional Capacity and Collaboration.

The links between threats, SOs and proposed priority actions are summarized below:

Threats to PAs (direct and indirect factors)	Strategic Objectives (SOs)	Priority Actions
Direct factors		
Habitat loss and degradation as a result of development activities inside PAs	SO 1 & 2	<ul style="list-style-type: none"> ➤ Complete boundary demarcation, land registration and zoning to clearly identify core and conservation zones for protection; ➤ Rationalize PA boundaries to remove/restore permanently degraded areas and add new conservation areas (including corridors); ➤ Ensure proper monitoring and enforcement of development activities as stipulated in relevant laws and regulations. ➤ Monitoring and assessment of natural resources
Illegal logging, hunting, poisoning, fishing or encroachments in PAs	SO 1, 3 & 4	<ul style="list-style-type: none"> ➤ Accelerate law enforcement training for Rangers and local authorities; ➤ Build wildlife management capacity in MOE; ➤ Strengthen community involvement in monitoring, reporting, and development of alternative livelihoods; ➤ Develop a centralized database system that can be used by PA Directors, provincial Environment Departments and GDANCP for tracking law enforcement actions.
Indirect factors		
Impacts of climate change	SO 1 & 4	<ul style="list-style-type: none"> ➤ Focus protected area planning, management and monitoring on building resilience to climate change; ➤ Include adaptation, mitigation and ecosystem resilience as management objectives for protected areas.
Lack of zoning and management plans	SO 1	<ul style="list-style-type: none"> ➤ Complete zoning and develop simple management plans (<i>PA Profiles</i>) that summarize conservation values and strategic priorities for each protected area.
Limited community engagement in protected area planning and management	SO 3 & 4	<ul style="list-style-type: none"> ➤ Strengthen collaborative management; ➤ Expand community livelihood opportunities (including ecotourism); ➤ Enhance outreach and awareness; ➤ Support capacity building and training for local authorities to assume greater responsibilities for PA management.
Ongoing land use conflicts	SO 2 & 3	<ul style="list-style-type: none"> ➤ Harmonize development activities with protected area management objectives; ➤ Re-energize the National Committee for Conflict Resolution on PA Management.
Shortages of skilled staff	SO 1 & 4	<ul style="list-style-type: none"> ➤ Enhance the science and research capacity of GDANCP (particularly in areas of wildlife management and monitoring; integrated ecosystem mapping and valuation of natural resources); ➤ Provide targeted training to technical staff in areas of PA planning, gap analysis, data management; project management and proposal writing; ➤ Provide targeted training to PA staff on enforcement, biodiversity monitoring and participatory tools for engaging local stakeholders.
Limited infrastructure and financial	SO 4	<ul style="list-style-type: none"> ➤ Explore options for generating direct revenues for PAs (e.g. visitor fees, ecotourism, PES, REDD+);

resources		<ul style="list-style-type: none"> ➤ Operationalize the PA Fund; ➤ Demonstrate the economic values of PAs in supporting a Green Growth strategy.
Lack of baseline data and tools for collecting, storing, and sharing information on PAs	SO 4	<ul style="list-style-type: none"> ➤ Enhance collaboration with universities and conservation NGOs; ➤ Consolidate existing data on biodiversity and ecosystems; ➤ Adopt a standardized system for biodiversity field monitoring; ➤ Invest in a centralized data management system that can manage and share spatial (GIS) data on species and ecosystems in PAs.

The following provides summary overviews of the Strategic Objectives (SOs) and their plans of action. Results indicators for the short (5 years), medium (10 years) and long term (15 years), and budgets for the first 5-year period (2017-2021) are provided in Annex 3.

SO1: Prioritize and Strengthen Conservation

SO1.1: Secure protected area boundaries, zones and management plans

This programme of activities will be implemented with participation from local communities in a sequence of interrelated steps that include:

1. **Demarcation of protected area boundaries:** prioritize which protected areas and biodiversity conservation corridors need to have their outer boundaries demarcated, land registration and store in GDACP database. At a minimum, boundary markers should be placed along access points (i.e. roads and trails) and billboards along major roads.
2. **Management Planning:** over the next 5 years, develop short and concise *Protected Area Profiles* that summarize conservation values and strategic priorities for each protected area and that would guide zoning and the initial development of annual work plans and budgets. Over the longer term, develop more detailed management plans that are “climate-proofed” and include strategies for sustaining local livelihoods and ecosystem resilience; and,
3. **Zonation:** develop zoning guidelines and identify where zoning information already exists. As a priority, identify the core and conservation zones in key protected areas (i.e. based on high biodiversity and ecological values) where no further commercial development activities will be permitted.

Zoning and management plans will be approved by *Prakas* issued by MOE, while modifications to PA boundaries and establishment of new PAs will be determined by Sub-decrees (signed by the Prime Minister).

4. **Monitoring and assessment of natural resources:** establishment of national natural forest resources monitoring system on PA and corridor conservation area; and establishment database management such as national forest inventory, forest cover , patrolling, illegal logging and illegal land encroachment data

SO1.2: Invest in law enforcement and threat reduction

Law enforcement will consist of a two-pronged programme that includes awareness raising of local communities and strengthening law enforcement capacity. The primary purpose is to reduce the incidences of illegal activities throughout the protected area system. By enhancing enforcement capacity and working in collaboration with local communities, it will also help address other threats currently facing protected areas. Priority actions include:

1. **Raise awareness:** provide training and capacity building for local authorities (Municipal/District Administrations and Commune Development Councils) on protected area laws and regulations, on the rights and responsibilities associated with community uses of

protected areas; and, on opportunities for improving local livelihoods while also contributing to the conservation of protected areas.

2. **Strengthen law enforcement capacity:** requires an investment in both equipment and training that includes:
 - a. procuring more 4WD vehicles and motorbikes, as well as speedboats (in wetlands), GPS, digital cameras, compass navigation and other modern field equipment;
 - b. providing specialized law enforcement training for Rangers in cooperation with military authorities;
 - c. providing basic training to local communities to increase their involvement in patrolling activities and in developing local informant networks;
 - d. establishing mobile and rapid deployment law enforcement teams including representatives from other administrative units, as well as the military police, to support interventions in cases requiring more extensive enforcement;
 - e. encouraging the enhanced use of simple patrol data management systems, such as SMART (Spatial Monitoring and Reporting Tool) and MIST (Management Information System) across protected areas;
 - f. enforcing penalties and sanctions against offenders;
 - g. exploring opportunities to provide incentives and other benefits to enhance the commitments of Rangers to pursue illegal activities in protected areas; and,
 - h. developing a centralized database system that can be used by PA Directors, provincial Environment Departments and GDANCP for tracking law enforcement actions.

Threat reduction activities will be further addressed by developing sustainable livelihood opportunities for local communities that can replace unsustainable uses of natural resources (see SO3.3).

SO1.3: Promote biodiversity conservation and restoration

Given the importance of protected areas in providing natural habitats for wildlife species at risk (including plants and fish), MOE will collaborate with MAFF (FA and FiA), conservation NGOs, development partners and universities to improve the knowledge base, support conservation action plans, and strengthen the enabling environment for addressing threats to species and ecosystems. Specific strategies will include:

1. Completing integrated ecosystem mapping to identify biodiversity hotspots and opportunities for linking protected areas through additional biodiversity corridors to enhance connectivity (see also SO2.2).
2. Developing standardized biodiversity assessment protocols that can be shared and used to regularly monitor the status and trends of species at risk in protected areas (see also SO4.2);
3. Supporting applied research and local (traditional) knowledge to develop species-specific conservation action plans for threatened species or degraded areas. This will include efforts to increase forest cover through restoration of degraded areas;
4. Preventing the introduction and establishment of invasive alien species as threats to native fauna and flora in protected areas;
5. Expanding *ex situ* conservation facilities for the recovery and potential reintroduction of species at risk into their natural habitats; and,
6. Strengthening institutional capacity for addressing threats to species and ecosystems, including:
 - a. Effective management planning for protected areas (SO1.1);
 - b. Proactive public awareness raising (SO1.2);
 - c. Effective law enforcement (SO1.2);
 - d. Upgraded science capacity in GDANCP (SO4.1); and,
 - e. Collaborative technology transfer (SO4.2).

SO1.4: Expand international cooperation

International cooperation for strengthening protected areas management and conservation will be expanded, especially in the regional context, to share best practices, innovative approaches and new technologies. Specific areas of engagement will include:

1. ASEAN - supporting the ASEAN Wildlife Enforcement Network to combat illegal wildlife trade and implement CITES commitments;
2. Greater Mekong Sub-region – expanding transboundary biodiversity conservation corridors;
3. World Commission on Protected Areas (WCPA) Southeast Asia Region – participating in workshops, trainings and information exchange specific to protected areas;
4. IUCN Asian Species Action Partnership (ASAP) - an interagency coalition to address the extinction risk among the most threatened non-marine vertebrates of Southeast Asia;
5. International Ranger Federation (and Ranger Federation of Asia) – participating in annual meetings of Park Rangers to share experiences and new technology;
6. Multilateral Environmental Agreements (e.g. CBD, UNFCCC, CITES, Ramsar Convention) – participating in regional meetings and Conferences of the Parties; and,
7. Bilateral Agreements – implementing strategies of mutual interests (e.g. MOUs with China and South Africa on environmental priorities).

SO2: Enhance Sustainable Management

SO2.1: Harmonize development activities with protected area management objectives

With the recent transfer of Economic Land Concessions (ELCs) within protected areas to the Forestry Administration (MAFF-FA), there is a need to work in close collaboration to ensure legislative regulations and requirements of EIAs are fulfilled and that the existing ELCs contribute to local livelihood enhancement. Other infrastructure developments (e.g. hydro power, mining and roads) proposed or initiated inside protected areas will also be subject to EIA and other relevant legal requirements as prescribed in the new Environment and Natural Resources Code. To address ongoing land use conflicts inside or adjacent to protected area boundaries, the National Committee for Conflict Resolution on Protected Area Management (established by the Protected Area Law) will be re-energized.

Opportunities for non-commercial and sustainable harvests of natural resource products by local communities will be encouraged, where appropriate. Similarly, local communities will also be directly involved in carrying out reforestation and regeneration activities in degraded areas (see also SO1.3).

SO2.2: Connect the Protected Area system

The recent expansion of the protected area estate under MOE jurisdiction has resulted in large, continuous conservation landscapes in eastern, northern and southern regions of Cambodia (Annex 2). The establishment of biodiversity conservation corridors provides an opportunity to strengthen linkages within and between these conservation landscapes that would facilitate movements of large or migratory wildlife species between areas designated for protection and conservation.

To ensure protected areas are actually in the “right places” (i.e. science-based selection), spatial planning using GIS and integrated ecosystem mapping based on best available information will be done to strengthen management effectiveness of existing protected areas and fill gaps in representation of key ecosystems. This spatial planning will:

1. Use integrated ecosystem mapping to overlap areas of high conservation values with existing protected areas and identify gaps in coverage;

2. Identify existing land uses in the biodiversity conservation corridors and apply appropriate management measures to reduce habitat fragmentation and maintain ecosystem integrity;
3. Help determine whether changes to the boundaries of some protected areas would improve coverage of key ecosystems, species or traditional uses; and,
4. Consider whether the status or boundaries of some protected areas whose ecological integrity might have been seriously impaired as a result of habitat loss or excessive development should be changed (e.g. Snoul Wildlife Sanctuary).

A priority will also be given to identify and designate new Marine/Coastal and Wetland protected areas to ensure these critical ecosystems are adequately represented in the national protected area system.

SO3: Expand Community Participation and Benefits

The lead implementing agency for this Strategic Objective will be the new General Directorate of Local Community (GDLC) in the Ministry of Environment.

SO3.1: Increase local participation in management planning processes

Under MOE Prakas #35, GDLC will be responsible for providing training and capacity building of Commune/Sangkat staff on community management in protected areas, including the management of existing Community Protected Areas (CPAs). In order to develop constructive dialogues with local communities and indigenous ethnic minority groups, GDLC staff (as well as PA staff) will need training on participatory and gender sensitive methods for engaging local stakeholders. This training (Training of Trainers) could be provided by national NGOs with proven experience in community-based natural resource management.

Educational outreach and awareness raising actions focusing on local authorities will be implemented in close collaboration with the General Directorate of Administration for Environmental Knowledge and Information (GDEKI) and will focus on:

1. Using multi-media awareness raising campaigns to communicate (in simple and gender sensitive language) the importance of biodiversity and natural resources conservation as a means of linking livelihood opportunities with sustainable resource management;
2. Broadening understanding of laws and regulations outlining rights/responsibilities associated with traditional resource uses in and around protected areas; and,
3. Mainstreaming principles of conservation, sustainable natural resource use and gender equity into local school curricula.

The benefits of increased local participation in management planning processes are several, including:

- Collecting local and traditional knowledge to strengthen protected area zonation and management planning (SO1.1), as well as contributing to biodiversity assessments (SO1.3 and SO4.2);
- Developing networks of local informants that can assist Rangers in the enforcement of protected area regulations (SO1.2); and,
- Raising awareness of the importance of balancing community livelihood commitments with the conservation of natural resources in individual protected areas (SO3.3).

It is important to recognize that incentives will be necessary to engage local communities that are otherwise busy in their daily livelihood activities.

SO3.2: Support collaborative management mechanisms

“Collaborative management” is a mechanism in which national and local level authorities, local communities and other stakeholders share roles and responsibilities, in this case for the management of protected areas. As part of the devolution efforts of RGC and the NCDD, the Ministry of Environment has already delegated a number of functions related to protected area management to local authorities in support of collaborative management. These include delegating community involvement to Commune/Songkat Administrations and responsibilities for awareness raising, livelihoods development and enforcement to Municipal/District Administrations.

Another collaborative mechanism is the establishment of Community Protected Areas (CPAs) that provide an important means for securing green belts, reducing illegal encroachments, and facilitating local participation in the management of protected areas. Support to existing CPAs will continue and integration of CPA Management Plans into Commune Investment Plans will be encouraged as a means of securing political support for strengthening participation of local communities in management planning processes. Additional CPAs or other related collaborative management mechanisms will be established and supported.

Incentives in the form of funding, materials/equipment, awards or Certificates will be considered for those communities that show exemplary success in the management and sustainable use of CPAs.

SO3.3: Expand livelihood opportunities for local communities

Providing opportunities for direct and meaningful participation by both men and women in sustainable use initiatives in protected areas will reduce pressures on natural resources and offer increased livelihood alternatives for local communities. By developing opportunities that can replace unsustainable uses of natural resources, local communities are also more likely to collaborate in efforts to monitor and safeguard protected area resources. Actions will include:

1. Increasing community employment opportunities associated with ELCs and other private investment activities in protected areas (see also SO2.1);
2. Supporting technologies to improve the agricultural yields of crops cultivated by local communities (in collaboration with MAFF);
3. Facilitating small business development and access to microcredit initiatives associated with processing and marketing NTFPs, resins, handicrafts and traditional medicines; and,
4. Encouraging collaborative efforts to monitor and control illegal activities in protected areas and engage participation of local communities in forest and ecosystem restoration programmes.

One of the more readily available means for supporting both conservation of protected areas and local livelihoods is the expansion of ecotourism opportunities that incorporate community provision of tourism facilities and services. Best practices from existing ecotourism operations (e.g. in Kirirom NP, Kulen Promtep WS, Prek Toal Ramsar site and Peam Krasop WS) will be used to develop an Ecotourism Strategy specific to protected areas that:

1. Identifies existing and future potential ecotourism destination sites, including scenic natural as well as cultural and natural heritage sites;
2. Considers those sites that are of sufficient quality to attract adequate numbers of visitors to be financially sustainable and where contributions to local communities can be optimized through the provision of local facilities and services;
3. Creates ecotourism packages that will attract visitors, including guided tours, adventure travel, community interpretive centers, “home stays” (where visitors enjoy a cultural experience by staying with a local family), botanical parks (in urban centers), and opportunities for visitors to volunteer their services in research and biodiversity assessments;
4. Includes regulatory and marketing strategies, benefit-sharing mechanisms and means to monitor the impacts of ecotourism activities (through the development of safeguards); and,

5. Prepares outreach programmes to train local communities to implement ecotourism initiatives in individual protected areas.

The ecotourism component should focus on providing “high quality-low impact” experiences for visitors to ensure the values of protected areas are sustained.

SO4: Strengthen Institutional Capacity and Collaboration

SO4.1: Ensure adequate staff with appropriate capacity and resources

At field level, there is an urgent need to provide PA staff and Rangers with the training and resources required to do effective law enforcement, biodiversity monitoring and engagement with local stakeholders (see also SO1.2). The immediate priority is to ensure the 300 new Rangers receive basic training by experienced Rangers who have already been exposed to the Training-of-Trainers approach. Over time, the number of qualified Rangers assigned to the PA system will increase substantially and MOE will establish three Regional Training Centers (southern, northern and eastern) aimed at bringing provincial and local authorities, Rangers and PA staff closer together to build their capacity for more effective and collaborative management of protected areas.

At the central (GDANCP/GLDC) and provincial (Environment Department) levels, there is a similar urgent need to strengthen the technical capacity required to be able to provide the oversight, coordination and support to local authorities in the planning, management and sustainable use of protected areas. Given the complexities of natural systems, it is essential that the science and research capacity of GDANCP is upgraded through new recruitments to provide the necessary guidance and training for provincial and local authorities. Priority areas include wildlife management, integrated ecosystem mapping and valuation of natural resources in protected areas. Considerations will be given to the establishment of a new Research and Development unit under GDANCP for this purpose.

MOE will seek to attract young professionals with a basic understanding of modern approaches to collaborative protected area management. Assessments of the capacity needs of existing staff will be developed and implemented on a priority basis followed by delivering a series of integrated training modules. These training modules should include gender equity considerations and seek to:

1. Strengthen the effectiveness of PA staff and Rangers in reducing illegal activities and other threats to protected areas, monitoring biodiversity, engaging with local stakeholders, and enhancing community livelihood opportunities;
2. Increase the technical understanding of central and provincial staff in areas of protected area planning, management and monitoring (e.g. doing spatial planning, valuation studies and management effectiveness evaluations; developing simple zoning and management plans; and, designing biodiversity monitoring and data sharing protocols); and,
3. Provide technical and management training for central staff to prepare funding proposals and enhance the timely delivery of project activities and disbursement of project funds.

Practical incentive packages will be piloted to motivate performance and provide protected area staff with opportunities for advancement based on performance and merit. To ensure staff members have the basic tools to perform their jobs effectively and efficiently, a renewed investment in basic infrastructure required at both field and central levels will be made (see also SO1.2).

SO4.2: Enhance collaboration for research, planning and policy development

To strengthen inter-ministerial collaboration in adopting a landscape-level conservation approach to protected area planning and management, the Environmental Governance Reform facilitated by MoE provides an opportunity to:

- review the current legislative and regulatory environment under which protected areas are

managed to promote the value of protected areas in providing ecosystem services and contributing to local livelihoods;

- address and clarify overlapping resource responsibilities and jurisdictions among government resource agencies; and,
- strengthen implementation of existing laws and policies affecting protected area management.

At the technical level, collaboration on biodiversity research and monitoring with other line agencies, universities, conservation NGOs, and development partners will include:

1. Establishment of more practical and responsive linkages to better align research efforts with priorities for protected area planning and management;
2. Concerted efforts to establish a baseline biodiversity database for protected areas which can be widely shared and used to measure progress in achieving conservation targets;
3. Scaling up successful models for biodiversity and enforcement monitoring that can be routinely used by protected area staff;
4. Generating support for a centralized conservation database in MOE to inform management planning processes in individual protected areas; and,
5. Initiating pilots to identify and value ecosystem services.

This technical-level collaboration between MOE, other line Ministries, conservation NGOs and academic institutions will be facilitated through regular meetings (at least twice annually) to share information, generate common standards for data sharing, and develop funding proposals for implementing NPASMP priorities.

6. GENDER MAINSTREAMING

As reflected in the Government's Rectangular Strategy (RS) and the National Strategic Development Plan (NSDP), gender equity and empowerment of women are key national development objectives in Cambodia and viewed as cornerstones to achieving conservation and sustainable development.

The rural poor, the majority of whom are women, are among the most vulnerable to conditions associated with the management of Cambodia's protected areas as a result of their greater dependence on agriculture and natural resources. Promoting gender equity contributes to improved nutrition, greater employment opportunities, and improved family well-being by recognizing the fundamental role that natural resources in protected areas play in household survival strategies of rural communities. By understanding the different interests and priorities of men and women, protected area management approaches can be developed that reduce conflicts and that support both conservation and sustainable livelihoods. This underscores the responsibility to mainstream gender into every aspect of NPASMP implementation to ensure this crosscutting issue receives broad-based support at local, regional and national levels.

Gender mainstreaming will entail the incorporation of strategies and actions to ensure that women and the most vulnerable groups are empowered to participate in planning, management and decision-making processes related to protected areas, and share equitably in the benefits from the provision of livelihood opportunities. Strategies and actions will include:

1. Incorporating gender perspectives in the training and capacity building of protected area staff;
2. Incorporating gender perspectives in the development of awareness and educational materials to reach a larger population (by not excluding women and young people);
3. Assessing and considering the needs of women in establishing appropriate criteria for zoning and management planning of protected areas (e.g. access to water and fuelwood);
4. Developing livelihood opportunities that recognize the capabilities and strengths of women (e.g. micro-credit schemes, community-based tourism enterprises, NTFP handicrafts);
5. Ensuring part of revenues from ecosystem services (e.g. carbon fixing) is earmarked for

- promoting equity in beneficiary communities; and,
6. Establishing gender equity criteria and targets for monitoring progress in implementing the NPASMP.

The active participation of women in implementing the objectives and actions of the NPASMP will strengthen gender equity and help ensure conservation and livelihood initiatives on the ground are consistent with the interests and priorities of both men and women.

7. CLIMATE CHANGE MITIGATION AND ADAPTATION

Protected areas represent unique opportunities to respond to the growing challenges of climate change by buffering impacts from floods and droughts, providing options for society to build resilience, sequestering carbon and reducing emissions. In a recent review of over 100 articles, the single most frequently cited measure for climate adaptation is the expansion of the number and coverage of protected areas⁶. Hence, effectively managed protected areas should be considered as one of the key strategies to adapt to, and mitigate the impacts of, climate change.

Climate change considerations are incorporated into the development of the NPASMP with regard to both mitigation and adaptation. With respect to mitigation, there are planned strategies to evaluate and develop REDD+ activities in selected sites to increase emissions reductions associated with carbon sequestration and support the establishment of financially sustainable programmes to mitigate climate change impacts and strengthen conservation. Promoting enhanced carbon stocks through forest restoration efforts (especially in the Community and Sustainable Use Zones) can provide economic justification for alternative land uses that increase both the conservation and economic values of protected areas compared with investments that clear large forest areas (e.g. mining, agro industry plantations).

With respect to adaptation, there are planned strategies to evaluate future impacts of climate change on biodiversity, ecosystem services and local livelihoods. These will be incorporated into the preparation of zoning and management plans for individual protected areas, as well as in the development of livelihood enhancement activities. In designing a system of protected areas for the future, climate change considerations will be important in developing a system that is representative, well connected and resilient to projected impacts of climate change.

8. FINANCING RESOURCES

The Protected Area Law (Chapter VII) refers to the funding of protected areas, including the establishment of a **Protected Area Fund** managed jointly by the Minister of Environment and the Minister of Economy and Finance. This proposed Fund does not yet exist and national budget allocations for the management of protected areas remain limited, especially when compared to other countries in the region that have much smaller protected area coverage. As a result, the current MOE budget barely covers staff salaries and basic administration with limited opportunities for investments in infrastructure, capacity building and training⁷. While gradual increases to the MOE budget are a positive first step, the baseline needs to be substantially raised in order to effectively deliver on the new and expanded responsibilities assigned to the Ministry. A significant amount of financing for protected areas and biodiversity conservation has been provided in the past 20+ years as grants from development partners (donors and conservation NGOs).

There is an urgent need to develop a resource mobilization plan using a diversified set of funding sources to address the funding needs of protected areas. The types of funding sources that will be

⁶ Heller, N. and E. Zavaleta (2009); Biodiversity management in the face of climate change: A review of 22 years of recommendations. *Biological Conservation* 142(1): 14-32.

⁷ In 2017, MOE's budget will represent less than 0.40% of the entire Government of Cambodia annual budget.

considered are summarized below:

Funding Source	Examples
Government funds	<ul style="list-style-type: none"> ➤ National budgets ➤ Donors (multi-lateral and bi-lateral) ➤ Green Climate Fund (REDD+ funding) ➤ GEF STAR-6 ➤ Debt-for-Nature swaps ➤ Trust funds (e.g. Protected Area Fund)
Taxes and surcharges	<ul style="list-style-type: none"> ➤ ELCs (after 5 years of operation, ELCs are obliged to pay \$1/ha/year for land rental) ➤ Compensation from hydropower and mining concessions (“biodiversity offsets”) ➤ Tax incentives for ecosystem conservation ➤ Hotel surcharges ➤ Airport surcharges for international visitors
Permits, fees and licenses	<ul style="list-style-type: none"> ➤ PA entrance fees ➤ Tourism concession fees ➤ Payments for ecosystem services (e.g. water, carbon) ➤ Compensatory legal fees and fines
Donations, volunteers and cost sharing	<ul style="list-style-type: none"> ➤ Corporate (CSR) and personal donations ➤ Public-Private Partnerships ➤ Volunteer work to reduce staff costs ➤ Collaborative management with international NGOs ➤ Voluntary surcharges (guest contributions at hotels, “drop boxes” in PA visitor centres)
Direct sales	<ul style="list-style-type: none"> ➤ Products, goods and services from protected areas

Under the auspices of the National Council for Sustainable Development (NCSDD), a review will be initiated to explore opportunities for a renewed investment of government funding in the national protected area system to implement the NPASMP. As part of national fiscal reform, this will include identifying innovative financing mechanisms and ensuring protected area needs are mainstreamed into national development strategies and budgets. While many of the actions proposed in this Strategy will require external assistance and financing, strengthening the basic capacity of the two key Directorates in MOE responsible for protected areas (GDANCP and GDLC) has to be, first and foremost, a priority for the Government of the Royal Kingdom of Cambodia.

Implementation of the National Protected Area Strategic Management Plan (2017-2031) is estimated to require financing in the order of USD 46.8 million for the first 5 years to cover the programme costs for each of the four Strategic Objectives identified in the NPASMP (Annex 4). These costs are over and beyond the core salary and administrative expenses currently provided by MOE.

As part of programme-based budgeting introduced in 2016, GDANCP and GDLC now have their own financial account and budget to be able to prioritize annual investments in individual protected areas. Currently, there is no overall mechanism to direct external funding or revenues collected from fees, fines and taxes back into the protected area system to cover operational costs, infrastructure investments, or habitat restoration efforts. As part of fiscal reform, consideration will be given to directing these revenues into an operationalized Protected Area Fund that could be used by GDANCP and GDLC to enable investments in protected areas over and beyond what is available from national budget allocations.

9. MONITORING AND EVALUATION

The planning period for the National Protected Area Strategic Management Plan (NPASMP) spans a 15-year period (2017-2031) to largely coincide with other strategic plans that affect natural resource management in Cambodia (e.g. the National Forest Programme and the Strategic Planning Framework for Fisheries).

The NPASMP will be reviewed every 5 years (in 2021, 2026 and 2031) under the auspices of NCSO to evaluate progress and make adjustments and course corrections, as required. A results framework with indicators, lead Departments and performance targets (short, medium and long term) for each Strategic Objective will be used to monitor implementation of the NPASMP against the current baselines (Annex 3).

In implementing the NPASMP, GDANCP and GDLC will ensure each Department develops annual operating plans (AOPs) that address the priority actions that each Department will either lead or support. Similarly, each Provincial Environment Department and Protected Area Director will include in their AOPs those activities relevant to specific sites. The monitoring and reporting needs to be standardized to measure progress in achieving annual targets. The NCSO will help facilitate the planning and coordination of implementation priorities between central and provincial authorities, as well as with other line Ministries.

The CBD Programme of Work on Protected Areas (Goal 4.2) encourages governments to monitor and improve the effectiveness of protected areas. Assessments of management effectiveness are essentially evaluations of the degree to which protected areas fulfill their objectives. Results from the evaluations will be included in national reports and key recommendations implemented as part of using adaptive management strategies. Standardized methods already exist for management effectiveness evaluations and have been previously applied in Cambodia (e.g. RAPPAM and the simpler GEF Management Effectiveness Tracking Tool). For future evaluations, indicators could be fine-tuned to measure how well protected areas are managing for climate change impacts (resilience, adaptation and mitigation) and sustainable livelihoods.

10. CONCLUSION

The Cambodia National Protected Area Strategic Management Plan (NPASMP) highlights the urgent need for a renewed investment in protected areas in order to realize their potential in contributing to Cambodia's economy, sustainable development, and poverty reduction efforts that target some of the most vulnerable groups of society. While the values of protected areas and the ecosystem services they provide are rarely monetized by governments, it is safe to say that in Cambodia, these values are significant given the large size and extent of the protected area land base. However, this natural and cultural heritage is now under considerable pressure from natural habitat loss, unsustainable uses and illegal activities across protected areas.

The investment that is now needed will build institutional capacity within MOE (particularly GDANCP and GDLC) to strengthen conservation management and enforcement, expand community livelihood opportunities, and support sustainable uses of protected area resources. Collaboration at unprecedented levels will be required with other line Ministries, with the private sector, with conservation NGOs and development partners to secure a system of protected areas that will continue to benefit future generations in Cambodia.

Annex 1. List of Protected Areas in Cambodia.

ក្នុង	តំបន់ការពារធម្មជាតិ	PROTECTED AREA	ផ្ទៃក្រឡា(ហិ.ត)
ឧទ្យានជាតិ ១២		National Park 12	1,720,269.35
១	ព្រះសុរាម្រិត-កុសមៈ (គិរីរម្យ)	Preah Soramarith Kosamak "Kirirom"	35,232
២	ព្រះមុនីវង្ស (បូកគោ)	Preah Munivong "Bokor"	154,458
៣	កែប	Kep	1,152
៤	ព្រះសីហនុ (រាម)	Pheah Sihanouk "Ream"	15,000
៥	បុទុមសាគរ	Botum Sakor	171,250
៦	ព្រះជ័យវរ្ម័ន-នរោត្តម (ភ្នំគូលែន)	Preah Cheyvarama "Phnom Kulen"	37,500
៧	វិរៈជ័យ	Virachey	332,500
៨	វើនសៃ-សៀមប៉ាង	Vensai Siempang	57,469
៩	ជួរភ្នំក្រវាញកណ្តាល	Central Cardamom	401,313
១០	អូយ៉ាដាវ	O'Yadao	101,348
១១	ជួរភ្នំក្រវាញខាងត្បូង	Southern Cardamom	410,392
១២	កោះរុង	Koh Rong	2,655.35
ដែនជម្រកសត្វព្រៃ ១៨		Wildlife Sanctuary 18	3,684,328
១៣	ភ្នំឱរ៉ាល់	Phnom Aural	253,750
១៤	ពាមក្រសោប	Peam Krasop	23,750
១៥	ភ្នំសំកុស	Phnom Somkos	333,750
១៦	រនាមដួនសំ	Ronien Daun Sam	178,750
១៧	គូលែន-ព្រហ្មទេព	Kulen Promtep	402,500
១៨	បឹងពែរ	Beng Per	242,500
១៩	លំផាត់	Lomphat	250,000
២០	ភ្នំព្រៃច	Phnom Prich	222,500
២១	ភ្នំណាមលៀវ	Phnom NamLyr	47,500
២២	ស្នួល	Snoul	75,000
២៣	ព្រៃឡង់	Prey Lang	431,683
២៤	ព្រះរការ	Preah Roka	90,361
២៥	សៀមប៉ាងខាងលិច	Western Siempang	65,389
២៦	ឆែប	Chhaeb	190,027
២៧	តាតៃ	Tatai	144,275
២៨	កែវសីមា	Koe Seima	292,690
២៩	ស្រែពក	SrePok	372,971

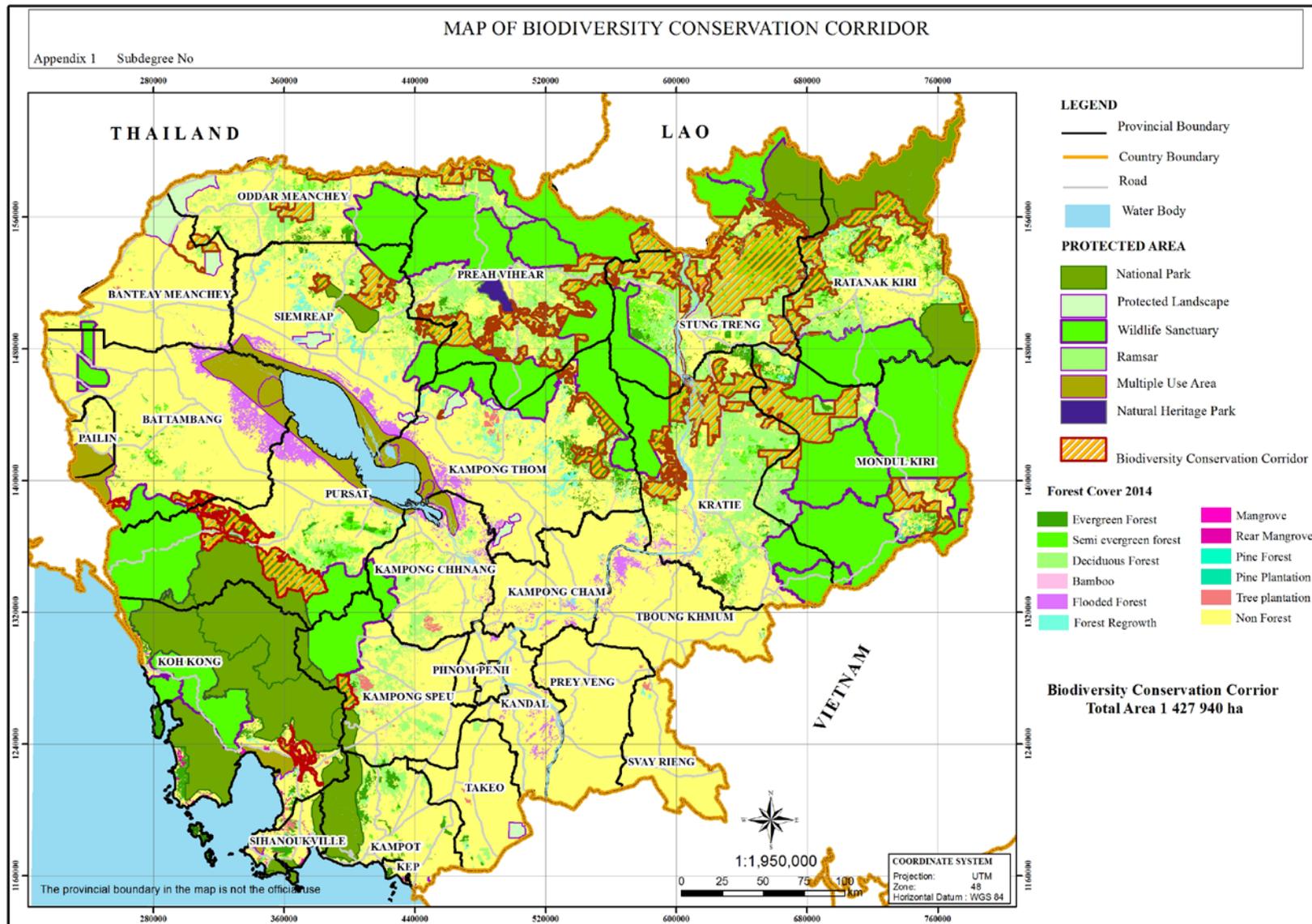
៣០	សៀមប៉ាង	Siem Pang	66,932
តំបន់ការពារទេសភាព ៨		Protected Landscape 8	149,347.30
៣១	អង្គរ	Angkor	10,800
៣២	បន្ទាយឆ្មារ	Banteay Chhmar	81,200
៣៣	ព្រះវិហារ	Preah Vihear	5,000
៣៤	អន្លង់ព្រីង	An Long Pring	217
៣៥	ទំនាបខាងជើងទន្លេសាប	North Tonle Sap	31,159
៣៦	បឹងព្រែកល្ពៅ	Boeung Prek Lpov	8,305
៣៧	អាងត្រពាំងថ្ម	Ang Trapeng Thmor	12,650
៣៨	បឹងព្រែកទប់	Boeng Prektub	16.30
តំបន់ប្រើប្រាស់ច្រើនយ៉ាង ៥		Multiple Use Area 5	409,669
៣៩	ដងពែង	Dong Peng	27,700
៤០	សំឡូត	Samlaut	60,000
៤១	ទន្លេសាប	Tonle Sap	316,250
	<i>តំបន់ស្នូលបឹងទន្លេឆ្មារ (តំបន់រ៉ាមសារ)</i>	<i>Boeng Chhmar Core Area (Ramsar Site)</i>	<i>(14,560)</i>
	<i>តំបន់ស្នូលព្រែកទាល់ (តំបន់រ៉ាមសារ)</i>	<i>Prek Toal Core Area (Ramsar Site)</i>	<i>(21,342)</i>
	<i>តំបន់ស្នូលស្ទឹងសែន</i>	<i>Stung Sen Core Area</i>	<i>(6,355)</i>
៤២	ពញាក្រែក	Punchearkrek	199
៤៣	ព្រែកទឹកសាបក្បាលឆាយ	Kbal Chay	5,520
តំបន់រ៉ាមសារ ៤		Ramsar 4	14,600
៤៤	ស្ទឹងត្រែង	Stung Treng	14,600
	<i>(កោះកាពិ)</i>	<i>(Koh Kapik)</i>	<i>(1,200)</i>
	<i>(បឹងទន្លេឆ្មារ)</i>	<i>(Boeng Chhmar)</i>	<i>(14,560)</i>
	<i>(ស្នូលព្រែកទាល់)</i>	<i>(Prek Toal)</i>	<i>(21,342)</i>
តំបន់បេតិកភណ្ឌធម្មជាតិ ១		Natural Heritage Park ១	24,654
៤៥	ភ្នំត្បែង	Phnom Tberng	24,654
៤៦	របៀងអភិរក្សជីវៈចម្រុះប្រព័ន្ធតំបន់ការពារធម្មជាតិ	Biodiversity Corridor of Protected Area	1,427,940
	<i>របៀងអភិរក្សជីវៈចម្រុះភ្នំសាន</i>	<i>NorthEast Corridor</i>	<i>(757,661)</i>
	<i>របៀងអភិរក្សជីវៈចម្រុះឧត្តរ</i>	<i>NorthWest Corridor</i>	<i>(500,810)</i>
	<i>របៀងអភិរក្សជីវៈចម្រុះជួរភ្នំក្រវាញ</i>	<i>Cardamom Corridor</i>	<i>(169,469)</i>
សរុបផ្ទៃដី			7,430,807.65

*** Note:**

- Part of the Tonle Sap Biosphere Reserve has three core areas: 1- Boeng Chhmar; 2- Prek Toal, and 3- Stung Sen

- Biodiversity Corridor of Protected Areas has three areas: 1-NorthEast Corridor, 2-NorthWest Corridor, 3-Cardamom Corridor
- Koh Kapic Ramsar Site is under Peam Krasaop Wildlife Sanctuary

Annex 2. Map of Protected Areas in Cambodia.



Annex 3. NPASMP Results Indicators and Budgets (2017-2031)

NOTE: Budgets relate to the first 5-year period only (2017-2021) and are **additional** to the current core costs of staff and operational expenses provided by MOE.

Strategic Objective (SO)	Results Indicators	Lead MOE Directorates ⁸	Baseline (2017)	2021 Target	Total Budget 2017-2021 (USD)	2026 Target	2031 Target
SO1. Prioritize and Strengthen Conservation							
SO1.1 Secure PA boundaries, zoning and management plans	a) Number of protected areas (PAs) with outer boundaries clearly demarcated at access points (roads, trails, etc.) and officially registered	GDANCP/GDLC	7 PAs	37 PAs	1,625,000 ¹	100% of all PAs	100% of all PAs
	b) Number of <i>Protected Area Profiles</i> (simplified management plans) completed	GDANCP	0	25	1,500,000 ²	100%	100%
	c) Number of PAs with approved management zones	GDANCP with support from GDEKI (GIS unit)	3	25	1,100,000 ³	75%	100%
	d) Number of Biodiversity Corridors with outer boundaries clearly demarcated and officially registered	GDANCP/GDLC	0	50%	1,500,000 ⁴	100%	100%
	e) monitoring and assessment of natural resources	GDANCP	0	2 times	1,500,000 ⁵	100%	
SO1.2 Invest in law enforcement and threat reduction	a) Number of PAs with upgraded equipment for effective patrolling and biodiversity monitoring	GDANCP	4	30	3,250,000 ⁶	100%	100%
	b) Number of Rangers that have received specialized law enforcement training	GDANCP	300	1,000	1,050,000 ⁷	100%	100%
	c) Number of PAs with active community awareness programmes that include gender considerations	GDANCP/GDLC with support from GDEKI	4	30	1,300,000 ⁸	75%	100%
SO1.3 Promote biodiversity conservation and restoration	a) Number of PAs with species-specific conservation action plans	GDANCP	0	15	1,125,000 ⁹	50%	100%
	b) Number of PAs with forest restoration plans under implementation	GDANCP	0	15	3,750,000 ¹⁰	50%	100%
SO1.4 Expand international cooperation	a) GDANCP/GDLC staff participate in key regional and international workshops, trainings and study tours	All Departments	-	Done	500,000 ¹¹	-	-
Subtotal SO1:					16,700,000		
SO2. Enhance Sustainable Management							
SO2.1 Harmonize development activities with PA management objectives	a) Proportion of existing ELCs with completed EIAs	GDANCP with support from GDES and MAFF	10% of all ELCs	60% of all ELCs	375,000 ¹²	100% of all ELCs	100% of all ELCs
	b) The National Committee for Conflict Resolution on PA Management is functioning and making significant progress in addressing land use conflicts	MOE	-	Done	-	-	-

⁸ Includes the General Directorate of Administration for Nature Conservation and Protection (GDANCP), the General Directorate of Local Community (GDLC), the General Directorate of Environmental Knowledge and Information (GDEKI), and the General Directorate of Environmental Safeguards (GDES).

Strategic Objective (SO)	Results Indicators	Lead MOE Directorates ⁸	Baseline (2017)	2021 Target	Total Budget 2017-2021 (USD)	2026 Target	2031 Target
SO2.2 Connect the PA system	a) Ecosystem mapping and spatial gap analyses to identify and establish new biodiversity corridors and review (rationalize) existing PA boundaries	GDANCP with support from GDEKI (GIS unit)	-	Done	2,500,000 ¹³	-	-
	b) Number of new Marine/Coastal PAs proposed and approved	GDANCP	1	4	900,000 ¹⁴	8	10
	c) Number of new Wetland PAs proposed and approved as Ramsar sites	GDANCP	4	8	1,200,000 ¹⁵	12	15
Subtotal SO2:					4,975,000		
SO3. Expand Community Livelihood Opportunities							
SO3.1 Enhance local involvement in management planning processes	a) Staff from GDLC, Provincial Environment Departments and PA Directors trained on using participatory and gender sensitive tools for engaging local stakeholders (Training of Trainers)	GDLC/GDANCP	0	-	800,000 ¹⁶	-	-
	b) Development and delivery of awareness raising campaigns on PA laws, regulations and management aimed at local authorities	GDLC with support from GDANCP and GDEKI	0	-	1,250,000 ¹⁷	-	-
	c) Number of PAs that have initiated forest and ecosystem restoration actions with local participation (see also SO1.3 and SO3.3)	GDANCP/GDLC	6 PAs	30 PAs	6,000,000 ¹⁸	100% of all PAs	100% of all PAs
SO3.2 Support collaborative management mechanisms	a) Number of CPAs with approved management plans	GDLC/GDANCP	22 CPAs	60 CPAs	1,330,000 ¹⁹	75% of all CPAs	100% of all CPAs
	b) Number of CPAs with active community networks to share CPA experiences and receiving operational support	GDLC	5	40	1,750,000 ²⁰	75%	100%
	c) Number of new CPAs approved with clear boundary demarcation	GDLC/GDANCP	0	25	1,250,000 ²¹	50	75
SO3.3 Expand livelihood opportunities for local communities	a) Number of CPAs targeted for livelihood enhancements	GDLC	15	50	2,625,000 ²²	75%	100%
	b) Number of CPAs that have facilitated access to microcredit opportunities (including women entrepreneurs)	GDLC	5	30	1,250,000 ²³	50% of all CPAs	100% of all CPAs
	c) Development of Ecotourism Strategy for PAs and establishment of ecotourism network	GDANCP/GDLC	0	Done	325,000 ²⁴	-	-
	d) Number of PAs with business plans for ecotourism development	GDLC	3 PAs	15 PAs	900,000 ²⁵	50% of all PAs	75% of all PAs
	e) Number of PAs that generate revenue used for conservation and management activities	GDLC/GDANCP	3	10	-	50%	75%
Subtotal SO3:					17,480,000		
SO4. Strengthen Institutional Capacity and Collaboration							
SO4.1 Ensure adequate staff with appropriate capacity and resources	a) Develop three Regional Training Centers aimed at PA staff and local authorities (one for each GDANCP region)	GDANCP/GDLC	0	3	3,600,000 ²⁶	100%	100%
	b) Establish a new Research and Development Unit in GDANCP that will provide technical advice and training to central and provincial staff on conservation biology	MOE and GDANCP	-	Done	1,000,000 ²⁷	-	-
	e) Number of integrated technical training modules	GDANCP/GDLC	0	10	750,000 ²⁸	15	20

Strategic Objective (SO)	Results Indicators	Lead MOE Directorates ⁸	Baseline (2017)	2021 Target	Total Budget 2017-2021 (USD)	2026 Target	2031 Target
	developed and delivered for central and provincial staff						
SO4.2 Enhance collaboration for research, planning and policy development	a) Mechanisms for collaboration at policy and technical levels established	MOE and NCSD	-	Done	-	-	-
	b) Baseline conservation data catalogued, stored and shared in central MOE database	GDANCP and Biodiversity Department (GSSD)	-	Done	500,000 ²⁹	-	-
	c) Number of PAs using standardized biodiversity monitoring protocols	GDANCP and Biodiversity Department (GSSD)	4	20	800,000 ³⁰	50%	100%
	d) Number of PAs that have completed valuation of ecosystem services (PES pilots)	GDANCP and Biodiversity Department (GSSD)	0	5	625,000 ³¹	10	20
Subtotal SO4:					7,275,000		
Monitoring and Evaluation							
Management Effectiveness Evaluations	a) Number of PAs that have completed rapid management effectiveness evaluations	GDANCP/GDLC NCSD	0	5	375,000 ³²	20	100%
TOTAL					46,805,000		

Budget Notes (including estimated costs):

- ¹ GIS mapping, pole/sign construction and placement (ave. \$50,000 per PA) with higher costs for wetland areas (ave. \$75,000)
- ² Rapid resource assessments, stakeholder consultations and preparation of PA Profiles (ave. \$60,000/PA)
- ³ Rapid resource assessments, stakeholder consultations, GIS mapping (ave. \$50,000/PA)
- ⁴ Lump sum estimate for demarcating 50% (700,000 ha) of all Biodiversity Corridors
- ⁵ Satellite land monitoring system and field inventory assessment (ave. \$750,000/time)
- ⁶ Includes appropriate vehicles, field equipment and mobile communication devices (ave. \$125,000/PA)
- ⁷ Training costs estimated at \$1,500/Ranger including development and delivery of training programs, travel and equipment
- ⁸ Development and delivery of awareness programmes estimated to average \$50,000/PA
- ⁹ Development and implementation costs estimated at \$75,000/plan
- ¹⁰ Development and implementation costs estimated at \$250,000/plan
- ¹¹ Additional travel costs estimated at \$100,000/year
- ¹² ELC monitoring and joint inspections (ave. \$75,000/year)
- ¹³ Ecosystem and GIS mapping, stakeholder consultations, management planning estimated at \$500,000/year over 5 years
- ¹⁴ National and local consultations, resource assessments, demarcation, zonation and management planning (ave. 300,000/new PA)
- ¹⁵ National and local consultations, resource assessments, demarcation, zonation and management planning (ave. 300,000/new PA)
- ¹⁶ Training costs for about 200 staff estimated at \$4,000/staff member including development and delivery of training modules and travel
- ¹⁷ Development and delivery of awareness campaigns estimated at \$250,000/year
- ¹⁸ Assessment of PAs with restoration potential, establishment of forest nurseries, local consultations, labour and materials (ave. \$250,000/PA)
- ¹⁹ Consultations and preparation of management plans (ave. \$35,000/CPA)
- ²⁰ Consultations and continuing support for CPAs and community networks (ave. \$10,000/year/CPA)
- ²¹ Stakeholder consultations, demarcation, management planning and initial operational support (ave. \$50,000/CPA)
- ²² Stakeholder consultations, training, programme development (ave. \$75,000/CPA)
- ²³ Development of business plans in collaboration with private sector partners (ave. \$50,000/PA)

- ²⁴ Consultations and strategy development estimated at \$75,000; recurring costs of running the ecotourism network estimated at \$50,000/year over 5 years
- ²⁵ Development of business plans identifying products, marketing strategies, infrastructure, training requirements, and benefit-sharing mechanisms (ave. \$75,000/PA)
- ²⁶ Includes estimated costs of refurbishing existing government property, running costs and maintenance over 4 years (assuming buildings have been refurbished by 2018)
- ²⁷ Assumes 10 new staff will be hired as consultants in 2017 and then regularized as MOE staff in 2021. Costs include salaries, office space, equipment and travel over 5 years (2017-2021)
- ²⁸ Includes costs for development and delivery of training modules for an estimated 50 staff/training (ave.\$75,000/module)
- ²⁹ Development of database, compilation of existing data, data entry, and digitizing maps
- ³⁰ Development, training and demonstrated use of monitoring protocols (ave. \$50,000/PA)
- ³¹ International and national consultants, valuation studies and training of core group of GDANCP staff (ave. \$125,000/PA)
- ³² Development of appropriate methodology for each PA, rapid assessments and preparation of evaluation reports (ave. \$75,000/PA)