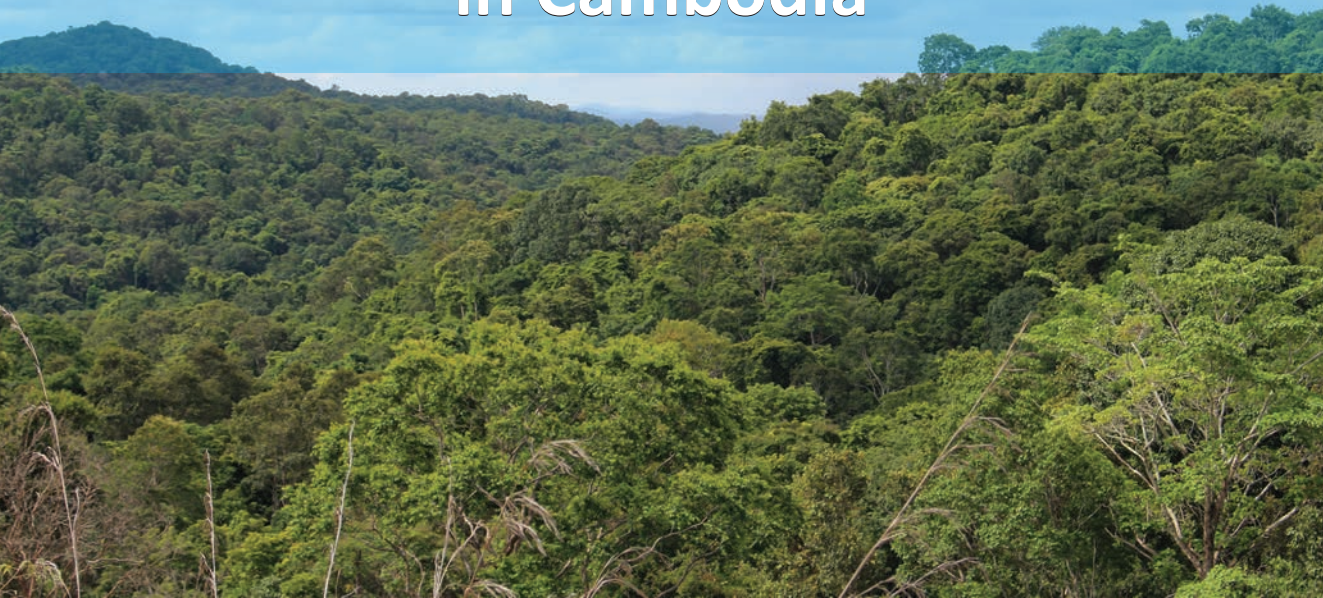




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Zoning Guidelines for the Protected Areas in Cambodia



2017

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Zoning Guidelines for the Protected Areas in Cambodia

Message

The Ministry of Environment has a great pleasure to announce the “Zoning Guidelines for the Protected Areas in Cambodia” developed by the General Directorate of Administration for Nature Conservation and Protection (GDANCP) to provide the important fundamentals for the identification of the four zones in the protected areas as stipulated in the Article 11 of the Protected Area Law in 2008.

These guidelines are crucial to ensure that Cambodia's vast protected areas are effectively managed and protect to support and enhance ecosystem functions, and thereby increasing ecosystem services for supporting agricultural cultivation and sustaining long-term economic development for the long-term benefits for future generations in consistence with development policies of the Royal Government of Cambodia (RGC) under the great leadership and wisdom of the Samdech Akka Moha Sena Padey Techo Hun Sen, the Prime Minister of the Royal Government of Cambodia.

Cambodia is a biologically rich country with forests expanding from main land, fresh water to the coastal areas. Forests as well as other natural resources in the freshwater, wetland, and coastal areas have played vital roles in economic development and social-cultural protection in Cambodia for many generations. The Royal Government of Cambodia introduced the National Strategic Development Plan for the management and conservation of the protected areas 2018-2031 so as to accelerate the economic growth and sustainable development, including poverty reduction, especially through conservation and sustainable use of biodiversity, natural resources, culturally-rich resources, and other ecosystem services in the protected areas. As results of recent reforms on the management of natural resources, the total number of protected areas increased from 23 to 50 sites and the total area, including that of biodiversity conservation corridors has expanded from 3.2 million ha to 7.5 million ha equivalent to about 41% of the country's total land area.

These zoning guidelines will contribute to the effectiveness of management and forest uses in the protected areas and will improve the engagement from the relevant stakeholders in the identification and management of the individual zones as well as to enforce the existing laws.

On behalf of the Ministry of Environment, I believe and hope that these zoning guidelines on the identification of the zones in the protected areas will improve effectiveness of the management of the identified zones and improve livelihood of the local community living in or nearby the protected areas.

Phnom Penh, 29 December, 2017

Say Samal
Minister of Environment

Preface

The Royal Government of Cambodia during the 5th mandate (RGC) has introduced the deeply policy reforms on management of the protected areas (PAs) MoE has the sole leadership responsibility to implement the management of the PAs systematically to the characteristics of the ecosystem, biodiversity, and geographic settings of the PAs throughout the Royal Government of Cambodia for achieving maximum benefits in terms of biodiversity conservation and social, environmental, and economic sustainability that there are fundamental for welfare of human well-being.

With the leadership and orientation by HE. Say Sam AI, Minister for Environment General Directorate of General Administration for Nature Conservation and Protection led to develop the guideline on Zoning in protected areas with the participation with

all stakeholder concerns aim at to identify specifically about legal framework, protection activities, techniques, and based on the experiences and best practices from other countries in the region and the world. These are toward to ensure the effectiveness and efficiency of protected areas ecosystem management, which is the fundamental for contribution to sustainable development, livelihood improvement of local communities, reducing based on forestry product and ensuring the balance of emission and carbon stock greenhouse gaze from forestry sector.

These zoning guidelines develop to achieve goals that identified in the national protected area strategic management plan was the achievement of efficient, efficient, fair management of protected area system aiming at to conserve, protect and enhance of ecology value, naturally cultural heritage, local social culture, enhance of engagement and supporting from local communities, creating the opportunity for sustainable eco-tourism sector and financial development, the sustainable management of protected areas including strengthening the effectiveness to collaborate with agency concerns, local authorities, local communities, development partners, NGOs and civil society.

Management implementation by the MoE provincial offices and other related stakeholders to conduct research and identify the location, size, and shape of the four ones or some of the zones as stimulated in the Protected Area Law (2008). GDANCP has the duty to lead implementation of these guidelines with close consultation with the relevant stakeholders.

These zoning guidelines was developed based on some critical guidelines as below:

- Zoning in the protected area has 4 zones: core, conservation, sustainable use and community zones;
- Ecological criteria for identifying 4 zoning has 4 criteria comprises of position, size, shape edge effects, connectivity, habitat suitability;
- Socio-economic criteria comprises of supporting capacity of natural resources, geographic setting of individual zones
- Criteria for identifying individual zone comprises of core, conservation, sustainable use and community zones.

The guideline is the legal and social technique and are tools long term supports in systematically-protected areas management, ensure entirely safety to biodiversity resources, culturally natural heritage local social culture which we are the bridges to continue these natural heritages to future generations.

The guideline is the fundamental of knowledge for the authorized staff and all stockholders to contribute identifying zoning specifically according to the Government policies, laws and

regulations, technical conditions, international conventions, treaties, and other agreement frameworks in region or global and the real locations of the individual zones

The guideline can update according to new scientific data findings or real situation trends of development and the need of for effective governance of protected areas.

I would like to take this opportunity to thank the high ranking officers, staff of the General Directorate of Administration for Natural Conservation and Protection, Environmental Department of Provinces, Dr. Nophea Sasaki, Wildlife Alliance, UNDP, and other related partners for their active participation the development of the important zoning guideline.

Phnom Penh, 29 December, 2017

Chea Sam Ang

Director

**General Directorate of Administration
for Nature Conservation and Protection**

Acknowledgement

We gratefully thank the leaders of the Ministry of Environment for their clear leadership guidelines, leaders of the General Directorate of Administration for Nature Conservation and Protection, technical working group, individuals and development partners for their hard works, technical inputs, and advice for the development of these zoning guidelines.

Special thanks are given to the Wildlife Alliance for their technical assistance and the United Nations Development Programme and other NGOs for their active participation in the development of these zoning guidelines for the effective management of the PAs in Cambodia.

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Acronyms and Glossary of Terms

RGC: The Royal Government of Cambodia

IUCN: The International Union for Conservation of Nature

CBD: The UN Convention on Biological Diversity

PA: Protected area

UNFCCC: The United Nations Framework Convention on Climate Change

WWF: World Wildlife Fund

Article 11 of the Protected Area Law 2008 defines the four zones as followed. The Draft Environment and Natural Resources Code of Cambodia has modified the definitions below (see Annex 1 for comparison).

Core Zone: management area(s) of high conservation values containing threatened and critically endangered species, and fragile ecosystems. Access to the zone is prohibited except the Nature Conservation and Protection Administration's officials and researchers who, with prior permission from the Ministry of Environment, conduct nature and scientific studies for the purpose of preservation and protection of biological resources and natural environment with the exception of national security and defense sectors.

Conservation Zone: management area(s) of high conservation values containing natural resources, ecosystems, watershed areas, and natural landscape located adjacent to the core zone. Access to the zone is allowed only with prior consent of the Nature Conservation and Protection Administration at the area with the exception of national security and defense sectors. Small-scale community uses of non-timber forest products (NTFPs) to support local ethnic minorities' livelihood may be allowed under strict control, provided that they do not present serious adverse impacts on biodiversity within the zone.

Sustainable Use Zone: management area(s) of high economic values for national economic development and management, and conservation of the protected area(s) itself but without changing the natural characteristics of the natural resources. This zone should be managed for improving livelihood of local community and indigenous ethnic minorities. After consulting with relevant ministries and institutions, local authorities, and local communities in accordance with relevant laws and procedures, the Royal Government of Cambodia may permit development and investment activities in this zone in accordance with the request from the Ministry of Environment.

Community Zone: management area(s) for socio-economic development of the local communities and indigenous ethnic minorities and may contain existing residential lands, paddy field and field garden or shifting cultivation (Chamkar). Issuing land title or permission to use land in this zone shall have prior agreement from the Ministry of Environment in accordance with the Land Law. This management area does not cover the APSARA authorities and other authorities designated and management area(s) to which the Royal Government has allocated the tasks.

Other Terms

Other important terms used in these guidelines include

According to IUCN, there are VI types of protected area, The Strict Nature Reserve (Ia) and Wilderness Area (Ib), National Park (II), III Natural Monument or Feature (III), Habitat/Species Management Area (IV), Protected Landscape/ Seascape (V), and Protected area with sustainable use of natural resources (VI).

Protected Area (PA): The International Union for Conservation of Nature (IUCN) defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values (IUCN Definition 2008). Article 11 of the law on protected areas defines the four zones as followed:

Categories of PA by the International Union for Conservation of Nature IUCN. IUCN categories PA to

Category Ia – Strict Nature Reserve: It is an area which is protected from all but light human use in order to preserve the geological and geomorphical features of the region and its biodiversity. These areas are often home to dense native ecosystems that are restricted from all human disturbances outside of scientific study, environmental monitoring and education. Because these areas are so strictly protected, they provide ideal pristine environments by which external human influence can be measured.

Category Ib – Wilderness Area: It is similar to a strict nature reserve, but generally larger and protected in a slightly less stringent manner. These areas are a protected domain in which biodiversity and ecosystem processes (including evolution) are allowed to flourish or experience restoration if previously disturbed by human activity. These are areas which may buffer against the effects of climate change and protect threatened species and ecological communities.

Category II – National Park: It is similar to a wilderness area in its size and its main objective of protecting functioning ecosystems. However, national parks tend to be more lenient with human visitation and its supporting infrastructure. National parks are managed in a way that may contribute to local economies through promoting educational and recreational tourism on a scale that will not reduce the effectiveness of conservation efforts.

Category III – Natural Monument or Feature: It is a comparatively smaller area that is specifically allocated to protect a natural monument and its surrounding habitats. These monuments can be natural in the wholest sense or include elements that have been influenced or introduced by humans. The latter should hold biodiversity associations or could otherwise be classified as a historical or spiritual site, though this distinction can be quite difficult to ascertain.

Category IV – Habitat/Species Management Area: It is similar to a natural monument or feature, but focuses on more specific areas of conservation (though size is not necessarily a distinguishing feature), like an identifiable species or habitat that requires continuous protection rather than that of a natural feature. These protected areas will be sufficiently controlled to ensure the maintenance, conservation, and restoration of particular species and habitats – possibly through traditional means – and public education of such areas is widely encouraged as part of the management objectives.

Category V — Protected Landscape/Seascape: It covers an entire body of land or ocean with an explicit natural conservation plan, but usually also accommodates a range of for-profit activities. The main objective is to safeguard regions that have built up a distinct and valuable ecological, biological, cultural, or scenic character. In contrast with previous categories, Category V permits surrounding communities to interact more with the area, contributing to the area's sustainable management and engaging with its natural and cultural heritage.

Category VI – Protected Area with sustainable use of natural resources: Though human involvement is a large factor in the management of these protected areas, developments are not intended to allow for widescale industrial production. The IUCN recommends that a proportion of the land mass remains in its natural condition – a decision to be made on a national level, usually with specificity to each protected area. Governance has to be developed to adapt the diverse – and possibly growing – range of interests that arise from the production of sustainable natural resources.

PA Stakeholders: PA stakeholders are the stakeholders (individuals or organizations) involved in the management of protected areas.

Zoning Stakeholders: Zoning stakeholders are the stakeholder involved in the identification, planning, and management of the Zones within the PAs.

Biological Corridor: A biological corridor is an area of habitat that maintains connectivity within a landscape and reduces the risk of modified landscapes becoming shrinking fragmented islands (due to infrastructure development and/or logging). These corridors provide forest, land or water pathways, allowing (1) animals and plants to move/ disperse (2) supporting gene flow exchange and species survival and persistence (3) supporting wildlife natural behavior though covering natural pathways (4) preserving ecosystems services.

Habitat Connectivity: Habitat connectivity is the degree to which the landscape facilitates animal movement and other ecological flows. Habitat connectivity is considered to be one of the most important factors in maintaining fauna and flora biological diversity. Maintaining gene flow is essential for genetic fitness and allows for adaptation to environmental changes.

Habitat Suitability: Habitat suitability is defined as the habitat's potential to support a particular species. It can be considered as the suitability threshold required to support an area of utilization, distribution or a breeding habitat or areas. Although data might be rare for particular species in Cambodia, data on habitat's species suitability may be obtained using regional or global data.

Biodiversity is the variability among living organisms from all sources, including terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species, and of ecosystems.

Ecological functions are the biological, geochemical and physical processes and components that take place or occur within an ecosystem.

Ecosystem services can be defined in various ways. The Millennium Ecosystem Assessment classified ecosystem services as 1) Supporting services: The services that are necessary for the production of all other ecosystem services including soil formation, photosynthesis, primary production, nutrient cycling and water cycling; 2) Provisioning services: The products obtained from ecosystems, including food, fibre, fuel, genetic resources, biochemicals, natural medicines, pharmaceuticals, ornamental resources and fresh water; 3) Regulating services: The benefits obtained from the regulation of ecosystem processes, including air quality regulation, climate regulation, water regulation, erosion regulation, water purification, disease regulation, pest regulation, pollination, natural hazard regulation; and 4) Cultural services: The non-material benefits people obtain from ecosystems through spiritual enrichment, cognitive development, reflection, recreation and aesthetic experiences – thereby taking account of landscape values.

Executive Summary

The purpose of zoning guidelines in protected areas is to identify appropriate zones with particular emphasis on biodiversity role and conservation, geographic settings, and sociocultural, and economic requirements in order that various strategies for protection, conservation and sustainable use of natural resources can be introduced to achieve management objectives of the PAs.

Typically, zoning is done to avoid the conflicts of natural resources use and management in the PA, improve effectiveness of the conservation of the protected area, and to maximize ecological and socioeconomic benefits by providing added protection for areas of high conservation value, separating conflicting human and human-wildlife activities, and protecting natural/cultural values while allowing for a variety of reasonable human uses.

In Cambodia, the Protected Area Law (2008) provides the legal foundation for identifying the zones in the PA system to ensure: effective management of the individual zones and adequate protection of areas with high conservation values; sustainable use of the areas with less ecological values but high economic value; and, inclusive participation and benefits for local communities and indigenous ethnic minorities.

The management objectives of the individual zones need to be formulated in order to fulfill the main objectives of a protected area in question. Although zoning should be site-specific, it may not be necessary to identify all four zones because PA with small size may not have enough capacity to support the management objectives of the four zones. The highest priority for zoning should be given to those larger protected areas that are increasingly under threats from the development and forest exploitation. Zoning guidelines should simplify and be easily understood by local communities and stakeholders. Zoning should follow the important steps of implementation

1. Introduction

1.1 Background on the Development of Zoning Guidelines

The purpose of this document is to provide practical guidelines for identifying the four zones as stipulated in nationally designated Protected Areas. The proposed guidelines are based on ecological and socio-economic criteria; stakeholder consultation and case studies in various parts of Cambodia. These guidelines are important for further introducing management objectives of the identified zones in the PA in question.

1.2 Protected Areas System in Cambodia

Cambodia is moderately rich in biological diversity and levels of endemism. According to MacKinnon (1997), the Biodiversity Index in Cambodia is 7.5 although a higher score may be attainable when more data becomes available. Cambodia is a biologically rich country with 123 known species of mammal, 545 known species of bird, 88 known species of reptile, 2,308 known species of vascular plants species, and 874 known species of fish, 24 species of hard coral, 14 species of soft coral, 10 species of the sea grass, and 63 species of amphibian. At least, 39 species, 36, 13, 38, and 12 species mammals, bird, reptile, vascular plant, and amphibian are on the IUCN red list (Table 1), and therefore their existence is at great danger of being extinct.

Table 1 Current status of know species in Cambodia

Species	Total Number of Known Species	On IUCN Red List
Mammal species	123	39
Bird species	545	36
Reptile species	88	13
Vascular plants species	2,308	38
Fish species	874	-
hard coral	24	-
Soft coral	14	-
See grass	10	-
Amphibian	63	12

Source: Ministry of Environment (2010)

Although data on forest degradation are difficult to obtain, recent forest cover released by Forestry Administration shows rapid decline of forest cover from 61.1% in 2002 to 46.9% in 2014. To reduce further loss and degradation of biologically-rich forest resources, the Royal Government of Cambodia (RGC) has made great efforts to protect the remaining forests. Since the logging ban in 2002, the area of land under the legal protection has increasingly significantly to more than 7 million hectares or about 40% of the country's land area between 1997 and early 2017. Accordingly, the tasks for the management of national parks, wildlife reserves, and other forms of protected area have been expanded. As PA areas increased, the tasks for managing the protected areas go beyond biodiversity conservation.

Human population growth coupled with rapid economic development stress the needs to balance between biodiversity conservation and livelihood of human wellbeing through the creation of various zones in the protected areas,

National Laws, Policies and Agreements:

- The Royal Decree Concerning the Creation and Designation of Protected Areas (1993)
- The Nature Protection Areas (Protected Area) Law (2008)
- The National Strategic Development Plan (NSDP, 2014-18) recognizes improved PA management
- National Biodiversity Strategy and Action Plan (2015)
- National Forest Programme (2010- 2029)
- National Protected Areas Strategic Management Plan (2017-2031)
- National REDD+ Strategies (2018-2028)

There are eight categories of natural protected areas (Table 2) as defined in the Protected Areas Law (2008) which stipulates that protected areas have four zones, namely core zone, conservation zone, sustainable use zone and community zone.

The first protected area in Cambodia was Angkor Archaeological Park, declared in 1925, one of the first in Southeast Asia. After the end of the civil unrest in Cambodia, Protected Areas System was re-established in 1993 and as of November 2017, there are 50 protected areas by sub-decree all of which fall under the administration of MoE. Approximately 30% of Cambodia's surface may be considered as wetland, and other areas may be brought under the Ramsar Convention in future.

Table 2 Protected areas system in Cambodia

No.	Name	Number in Cambodia	Designation	Equivalent to IUCN Category
1.	National park	12	A national park is a park in use for conservation purposes	II
2.	Wildlife sanctuary	19	Wildlife preservation and protection	I
3.	Protected landscape	9	Protected scenic view areas to be maintained as scenic spots for leisure and tourism	III or V
4.	Multi-purpose-use management area	5	Accessible areas for economic development and leisure activities with the assurance of natural stability of water, forestry, wildlife and fishery resources;	VI
5.	Biosphere reserve	1	An area of biodiversity conservation and support of sustainable development and activities.	
6.	Natural heritage site	2	Natural or semi-natural sites unique in ecosystem, beauty or cultural value	III
7.	Marine park	1	Coastal areas with plants, wildlife and fish, with historical or cultural value	
8	Ramsar site	4	Areas recognized for the importance of their wetlands and surrounding environment, including wildlife, habitats and ecosystems.	

1.3 Cambodia and International Conventions

The first Environmental Secretariat was established in Cambodia in 1993 and subsequently, the Ministry of Environment was established in 1996. Cambodia ratified the UN Convention on Biological Diversity in 1995, the UN Framework Climate Change Convention in 1995, the RAMSAR Convention in 1996, CITES in 1997, the World Heritage Convention in 1991, and the Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin in 1995. With these ratifications, Cambodia is bound by the international conventions

or treaties, which Cambodia needs to take into consideration with regard to biodiversity conservation and management of the protected areas. Zoning is therefore an important step toward effective management of the protected areas in Cambodia in consistent with the international commitments.

1.4 Legal framework for zoning

Based on recent deep policy reforms, the Ministry of Environment has increasingly strengthened the effectiveness of PA management to ensure the biodiversity conservation and protection in Cambodia on a sustainable basis. As a result, MoE has expanded the size of the protected areas and biodiversity conservation corridor from just 3.2 million ha to 7.5 million ha in 2016 or about 41% of the country's total land area in 2016.

The Nature Protection Areas (Protected Area) Law of 2008 provides the legal foundation for the management, conservation and development of the country's protected areas, and especially development of the zoning guidelines for the identification of the four zones in the protected areas, namely core zone, conservation zone, sustainable use zone, and community zone.

Identification of the appropriate zones in the protected areas is needed to increase management effectiveness of the individual protected areas for fulfilling the ecological function and maximizing ecosystem services, conservation of the natural resources, economic, and socioenvironmental benefits. Therefore, these zoning guidelines are an important tool for identification of the appropriate zones and for implementation of the zoning of the individual zones in consistent with the management goals of the protected areas.

2. Vision

Management of the Protected Areas shall ensure the sustainable flow of ecosystem function and services, cultural and natural heritages, socio-economic, and environmental benefits, which are the fundamental basis for public welfare.

3. Mission

To improve the effectiveness of the PA management at national and local levels in consistent with national policies and international conventions for the purpose of improving biodiversity conservation, ecosystem functions, and local livelihood.

4. Goal

To achieve maximum contribution to the effectiveness of the protection and conservation of biodiversity in the protected areas with active participation from the relevant stakeholders.

5. Criteria for Identifying the Four Zones

Protected areas are set aside mainly for biodiversity protection and conservation, and ensuring sustainable natural resources management. While, at the same time improving local livelihood of the well-established community. Therefore, it is important that ecological criteria or considerations have higher priority.

Article 12 of the Law on Environment requires that identification of the individual zones be based on five criteria: *management objectives of the individual zones, ecological criteria or integrity, socio-economic criteria, supporting capacity of natural resources in the individual zones, and geographic settings of the individual zones.*

5.1 Management Objectives of Individual Zones

5.1.1 Core zone

Core zone shall be managed to achieve maximum ecological integrity such as protecting the highest conservation value containing threatened, endangered, and critically endangered species, the most fragile ecosystems, and other natural resources.

5.1.2 Conservation zone

Conservation zone shall be managed to achieve high level of ecological integrity, safeguarding areas of high conservation value containing threatened, endangered, and critically endangered species, fragile ecosystems, natural resources, watershed areas, and natural landscapes, often located adjacent to a Core Zone while still generating revenues from eco-tourism activities without or minimum impacts on fauna and flora in the zone.

5.1.3 Sustainable Use Zone

Sustainable Use Zone shall be managed for long-term sustainable use of the natural resources to provide the needed sources for effective management of the protected areas, development of national economy, and improvement of livelihood of local communities and indigenous peoples. Development and use of the natural resources shall ensure the sustainable flow of ecosystem functions and services without damaging natural forest resources.

5.1.4 Community Zone

Community Zone shall be managed for socio-economic development of the local communities and indigenous peoples who have residential lands, paddy field, and field garden or Sweden agriculture. Management of this zone is for use by local communities and indigenous peoples only. Management of this zone for non-local use shall not be allowed. Issuance of land title, tenure rights for use this zone shall be approved by the MoE in accordance with Law on Protected Areas and Land Law.

5.2 Ecological Criteria

Ecological criteria for identification of the individual zones include four criteria:

5.2.1 Position, Size, Shapes, SLOSS

Wildlife populations in larger core zones or protected areas have a smaller risk of extinction, compared to those in smaller fragmented reserves or 'isolated islands' Core zone should be large enough and have a circle shape or similar whenever possible. In the event of no large area for determining the core zone, several small core zones along with connectivity may be set up to protect more species.

5.2.2 Edge effects (ecotone)

Zone, especially the core and conservation zones need to be determined to have less edge effect to prevent invasive species or risk to human hunting as well as to provide enough space for species that require interior habitat for breeding in the core and/or conservation zone.

5.2.3 Connectivity

Connectivity or habitat connectivity is important for wildlife movement and gene flows. Fragmentation is likely to occur through increase development of linear infrastructure and development planning, especially within key areas that hold high conservation value within suitable areas within or across PA, Biodiversity Conservation Corridor (BCC) or coastal areas that connect to the mainland and steep slope areas.

Any proposed development project within a PA and BCC need to conduct socio-environmental impact assessment before any development can be undertaken with approval from the MoE. Billboard signs shall be placed in the connectivity areas. Billboard signs may include but “SPECIAL ZONE, NO SETTLEMENTS ALLOWED, SLOW DOWN, NO NOISE, NO GARBAGE”, and more if deemed necessary.

5.2.4 Habitat Suitability

Large wildlife species such as elephant are threatened by habitat loss. Asian elephant requires at least 15 to 50 km² to 500 to 800 km² (Zhang et al. 2015). Similarly, a tigress needs a 13-51 km² territory, while a male tiger requires a larger territory up 60 – 100 km² (Naha et al. 2016, Qin et al. 2015). Irrawaddy Dolphin, on the other hands requires large area of fresh water habitat and good water conditions.

This habitat suitability should be the major consideration for determining the size of the core zone in the PAs. For example, wetlands are the habitats of rare and extinct fishes, grasslands, salinity lands and other areas supporting various flora and fauna in Cambodia. Corridors for wildlife movement shall also be considered when identifying the appropriate zones.

5.3 Socio-economic Criteria

These criteria refer to socio-economic development by the local communities and/or indigenous people who have legally resided in the areas. Identifying the zones shall respect the right for traditional use of the natural resources by the local communities and indigenous people according to their customary practices, belief, and religion. Locations of cultural area and natural culture (i.e. natural forests with caves, spiritual trees, burial grounds, and castles) shall be taken into account during the zonation process. Local communities living within or adjacent to the protected areas or BCC shall be consulted.

5.4 Supporting Capacity of Natural resources

For effective management of the individual zones, current conditions of natural resources and their capacity to support the management objectives of the individual zones need to be considered when identifying the location and size of the zones.

5.5 Geographic Settings of the Individual Zones

Primary ecosystem functions include but are not limited to water resources (e.g. watersheds, water catchment, and other waterways), soil types and agricultural cultivation. Geographic settings also include important habitat for fauna, birds, mammals, reptiles, and various kinds of fishes. Waterways can be locations for eco-tourism activities in the zone, i.e. the conservation zone, sustainable use, or community zone. Therefore, zoning shall ensure the protection of these water sources by incorporating watershed, water catchment, rivers, and other forms of water resources in the respective zone (s). Furthermore, terrain conditions can also affect the identification of the four zones. For example, areas where steep slopes (35 degree or more) are sensitive to land slide or other form of soil erosion. Such area may be set as core zone or conservation zone subject to stakeholder consultation. Similarly and where possible, cleared forest that can be restored should be put under the conservation zone.

6. Identification of the Individual Zones

These guidelines are developed as a tool to identify and map the location and size of the individual zones in the PA. Illustrations are provided in Appendix 2 and Appendix 3.

6.1 Core Zones

Core Zone is determined using ecological criteria for determining the size, shape, and connectivity of the core zone. The core zone should contain globally, regionally or nationally significant concentration of biodiversity values. Initial criteria to consider include:

1. Presence of globally, regionally, or nationally threatened species
2. The habitat suitability or territory requirements for globally, regionally, or nationally threatened species
3. Nationally important and fragile ecosystems,
4. Watershed function
5. Connectivity of critical ecosystems and corridors

Size of this zone can be determined using habitat suitability or territory requirements or a combination of the criteria 1 through 5 above. For (5) even if threatened species are not present, the entire surface of the natural forests should be considered because rainfall regulation of the forest canopy is cumulative and cannot be reduced into fragmented lands, which considerably reduces rainfall and the quantity of the underground water reserves. Size of the core zone of the PA found in freshwater and coastal areas can be determined using the habitat suitability or territory requirements of the globally threatened species. Due to its high biodiversity values and high concentration nutrient cycles, the entire area of wetland in the PA can be considered as core zone if such area is not occupied by local community. If otherwise, the entire area can be initially considered as core zone subject to stakeholder consultation.

6.1.1 Range of Habitat Suitability Requirement

Where possible range of habitat suitability requirement for large wildlife species should be used as indicator. For example, range of habitat requirements for Asian elephant requires at least 50 km² to 800 km² and for a tigress needs is 13–51 km², and for a male tiger is up 33 – 151 km² of habitat or territory (Sunquist 1981, Smith et al. 1989).

Habitat suitability requirement for some known species are given in Appendix 1. Where data of habitat requirements are not available, natural green area (i.e. evergreen, semi-evergreen or

deciduous forest) or area that is under carbon accounting of the REDD+ project should be allocated to core zone but subject to stakeholder consultation.

Determining the core zone in the marine protected areas, PAs along the coastal lines and freshwater PAs requires further knowledge of marine and/or freshwater species habitat requirements and year-round movement.

Wetlands under the Ramsar Convention should have largest core zone or should contain only one core zone. Where necessary, consultation with relevant authority and/or experts from other ministries is needed to ensure protection of globally threatened species.

Zone shape should consider all topographical and geographical factors features to ease the management and conservation of the important ecological features and species.

Size of the core zone should consider all globally threatened species (birds, reptiles, fishes, plants).

To maintain wildlife movement and genetic flow, habitat connectivity must be established between zones in the adjacent protected areas and no resettlement is allowed in the habitat connectivity areas.

6.2 Conservation Zone

Due to ecologically high values for this zone, ecological criteria also have higher priority score after that of core zone. The location and size of the zone may be determined according to the globally threatened species presence and movements, ecosystems and habitat features, geographical setting (i.e. steep slope of 35 degree or any other environmentally sensitive area) and the area requirement for effective protection of the watershed, water catchment or any waterways.

Conservation of water catchments or watersheds (including waterfalls) should be the primary consideration within this zone. However, upon assessment and agreement that there is no notable impact on these ecosystems or the biodiversity, low-impact tourism could be considered. Considerable conservation linkages and benefits must be derived from these activities within this zone. Other activities such as collection of Non-Timber Forest Products (NTFPs) and non-commercial fishery using traditional tools by local community stakeholders may be permitted in accordance with the PA Law.

As a general rule, the Core Zone should be surrounded by a Conservation Zone that can act as a “buffer” to reduce direct impacts from human activities on the areas that require the highest level of protection.

6.3 Sustainable Use Zones

Sustainable use zones need to be clearly interpreted and understood by the users and relevant stakeholders. ELCs can be no longer provided in these zones because ELCs will result in the replacement of natural forests with industrial plantations, which is contradict to the principle of sustainable use of the natural resources. All uses of natural resources (i.e. collection of NTFPs, restoration of native species, small-scale harvesting for local uses) must be pursued in a sustainable manner in harmony with nature, meaning that use of natural resources must not result in the destruction of the natural resources or is not subject to replacing natural resources with other species or construction of any commercial infrastructures. This zone should be

determined only after core zone, conservation zone, and community zone are determined. Where appropriate, related existing laws (including decrees, sub-decrees, Prakas, etc.) must be taken into consideration during the identification of these zones.

As a general rule, the Sustainable Use Zone should provide additional livelihood opportunities for local communities and indigenous to live on. Based on PA law, sustainable use zone includes

- Area for preservation of the natural culture and heritage
- Area for conservation of wildlife for ecotourism and leisure
- Area for restoring biodiversity and genetic sources
- Area for forest park
- Area for development of necessary infrastructures such as irrigation system, water reservoirs, hydropower, poles for power grids
- Area for geological significance
- Area for harvesting of plant resins in the protected areas and nearby

Where deemed necessary, Core Zone or Conservation Zone may be established in this Sustainable Use Zone to protect and conserve the natural resources, steep-slope terrains, watershed, waterways, and natural environment, and public safety.

6.4 Community Zones

These zones are complicated due to the existence and new establishment of the villages. Many laws have been introduced to ensure that local communities and their rights are respected. It is important that all key documents below, which are consistent with the development of all community zones must be considered when deciding the location and size of these zones. These documents include:

- Law on Forestry (2002) and Land Law in 2001
- Administrative Law of Commune/ Sangkat, district, and provinces in 2008
- Sub-decree 118 on State Land Management in 2005
- Sub-decree 83 (Procedures on the registration of lands of indigenous communities in 2009
- Guidelines on the strengthening of the effectiveness on the 'old policies, new action' on land legislation in 2012
- Government Order on Strengthening Measures and Enhancing Effectiveness of ELCs Management No. ២២ dated in May 2012
- Government Order on Measures to Prevent and Suppress Transportation, Collection, and Storage of Kranuong (2013)
- Government Circular on Management Improvement and Effectiveness of ELCs (Government Order in 2007)
- Government Circular on Strict Measures for Strengthening of the management of the PAs (2016),
- Prakas of MAFF on Non-Timber Forest Product was prohibited in 2005
- Prakas of MAFF on the Classification and Naming of the Wildlife Species in Cambodia in 2007
- Guidelines on the Establishment of the PA Communities. As a general rule, the Community Zone should be restricted to areas of existing settlements (villages) and their cultivated areas (e.g. rice fields, chamkar and field gardens), on which land titles were already issued.

These zones should be identified considering the ecological and socio-economic criteria or topographic or geographic features (i.e. forest borders, rivers, stream beds, waterways, area of cultural and natural heritage, and other areas of biodiversity significance) to enable environmental sustainability, public health, and increase awareness of the tourists visitors and local communities on the management activities and restrictions inside the zones. Furthermore, the use of any zone for military purpose for national safety and protection of national integrity shall be aimed to minimize the impacts of daily military activities on flora and fauna species, and other natural resources because those resources are the main natural supporting systems for long-term economic development in Cambodia.

7. Important Steps for Implementation

These zoning guidelines shall be implemented according to five key steps and amendment, for the latter when more data become available. Where necessary, each step may further contain several sub-steps to ensure smooth implementation of the zoning guidelines.

7.1 Step 1 Create Protected Area working group

Working group for identifying the individual zones will be set up by the MoE and the group's members include:

1. Director General of the General Secretariat: Chair
2. Governor of the respective province: Deputy Chair
3. Director (s) of the technical departments: Members
4. Director (s) of other related departments: Members
5. Direct (s) of the development department at the local level: Member
6. Director of the Department of the Biodiversity and International Conventions: Member
7. Director of the provincial office of the MoE: Member
8. Relevant local authority: Member
9. Manager of technical office: Member
10. Area Director of the nature conservation: Member
11. Relevant Development partners and NGOs: Member
12. Other relevant organizations: Member
13. Villages-Communes/Sangkat and Districts concern.

7.2 Methodology

- a. Select methodology, the participatory appraisal, which is suitable for implementation in the real geography context of zoning management each area;
- b. Select key persons in local community and stock holders to share information for field researches;
- c. Collect and use existing information/data as basis of analysis;
- d. Set requirements, information type which are all responsive to research objectives;
- e. Results of research shall be shared and consulted with local community and stock holders.

7.3 Preliminary Study

1. To arrange the consultative workshops to raise the awareness on the process and identification of the individual zones in the PAs and to discuss the implementation planning.
2. To understand about the PAs Law, other related laws and declarations, guidelines, available data and documents.
3. To identify the real stakeholders according to their expertise for the purposes of assisting in data collection, related information and drafting the maps of the target areas in consistent with point 5 of criteria for zoning.
4. To study the criteria for data collection and verification and draft the map of the individual zones in the target PA.

7.4 Data collection and resources assessment

1. Collection of data in the target areas
2. Field surveys to assess the criteria for identifying the individual zones as described on items 5 and 6 of these guidelines
3. Analyze the initial data and other data from the field surveys, based upon which second draft of the ones map can be produced
4. Organize consultative workshop with local communities, indigenous people, local authority, relevant experts, development partners and NGOs. Main points to be discussed include:
 - a. History of the target area
 - Location (area, geolocation, governance)
 - Population characteristics (age, gender, family, socio-economic status, language, education, occupation, race, religion, incomes, and health condition in accordance with development policy)
 - Natural resources (plants, wildlife, mineral resources, water sources, and other waterways)
 - Utilization of natural resources (legally, illegally, traditional practices)
 - Local administration (for each regime until recently)
 - b. Results from the study regarding the criteria for zones identification as described on point 5 and 6 above
 - c. Draft the map of the initially identified zones
 - d. Conclude the results from the consultative workshops and draft of the zoning maps for final approval

7.5 Finalization of the Zoning Identification and Approval of the Zones in the PA

1. Organize the internal meeting with General Secretariat of GDANCP to evaluate the approve the final draft of the zones identification
2. Organize the consultative meeting at national level to discuss and evaluate the final draft of the zoning document
3. Submit the zoning document for approval by the government
 - a. Consolidate the zoning map based on data collection and zoning map proposed by target villages
 - b. Commune or district Consultation meeting on draft management zones with community stakeholders (stipulated in the zonation work plan)
 - c. Provincial workshop on results from the consultation on draft management zones with community stakeholders (stipulated in the zonation work plan)
 - d. Present final draft management zones to GDANCP and provincial level

8. Measures for Effective Zoning

1. Effective zoning requires the participation of all relevant stakeholders whose livelihood would be affected by the zoning and related regulations. Identification of the zones with participation by the relevant stakeholders can achieve balance conservation and development but such identification needs to be pursued in a transparent way according to the criteria and management objectives of the zones, good governance, financial availability, and the national budget to ensure that identification and management of the zones can be continued with interruption.
2. The effective implementation of these guidelines needs to carefully evaluate the available information so that criteria for identification of the individual zones may be added to respond to the management needs for the PAs.
3. Proper monitoring plan is needed to monitor and evaluate the progress or results of the management of the individual zones, and to ensure the effectiveness of the zoning and zoning implementation.
4. These guidelines need to be revised when more data and scientific findings are obtained to increase the effectiveness of the future zoning.
5. To achieve effective management of the individual zones, it is required that management planning by the management objectives of the individual zones needs to be developed with participation from the government experts, local communities, local authority, experts of the development partners and related institutions.
6. Development of the Implementation Guidelines for management activities in the individual zones of the PAs is required so that proper management activities of the zones can be undertaken in accordance with government policies, legal matters, technical conditions, national and international conventions or agreements, actual characteristics of the target areas, and with participation from the relevant parties.

APPENDICES

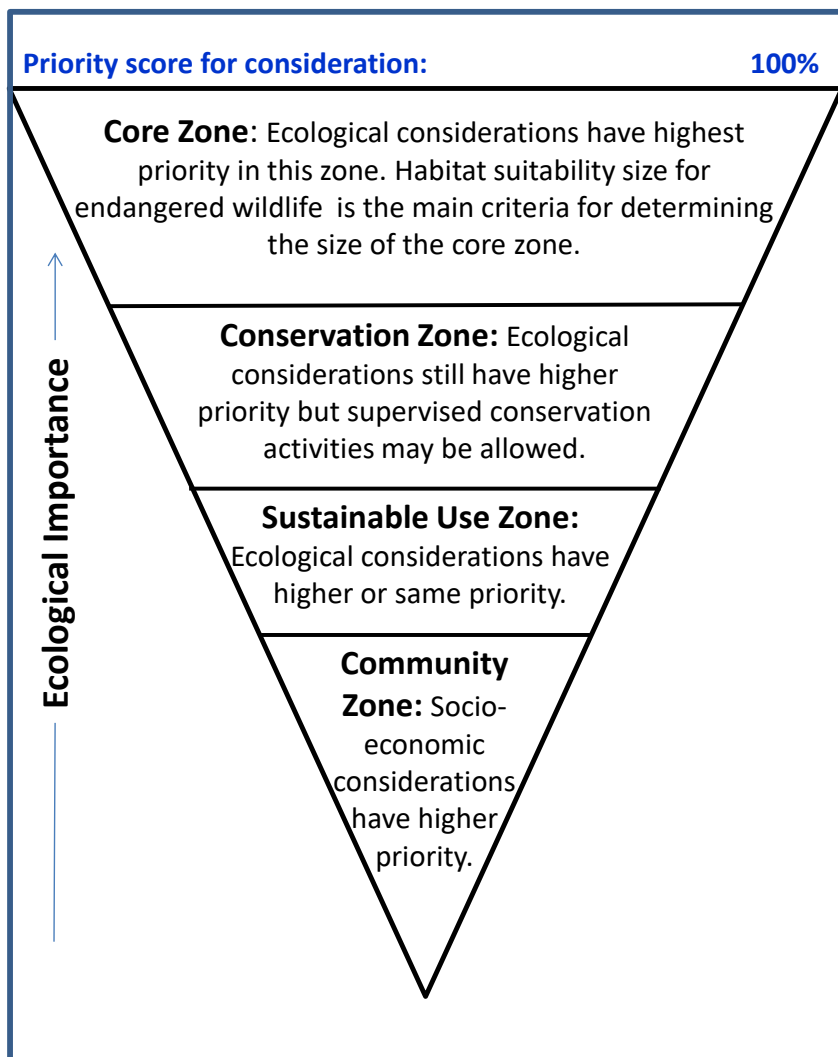
Appendix 1. Critically endangered fauna species and their habitat requirements

Scientific Name	English Name	Status	Habitat Requirement (km ²)
<i>Elephas maximus</i>	Asian elephant	Endangered	15-50 km ² It really depends on the actual on-the-ground range that is observed through data collection.
<i>Panthera tigris</i>	Tiger	Endangered	20-100 km ² It really depends on the actual presence and density of prey-base which could make the range vary considerably. In the Cardamoms, we are planning with the government to reintroduce tigers, which will make the zoning very strict because we will not be able to have Sustainable Use Zone and increased size Community Zone in the tiger habitat.
<i>Ursus thibetanus</i>	Asiatic black bear	Vulnerable	
<i>Helarctos malayanus</i>	Malayan sun bear	Vulnerable	
<i>Neofelis nebulosa</i>	clouded leopard	Vulnerable	
<i>Prionailurus viverrinus</i>	fishing cat	Endangered	
<i>Catopuma temminckii</i>	Asian golden cat	Near threatened	
<i>Pardofelis marmorata</i>	marbled cat	Near threatened	
<i>Rucervus eldii</i>	Eld's deer	Endangered	
<i>Capricornis milneedwardsii</i>	Chinese serow	Near threatened	
<i>Rusa unicolor</i>	Sambar deer	Vulnerable	
<i>Bos gaurus</i>	gaur	Vulnerable	
<i>Bos javanicus</i>	Banteng	Endangered	Up to 45 km ²
<i>Manis javanica</i>	Sunda pangolin	Critically endangered	
<i>Hylobates pileatus</i>	pileated gibbon	Endangered	
<i>Nomascus gabriellae</i>	yellow cheeked gibbon	Endangered	
<i>Pygathrix nemaeus</i>	Douc langur	Endangered	
<i>Trachypithecus germaini</i>	silver langur	Endangered	
<i>Nycticebus javanicus</i>	slow loris	Critically Endangered	
<i>Nycticebus pygmaeus</i>	pigmy loris	Vulnerable	
<i>Macaca nemestrina</i>	pig-tailed macaque	Vulnerable	
<i>Macaca fascicularis</i>	long-tailed macaque	Least concern	
<i>Pseudibis gigantean</i>	giant ibis	Critically endangered	
<i>Leptoptilus dubius</i>	Greater adjutant	Endangered	
<i>Buceros bicornis</i>	great hornbill	Endangered	
<i>Gyps bengalensis</i>	White-rumped Vulture	Critically endangered	

<i>Gyps tenuirostris</i>	Slender-billed Vulture	Critically endangered	
<i>Sarcogyps calvus</i>	Red-headed Vulture	Critically endangered	
<i>Antigone antigone</i>	sarus crane	Vulnerable	
<i>Ephippiorhynchus asiaticus</i>	black-necked stork	Near threatened	
<i>Mycteria leucocephala</i>	painted stork	Near threatened	
<i>Pelecanus philippensis</i>	spot-billed pelican	Near threatened	
<i>Cairina scutulata</i>	White-winged duck	Endangered	
<i>Hylopetes alboniger</i>	Particoloured flying squirrel	Endangered	
<i>Crocodylus siamensis</i>	Siamese crocodile	Critically endangered	
<i>Batagur baska</i>	Royal turtle	Critically endangered	
<i>Rafetus swinhoei</i>	giant soft-shell turtle	Critically endangered	
<i>Indotestudo elongate</i>	elongated tortoise	Endangered	
<i>Heosemys annandalii</i>	yellow-headed temple turtle	Endangered	
<i>Python bivittatus</i>	Burmese python	Vulnerable	
<i>Ophiophagus Hannah</i>	King cobra	Vulnerable	
<i>Naja kaouthia</i>	Monocled Cobra	Least concern	
<i>Scleropages formosus</i>	Asian arowana	Endangered	
<i>Batagur baska</i>	Batagur	Critically endangered	
<i>Cuon alpinus</i>	Dhole	Endangered	
<i>Lutra sumatrana</i>	Hairy-nosed Otter	Endangered	
<i>Asarcornis scutulata</i>	White-winged Duck	Endangered	
<i>Pavo muticus</i>	Green Peafowl	Endangered	
<i>Tenualosa thibaudeaui</i>	Fish—family Clupeidae	Endangered	
<i>Probarbus jullieni</i>	Jullien's golden carp	Endangered	
<i>Pangasianodon gigas</i>	Giant catfish	Endangered	

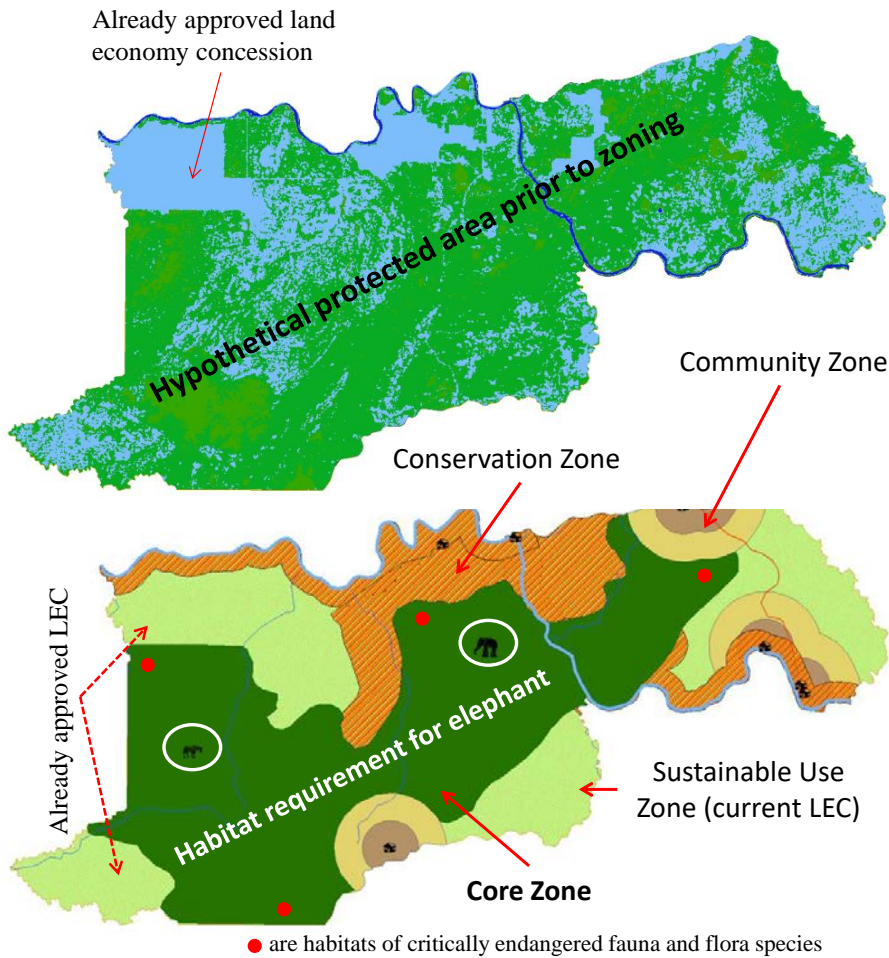
Note that more fauna species will be added to Table 2 when new data become available.

Appendix 2. Priority score for identifying the individual zones in the protected area



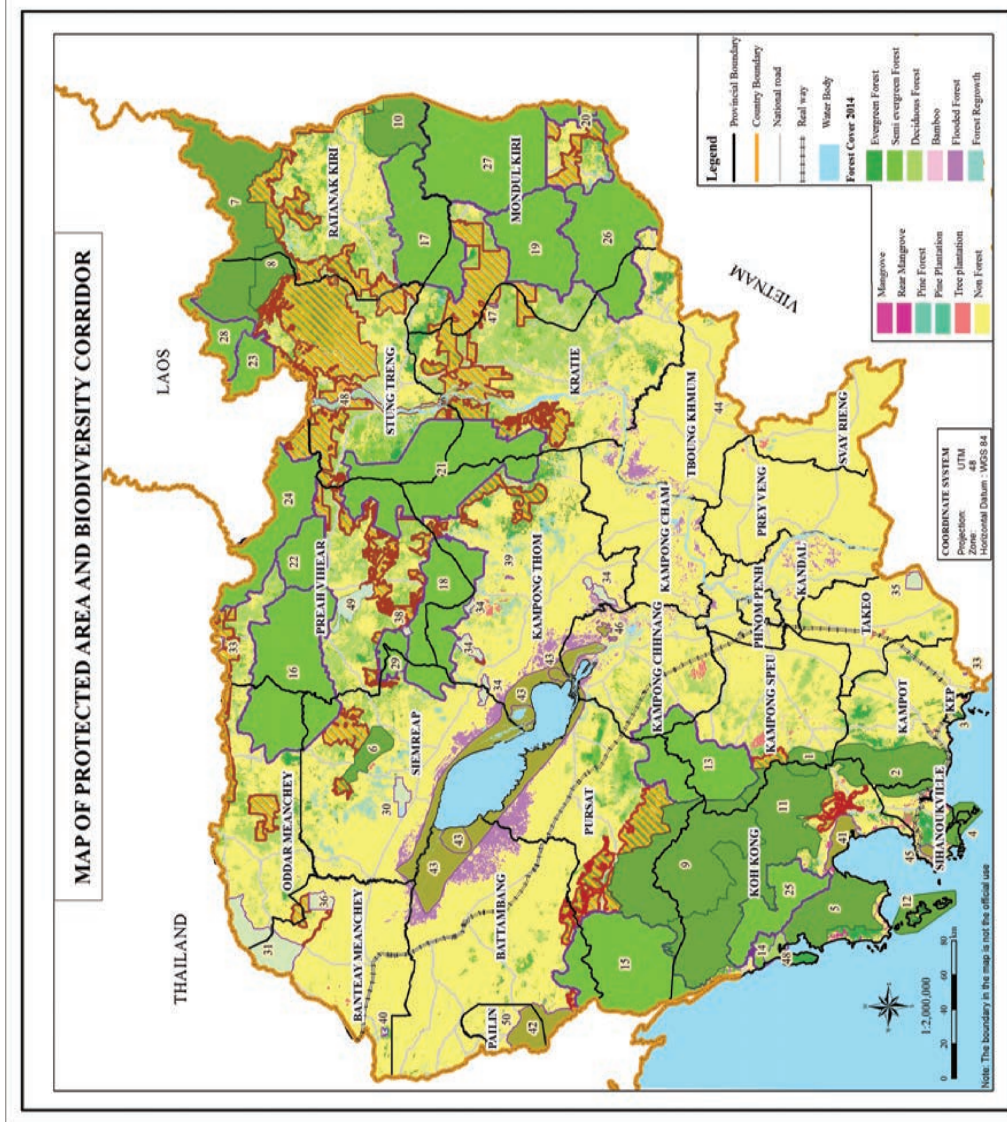
***Explanation of Appendix 2:** Ecological and socio-economic criteria have a priority score for consideration of 100% each but varies for individual zones. For example, core zone will have higher ecological criteria score approaching to 100%, while that of the socio-economic criteria is approaching to zero. In contrast, priority score of ecological criteria is approaching to zero while that of the socio-economic criteria is approaching to 100% for community zone.*

Appendix 3. Example of zoning in a hypothetical protected area



Example of the process: Wildlife species A (such as elephant or tiger) requires 20 km² but nearby, there are other species are also critically endangered: plant, bird, and reptile species (red point) in the above PA. Therefore, the actual core zone is the habitat requirements of two wildlife species, locations of plant, bird, and reptile species. Stakeholder consultation is important in knowing the location of the endangered species in the PA.

Appendix 4. Map of the current protected areas in Cambodia



No	Protected Area	Province	Size (Hectare)	Royal Decree/Sub Decree	
National Park (N.P) 12 Areas			1,770,062.00		
01	Kep	Kep	1,152.00	Sub: 138	Date:25 Oct 2003
02	Veun Sai Siem Pang	Stung Treng, Ratanak Kiri	57,469.00	Sub:77	Date:09 May 2016
03	Central Cardamom	Koh Kong, Pursat, Kampong Speu	401,313.00	Sub:81	Date:09 May 2016
04	Preah Soramarith Kosamak "Kirirom"	Kampong Speu, Kampot, Preah Sihanouk	35,232.00	Sub:171	Date:28 Dec 2010
05	Preah Munivong "Bokor"	Kampot, Preah Sihanouk	154,458.00	Sub:171	Date:28 Dec 2010
06	O'Yadao	Ratanak Kiri	101,348.00	Sub:82	Date:09 May 2016
07	Southern Cardamom	Koh Kong, Pursat, Kampong Speu, Preah Sihanouk	410,392.00	Sub:89	Date:09 May 2016
08	Samot Koh Rong	Preah Sihanouk, Koh Kong	52,448.00	Sub:14	Date:08 Feb 2018
09	Pheah Sihanouk "Ream"	Preah Sihanouk	15,000.00	Royal:	Date:01 Nov 1993
10	Botum Sakor	Koh Kong	171,250.00		
11	Preah Cheyvarama "Phnom Kulen"	Siemreap	37,500.00		
12	Virachey	Ratanak Kiri, Stung Treng	332,500.00		
Cancel	Koh Rong	Preah Sihanouk	(2,655.35)	Sub:188	Date:13 Sep 2016
Wildlife Sanctuary (W.S) 18 Areas			3,433,122.00		
13	Lumphat	Ratanak Kiri, Mondul Kiri	250,000.00	Sub:04	Date:05 Jan 2017
14	Phnom Prich	Mondul Kiri	222,500.00	Sub:05	Date:05 Jan 2017
15	Prey Lang	Stung Treng, Kapong Thom, Kratie, Preah Vihear	431,683.00	Sub:74	Date:09 May 2016
16	Preah Roka	Preah Vihear	90,361.00	Sub:75	Date:09 May 2016
17	Western Siempang	Stung Treng	65,389.00	Sub:76	Date:09 May 2016
18	Chhaeb	Preah Vihear, Stung Treng	190,027.00	Sub:79	Date:09 May 2016
19	Tatai	Koh Kong	144,275.00	Sub:80	Date:09 May 2016
20	Koe Seima	Mondul Kiri, Kratie	292,690.00	Sub:83	Date:09 May 2016
21	Srae Pok	Mondul Kiri	372,971.00	Sub:85	Date:09 May 2016
22	Siem Pang	Stung Treng	66,932.00	Sub:86	Date:09 May 2016
23	Phnom Thnout Phnom Pok	Preah Vihear, Siemreap	(42097.00)	Sub:143	Date:31 Aug 2017

Code	Protected Area	Province	Size(Hectare)	Royal Decree/Sub Decree	
24	Sang Rokhavorn	Oddar Meanchey	30,254.00 (27,710.00)	Sub:49	Date:05 April 2018
25	Phnom Aural	Kampong Speu, Pursat, Kampong Chhnang	253,750.00	Royal:	Date:01 Nov 1993
26	Peam Krasaop	Koh Kong	23,750.00		
27	Phnom Somkos	Pursat, Battambang, Koh Kong	333,750.00		
28	Kulen Promtep	Siemreap, Preah Vihear, Kampong Thom	402,500.00		
29	Beng Per	Siemreap, Preah Vihear, Kampong Thom	242,500.00		
30	Phnom NamLyr	Mondul Kiri	47,500.00		
Cancel	Roniem Daun Sam	Battambang, Banteay Meanchey	(178,750.00)		
Cancel	Snoul	Kratie	(75,000.00)		
Protected Landscape (P.L) 11 Areas			151,208.30		
31	An Long Pring	Kampot	217.00	Sub:04	Date:06 Jan 2011
32	North Tonle Sap	Kampong Thom, Siemreap	31,159.00	Sub:88	Date:09 May 2016
33	Boeung Prek Lpov	Takeo	8,305.00	Sub:149	Date:15 Oct 2007
34	Ang Trapeng Thmor	Banteay Meanchey	12,650.00	Royal: 0200/110	Date:22 Feb 2000
35	Boeung Prek Tub	Preah sihanouk	16.30	Sub:187	Date:13 Sep 2016
36	Prasat Bakan (Preah Khan Kampong Svay)	Preah Vihear	(2,124.00)	Sub:144	Date:31 Aug 2017
37	Roniem Daun Sam	Banteay Meanchey	1,423.00	Sub:15	Date:20 Dec 2017
38	SamBor PreyKok	Kampong Thom	438.00	Sub:39	Date:13 Mar 2018
39	Angkor	Siemreap	10,800.00	Royal:	Date:01 Nov 1993
40	Banteay Chhmar	Banteay Meanchey, Oddar Meanchey	81,200.00		
41	Preah Vihear	Preah Vihear	5,000.00		
Multiple Use Area (M.U) 7 Areas			415,796.00		
42	Punhea Kraek	Tbong Kmum	199.00	Sub:87	Date:09 May 2016
43	Kbal Chay	Preah Sihanouk	5,520.00	Sub:116	Date:05 June 2016
44	Phnom Neang Kang Rey Phnom Touk Meas	Kampong chhnang	5,063.00	Sub:200	Date:28 Nov 2017
45	Sorsor Sdam Sat Tor	Kratie	839.00	Sub:201	Date:28 Nov 2017
46	Dong Peng	Koh Kong	27,700.00	Royal:	Date:01 Nov 1993
47	Samlaut	Pailin, Battambang	60,000.00		

Code	Protected Area	Province	Size (Hectare)	Royal Decree/Sub Decree	
48	Tonle Sap	Kampong Thom, Kampong Chhnang, Pursat, Battambang, Siemreap	316,250.00	Royal:	Date:01 Nov 1993
	Boeng Chhmar Core Area (Ramsar Site)	Kampong Thom	(14,560.00)	Royal: 0401/070	Date:10 April 2001
	Prek Toal Core Area (Ramsar Site)	Battambang	(21,342.00)	Sub:87	Date:09 May 2016
	Stung Sen Core Area	Kampong Thom	(6,355.00)	Royal: 0401/070	Date:10 April 2001
49	Boeng Yak Lorm	Ratanak Kiri	225.00	Sub:78	Date:13 Jun 2018
Ramsar (R.S) 4 Areas			14,600.00		
50	Stung Treng	Stung Treng	14,600.00	Royal: 1296.34	Date:24 Dec 1996
	(Koh Kapi)	Koh Kong	(1,200.00)		
	(Boeng Chhmar)	Kampong Thom	(14,560.00)		
	(Prek Toal)	Battambang	(21,342.00)	Sub:139	Date:02 Oct 2015
Natural Heritage Park (N.H) 2 Areas			24,654.00		
51	Phnom Tbeng	Preah Vihear	24,654.00	Sub:189	Date:13 Sep 2016
52	Phnom Yat	Pailin	(31,951.00)	Sub:100	Date:19 June 2016
53	Biodiversity Corridor of Protected Area (Cor)		1,427,940.00		
	Northeast Corridors		(757,661.00)	Sub:07	Date:26 Jan 2017
	Northwest Corridors		(500,810.00)		
	Cardamom Corridors		(169,469.00)		
TOTAL			7,237,382.30		

Notes:

1. Tonle Sap Multiple Use Area is divided into 3 core areas: Boeng Tonle Chhmar, Prek Toal, and Stung Sen.
2. Biodiversity Corridor of Protected Area is divided into 3 areas: Northwestern, Northeastern and Cardamoms.
3. Koh Kapi Ramsar Site is located in Peam Krasoab Wildlife Sanctuary and Botom Sakor National Park.
4. Phnom Thnoat Phnom Poak Wildlife Sanctuary is located in the Northwest Corridor
5. Parsat Bakan Protected Landscape is located in NorthWest Corridor and Boeung Per Wildlife Sanctuary
6. Phnom Yat Natural Heritage Park is located in Samlaut Multiple Use Area
7. Sang Rokhavorn Wildlife Sanctuary is located in Northwest Corridor, 27,710.00 Ha

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