



Policy Analysis for Biodiversity Conservation in Cambodia: The Protected Areas System

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Abstract The Government of Cambodia recognizes the importance of biodiversity conservation. Following broad consultation and collaboration with stakeholders, it has created national policies and legislation for environmental and natural resources management over the next decade and also to compliance with country's obligations under relevant international treaties and conventions. This paper sets out the existing national environmental and natural resources management's policies and legislation, focusing on the protected areas system management in Cambodia. The specific objective is to analyze policy gaps in biodiversity and natural resources conservation; and assess its' effectiveness implementation. There are three phases in the assessment process: 1) gathering, listing and reviewing existing policies and legislations to highlight the significant contents in competences to natural resources conservation and management; 2) analyzing and identifying content gaps and opportunities to implement "Protected Areas Law" and relevant legislation in contribute to biodiversity management; 3) reviewing and examining national legislations, the provisions reflect on Cambodia's obligations under the UN Convention on Biological Diversity. Among 9 specific laws and some relevant policies and strategic plan there is approximate one third are found they have specific provisions related to biodiversity management and relevant to the protected areas system management. The analysis of "Protected Areas Law" shown a significant gap for unmanageable of protected areas that are not designated by Royal Decree on 1 November 1993 and neither financial mechanism nor guideline for zoning identification and management. The analysis showed that lack of specific policy on biodiversity management lead to challenges for sustainable use of natural resources with no return monetary benefits from ecosystem services. In conclusion, this paper will present opinions and recommendations to address policy gaps and enhance the implementation of existing laws.

Keywords policy, analysis, biodiversity, conservation, Cambodia

INTRODUCTION

Biodiversity is referred to the variability living organisms from all course including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this including diversity within species, between species and ecosystem (CBD, 1992). It has been recognized as an important and essential asset that significantly contributes into national and global economics. According to Sukhdev et al (2014), around 70% of the world's poor live in rural areas satisfy as much as 90% of their needs from biodiversity and its services such as food, fuel, medicine, shelter, and income generation. However, the global population growth increases demand of natural resources for improved living condition and development. The destruction of biodiversity and natural resources including habitat loss and degradation of ecosystem are among key global concerned. Like elsewhere, Cambodia depends mainly on rich natural resources and biodiversity for its socio-economic development that cause many challenges for country biodiversity conservation. Aware of these

challenges and the biodiversity's values, the Royal Government of Cambodia (RGC) has been engaged in establishing Protected Areas Systems (PAS) including 23 Protected Areas, 6 Forest Protection, and 8 Fish Sanctuary, aim to conserve, protect, and manage of natural resources, biodiversity, and its components for sustainable use, along with introduced various national policies and legislations to support and guide responsible institutions.

OBJECTIVE

This paper aims to analyze the existing national policies and legislations relevant to biodiversity conservation within the protected areas system in Cambodia in order to identify opportunity, gap and overlapping areas. Based on key findings, various recommendations are proposed to bridge the gap between policy and practice, reduce overlapping and overcome policy challenges.

METHODOLOGY

This study has collected relevant policies and legislations including Cambodian Rectangular Strategy; Sectoral Policies such as land, forest, and fisheries; and existing laws. The review process focus on content, purpose and objective of those legislations, while analyzed process examine the most relevant provisions and articles of Protected Areas Law that articulate on Natural resources management and Biodiversity Conservation in Cambodia in line with the program of work and strategic objective of the UN Convention on Biological Diversity (UN-CBD). The final analysis focuses on opportunity, overlapping, and gaps of Biodiversity Conservation. However, this paper mainly reviews on three specific policies: a protected area law, law on forestry, and law on fisheries, in with details on Protected Areas Law. The analysis has focus on three aspects: structure and provisions on natural conservation, implementation and compliance measure, and financial mechanism provision.

RESULTS AND DISCUSSION

The RGC tries to implement a coordinated set of laws, programs, action plans, and institutional arrangements regarding natural resources which are directed toward enabling the achievement of national goals of environmental protection, biodiversity conservation, poverty reduction, socio-economic development, and good governance, as described in table 1 on National Policies. The RGC sets national goals directed to the sustainable development of the Nation that provides the overall development framework for the conservation and management of Cambodian natural resources, and considers the ecologically, socially and economically viable conservation and management of biological resources as a major pillar for public welfare directly contributing to environmental protection, poverty reduction and socio-economic development.

Overview of National Policy and Legislation

This section describes overview of national policy, law, and strategic plan that are relevant to natural resources and biodiversity conservation in Cambodia.

National Policy

This study selected only 5 policies on land, forestry, and fisheries to review in the context of biodiversity conservation for sustainable management. Land Policy (2001) has objective to ensure management, protection and use of land and natural resources with transparency and efficiency in order

to preserve environmental sustainability and equitable socio-economic development in rural and urban areas as well as to prevent disputes over land use by regulating land development, land conversion, land readjustment, construction, and resettlement. While National Forest Sector Policy (2002) provides mandate to the Forestry Administration (FA) of Ministry of Agriculture Forestry and Fisheries (MAFF) to conserve and manage forest resource with five objectives to conserve and sustainable manage of the country's forest resources for sustainable social-economic development; to consider remaining forest resources as Permanent Forest Estate; to engage private sector and local population to ensure food security, poverty reduction and socio-economic development; to coordinate multi-stakeholder to enable the harmonization of the different perceptions, interests and objectives of the various forest interest groups; and to support forestation of arable land and to protect those trees for the development of forest resources. To achieve the objective of Forest Sector Policy, MAFF has developed a long term National Forest Programme 2010-2029 (NFP, 2010) that aims to attain sustainable forest management and reduce poverty in the country with specific objectives and goals of environmental protection, biodiversity conservation, economic development and good governance. The programme has identifies the four tasks on forest resources conservation, good governance, social economic development, and poverty reduction, that need to achieve by 2029. Furthermore, Fisheries sector also developed 20 years Strategic Planning Framework for Fisheries 2010-2029 (SPF, 2010) to guide Fisheries Administrative in effective implementing the National Strategic Development Plan, and compliance with the Law on Fisheries.

Table 1 National Policy related to Biodiversity Conservation

Date	Policy
2001	<p>The Declaration on Land Policy Focuses on three sub-sectors: land administration, land management, and land distribution, under responsible of Ministry of Land Management, Urban Planning and Construction (MoLMUPC)</p>
2002	<p>National Forest Sector Policy To conserve and sustainable manage of the country's forest resources for sustainable social-economic development and to ensure that the management and exploitation of forests generates benefits for government entities, local communities, the private sector and individuals.</p>
2010	<p>National Forest Programme (NFP) 2010-2029 NFP is developed to replace and implement National Forest Sector Policy. It identifies REDD+ as important source of sustainable forest financing in targeting to register 1,000 community forestry groups nationally, and for community forest programmes to cover 2.0 million hectares by 2030.</p>
2010	<p>The Strategic Planning Framework for Fisheries: 2010-2019 To support the achievement of Cambodia's MDG and implement National Strategic Development Plan with compliance with Law on Fisheries to be benefit of the Cambodian people.</p>

National Law related to Natural Resource Conservation

Cambodia has adopted a number of laws to support natural resources management in which these policies are directly and indirectly used to manage Protected Area System. Nine relevant laws related to Biodiversity conservation and protected areas management has been selected to review and descript in this section. However, only three laws (Protected Area Law, Law on Forestry, and Law oh Fisheries) are directly responded to protected areas system management and establishment of conservation communities as shown in table 2. The “*Law on Environmental Protection and Natural Resource Management*” of 1996 (LEPNRM, 1996) intends to protect and promote environmental quality and public health through the prevention, reduction, and control of pollution, to assess the environmental impacts of all proposed projects prior to the issuance of the decision by the Royal Government, to ensure the rational and sustainable conservation, development, management, and use of the natural resources, to encourage and enable the public to participate in environmental protection and natural

resource management, and to suppress any acts that cause harm to the environment. The objective of the “*Land law*” 2001 (LL, 2001) is to determine the regime of ownership for immovable properties in the Kingdom of Cambodia for the purpose of guaranteeing the rights of ownership and other rights related to immovable property, according to the provisions of the 1993 Constitution of the Kingdom of Cambodia. This law provides legal basis to government institutions to manage state land such as protected areas, public land, and community land. The “*Law on Water Resources Management*” 2007 (LWRM, 2007) emphasize management and development of water and water resources based on an integrated water resources management (IWRM), in which requires to coordinated multi-sectoral water use planning including the need for conservation of biodiversity and ecosystems. Article 23 of this law authorizes the Ministry of Water Resources and Meteorology (MOWRM) to declare any watershed as a protected "water use" zone if it is prone to degradation by human activities or natural factors. Besides, “*Law on Biosafety*” 2008 (LBS, 2008) has been developed in 5 years after Cambodia become a party of the Cartagena Protocol on Biosafety. The purpose of the law is to respond with Cambodia’s obligation and commitment to implement the Biosafety protocol of the Convention on Biological Diversity that Cambodia becomes a party in 1995. This law aims to prevent adverse impact on the conservation of biodiversity and natural resources caused by the trans-boundary movement, development, handling, transfer, use, storage, and release of living modified organisms resulting from modern biotechnology; and ensure effective conservation of biodiversity and sustainable use of biological resources, taking also into account risks to human health. At the same year RGC also adopted “*Law on Seed Management and Plant Breeder’s Right*” (LSMPBR, 2008) that serves as legal instrument to manage and control the breeding, release for use, production, processing, registration, distribution, import and export of seeds. This law has objectives to protect new plant varieties, to secure the management and sustainable development of varieties, and to encourage the development thereof for social, economic, and environmental benefits. One year later, the RGC endorsed “*Law on Tourism*” 2009 (LT, 2009) to allow the Ministry of Tourism (MOT) to govern the tourism sector in a sustainable manner for poverty reduction. This law aims to protect and conserve the natural resources, culture and customs, which serve as the foundation of the tourism sector, with its optimal benefits (Article 2).

In addition to the above laws, three specific laws are directly defended legal framework for Biodiversity Conservation within Protected Area System in Cambodia. The “*Law on Forestry*” 2002 (LF, 2002) defines framework for management, harvesting, use, development and conservation of the Forests in the Kingdom of Cambodia. The objective of this law is to ensure sustainable management of these forests for their social, economic, and environmental benefit, including conservation biological diversity and cultural heritage. The “*Law on Fisheries*” 2006 (LFi, 2006) aims to ensures fisheries and fishery resource management, enhance aquaculture development, the management of production and processing, and to promote the livelihood of people in local communities for the social-economic and environmental benefits, including the sustainability of the conservation of biodiversity and natural culture heritages. The “*Protected Area Law*” 2008 (PAL, 2008) defines the framework of management, conservation and development of protected areas to ensure the management, conservation of biodiversity, and sustainable use of natural resources in protected areas.

National Strategy

The National Strategic Development Plan and its Update 2009-2013 (NSDP, 2010) contains policy priorities that support the establishment of protected areas and protected forests with the objectives to conserve biodiversity and improve the livelihoods of people living in rural areas and contribute to economic growth. It covers all aspects of sustainable development, including chapters on enhancement of the agricultural sector for improving agricultural productivity and diversification. While National Strategic Development Plan 2014-2018 has been formulated for implementing the Rectangular Strategy Phase III (RS, Phase III, 2010): Growth, Employment, Equity, & Efficiency, to ensure development sustainability and poverty reduction and sustainable management of natural resources,

Cambodia Climate Change Strategic Plan 2014-2023 (CCCSP, 2013) is a continuation of national policy response, in providing a framework for climate change responses and guiding the transition to low-carbon and climate resilient development. It supports national preparedness in responding to climate risks and disaster management, and in capitalizing on emerging opportunities such as green growth, mobilizing climate funds from bilateral and multilateral sources, and enhancing effective participation in international dialogues and negotiations on climate change, and biodiversity. National Biodiversity Strategy and Action Plan (NBSAP, 2015) sets its vision to use, protect and manage biodiversity for sustainable development in Cambodia. To ensure this, biodiversity issues and values are mainstreamed in national development and sectoral policies, plans and programmes; biodiversity, our natural capital, is protected by reducing the various direct and indirect pressures causing its loss or degradation, and is used wisely so as to enhance the benefits from it to the people of Cambodia, particularly in rural areas; and the enabling environment for effective and efficient implementation of this mission is strengthened.

Policy Analysis: Protected Areas Law

The Protected Areas Law established by Royal Decree dated on 15 February 2008, defined the management, conservation, and establishment of new and existing protected areas, which identified in Royal Decree of 1 November 1993. This law composed of 11 chapters with the objective to ensure the management, conservation of biodiversity, and sustainable use of natural resources in protected areas. Article 2 of this law sets scope of application in protected areas defined by the provisions of the Law on Environmental Protection and Natural Resources Management, which was promulgated by Royal Decree No NS/RKM/1296/36 of December 24, 1996, Royal Decree on the Establishment and Designation of Protected Areas of November 01, 1993, Royal Decree on the Establishment and Management of Boeung Tonle Sap Biosphere reserve No NS/RKT/0401/070 of April 10, 2001, and other relevant standard documents. Chapter II has defined responsibility of the Ministry of Environment (MoE) for management of protected areas with full participation from local communities, indigenous ethnic minorities and the public to participate in the decision-making on the sustainable management and conservation of biodiversity. This law provides legal framework and opportunity to conserve and manage biodiversity resources in line with Cambodia obligation to implement UN Convention on Biological Diversity (UN-CBD) and its protocol. Article 5, 6, and 38 sets the rights and duties of MoE to monitor national resource of all kinds in the protected areas including the right to control export and import of wild flora and fauna, seeds and samples, cross-breeding of wild species or fish of all species from/into the protected areas based on scientific research. These articles are mostly relevant to the control measures set in Nagoya Protocol on access and benefits sharing of the UN-CBD, and MoE duty to develop strategic plans, action plans, and technical guidelines for managing the protected areas. Article 9 & 10 states that RGC may establish provincial/municipal protected areas and modify any protected area that already designate as world or regional heritage site shall be comply with national legislations to ensure its management and conservation consistent with procedures and relevant regulations. The article 15, 16 and 19 determines the needs for development of national strategic and action plan (NSAP) for protected area management with introduce the process and instruction for NSAP. Article 22 recognizes and secures access to traditional uses, local customs, beliefs, and religions of the local communities, and indigenous ethnic minority groups residing within and adjacent to the protected areas and allow to Access to traditional uses of natural resources and customary practices on family scale within sustainable use zone and conservation zone subject to guidelines. This article responds to the implementation of article 8(j) of the UN-CBD. Articles 32, 33, & 34 define the establishment of “Protected Area Trust Fund”, the sources for this fund, and the use of fund to support activates. Chapter 10 defines procedure and mechanism on penalties of natural resource offenses. However, the procedure for penalties in this law is not capturing all forest offenses, so that need for using provisions of law of forestry to complain at the court in some cases.

Provisional Gap of Protected Area Law

Although Protected Area Law has many strength provisions, it is still some gaps to achieve the goal for natural resources management and biodiversity conservation for sustainable development. Those gaps are described in table 2.

Besides provision gaps in PA Law, there is policy gap such as no environmental policy, no biodiversity policy/law that limit functions of responsible institution in biodiversity conservation and benefits values of biodiversity and its ecosystem for social economic development.

Table 2 Provision Gap Analysis of PA Law

Provision	Gap Description
Article 2	This Law has a scope of application in 23 Royal Decree on 1 November 1993 only. However, Protected Area System includes Forest Protection, Fish Sanctuary and Community Conserve Area that should cover by this law.
Article 11	Identify 4 zoning for PA management, but it does not include cultural and heritage zone under Apsara authorities.
Article 12	Set only criteria for zoning identification, not introduce procedure and guideline.
Article 16	No guideline or mechanism for implementing National PA Strategic Management Plan.
Article 19	No financial mechanism to implement action plan.
Article 25	This law not covers any part of Community PA outside PA boundary.
Article 41	Missing to include rare, endangered species, and threaten species in the prohibited practices considered destructive and harmful.

Overlap responsibility of Protected Area Law with Laws on Forestry and Fisheries

The RGC has endorsed sectoral laws: PA Law, Law on Forestry, Law on Fisheries, Land Law, and Law on Water Resources Management to direct and indirect manage and conserve natural resources for sustainable development. These laws create overlapping responsibilities among government sectors for natural resource management (Fig. 1).

PA Law aims to manage and conserve biodiversity within the 23 Protected Areas under jurisdiction of MOE, while MAFF has responsible to biodiversity conservation outside the PA. The conservation of biodiversity within Forest Protected is under jurisdiction of FA and within Fish Sanctuary is under jurisdiction of Fisheries Administration. Moreover, Law on Forestry emphasized that the areas of Forest Protection and all kind wildlife species are under the management, research and conservation of the Forestry Administration, except for fish and animal that breed in water. Chapter 4, Chapters 5 and 6 in the 2006 Law on Fisheries present approaches to protect and conserve fisheries in inland and marine waters, in general, and more specifically in inundated forests and mangrove forests as shown in Table 3. Overlapping jurisdictions among key ministries for such as MoE, MAFF, MOWRM, and Ministry of Land Management, Urban Planning and Construction (MLMUPC), have often led to ambiguity as to which ministry has the key role in managing which resources.

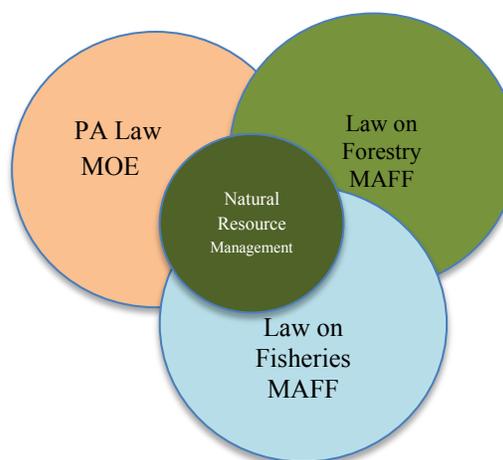


Fig 1. Overlapping Areas of PAL, LF, & LFi

Table 3 Comparison Protected Area Law with Laws on Forestry and fisheries

Policy	Institute	Overlapping Responsibility
PA Law	MOE	Management, conservation and development of protected areas to ensure the management & conservation of biodiversity & natural resources for sustainable use.
Law on Forestry	MAFF	Management, harvesting, use, development and conservation of the forests to ensure the sustainable management of forests for social, economic and environmental benefits, including conservation of biological diversity and cultural heritage.
Law on Fisheries	MAFF	Ensures fisheries and fishery resource management, enhance aquaculture development, the management of production and processing, and to promote the livelihood of people in local communities for the social-economic and environmental benefits, including the sustainability of the conservation of biodiversity and natural culture heritages.

CONCLUSION

In general, there are many national policy and legislations established by RGC for manage and conserve of biodiversity within or outside the protected areas system. However, based on this study, the results showed that almost sectorial policy and law are developing in ad hoc based on individual sectors and institutional circumstance. Almost all of sectorial laws are excluded financial mechanism and implementation measure, and resources needs. This gap limits law enforcement and participation from all relevant stakeholders. Learning from the gap finding, it appears that there is a need for establishment and strengthen of coordination mechanism, mobilize adequate resources, and enhance capacity to review and amend some laws to be coherence, consistent, and clear mandate for individual institution. To achieve biodiversity conservation, the national biodiversity policy and laws should be established as urgent needs. Fortunately, in February 2016, Prime Minister announce on jurisdiction reform to give mandate to MoE in environmental protection within PAS including 23 Protected Areas (PAs) and MAFF has responsible for production forest and Economics Land Concession (ELC) areas, and protection and management of fisheries. Therefore, soon sectorial policies have been amendment within this new reform.

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REFERENCES

- Ministry of Agriculture, Forestry and Fisheries. 2002. Law on forestry. Ministry of Agriculture, Forestry and Fisheries, Cambodia.
- Ministry of Agriculture, Forestry and Fisheries. 2002. National forest sector policy. Ministry of Agriculture, Forestry and Fisheries, Cambodia.
- Ministry of Agriculture, Forestry and Fisheries. 2006. Law on fishery. Ministry of Agriculture, Forestry and Fisheries, Cambodia.
- Ministry of Agriculture, Forestry and Fisheries. 2008. Law on seed management and plant breeder's right.

- Ministry of Agriculture, Forestry and Fisheries, Cambodia.
- Ministry of Agriculture, Forestry and Fisheries. 2010. National forest program, Ministry of Agriculture, Forestry and Fisheries, Cambodia. (<http://www.4cmr.group.cam.ac.uk/filecab/redd-law-project>)
- Ministry of Agriculture, Forestry and Fisheries. 2010. National strategic planning for fisheries 2010-2029. FiA, Ministry of Agriculture, Forestry and Fisheries, Cambodia.
- Ministry of Environment. 1996. Law on environmental protection and natural resource management. Ministry of Environment, Cambodia.
- Ministry of Environment . 2008. Law on biosafety. Ministry of Environment, Cambodia.
- Ministry of Environment. 2008. Protected area law. Ministry of Environment, Cambodia.
- Ministry of Environment. 2010. The rectangular strategy phase III. Ministry of Environment, Cambodia.
- Ministry of Environment. 2010. National strategic development plan, update 2009-2013. Chapter IV. Ministry of Environment, Cambodia.
- Ministry of Environment. 2013. The Cambodia climate change strategic plan. Ministry of Environment, Cambodia.
- Ministry of Environment. 2014. The national protected areas system strategic management framework. P.1. Ministry of Environment, Cambodia.
- Ministry of Environment. 2015. The national biodiversity strategic and action plan. Ministry of Environment, Cambodia.
- Ministry of Land Management, Urban Planning and Construction. 2001. Land policy. Ministry of Land Management, Urban Planning and Construction, Cambodia.
- Ministry of Land Management, Urban Planning and Construction. 2001. Land law. Ministry of Land Management, Urban Planning and Construction, Cambodia.
- Ministry of Tourism. 2009. Law on tourism. Ministry of Tourism, Cambodia.
- Ministry of Water Recourses and Meteorology. 2007. Law on water resources management. Ministry of Water Recourses and Meteorology, Cambodia.
- Sukhdev, P., Wittmer, H., and Miller, D. 2014. The economics of ecosystems and biodiversity (TEEB), Challenges and responses, In D. Helm and C. Hepburn (eds), *Nature in the Balance: The Economics of Biodiversity*. Oxford: Oxford University Press.
- The Cambodian National Sustainable Development Strategy. 2009.
- The Convention on Biological Diversity (CBD). 1992. The Article 2, Use of term on biological diversity. CBD.