

Biodiversity Conservation Beyond Borders: The Case of ASEAN Heritage Park

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SUMMARY

Biodiversity conservation in Southeast Asia, also known as the Association of Southeast Asian Nations (ASEAN) is becoming more urgent due to increasing pressure of fast dwindling important and rare resources. Various risks, ranging from habitat destruction, illegal logging, invasive alien species, pollution and others, continue to threaten the significant range of natural resources of the region, which are also being complicated by impacts from progressing climate change. Addressing these issues require a range of conservation approaches, one of which is the establishment of the ASEAN Heritage Parks (AHPs) Programme. With the ASEAN Centre for Biodiversity (ACB) as Secretariat, the AHP Programme aims to strengthen the management and conservation of 33 AHPs, which have been selected to represent the typical and unique ecosystems and species of Southeast Asia. The paper provides insights into the projects and activities of the AHP Programme, and recommendations on how it can continue to facilitate stronger management and conservation of the ASEAN region's exceptional biodiversity.

INTRODUCTION

Biological diversity or biodiversity is the web of life that encompasses all species of plants, animals and micro-organisms, their genetic material and the ecosystems therein. The United Nations Convention on Biological Diversity defines biodiversity as “the variability among living organisms including, inter alia, terrestrial, marine and other aquatic systems and the ecological complexes of which they are part of”. This includes diversity within and between species and ecosystems.

Biodiversity brings enormous benefits to all, thus, they are very valuable to humankind. They provide food, medicine, shelter, water and a host of ecosystem services. It also underpins the sources of people's cultural and spiritual values. Biodiversity is critical in moderating the impacts of climate change. The diversity of all living forms of plants, animals and ecosystem services has huge economic value. Biodiversity creates health and wealth and they sustain life-support system especially in the ASEAN region (ACB 2010). The region's biodiversity and ecosystem services are very essential to not only more than 600 million people in the region but also to the rest of the world.

The ASEAN Region: Its standing in the global biodiversity area

The ASEAN Region is composed of ten ASEAN Member States, namely Brunei Darussalam, Cambodia, Indonesia, Lao

PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam. The region is endowed with very rich biodiversity. ASEAN Member States with high number of recorded species include Malaysia (21,914), Philippines (18,535), Indonesia (17,157) and Viet Nam (16,740). In 2008, a total of 26,268 endemic species were recorded in the region. Although it occupies less than 3% of the world's total area, it is home to more than 20% of all known plant and animal species living in its jungles, mountains, rivers, lakes and seas (Fourth ASEAN State of the Environment Report 2009; ASEAN Secretariat 2011; Sodhi *et al.* 2010). It is home to three of the 17 known mega-diverse countries (Indonesia, Malaysia and Philippines). Mega-diverse countries have less than 10% of the global surface but supports more than 70% of the planet's biodiversity.

The region has one-third of all known coral reef areas in the world and three countries (Indonesia, Malaysia and the Philippines) form part of the Coral Triangle, known to harbor the richest marine biodiversity in the world. In terms of global diversity of plants and animals, Indonesia ranks second for mammals, fifth for plants, and sixth for amphibians; Malaysia ranks second for plants, 16th for amphibians, and 17th for mammals; Myanmar ranks 14th for birds; the Philippines ranks 15th for plants; and Thailand ranks 18th and 20th for birds and animals, respectively (Peng Bin 2013).

Protection and Conservation of Southeast Asia's Endangered Species

More and more reports state that Southeast Asia's biodiversity is under grave threat. The region has seven of the world's 25 recognized biodiversity hotspots. Biodiversity hotspots have

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have exceptional levels of endemic species and are facing serious losses of habitats. It is also reported that 7% of all threatened amphibians, 12% of all threatened birds, 18% of all threatened mammals and 18% of all threatened plants are in the ASEAN region. Of the more than 64,000 known species in the region, more than 1,300 species are endangered. The five drivers of biodiversity loss in the ASEAN region are habitat destruction and fragmentation, climate change, alien invasive species, unsustainable use and over-exploitation of biodiversity, and pollution (Figure 1). Eighty percent of Southeast Asia's coral reefs are at risk due to destructive fishing practices and coral bleaching (ACB 2010).

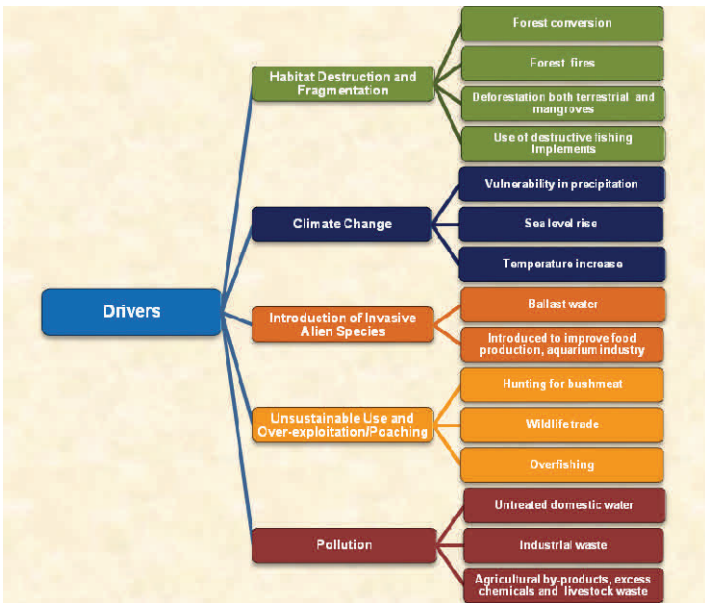


Figure 1. Drivers of Biodiversity loss and ecosystem degradation in the ASEAN (Source: ASEAN Biodiversity Outlook 2010. ASEAN Centre for Biodiversity).

The ASEAN Vision 2020 to achieve “a clean and green ASEAN with fully established mechanisms for sustainable development, and ensure the protection of the region’s environment and natural resources are sustained, as well as the high quality of life of its people” is ASEAN’s commitment to biodiversity conservation. The protection and conservation of biodiversity are ensured through the establishment of the more than 1,300 protected and conservation areas in the region. New protected areas have been established in Lao PDR, Myanmar and the Philippines, bringing the region’s total to 588,434 sq km (or 13.25% of the total land area (Fourth ASEAN State of the Environment Report 2009). They are considered as cornerstones for promoting biodiversity, ecosystem services and human well-being. Protected areas cover 12.7% of the world’s terrestrial areas and 1.6% of the global area.

Since 2000, protected areas in the ASEAN region have increased in terms of area by 48,827 sq km and by 100 protected areas in terms of number (Figure 2 and Table 1). These conservation areas include strict nature reserves, national parks, natural

monuments, habitat/species management areas, protected landscape/seascape, managed resource protected areas, marine and coastal protected areas and key biodiversity areas. Some of these protected areas are classified as ASEAN Heritage Parks.

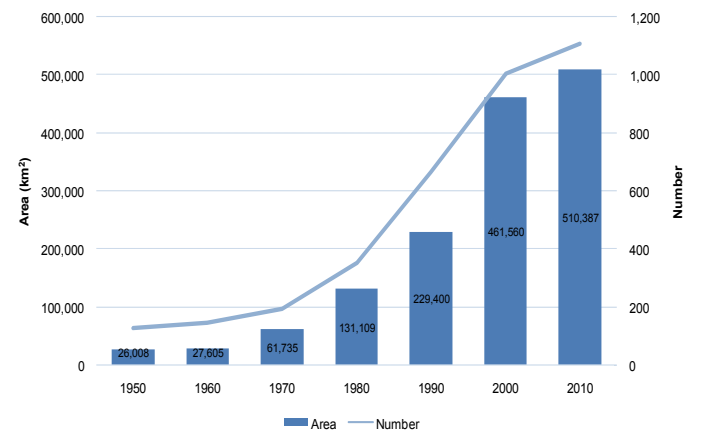


Figure 2. Trends of Protected Areas growth in terms of number and area of designated protected areas in ASEAN, 1950-2010. (Source: UNEP-WCMC. 2010. World Database on Protected Areas, accessed on June 17, 2010 at <http://www.wdpa.org>)

ASEAN Heritage Parks

At their first meeting in 1978, the ASEAN Experts on Environment noted a select group of protected areas that have outstanding wilderness and other values. Keenly aware of the uniqueness of these protected areas, the experts recommended that these conservation areas be given the highest regional recognition so that their importance will be appreciated internationally. This resulted in the establishment of ASEAN Heritage Parks (AHPs).

AHPs are protected areas of high conservation importance preserving in total a complete spectrum of representative ecosystems of the ASEAN Region (MacKinnon *et al.* 2004). They are habitats of endangered, rare or important species, and/or they have spectacular geographical features, unique ecosystems, and/or worthwhile cultural and ecotourism practices/activities.

In 1984, through the ASEAN Declaration on Heritage Parks and Reserves, the ASEAN Member States agreed to effectively manage these AHPs to maintain ecological processes and life support systems, preserve genetic diversity, ensure sustainable utilization of species and ecosystems, as well as maintain wilderness areas that have scenic, cultural, educational, research, recreational and tourism values. The Declaration also provides a set of principles, objectives, criteria and guidelines for the selection, establishment and management of AHPs. The ASEAN Heritage Parks Programme was developed to promote greater collaboration among ASEAN Member States in the conservation of their common natural heritage and to ensure that AHPs benefit from the best practices of management available.

Table 1. Area Coverage of Protected Areas in ASEAN

Country	Terrestrial ¹		Wetlands ²		Coastal/Marine ¹	
	2000	2010	2000	2012	2000	2010
Brunei	2,623	2,623	-	-	44	44
Darussalam						
Cambodia	41,770	47,034	546	546	78	84
Indonesia	258,342	269,774	2,427	9,647	34,019	65,975
Lao PDR	38,433	38,433	0	148	-	-
Malaysia	59,978	60,045	384	1,342	2,555	2,555
Myanmar	30,082	42,639	0	104	476	476
Philippines	32,136	32,454	684	684	16,453	16,754
Singapore	31	32	-	-	9	9
Thailand	103,155	104,024	5	3,728	4,804	4,804
Viet Nam	19,898	20,568	120	431	974	3,281
Total	586,448	617,626	4,166	16,630	59,412	93,982

Sources:

1. IUCN and UNEP-WCMC (2011) *The World Database on Protected Areas (WDPA): January 2011*. Cambridge, UK: UNEP-WCMC.
2. RAMSAR-listed wetlands, 2012. RAMSAR Convention on wetlands, downloaded on 12 October 2012 from www.ramsar.org

To date, a total of 33 AHPs were established in Southeast Asia encompassing almost 8 million hectares of key terrestrial and marine ecosystems, and is distributed as follows: Brunei Darussalam – 1; Cambodia – 2; Indonesia – 3; Lao PDR – 1; Malaysia – 3; Myanmar – 7; Philippines – 5; Singapore – 2; Thailand – 4; and Viet Nam – 5 (Figure 3). The Philippines, out of its more than 200 protected areas which are under the administration of the Bureau of Biodiversity Management (formerly the Protected Areas and Wildlife Bureau) of the Department of Environment and Natural Resources, has ASEAN Heritage Parks of regional importance, as shown in Figure 4 (Uriarte, *et al.* 2013).

The ASEAN Centre for Biodiversity as AHP Secretariat

The ASEAN Centre for Biodiversity (ACB) is the ASEAN's response to the challenge of biodiversity loss. It is mandated to facilitate cooperation and coordination among the ten ASEAN Member States and with relevant regional and international organizations on biodiversity conservation. As the AHP Secretariat, ACB receives and processes nominations for AHPs; manages an information system for AHPs; and facilitates information sharing, capacity building activities, and development and monitoring of AHP activities. ACB is assisted by the AHP Committee composed of members from Ministries of Environment or Natural Resources. The AHP Committee develops the regional action plan for the AHPs; reviews and updates the selection criteria; reviews and recommends new ASEAN Heritage Parks in accordance with the AHP selection criteria; and participates and provides technical assistance in the

conduct of other related activities of ACB.

Ongoing efforts to enhance biodiversity conservation in ASEAN Heritage Parks

Since 2006, the ASEAN Centre for Biodiversity, in cooperation with the ASEAN Member States, has conducted several activities to enhance management of ASEAN Heritage Parks. These include the implementation of pilot projects, conduct of conferences, trainings and workshops and other capacity building

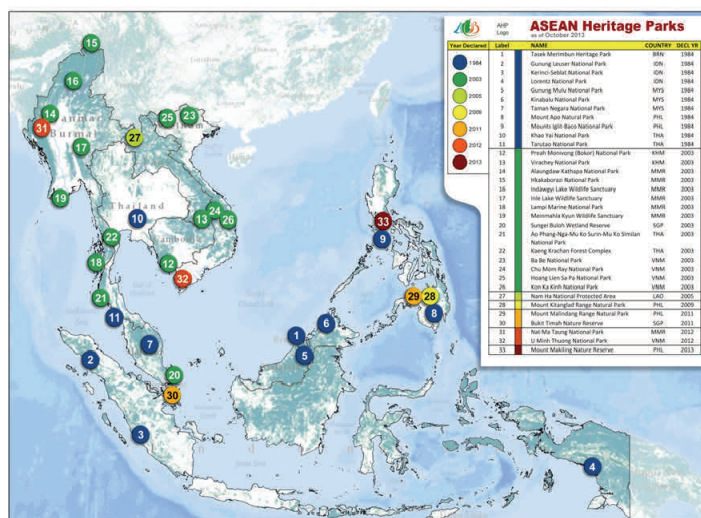


Figure 3. Map of ASEAN Heritage Parks (Source: Uriarte, *et al.*, 2013)

Mt. Apo Natural Park – Where the Philippine eagle soars to new heights

Mt. Apo Natural Park is a stronghold of the remaining population of the rare and endangered Philippine eagle (*Pithecophaga jefferyi*) and also home to seven indigenous groups, namely the Manobos, Klatas, Bagobo, Ubos, Atas, K'lagans, and Tagacaolo.

The Park protects several waterfalls and mountain lakes, the most popular of which are Lake Agco (known as the “Blue Lake”) and Lake Venado, a famous camp site for mountaineers and a stopover towards the peak.

Mts. Iglit-Baco National Park – The refuge of the tamaraws

Mts. Iglit-Baco National Park is the only habitat of the tamaraw (*Bubalus mindorensis*), a type of water buffalo that is endemic to Mindoro island and the jade vine (*Strongylodon macrobotrys*).

The Park is characterized by a rugged terrain of slopes, river gorges and plateaus, encompassing at least eight major river systems and ten low mountains close to each other. The Tau-buid or Batangan and the Buhid greatly depend on Mts. Iglit-Baco for their source of food and livelihood.

Mt. Kitanglad Range Natural Park - Well-spring of living traditions

Mt. Kitanglad Range Natural Park is the major watershed that provides water for irrigation, power generation and domestic use for Bukidnon and its surrounding provinces. More than a dozen mountain peaks, densely populated forested slopes, a number of caves, several waterfalls and hot springs can be found in the Park.

The Park is habitat to *Rafflesia*, numerous bird species and bats, including the Mindanao pygmy bat (*Alionycteris paucidentata*), the first fruit bat species known in Asia, which is abundant and endemic to the Park. It is the ancestral domain of the Talaandig, Higaonon and Bukidnon ethnolinguistic groups and they consider the Park as the well-spring of their tradition.

Mt. Malindang Range Natural Park – Home of the mystical Lake Duminagat

Mt. Malindang Range Natural Park is composed of seven major peaks with Mt. Malindang as the highest and Mt. Ampiro as the lowest. Canyons, ravines and gorges dissect the entire mountain range. The park's allure comes from its waterfalls, craterlake and dense virgin forests, which host diverse and rare species of flora and fauna. Mt. Malindang is the ancestral domain of the Subanen tribe, the freedom-loving and indigenous peoples of Misamis Occidental. Various attractions in the park include the mystical Lake Duminagat and Sibucal Hotspring. Lake Duminagat is one of the historical sites of the Subanen and is used as their ritual site during important gatherings.

Mount Makiling Forest Reserve – An outdoor laboratory and experimental area

Mount Makiling Forest Reserve is one of the country's centers of plant diversity. The reserve contains diverse, unique, and rare species of fauna which include the lesser false vampire bat or common Asian ghost bat (*Megadermas pasma*), one of the only two bat species in Asia and only one in the Philippines that catches and eats tiny frogs and lizards. The reserve serves as an outdoor laboratory for professional instruction and research. It is a popular weekend destination and among the most frequented areas in Mt. Makiling Forest Reserve are the Makiling Botanic Gardens, Flattracks, Mudspring, Makiling Rainforest Park, Peak 2 of Mt. Makiling and the Natural Museum.

Biodiversity richness of Mt. Apo Natural Park

Over 800 species of flora
629 vascular and non-vascular species
572 ferns and angiosperms
57 bryophytes or mosses
37 species with economic value
378 species of fauna
53 species of mammals
272 species of birds
17 species of amphibians
36 species of reptiles
118 species of butterflies

Biodiversity richness of Mts. Iglit-Baco National Park

63 species of plants belonging to 49 genera under 9 families
104 species of birds belonging to 39 families
11 species of snakes
14 species of lizards
9 species of amphibians
10 species of fruit and insect bats
2 species of large mammals belonging to the order *Artiodactyla*

Biodiversity richness of Mt. Kitanglad Range Natural Park

168 species of birds
131 species of butterflies
63 species of mammals, of which 17 are endemic
26 species of amphibians
21 species of reptiles

Biodiversity richness of Mt. Malindang Range Natural Park

1,284 species of plants
36 species of mammals
162 species of birds
33 species of reptiles
26 species of amphibians

Figure 4. ASEAN Heritage Parks in the Philippines with regional importance.

activities; enhancing public awareness through education and development of books and other publications, among others. The following are some of the activities conducted:

Assessing management effectiveness to ensure protection of AHPs. Management effectiveness assessment evaluates how well protected areas are being managed and this generates vital information for protected area planning and management. Regular assessments facilitate management and policy responses and effective implementation of corrective measures. A research project on management effectiveness conducted by the Biodiversity and Climate Change Project of the ASEAN Centre for Biodiversity and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) used a management effectiveness tool slightly adapted from the International Union for the Conservation of Nature – Management Effectiveness Tracking Tool (IUCN-METT). Results showed that major threats in AHPs include illegal activities such as illegal logging, poaching, illegal wildlife trade, illegal fishing and illegal extraction of non-timber forest products. While management effectiveness of most of the AHPs were categorized as either “good” or “average”, three AHPs, specifically Taman Negara National Park (Malaysia); Kinabalu National Park (Malaysia); and Khao Yai National Park (Thailand) were categorized as having “very good park management”. Likewise, these AHPs were found to be successful in managing their area and are able to self-finance their operational costs. The high number of local and international tourists contributed much to the success of their activities.

In the Philippines, Mt. Kitanglad Range Natural Park and Mt. Malindang Range Natural Park were found to have “good park management” while Mts. Iglit-Baco National Park was categorized as having “average park management” (Mardiastuti *et al.* 2013).

Strategic themes, which were recommended for the effective management of the AHPs include strengthening information exchange and partnership within and outside AHPs; intensifying law enforcement; redefining land use and tenure system; enhancing capacity building through trainings, staff exchange, internship and upgrading staff competencies through formal education; intensifying tourism/ecotourism programs; and actively involving indigenous and local communities in various activities in the park.

Documenting and sharing good practices and lessons learned.

Good practices are processes or methodologies that represent an effective way of achieving a specific objective that have worked well and produced good results. They are recommended as models and include innovative practices, lessons learned, success stories, or adaptive learning processes focused on fostering improvements in quality and promoting continuous learning. They are generally replicable and applicable real-life examples

Several good practices and lessons learned were identified in AHPs and these include: those that demonstrate environmentally-sound technologies or practices; mobilize communities for biodiversity conservation and livelihoods; demonstrate good gov-

ernance; enhance community-based natural resources management; and promote and strengthen public awareness and education. Some good practices not only involve indigenous and local communities but they also enhance unity and cooperation among them. Others involve cultural features, religious practices and local knowledge on conservation management, thus enhancing their commitment to be partners in biodiversity conservation (Setyawati *et al.* 2014). Examples of good practices in AHPs include the following:

Pro-poor tourism in Nam Ha National Protected Area, Lao PDR.

In Lao PDR, it is a policy that tourism, ecotourism in particular, should alleviate the condition of the local communities and villages. This not only involves villages that are endowed with natural beauty and considered as tourism destinations, but also adjacent villages that can contribute to ecotourism products such as food and souvenirs. Called pro-poor tourism, the program adopts a two-pronged approach. First, tourist circuits consisting of two or more villages that have or are located near tourist attractions are developed. A village can offer homestay or community lodges and feature traditional events such as local festivals. Second, in poor villages with no tourist attraction, the thrust is to develop agricultural or handicraft villages (food / supply chain villages) such as the night market in Luang Prabang. In terms of revenue generation, entrance fees are charged for tourist circuit villages. Residents of other villages participate as local guides, provide boat rides or other transport, supply handicraft and agricultural products to homestay villages, and conduct cultural exhibit to show their traditional products. All these can stimulate the sale of handicrafts and other products. Pro-poor tourism not only helps in poverty alleviation in Nam Ha National Protected Area but also enhances unity and cooperation among villages and preserves traditional practices in the park.

The Malaysian Homestay Program. A unique feature of ecotourism in Malaysia is the Homestay Program, which invites visitors to stay in the homes of local people so they can have a better understanding and appreciation of local culture. It does not focus on accommodation alone, but incorporates lifestyle and experience, and encourages participation in cultural and economic activities. Activities that may be experienced while at the homestay cover: a) culture and lifestyle (traditional dances, songs, food, games and sports, weddings, and other events); b) economic activities (rubber tapping, fish farming, and various agricultural activities); c) leisure (jungle trekking, white water rafting, firefly watching, and visiting ecotourism sites); and d) environmental conservation activities (plant-a-tree program where tourists are encouraged to plant a tree at the home stay they visited).

All participating home stays are certified and follow strict standards in hospitality. Family interaction is part of the program, so visitors engage with the family and partake the family meals together. Sometimes evening performances such as traditional music and dances are provided at the

local town center.

In the Philippines, pro-poor tourism and homestays are features of some of the country's protected areas. Mt. Kitangla Range Natural Park and a number of protected areas feature local products and handicrafts, employ local personnel, and support local businesses such as food and beverage stands, tours, transport, lodgings and other services that generate income for local communities. In protected areas where accommodations are limited, management encourages homestays and provides training to local households on hospitality services, cooking, and hygiene and sanitation.

Assessing impacts of climate change on biodiversity and ecosystems in ASEAN Heritage Parks. Majority of the AHPs have the basic essential elements for effective management that is key to enabling them to adapt to climate and non-climate stressors. Most of the AHPs have management plans that include the various protection, conservation, and development programs needed to realize the objectives of the AHPs. However, it was noted that the management plans do not include a particular program related to climate change impacts, vulnerabilities, and adaptation (Cruz *et al.* 2013).

Issues and concerns that hinder AHPs' adaptation to climate change include inadequate mainstreaming/integration of climate change in management or development plans and AHP programs; absence of site-specific information and assessment on climate change impacts, vulnerabilities and adaptation; and limited monitoring of climate change impacts.

To address these issues and concerns, the key areas identified include a) in-depth assessment of the impacts, vulnerabilities and adaptation of AHPs to climate change; b) training and institutional needs assessment of each AHP; c) sustainability of financing climate change programs in AHPs; and d) improvement of the existing systems for monitoring, information, and knowledge for AHPs.

Climate adaptation and mitigation measures are particularly significant for AHPs because of the following insights:

- The frequency and intensity of extreme climate events (excessive rains and prolonged droughts) associated with the El Niño Southern Oscillation (ENSO) are observed to have increased in Southeast Asia.
- Increase in temperature in Southeast Asia is similar to the global average increase in temperature that ranges from less than 1 to less than 4 degrees Centigrade.
- Most, if not all AHPs, are invariably exposed to floods, droughts and landslides. Some AHPs are exposed to the risks of sea level rise and tropical cyclones.
- Endangered plants and animals in AHPs are sensitive to climate change.

The most common non-climate stressors in AHPs are encroachment, farming, hunting and poaching, all of which affect the livelihood activities of local and indigenous

communities inside or around the AHPs. Based on the number of stressors and threats being addressed, implementation of management and land-use plans particularly on law enforcement, monitoring, protection and conservation, management information system development, and information, education and communication (IEC) programs are vital in ensuring that AHPs are resilient and adaptive to climate change and variability.

Various activities have been recommended to strengthen climate resilience of AHPs. These include the restoration of degraded ecosystems; climate change research and monitoring; mainstreaming and integration of climate change adaptation, mitigation and disaster and risk reduction into the AHP management plans; ex-situ conservation of vulnerable species; periodic assessment of climate change impacts, vulnerabilities and adaptation; integration and coordination of management plans of AHPs with local development plans; and conduct of capacity building activities and information and education programs specific to climate change issues (Cruz *et al.* 2013).

Increasing collaboration to strengthen management and law enforcement in AHPs

Management of AHPs has worked extensively with government agencies and international organizations to ensure the effective management and protection of the parks' biodiversity. Activities to monitor and control forest disturbance have been strengthened by routine and integrated patrols with other enforcement agencies.

Management skills and knowledge of managers and staff are strengthened by capacity building trainings and workshops on law enforcement, ecotourism, and management effectiveness conducted by the ASEAN Centre for Biodiversity with other partners such as the FREELAND Foundation based in Thailand.

Challenges for the ASEAN Heritage Parks Programme

The 33 AHPs have their own unique characteristics. They are very different in many aspects: area, ecosystems, flora and fauna, management system, infrastructure and threats.

- In terms of size, the AHPs range from a mere 130 ha (Sungei Buloh Nature Reserve, Singapore) to 2.5 million ha (Lorentz National Park, Indonesia).
- Some AHPs have very good infrastructure (Taman Negara National Park, Malaysia and Khao Yai National Park, Thailand), while others are very isolated and almost inaccessible (Hkakaborazi National Park, Myanmar and Lorentz National Park, Indonesia).
- Few AHPs are equipped with appropriate human and funding resources (Khao Yai National Park, Thailand is fully equipped) while the majority have to struggle with very limited funding and poorly trained staff (Virachey National Park, Cambodia).

- In some ASEAN Member States, there is more room for the “participatory management approach” (involvement of indigenous and local communities and other local stakeholders) while in some other countries (particularly in Cambodia, Lao PDR, Myanmar and Viet Nam), the top-down management style (decision and direction are almost exclusive from the government) is the practiced approach.
- Only few AHPs have good management plan, some need to update their management plans, while others still have to develop theirs.
- Some AHPs have clear and permanent legal status and their boundaries are mapped and gazetted or demarcated, while others are not gazetted yet and even have unsecure status.
- The main threats to AHPs vary, from illegal logging and forest conversion to land tenure conflict and wildlife trade.

Given the high diversity of issues and concerns among the 33 AHPs, it is clear that the needs, priorities, and interests in managing AHPs differ from country to country and from AHP to AHP. It is not quite possible to develop a common strategy and standard management approach that can be applied to all AHPs. Thus, some challenges to the AHP Programme are identified as follows:

Institutional set up of the AHP Programme and AHP management. The AHP Programme and the AHPs were established by the ASEAN Ministers of the Environment. However, the management of some AHPs in the countries is under the authority of other ministries or agencies. For instance, in Myanmar and Viet Nam, AHPs are under the provincial or state government, while in Indonesia, AHPs are managed by the Ministry of Forestry. Therefore, to develop and implement activities under the AHP Programme, the Ministries of Environment in the ASEAN Member States must collaborate closely with other ministries or agencies that have jurisdiction over AHPs.

Funding. The implementation of programs and activities in each AHP, whether it is within the framework of the AHP Programme or as part of national park activities, requires sufficient funding that should come from the respective ASEAN Member States. Major sources of funding come from national government budgets. Some AHPs are self-sufficient and others are generously funded by donors, but still others have very limited funding. Potential revenues can be generated from tourist fees, private sector funds and payments for ecosystems services. Activities under the AHP Programme may also differ from regular park management projects and activities and this means extra costs for the park. As such, there should be a commitment from the government to put in additional funds to finance activities under the AHP Programme.

Capacity. As reported by many AHPs, there is a need for more skilled staff. This is one reason why the management effectiveness of many AHPs was assessed as average to good only. While the need and urgency to build the capacity of AHP

managers and staff are very high, only few ASEAN Member States are able to allocate sufficient resources for training and other capacity building efforts.

Opportunities for the ASEAN Heritage Parks Programme

Despite these challenges, the AHP Programme has enormous potential to effectively support the ASEAN member States in ensuring better protection and management of AHPs, as well as other protected areas.

Changing environment. Since 1984, when the first AHPs were established, there has been significant increase in people’s awareness on the importance of natural resources and need for their protection and conservation. This is largely attributed to extensive communication and information campaigns on environmental issues, inclusion of environmental issues in educational systems and curricula, and better access and availability of information materials. Likewise, more organizations and groups, and even decision-makers, are working together for the protection and sustainable use of ecosystems and the biodiversity resources therein. However, despite its importance, biodiversity continues to be lost. It is still reported that there is progressive destruction and depletion of natural ecosystems due to illegal logging, forest conversion, and climate change.

The role and importance of protected areas, especially AHPs, have become prominent as they form the large part of remaining intact ecosystems. In Southeast Asia, over half of the remaining natural ecosystems are found in protected or conservation areas. In the last 5 to 10 years, the focus of conservation in Southeast Asia has moved towards a “revival” of basic issues of biodiversity and ecosystem management. New innovative approaches such as The Economics of Ecosystems and Biodiversity (TEEB), Payment for Ecosystem Services (PES) and Access and Benefit Sharing (ABS) have emerged. The Convention on Biological Diversity has also developed the Strategic Plan for Biodiversity 2011 – 2020, which aims “*to take effective and urgent actions to halt the loss of biodiversity in order to ensure that by 2020, ecosystems are resilient and continue to provide essential services, thereby securing the planet’s variety of life, and contributing to human well-being, and poverty eradication*”.

The AHP Programme can benefit from this development. A program with appropriate strategies and approaches can easily be “sold” to get buy-in and support from key stakeholders, and the donor community down to local communities living within and around AHPs. Information and observations from many AHPs that have been visited and assessed, and where ACB supports or assists the ASEAN Member States in field activities, show that local stakeholders, particularly AHP managers and staff, local communities, and NGOs, have strong interest and willingness to support the different activities in the AHP Programme.

Strategic position of ACB as a regional organization. Many causes of biodiversity loss, as well as their tangible negative

consequences, are transboundary in nature, and thus a large number of issues need to be addressed from both national and regional perspectives. This gives an advantage to and puts ACB in a unique position as a regional organization with the mandate to facilitate and coordinate actions among the ten ASEAN Member States. *Per se*, ACB has the capacity to influence biodiversity and ecosystem conservation in a number of ways (support/assist policy development; capacity building; information development and sharing; among others) at various levels, from regional to the ground, through the implementation of the AHP Programme. With ACB as the Secretariat, the AHP Programme has the opportunity to create real collaboration between the ASEAN Member States for greater conservation impacts.

Moving Forward. The AHP Programme can and should be strengthened by addressing the constraints and capitalize the opportunities mentioned above, which will require fortifying both the AHP Secretariat as well as the AHP Committee (AHPC). The AHP Secretariat should be built and empowered to the level that will enable it to provide effective support (administration, technical, financial facilitation, coordination and assistance) to the AHP Programme. Staff with appropriate skills from ASEAN Member States could take part in the ACB secondment program to help strengthen and build in-house capacity of the AHP Secretariat. AHPC members must have a stronger involvement in program implementation, from the selection of new AHPs to the control and monitoring of program implementation in their respective countries. This will increase their responsibility and ownership of the program. AHPC members must have decision-making powers and their tenure as AHPC members must also be lengthened to ensure a continuity of projects agreed upon for the AHPs.

The AHP Programme and AHP Secretariat require sufficient funds to implement programs. While raising funds from the donor community to support the operationalization of the secretariat is an option, the ASEAN Member States should provide funding support to the AHP Secretariat and for the implementation of AHP Programme. This will increase ASEAN Member States' responsibility and ownership of the AHP Programme.

The AHP Programme design and implementation should be enhanced with the goal to improve protection and sustainable use of the resources of AHPs and to strengthen policy development at the national and regional level. To achieve this goal, it is important to develop a joint action plan that is sensible, feasible, and practicable. The AHP Regional Action Plan (AHP RAP) could potentially serve as good basis for joint actions among the ASEAN Member States. The plan should focus on strategic actions that have priorities for all or the majority of ASEAN Member States, realistic (in terms of capacity, funding, and time) in terms of implementation, and have greater impacts. As identified in the past assessments and studies as well as AHP meetings and conferences, the following should be included in the next AHP RAP 2014-2020:

- Build capacity of AHP Managers and staff, particularly on a) inventory of protected area resources; b) biodiversity data base development and management; and c) development of management plans. The results of a training needs assessment by Purwanto (2013) pointed out that ASEAN Member States and AHP managers and staff prefer regional trainings and internship programs, which open opportunities to foster collaboration and information exchange between and among AHPs and other conservation areas. They prefer trainings with emphasis on practical application, learning by doing, or problem solving analysis that are supported with best-practices and lessons-learned observations. They also expect post-training facilitation in the form of distance learning/facilitations and technical assistance.
- Develop and/or improve management plans as the quality of plans vary between ASEAN Member States and AHPs and most need to be improved significantly.
- Assist AHPs in the conduct of activities that contribute to the fulfillment of their national commitment to international treaties or agreements (e.g. Communication, Education, Public Awareness programs; National Biodiversity Strategy and Action Plan; among others). AHPs urgently need knowledge and understanding of these issues, which could be provided by the AHP Secretariat through active information sharing and training.
- Assist AHPs in securing funding through, for example, by providing the AHPs with information and access to funding sources.
- Foster sharing of lessons-learned and experiences among AHPs for replication and up-scaling conservation impacts. Good practices in tourism development and benefit sharing from Taman Negara Pahang, Tasek Merimbun Heritage Park, and Khaoi Yai National Park, for example, should be shared with other AHPs to help improve park management.
- Develop critical management tools for the AHP Programme. Particularly important is the development of guidelines and a set of criteria and indicators for AHP nomination and selection, as well as monitoring, evaluation and reporting systems and mechanisms. These tools should be used rigorously and consistently to ensure the effectiveness of the program and the quality of AHP management on the ground. Develop a mechanism to ensure that experiences, lessons learned and information from program implementation will feedback into policy development and *vice versa*.
- Intensify communication between the AHP Secretariat (ACB) and AHPs, as well as among the AHPs.
- Secure sufficient budget for AHP Secretariat and AHP Programme.

As AHP Secretariat, ACB has taken great strides in providing assistance to AHPs in strengthening management in areas such as law enforcement, ecotourism, information management, taxonomy, and communication and public awareness, among others. Studies in management effectiveness and assessment of needs and priorities in the face of emerging environmental issues and concerns, such as climate change, require a stronger AHP Programme to ensure that the rich biodiversity of AHPs will continue to be conserved and benefit millions of people in the ASEAN region and beyond.

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