Wetlands Biodiversity in Southeast Asia: Areas of Cooperation with ACB

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presented by

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ASEAN Biodiversity Outlook 2010
INLAND WATERS: The next flashpoint

- Indo-Malaya Realm and the Australasia Realm
- Indo-Malaya Realm has 29 freshwater ecoregions
- Australasia Realm has three freshwater ecoregions with tropical and subtropical coastal rivers located in Sulawesi and the East Timor subregion

Critical pressure points:
- Land conversion for infrastructure development
- Highly dense population
PEATLANDS: An increasingly valuable ecosystem

- About 250,000 sq. m. of peatlands, (60 % of the world’s tropical peatlands, and about 1/10 of the total global peatland resource)

- Majority of the peatlands located in Indonesia, which has over 70 % of the total peatland cover of Southeast Asia

Critical pressure points:

- Conversion for human activities (e.g. oil palm plantation)
- Vulnerability from fires
- Climate change
MANGROVES: A critical support ecosystem

- Mangroves occupy over 60,000 sq. km.
- Decreasing trend in the size of mangrove areas all over Southeast Asia
- Home to 52 true mangrove species; two are listed as critically endangered and endangered

Critical pressure points:
- deforestation due to domestic demand for fuel and materials for housing
- conversion of mangrove forests to either fish or prawn ponds for commercial consumption
RAMSAR Sites in ASEAN
RAMSAR Sites in ASEAN

- 29 RAMSAR Sites in ASEAN: 8 marine, 7 are estuarine, 6 lakes (lacustrine), 5 riverine, 3 swamps and bogs covering a total of 13,000 sq. km.
ACB Programme Themes

- Support to Programme of Work on Protected Areas
- Payments for Ecosystem Services and Resource Valuation
- Peatland Biodiversity/Wetlands Management
- Taxonomy/Global Taxonomy Initiative
- Invasive Alien Species
- Wildlife Enforcement
- Transboundary Protected Area Management

- Access to Fair and Equitable Sharing of Biodiversity Benefits
- Ecotourism and Biodiversity Conservation
- Biodiversity and Climate Change
- Managing Biodiversity Information and Knowledge
- Business and Biodiversity
- Biosafety Regulations, Food Certification and Biodiversity
Joint Research/Initiatives on Biodiversity

- Supported studies and forums in the various thematic areas
- ACB Scientific Advisory Committee (SAC) provides guidance in the selection and monitoring of approved projects
- 13 projects completed in 6 AMS on biodiversity research and policy initiatives from ASEAN-based research, academic, and both non-government and government institutions and agencies

Joint Research/Initiatives:

- Conservation of Peatland Biodiversity in Southeast Asia - Year 2, Global Environment Centre, Malaysia
- Nesting Beach and Coral Reef Monitoring and Management of Turtle Islands Wildlife Sanctuary, Protected Areas and Wildlife Bureau, Philippines

- ASEAN Peatland Forests Project (APFP) funded by GEF/IFAD
- SEApeat Project, funded by the European Union
- Led by the ASEAN Secretariat with the Global Environment Centre as the Regional Project Executing Agency
ASEAN Heritage Parks (AHP) Programme
The ASEAN Declaration on Heritage Parks

• In 1983 AMS proposed criteria and guidelines for the selection, establishment and management of PAs in the ASEAN Region

• In 1984 the Declaration on ASEAN Heritage Parks and Reserves was issued

• AMS Established the ASEAN Heritage Parks (AHPs) to generate greater awareness, pride, appreciation, enjoyment and conservation of the ASEAN region’s rich natural heritage
ASEAN Heritage Parks Programme

- AHPs were established to instill greater awareness, promote conservation, and provide a sense of pride and enjoyment of the rich natural heritage sites
- AHPs are protected areas of highly important conservation, preserving in total a complete spectrum of representative ecosystems and species of the ASEAN region
- 30 AHPS declared to date

Tasek Merimbun, Brunei Darussalam
The ASEAN Heritage Parks Programme
- Promotes greater collaboration among AMS in the preservation of their common natural heritage
- ACB serves as the Secretariat of the AHP Programme
- ACB endeavors to ensure that the AHPs benefit from the best practices available on PA management
- Through the network of AHP managers, ACB supports information and other capacity needs of AHPs.

Lampi National Park, Myanmar
• Brunei Darussalam
  – Tasek Merimbun National Park: best known for the Black Lakes

• Indonesia
  – Lorentz National Park: largest single protected area in Southeast Asia. It has the most complete spectrum of New Guinean ecosystems, from mangroves on the coast, to montane and alpine forests

• Myanmar
  – Alaungdaw Kathapa National Park: each year, from October to March, the Park hosts some 60,000 migratory water birds from northern Asia
- **Indawgyi Lake Wildlife Sanctuary**: largest inland lake in Southeast Asia and the third largest lake in the world; considered a bird watcher’s paradise.

- **Inlay Lake Wildlife Sanctuary**: second largest lake in Myanmar after the Indawgyi Lake.

- **Meinmahla Kyun Wildlife Sanctuary**: two freshwater species of turtle have been recorded in the Sanctuary; freshwater dolphins have been reported in the area as well.
• **Singapore**
  - **Sungei Buloh Wetland Reserve**: Singapore's first and only protected wetland reserve, and is home to over 500 species of tropical flora and fauna

• **Thailand**
  - **Ao Phangnga - Mu Koh Surin - Mu Koh Similan Marine National Parks**: most well-known marine protected areas in Thailand

Sungei Buloh Wetland Reserve, Singapore
Raising Awareness on Biodiversity:

- Communication, Education and Public Awareness (CEPA) Program at the regional level

- Partnership with CBD Secretariat to enhance the capacity of AMS to implement their respective CEPA strategies and action plans
Biodiversity Information Sharing Service

A web-based information sharing platform for the ASEAN Member States on biodiversity information
• a functional regional database or network of national databases containing the inventory of biological resources of the ASEAN region

• a web-based information sharing platform for the ASEAN Member States on biodiversity information

• aims to reduce the burden of reporting to global biodiversity treaties such as the CBD, CITES, Ramsar Convention, CMS, ASEAN Declaration on Heritage Parks
WELCOME TO THE ASEAN BIODIVERSITY INFORMATION SHARING SERVICE (ASEAN-BISS)

The biodiversity information sharing service (BISS) supports the collaboration among the ASEAN Member States (AMS) to present a regional perspective of biodiversity conservation in the ASEAN region. Based on data and information shared by designated AMS focal points and partners, the BISS contains the inventory of biological resources of the ASEAN region, houses its historical and current biodiversity metadata, and works as a platform that presents a growing collection of knowledge products.

The BISS Home page provides information on country profiles and available map-based regional summaries. Information on species assessments can be accessed by selecting topics displayed in the side bar. Select a combination of information for any two maps and adjust the overlay resolution by sliding the button between Map 1 and Map 2. More summaries will be presented as information becomes available.

Regional Summaries
- Country Profiles
- IUCN Species Assessment 2010
- Threatened Species
  - Critically Endangered
  - Endangered
  - Vulnerable
- Maps
  - Marine Protected Areas
  - Terrestrial Protected Areas
  - Key Biodiversity Areas
  - Important Bird Areas
  - Biodiversity Hotspots

Note: Some information presented in the following pages are directly quoted from available online references or from published information. In such instances, ACB endeavors to properly acknowledge respective authors and provide links to cited references.
ASEAN Heritage Parks

Some nationally protected areas in the ASEAN have the uniqueness, diversity and outstanding values that deserve the highest recognition. The ASEAN Heritage Parks (AHPs) are “protected areas of high conservation importance, preserving in total a complete spectrum of representative ecosystems of the ASEAN region. These AHPs embody the aspirations of the peoples of Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam to conserve the natural heritage that protects the bounty and diversity of living organisms of their nations.

Information on each AHP can be accessed by clicking on the ** icon. Click on ‘Read More’ to view additional information, the map of the AHP and pictures of its rich biodiversity.
ASEAN Species

Knowing the availability and status of species per country is important to defining and refining conservation strategies for each AMS. With information drawn from the Key Biodiversity Area maps and similar map-based information, each AMS will be able to prioritize areas for conservation. The species database takes off from the taxonomic tree defined by the Catalogue of Life (COL). Where information is missing from COL, ACB accesses taxonomic information from the IUCN Red List, World Register of Marine Species (WORMS), Living Natural Treasures, Germplasm Resource Information Network (GRIN) and World Agroforestry Centre.

Click on any one of the active phyla in the left panel and select your ASEAN species of interest from the taxonomic tree. Alternatively, click on the search button to define your search criteria and select your species of interest. To search country-level species information, click on any country flag icon. This will present a country level summary on the status of threats on the right panel and a country level species metadata on the left.
Improvements incorporated:
- expanded fields
- interoperable with other databases
- Search facility

Chelonia mydas

Taxonomy:
- Classification: Animals (COL) > Chordata (COL) > Reptilia (COL) > Testudines (COL) > Chelonioidea (COL) > Chelonia (COL)
- Synonyms: Testudo mydas Linnaeus, 1758 (Chelonia mydas - IUCN Red List of Threatened Species 2010 v2)
- Common names: Green Turtle (Eng.), Tortue Combattante, Tortue Franch, Tortue Verte (Fr.), Tortuga Blanca, Tortuga Verde (Sp.) (Chelonia mydas - IUCN Red List of Threatened Species 2010 v2)

Assessment:
- IUCN Red List Status: Endangered

Physical Characteristics:
- Carapace length: 76 - 91 cm (Sea Turtle Conservancy) 136 - 180 kg (Sea Turtle Conservancy)

Distribution and Habitat:
- Environment:
- Climate / Range:
- Distribution:
- Indonesia, Malaysia, Myanmar, Philippines, Thailand, Vietnam (Chelonia mydas - IUCN Red List of Threatened Species 2010 v2)

Other Information:
- Short Description:
- Biology:

Green turtles are easily distinguished from other sea turtles because they have a single pair of prefrontal scales (scales in front of its eyes), rather than two pairs as found on other sea turtles. The head is small and blunt with a serrated jaw. Carapace is bony without ridges and has large, non-overlapping, scutes (scales) present with only 4 lateral scutes. Body is nearly dull and is more depressed compared to Pacific green turtles. All flippers have a single trailing flange. The carapace color varies from pale to very dark green and pale to very brilliant yellow, brown and green tones with radiating stripes. The plastron varies from white, very white or yellowish in the Atlantic populations to dark greyish/green in the Pacific populations. Hatchlings are dark brown or nearly black with a white underbelly and white flipper margins (Sea Turtle Conservancy). (Chelonia mydas - Sea Turtle Conservancy)

Green turtles have particularly slow growth rates and appear to take longer to become reproductively mature than any other sea turtle species, with age at sexual maturity ranging from 26 to 40 years. Undertaking tremendous feats of navigation, adults return to the same beach to breed each season. Mating tends to occur just offshore of the nesting beaches, using a curved claw on each front flipper and a flat nail at the end of the tail; males are able to grip their mates. Females haul out onto the beach at night and dig large nests with their back flippers beyond the high tide mark; they typically lay between 100 and 150 eggs in one nest and then proceed to cover the eggs with sand; the whole process takes around two hours. A single female returns to breed only once every two to five years, but will lay up to nine nests in that one season. Incubation takes between 45 and 70 days, and temperature has been shown to determine the sex of hatchlings, with females being produced at warmer temperatures. Breaking open their eggs with a special hooked egg hook that will subsequently become lost. Hatchlings use their powerful front flippers to reach the surface, and then proceed to the sea. The soft-shelled juveniles are particularly vulnerable at this time from a variety of predators, such as ghost crabs and gulls on the beach to sharks and dolphins in the open sea.
Clearing House Mechanism for Southeast Asia

- A single entry point to regional biodiversity information and the national CHM websites of the ASEAN Member States
- Allows faster access, easier search and better consolidation of biodiversity information at the regional level
Enhance structure & presentation of interactive web-based information on biodiversity resources in the ASEAN

<table>
<thead>
<tr>
<th>Enhanced the ASEAN CHM</th>
<th>by adding new tools and information, improving layout designs and conducting necessary tests</th>
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<tbody>
<tr>
<td>Developed additional databases</td>
<td>Initiatives, Policies and Agreements, Ecosystems, E-library and Capacity Building</td>
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<tr>
<td>Prepared knowledge products</td>
<td>in the form of: Ecosystem Maps and Map overlays, Regional Trends</td>
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<tr>
<td>Established a database editors</td>
<td>a) e-library to facilitate contribution and sharing of biodiversity information b) MEA Report Harmonization Database Editor</td>
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Institutional Linkages and Partnerships

- Secretariat of the Convention on Biological Diversity (CBD)
- Global Biodiversity Information Facility (GBIF)
- Institute of Southeast Asian Studies (ISEAS)
- Partnerships in Environmental Management for the Seas of East Asia (PEMSEA)
- United Nations Environment Programme-World Conservation Monitoring Centre (UNEP-WCMC)
- Fishbase Information and Research Group, Incorporated
- ASEAN Wildlife Enforcement Network (ASEAN-WEN) and FREELAND Foundation
- RAMSAR Secretariat
Scope of Cooperation of ACB-Ramsar Secretariat Joint Work Plan

- Development and implementation of programs and projects
- Delivery of capacity building activities
- Conduct of communication, education and public awareness activities
- Knowledge and information management on biodiversity
Ongoing Initiatives of ACB: Continuing Partnerships and Collaboration

- ASEAN Small Grants Programme for AHPs
- Biodiversity and Climate Change
- Taxonomic Capacity Building
- Promoting TEEB and PES
- Capacity Building on ABS
- ASEAN Biodiversity Fund
Conserve Biodiversity, Save Humanity!
Terimah kasih!

www.aseanbiodiversity.org