Wildlife in the Tropical Wetlands

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WWF Greatermekong Thailand
• Example of wetland wildlife cases
  • Freshwater dolphins
  • Dugong
  • Wetland dependent mammals
  • Amphibians
  • Freshwater & Sea turtles
  • Aquatic reptiles
Keystone-Flagship species samples

Mekong basin: Giant catfish, big fishes, Irrawaddi dolphin
Central plains: big fishes, stingrays, croc.
Coastal: Cetacea, sharks and rays
Peat swamp forests: Stenotopic fishes, croc.
Seagrass beds: dugong, dolphins, fishes
Lagoon and Lake: Irrawaddi dolphin, sharks and rays
• **Endangered aquatic mammals**
  - Irrawaddi dolphin: Mainstreams, lagoons
  - Indo-Pacific humpback dolphin: Coastal waters
  - Smooth-coated otter: forested streams
  - Hairy-nosed otter: peat swamps
  - Dugong: seagrasses

• **Endangered aquatic Reptiles**
  - จระเข้น้ำจืด Siamese Crocodile: flooded forests
  - ฝูงน้ำย  Giant softshell turtle: river sand dunes
  - เต่ากระอาน Batagur baska: lowland rivers, estuaries
Mekong Wetlands as Bird Habitats and Birding Sites

• **Over 300 species of Migratory Birds**
  - นกใกล้ถึงสูญพันธุ์ของโลก  **Globally threatened waterbirds**
    - กระเรียน  **Eastern sarus crane**
    - นางนวลแกลบท้องดำ  **Black-bellied tern**
    - นางนวลแกลบแม่น้ำ  **Indian river tern**
    - กระแตผียักษ์  **Great thick-knee**
    - นางนวลแกลบ  **Giant ibis**
    - นางนวลแกลบแม่น้ำ  **White-shouldered ibis**

• **Endemic birds**
  -  **Mekong wagtail**
  -  **Mekong Bengal florican**
Wetland dependent mammals

Otter civet

Flathead cat: Endangered

Baycat: Endangered

Giant otter

Hairy-nosed otter
Asian Rhinos: EN to Critical

Saola: EN

Asian Mega fauna

Wild buffalos

© Sumit K Sen

© Jean-Paul Ferrero / Auscape International
Critically Endangered: CR

Indochinese hogdeer
*Axis porcinus annamiticus*

A population of hog deer has been discovered in northeast Cambodia.
OKAVANGO SWAMP
Quiz of the hour

• Cetaceans is the closest relative to ???
  — Dugong
  — Seals
  — Pigs
  — Me?
Freshwater dolphins under threats

GLOBAL 200 ECOREGIONS

Boto, Amazon River dolphin
Tucuxi

Baiji, Yangtze dolphin
Finless porpoise

Bhulan, Indus dolphin

Irrawaddy dolphin

Susu, Ganges dolphin
Ganges River dolphin, susu
(Platanista gangetica gangetica)
Indus River dolphin, bhulan

*(Platanista gangetica minor)*
Yangtze River dolphin, Baiji

(Lipotes vexillifer) EX
Yangze Finless Porpoise
(*Neophocaena phocaenoides asiaeorientalis*)
Amazon River dolphin, Boto,
(Inia geoffrensis)
Irrawaddy dolphin, Pa Kha\`

*(Orcaella brevirostris)*
Irrawaddi dolphin โลมาหัวบาตรครีบหลัง

2.5 m/160kg

**Food:** Catfishes, fishes and squids

**Habitat:** coastal to inner river, up to 1,000 km from the sea.

- Mandalay
- Chilika Lagoon
- Siphandong-Kratie
- Bangpakong
- Thale noi
- Mahakam R.
Threats to dolphins!

- Intensive catch for Dolphinaria, Zoos and aquarium
- International trade
- Habitat lost
- Pollution
- By-catch dead

- Over 90 dolphinaria in Asia
- More than 50 dolphins exported from Thailand, Indonesia (2003)
Indus River dolphin: ENDANGERED (EN)
Ganges River dolphin: ENDANGERED (EN)
Irrawaddy dolphin/some populations: CRITICALLY ENDANGERED (CR) (DD)
Finless porpoise: ENDANGERED (EN)
Yangtze river dolphin: CRITICALLY ENDANGERED (CR/PE)
Amazon river dolphin: VULNERABLE (VU)
Tucuxi: Data deficient (DD)
Laos-Cambodian Mekong

Inner Gulf of Thailand

Chilika Lake India

Value of cetaceans

- Dolphin/whale watching tourism
- Local tourism benefit
Seagrass beds as fishes nursing ground and dugong habitats
Dugongs farm seagrass — when dugongs are lost from an area it may decline in habitat quality

From Helene Marsh 23 Aug, 05 Dugong Conservation Workshop
James Cook University Australia

Dugong biology, ecology, populations and behaviour
Area of occupancy: shallow coastal waters

potentially > 125,800 km²

Critical habitat seagrass beds < 10m especially <3m
Threats to the dugong

- Boat strikes
- Gill netting
- Food/medicine/artefacts for subsistence
- Agricultural pollution
- Coastal development
### Uncertain prospects

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<td>% of range believed declining</td>
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<tr>
<td>% range declining/ unknown</td>
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<tr>
<td>% range gill nets</td>
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<tr>
<td>% range human settlement</td>
<td>100</td>
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<tr>
<td>% range harvested food/ medicine/ artefacts</td>
<td>89-99</td>
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<tr>
<td>Threat score</td>
<td>High</td>
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**South East Asia**
High risk of extinction

Indian region

<table>
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<th>Population size thousands</th>
<th>No</th>
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Food security is an issue in much of the range.

Threats from human settlement in the dugong’s range.
Quiz of the hour

• Which animal that is cousin of Dugong, Manatees and Sea cows ???

• Cattles

• Elephants

• Hippos
Global 22 species. All CITES List
8 spp. In Asian wetlands

Farmed over 10 species, annually over 10 million crocs consumed.

Control mammal and fish populations, including their carrions

Mostly tropical, 3 subtropical and temperate
Depended on wetland biodiversity: **Forest-waters**

Invert.-Amphibians-Fishes-Mammals/Birds
Southeast Asian Crocs

Indo-Pacific Crocodile *Crocodylus porosus* widest distribution

Siamese croc. *Crocodylus siamensis*

False gharial *Tomistoma schelegeli*
Other wetland depended reptiles
Coastal Seasnakes

Consumed in Philippines and Okinawa as food and traditional medicine
Freshwater Turtles

14 Spp in Redlist
2 CR in S-SEA

Trionycidae

9 Spp in Redlist
1 CR in S-SEA

Bataguridae

35 Spp in Redlist
9 CR in S-SEA

Platysternidae

Testudinidae
SEA. Turtles
Endemic Countries

Viet Nam

Myanmar
Main threats

Critical: China, VN

Wildlife pet trade: Japan, EU

Delicacy: China, VN

Wetland lost: All
Quiz of the hour

• Who is the only one tetrapod that feed mainly on sponges??

• Why some sea turtle species died for rubbish plastic bag eating??
Sea Turtle

2 families  8 species

Indo-Pacific

Leatherback turtle
Green sea turtle
Olive ridley turtle
Loggerhead turtle
Hawksbill sea turtle
Flatback turtle

Atlantic

Black sea turtle
Kemp’s ridley turtle
Survival rate of adults: 1 pair from 5000 eggs

Males hatched from lower 28°C

Journey for over 3000 km annually

Over 1000 m dives

One of the largest living reptile: Leatherback 2.6 m/916 kg

Originated from Cretaceous; 130 mya.

Recent species came for 60-10 mya.
เต่าทะเล Green sea turtle
*Chelonia mydas*
Diet: seagrass
Loggerhead turtle
*Caretta caretta*

Diet: shellfishes
Hawksbill sea turtle
*Eretmochelys imbricata*

Diet: sponges

“Only one tetrapod species who feed on Sponges”
Olive ridley turtle
*Lepidochelys olivacea*

Diet: fishes and shellfishes
Arribada

Mass nesting of 40,000 Olive Ridley in Costa Rica
Arribada sites of Sea turtles
เต่ามะเฟือง  Leatherback turtle

*Dermochelys coriacea*

*Diet: jellyfishes*

*By Songpol Tippayawong WWF TH*
เต่าหูแก้มรูปไข่
*Lepidochelys kempi*

เต่าหลังแบน
*Natator depressa*

(C) Greg Calvert
Sea turtle Critical habitats

- Open seas
- Nursing (the Lost years)/feeding
- Migration
- Coral reefs feeding/mating
- Seagrass beds feeding/mating
- Sandy beaches- Forests Nesting
Sea turtle species nesting diversity

WCMC World Atlas of Biodiversity, 2002
Global Utilization

USA, Grand Cayman: meat, hides, Ecotourism

Mexico: meat, hides, eggs, Ecotourism

Costa Rica: meat, hides, eggs, Ecotourism

Japan: tortoise shell, meat, hides

Vietnam: meat, hides, eggs, tortoise shell

Indonesia: meat, hides, eggs, tortoise shell

Philippines: meat, hides, eggs, tortoise shell

Malaysia: meat, hides, tortoise shell, Ecotourism

Thailand: hides, eggs, tortoise shell, Ecotourism
Amphibians

Caecilian
168 spp

Anura
5067 spp.
EX 32 spp.

Salamanders
508 spp.

The best bio-indicator of global climate and environmental changes
Anura

4 Families

Ranidae

Microhylidae

Bufonidae

Rhacophoridae
Only 1 sp. In brackish waters
Diversity areas of Amphibians

- Highest diversity
- High diversity
- Low diversity
Main threats to Amphibians

- Over 150 spp. threatened
Costa Rica cloud forest golden toad: Extinct by Climate Change + fungal disease

IUCN Red Data of Amphibian

- Data Deficient: 1294
- EX: 35
- CR: 427
- EN: 761
- VU: 668
- Near threatened: 359
- Save: 2199

Threatened: 1672

168
55
Other use of Amphibians

Pets

Traditional medicines
แหล่งอาหาร  Food from wetland fauna

[Images of wetland fauna and food products]
Exploited 800,000-1,000,000 snakes annually from the Grand Lake

Water snakes
7 species from 3 families

Utilization
- Meat
- Hides
- Feedmeal for crocodile farms
- Exported to China (whole)
  Thailand (hides)
Thanks

See me next session

Nonn Panitwong