CONSERVATION CONTEXT AND ISSUES IN CAMBODIA

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A guide for Buddhist monks in Cambodia

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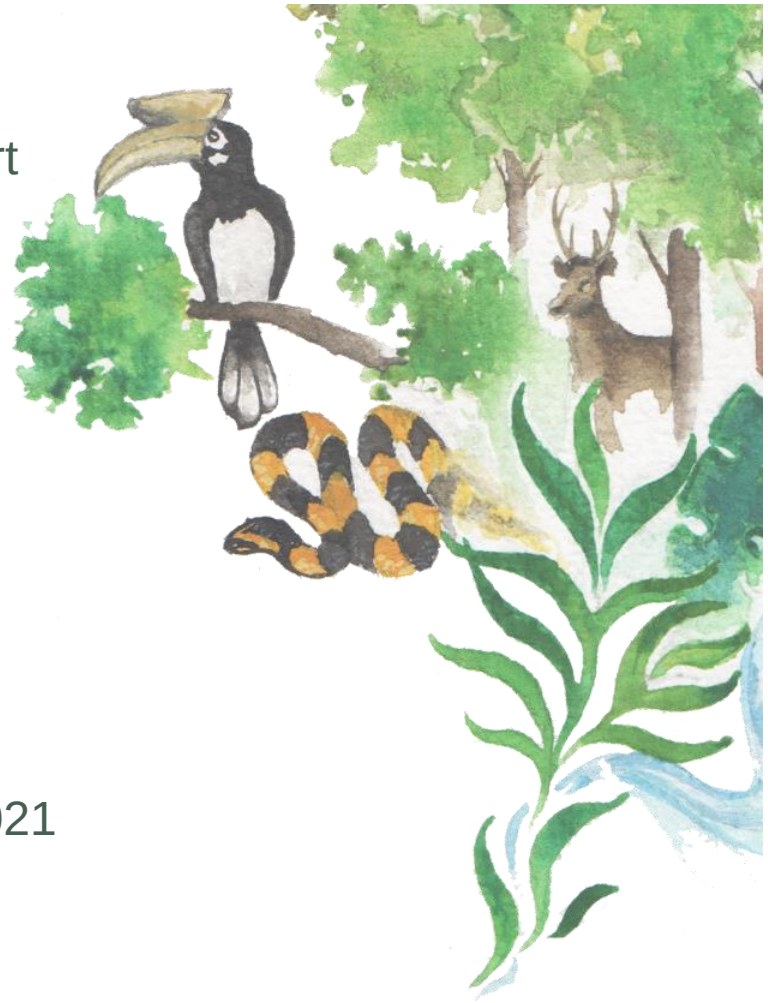

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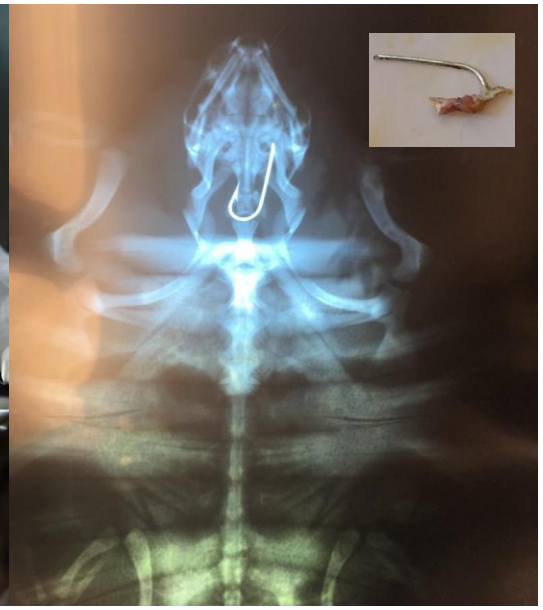
THE ANGKOR CENTRE FOR CONSERVATION OF BIODIVERSITY (ACCB)

The Angkor Centre for Conservation of Biodiversity (ACCB) is a species conservation centre located at the base of Kbal Spean mountain, Phnom Kulen National Park, and aims to contribute to the conservation of wildlife and biodiversity in Cambodia.

The initial idea to build a rescue centre for wildlife near the temples of Angkor originated from a dedicated Cambodian Biologist of international reputation, Mr. Sam Veasna. With the initial support of the Allwetterzoo Munster and the Zoological Society for the Conservation of Species and Populations (ZGAP) in Germany, ACCB could start operations in 2003.

WHY DOES ACCB RESCUE THE WILD ANIMALS?

- Animals are being rescued and kept at ACCB for three important reasons:
  - Rehabilitation before release
  - Rescued animals which cannot be released
  - Species conservation



ENVIRONMENT

- Environment can be described as the sum of all living and non-living components that constitute surroundings of an organism, or group of organisms
- The living and the non-living things on earth are all interconnected and can affect each other
- There are 3 types of environment:
  - Natural Environment
  - Socio-Cultural Environment
  - Human Environment

Why is it so important to conserve and protect our environment?

Our environment is what houses and helps our ecosystem grow and thrive. Without protecting and taking care of our environment we're putting so many lives in danger such as animals, plants and crops, and even our own. All of the ecosystems that make up our environment are deeply connected to each other.

- Biodiversity
  - Why is biodiversity important?
- Ecosystems
  - Why are the ecosystems important for people?
  - Main ecosystems in Cambodia
- Conservation
  - Why is conservation important?
- Human nature relationships
  - Traditional animist/ spirit beliefs are everywhere in Khmer daily life
  - Why is the environment important for people's beliefs and values?

BIODIVERSITY

Biodiversity means the variety of different species living in many different areas all over the world. Each species has an important role in the ecosystem.

Why is biodiversity so important?

Every part of biodiversity and every ecosystem worldwide is vitally important, since all of them are part of a large interconnected global network.

This reflects the Buddhist principle stating that "*everything is composite and interdependent. Furthermore, animals are living beings who can feel fear and pain just as humans, therefore they deserve and need our compassion*".

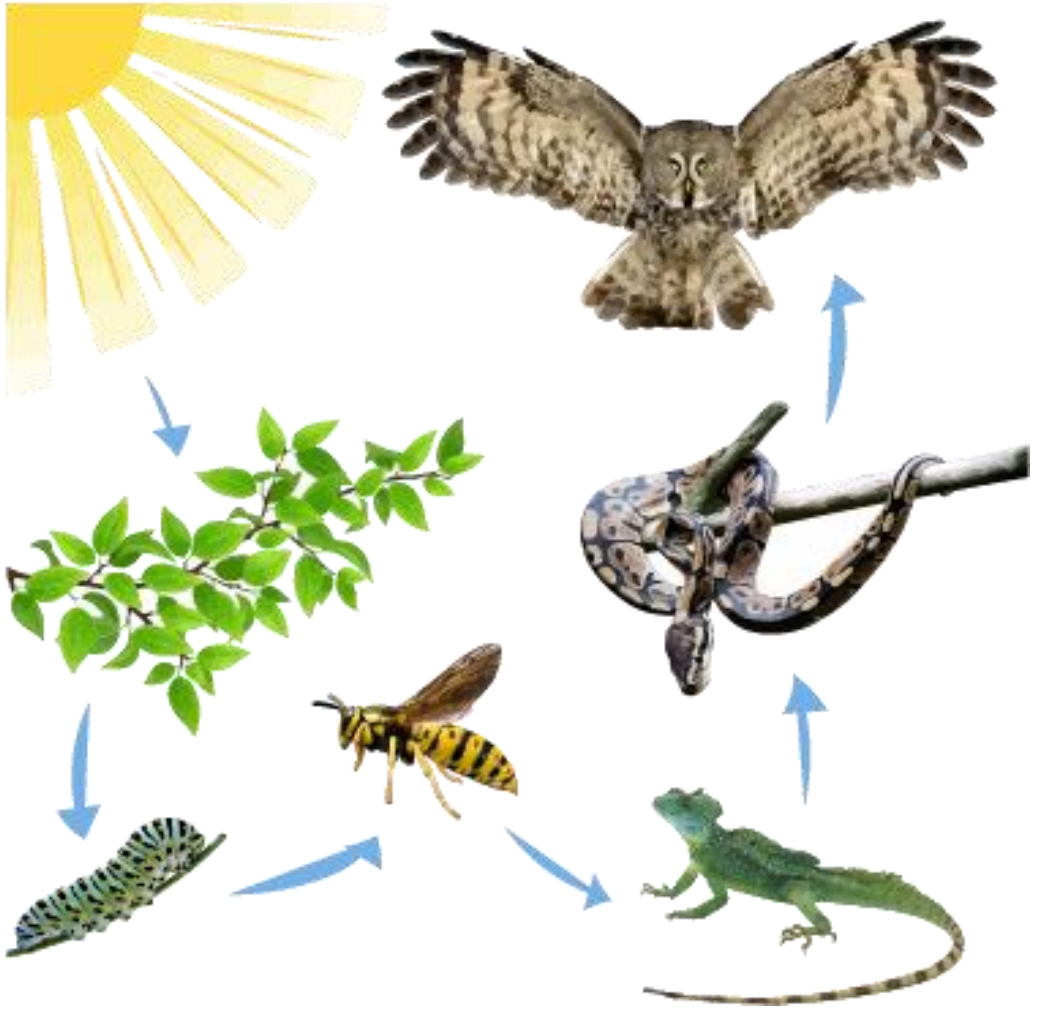
As humans, we are part of biodiversity as well.

ECOSYSTEMS

Ecosystem refers to different ecological communities having interaction with each other and with non-living things environment in a particular area. It is a complex set of relationships among the living resources, habitats, and residents of an area.

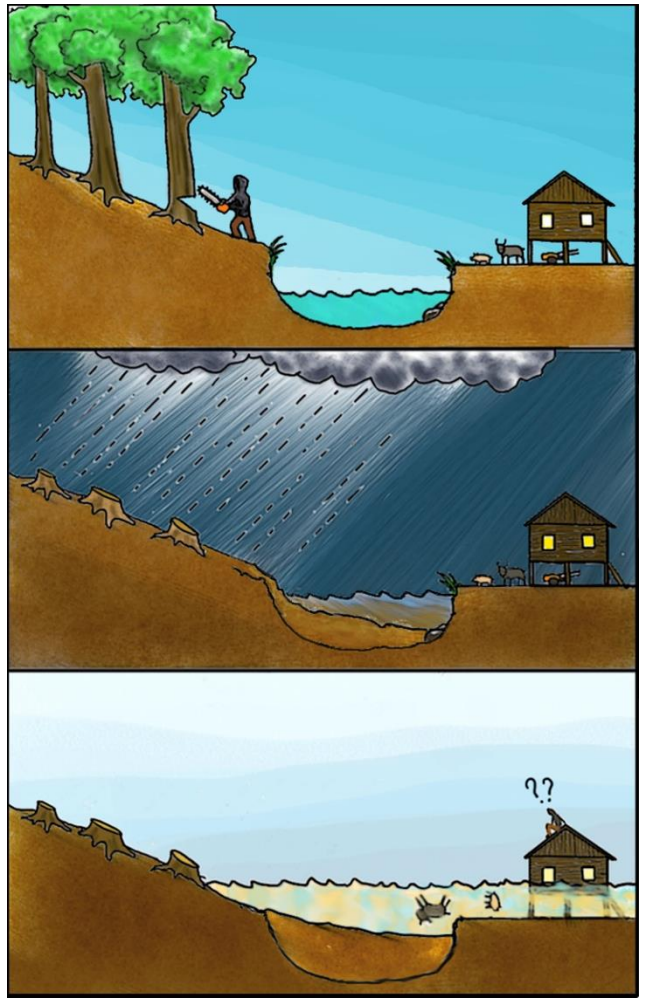
Why are the ecosystems important for people?

- Ecosystems include food chains and food webs (predator prey interactions) as well as animal habitats (where animals find food, water, shelter, space and mates), as well as the landscape including terrain, climate and elevation.
  - Bees do pollinate wild plants and food crops when they collect nectar to make honey
  - Vultures are large birds which eat the carcasses of dead wild and domestic animals
  - All life on earth depends on the existence of trees and forests

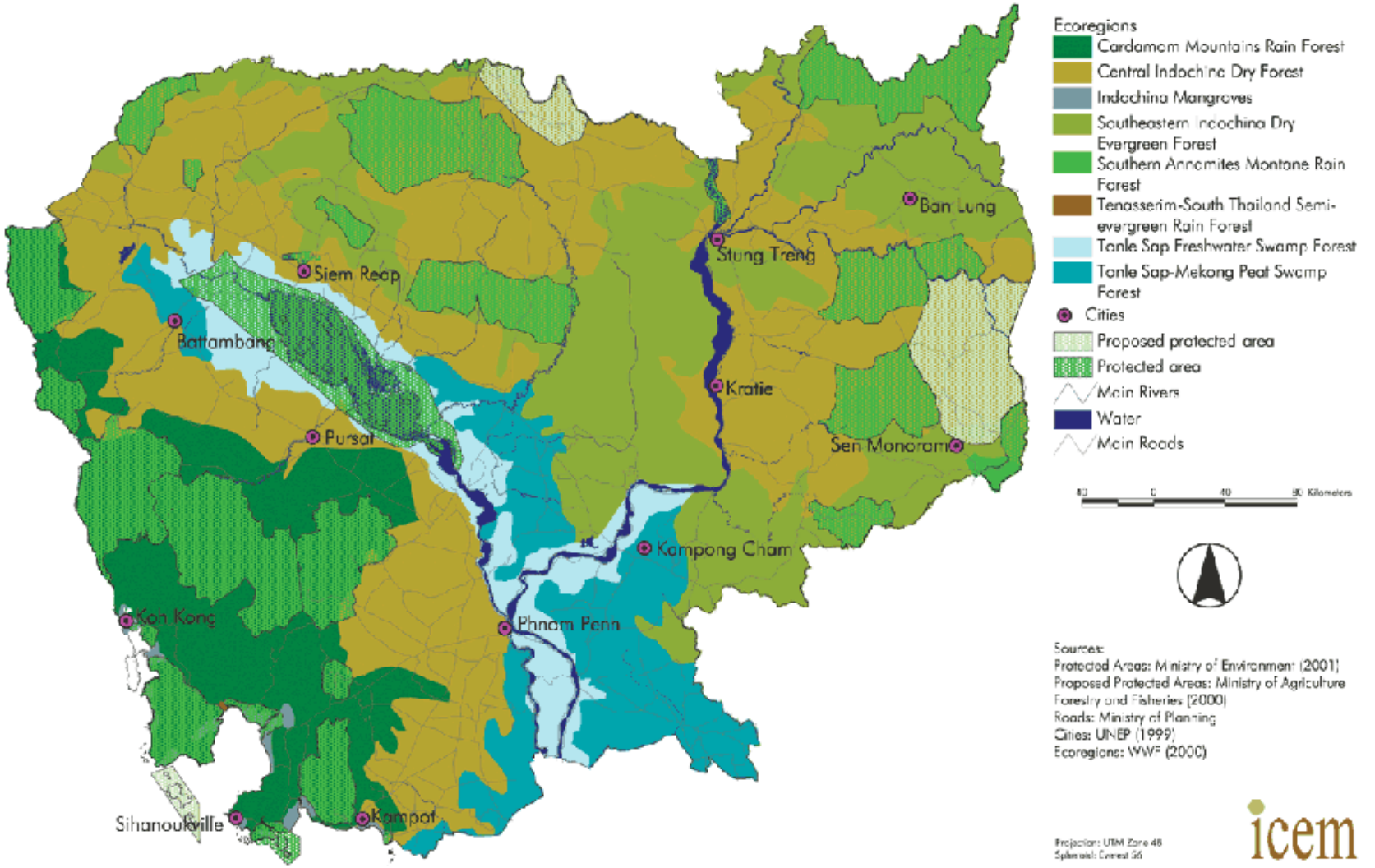


Why are the ecosystems important for people?

- An ecosystem service is any positive benefit that wildlife or ecosystems provide to people (direct or indirect benefit).
- There are four broad categories ecosystem services:
  - Provisioning services: food, materials and energy
  - Regulating services: control of climate and disease
  - Supporting services: nutrient cycles and oxygen production
  - Cultural services: those related to the cultural or spiritual needs of people

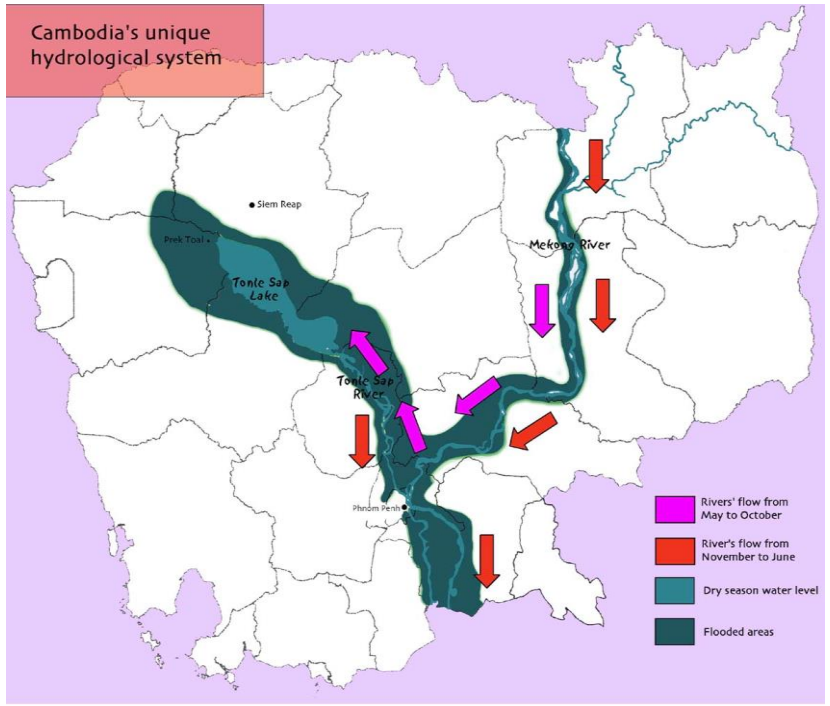


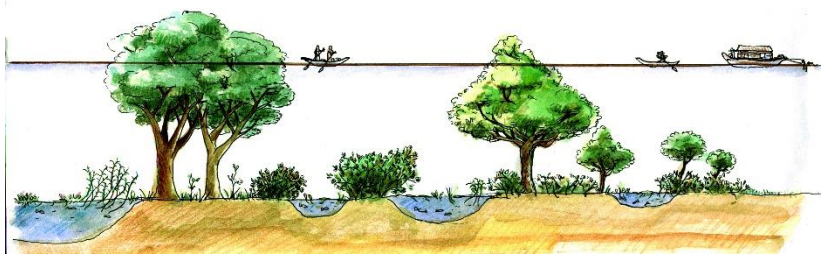
Main ecosystems in Cambodia



Tonle Sap ecosystem

- Tonle Sap Lake is Cambodia's most important ecosystem:
  - Unique hydrological phenomenon: annual reverse flow
  - Largest fresh water lake in Southeast Asia: 2500 – 3000km^2 (dry season) and 9000 – 14000km^2 (rainy season)
  - Largest freshwater swamp forest (flooded forest) remaining in the region: (300 000 hectares)
  - Cambodia's most productive freshwater fisheries and one of the world's top fisheries
  - Largest water bird colony in Southeast Asia and the most importance breeding grounds for those endangered species
  - Endemic species: Tonlé Sap Water Snake *(Enhydris longicauda)*
  - 3 million people depend directly on the lake's resources





Tonle Sap ecosystem

Coastal and marine ecosystems

- Mangrove forest plays a significant role in the survival of some fish species and other marine organisms and serving as spawning grounds or nursery grounds for a wide range of commercially significant fish species
- Seagrass beds stretches of shallow, protected coastal waters often provides habitats for juvenile fish, and perform nursery functions for many different fish species
- Coral reefs are vitally important coastal ecosystems, providing local communities with a range of valuable social and economic goods and services

Cardamom mountains evergreen rainforests ecosystem

- A vast mosaic of sixteen interlocking ecosystems, from dense evergreen rainforest to lowland swamps and coastal mangroves
- An internationally recognized biodiversity hotspot, and one of the most important Indo-Burma biodiversity hotspots, housing one of the last remaining elephant corridors and large predator ranges in the region
- Home to most of Cambodia's known large mammal species and half its known bird, reptile and amphibian species
- About 10,000 people depend either directly or indirectly on the forests and wildlife of the area for food security and other needs

CONSERVATION

- Conservation is a general term for all kinds of actions aiming:
  - To protect the wild animals and animal species
  - To preserve the habitats and ecosystems
  - To prevent the loss of biodiversity
- To help protect wildlife, it's important to understand how species interact within their ecosystems, and how they are affected by environmental and human influences.

Why is conservation important?

- Conserving wildlife protects you and your community
- Conserving wildlife leads to sustainable food, clean water and clean air
- Conserving wildlife means ensuring that future generations can enjoy our natural world and the incredible species that live within it
- Conserving wildlife helps increase livelihood opportunities for the communities (timber forest products and ecotourism services)

HUMAN NATURE RELATIONSHIPS

Today increasing pressure is being put on wildlife habitats in Cambodia by logging, poaching, and clearing of land for economic development projects such as large scale agriculture and large scale dams.

The Story of Sovanna Sam: This story conveys the human nature relationship.

Sovanna Sam was a young boy who lived in a mountainous forest. Each day, he collected water and food from the forest to serving his blind parents. He grew to know and was loved by the forest deer and all the wildest animals were not frightened of him.

Traditional animist/ spirit beliefs in Khmer daily life

- Animism means the belief that all living beings have a spirit and that features such as rivers, mountains, trees, rock formations, termite stacks, wooden linga are inspirited.
- The term “neak ta” is used to refer to these spirit forms.
- The rivers and seas plays an important role in local belief systems and cultural identity.
- The Tonle Sap lake, the Mekong river and the Cardamom mountainous forest are home to some particularly important spirits.

Why is the environment important for people's beliefs and values?

- The Cambodia's festivals come from traditional beliefs and values which are inter-linked with nature
  - The Water Festival was celebrated with the hopes for a successful fishing season and rice crop
  - The Sea Festival was aimed at encouraging the protection of marine resources
  - In the Royal Ploughing Ceremony, by observing what feed the royal oxen choose, we can predict a range of events including epidemics, floods, good harvests and excessive rainfall
  - In the Rain-asking Ceremony, we pray to the gods and neak tas for successful rain fall in the upcoming farming season

THE UNIQUENESS OF CAMBODIA'S NATURE AND BIODIVERSITY

- Cambodia is an important part of the Indo-Burma Biodiversity Hotspot
- Cambodia’s biodiversity is very diverse
  - 15000 plant species
  - 200 species of mammals
  - 720 species of birds
  - 240 species of reptiles
  - 850 species of fish in the Tonle Sap Lake
  - 435 species of fish and marine mammals
- Giant Ibis, the national bird, Southern River Terrapin, the national reptile and Giant Barb, the national fish.

THE UNIQUENESS OF CAMBODIA'S NATURE AND BIODIVERSITY

- Cambodia is home to the largest areas of contiguous and intact forests in Southeast Asia
- Tonle Sap lake is the largest and one of the most diverse freshwater lakes in Southeast Asia
- Mekong River system provides water for many millions of people and even more animals
- Forests, wetlands and rivers are home to a large diversity of plants and wildlife, and play a vital role in stabilizing the earth’s climate

MAIN THREATS TO GLOBAL CONSERVATION: CLIMATE CHANGE

- Climate Change represents one of the biggest threats to global biodiversity and human livelihoods worldwide:
  - The human-caused emissions of cars and airplanes, industrial factories, power plants, large-scale domestic animal farming and forest fires add more gas to the atmosphere, especially carbon dioxide (CO2)
  - CO2 increases the capacity of the atmosphere to retain the heat of the sun rays and the temperature of the earth is increasing further
  - Global warming has a direct effect on the climate, leading to a more unpredictable, extreme and erratic weather conditions (droughts, heavy rain and floods and severe storms)

MAIN THREATS TO GLOBAL CONSERVATION: CLIMATE CHANGE

- Other human activities:
  - Logging and destruction of important ecosystems (rainforest, dry forest, mangrove forest and flooded forest) accelerate the above mentioned problems even more
- Climate change affects our daily life in Cambodia:
  - Droughts make it harder to cultivate food crops; to rear domestic animals and fishing grounds might dry out
  - Floods might destroy villages and fields
  - Dry season hotter, dryer and longer, and the wet season shorter but with more extreme rainfall and storms

MAIN THREATS TO CONSERVATION IN CAMBODIA

- Deforestation and habitat destruction
- Small-scale poaching, hunting and wildlife trade
- Organized wildlife crime
- Plastic pollution
- Improper use of pesticides and other poisons
- Invasive species

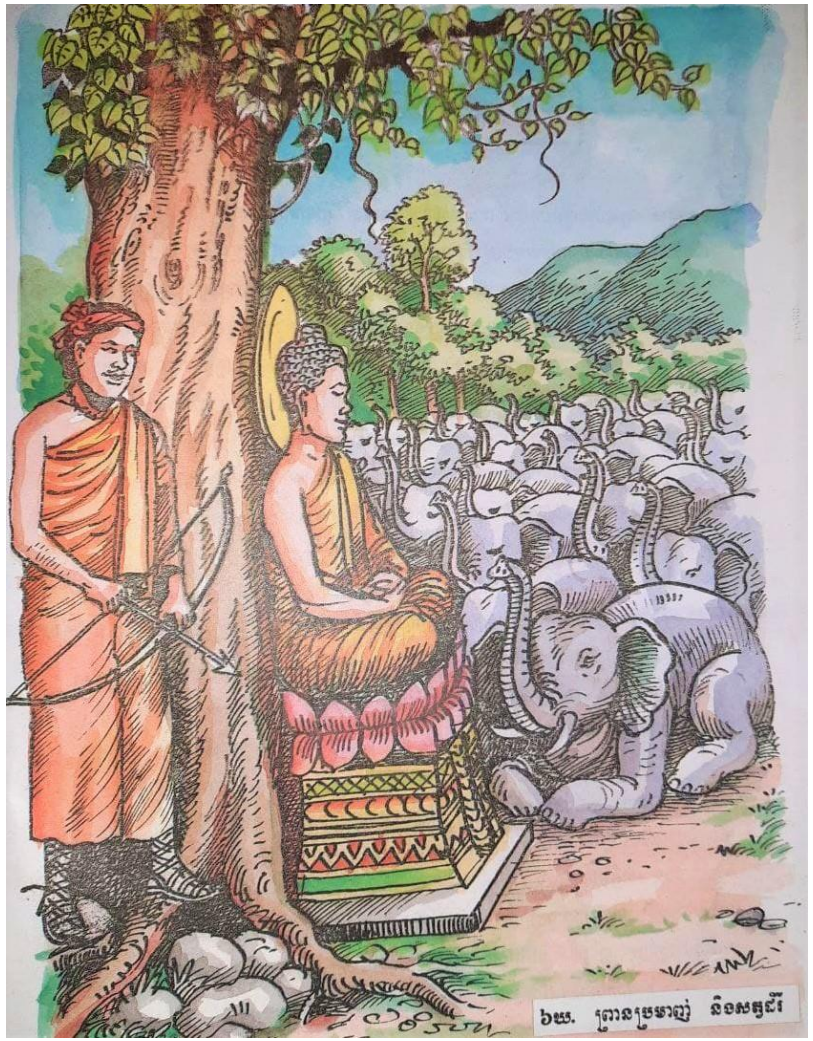
Deforestation and habitat destruction

- Large-scale land clearing for planting crops (e.g. cashew nuts, cassava, sugarcane and gum trees)
- Small-scale subsistence logging for family farm land clearing, construction wood and charcoal-making
- Trade in woods (furniture, house buildings and brick factories)
- Forest fire (natural disaster and human activities)
- Large hydropower dams
- Sand and gravel mining

Small-scale poaching, hunting and wildlife trade

The elephant hunter and the noble elephant: This story conveys the concept of falsehood.

Most of the hunting of wild animals in Cambodia today is done illegally for monetary gain, with rare species being exported across the border to Thailand, China, and Vietnam. This trade in wildlife and related products is becoming a major threat to several species of animals including the tiger, leopard, sun bear, pangolin, and monitor lizard. These animal populations are rapidly decreasing as a result of hunting and poaching, and through the degradation of natural habitats caused by large-scale logging.



Small-scale poaching, hunting and wildlife trade

- Pet trade:
  - Primates, reptiles and birds are commonly captured from the wild for sale into the pet trade as well as for merit release
- Traditional medicines:
  - Tiger bones, slow loris parts, pangolin scales, rhino horn and many more
- Lucky charms / protection:
  - Wild pig solid canines and tiger canines and many more
- Subsistence:
  - Small scale hunting, trapping, snaring and fishing
- Trophy:
  - Souvenirs and fashion items

Organized wildlife crime

- These criminal networks are usually professionally organized, in a similar fashion to illegal drug and arms trade networks, and engage in the large-scale cross-border smuggling of animal species which are highly priced in the international black market
- Professional wildlife crime networks also collaborate with local villagers to locate and obtain animals such as:
  - Songbirds
  - Pangolins and pangolin scales
  - Turtles and tortoises
  - Tiger products
  - Ivory from elephants
  - Rhino horns

Plastic pollution

- Plastic pollution:
  - Waste, toxicity, and climate change
- Plastic is very harmful for:
  - Human health
  - Our groundwater
  - Our wildlife
- Plastic piles up in the environment (get washed to rivers and the ocean)
- No country-wide effective recycling systems

Plastic pollution

- Plastic can not biodegrade:
  - It breaks down into smaller and smaller pieces
  - Microplastics: miniscule pieces of plastic ending up in all animals
- Plastic poisons our food:
  - Bioaccumulation: increasing concentration of pollutant in organism through food chains/ webs

Improper use of pesticides and other poisons

- Pesticides are dangerous, toxic substances which are also harmful to the health of people and animals
- Pesticides will also kill beneficial pollinating insects like bees and affects ecosystems
- People use pesticides for hunting, fishing or revenge poisoning of domestic animals
- Any animal died of poisoning will have poison distributed in all its organs and meat. if people eat the meat of that animal, and afterwards they will ingest the poison as well and suffer serious negative health effects.
  - Biomagnification / bioaccumulation (see page 30)

Invasive species

- According to the Asean Centre for Biodiversity (ACB); there are around 63 records of species that are invasive in Cambodia.
  - An invasive species is an organism that is not indigenous, or native to a particular area
  - Animals and plants can become invasive species when introduced, either intentionally or accidentally into a habitat that they are not native to and can out-compete the native wildlife
  - Invasive species can cause great economic and environmental harm to the new area

WHAT CAN YOU DO TO HELP LOCAL CONSERVATION?

- Use natural resources in a more sustainable way
- Use plant-based sources of protein in your diet and in traditional medicines. Use of sustainable food and medicine
- Reducing the wildlife trade through awareness
- Reduce the use of single-use plastic
- Proper use of pesticides

Use natural resources in a more sustainable way

- Use furniture and decoration items made out of fast-growing wood such as bamboo
- Use cultured plant species, such as lemongrass, turmeric and ginger, for traditional medicine, and collect quickly re-growing plants and leaves
- Sustainable honey harvesting, beekeeping, rafter beekeeping and resin harvesting
- Burning the forest destroys important habitat, directly affects animals and contributes to global warning by releasing important amounts of carbon dioxide (CO2)

Use plant-based sources of protein in your diet and in traditional medicines. Use of sustainable food and medicine

- Use plant-based sources of protein in your diet
- Use plant-based traditional medicines
- When eating animal proteins chose abundant or farmed animals. Avoid using or eating parts of endangered species/ bushmeat
- Most diseases can be treated much more effectively by academic medicine in a clinic or health center

Reducing the wildlife trade through awareness

- Wild animals do not make good pets and should not be kept in captivity
- Buying animals from the wildlife trade, this action will fuel the cruel trade further
- Animals coming from the illegal trade are often sick and need specialized care in order to be able to release back into the wild

Reduce the use of single-use plastic

Proper use of pesticides

- Pesticides should be used on food crops only if unavoidable
- Pesticides should never be used in an inappropriate manner, for example for poisoning wildlife:
  - Fish
  - Birds
  - Other wild animals

LAWS AND REGULATIONS

CONSERVATION OF WILDLIFE (CHAPTER 10)

The Cambodian law is very clear about the fact that wildlife is protected and activities like hunting, trapping, poaching, trading and keeping wildlife as pets are illegal in the vast majority of cases.

The Cambodian Law on Forestry in 2002 (Chapter 10: Articles 48- 50), states that:

Article 48:

All kinds of wildlife species in the Kingdom of Cambodia are State property and the component of forest resources, including all species of mammals, birds, reptiles, amphibians, insects, other invertebrates, and their eggs or offspring. Such wildlife is under the management, research and conservation of the Forestry Administration, except for fish and animals that breed in water. Wildlife specimens are dead wildlife, including the whole body, internal or external organs, the skeleton and processing products, and shall be under the management jurisdiction of the Forestry Administration. All wildlife shall be divided into the following three categories (endangered species, Rare species and Common species)

CONSERVATION OF WILDLIFE (CHAPTER 10)

The Cambodian Law on Forestry in 2002 (Chapter 10: Articles 48- 50), states that:

Article 49:

It is strictly prohibited to hunt, harm or harass all kind of wildlife using all types of dangerous means, hunting during the prohibited season, and hunting in protected zones.

In the case of rare and endangered wildlife species, hunting, harassing, netting, trapping, poisoning, transporting, trading, exporting and importing, and keeping them in a zoo or family house is generally prohibited.

Article 50:

In the case of common wildlife species, it is only allowed to keep them in a zoo or family house, export and import them if a permit to do so was issued by the Forestry Administration.

PROTECTION AND CONSERVATION OF FISHERIES (CHAPTER 5)

The Cambodian Law on Fisheries in 2007 (Chapter 5: Articles 20 and 23), states that:

Article 20:

Prohibits the use of fishing gear including electrocuting devices, explosives, poisons, pumps that dry areas, spear-fishing, nets with mesh size less than 1.5 cm or greater than 15 cm in inland waters, dam fishing, trawling in inland waters, etc.

Article 23:

Outlines activities allowed only under permission including: catching, buying, selling, stocking and transporting fingerlings or fish eggs and other aquatic animals' offspring or eggs; and transporting, processing, buying, selling, and stocking endangered fisheries resources.

KEY SPECIES GUIDE

(Focus on species monks are most likely to encounter)

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Common Long-tailed Macaque
Macaca fascicularis

Key Features

Long tail (longer than its height from the head to rump), the face is pinkish-brown and white spaces on its eyelids, near the nose. On the top of the head, formed by the hairs on the head, sweeping back over the forehead. Male are distinguished by mustaches as well as cheek whiskers around their faces. Females, on the other hand, have beards and cheek whiskers.

Habitat

Primary lowland rainforests and secondary rainforest, shrubland, riverine, coastal forest and mangrove.

Threats

Habitat loss, hunting for their meat, illegal pet trade and research (use in laboratories as test subjects).

Range

Southeast Asia, Southeastern Bangladesh, Java and Borneo.

Diet

Omnivorous: wild fruits and seeds make up to 90% of their diet, but they also eat leaves, flowers, bark, eggs, bird chicks, reptiles, amphibians, fish and invertebrates.

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Northern Pig-tailed Macaque
Macaca Leonina

Key Features

Large, thick-set monkeys with an olive-gray pelage that forms a darker brown crown on their heads. Their face are pinkish with patches of pale skin around the eyes and distinctive red lines extending from the outside corners of the eyes to the edge of the face. They have long hairs on their cheeks. The most distinguishing feature is short, thick tail which usually arches over their back.

Habitat

Primary and secondary bamboo, deciduous, and evergreen forests.

Threats

Habitat loss, hunting for meat and body parts and collection for illegal pet trade.

Range

Southeast Asia (India, Bangladesh, Myanmar, Thailand, China, Laos, Cambodia and Vietnam).

Diet

Over 100 species of fruit, bird eggs, and small animals and invertebrates.

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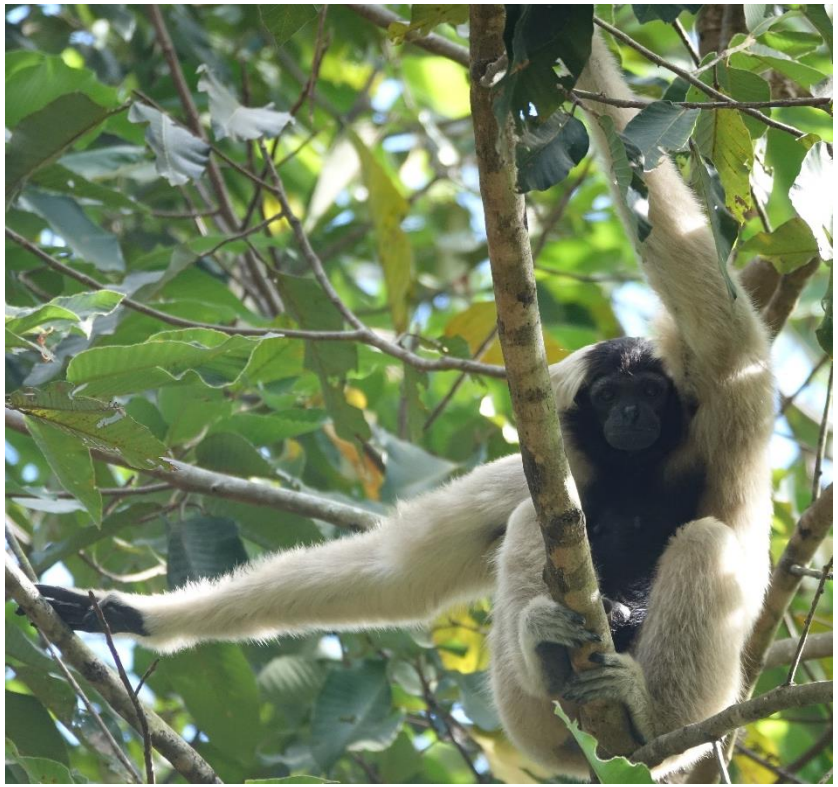
Pileated Gibbon
Hylobates pileatus



Key Features

Slender torsos, long arms (no tails). Their buttocks have a thickened layer of skin. Sexually dichromatic, females are blonde and males are black. Young males are buff until they reach maturity, females have dark black patch from top of head to groin area. Both genders typically have a white circular streak around the crown and sides of their head.

Habitat

Moist, seasonal evergreen and mixed deciduous-evergreen forests. They prefer tall trees.

Threats

Habitat loss and fragmentation and hunting.

Range

Thailand, Cambodia, and Lao PDR

Diet

Their diets are fruits. The rest includes leaves, insects, eggs, and small vertebrates like birds.

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Bengal Slow Loris
Nycticebus bengalensis

Range

Bangladesh, Cambodia, China, India, Lao PDR, Myanmar and Vietnam.

Key Features

Its dorsal fur is light brown, with much lighter ventral fur. The face is creamy white with triangular patches of dark fur around the eyes. The dark head-stripe occurs at the middle of the head that changes to a dark brown-black at the shoulders and continues as a dorsal stripe to the middle of the back.

Habitat

Tropical evergreen forest, semi-evergreen forest, and moist deciduous forest. Also found in secondary forest, at the edge of primary forest, and on agricultural land and bamboo forest.

Threats

Habitat loss and severe hunting pressure for food, medicine, and sport, but the greatest pressure comes from hunting for the illegal pet trade.

Diet

Their diet consists mainly of tree gum, but also includes insects, fruits, lizards and small mammals.

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Pygmy Slow Loris
Nycticebus pygmaeus

Key Features

The dorsal fur is short and thick, reddish brown in color with an orange tinge. On their face, they have a small white stripe from the nose to the forehead and is often connected to the dorsal stripe. They have a black nose, black skin on the hands and feet and little hair on the ears, which appear more obvious.

Habitat

Primarily evergreen, semi-evergreen, and secondary forests but also limestone forest, bamboo forest, and highly degraded forest.

Threats

Exploited for food, traditional medicine and the greatest threat is from the international pet trade.

Range

East of the Mekong River in Vietnam, Cambodia, Laos, and southernmost China.

Diet

Consuming predominantly insects and tree sap but are also known to feed on nectars, lizards, small mammals, eggs and chicks.

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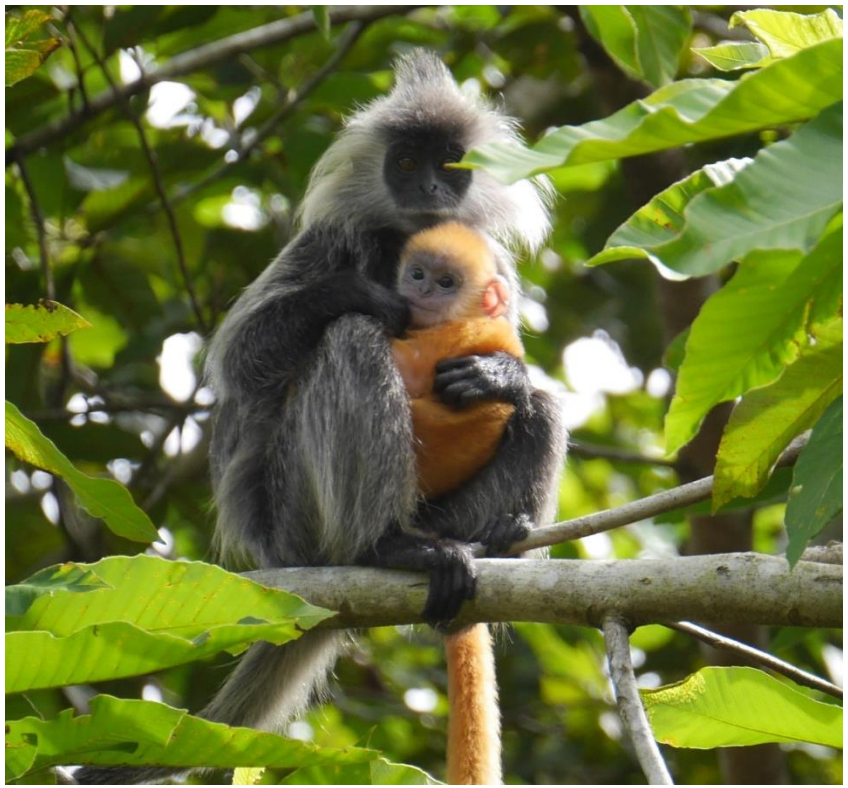
Indochinese Silvered Langur
Trachypithecus germaini



Range

Cambodia, Lao PDR, Myanmar, Thailand and Vietnam.

Key Features

The fur is long and comprises various shades of grey. The tail is long and also grey. The face has dark grey skin, is framed with impressively long pale hairs, which form a marked crest on the crown. Infants have orange fur. The feet and hands are dark grey to black.

Habitat

Lowland, semi-evergreen and evergreen forests, mangrove forest.

Threats

Habitat loss, hunting, traditional medicine, and collection for the pet trade.

Diet

Young leaves and mature leaves (almost 70%), fruits and flowers (about 25%) and buds (about 5%).

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Leopard Cat
Prionailurus bengalensis

© ACCB/Daniel Roper-Jones

Key Features

Similar in size to the domestic cat but longer legs. Coloration ranges from orange-brown to yellow, red or grey above with the underparts white and spotted. Black rosettes cover the sides of the body, with solid spots running down the legs and the tail. There are usually four black stripes running down the forehead to the nape, breaking up into short bands and elongate spots on the shoulders. Often there is one stripe running the length of the body.

Habitat

Occur in a wide variety of habitats from tropical rainforest to scrubland, secondary vegetation and agricultural areas.

Threats

Habitat loss, hunting and killed as a poultry predator, heavy commercial exploitation in China for fur, meat and the pet trade.

Range

Southeast Asia (Cambodia, Lao PDR and Vietnam).

Diet

Small mammals, birds, reptiles and insects as well as fish and crustaceans.

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Common Palm Civet
Paradoxurus hermaphroditus

Key Features

They have elongated bodies with short legs, and long tail. Their nose is pointed and protrudes from their small face. They have large dark eyes and large pointed ears. The coat are short, coarse, and are usually black or gray with black-tipped guard hairs all over. They have a white patch of fur below and above the eyes and on each side of the nose. They can be recognized by the dark stripes down their back and the three rows of black spots freckled on each side of their body and covering their legs.

Habitat

Wide range of habitats including evergreen and deciduous forest, seasonally flooded, mangroves, monoculture plantations, and urban.

Threats

Hunting for the international trade in meat and body parts, and production of civet coffee.

Range

Wide distribution in South and Southeast Asia.

Diet

Its diet consists of insects and fruits, among them coffee cherries.

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Javan Mongoose
Herpestes javanicus

Key Features

The mongoose is a small, slender animal with short legs and small rounded ears located on the side of its head. It has soft short fur, usually pale to dark brown with golden flecks, but may vary seasonally and individually. It has a pale underside and a bushy tail.

Habitat

Scrubland, grassland, plantations, agricultural areas and rice paddies.

Threats

There are presently no known significant threats.

Range

Vietnam, Thailand, Lao PDR, Cambodia, Myanmar, Malaysia, Sumatra, Java and Bali.

Diet

Feeds on other vertebrates including frogs, reptiles and small mammals, but will also consume invertebrates such as insects.

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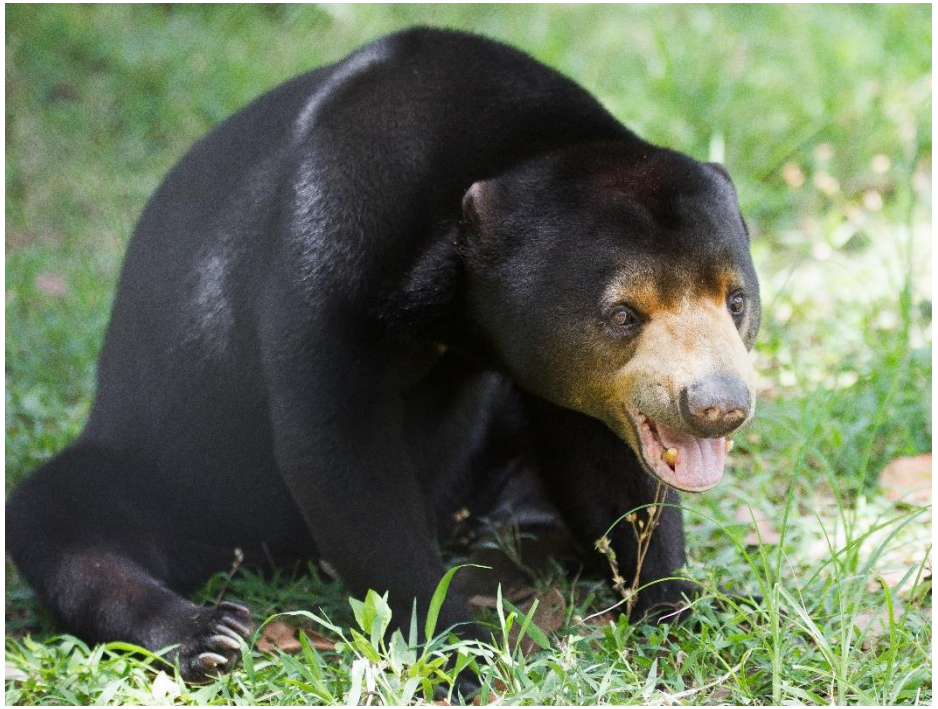
Sun Bear
Helarctos malayanus



Key Features

The ears are small and round. Sun bear has a short, sleek, black coat. The muzzle is short, and gray to faint orange in color. The crescent-shaped chest patch is yellowish or light colored. The muzzle is shorter and lighter colored than that of a black bear and in most cases the white area extends above the eyes. The paws are large and the soles are naked, the claws are large, curved, and pointed.

Habitat

Tropical forests in Southeast Asian, including tropical evergreen rainforest, montane forest and swamp habitat.

Threats

Hunting for their gall bladders and body parts for medicinal uses, pet trade. Also habitat destruction and illegal logging.

Range

Bangladesh, Brunei Darussalam, Cambodia, China, India, Indonesia, Lao PDR, Malaysia, Myanmar, Thailand and Vietnam.

Diet

Omnivores: feeding primarily on termites, ants, beetle larvae, bee larvae, honey, and a large variety of fruit species.

NE DD LC LEAST CONCERN NT VU EN CR EW EX

Wild Boar
Sus scrofa

Key Features

They have a thick and course double coat of fur, that consists of a harder, bristly top layer, with a softer undercoat beneath it. They have very small-sized eyes, but they also have a long, straight snout.

Habitat

Found in a variety of different habitats including tropical jungles and grasslands, but they tend to favour deciduous broad-leafed forests.

Threats

Habitat loss and hunting for their meat.

Range

Found throughout Europe and Asia.

Diet

Omnivorous: predominantly eat plant matter, fruits, roots, crops. Also known to consume bird eggs, carrion, small rodents, insects, and worms.

NE DD LC NT VU **EN** ENDANGERED CR EW EX

Banteng
Bos javanicus

Key Features

Males are blue-black or dark chestnut in color, while females and young are chestnut with a dark dorsal stripe. Both males and females have white stockings on their lower legs, a white rump, a white muzzle, and white spots above the eyes.

Habitat

Open dry deciduous forests, tropical moist forests, and seasonal freshwater swamp forest, found also on open grassland, mature timber plantations, and abandoned cultivated land.

Threats

Habitat loss, hunting for meat, horns and trophy heads, hybridization with domesticated cattle, and infections with cattle diseases.

Range

Southeast Asia (Cambodia, Indonesia, Malaysia, Myanmar, Thailand, Vietnam).

Diet

Herbivorous: feed on grasses, bamboo, fruit, leaves, and young branches.

NE DD LC NT VU VULNERABLE EN CR EW EX

Gaur
Bos gaurus

Key Features

Massive head, deep body and solid limbs. The color of their body varies from reddish or brown to black while the limbs are pale colored. Males and females have upwardly curved horns. Their horns have yellow base and black tip. Gaur has a hump on their shoulders, which is especially prominent in adult males. They have a distinct "dewlap" of skin, stretching from their throat to their forelegs.

Habitat

Evergreen forests, Semi-evergreen, moist deciduous forests and deciduous forest areas.

Threats

Habitat loss, hunting for meat, horns and trophy heads, hybridization with domesticated cattle, and infections with cattle diseases.

Range

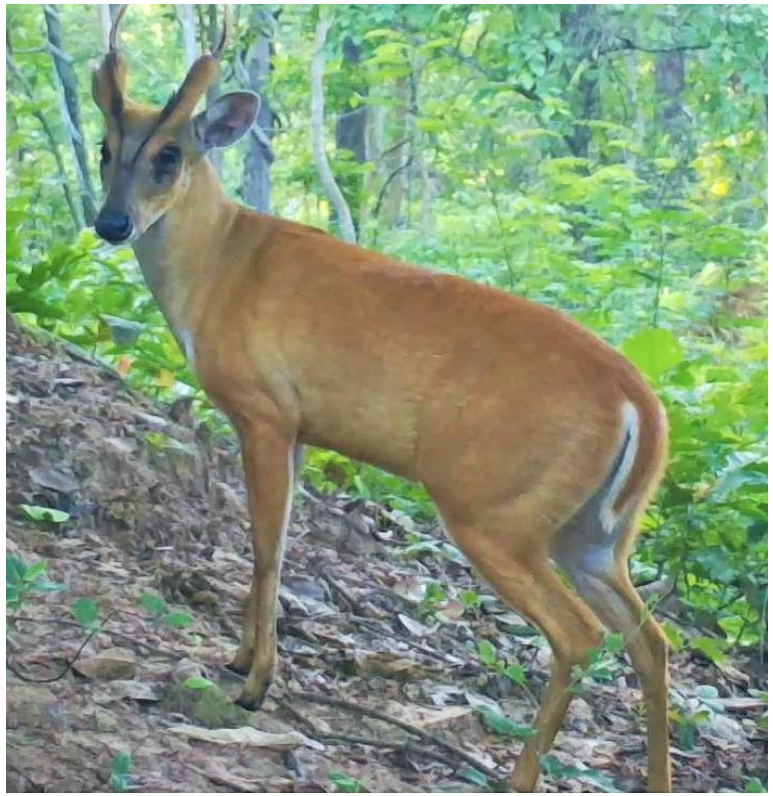
Cambodia, Bhutan, China, India, Lao PDR, Malaysia, Myanmar, Nepal, Thailand and Vietnam.

Diet

They are herbivorous animal: grass while leaves, forbs, coarse and dry grasses.

NE DD LC LEAST CONCERN NT VU EN CR EW EX

Northern Red Muntjac
Muntiacus vaginalis



Key Features

Males have small straight antlers. Instead of antlers, females have bony knobs on their heads with patches of fur on top. In males the canines are longer and are clearly visible.

Habitat

Wide variety of forests and scrub, including level plains and rugged mountains, dense and open forests, evergreen and deciduous areas, old-growth and secondary forests, and even grass- and cropland near woody habitats.

Threats

Rainforests, dense vegetation, monsoon forests, and hilly country (prefer being close to water).

Range

Widespread through South and Southeast Asia.

Diet

Omnivorous: feeding on leaves, grasses, herbs, fruit, seeds, sprouts, bird eggs and small animals.

NE DD LC NT **VU** VULNERABLE EN CR EW EX

Sambar Deer
Rusa unicolor

Key Features

Coloration ranges from light brown or dark with a grayish or yellowish and the underparts are paler. Males have stout, rugged antlers with three points. Their tail is quite long for deer, generally black on top and a dirty white or whitish underneath. They have long, strong legs, the upper color being dark brown, with the inner parts of the legs a paler or dirty white. Their brownish gray ears are long.

Habitat

Adapted to a wide variety of habitat types from savannas, scrubland, grasslands, wetlands and different forest types such as moist and dry deciduous forests, thorn and dry forests, evergreen and semi-evergreen forests.

Threats

Hunting and habitat encroachment.

Range

Cambodia, Bangladesh, Bhutan, Brunei, China, India, Indonesia, Laos, Malaysia and Myanmar.

Diet

Herbivorous: eating various grasses, foliage, fruits, leaves, water plants, herbs, buds, berries, bamboo, stems and bark, as well as a wide range of shrubs and trees.

NE DD LC NT VU **EN** ENDANGERED CR EW EX

Hog Deer
Axis porcinus

Key Features

Hog deer have a stout build with relatively short legs, raised hindquarters and white-tipped tails. Males are heavier than females, and have much thicker necks. Females are reddish-brown in summer, becoming duller in winter. Mature males are dark brown.

Habitat

Floodplains and wet grasslands in the foothills of the Himalayan Mountains, from Pakistan to Cambodia. Hog deer tend to avoid forest and cultivated areas.

Threats

Hunting and snaring for bush meat consumption, habitat loss and land clearance for agriculture.

Range

Cambodia, Bangladesh, Bhutan, India, Nepal, Pakistan, China, Laos, Myanmar, Vietnam and Thailand.

Diet

They are herbivores (folivores). The diet of this animal is generally composed of grasses, supplemented with other plants such as leaves.

NE DD LC LEAST CONCERN NT VU EN CR EW EX

Lesser Mousedeer
Tragulus Kanchil

Key Features

No antlers or horns, adult males have elongated, tusk-like upper canines protrude from the side of the mouth. Mouse deer have no upper incisors. The pelage is brown with an orange tint.

Habitat

Found in overgrown primary and secondary forests. They often reside around rocks, hollow trees, and dense vegetation near water.

Threats

Deforestation and hunted for their meat.

Range

Tropical forest region in Southeast Asia.

Diet

Herbivores and folivores: eating leaves, buds, shrubs, and fruits that have fallen from trees.

NE DD LC NT VU **EN** ENDANGERED CR EW EX

Eld's Deer
Rucervus eldii

Key Features

Its legs are thin and long with a long body, large head and thin neck. The rough and course coat turns from reddish brown in summer to dark brown in winter. Males have bow or lyre shaped antlers, and possess a thick mane of long hair around the neck.

Habitat

Deciduous Dipterocarp forest, open grasslands, prefer the areas near water.

Threats

Hunting for meat, habitat loss and fragmentation.

Range

Cambodia, China, Lao PDR, Thailand and Vietnam.

Diet

Grass and forbs make up the main part of their diet, which includes a variety of grasses, fruits, herbaceous and wetland plants.

NE DD LC NT VU **EN** ENDANGERED CR EW EX

Indochinese Tiger
Panthera tigris tigris

Key Features

Their coat is reddish-orange coat and there are vertical black stripes on the shoulders and flanks that vary in size, spacing and length. The muzzle, throat, chest, belly and underside of the limbs are white or light. Above the eyes there is white color that extends to the cheeks.
On the back of the ears there is a white spot. The tail is reddish-orange in color and ringed by several dark bands.

Habitat

Found mainly in the forests of tropical Asia, although they historically occurred more widely in drier and colder climes.

Threats

Poaching, habitat loss and population declines of ungulate prey.

Range

Bangladesh, Bhutan, China, India, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, Russian Federation, Thailand.
Possibly extinct in Cambodia, Korea and Vietnam.

Diet

Carnivorous: large ungulates, bears, and smaller animals if large prey is not available such as birds, reptiles, fish, medium sized mammals.

NE DD LC NT VU EN CR CRITICALLY ENDANGERED EW EX

Sunda Pangolin
Manis javanica

Key Features

They have prehensile tails which they use to climb trees. Their body is covered by rows of scales and fibrous hair. The scales on the back and sides are olive-brown to yellowish in color. The hair on the underbelly and face is whitish to pale-brown. These animals have thick and powerful claws and lack teeth.

Habitat

Found in primary and secondary forest, including lowland dipterocarp forest, and cultivated areas.

Threats

Overexploitation from hunting and poaching, both targeted and untargeted, for local and international illegal trade for use in human consumption and traditional medicine.

Range

Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Singapore, Thailand and Vietnam.

Diet

Ants and termites.

NE DD LC NT VU **EN** ENDANGERED CR EW EX

Asian Elephant
Elephas maximus

Key Features

Gray/ brown skin, covered with hair. The tip of the trunk has one fingerlike projection. The hind foot has four hooves. The adult males are much larger than the females and males have tusks while females lack tusks.

Habitat

Grassland, tropical evergreen forest, semi-evergreen forest, moist deciduous forest, dry deciduous forested and dry thorn forest. In addition to cultivated and secondary forests or scrublands.

Threats

Habitat loss and fragmentation, human-elephant conflict, and poaching and illegal trade of elephants.

Range

Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, Sri Lanka, Thailand and Vietnam.

Diet

Herbivorous (folivorous): feeding upon plants. Major components of their usual diet are grasses, leaves, roots, bark of trees and bushes.

NE | DD | LC | NT | VU | **EN** ENDANGERED | CR | EW | EX

Irrawaddy Dolphin
Orcaella brevirostris

Key Features

Dark grey in color with a lighter underside. Bulging, rounded head, lacking a beak. Broad triangular, paddle-like, pectoral fins, and small, triangular dorsal fins set approximately two-thirds of the body length along the back.

Habitat

In rivers: in deep pools at confluences or near rapids.
In coastal waters: in areas affected by freshwater inputs.

Threats

Accidental capture and drowning in fishing gear.
Habitat deterioration and population fragmentation due to hydropower dams, increased sedimentation as a result of deforestation and gold, sand and gravel mining, pollution, and altered freshwater flow.

Range

Bangladesh, Brunei Darussalam, Cambodia, India, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam.

Diet

Fish, cephalopods, and crustaceans.

NE DD LC NT VU **EN** ENDANGERED CR EW EX

Southeast Asian Box Turtle
Cuora amboinensis

Key Features

The plastron (the bony plates on the underside) have a hinge-line which allows the entire animal to withdraw inside the fully closed shell. The species is best identified by the arrangement of three yellow striped lines on the head.

Habitat

Largely restricted to standing water bodies, but opportunistically inhabits most types of water bodies except large rivers and reservoirs.

Threats

Over-collection for food, pet trade, and traditional medicine.

Range

Lowland tropical rainforest areas of Southeast Asia.

Diet

They feeds on vegetation, fallen fruits and soft invertebrates such as worms and slugs.

NE DD LC NT VU EN **CR** CRITICALLY ENDANGERED EW EX

Elongated Tortoise
Indotestudo elongata

Key Features

Its carapace is yellowish-brown, with the central part of each scale or scute typically being black, the carapace is long. Adult males have a concaved plastron and a relatively long tail, where the tail in females is short.

Habitat

Primarily deciduous forest types.

Threats

Beside habitat loss, the tortoise is widely poached, ending up in food markets in countries (Vietnam and China). It is also harvested for traditional medicine, and sold into the pet trade.

Range

Widely distributed in South and Southeast Asia.

Diet

Its diet is varied and comprises fruits, flowers, leaves, fungi and soft-bodied invertebrates.

NE DD LC **NT** NEAR THREATENED VU EN CR EW EX

Mekong Snail-eating Turtle
Malayemys subtrijuga

Key Features

The species has large head and the shell is brown with three distinct ridges, or "keels", along the top. The edge and bottom of shell are yellowish. Head is black with white or yellow lines running from tip of snout backwards above and below the eyes. Three pair of nasal stripes present. Black eyes with pale circle on iris.

Habitat

Inhabits seasonally flooded habitats, including rice fields.

Threats

Over exploitation for food consumption, and, to a lesser extant, pet trade.

Range

Cambodia, Lao PDR, Vietnam. It might occur in eastern Thailand. Records from (Indonesia) are uncertain.

Diet

Carnivorous: feed on snails, as well as earthworms, crustaceans, aquatic insects and small fish.

NE DD LC NT VU EN **CR** CRITICALLY ENDANGERED EW EX

Giant Asian Pond Turtle
Heosemys grandis

Key Features

The carapace is light to medium brown in adults. There is a pale vertebral keel in both juveniles and adults. The head is robust and orange-brown in colour, and the snout is blunt: the sides of the head and neck are mottled.

Habitat

The species inhabits standing water bodies such as ponds, lakes and slow-flowing pools in freshwater swamp forest.

Threats

Illegal capture and illegal wildlife trade in parts of Asia.

Range

Cambodia, Lao PDR, Malaysia, Myanmar, Thailand and Vietnam.

Diet

Omnivorous: diets consists of aquatic and terrestrial vegetation, and worms, larvae, insects and fish.

NE DD LC NT VU EN **CR** CRITICALLY ENDANGERED EW EX

Yellow-headed Temple Turtle
Heosemys annandalii

Key Features

It has a strongly domed, relatively smooth, dark grey carapace. The plastron is yellow or orange in colour, with black blotches. Its forehead, jaws and neck are yellow with darker bands, and the upper jaw bears two sharply pointed projections. The feet are large and strongly webbed.

Habitat

It habits in wetlands, inundated fields, wet forests, and swamps.

Threats

Over exploitation for the illegal food and traditional medicine trade, and habitat loss.

Range

Cambodia, Lao PDR, Vietnam, Thailand and Malaysia.

Diet

They feeds almost exclusively on aquatic vegetation, supplemented by fallen fruits when available.

NE DD LC NT VU EN **CR** CRITICALLY ENDANGERED EW EX

Southern River Terrapin
Batagur affinis

Key Features

Large turtle with relatively small heads with an upturned snout. Four claws on its forefeet. Feet are fully webbed. This species exhibits marked sexual dichromatism; while females remain the same coloration throughout the year, the pigment melanin is hyper-expressed in males during the breeding season, giving them an overall dark grey to black appearance. Furthermore, males have golden-yellow eyes.

Habitat

Estuaries, mangrove creeks, lower river sections, and coastal lagoons, generally in areas influenced by the tide, but may also occur substantial distances upriver.

Threats

Habitat alteration and destruction, sand mining and construction of hydropower dams, exploitation for eggs and meat.

Range

Cambodia, Indonesia (Sumatera), Malaysia (Peninsular Malaysia) and Thailand.

Diet

Omnivorous, but the bulk of the diet consists of vegetation and fruit.

NE DD LC NT VU EN **CR** CRITICALLY ENDANGERED EW EX

Asian Giant Softshell Turtle
Pelochelys cantorii

Key Features

The turtle has a broad head and small eyes close to the tip of its snout giving it a frog-like appearance (hence the Khmer-name "Frog Head Turtle"). The carapace is smooth and olive-colored. Juveniles may have dark-spotted carapaces and heads, with yellow around the carapace.

Habitat

Different lowland aquatic habitats such as lakes, rivers, swamps and estuaries.

Threats

Habitat destruction, exploitation for human consumption, and exploitation of its flesh for food, suspected killing by anglers and fishermen after getting entangled in fishing gear.

Range

Bangladesh, Cambodia, China, India, Indonesia, Lao PDR, Malaysia, Myanmar, Papua New Guinea, Philippines, Thailand and Vietnam.

Diet

Carnivorous: feeding on crustaceans, mollusks and fish in addition to vegetation

NE DD LC NT VU VULNERABLE EN CR EW EX

Southeast Asian Softshell Turtle
Amyda Ornata

Key Features

Leathery carapace is flattened and oval. Neck is long and head is narrow, pointed, with a thin elongated snout. Limbs paddle-shaped with webbed digits and three claws each. Carapace coloration variable from cinnamon-brown to olive-gray.

Habitat

Tropical forest, rainforest and swam forest (lakes and ponds, rivers and streams).

Threats

Trade exploitation in Cambodia, Lao and Viet Nam. Habitat loss remains a contributing factor throughout its range.

Range

All the countries of Southeast Asia (except Philippines).

Diet

The diet of this species is variable and includes insects, crustaceans, fish, vegetation and carrion.

NE | DD | LC | NT | VU VULNERABLE | EN | CR | EW | EX

Burmese Python
Python bivittatus

Key Features

Up to 6m total length. Large, rather triangle shaped head well distinct from neck. Head is brown with light arrow shaped patern, dark-brown blotches on back. Underside creamy, white or grey colored. Non-venomous.

Habitat

Found in forested areas, including mangrove forests and rainforests. Also found in grasslands, marshes, streams and rivers, including the Tonle Sap wetland in Cambodia.

Threats

Illegal trade, overexploitation for food and skins.

Range

Bangladesh, Cambodia, China, India, Indonesia, Lao PDR, Myanmar, Nepal, Thailand, and Vietnam

Diet

They are carnivores, eating mostly small mammals and birds.

NE DD LC LEAST CONCERN NT VU EN CR EW EX

Reticulated Python
Malayopython reticulatus

Key Features

Up to 7.7m total length. Yellow or olive head with dark stripe from eye to jaw corner and thin dark line from snout to top of their head. Iris orange in color. Body tan or brown, with irregular diamond shaped pattern edged with dark reticulations; white spots framed with black on flank. Underside yellowish. Non-venomous.

Habitat

Rainforest, woodland and adjacent grassland areas.
It is also associated with rivers and is often found near or in streams and lakes.

Threats

Hunting for skins, food, traditional medicine, pets and the meat trade.

Range

Bangladesh, Brunei Darussalam, Cambodia, India, Indonesia, Indonesia, Lao PDR, Malaysia, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam.

Diet

They are carnivores, eating mostly small mammals and birds.

NE DD LC LEAST CONCERN NT VU EN CR EW EX

Common Water Monitor
Varanus salvator

Key Features

Large monitor, may grow up to 2.5m in length. Robust body, stout limbs with large claws, long tail. Robust, elongated head, with nostrils closer to snout tip than to eyes. Dark grey with distinct rings of pale yellowish spots.

Habitat

Semi-aquatic, inhabits mangroves, mangroves, swamps, wetlands, forest and scrubland. Also found in canals, cities and agricultural areas.

Threats

Habitat loss and hunting for trade in leather, traditional medicine and human consumption.

Range

Bangladesh, Cambodia, India, Indonesia, Lao PDR, Malaysia, Myanmar, Singapore, Sri Lanka, Thailand, and Vietnam.

Diet

They are carnivores., they feed on a range of reptiles, mammals, birds, insects and eggs. In addition to this they take carrion.

NE DD LC LEAST CONCERN NT VU EN CR EW EX

Clouded Monitor
Varanus bengalensis

Key Features

Large monitor, may grow up to 1.6m in length. Robust body, stout limbs with large claws, long tail. Robust, elongated head, with nostrils closer to eyes than to snout tip. Body yellowish or brownish gray, unpatented or with faint light spots.

Habitat

Found in a variety of habitats, from desert areas to floodplains, scrubland to forests, at moderate elevations. It can also inhabit agricultural areas.

Threats

Habitat loss and hunting for food and skin in the leather trade and traditional medicine.

Range

Afghanistan, Bangladesh, Cambodia, China, India, Indonesia, Iran, Lao PDR, Malaysia, Myanmar, Nepal, Pakistan, Sri Lanka, Thailand and Vietnam.

Diet

They eat insects like grasshoppers and beetles, as well as small animals like frogs and rodents.

NE DD LC NT VU **EN** ENDANGERED CR EW EX

Greater Adjutant
Leptoptilos dubius

Key Features

145-150cm tall, wingspan of 250cm. Pinkish bare head/neck, blue eyes, white ruff at base of neck, and large drooping neck-pouch. Dark gray wings with light gray wing panel.

Habitat

Wetland, freshwater flooded forest, dry forest, carcass dumps, tall wet grassland, mangroves and intertidal flats, urban areas (north-east India).

Threats

Habitat loss, increased pesticide use and disturbance, eggs and chick collection, hunting for foods.

Range

Cambodia, India and also found in Bangladesh, Nepal, Thailand and Vietnam.

Diet

Fish, frogs, reptiles and large invertebrates. Small rodents and carrion.

NE DD LC NT **VU** VULNERABLE EN CR EW EX

Lesser Adjutant
Leptoptilos javanicus

Key Features

120-129cm tall, wingspan of 210cm. Bare head/neck, adults have red/ purpleish head-sides and yellow neck. All dark upperwings, while the underparts are mostly white.

Habitat

Natural and human-modified wetlands, both open and forested. Coastal populations frequent mangroves and intertidal flats. It utilizes small wetlands within Asian dry forest.

Threats

Habitat loss, increased pesticide use and disturbance, eggs and chick collection, hunting for foods.

Range

Bangladesh, Brunei, Cambodia, India, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, Sri Lanka, Thailand and Vietnam.

Diet

It mainly feeds on fish, but also small amphibians, crustaceans, crickets and small rodents.

NE | DD | LC | **NT** NEAR THREATENED | VU | EN | CR | EW | EX

Asian Woollyneck
Ciconia episcopus

Key Features

Glossy purplish-/greenish-black iridescence, with black cap and white neck and vent. The bill is dark with a dark salmon/red-tip.

Habitat

Wetland habitats such as savanna and grassland, including rivers, streams, lakes and marshes, whilst also using artificial habitats such as rice paddy-fields.

Threats

Hunting, habitat loss and fragmentation, environmental pollution.

Range

South Asia and Southeast Asia.

Diet

Fish, mollusks, marine invertebrates, amphibians, reptiles and insects.

NE DD LC NT VU **EN** ENDANGERED CR EW EX

Green Peafowl
Pavo muticus

Key Features

Iridescent green, scaled blackish long neck and dark wings. Males have long train with colourful ocelli. Facial skin is double striped with white to light blue around the eye, a yellow crescent beside the ear, and a dark triangle below the eye which is bluish-green in males and brown in females.

Habitat

Mostly limited to dry deciduous forests, with the highest densities occurring near undisturbed rivers and wetlands.

Threats

Hunting for meat and feather, pet trade, eggs and chick collection, habitat loss.

Range

Southeast Asia (Cambodia, Laos, PDR and Vietnam), China, Indonesia, Myanmar, and Thailand.

Diet

Fruits, invertebrates, reptiles, frogs and rodents.

NE DD LC LEAST CONCERN NT VU EN CR EW EX

Brahminy Kite
Haliastur indus

Key Features

Medium-sized raptor with a short rounded tail. White head and breast, the rest of its body is chestnut brown. The wings are chestnut brown with black wing-tips.

Habitat

Inland and coastal wetlands.

Threats

Hunting and collection of nestlings, disturbances, over-use of pesticides, and habitat loss.

Range

South and Southeast Asia and northern Australia.

Diet

They are primarily scavengers and feed mainly on dead fish and crabs but occasionally hunt live prey such as small mammals and insects.

NE DD LC LEAST CONCERN NT VU EN CR EW EX

Crested Serpent-eagle
Spilornis cheela

Key Features

Large head, mostly dark brownish. Dark brown with fine white spots, and rufous-brown underparts with dark-edged white spots. Black bill with yellow cere, face-skin and eyes. Legs and feet are yellow.

Habitat

Dry or wet forests, mangrove and scrubs.

Threats

Some of the important threats to these birds are habitat destruction, opportunistic poaching, and illegal shooting.

Range

Bangladesh, Bhutan, Brunei Darussalam, Cambodia, China, India, Indonesia, Japan, Lao PDR, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Thailand and Vietnam.

Diet

Snake, reptiles, small birds and mammals.

NE DD LC LEAST CONCERN NT VU EN CR EW EX

Changeable Hawk-eagle
Nisaetus cirrhatus

Key Features

Two color morphs, pale and black. Pale-morph adult is dark brown above with a white breast and belly overlaid with dark streak, faint narrow rufous barring on thighs. Dark morph is dark all over with paler outer wing feathers.

Habitat

Forest, grassland and forest edges.

Threats

Some of the important threats to these birds are habitat destruction, opportunistic poaching, and illegal shooting.

Range

Bangladesh, Brunei Darussalam, Cambodia, India, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, Philippines, Singapore, Sri Lanka, Thailand and Vietnam.

Diet

Including birds up the size of chickens, small mammals, snakes, and lizards.

NE DD LC LEAST CONCERN NT VU EN CR EW EX

Common Barn-owl
Tyto alba

Range

South and Southeast Asia, North and South America, Europe, Africa and Oceania.

Key Features

Heart-shaped face, long ivory to pinkish colored beak, and dark eyes. Chest and belly range in color from white to buff to light brown; back is usually rusty brown with some barring and spotting.

Habitat

Often gravitate toward open areas, like prairies or farmlands, but can be found in a wide variety of habitats, including developed urban areas.

Threats

Loss and fragmentation of foraging habitat, intensification of agricultural practices, urbanization, road development, pesticides, and climate change.

Diet

Almost exclusively small mammals and occasionally birds.

NE DD LC **NT** NEAR THREATENED VU EN CR EW EX

Red-breasted Parakeet
Psittacula alexandri

Key Features

Bright green with salmon-colored chests, gray-blue heads, and a black mustache and throat. Males have a bright red upper bill, while females' bills are wholly black.

Habitat

Habitats utilised by the species include dry forest, moist deciduous secondary forest, mangroves, cultivated areas with trees and human settlements.

Threats

Illegal pet trade and habitat loss.

Range

Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Lao PDR, Myanmar, Nepal, Thailand and Vietnam.

Diet

Wild and cultivated fruits, flowers, nectar, nuts and seeds, leaves and cereals such as rice and maize.

NE DD LC **NT** NEAR THREATENED VU EN CR EW EX

Alexandrine Parakeet
Palaeornis eupatria

Key Features

Predominantly green, with red shoulder patch and red beak. Female lacks male's narrow collar (black at front, pink at rear). Long tail feathers.

Habitat

Dry deciduous, semi-evergreen forest, riverin forest, mangrove forest) and cultivated areas.

Threats

Illegal trade (pet trade and merit-release practices) and habitat loss.

Range

Afghanistan, Bangladesh, Bhutan, Cambodia, India, Lao PDR, Myanmar, Nepal, Pakistan, Sri Lanka, Thailand and Vietnam.

Diet

Wild and cultivated seeds, flowers, flower buds, nectar, grain, fruit and vegetables.

NE DD LC LEAST CONCERN NT VU EN CR EW EX

Scaly-breasted Munia
Lonchura punctulata

Key Features
Stubby dark bill, brown upperparts and a dark brown head. The underparts are white with dark scale markings.

Habitat
Grasslands, gardens, fields, and agricultural areas.

Threats
Pet trade and habitat loss.

Range
Native to India and Southeast Asia, with introduced populations scattered elsewhere around the world.

Diet
Seeds, berries, and insects.

NE DD LC LEAST CONCERN NT VU EN CR EW EX

Barn Swallow
Hirundo rustica

Key Features

Steely-blue upper-parts, cinnamon and underparts vary across range, from bright buffy-orange to whitish. Chestnut throat and forehead, and deeply forked tail.

Habitat

Open habitat, especially large fields and wetlands, well adapted to human habitation.

Threats

Intensification of agriculture and illegal trade (merit release).

Range

Most widespread species of swallows in the world, found in every continent except Antarctica.

Diet

Flying insects: flies, beetles, grasshoppers, mosquitoes and dragonflies.

NE DD LC LEAST CONCERN NT VU EN CR EW EX

Common Hill Myna
Gracula religiosa

Key Features

Glossy black with bright yellow head wattles and orange bill. The wings are black with white wing patches that are most apparent in flight.
Ability to mimic noises and human speech.

Habitat

Tropical rainforest, semi-evergreen forest in lowlands, hills and mountains.

Threats

Habitat loss and pet trades throughout Asia.

Range

Bhutan, Brunei Darussalam, Cambodia, China, India, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, Philippines, Singapore, Thailand and Vietnam.

Diet

Arboreal frugivore, but also nectar, insects, eggs, and small reptiles.

NE DD LC NT VU EN **CR** CRITICALLY ENDANGERED EW EX

Giant Ibis
Thaumatibis gigantea

Key Features

Large, grey-brown plumage with greenish gloss, wings grey with black feather-tips. Head/neck are bare with black bars at the rear, bill is long and pale, legs are red, eyes are dark red.

Habitat

Predominantly Deciduous Dipterocarp Forest with seasonal ponds (trapeangs). Marshes, pools and wide rivers.

Threats

Habitat conversion, deforestation, human disturbance, hunting and egg collecting.

Range

Cambodia, Lao PDR and Vietnam. Mostly confined to northern and eastern Cambodia.

Diet

Invertebrates, crustaceans, eels, small amphibians and reptiles.

NE DD LC NT VU EN **CR** CRITICALLY ENDANGERED EW EX

White-shouldered Ibis
Pseudibis davisoni

Key Features

Dark brownish, with dark greenish-blue gloss on upperwing. White collar, bare blackish head. White wing-patch (mainly visible when flying). Dull red legs, red eye.

Habitat

Deciduous Dipterocarp Forest with seasonal ponds (trapeangs), wetlands, marshes, open grasslands, watercourses including wide rivers with sand and gravel bars.

Threats

Habitat loss, deforestation, infrastructure and agricultural development, hunting.

Range

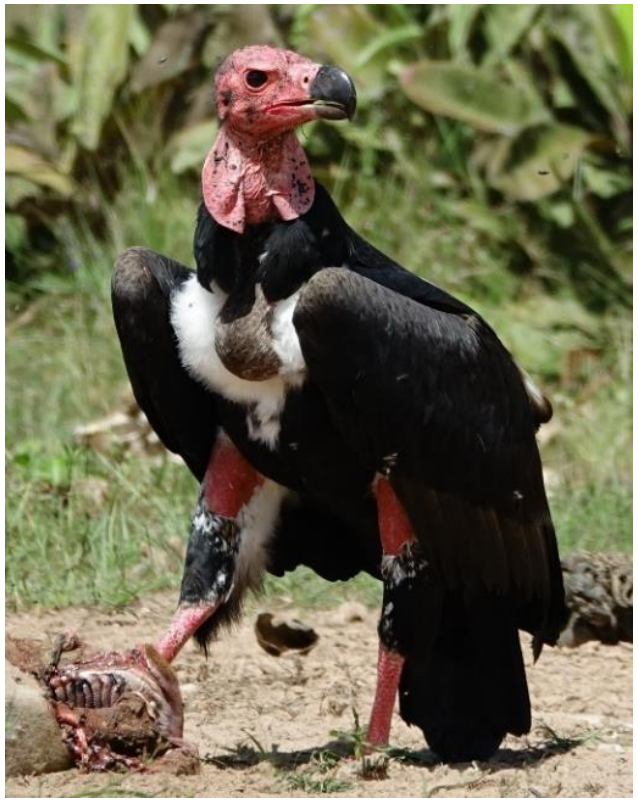
Cambodia, Indonesia and Lao PDR

Diet

(Aquatic) invertebrates, crustaceans, small reptiles and amphibians, eels.

NE DD LC NT VU EN **CR** CRITICALLY ENDANGERED EW EX

Red-headed Vulture
Sarcogyps calvus



Range

Bangladesh, Cambodia, China, India, Lao PDR, Myanmar, Nepal and Vietnam.

Key Features

Blackish plumage, white frontal part of neck-ruff and white patches on the flanks. Red head with loose flaps on the side. Neck, legs and feet are also red. Males have yellowish eyes, female's eyes are dark brown.

Habitat

Open countryside, well-wooded hills and dry deciduous forests, usually away from human habitation.

Threats

Demise of wild ungulates, habitat conversion, poisoning (poison baits), logging of nesting trees, direct persecution, pharmaceutical NSAID usage (Diclofinac, Ketoprofen) on livestock.

Diet

Carrion: carcasses of ungulates, birds, turtles and fish.

NE DD LC NT VU EN **CR** CRITICALLY ENDANGERED EW EX

White-rumped Vulture
Gyps bengalensis

Key Features

Blackish plumage with white neck-ruff, lower back and rump. Mostly naked greyish-brown head and neck, with dark bill.

Habitat

Open countryside, even near human habitation and dry deciduous forests.

Threats

Food shortage, habitat conversion, poisoning (poison baits), logging of nesting trees, direct persecution, pharmaceutical NSAID usage (Diclofinac, Ketoprofen) on livestock.

Range

Afghanistan, Bangladesh, Cambodia, India, Myanmar, Nepal and Pakistan.

Diet

Carrion: both putrid and fresh.

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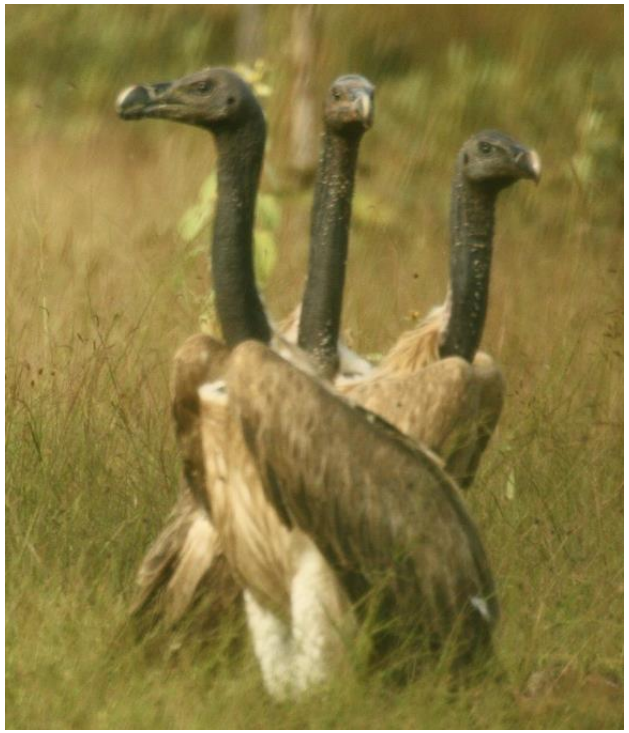
Slender-billed Vulture
Gyps tenuirostris



Range

Bangladesh, Cambodia, India, Myanmar, Nepal and Lao PDR.

Key Features

Rather pale sandy-brown body and wing-coverts, contrasting with the naked blackish head and fairly long neck and relatively long, slender dark bill. The neck ruff is small and short. Lower back and rump are whitish. The greater coverts have dark centres both on upper and underwings.

Habitat

Dry open country and forested areas, usually away from human habitation.

Threats

Demise of wild ungulates, habitat conversion, poisoning (poison baits), logging of nesting trees, direct persecution, pharmaceutical NSAID usage (Diclofinac, Ketoprofen) on livestock.

Diet

Carrion: both putrid and fresh.

NE DD LC NT **VU** VULNERABLE EN CR EW EX

Sarus Crane
Grus antigone

Key Features

Plumage pale grey, long pale red legs. Bare red head and upper neck.

Habitat

Open wet and dry grasslands, agricultural fields, marshes and pools and dry savanna woodlands with seasonal pools.

Threats

Habitat loss and degradation, human disturbance, trade in adult birds, chicks and eggs.

Range

Australia, Cambodia, India, Lao PDR, Myanmar, Nepal, Pakistan and Vietnam.

Diet

Omnivorous: roots and tubers, invertebrates, amphibians

NE DD LC NT VU EN **CR** CRITICALLY ENDANGERED EW EX

Bengal Florican
Houbaropsis bengalensis

Key Features
Male is black with a speckled brown back and mostly white wings. Female is buffish-brown with blackish markings above, blackish-brown crown with buff central stripe, and pale buff neck/ upper breast.

Habitat
Seasonally inundated, natural and semi-natural grasslands, degraded deciduous dipterocarp forest during the wet season.

Threats
Habitat loss, degradation, conversion and disturbance, power lines, predation by dogs and hunting.

Range
Cambodia, India and Nepal

Diet
Omnivorous: seeds, grain, tender shoots of grass and insects.

NE DD LC NT **VU** VULNERABLE EN CR EW EX

River Tern
Sterna aurantia

Key Features

Greyish-white with pale grey wings. Forked tail, with streamer-like outertail. Yellow beak, reddish legs. black nape/ mask. Crown black in breeding plumage, greyish dark-streaked in non-breeding plumage.

Habitat

Rivers and freshwater lakes, also occurring rarely on estuaries.

Threats

Flooding, egg and chick predation, disturbance, food shortage.

Range

Southern and Southeast Asia (Pakistan, India, Bangladesh, Myanmar, Thailand, Cambodia, China, Nepal, Bhutan, Laos and Vietnam).

Diet

Fish, crustaceans, frogs, tadpoles and aquatic insects are their primary food.

NE DD LC NT VU **EN** ENDANGERED CR EW EX

Giant Freshwater Ray
Urogymnus polylepis

Key Features

Brownish-grey, wide (up to 240cm) and flat disc-shaped body, with long whip-like tail. Barb at the base of the tail which can be up to 38cm in length. Total length up to 500cm length.

Habitat

Large, deep, rivers with a muddy or sandy bottom, estuaries.

Threats

Over harvesting for aquarium trade and sportfishing, degradation of river habitats, pollution.

Range

Cambodia, India, Indonesia (Kalimantan), Lao PDR, Malaysia (Sarawak, Sabah), Thailand and Vietnam.

Diet

Carnivore. Feeds on benthic invertebrates crustaceans and fishes.

NE DD LC NT VU EN CR CRITICALLY ENDANGERED EW EX

Seven-striped Barb
Probarbus jullieni

Key Features

Total length just under 150cm five longitudinal stripes between dorsal fin and lateral line, relatively small lips, large fish, 4 scale rows between lateral line and pelvic fin.

Habitat

Large rivers, with sand or gravel substrates and abundant mollusc populations.

Threats

Overfishing, habitat destruction, and large (hydropower) dams.

Range

Cambodia, Lao PDR, Malaysia, Thailand and Vietnam.

Diet

Omnivorous: feeding on zooplankton, aquatic plants, fruits, invertebrates, molluscs, shrimp, and crabs.

NE DD LC NT VU EN **CR** CRITICALLY ENDANGERED EW EX

Giant Barb
Catlocarpio siamensis

Key Features

Eye low, at or below middle of side of the large head. No spine in dorsal fin. No barbels. To 300cm total length, but rarely >200cm.

Habitat

Larger rivers and floodplain areas in the Maeklong, Mekong and Chao Phraya basins.

Threats

Over-harvest, habitat loss and fragmentation, dams, and pollution.

Range

Cambodia, Lao PDR, Thailand and Vietnam.

Diet

Omnivorous: crab, shrimp, algae, phytoplankton and fruits of inundated terrestrial plants.

NE DD LC NT VU EN **CR** CRITICALLY ENDANGERED EW EX

Mekong Giant Catfish
Pangasianodon gigas

Key Features

Gray in color and lacking stripes. Low-set eyes situated below level of mouth, lack of teeth in adults. Almost complete absence of barbels. Up to 350kg.

Habitat

Greater Mekong.

Threats

Overfishing, habitat loss and degradation, pollution and genetic introgression with cultured stocks.

Range

Cambodia, Lao PDR, Thailand and Vietnam.

Diet

Herbivorous: plants and algae.

APPENDIX: LITERATURE REFERENCES

Content of Environmental Life Skills for Teacher Training Centers, the Ministry of Education, Youth and Sport (Kingdom of Cambodia)

Cambodian Law on Forestry in 2002 (Chapter 10: Articles 48- 50)

Cambodian Law on Fishery in 2006 (Chapter 5: Articles 20- 23)

Das, I. 2008. Pelochelys cantorii Gray 1864 – Asian giant softshell turtle. In: Rhodin, A.G.J., Pritchard, P.C.H., van Dijk, P.P., Saumure, R.A., Buhlmann, K.A., and Iverson, J.B. (Eds.). Conservation Biology of Freshwater Turtles and Tortoises: A Compilation Project of the IUCN/SSC Tortoise and Freshwater Turtle Specialist Group. Chelonian Research Monographs No. 5, pp. 011.1-011.6,

Man Soriyonn, Suon Phalla, Sin Polin and Joe Walston- A Guide to the Mammals of Cambodia (WCS- Cambodia Programme and MAFF- Ministry of Agriculture, Forestry & Fisheries)

Moll, E. et al. "Batagur affinis (Cantor 1847) – Southern River Terrapin, Tuntong." (2015)

Mahood et al. 2019. A systematic expert-based assessment of progress and priorities for conservation of the Bengal Florican Houbaropsis bengalensis

Rainboth, W.J., 1996. Fishes of the Cambodian Mekong. FAO species identification field guide for fishery purposes. FAO, Rome, 265 p.

Rhodin et al. 2018. Global Conservation Status of Turtles and Tortoises (Order Testudines). Chelonian Conservation and Biology 17(2): 135-161

APPENDIX: LITERATURE REFERENCES

Robson 2005. Birds of South-East Asia: Concise Edition

River of Giants, Giant fish of the Mekong

Stenkat J. et al. 2019. Wildlife and Environment Protection and Conservation, A guide book for Buddhist monks in Cambodia. Angkor Centre for Conservation of Biodiversity (ACCB)

Tan Setha and Poole, C.M. (2003)- A Field Guide to the Birds of Cambodia (WCS-Cambodia Programme)

Vassilieva et al. 2016. A photographic Field Guide to the Amphibians and Reptiles of the Lowland Monsoon Forests of Southern Vietnam

www.pangolinsg.org/pangolins/sunda-pangolin/

www.iucnredlist.org

www.animaldiversity.org

https://www.iucn.org/regions/asia/our-work/coastal-and-marine-ecosystems

http://chm.aseanbiodiversity.org/index.php?option=com_wrapper&view=wrapper&Itemid=307

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WWF's Beliefs & Values Programme, which has sponsored this guidebook, engages with leaders and communities based on their spiritual, religious and cultural beliefs and value systems.

The Angkor Centre for Conservation of Biodiversity (ACCB) founded and operated by Allwetterzoo Munster, ACCB is one of Cambodia's first wildlife conservation centres, located at the foot of Phnom Kbal Spean, around 50 km north of the UNESCO World Heritage Site of Angkor.

Each year, several hundred wild animals are rehabilitated and, if possible, returned to the wild. Furthermore, ACCB runs environmental education activities in order to raise awareness about the threats affecting Cambodia's unique and endangered wildlife. This guide book for Buddhist monks has been developed in order to support the capacity building for Buddhist monks involved in animal protection and conservation.