TITLE

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Please READ Instructions in the notes section BELOW.
• You may ADD extra notes in this section below these instructions
• Please DELETE this box.
Figure 1: Location Map of Cambodia and its surrounding Countries
BIODIVERSITY DESCRIPTION AND THREATS

One of the most biodiverse countries in Southeast Asia!

- 8,260 plant species – 10% being endemic
- >250 amphibian and reptile species
- 874 fish
- >500 bird species

Areas of interest:

- Cardamom Mountain Landscape
  - 10,000km² area in the south-west of the country
  - harbours a remarkable diversity of species
- Rich marine environment,
  - with coral reefs surrounding its islands.
  - 70 coral species known
  - also extensive seagrass beds and mangrove habitats.
BIODIVERSITY HOTSPOT?

• Indo-burma Hotspot

• Spans over parts of Bangladesh, India, Myanmar, Yunnan Province in China, all of the Lao People’s Democratic Republic, Cambodia and Vietnam, the vast majority of Thailand and a small part of Peninsular Malaysia. In addition, the hotspot covers the coastal lowlands of southern China and some offshore islands
  • Hainan Island (of China) in the South China Sea
  • Andaman Islands (of India) in the Andaman Sea

• Species diversity and endemism,
  • One of the most biologically important regions of the planet
ECOREGIONS

• Tropical and subtropical moist broadleaf forests
  • Annamite Range moist forests
  • Cardamom Mountains moist forests

• Tropical and subtropical dry broadleaf forests
  • Tropical and subtropical dry broadleaf forests
  • Central Indochina dry forests

• Freshwater ecoregions
  • Mekong
CURRENT PROTECTED AREAS

• Habitat loss and destruction
  • Mining or logging
• Over-exploitation
  • Hunting
  • Overfishing

• Global climate change
  • Change in rainfall patterns cause flooding
• Pollution and contamination
  • Plastic and chemical in rivers
Figure 2: Map showing current Protected Areas of Cambodia
CONSERVATION TARGETS  PERCENTAGE AND SPECIES PENALTY FACTORS

• Conservation targets are made up of
  • Ecoregions
    • Cardamom Mountain Rain Forests
    • Central Indochina Dry Forests
    • Indochina Mangrove
    • Southern Annamites Montane Forest
    • Southeastern Indochina Dry Evergreen Forest Ecoregion
    • Tonle Sap Freshwater Swamp Forests
  • Species
    • Megophrys auralensis
    • Hylarana faber
    • Philatus cardamonous
    • Chiromantis samkosensis
Figure 3: Map Showing the Cardamom Mountain Rain Forests Ecoregion
CONSERVATION TARGETS AND SPECIES PENALTY FACTORS

Map Showing the Central Indochina Dry Forests Ecoregion

Figure 4: Map Showing the Central Indochina Dry Forests Ecoregion
Figure 5: Map Showing the Indochina Mangrove Ecoregion
Figure 6: Map Showing the Southern Annamites Montane Forest Ecoregion
Figure 7: Map showing the Southeastern Indochina Dry Evergreen Forest Ecoregion
Figure 8: Map showing the Tonle Sap Freshwater Swamp Forests ecoregion
Figure 9: Map Showing distribution of Megophrys auralensis
Figure 10: Map showing distribution of *Hylarana faber*
• Figure 11: Map showing distribution of Philatus cardamonous
Figure 12: Map showing distribution of Chiromantis samkosensis
• Figure 13: Map showing Ecological Planning Units
Figure 14: Map showing Systematic Conservation Planning Units for Cambodia
Figure 15: Map showing Landuse of Cambodia
• Figure 16: Map showing current protected areas of Cambodia
SYSTEMATIC CONSERVATION PLANNING EXPLAINING MARXAN

- MARXAN PARAMETERS
  - BOUNDARY LENGTH MODIFIER 2
  - REPEAT RUNS 1000
  - SPECIES MISSING IF PROPORTION OF TARGET LOWER THAN 0.95
  - RUN MODE APPLY SIMULATED ANNEALING FOLLOWED BY ITERATIVE IMPROVEMENT
  - ANNEALING CONTROLS
    - # ITERATION 10000
    - TEMPERATURE DECREASES 1000
    - ITERATIVE IMPROVEMENT TYPE NORMAL ITERATIVE IMPROVEMENT TYPE
  - COST THRESHOLD
    - THRESHOLD 1600
  - PENALTY FACTOR A; 9
  - PENALTY FACTOR B; 2
  - STARTING PROPORTION IS 0
  - RUN MARXAN
Systematic CONSERVATION planning