

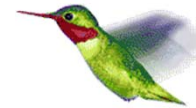


Convention on  
Biological Diversity



*Management of the Emerald Triangle Protected Forests Complex to Promote Cooperation for Trans-boundary Biodiversity Conservation between Thailand, Cambodia and Laos*

**ITTO-CBD-Birdlife International Side Event  
UN CBD COP 13**



Cancun, Mexico, 8 December 2016



**Cambodia and Thailand Project Teams**

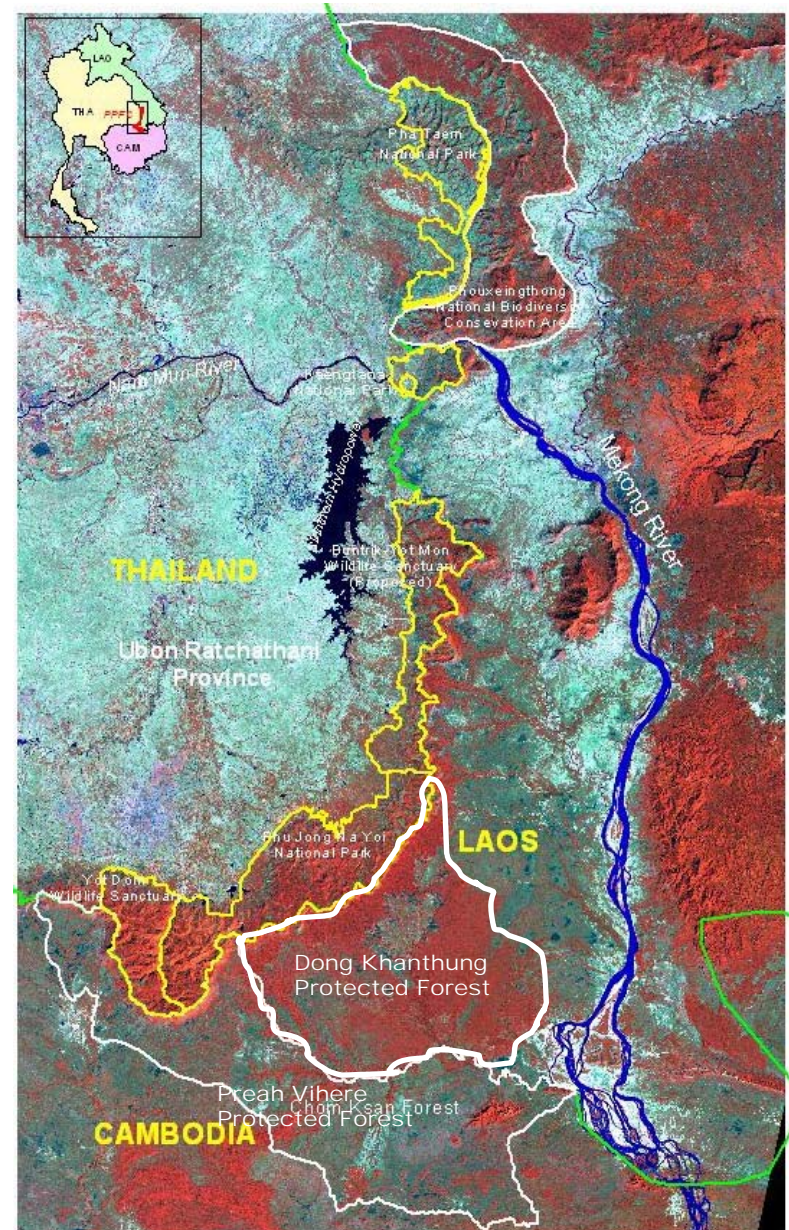


# ITTO TBCA Projects

Case	Locations of Projects	Area of Influence
1	Borneo - <b>Malaysia and Indonesia</b>	2.4 MM ha
2	<b>Emerald Triangle Complex</b> – <b>Thailand, Cambodia and Laos</b>	0.65 MM ha
3	Kabo-Ndoki Region - <b>Congo</b>	1.3 MM ha
4	Mengamé-Minkébé Gorilla Sanctuary - <b>Cameroon &amp; Gabon</b>	0.13MM ha
5	Cordillera del Condor – <b>Ecuador &amp; Peru</b>	2.4 MM ha
6	Tambopata-Madidi Protected Area – <b>Peru and Bolivia</b>	4.2 MM ha
	<b>Total</b>	<b>11.3 MM ha</b>

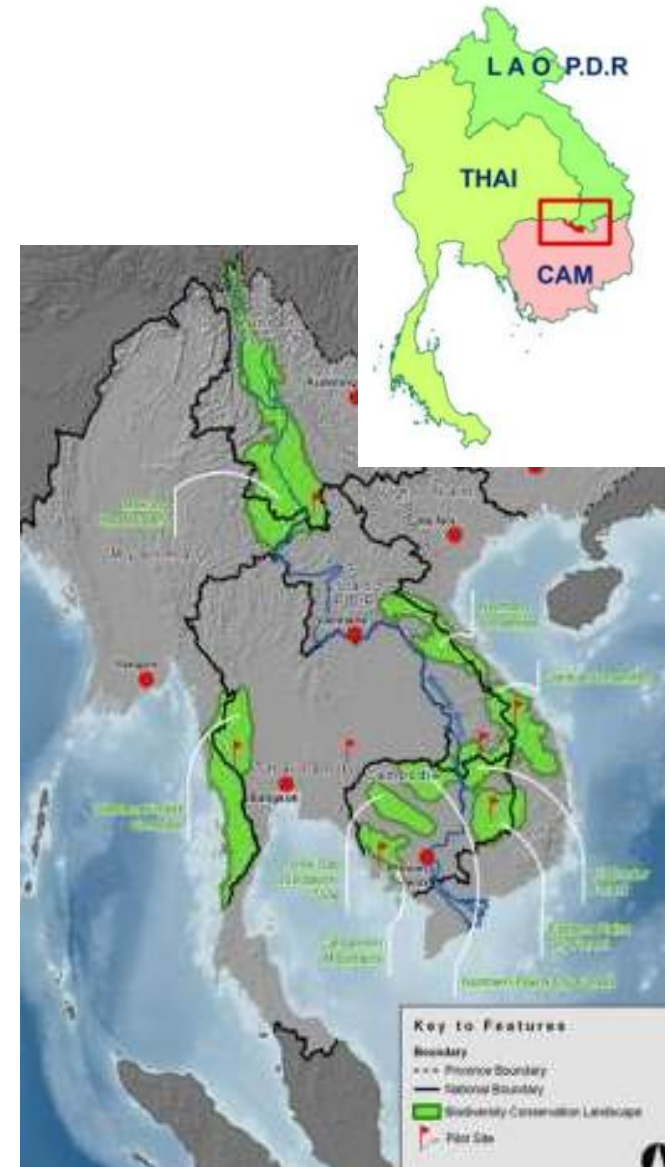
# The Emerald Triangle Protected Forests Complex

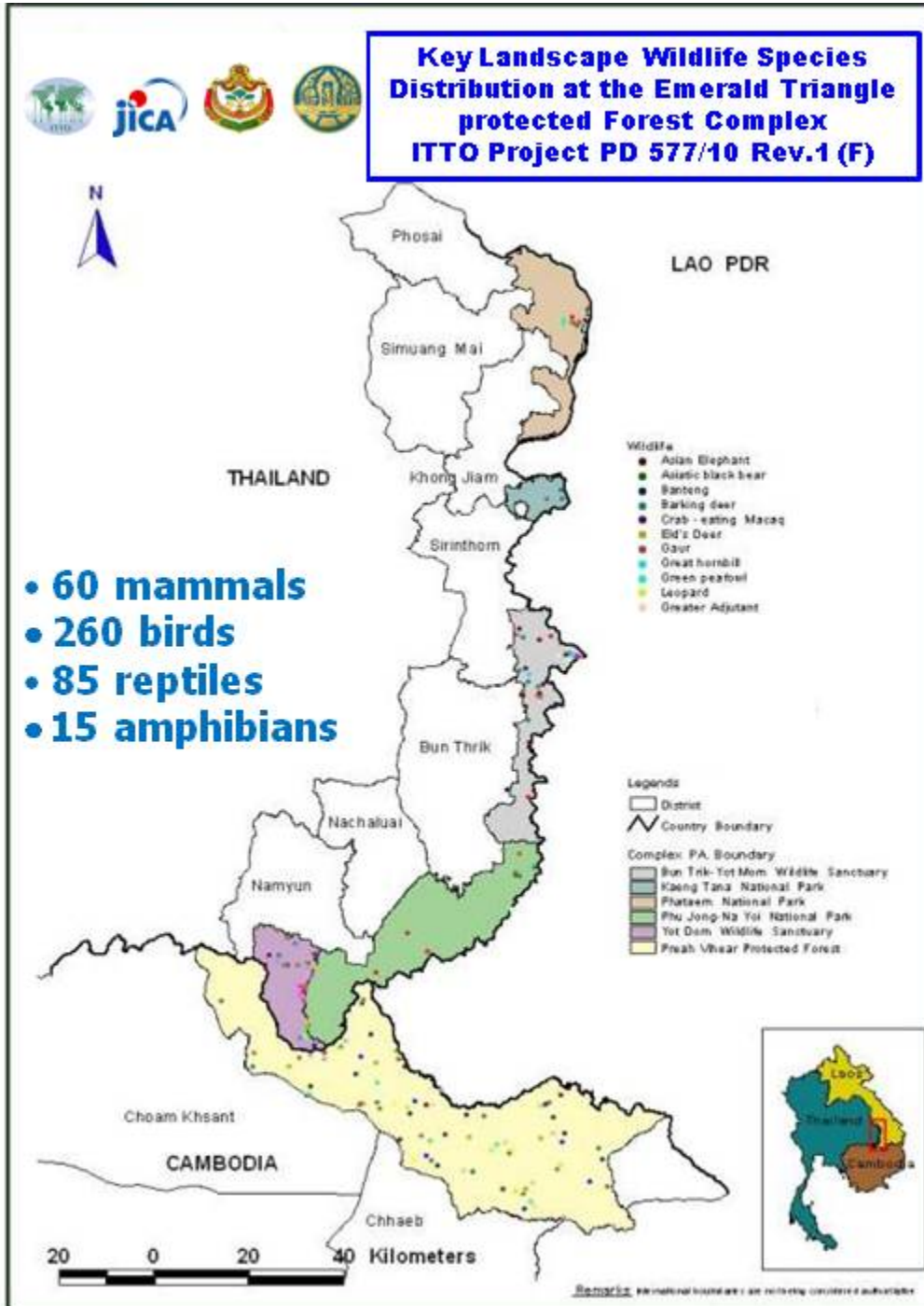
Component	Area (sq. km)
Pha Taem NP	353
Kaeng Tana NP	84
Phu Jong-Na Yoi NP	697
Yot Dom WS	235
Buntrarik-Yot Mon WS	365
<b>Sub-total</b>	<b>1,734</b>
Phou Xieng Thong NBCA	1,200
Dong Khanthung Protected Forest	1,700
<b>Sub-total</b>	<b>2,900</b>
Preah Vihear Protected Forest	1,900
<b>Total</b>	<b>6,534</b>



# The Emerald Triangle Protected Forests Complex

- The largest remaining, extensive intact block of a unique landscape of global importance for biodiversity conservation and climate change mitigation and adaptation.
- One of the most important Biodiversity Conservation Corridors of the Greater Mekong Sub-region.
- The last refuge for populations of more than 50 wildlife species on the IUCN Red List, including ten species which are listed as Critically Endangered.





- 60 mammals
- 260 birds
- 85 reptiles
- 15 amphibians

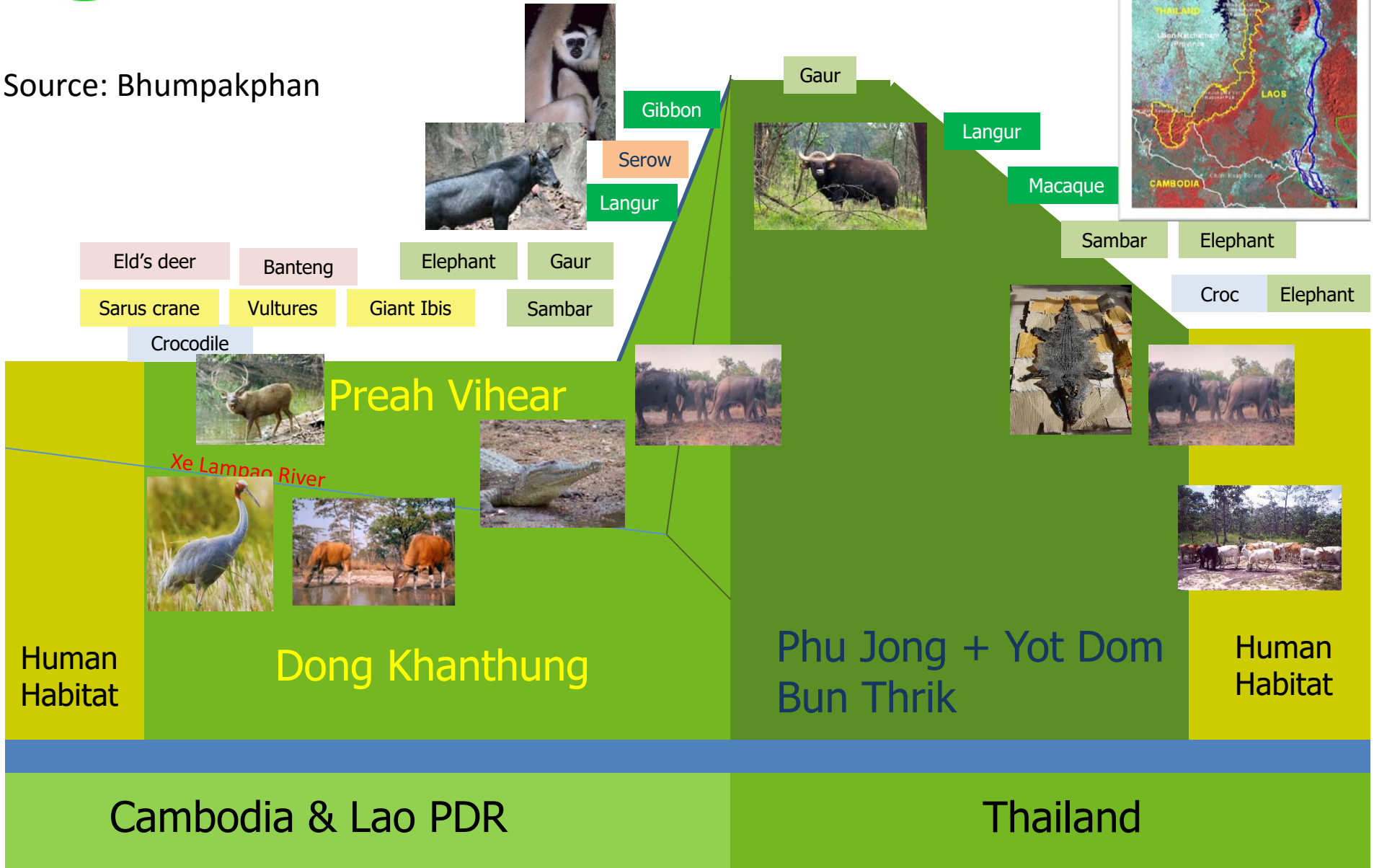




# Wildlife Distributions in Heterogeneous Landscapes

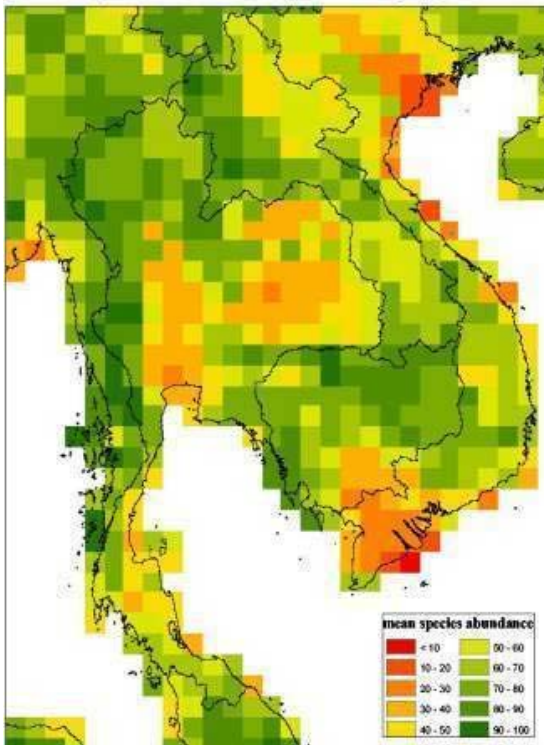


Source: Bhumpakphan

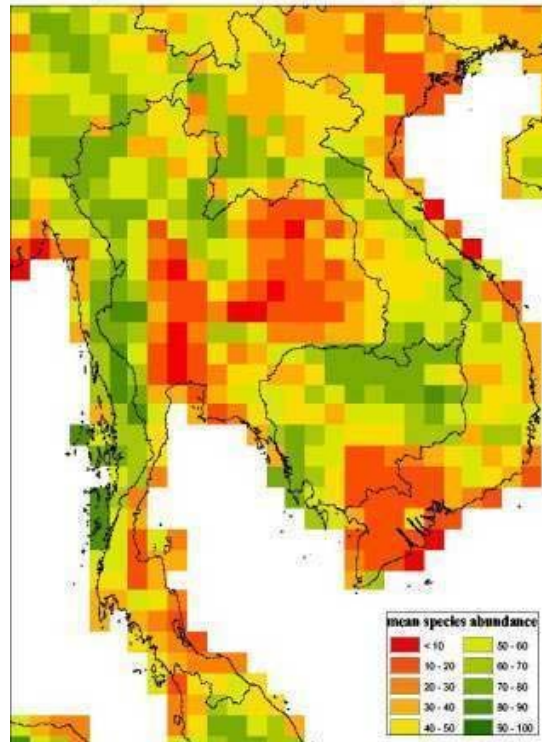


# Trend of Species Abundance in Greater Mekong Sub-Region

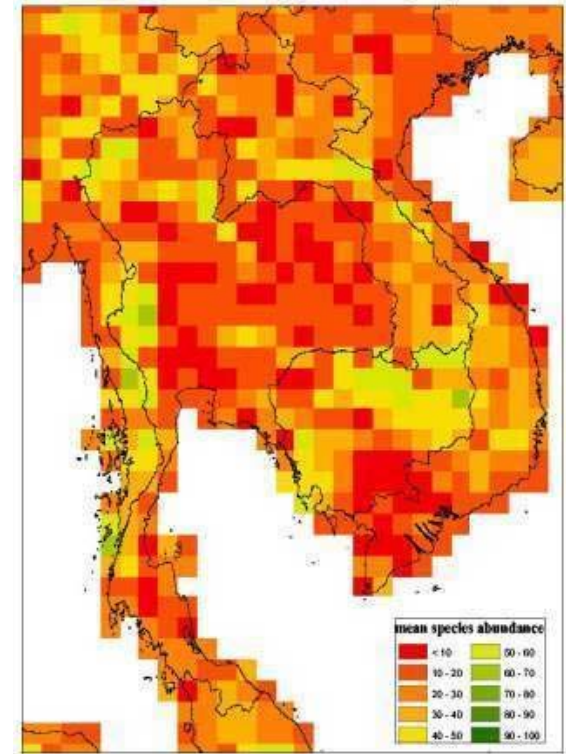
Mean species abundance (as % of original) in 1970



Mean species abundance (as % of original) in 2000



Mean species abundance (as % of original) in 2030



Source: Ben ten Brink "BCI Measuring and Modelling Biodiversity;" 2006.



# Iconic Wildlife Species

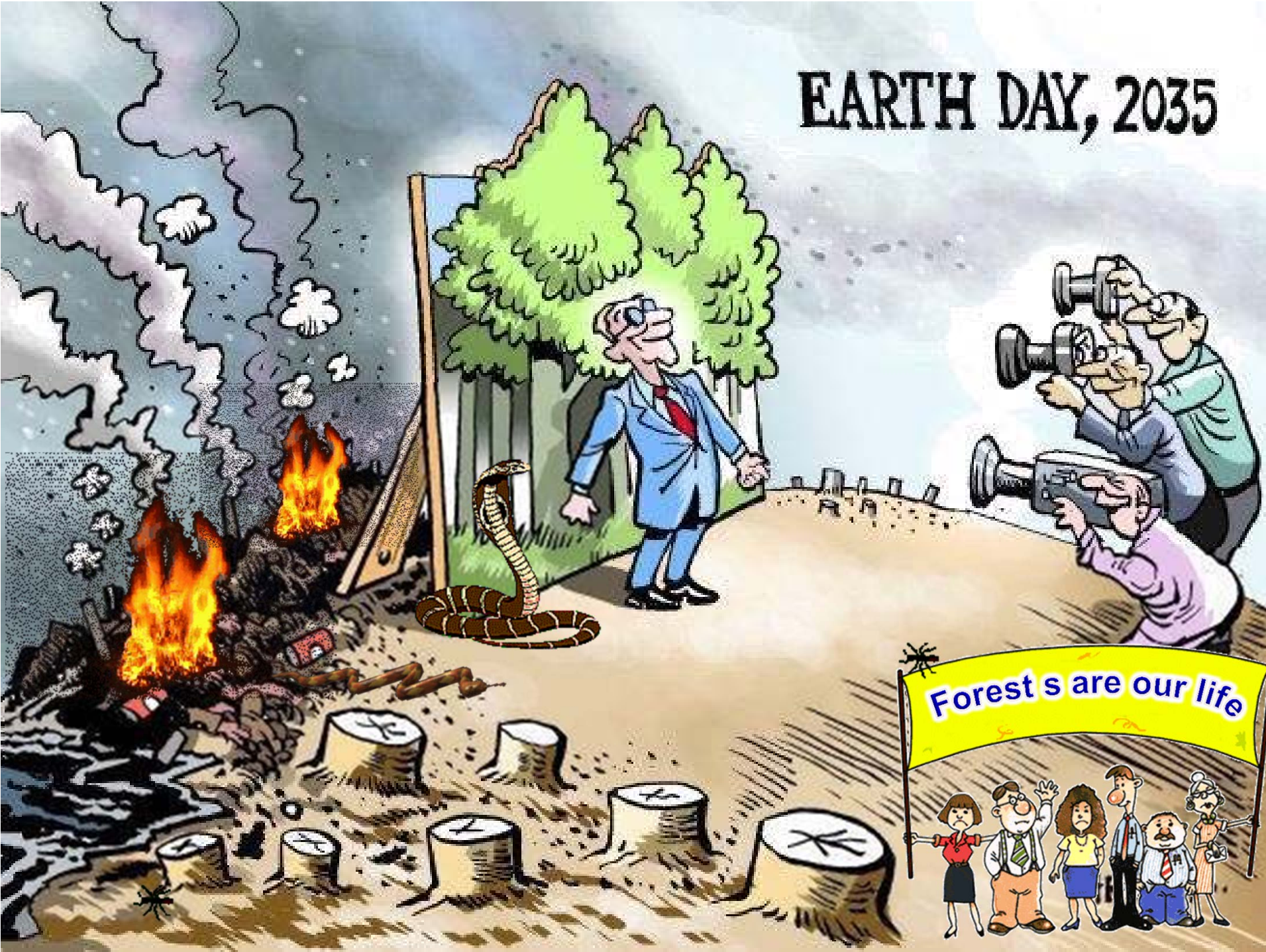
Species which formerly occurred in the PVPF, but apparently no longer occur there:

- **Asian Two-horned Rhinoceros** *Dicerorhinus sumatrensis*,
- **Lesser One-horned Rhinoceros** *Rhinoceros sondaicus* (last observed in Cambodia in 1930s),
- **Kouprey** *Bos sauveli* (last confirmed observation in Preah Vihear in 1964),
- **Wild Water Buffalo** *Bubalus bubalis* (last confirmed observation in Preah Vihear in 1964),
- **Indochinese Tiger** *Panthera tigris* (last confirmed observation in Preah Vihear in 2003), and
- **Asiatic Black Bear** *Ursus thibetanus* and **Large-antlered Muntjac** *Megamuntiacus*





# EARTH DAY, 2035



# The Emerald Triangle Protected Forests Complex Project

<p><b>Phase I</b> <b>2001-04</b></p>	<p>- <b>“Soft cooperation”</b> - To initiate management planning process in a framework of Trans Boundary Conservation Areas (TBCAs).</p>	<p>Thailand (Cambodia)</p>	<p>US \$629,624 Japan Switzerland USA</p>
<p><b>Phase II</b> <b>2008-10</b></p>	<p>- Establish <b>Common Vision</b> as a collaborative management framework and improve community livelihoods. - To enhance protection measures and monitoring of biological resources of TBCAs through involvement of relevant stakeholders and local communities.</p>	<p>Thailand &amp; Cambodia</p>	<p>US \$688,205 Japan Switzerland USA</p>
<p><b>Phase III</b> <b>2012-16</b></p>	<p>- <b>Joint wildlife monitoring research and on-the-job training.</b> - To strengthen the protection of trans-boundary habitats of protected wide-ranging species in the Emerald Triangle.</p>	<p>Thailand, Cambodia &amp; Lao PDR</p>	<p>US \$2,051,000 Japan under collaborative initiative of ITTO, CBD, &amp; JICA at CBD COP 10, Nagoya, 2010.</p>

**Better Informed Decisions in Protection of Trans-boundary Biodiversity Resources**

# Outputs of Phase III

## Sustainable Development Goals 2030

Forest Ecosystems provide food, clean water and energy, as well as various other benefits, and are essential for human well-being. It must be recognized that the provision of these goods and services ultimately depends on the ecological processes of well-functioning forest ecosystems.

**Livelihoods, employment and poverty alleviation:** Around the world, forests make a significant contribution to livelihoods and poverty.

**Goal 1: End poverty in all its forms everywhere**

**Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all**

**1 NO POVERTY**

**8 DECENT WORK AND ECONOMIC GROWTH**

**Sustainable production:** Forests support the sustainable production of agriculture and environmental products.

**Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture**

**Goal 12: Ensure sustainable consumption and production patterns**

**2 ZERO HUNGER**

**12 RESPONSIBLE CONSUMPTION AND PRODUCTION**

**Food security and safety nets:** Forests provide food security and safety nets in times of need or crisis.

**Goal 2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture**

**Goal 3: Ensure healthy lives and promote well-being for all ages**

**2 ZERO HUNGER**

**3 GOOD HEALTH AND WELL-BEING**

**Nutrition and Health:** Forest provide a wide range of nutritious foods, protein and medicinal plant.

**Goal 2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture**

**Goal 3: Ensure healthy lives and promote well-being for all ages**

**2 ZERO HUNGER**

**3 GOOD HEALTH AND WELL-BEING**

**Policy and partnerships:** Indicators and data on forests and their surrounding populations could provide much-needed information on poverty.

**Goal 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development**

**17 PARTNERSHIPS FOR THE GOALS**

**Terrestrial ecosystems and biodiversity:** Forests are essential to maintaining biodiversity and supporting environmental processes.

**Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss**

**15 LIFE ON LAND**

**Marine resources:** Mangrove forests support coastal ecosystems, store 'blue carbon', and prevent sea-level rise.

**Goal 14: Conserve and sustainably use the oceans, seas, and marine resources for sustainable development**

**14 LIFE BELOW WATER**

**Equality and Inequality:** The collective ownership of forests in developing countries is becoming more common, providing access and rights to marginalized communities.

**Goal 10: Reduce inequality among countries**

**Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels**

**10 REDUCED INEQUALITIES**

**16 PEACE, JUSTICE AND STRONG INSTITUTIONS**

**Sustainable Cities:** Forests support more than rural communities – they also sustain livelihoods of people living in and around cities.

**Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable**

**11 SUSTAINABLE CITIES AND COMMUNITIES**

**Infrastructure:** Forests provide essential products for infrastructure, housing development and sustainable cities.

**Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation**

**9 INDUSTRY, INNOVATION AND INFRASTRUCTURE**

**Economic Growth:** Forest products contribute to the economic base of many countries by contributing to economic growth, revenue, trade and investment.

**Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all**

**Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation**

**8 DECENT WORK AND ECONOMIC GROWTH**

**9 INDUSTRY, INNOVATION AND INFRASTRUCTURE**

**Education:** Forests provide a range of learning materials, encouraging environmental education and sustainability.

**Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all**

**4 QUALITY EDUCATION**

**Gender Equality:** Access to and control over forest resources is vital to women's empowerment and gender equality.

**Goal 5: Achieve gender equality and empower all women and girls**

**5 GENDER EQUALITY**

**Water:** Forests play a key role in the global water cycle and the protection of water resources.

**Goal 6: Ensure availability and sustainable management of water and sanitation for all**

**6 CLEAN WATER AND SANITATION**

**Energy:** Forests provide an important support renewable energy sources, including hydropower, wood and charcoal.

**Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all**

**7 AFFORDABLE AND CLEAN ENERGY**

# Outputs of Phase III

## Aichi Biodiversity Targets

Project Outputs	Aichi Targets
<p>I. Management plans incorporating research results on wide-ranging species and ecological processes are established and implemented.</p> <p>II. Capacity of multi-stakeholders in biodiversity conservation and monitoring is strengthened.</p> <p>III. Local communities are empowered to implement activities linking livelihoods improvement.</p>	<p>Target 5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved.</p> <p>Target 7: By 2020, forests are managed sustainably, %.</p> <p>Target 11: By 2020, 17 per cent of terrestrial ... areas ..., are conserved through well connected systems of protected areas.</p> <p>Target 15: By 2020, restoration of 15 per cent of degraded ecosystems.</p>



# Capacity Building

## GIS Mapping



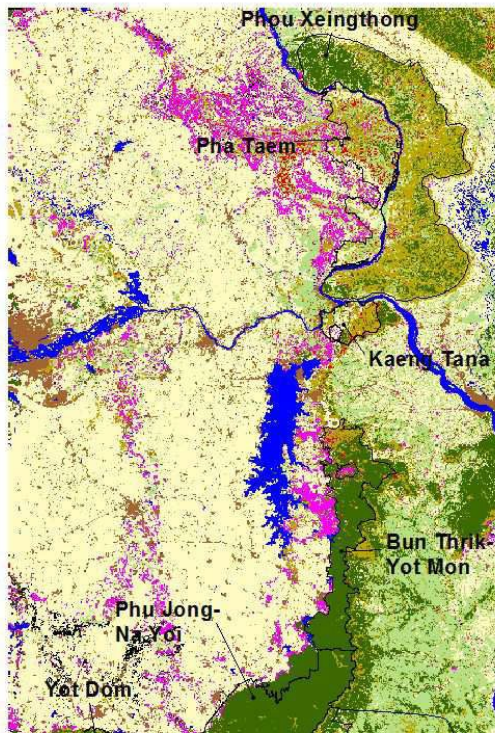
- *Introduction to GIS, Map Reading and GPS*
- *GIS Modeling for Forest Land Use*
- *Species distribution modeling*

**Wildlife Surveys:** making effective use of guide books, camera traps, interviews





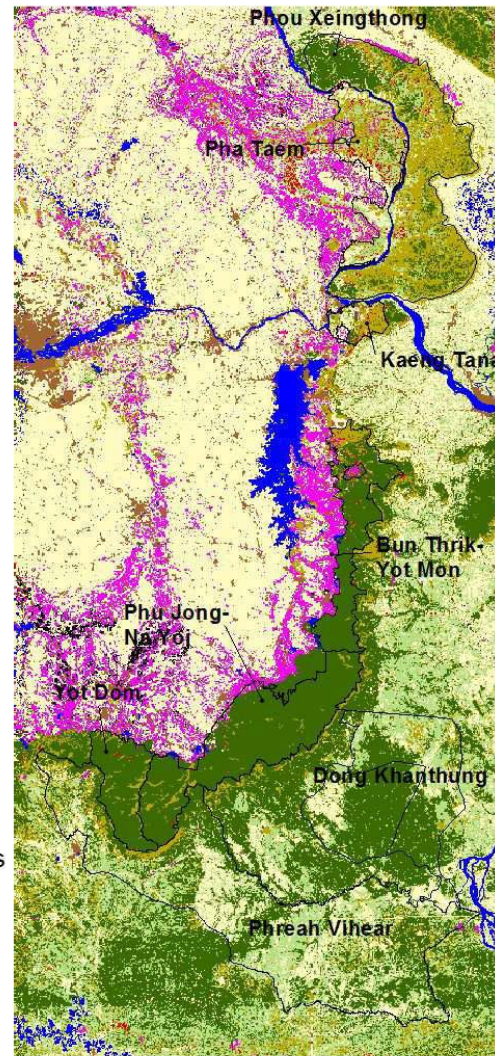
# LAND USE/LAND COVER



a) 2003

b) 2013

- Protected areas
- Land use/land cover classes
- Evergreen forest
- Mixed deciduous forest
- Dry dipterocarp forest
- Forest plantation
- Rubber plantation
- Oil palm
- Cassava
- Paddy field
- Bare soil/rock outcrop
- Urban/Infrastructure
- Water body



**Critical Questions**

- What are key drivers and **future land use** patterns?
- Where are **good habitats** for landscape species in the ETFC?
- What does landscape ecology contribute to trans-boundary habitats and the **conservation of biodiversity (CBD Aichi 2020 Targets)**?

# Raising Awareness and Improving Livelihoods



Food Bank  
Nursery



Painting Competition  
Home Stay



Bamboo Plants  
Handicrafts



# Law Enforcement in Cambodia







# National Arbor Day in Cambodia

Demonstration of ETFC partnership with His Majesty the King

**His Majesty the King of Cambodia provides a Royal audience to the Forestry Administration and reviews the Management Plan of the Preah Vihear Protected Forest.**



**Training on GIS and land use planning mapping for Preah Vihear Forestry Administration Cantonment officers.**



**Delegates from Thailand, Cambodia and Lao PDR planting rosewood at the project headquarters of the Preah Vihear Forestry Administration Cantonment.**



**Capacity Building on GIS applications.**



# Connecting the puzzle

- **Challenges for forest biodiversity conservation** include: poverty; political commitment; governance; legal frameworks, institutions; and human and financial resources.
- **Sound land use policy and security of tenure of gazetted forests** are crucial for ensuring biodiversity conservation; Conservation, protection and production forests must be set aside in forest landscapes.
- **Landscape-based ecosystem management** of protected areas is increasing to support biodiversity corridors to landscape management (IPSI, UNEP-IEMP GMS initiative, ADB GMS Environment Program, HoB ...).
- **Conservation can benefit communities, but efforts must be sustained and lead to self-reliance**; Poverty may be alleviated through integrated forest biodiversity conservation and development activities that consider livelihood improvement to be high priority.
- **Investment incentives** (public and private) in natural capital to foster economic viability, with people centered/socially acceptable quality of ecosystem integrity.

13





# 'Common Vision'



“By 2025, Cambodia, Laos and Thailand will have established a **common cooperative framework** for the **conservation and sustainable management** of the ETFC of the GMS in order to strengthen the protection of the **trans-boundary habitats of wide-ranging wildlife species** and will endeavor to **maintain the viability and ecological integrity** of the forest ecosystems and increase its land use and climate change adaptation capability to transform the ETFC into an **international symbol of TBCAs.**”



# Cooperation Continuum and Sustainability in the Emerald Triangle

- ❑ Technical cooperation has been enhanced, but sustainability remains a challenge.
- ❑ Showcase under the CBD/ITTO collaborative initiative at CBD COP 13.



✓ Joint ITTO proposal

✓ Information Sharing

✓ Coordinated Implementation

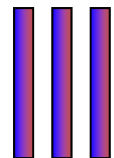
✓ Management plans are compatible.

✓ Governance mechanisms are established;

✓ Bilateral or Trilateral Cooperation Agreements

✓ Joint management planning and implementation

Border Disputes



Trans-boundary Conservation Cooperation Continuum

Unilateral Actions

Coordination

Advanced Cooperation

Full Cooperation



# Acknowledgements



*Thank You!*