



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

Regional Conference on “Forest Biodiversity and the Conservation of Carbon Stocks in the Permanent Forest Estate”

Siem Reap, Cambodia, March 20-21, 2016



Outline

- Trans-boundary Initiatives
- **Emerald Triangle Forests Complex (ETFC)**
- Project Phases & Objectives
- **Project Outputs Supporting Achievement of Forest-related Aichi Targets**
- **Selected Activities and Achievements**
- Uniqueness of ETFC TBCA
- **Lessons Learned and the Way Forward**



Project Overview

Development Objective: To contribute to the conservation of trans-boundary biodiversity in the Emerald Triangle Protected Forests Complex between Thailand, Cambodia and Laos.

Specific Objective: To strengthen the protection of trans-boundary habitats of protected wide-ranging wildlife species in the Emerald Triangle.

Output 1 : Management plans incorporating research results on wide-ranging species and ecological processes, which are compatible between countries, are established and implemented.	Output2: Capacity of multi-stakeholders in biodiversity conservation and monitoring is strengthened.	Output3 : Local communities are empowered to implement activities linking livelihoods improvement to reduced dependence on resources of protected areas
8 activities 38 sub-activities	8 activities 29 sub-activities	7 activities 31 sub-activities



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 (Royal Arbor Day, 7 July 2010).



ITTO TBCA Projects

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

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 of the Biodiversity Conservation Corridors in the Greater Mekong Sub-region.
- The last refuge for populations of more than 50 wildlife species on the IUCN Red List, including ten which are listed as Critically Endangered.



The Emerald Triangle Protected Forests Complex

Name	Area (km2)
Pha Taem NP	353
Kaeng Tana NP	84
Phu Jong-Na Yoi NP	697
Yot Dom WS	235
Buntrarik-Yot Mon WS	365
Sub-total	1,734
Phou Xieng Thong NBCA	1,200
Dong Khanthung Protected Forest	1,700
Preah Vihear Protected Forest	1,900
Total	6,534





Mammals

There are at least 60 mammal species in the ETFC, including primarily the larger species, as well as some bats. The smaller rodents and insectivores are less well known at this site. Species that formerly occurred in the PVPF apparently no longer do so, including the Asian Two-horned Rhinoceros (*Dicerorhinus sumatrensis*), Lesser One-horned Rhinoceros (*Rhinoceros sondaicus*; the last rhinoceros observed in Cambodia was in the 1930s), Kouprey (*Bos sauveli*) and Wild Water Buffalo (*Bubalus bubalis*) with the last confirmed observation in Preah Vihear in 1964.



Birds

There are more than 260 species of birds in the ETFC, including five of the rarest species in the world: the Giant and White-shouldered Ibises and the White-rumped, Slender-billed and Red-headed Vultures, each of which is Critically Endangered. There are many more species that are expected to be identified as more surveys are conducted.





Reptiles

There are more than 85 species, including a wide range of lizards, snakes, turtles and crocodiles with sizes that range from several meters long crocodiles to the tiniest of lizards in the ETFC and further additional species have been recorded through interviews with local people.

Where are we on the TBC cooperation continuum in the Emerald Triangle?

✓ Joint ITTO proposal

✓ Information sharing

✓ Coordinated implementation

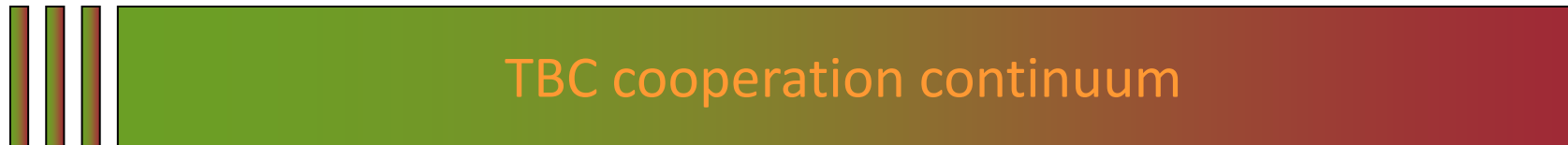
✓ Management plans are compatible.

✓ TBC governance mechanisms put in place;

✓ Bilateral or Tri-Lateral Cooperation Agreements

✓ Joint management planning and implementation

Border
Dispute



Unilateral
Action

Coordination

Advanced
Cooperation

Full cooperation





'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**.”

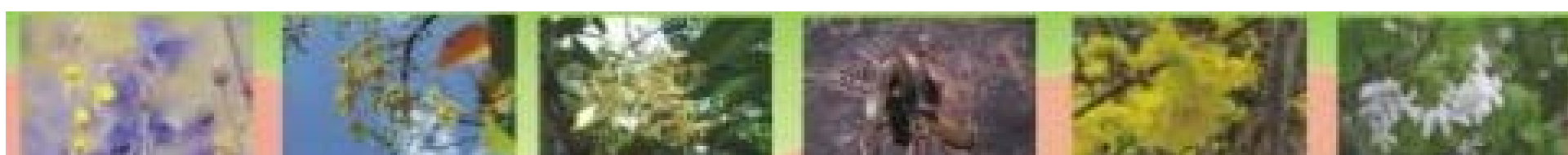
Expected Outputs (Phase III)

Project Outputs	Aichi Targets
1. Management plans incorporating research results on wide-ranging species and ecological processes, which are compatible between countries, are established and implemented.	<p>Target 2: By 2020, at the latest, biodiversity values..... reporting systems.</p> <p>Target 5: ... rate of loss of all natural habitats, including forests, ...is significantly reduced.</p> <p>Target 7: ... areas under agriculture, sustainably, ensuring conservation of biodiversity.</p> <p>Target 11: ...at least 17%integrated into the wider landscapes & seascapes.</p>



Expected Outputs (Phase III)

Project Outputs	Aichi Targets
2. Capacity of multi-stakeholders in biodiversity conservation and monitoring is strengthened.	<p>Target 5: By 2020, the rate of loss of all natural habitats, including forests,is significantly reduced.</p> <p>Target 7: By 2020 areas under agriculture,....ensuring conservation of biodiversity.</p>



Expected Outputs (Phase III)

Project Outputs	Aichi Targets
<p>3. Local communities are empowered to implement activities linking livelihoods improvement to reduced dependence on resources of protected areas.</p>	<p>Target 1: By 2020, at the latest, people conserve and use it sustainably.</p> <p>Target 2: By 2020, at the latest, biodiversity values..... reporting systems.</p> <p>Target 7: By 2020 areas under agriculture,....ensuring conservation of biodiversity.</p> <p>Target 15: By 2020, ecosystem resilience to combating desertification.</p>



OUTPUT 1: Management plans incorporating research results on wide-ranging species and ecological processes, which are compatible between countries, are established and implemented.

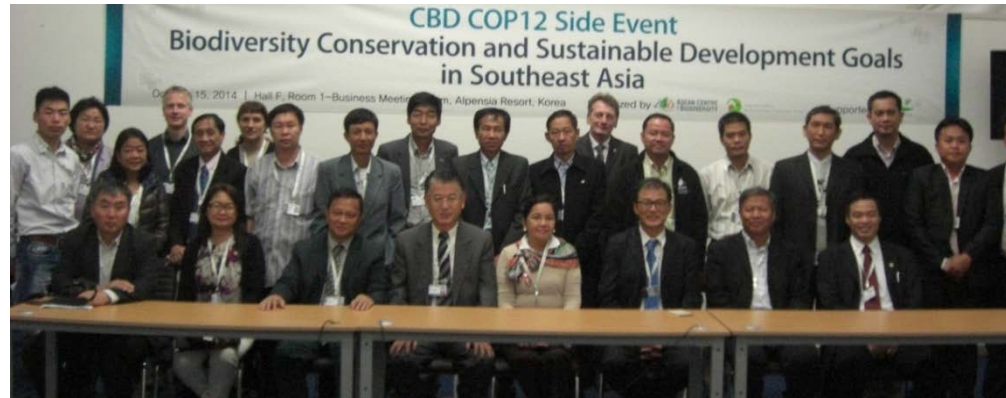
Meetings & Consultations among Project Participating countries



Project Steering Committee meetings and Joint Technical meetings



Presentation of the ITTO PD 577/10 Rev.1(F) project at the UN CBD COP 11 in Hyderabad India and in Pyeongchang, Korea: 6-17 October 2014.



The First Bilateral meeting on cooperation on wildlife law enforcement between Cambodia and Thailand organized on 18-19 December 2014 in Ubon Ratchathani province, Thailand.



National Conference in Phnom Penh, honoured by the Minister, 16-17 December 2015.



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OUTPUT 2: Capacity of multi-stakeholders in biodiversity conservation and monitoring is strengthened.



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Capacity Building – GIS and Mapping

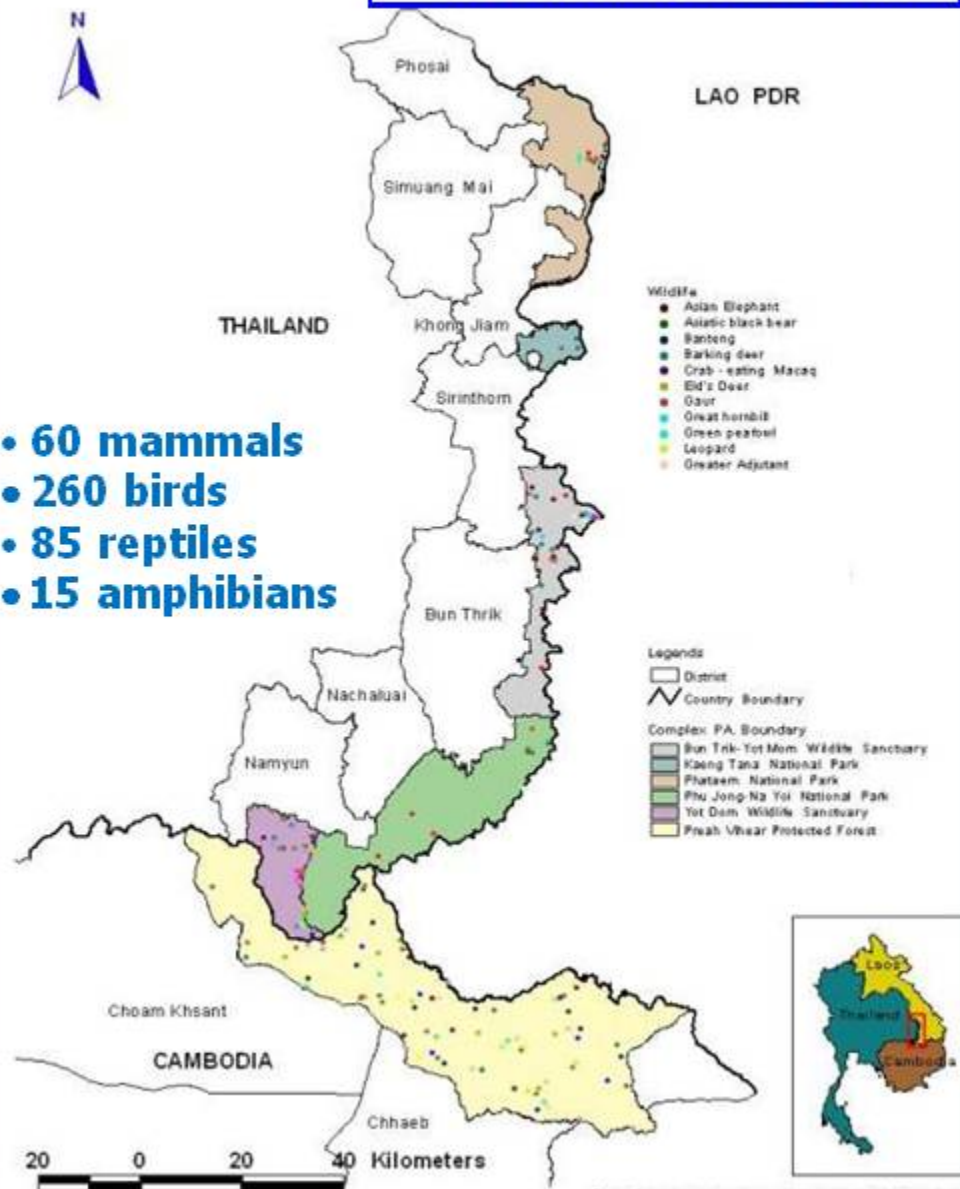




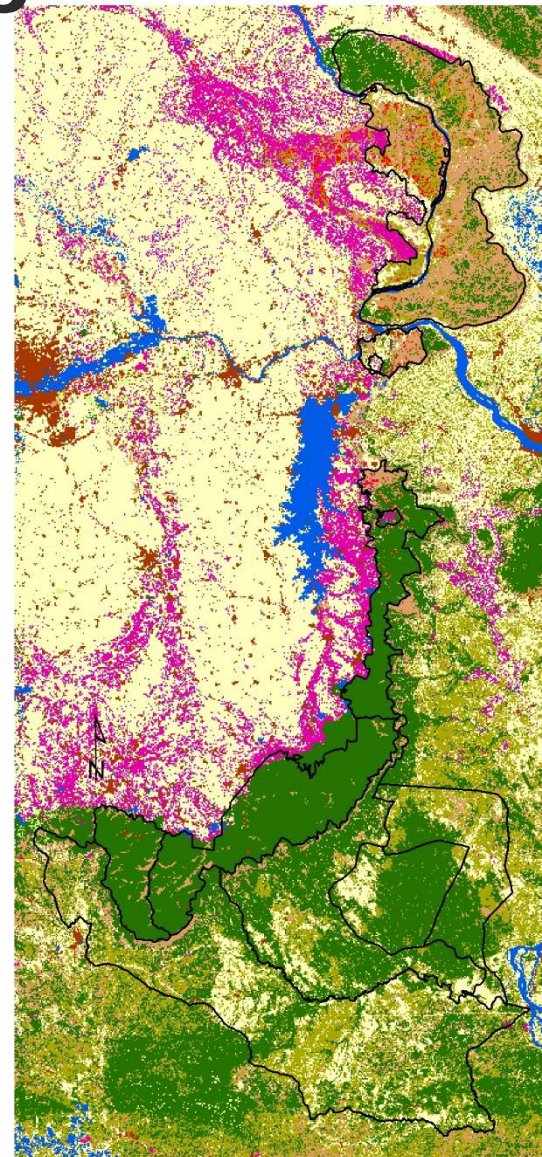
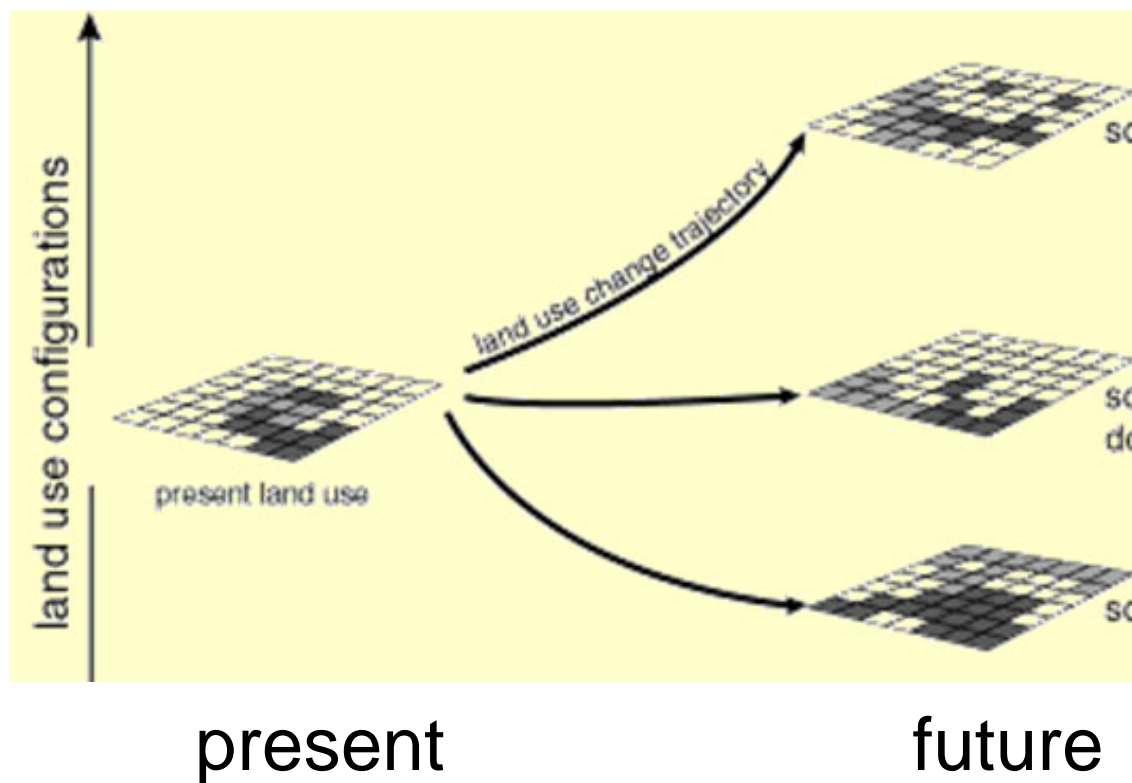
Key Landscape Wildlife Species Distribution at the Emerald Triangle protected Forest Complex ITTO Project PD 577/10 Rev.1 (F)



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



Scenario Development and LULC Modeling



Training activities on GIS and land use planning mapping delivered to Preah Vihear Forestry Administration Cantonment officers.



Delegates from Thailand, Cambodia and Lao PDR planting rosewood luxury species at the project headquarters of the Preah Vihear Forestry Administration Cantonment, 14 March 2014



Capacity Building on GIS application



Awareness raising conducted with various groups of stakeholders.



Forest inventory activities conducted with students from the Royal University of Agriculture and Prek Leap National School of Agriculture.



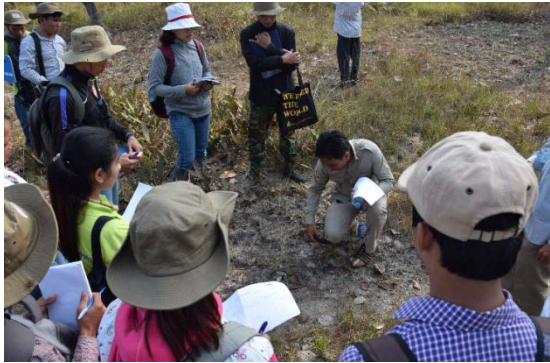
Project field staff mentoring student researchers in wildlife survey methods in the Preah Vihear Protected Forest.



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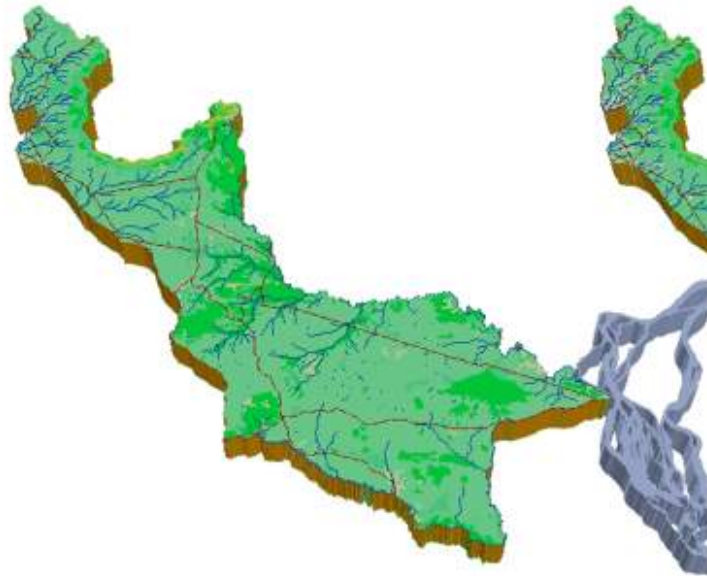


Project field staff mentoring student researchers in wildlife survey methods in the Preah Vihear Protected Forest.

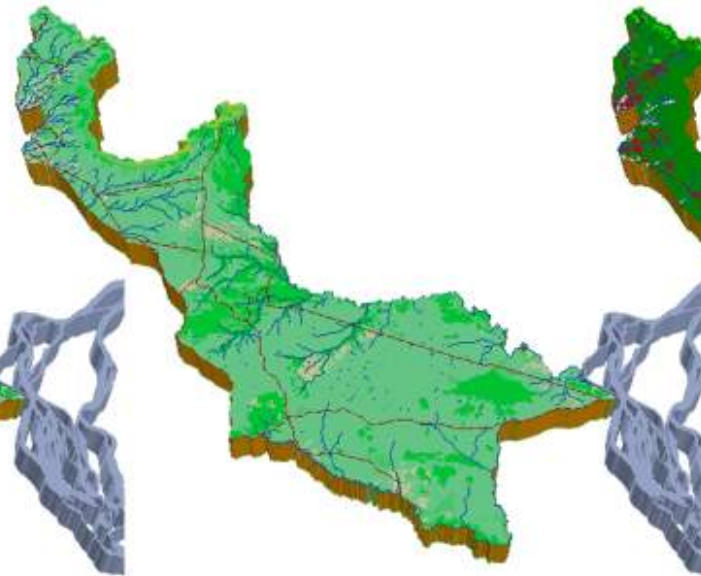


Forest Cover Changes 2002-2010 in the PVPF

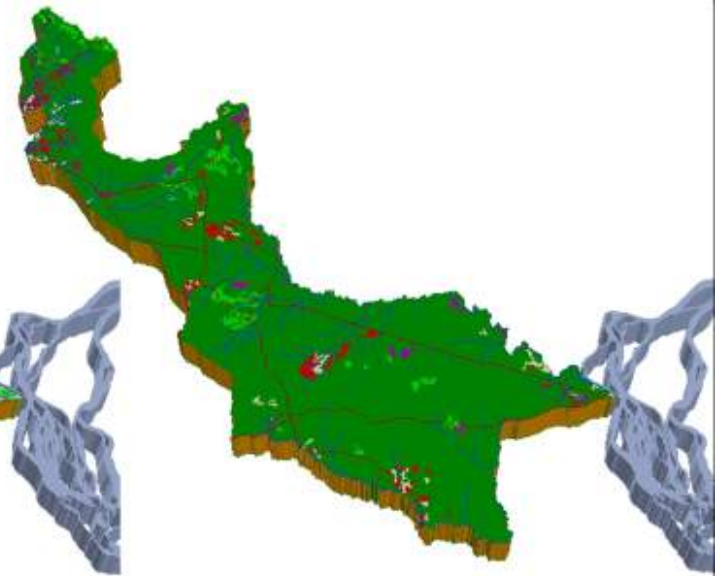
Forest Cover Changes



Forest Cover 2002



Forest Cover 2010



Forest Cover Changes 2002-2010

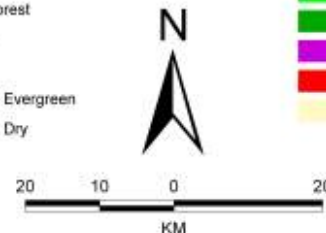
Forest Cover Changes 2002-2010 in Preah Vihear Protected Forest							
No.	FOREST TYPES	FOREST COVER AREA				FOREST CHANGES	
		2002		2010		2002-2010	
		Ha	%	Ha	%	Ha	%
1	Evergreen Forest	33,587	17.68	35,674	18.77	2,087	1.09
2	Semi-Evergreen Forest	18,512	9.74	18,189	9.57	-323	-0.17
3	Deciduous Forest	130,951	68.91	125,004	65.78	-5,947	-3.13
4	Other Forest	4,237	2.23	2,635	1.39	-1,602	-0.84
Total forest land		187,287	98.56	181,502	95.51	-5,785	-3.05
5	Non Forest	2,740	1.44	8,525	4.49	5,785	3.05
TOTAL AREA		190,027	100.00	190,027	100.00		

Legend

- Road
- River
- Mekong River
- Evergreen Forest
- Semi-Evergreen Forest
- Deciduous Forest
- Other Forest
- Wood & Shrubland Evergreen
- Wood & Shrubland Dry
- Non Forest
- Bamboo

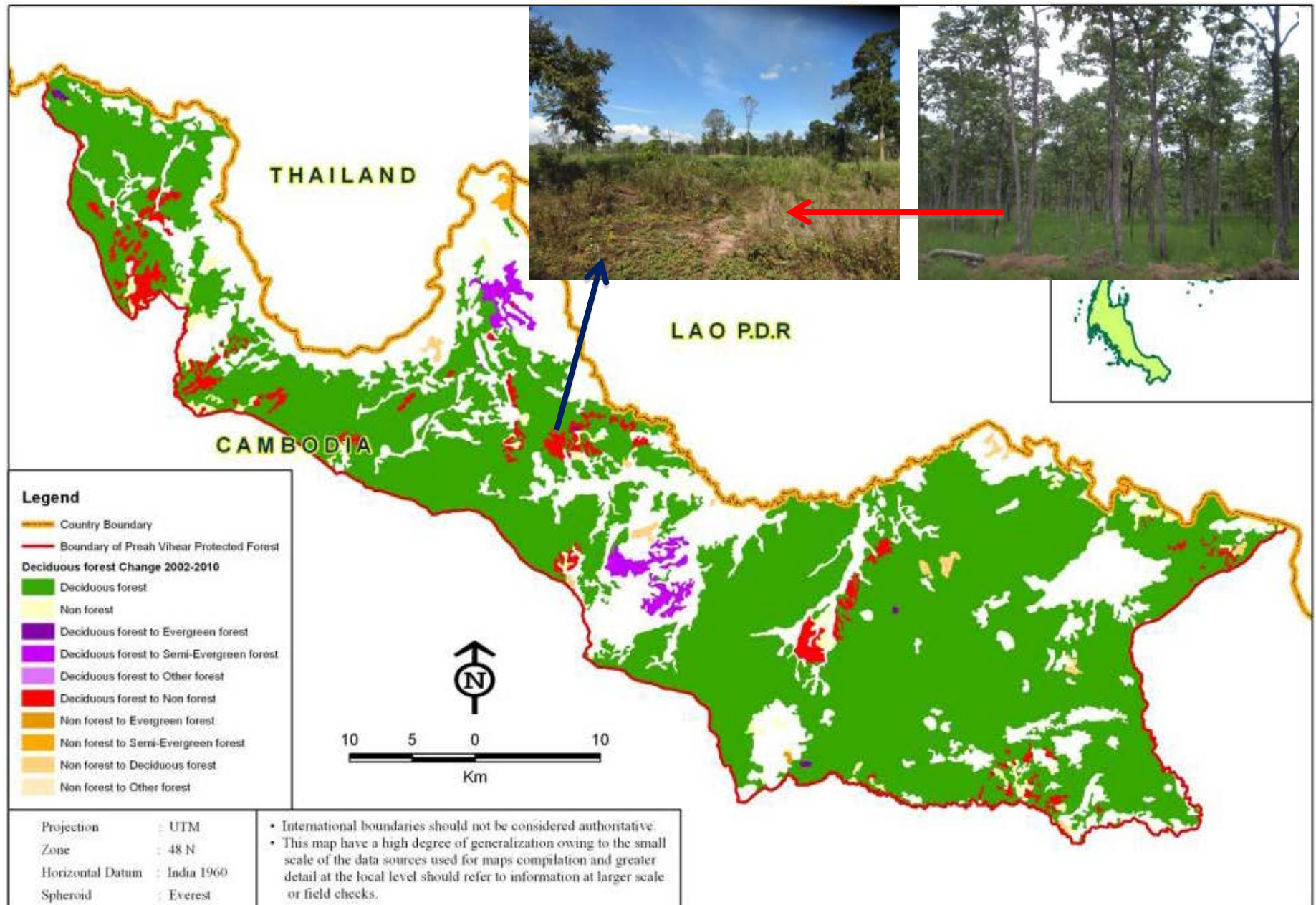
Legend

- Change of forest type
- Forest type stays same
- Non forest become forest
- Forest become non forest
- Non forest stays same

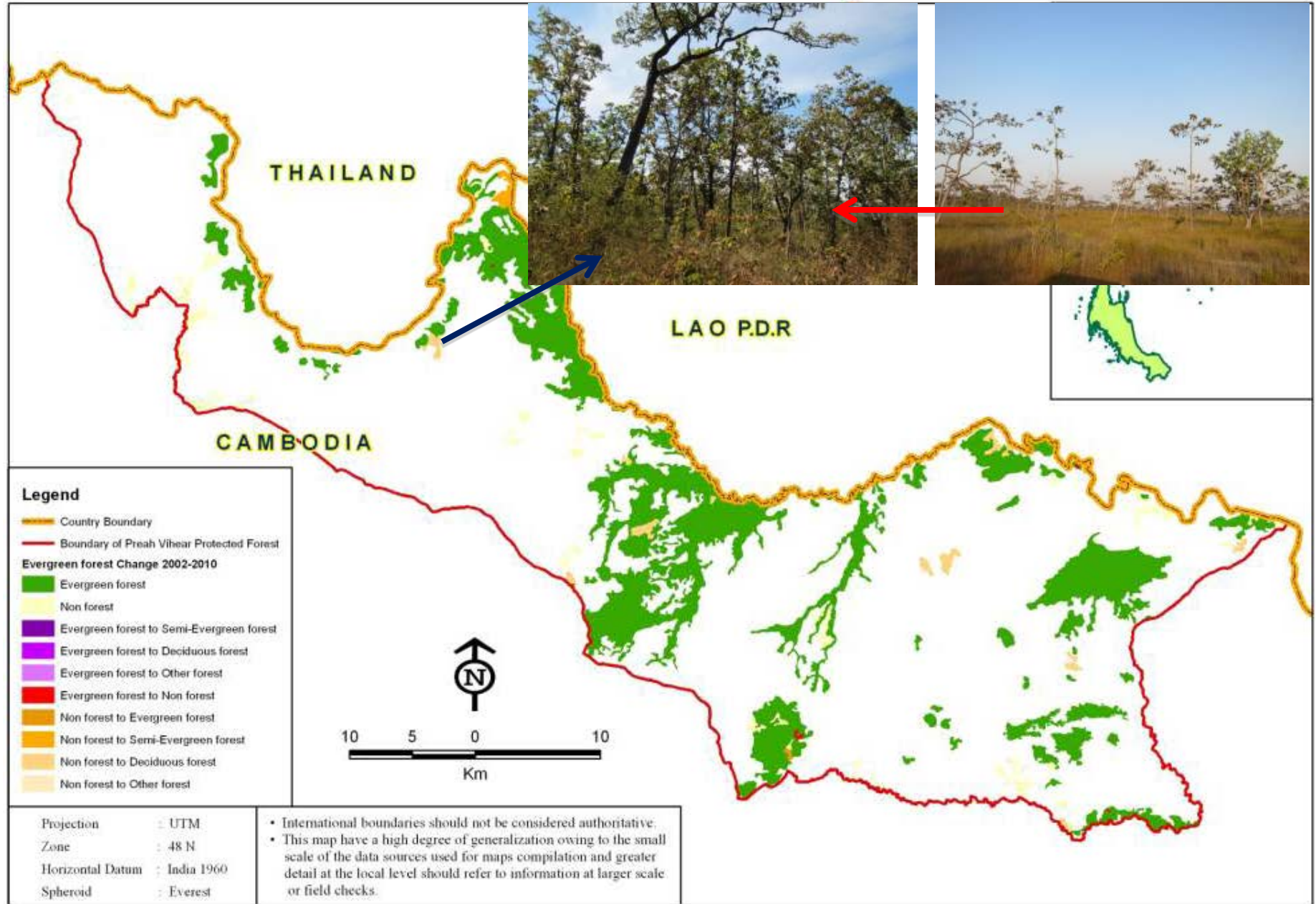


* International boundaries should not be considered authoritative.
 * This map has a high degree of generalization owing to the small scale of the data sources used for map compilation and greater detail at the local level should refer to information at larger scale or field checks.

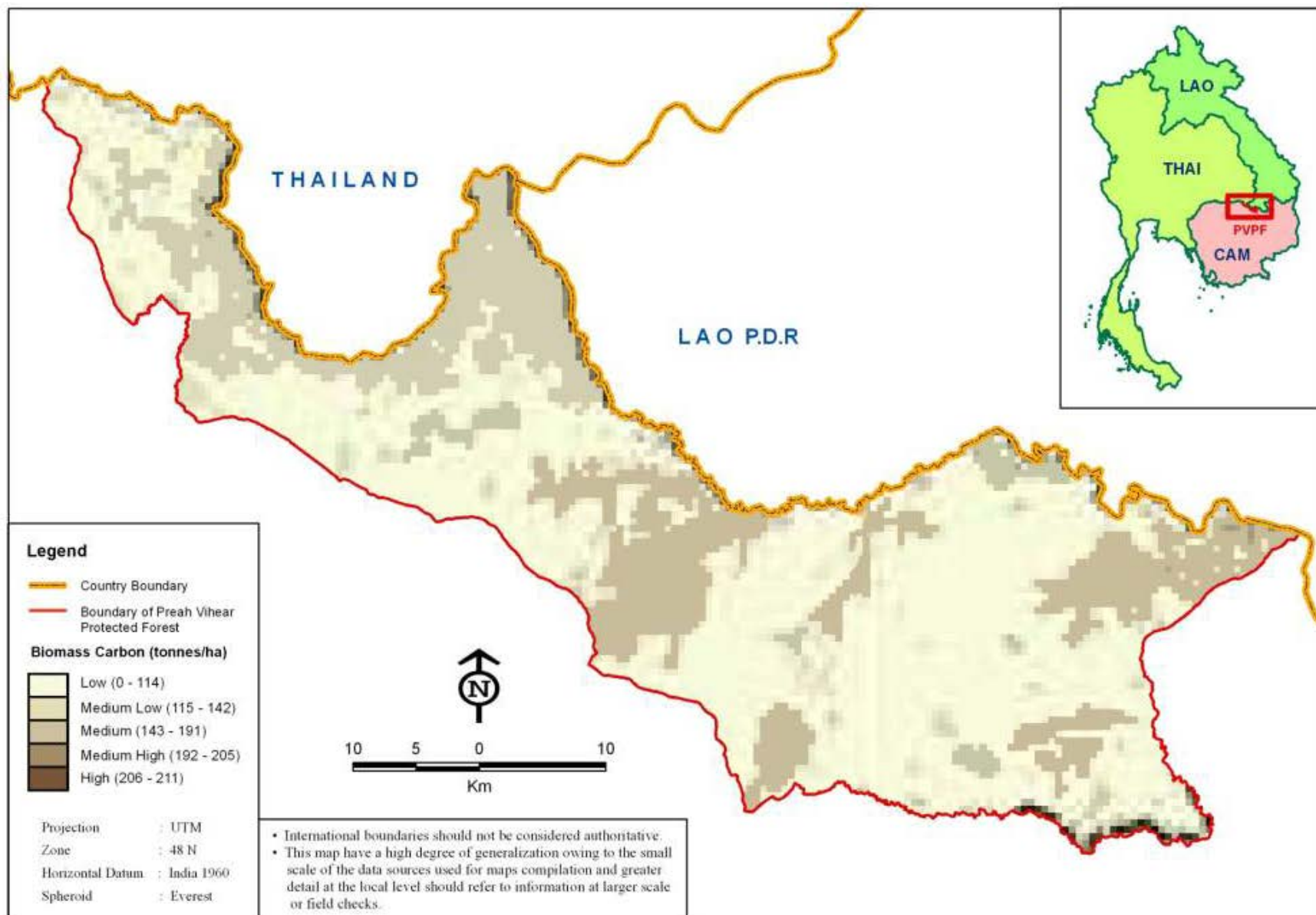
Change in Deciduous Forest Cover in the PVPF



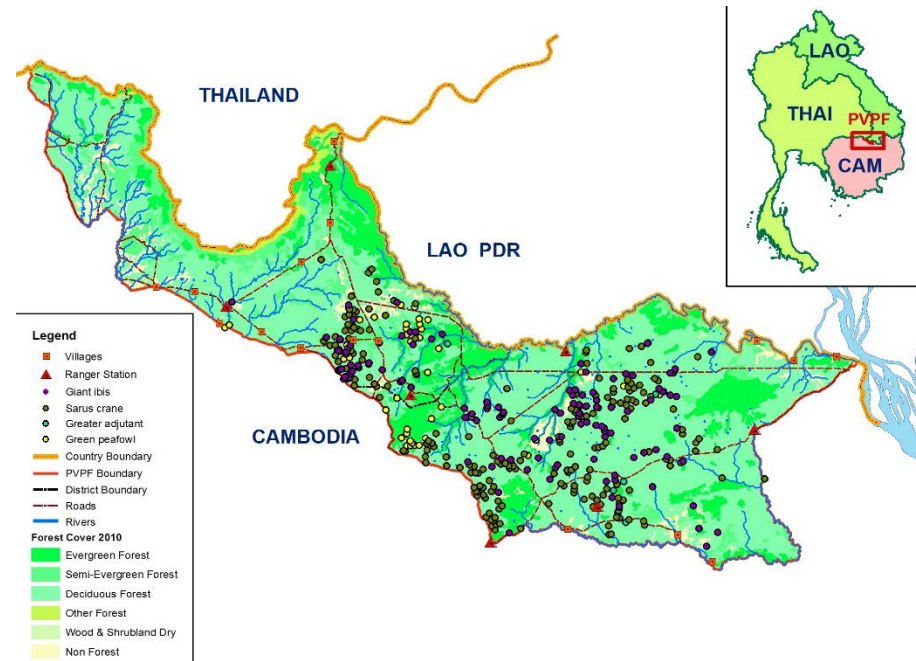
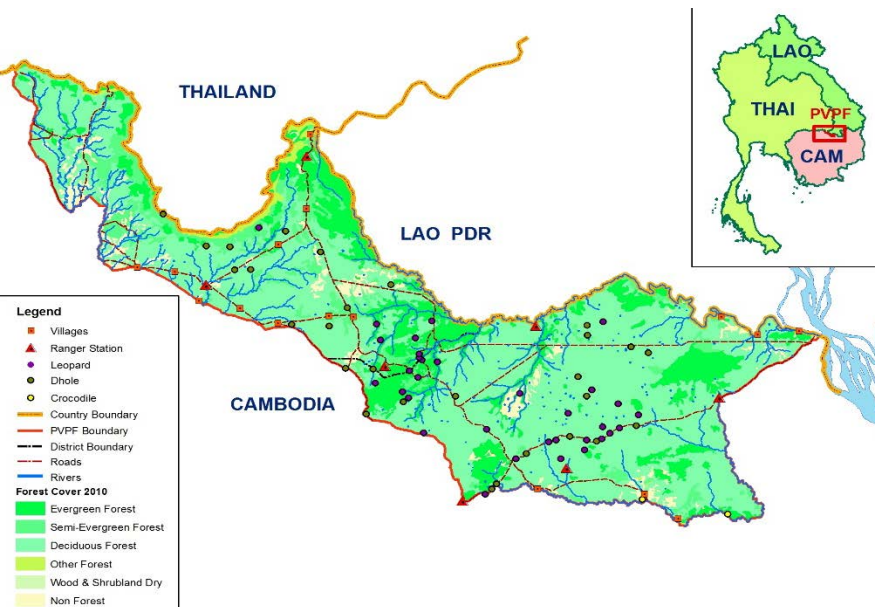
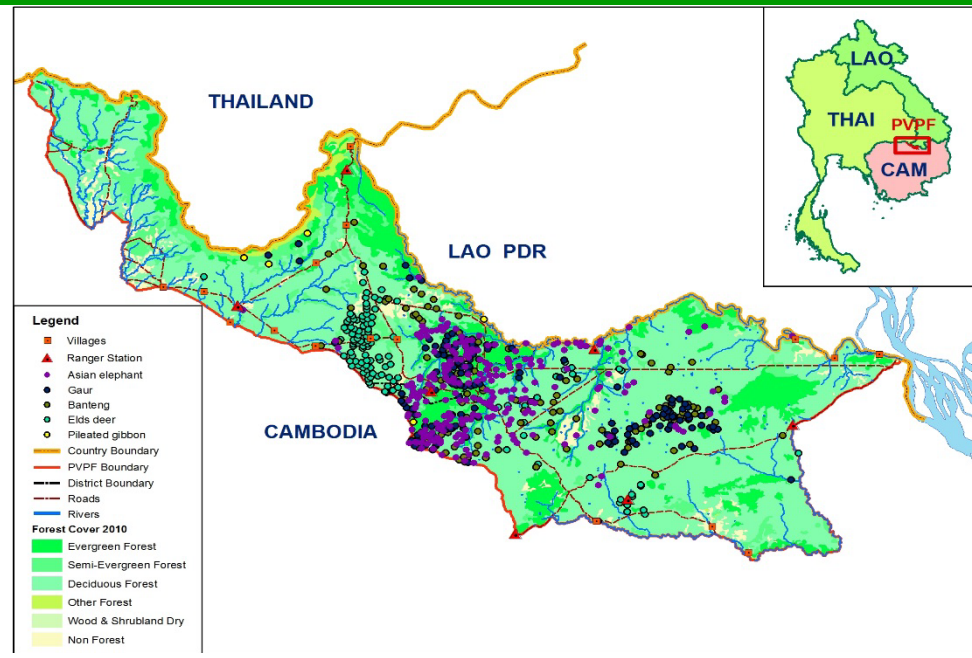
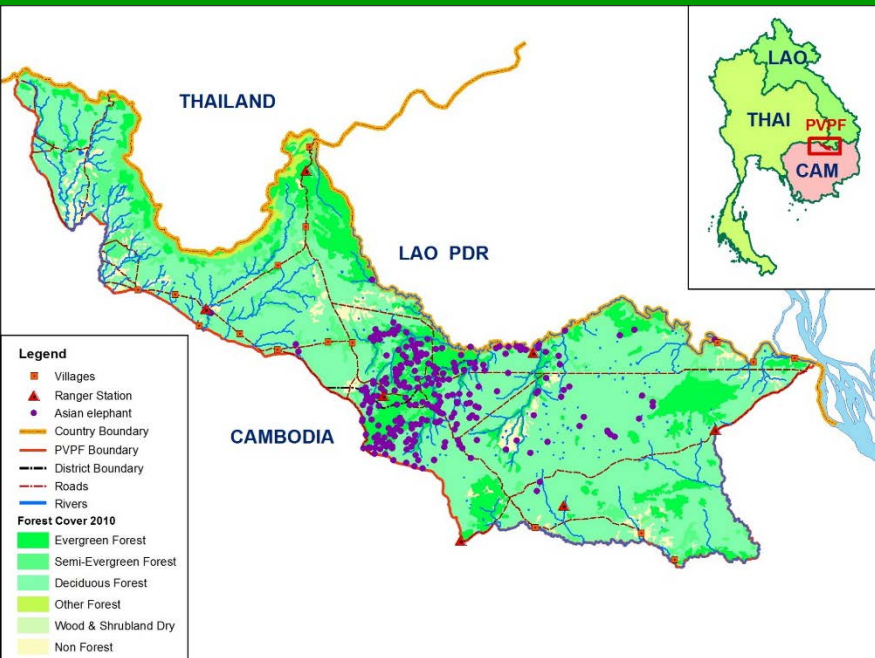
Change in Evergreen Forest Cover in the PVPF



Carbon Biomass Stocks (tons/ha) in the PVPF



Wildlife Distribution in the PVPF



Law Enforcement and Biodiversity Conservation Activities in the Preah Vihear Protected Forest

- Confiscated 50 chain saws
- Confiscated mean illegal logging transportation 12 Units: 8 transport vehicle , 3 tractor (Kor Yun), 1 motobike
- Confiscated illegal wildlife meat 1328.20 kg
- Confiscated illegal lumber 98.966 cubic meter, woody door and window 280 units
- Removed pole from illegal encroachment land 279 poles and confiscated illegal encroachment land 38 Ha
- Confiscated and stop other mean illegal activities such: 18 wildlife traps, 15 eletro-shocks, 7 batteries, 6 home made guns, 57 small sawmills

Law Enforcement and Biodiversity Conservation Activities in the Preah Vihear Protected Forest



Meetings between the Project Team, Preah Vihear Forestry Administration Cantonment, local authorities, and relevant stakeholders to facilitate law enforcement and biodiversity conservation activities in the Preah Vihear Protected Forest.

Meeting and discussions of law enforcement, and extension activities



Forest law enforcement in the Preah Vihear Protected Forest.



Using Drone to capture forestland cleared & encroached by local people



Forest law enforcement in the Preah Vihear Protected Forest.



Patrolling activities to suppress forest and wildlife offenses in the Preah Vihear Protected Forest.



Wild meat confiscated from illegal trader and logger in the PVPF



Wildlife confiscated at An Ses, an international checkpoint between Thailand and Cambodia, and released in the forest.



Confiscated Chainsaws, wildlife traps, hunting rifles and fish electroshocker confiscated and maintained at the O Chanh patrol station.



Illegal forestland clearance and logging



Confiscated rosewood and others maintained at Choam Ksant Forstry Administration Division while awaiting legal proceedings.



OUTPUT 3: Local communities are empowered to implement activities linking livelihoods improvement to reduced dependence on resources of protected areas

- Provided training on “Agriculture Technique” 25 courses, 1791 local communities participated (60% were Women) such as home garden, livestock, rice cultivation, and agro-forestry, furthermore vegetable seed was given.
- Provided training on “GIS and Remote Sensing technology for sustainable forest management and other applications” 15 courses, 100 local foresters and NGOs participated,



- Rice Bank (14 tons to 32.03 tons)
- Cow bank (13 cows to 72 cows)
- Village credit (USD 1,250 to USD 1,480)
- Installation of Village Pumping Wells (8)
- Digging 8 Ponds for Community Water Reservoir
- Distribution of Fruit plants & trees: 78,250 seedlings



Integrated Conservation and Community Livelihood Development in the Preah Vihear Protected Forest

Raising awareness and interventions supporting Community Livelihoods



Training on home garden preparation, animal husbandry practices and integrated agroforestry systems organized for local communities in Senrong Reoung 1, 2, 3, 4, 5, O Chanh, Mlis, and Sen Techeas villages and a vegetable garden established by a model farmer.



Organization of meetings to discuss use areas and proposed extensions of the Preah Vihear Protected Forest with local communities in Chaom ksant and Teuk Kraham commune, Chaom Ksant district.



Extension meeting on Preah Vihear Protected Forest boundaries and project achievements with local communities.



Group discussions of the impacts of land use and forest cover changes on biodiversity and sustainable livelihoods organized at the O Chunh project office.



Extension meeting on Preah Vihear Protected Forest boundaries and project achievements with local communities.



Group discussions of the impacts of land use and forest cover changes on biodiversity and sustainable livelihoods organized at the O Chanh project office.



Home garden established by local communities after training and vegetable seeds had been provided to them.



Exchange visit of Teuk Kraham and Morokot commune councils, village chiefs and local communities to the multi-agricultural and fish farming and rice and cow bank development activities implemented through the Tbeng lech community forestry committee in Banteay Srey district and the manufacture of souvenirs and furniture from NTFPs by local communities in Sot Nikum district, Siem Reap province.



Rice Bank



Establishment of a new Rice Bank in Morokot commune, O Chanh village.



Monitoring the development of rice bank activities provided through the project to the local community.



Rice Bank



Supplemented a plenty amount of rice to the rice banks



Equipped solar panels for the rice banks

Cow Bank



Monitoring the status of the cow bank established through the project with the Cow Bank Commission in Ro Bonh community.



Wells and Ponds



Provision of study materials and tree seedlings to local primary schools and the organization of question and answer sessions on forest conservation.



**Seoul University of Korea donated and participated in developing local communities:
making floor concrete & painting building of primary schools, installing solar panel, providing school
materials for students, and planting trees.**



Establishing the “Morokot” plant nursery in Sen Rungreung1, Teuk krham commune, Chaomksant district, Preah Vihear province.



**Set up the Forest-Wildlife Research and Patrol Station in Sen Rungreung1, Teuk kraham
commune, Chaom ksant district, Preah Vihear province.**



Local communities participating in seed germination and weeding activities and the provision of drainage at the Morkot Plant Nursery established under the project.



Preparing tree seedling nursery and compost fertilizer at O'chunh office in the Preah Vihear Protected Forest.



Orchid breeding at the O Chunh nursery.



The distribution of 5,000 fruit trees by the Preah Vihear Forestry Administration Cantonment on Arbor Day 2014 in Srayang commune, Kulen district, Preah Vihear province under the direction of H.E. Um Mara, Governor of Preah Vihear province.



The distribution of 4,000 fruit trees by the Preah Vihear Forestry Administration Cantonment to army families stationed at military headquarters No. 9 on Arbor Day 2014 in Sen Rong Reung 1, Teuk Kraham commune, Chaom Ksant district, under the direction of H.E. Um Mara, Governor of Preah Vihear province.



Provincial abort day with local community and abort day with UNESCO



Fruit trees and commercial trees distributed to local communities and army families in the PVPF.



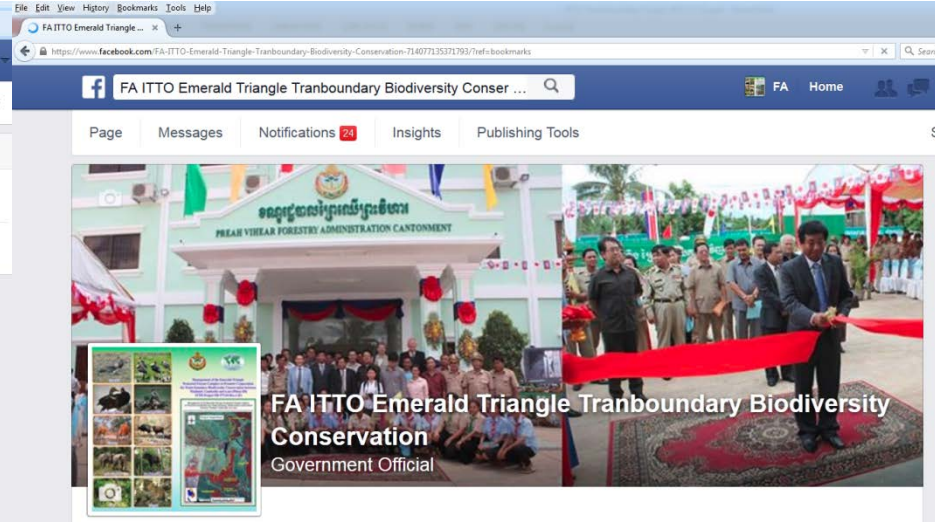
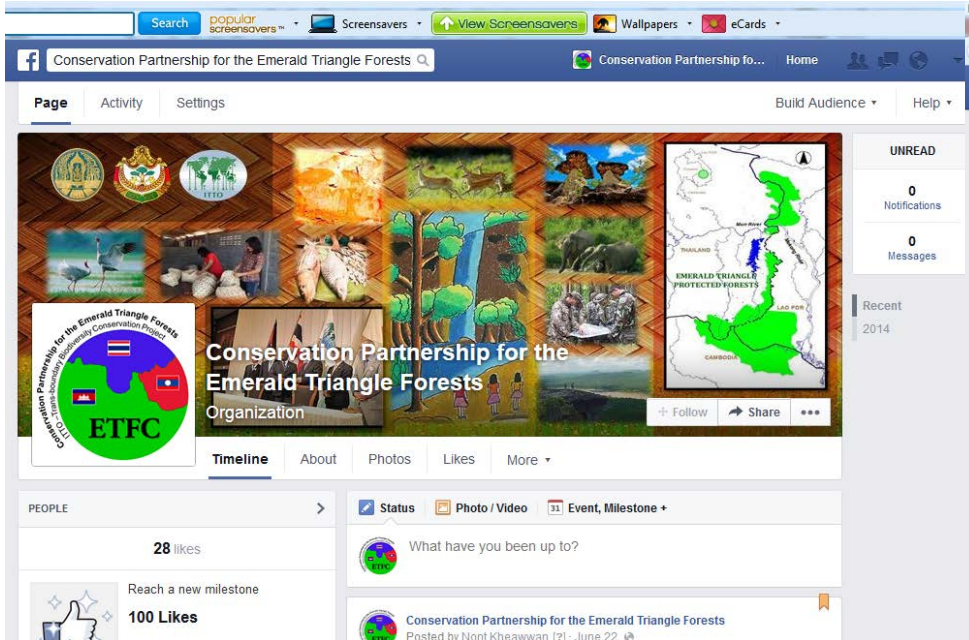
Fruit trees and commercial trees distributed to local communities and army families from Robonh-Teuk Kraham commune and Sen Techeas village in Morokot commune.



Planting of fruit trees and commercial trees by the army in Preah Vihear Protected Forest.



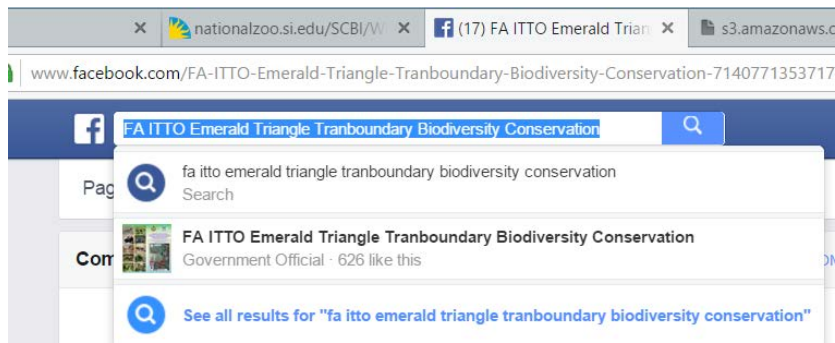
<https://www.facebook.com/EmeraldTriangle?ref=hl>



<https://www.facebook.com/FA-ITTO-Emerald-Triangle-Tranboundary-Biodiversity-Conservation-714077135371793/?ref=bookmarks>

Or

FA ITTO Emerald Triangle Tranboundary Biodiversity Conservation



Management Plan for Preah Vihear Protected Forest 2016-2020

Vision: *To conserve the PVPF by establishing a sustainable equilibrium between Economic, Social, and Ecological demands consistent with the National Forest Policy Statement, National Strategic Development Plan, National Poverty Reduction Strategy and the Global Agenda of Sustainable Development Goals.*

Management Strategies:

- Natural Resource Conservation and Management.
- Recreation and Ecotourism Management.
- Integrated Community Livelihood Development and Engagement.
- Institutional and Human Resource Development.
- Research and Monitoring.

Lessons Learned

- Each country involved in a trans-boundary conservation initiative should participate in, and agree to, the development of a shared vision, and indicate in the clearest manner that it is committed to contribute to the greatest extent possible to its implementation and achievement.
- Technical cooperation preceded political cooperation in this trans-boundary conservation project and so, much of the emphasis of activities in early stages should be directed to expanding opportunities for technical cooperation between participating countries.
- Political support is essential to the ultimate success of any trans-boundary conservation project and sufficient consideration should be directed to consolidate internal and external political support through the institutionalization of on-going meetings with local and national government officials in each participating country, as well as between government officials from each one of the participating countries.
- Income generation in a trans-boundary conservation project is most effectively established as a community or family enterprise and not as a project activity, with a focus on participatory village planning of natural resource use and/or conservation and the development of corresponding business plans incorporating realistic assessments of markets.
- Efforts to raise the awareness of local communities, government officials, and others of the importance of conservation in trans-boundary conservation projects should be an on-going pursuit.
- The sustainability of trans-boundary conservation projects must be assured at several interrelated levels, including that of the administrative and political level, the technical and managerial level, the rural community livelihood level, and at the financial resources level. This must be accomplished within the much broader context of the socio-economic and political conditions that define the relationships between or among participating countries.

Acknowledgements



Thank You