



International Tropical Timber Organization
ITTO



The Royal Forest Department
RFD

COMPLETION REPORT

(Thailand Project Component)

Project Number:
ITTO Project PD577/10 Rev.1 (F)

“Management of the Emerald Triangle Protected Forests Complex to Promote Cooperation for Trans-boundary Biodiversity Conservation between Thailand, Cambodia and Laos (Phase III)”

Host Government

THE GOVERNMENT OF THAILAND

Executing Agency

THE ROYAL FOREST DEPARTMENT OF THAILAND

Starting Date:
1 September 2012

Duration of Project:
36 months

Project costs: US\$1,139,832

Royal Forest Department, Bangkok, Thailand
October 2015

COMPLETION REPORT

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“Management of the Emerald Triangle Protected Forests Complex to Promote Cooperation for Trans-boundary Biodiversity Conservation between Thailand, Cambodia and Laos (Phase III)” - Thailand Project Component.

Starting Date:1 September 2012

Duration of Project:36 months

Project Cost:

<u>Overall Project Costs</u>	<u>Sources of financing (US\$)</u>	
Implementation in Thailand:	ITTO	800,280
Government:		339,552
Implementation in Cambodia:	ITTO	1,250,759
Government:		<u>228,850</u>
Total ITTO:		2,051,039
Total Government:		<u>568,402</u>
Grand Total:		<u>2,619,441</u>

Type of Report: Completion Report

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Executive Summary

The ITTO Project PD577/10 Rev.1 (F): “Management of the Emerald Triangle Protected Forests Complex to Promote Cooperation for Trans-boundary Biodiversity Conservation between Thailand, Cambodia and Laos (Phase III)”, was formulated at the end of project Phase II, based on the key interim recommendation of the independent terminal evaluation of the Project (Gasana, 2010), the Executing Agencies, the Royal Forest Department in Thailand and the Forestry Administration in Cambodia, jointly submitted a request to ITTO on 2 May 2010 to formulate a Phase III project proposal and this request was officially endorsed on May 21, 2010. The proposal has been approved by The International Tropical Timber Council at the Forty-Sixth Session, on 13-18 December 2010, the ITTO Project number is PD 577/10 Rev.1 (F) with the period of three years.

The implementation of the project resulted in improvement of protection of trans-boundary habitats of protected wide-ranging wildlife species, with improve ecosystem management through the production of a series of wildlife distribution maps that were jointly initiated. The sharing of information was institutionalized between the three countries as a basis for formulating sustainable management strategies to protect wildlife populations and reduce barriers to migratory wildlife movements along the tri-national borders. The project also extended to improve local community livelihoods on the basis of the outcomes of planned Sustainable Livelihood Assessments conducted in Thailand with an expansion of the effective Integrated Conservation and Development Program (ICDP) including nature-based tourism and other income-generating opportunities. The developmental objective of the project which was developed in accordance with the Final Evaluation Report for Phase II (Gasana, 2010) and the recommendations derived from the 3rd PSC meeting and Validation Workshop of the project phase II, therefore was to contribute to the conservation of trans-boundary biodiversity in the Emerald Triangle Protected Forests Complex between Thailand, Cambodia and Laos. The experiences and lessons learned from this project can be used as a model for other potential trans-boundary conservation areas in participating countries and in the Greater Mekong Sub-region. The specific objective of Phase III of the project was to strengthen the protection of trans-boundary habitats of protected wide-ranging wildlife species in the Emerald Triangle.

An important aspect of the implementation strategies was directed to the harmonization between Thailand, Cambodia and Lao PDR of guidelines for management planning and the implementation of several joint ecological monitoring activities. Within that broad framework, research on wide-ranging wildlife species continued in Thailand and Cambodia and also extended to Lao PDR successfully. The sharing of information was a basis for formulating sustainable management strategies to conserve forest resources and protect wildlife populations and reduce barriers to migratory wildlife movements along the tri-national borders. The development objective also contributed to sustainable development of local communities, through the implementation of ICDP activities and support to local socio-economic development initiatives.

All planned activities plus two new activities which were inserted to reach the output 1 as recommended at the 4th PSC meeting on 9 July 2014 were finished. Some activities were delayed due to uncontrollable factors, but the project could finalize in time as scheduled in the project plan. There are not critically differences between planned and actual project implementation. One of the success outcome of the project implementation, as indicated by study and research of student from Faculty of Forestry, Kasetsart University, was improving

community livelihood, raising awareness, and promoting transboundary biodiversity conservation for the protection of protected area with support from communities inside and around protected area.

The situation after project completion was sharing information, experience and knowledge with Cambodia and Lao PDR through joint research, training, workshop and information exchange. The local communities and involved stakeholders became more aware of the transboundary biodiversity conservation, the livelihood of the communities also improved. The protected areas were less encroached with cooperation among local authorities, protected area staff and forest protection unit staff with area patrol techniques trained by the project.

Many useful lessons learned are: 1) stakeholders played an important role in the project implementation and the project should have more staff and resources to expand and organize additional ICDP projects, 2) there is a chance that the institutions in Lao PDR will join the research as well as to initiate the raising awareness on biodiversity conservation in Laos protected forests, 3) the capacity and capability of the staff and of the local communities, should be identified before planning the training and workshop to be able to execute the related activities smoothly, 4) more and close cooperation with other relevant departments to strengthen the cooperation, 5) maintain communication and support to the existing ICDPs after the end of the project 6) a factor that could cause unsuccessful to the implementation was the involvement of the authorities and staff that expected more benefit on financial with less participation, 7) The government and Executing Agency would continue to support of sustainable livelihoods and the capacity building of local communities and will be extended to other areas in Thailand, as well as continuation of cooperation between Executing Agencies with others to researches and sharing information on wildlife habitats.

Completion Report

ITTO Project PD577/10 Rev.1 (F)

“Management of the Emerald Triangle Protected Forests Complex to Promote Cooperation for Trans-boundary Biodiversity Conservation between Thailand, Cambodia and Laos (Phase III)”

Thailand Project Component

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1. Project Identification

1.1. Context

The Government of Thailand established a trans-boundary biodiversity conservation area (TBCA) and selected the Pha Taem Protected Forests Complex (PPFC), comprised of five protected areas in Ubon Ratchathani Province in northeast Thailand, and received funding from the International Tropical Timber Organization (ITTO) to implement a pilot project, PD 15/00 Rev.2 (F), *“Management of the Phataem Protected Forests Complex to Promote Cooperation for Trans-boundary Biodiversity Conservation between Thailand, Cambodia and Laos (Phase I),”* in the period 2001-2003 (October 2001 to December 2004). This pilot phase was primarily aimed at initiating a management planning process for the PPFC in the framework of trans-boundary biodiversity conservation and establishing cooperation between Thailand, Cambodia, and Laos.

Upon completion of Phase I of the project, the Governments of Thailand and Cambodia received additional funding from ITTO to enable them to implement Phase II of the project under the title, PD 289/04 Rev.1 (F), *“Management of the Emerald Triangle Protected Forests Complex to Promote Cooperation for Trans-boundary Biodiversity Conservation between Thailand, Cambodia and Laos (Phase II),”* in the period 2008-2010 (March 2008 to June 2010). This phase was directed to strengthening tri-national cooperation and implementing biodiversity conservation activities through the involvement of local communities living in or close to the buffer zones of the protected forests. The results of Phase II, which was executed in two Components, i.e. a Thailand Component and a Cambodia Component, include a) conservation of Cambodia’s protected forest for genetic resources of plants and wildlife in the TBCA, b) strengthened TBCA cooperation among the three countries to collaboration level 2 of 5, c) increased human resources capacity, and d) integration of a conservation and development program (ICDP) in Thailand and Cambodia in buffer zones and nature-based tourism interventions as a part of the efforts to increase livelihood opportunities for local residents (Trisurat, 2010).

In spite of the recognized critical importance of establishing and sustaining the impacts of project activities in promoting trans-boundary biodiversity conservation in the Emerald Triangle Protected Forests Complex, there were several constraints limiting the achievement and affecting the sustainability of project objectives that were identified in the final evaluation report for Phase II of the project (Gasana, 2010). These included project design limitations and limited scale of project interventions in the Cambodia component of the program, as well as incomplete application of the Sustainable Livelihoods Approach (SLA)

and establishment of effective partnerships with civil society and development NGOs that would include rural credit institutions in both country components. These were overlaid by external constraints associated with the limited participation of Lao PDR in project activities and border disputes between Thailand and Cambodia which interrupted tri-national collaboration. In responding to those challenges and the results of the 3rd PSC meeting held in Bangkok on November 17, 2009, the Validation Workshop organized in Siem Reap, Cambodia on April 2-4, 2010, and the key interim recommendation of the independent terminal evaluation of the Project (Gasana, 2010), the Executing Agencies, the Royal Forest Department in Thailand and the Forestry Administration in Cambodia, jointly submitted a request to ITTO on 2 May 2010 to formulate a Phase III project proposal and this request was officially endorsed on May 21, 2010. The proposal has been approved by The International Tropical Timber Council at the Forty-Sixth Session, on 13-18 December 2010, the ITTO Project number is PD 577/10 Rev.1 (F) with the period of three years.

The Emerald Triangle project was considered as a priority at international level of transboundary biodiversity conservation in Indo-China. It also creates cooperation between the countries in the Greater Mekong Sub-region (GMS) and can be developed as an international peace park. In addition, the Secretary Convention on Biological Diversity and the Foreign Ministry of the people of Japan and JICA has given priority to this project. The requested budget increase of approximately US \$ 670,000 to US \$ 2.6 million, and provided as an example to member countries of the Convention on Biological Diversity.

There was some delay in approval of the project by Thai Cabinet due to several reasons that cannot be avoided. At last, Thai Cabinet approved on 20 March 2012, and the project phase III, Thailand Project Component, started the implementation on 1 September 2012, one month after the Cambodia Project Component.

In responding to the critical concern in the Emerald Triangle Protected Forests Complex, which is the inadequate protection of trans-boundary habitats of protected wide-ranging wildlife species, project interventions will improve ecosystem management through the production of a series of wildlife distribution maps that were initiated during the first two phases of the project. Those will contribute to the establishment of a broad collaborative framework for integrating trans-boundary biodiversity conservation efforts among the three countries. Within that framework, research on wide-ranging species will continue in Thailand and Cambodia and will be extended to Lao PDR. The sharing of information will be institutionalized between the three countries as a basis for formulating sustainable management strategies to protect wildlife populations and reduce barriers to migratory wildlife movements along the tri-national borders.

Project interventions will also be extended to improve local community livelihoods that will be developed on the basis of the outcomes of planned Sustainable Livelihood Assessments that will be conducted in Thailand and Cambodia. There will also be an expansion of the most effective Integrated Conservation and Development Program and Community Livelihood Development Program activities that were introduced in Phase II of the project, including nature-based tourism interventions as well as other promising income-generating opportunities. Concerted efforts will be extended in both countries to strengthen the long-term viability of the livelihood initiatives which have been introduced by establishing closer program linkages with civil society, including non-governmental organizations (NGOs) and rural credit programs.

Project interventions will also ensure multi-stakeholder participation, especially in responding to the recognition that Lao PDR may continue to be reluctant to participate in phase III activities, through the development of several opportunities for participation in “soft” collaborative activities. Those will include as sub-contractors for the collection of baseline information on wildlife distribution in the PhouXeingthong National Biodiversity Conservation Area and adjoining forest areas and as participants in research on wide-ranging species with the support of the project teams in Thailand and Cambodia. There is sufficient reason to believe that the use of this pro-active approach will result in steadily growing participation in project activities by Lao PDR as each of the primary stakeholder countries assumes increasing ownership of the project during Phase III.

Project efforts will continue, as well, to strengthen the capacity of project staff, rangers, border patrol police, and local communities through the provision of training initiated in Thailand and Cambodia in Phases I and II of the project. The provision of the training will be especially important in Cambodia, as well as in Lao PDR, where staff have little or limited access to training, budgets for management are very small, and there are very few rangers and facilities on the ground, especially in protected areas.

The capacity-building strategies in Phase III of the project will include hands-on-training and the sharing of lessons learned in the first two phases of the project from Thailand and Cambodia to Lao PDR. This approach will be reflected in joint research on wildlife distribution that will be conducted in each of the participating countries, which will provide a practical platform for not only strengthening trans-boundary cooperation, but also developing hands-on-training.

Thailand

Location and Extent of the PhaTaem Protected Forests Complex

The PhaTaem Protected Forests Complex is located between latitudes 14° 12.5' and 15° 13.9' North and longitudes 104° 58.5' and 105° 8.5' East in northeast Thailand. The protected area complex is comprised of the Pha Taem National Park, Kaeng Tana National Park, Phu Jong-Na Yoi National Park and Yot Dom and Bun Thrik-Yot Mon Wildlife Sanctuary. The collective area of the complex is 173,400 ha with a perimeter of 73,000 km. Some 317 km, or 43% of its total border adjoins Laos (298 km, or 40.96%) and Cambodia (18 km, or 2.5%).

The PreahVihear Protected Forest is located in Preah Vihear Province, Cambodia. It adjoins the south of the Yot Dom Wildlife Sanctuary and to the west of the Mekong River, covering an area of approximately 190,000ha. To the northeast, it borders to Dong Khanthung proposed NBCA, which covers 182,800ha. Another protected area in Lao PDR situated in the ETFC is the PhouXeingthong NBCA, which is located east of Pha Taem National Park, has an area of approximately 190,000 ha. Therefore, the entire protected areas encompass approximately 666,200 ha (Figure 1).

Table 1. Protected areas of the Emerald Triangle Forest Complex
Among Thailand, Cambodia, and Lao PDR.

<u>Reserve</u>	<u>Area (ha)</u>
Pha Taem National Park (Thailand).....	35,300
Kaengtana National Park (Thailand).....	8,400
Phu Jong Na Yoi National Park (Thailand).....	69,700

Yot Dom Wildlife Sanctuary (Thailand).....	23,500
Buntrik-Yot Mon Wildlife Sanctuary (Thailand).....	36,500
Dong Khanthung (Laos).....	182,800
PhouXiengthong NPA (Laos).....	120,000
Preah Vihear Protected Forest (Cambodia).....	190,000
Total	666,200

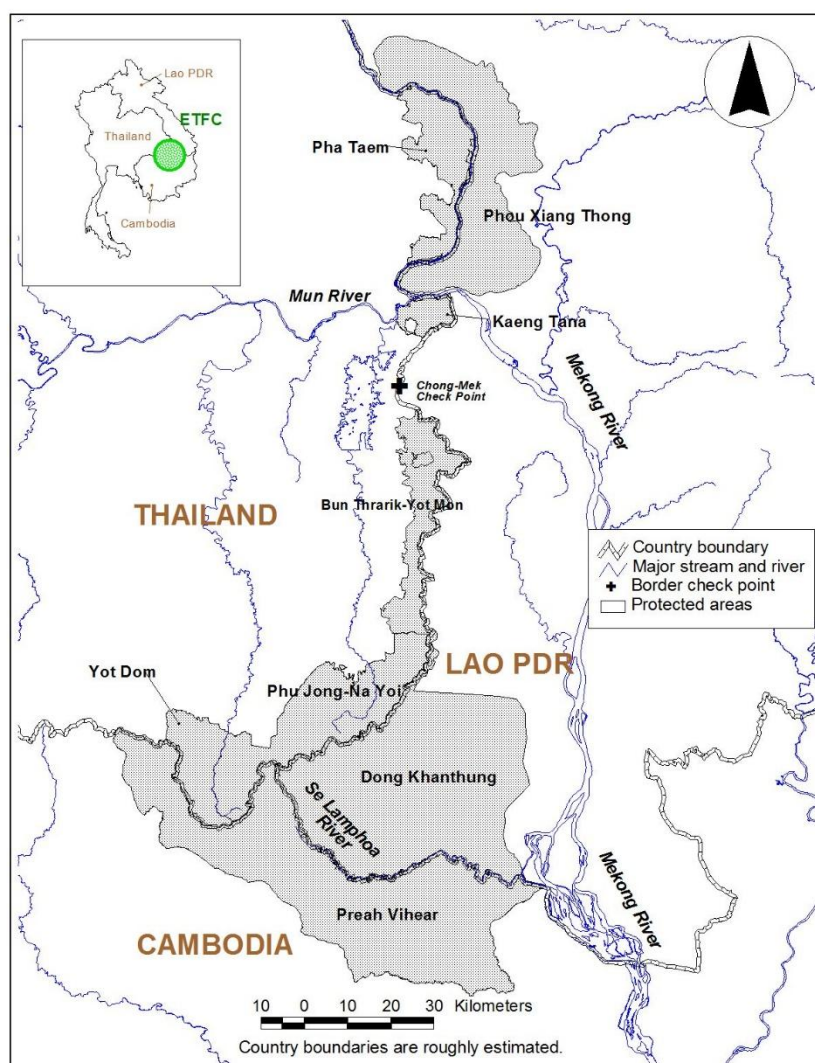


Figure 1: Eight reserves of the Emerald Triangle Protected Forest Complex.

National Conservation Policies

The Constitution of the Kingdom of Thailand (2007)

Thailand’s Constitution states that *“the state shall promote and encourage public participation in the preservation, maintenance and balanced exploitation of natural resources and biological diversity and in the promotion, maintenance and protection of quality of the environment in accordance with the persistent development principle as well as*

the control and elimination of pollution affecting public health, sanitary condition, welfare and quality of life.”

The Eleventh National Economic and Social Development Plan (NESDP) (2012-2016)

The Eleventh NESDB Plan aims to conserve natural resources and biodiversity by maintaining forest at no less than 33% of total land area, with conservation forest no less than 18% of total land area. The strategies are proposed to achieve those targets, including (1) maintaining balance within the ecosystem through public participation in protection, conservation and utilization; (2) to conserve, restore and secure natural resources and the environmental base. The development paradigm be shifted toward an environmentally safe low-carbon economy and society. Adaptive capacity be upgraded to handle climate change and disasters. Pollution reduction be achieved by improving management of controls; (3) natural resource and environmental management systems become more efficient, transparent and equitable. International trade be protected from crises that result from environmental conditions and climate change, and (4) the role of the country in international arenas be strengthened and related to environmental framework agreements and commitments (NESDB, 2011).

Thailand National Forest Policy

The Thailand National Forest Policy was adopted by the Cabinet on December 3, 1985. This policy has been used as guidance for forest administration in Thailand. Key policy statements include the following:

- Long-term guidelines for forest management and development shall be established to maximize national social and economic benefits as well as national security.
- Forty percent of the country's area shall be kept under forests (25% “*Conservation Forest*” and 15% “*Production Forest*”).

Thai Forestry Sector Master Plan

The Thai Forestry Sector Master Plan (TFSMP), which was formulated in 1993 by the Royal Forest Department, was endorsed by the National Forest Policy Committee. The TFSMP provides general guidelines for long-term forest development. Long-term objectives are to conserve representative ecosystems and their biodiversity and to promote biodiversity conservation in land management practices.

Management Responsibilities of the National Park, Wildlife and Plant Conservation Department)

The National Park, Wildlife and Plant Conservation Department (DNP) has direct responsibility to manage conservation forests, especially national parks and wildlife sanctuaries. The DNP's mission is to conserve the flora and fauna of conservation forests by protecting remaining forest cover, rehabilitating degraded areas of forests with the involvement of local communities and raising awareness of forest conservation.

International Conventions

In the past two decades, the Kingdom of Thailand has ratified several international agreements and treaties related to the environment and natural resources, including the Convention on Biological Diversity, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, and the United Framework Convention on Climate Change.

Biodiversity Conservation Projects

Thailand has upgraded its standards of environmental management and implemented several projects supporting biodiversity conservation. Some of those include 1) ITTO Project PD 16/97 Ref. 3 (F) on “Integrated Buffer Zone Development for Sustainable Management of Tropical Forest Resources in Thailand,” which is implemented in the buffer zone of Kaeng Krachan National Park; 2) a European Union (EU) project in Phu Khieo Forest Complex, which also is directed at conserving biodiversity and promoting buffer zone management; 3) the “Western Forest Complex Ecosystem Management” project and the “Joint Management of Protected Areas” project funded by the Danish Government, which support capacity development for integrated ecosystem management and improved livelihoods of local communities; and 4) the “Biodiversity Conservation Corridors Initiatives” to link the WEFCOM with the Kaeng Krachan Complex in western Thailand, which is organized by the Greater Mekong Sub-region Environment Operations Center.”

1.2. Origin and problems

Origin

Thailand has established 139 National Parks, Wildlife Sanctuaries and Nature Conservation Forests and has grouped them into twenty protected forest complexes. Although wildlife may migrate across the borders of adjacent countries unimpeded within those protected areas, many have been poached and traded illegally because of the lack of control and limited availability of financial, as well as technical, resources. Thailand, as well as Cambodia, has attempted to protect its wild flora and fauna more effectively, but there are still several problems confronting such efforts. The origin of these are that management measures have not been fully implemented in protected forests because the information base for planning has been poor and skills in management techniques have been limited, and there has been no framework for data collection, information dissemination, and inter-disciplinary communication and coordination.

Problems

The protected areas of the Emerald Triangle comprise habitats of a diversity of wildlife species. Large species, such as the wild elephant, banteng, and tiger, are observed along the national borders and seasonally migrate across the tri-national boundaries (Bhumpakphan, 2003). Cambodia has some of the most extensive unfragmented natural forests in Southeast Asia and the northern plains contain large numbers of globally threatened species. Indeed, the area is either a last refuge for – or maintains a key population of – sixteen “Critically Endangered” and “Endangered” species from the IUCN Red List.

As a result of the highly seasonal nature of the environment, key species are dependent on strictly limited resources, including permanent waterbodies and upland forest patches, that are small, localized and especially vulnerable to disturbance. In this context, the critical problem in the Emerald Triangle is the inadequate protection of trans-boundary habitats of protected wide-ranging wildlife species, which may have as critical negative impacts the endangered long-term conservation of protected wide-ranging wildlife species or landscape species and the increased threat to ecosystem functions at the landscape level. The root causes of this problem, which are outlined in the Problem Tree, are the (a) limited capacity to

implement TBC compatible management plans; (b) weak tri-national TBC cooperation; and (c) unsustainable harvesting of natural resources by local communities (Figure 1).

- **Limited capacity to implement TBC compatible management plans**

There is, in general, a significant gap associated with the skills and capacity required to manage protected areas between Thailand and its neighboring countries. Cambodia, but more especially Lao PDR, lack sufficient capacity to manage and plan biodiversity conservation effectively at all levels, but especially at local levels. Protected area staff at central, but especially local, levels, have limited access to training; management budgets are often constrained; and there are few rangers in the field. These obstacles impact the effectiveness of patrolling and law enforcement to reduce forest encroachment, illegal poaching and the illegal trade in wildlife along protected area borders. As a result, capacity building is an issue of importance that will be effectively addressed in Phase III of the project.

In order to strengthen capacity at the local level, there will continue to be coordination between central offices and field offices to support effective implementation of Phase III project activities, especially in Cambodia. There will also be efforts to increase the involvement of decision-makers in DNP, which has the primary mandate in Thailand to manage protected areas, in project implementation.

- **Weak tri-national TBC cooperation**

The effective management of cross-border forest reserves requires a considerable degree of international cooperation. The extent of that cooperation progressed rather steadily from its early stages in Phase I of the project, in which Thailand initiated a scoping process to encourage international cooperation, through Phase II, in which international cooperation on trans-boundary conservation issues between Thailand and Cambodia was initiated. The final Phase II evaluation (Gasana, 2010) indicated there still remain two especially difficult challenges that will have to be overcome, though, if the complete development of the project vision of international cooperation is to be realized in Phase III.

The first of those involves the participation of Lao PDR in the project. While its representatives have attended several project meetings, Lao PDR has yet to officially join the project as originally planned. The importance of the active engagement of Lao PDR in the conservation of the Emerald Triangle Forests Complex has been underscored by the PSC. Indeed, seasonal migratory patterns of landscape species, such as the Asian elephant, gaur, banteng and tiger, suggest that their long-term survival depends on the cooperation and commitment of each of the three countries to conserve trans-boundary biodiversity. Project efforts will therefore be redoubled in Phase III of the project to enlist the participation of Lao PDR in more activities to conserve the Emerald Triangle Protected Forests Complex.

The second challenge involves the irregular border disputes between Thailand and Cambodia, which has heightened political tensions and interrupted tri-national collaboration at the policy-making level. Notwithstanding these tensions, it is expected that there will continue to be strong engagement at the technical and management levels to stimulate better cooperation and commitment among the three countries to apply the lessons learned from the first two phases of the project to conserve trans-boundary biodiversity.

- **Unsustainable harvesting of natural resources by local communities**

Most of the communities in the Emerald Triangle live under the poverty level and rely on natural resources for their subsistence. This is reflected in wildlife poaching, which has been reported in Lao PDR and to a lesser extent in Thailand and Cambodia. The primary impetus for this poaching is derived from the demand for bush meat, which is an important source of protein for rural households (Trisurat, 2003a; 2003b).

The illegal trade of wild animals and plants has also been observed at border check-points between Thailand and Lao PDR. Local people who collect edible plants often burn areas of dry dipterocarp forests to stimulate young shoot rejuvenation and the application of scientific research is essential to raise local awareness of the relationships between forest fires and the sustainable management of deciduous tropical forests.

These problems are likely to continue throughout the Emerald Triangle Forests Complex because local people have been using forest resources for many generations unless the project ensures there are alternative activities available to supplement their income and strict protection measures and proper land-use planning are enforced (Trisurat, 2007).

2. Project Objectives and Implementation Strategy

i) Project Objectives

- **Project Rationale**

Thailand initially recognized the potential benefits, as well as challenges, of cooperating with neighboring countries in efforts to conserve biodiversity in trans-boundary protected areas. It envisaged the establishment of conservation initiatives in selected protected areas through which neighboring countries would be invited to collaborate in efforts to conserve biodiversity in trans-boundary conservation areas. It understood the critical importance of protecting wildlife species, including rare and endangered species, in those areas from illegal hunting and poaching. It recognized that the protection of critical wildlife habitats and corridors of migration offer exceptional opportunities for collaborative efforts in trans-boundary biodiversity conservation and the control of the illegal trade in plants collected from protected areas. It understood, too, that since trans-boundary cooperation for biodiversity conservation must account for cross cultural ties of local people on both sides of borders, efforts have to be made to avoid management practices that would constitute threats to such diversity.

- **Development objective**

Objectives and outputs of Phase III of the project were developed in accordance with the Final Evaluation Report for Phase II (Gasana, 2010) and the recommendations derived from the 3rd PSC meeting and Validation Workshop.

The project will contribute to the conservation of trans-boundary biodiversity in the Emerald Triangle Protected Forests Complex between Thailand, Cambodia and Laos. The experiences and lessons learned from this project will be used as a model for other potential trans-boundary conservation areas in participating countries and in the Greater Mekong Sub-region.

The long-term impact indicators are:

- Areas of critical habitat available to sustain viable populations of wide-ranging species in the Emerald Triangle are maintained or enhanced.
- Management measures to protect wide-ranging species are formulated, adopted and implemented by participating countries.

- **Specific Objectives**

The specific objective of Phase III of the project is to strengthen the protection of trans-boundary habitats of protected wide-ranging wildlife species in the Emerald Triangle.

The outcome indicators are:

- Information is collected and exchanged between the three countries on wildlife distribution and applied in joint research activities.
- Maps indicating the habitats of wide-ranging species are produced.

- Capacity of park officials and management staff in the TBCA is increased.
- Livelihoods of local communities are increased.

ii) Project implementation strategy

Implementation strategies in the third phase of the project, implemented during August/September 2012 to August/September 2015, are directed to the harmonization between Thailand, Cambodia and Lao PDR of guidelines for management planning and the implementation of several joint ecological monitoring activities. Within that broad framework, planned research on wide-ranging wildlife species will continue in Thailand and Cambodia and be extended to Lao PDR. The sharing of information will be institutionalized between the three countries, as well, as a basis for formulating sustainable management strategies to conserve forest resources, improve carbon sequestration and carbon stocks, and protect wildlife populations and reduce barriers to migratory wildlife movements along the tri-national borders, which will contribute collectively to the forest-related Aichi Targets developed at the Convention on Biological Diversity 2020. The implementation of the third phase of the project under ITTO/CBD Collaboration on Tropical Biodiversity Conservation with support from the Government and the people of Japan, will not only strengthen regional cooperation and enhance monitoring and conservation interventions, but will also mobilize support and strengthen the collective political will to maintain the common natural heritage of the three countries participating in the project. It will also promote understanding and peace in the region and improve rural community livelihoods and economic prosperity on all sides of the Emerald Triangle Protected Forests Complex.

iii) Assumptions and risks

The ultimate success of the project depends on the continued shared commitment and political will of the three countries and its associated stakeholders to trans-boundary biodiversity conservation. That commitment and political will is reflected in several international and regional mechanisms, including the Greater Mekong Subregion (GMS) Working Group on Environment (WGE), the ASEAN Blueprint 2015, and the Mekong River Commission. Those mechanisms lessen the risk of weakening that commitment and political will by providing a catalytic mechanism to guide the establishment of an appropriate policy environment for the planning and execution of trans-boundary agreements. Moreover, the participating countries have ratified a number of international conventions related to biodiversity and the environment and each of the countries is committed to the United Nations Millennium Development Goals to eradicate poverty and ensure environmental sustainability, as well as to the 2010 biodiversity target to significantly reduce the current rate of biodiversity loss at global, regional and national levels.

One of the critical underlying assumptions of Phase III of the project is that the executing agencies (RFD, FA and DoF) will provide qualified staff to participate in project activities, both at national and local levels, especially with regard to the collaborative research that is planned to be conducted on wide-ranging wildlife species distribution. It is also assumed that in Thailand the DNP, which has direct responsibility to manage protected areas, will assume greater leadership in project implementation. It is anticipated, as well, that the involvement of development NGOs and other donors to sustain ICDP activities in Thailand and Cambodia will increase the livelihoods of local communities and reduce their dependence on natural resources.

The most significant risks that might impact effective project implementation, as well as mitigating actions to counteract those risks, include the following:

- Lao PDR may still not be compelled to participate in project activities. This is an external risk that is essentially beyond the control of the project, but concerted efforts will be made in Phase III to mitigate its potential impacts by providing several opportunities for Lao PDR to participate in “soft” collaborative activities. These will be intended to smooth the pathway for their eventual full participation in Emerald Triangle Protected Forests Complex trans-boundary conservation activities subsequent to their securing official membership in ITTO.
- Military tensions along the tri-national borders, or contagious diseases such as SARS or bird flu, might arise so that tourists, local and foreign, are too alarmed to visit project sites. These are also external risks over which the project has little or no control, but their impacts might be mitigated to some extent by understanding that their occurrences are irregular and oftentimes transitory and redoubling project efforts during those periods that they are inactive.
- The government agencies responsible for executing Phase III of the project in Thailand and Cambodia (RFD, DNP, FA) might be unable to provide sufficient incentives for staff to commit themselves to the project or the DNP might be unable to provide adequate resources to Bun Tharik-Yod Mon, the recently-established wildlife sanctuary in Thailand, to ensure its effective protection and management. These are also external risks over which the project would have little or no control. Its impacts might be mitigated to some extent, however, by ensuring that the most industrious, responsible and committed staff of those agencies are assigned to the project.
- Significant infrastructure may be developed under the GMS Economic Corridor Development program, which would fragment and damage critical ecosystems in the Emerald Triangle Protected Forests Complex. This is also an external risk over which the project would have little control, but its impacts might be mitigated to some extent by efforts to influence the location of infrastructure development and restrict such development to the greatest extent possible to less critical areas of wildlife habitat that are located outside of primary animal migration paths.
- Some local communities might choose to not actively participate in either ICDP or CLPD livelihood activities, but rather cling to clearing forest to support unsustainable agricultural practices. The impacts of this risk will be mitigated by screening procedures intended to exclude more disinterested communities as part of the Sustainable Livelihood Assessments that will be conducted in both Thailand and Cambodia.
- Market incentives might be too strong for local communities to abstain from forest encroachment and unsustainable agriculture practices. The impacts of this risk would be mitigated by ensuring that the ICDP activities respond to local communities’ income requirements as reflected in the Sustainable Livelihoods Assessments that are conducted in Thailand and Cambodia to the greatest extent possible.

- Project activities might not be implemented as scheduled in the work plan because of delayed funding or the complexities of administrative procedures and regulations. The impacts of these risks would be mitigated by recognizing that impediments such as those are not necessarily uncommon, anticipating the timing of their potential occurrences, and redoubling efforts during more productive periods of project implementation to ensure that the activities that are described in the work plan are implemented as envisioned to the greatest extent possible by the close of Phase III of the project.

3. Project Performance

- (a) Specific Objectives – There were no substantial differences between planned and realized project elements in the Specific Objectives.
- The specific objective of Phase III of the project is to strengthen the protection of trans-boundary habitats of protected wide-ranging wildlife species in the Emerald Triangle.
- (b) Outputs and related activities – There were no substantial differences between planned and realized project outputs and related activities, two new activities (A. 1.9.1 and A. 1.9.2) were inserted to Input 1 as recommended at the 4th PSC meeting on 9 July 2014.

The details of meetings / trainings / workshops are shown at the last part of Section 3.

Activity 1.1.1 Assign Project Staff, recruit PM, Local and Field Staff.

- The Project Manager, Project Secretary and Local Support Staff were recruited after approval by ITTO and started working from 1 September 2012. Other Project personnel were appointed as appropriate in compliance with the organization. The International Project Coordinator position was approved by ITTO and start working with the project in August 2013.

Activity 1.1.2 Assign PSC/PTC, Advisory Committee.

- Projects Steering Committee was formulated, PTC, Advisory Committee were also assigned by RFD.

Activity 1.1.3 Recruit Consultant, Auditor.

- Recruitment of consultant and auditor was discussed and the process started. The Final Technical reports from GIS Consultant and Wildlife Consultant were published and distributed in the 5th PSC Meeting on 24 February 2015 at Tohsang Khongjiam Resort, Khong Cheam, Ubon Ratchathani, Thailand. ISAC-International Standard Audit and Consultant Co., Ltd was contracted in February 2013, the auditing reports were submitted to ITTO as planned, the auditor expected to finish the last auditing report within three months.

No.	Details	Date
1	Recruitment of GIS Consultant, the contract was signed and started working.	July 2013
2	Recruitment of Wildlife Consultant, the contract was signed and started working.	September 2013
3	Submission of Wildlife Technical Report to RFD	October 2014
4	Submission of GIS Technical Report to RFD	December 2014
5	RFD signed contract with ISAC-International Standard Audit and Consultant Co., Ltd	February 2013
6	First auditing report (1 September 2012 to 31 December 2012) submitted to ITTO	4 April 2013
7	Second auditing report (1 January 2013 – 31 December 2013) submitted to ITTO	8 April 2014
8	Third auditing report (1 January 2014 – 31 December 2014) submitted to ITTO	8 April 2015
9	Fourth auditing documents (1 January 2015 – 31 August 2015) sent to ISAC	31 August 2015

Activity 1.2.1 Organize Project Steering Committee Meeting.

- The Project Steering Committee Meetings were organized to consider the progress of the project implementation, financial and recommendations as

advised by ITTO, six PSC meetings were organized both in Thailand and Cambodia.



Activity 1.2.2 Organize Advisory Committee and Task Force Meetings.

- Advisory Committee and Taskforce Meetings were organized to report the progress of the project activities, discussed and advised on the raising awareness on conservation activities and discussed on the establishment of new ICDP, nurseries and tissue culture lab supported by the project.

Activity 1.2.3 Organize Technical Working Group Meeting.

- Technical Working Group Meetings were organized to report the progress of the project activities, discussed, advised, recommended and approved on the financial and workplan, yearly plan and cooperation with agencies concerned.





Activity 1.2.4 Organize the Project Opening Ceremony.

- The project staff led by the Deputy Director General of RFD participated the opening ceremony, which was organized on 1 October 2012 at Phnom Penh Hotel, Phnom Penh, Cambodia.

Activity 1.3.1 Wildlife Training and Meeting - DNP scientists and park officials.

- GIS and Wildlife trainings/workshops were organized successfully with cooperation of Kasetsart University, Thailand and Champasack University, Lao PDR and support of the Thailand project component on 13-15 December 2013. The outcomes of the meeting showed promising cooperation on wildlife research between the two Universities and the Project Thailand component.
- Wildlife training workshops for park officials in Thailand was organized between 5-6 February 2014.
- The meetings and trainings/workshops with park officials in Thailand on wildlife research and the impact of wild elephant on livelihood of communities around Bun Thrik-Yod Mon Wildlife Sanctuary for hearing and remedy the problems of wild elephants destroying the agricultural products to report to authorities were organized on 3 and 19 November 2014, 16 January, 19 January, 28-30 April, 7 May, 20-22 May, 20-22 June 2015, 13-17 July 2015, and 24-28 August 2015.

Activity 1.3.2 Purchase of equipment.

- Procurement of capital items was finalized in January 2014, the items were used at the project office and also distributed to National Parks and Wildlife Sanctuaries, the items are:

ITEM	UNIT	USD
Project Vehicles (4x4)	1	27,687
Notebook	2	1,852
GPS	8	3,960
Camera	2	2,999
Projector	1	970
Printer Laser Monochrome	2	261
Printer Laser color	2	803
Computer	2	2,066

ITEM	UNIT	USD
Air Condition	2	2,275
Table for meeting rooms	20	1,602
Chairs	60	1,730

Activity 1.3.3 Field data collection and update.

- Wildlife distribution data in the project area were collected regularly by the project staff, staff of the wildlife sanctuaries, DNP and Champasack University.
- The data was updated and elaborated by the GIS and Wildlife consultants to use in the joint Trainings/Workshops and were included in the GIS and Wildlife Final Technical Reports.

Activity 1.3.4 Technical report on Wildlife occurrences for the 1st year.

- The Technical Report was submitted to RFD, parts of the report were produced as articles printed in journals.

Activity 1.4.1 Recruit GIS Consultant.

- The project started the process of recruitment of the GIS Consultant in early 2013, the process finalized and the GIS Consultant started working with the project in July 2013.

Activity 1.4.2 Meetings/Communication with Cambodia and Lao PDR Project Staff.

- The project staff and the consultants communicated with Champasack University, Lao PDR on 9 September 2013, and agreed to cooperate in the GIS and Wildlife Research in the project area inside Laos border, the meeting minutes and the cooperative agreement as shown at the last part of Section 3.
- The Technical Meeting on Biodiversity Conservation and Wildlife Research in Southern Lao PDR organized on 12 December 2013, and GIS and Wildlife research training workshops were organized by the Thailand Project Component in Champasack, Lao PDR, during 13-15 December 2013 with support of the GIS and Wildlife Consultants from Faculty of Forestry, Kasetsart University, which signed the contract with RFD and started working with the project in July and September 2013 respectively. Wildlife trainings were on: Field Wildlife Resource Studies and Field Wild Mammal Survey and Identification.
- Joint Training Workshops on GIS Modeling for Forest Land Use Planning was discussed and planned with cooperation of the Project Thailand Component, Cambodia Component and staff of Champasack University, Lao PDR, with support of GIS and Wildlife consultants from Kasetsart University, Thailand.
- Project staff participated in the Thailand-Cambodia WEN meeting and field excursion organized by DNP during 18-19 December 2014.
- The communication was on going to discuss and inform of the progress.

Activity 1.4.3 Conduct training for GIS officials for three participating countries.

- The GIS trainings/workshops for Thailand Component project staff and officials were organized on 28-29 November 2013 successfully and were reported in the 3rd PSC meeting.

- The GIS and Wildlife trainings/workshops in cooperation with forest protection unit in the project area were organized to prevent wildlife poaching, illegal logging, illegal trading and collection of wild plants on 5-6 February 2014.
- Joint Training Workshops on Wildlife Research, GIS Modeling for Forest Land Use Planning and GIS-Wildlife Modeling were discussed, planned and organized with cooperation of the Project Thailand Component, Cambodia Component and staff of Champasack University, Lao PDR. The trainings/workshops were organized in Lao, PDR, Cambodia and Thailand on 13-15 December 2013, 10-15 March 2014, and 20-24 October 2014 respectively.

Activity 1.5.1 Meetings/Communication with Cambodia and Lao PDR Project Staff.

- Joint research on wide-ranging species distribution in the Emerald Triangle in Lao PDR was planned and started on 13-15 December 2013.
- GIS and Wildlife research training/workshops were discussed, planned and organized in Lao PDR, Cambodia and Thailand with participation of staff from Thailand, Cambodia and Lao, PDR.
- The communication was on going to discuss and inform of the progress regularly.



Activity 1.5.2 Standardize Wildlife distribution data.

- The activity was organized in Lao PDR, Cambodia and Thailand in cooperation with GIS and Wildlife Consultant with participation of staff from Thailand, Cambodia and Lao, PDR.
- GIS and Wildlife research results were reported at the 5th Project Steering Committee Meeting organize in Khong Cheam District, Ubon Ratchathani, Thailand during 23-26 February 2015.
- The dissemination of project outputs on wildlife resources and GIS modeling and research on the livelihood improvement of the communities from ICDPs support by the project was organized for the Task Force Working Group from RFD and DNP and the Advisory Committee during 23-24 April 2015.





Activity 1.5.3 Simulate Wildlife distribution in the Emerald Triangle.

- The GIS and Wildlife consultants elaborated the results from the Joint trainings and workshops organized in Lao PDR, Cambodia and Thailand, and reported the progress to RFD and in the PSC meetings.
- The dissemination of project outputs on wildlife resources and GIS modeling was organized for the Task Force Working Group from RFD and DNP and the Advisory Committee to discuss the research results during 23-24 April 2015, Wildlife Distribution Modeling maps was produced and distributed to parties concerned.

Activity 1.6.1 Meetings/Communication with Cambodia and Lao PDR Project Staff.

- Joint GIS and Wildlife research in the Emerald Triangle was introduced in the meeting in Champasack Lao PDR for future collaboration. The trainings/workshops were agreed and planned to organize in Lao PDR, Cambodia and Thailand.
- The communication was on going to discuss and inform of the progress regularly.

Activity 1.6.2 Field data collection and update.

- Land use change data in the project area were collected and updated regularly by the PAs and project staff under supervision of GIS Consultant.

Activity 1.6.3 Land-use scenarios in the Emerald Triangle in 2020 for the first year.

- The land use information of the project area in Thailand was continuously collected for the joint workshops planned in Cambodia.
- The articles were prepared by the GIS Consultant after the Joint Training Workshop in Lao PDR during 13-15 December 2013, in Cambodia during 10-15 March 2014, and in Thailand during 20-24 October 2014. The article was published in the University Journal, the technical reports were published and distributed in the 5th PSC Meeting.

Activity 1.6.4 Technical report/paper on future land-use/land-cover for the 2nd year.

- The outcomes of the joint workshops were elaborated and reported by GIS consultant after the workshop and included in GIS Consultant Final Technical Report.

Activity 1.7.1 Publish paper on future land use (2020) in the Emerald Triangle in international conference or internal journal for the 2nd year.

- The Wildlife and GIS consultant technical report including the elaboration of land use modeling with the GIS-Wildlife Distribution Modeling Training Workshops were published and distributed.

Activity 1.7.2 Publish paper on consequences of land-use change on wide-ranging species distributions in international conference or internal journal for the 3rd year.

- The paper on consequences of land-use change on wide-ranging species distributions was sent to a journal by the GIS and Wildlife consultants for printing.

Activity 1.7.3 Publish brochures and leaflets to general publics.

- Brochures and leaflets both in Thai and English were updated and published regularly, and circulated in the meetings trainings, workshops and sent to the agencies concerned.



Activity 1.7.4 Disseminate project results via website and VDO.

- The dissemination of project results was on-going regularly. Common Vision was drafted in the 2nd PSC meeting, and was disseminated in the project Facebook, and IUCN E-News (www.tbpa.net – Tbenews7).

- The dissemination of project results via website and VDO were regularly updated, the project activities implemented was launched and added to the Facebook of Kasetsart University on 16 June 2014, the VDO was shown in the 4th PSC Meeting.



Activity 1.8.1 Meetings /Mutual Visits to Cambodia and Lao PDR for the preparation of TBCA common vision.

- The common vision was formulated and agreed in the 2nd PSC meeting,

Activity 1.8.2 TBCA common vision endorsed by tri-national.

- The project communicated with authorities in Lao PDR, and the matter was discussed.

Activity 1.9.1 Initiate the facilitation of integrating the results of joint research activities on Wildlife conducted in the Emerald Triangle Protected Forests Complex into individual country management plans which are exchanged between the project's participating countries, especially Thailand and Cambodia.

- The PhaTaem Protected Forests Complex Management Plan which was prepared in the project Phase I, was revised incorporated the results of joint research activities on Wildlife conducted in the Emerald Triangle Protected Forests Complex and send to RFD in mid-August 2015 for revision before submitted to ITTO. The copy was also sent by e-mail to ITTO and Cambodia Project Component in mid-August 2015.

Activity 1.9.2 Establish an effective mechanism to alert participating countries of incidences of illegal Wildlife activities in efforts to synchronize cross-border patrolling activities.

- The effective mechanism to alert participating countries of incidences of illegal Wildlife activities in efforts to synchronize cross-border patrolling activities was also included in the revision of the Pha Taem Protected Forests Complex Management Plan.

Activity 2.1.1 Field data collection and update.

- Update and maintain information system was carried on by project staff and compiled at the project headquarters. The information was used by the GIS and Wildlife consultants, and to inform the stakeholders concerned.

Activity 2.1.2 Procurement of Equipment.

- Procurement of capital items was finalized in January 2014, the items were used at the project office and also distributed to National Parks and Wildlife Sanctuaries.

Activity 2.2.1 Meetings, Trainings-PA Staff, Local People.

- Meetings with forest protection unit in the project area were organized and discussed the benefits of conservation to the villages meetings to prevent wildlife poaching, illegal logging, illegal trading and collection of wild plants.
- Workshops/Trainings for PA staff and local people in cooperation with NGOs, Universities and forest protection unit in the project area on the benefits of conservation, forest protection, effective patrolling were organized to prevent wildlife poaching, illegal logging, illegal trading and collection of wild plants on 5-6 February 2014.
- The meetings with communities in all protected areas were held during field visit of the project staff in year 2012, on 9 October, 23 November, in year 2013 on 10 July, 13-14 July, 25 July, 15 August, 31 October, in year 2014 on 14 January, 8 May, 16, May, 27 May, 6 June, 22 September, 14 October, 17 October, 22 October, and in year 2015, on 6 January, 9 January, 22 April.

Activity 2.2.2 Workshops-PA Staff, Local People.

- Workshop on prevention of wildlife poaching, illegal logging, illegal trading and collection of wild plants was organized on 28-29 November 2013 and 5-6 February 2014, and also on going in the project area during field visit of the project staff.
- Project staff participated in the Thailand-Cambodia WEN meeting and field Excursion organized by DNP during 18-19 December 2014.



Activity 2.3.1 Meetings with universities and NGOs.

- Meetings with the universities and NGOs in Ubon Ratchathani were held to plan for cooperation. Workshops/Trainings in cooperation with NGOs, Universities on buffer zone management were organized in Ubon Ratchathani during 5-6 May 2014.

Activity 2.3.2 Training on buffer zone management - PA Staff, Local People.

- Trainings/workshops on buffer zone management were organized in cooperation with forest protection units in the project area during field visit of the project staff.

Activity 2.4.1 Procurement of equipment.

- Procurement of capital items was finalized in January 2014, the items were used at the project office and also distributed to National Parks and Wildlife Sanctuaries.



Activity 2.4.2 Workshops on effective patrolling and protection.

- The Meetings were organized to follow up the patrolling and to provide necessary equipment and facilities to protected areas and protection units for effective patrolling and protection once a month during field visit of the project staff.

Activity 2.4.3 Meetings-Local People to consider the establishment of nursery and Tissue Culture Lab.

- Meetings to discuss and assess the possibility to establish nursery and Tissue Culture Lab in the villages were organized during the visits of the project staff. Community fora and election of the responsible personnel were organized with support and assistance of the project under regulations established by the Office of Community Forest, RFD.
- The project team encouraged local committees to develop criteria and regulation for project selection, the project team also held discussions with stakeholders in local communities and officials of community development government agencies to help to identify promising ICDP projects and related activities. Common projects chosen were: Handicrafts from bamboo, Home-stay for eco-tourism, Food banks-agro forestry, Wild Orchid Micro Technique Propagation.
- The selection criteria for the ICDP projects include: Interest to work with the project, Indigenous knowledge on sustainable management of natural resources, Potential for community-based ecotourism, Experience of working with government agencies, Need to diversify non-forest based activities.
- The project team conducted several community potential assessments in order to obtain an up-to-date situation and needs assessment for the development in target communities. The team interviewed representatives of related agencies and local authorities to search for possible collaborations in the development of livelihood improvement projects and alternatives. The results from the community assessments and information interviews were used in designing capacity-building training programs and in the selection of the pilot villages.
- After the selection of pilot communities, a community meeting in each village was organized to inform of the selection result and to facilitate preparation of the pilot activity proposal from the pilot fund. A “group management committee” was also elected by community members. Training workshop programs on eco-

tourism management and development of local products were provided for representatives of target communities. During the implementation process of pilot activities, several informal monitoring visits were made by the project team.

- Meetings to prepare requests to RFD for the establishment of nursery and Tissue Culture Lab were organized during October – November 2013.
- Meetings to follow up the establishment of nursery and Tissue Culture Lab were organized during field visit during January to May 2014, the first installments of the addition fund were provided to the communities on 14 January 2014, the second (last) installment of the addition fund was provided to the communities on 27 May 2014.



Activity 2.5.1 Task Force meetings.

- The meetings were organized to inform of the progress and for cooperation in implementation of the activities.
- Task Force Meetings as shown above in Activity 1.2.2.
- Informal Task Force Meetings and meetings with PAs staff were organized during field visit to discuss the biodiversity cooperation and resolving land use changes regularly.

Activity 2.5.2 Stakeholder meetings.

- The meetings in field during project staff visits to discuss the cooperation and collection of baseline information.
- Stakeholder meetings. Informal meetings with communities and leaders were organized during field visit to discuss the biodiversity cooperation and resolving land use changes.
- Meetings with communities and leaders were organized during field visit to follow up the biodiversity cooperation and resolving land use changes.

Activity 2.6.1 Stakeholder meetings and trainings.

- Stakeholders meeting was organized to inform the project activities and cooperation, the possibility and feasibility of nursery and tissue culture lab establishment provided by ITTO fund were discussed. Meeting with stakeholders regularly to discuss the project sustainability, activities and cooperation.

Activity 2.6.2 Workshops-Local People.

- During the Stakeholders meetings, workshop for local people was considered and agreed to organize. Workshops for local people on sustainability, activities and cooperation were set up during village visits.



Activity 2.7.1 GIS Meetings and trainings-border patrol police, PA Staff.

- The Meetings were organized to follow up the patrolling and discuss future cooperation and planning of the trainings.
- The Meetings were organized on 28-29 November 2013 to facilitate the patrolling on biodiversity conservation and protection.
- GIS and Wildlife Trainings were organized for border patrol police, forest protection unit in the project area on forest protection, effective patrolling and buffer zone management on 5-6 February 2014.
- Discussions were carried on regularly during field visit with border patrol police, forest protection unit in the project area on forest protection, effective patrolling and buffer zone management.

Activity 2.7.2 GIS Workshops-border patrol police, PA Staff.

- The Meetings were organized on 28-29 November 2013 to facilitate the patrolling on biodiversity conservation and protection.
- GIS and Wildlife Workshops were organized for border patrol police, forest protection unit in the project area on forest protection, effective patrolling and buffer zone management on 5-6 February 2014.

Activity 3.1.1 Network and Raising awareness Meetings and trainings - Local People.

- Workshops and Trainings for local people on network and raising awareness were conducted during village visits. Training on conservation of natural resources and environment for the youth camp program was organized during 20-22 November 2014.

Activity 3.1.2 Workshop-Local People.

- Workshops for local people on network and raising awareness were conducted during village visits.

Activity 3.2.1 Raising awareness Meetings and trainings-local schools, Local People.

- Raising awareness issues were presented in the monthly meeting of schools boards in the project area, school drawing contests and exhibition of conservation in the schools were organized once a month.



Activity 3.2.2 Workshop-Local People.

- Workshops for local people on raising awareness were set up during village visits.

Activity 3.2.3 Meeting-Nursery and Tissue culture Lab.

- Meetings to discuss and assess the possibility to establish nursery and Tissue Culture Lab in the villages were organized during the visit. Meeting-Training was organized in May 2013.
- Meetings to prepare requests to RFD for the establishment of nursery and Tissue Culture Lab were organized during October – November 2013.
- Meetings to follow up the establishment of nursery and Tissue Culture Lab were organized once a month, the first installment of the addition fund was provided to the communities on 14 January 2014, the second (last) installment of the addition fund was provided to the communities on 27 May 2014.
- Training/workshop for nursery, tissue culture lab and ICDP projects were conducted regularly, study tour were organized on 8-10 and 22-24 April 2014. Bamboo training/workshop was organized on 28 April, 2014. Training Workshops on nursery seedling production and micro-techniques for multiplication of orchids and ornamental plants were organized in cooperation with Ubon Ratchathani University. On the job trainings/workshops were organized regularly.

Activity 3.2.4 School drawing contest.

- School drawing contest was discussed and agreed to organize in each protected areas, five contests were organized in the first year, 5 contests were organized in year 2013, another 5 contests were organized in year 2014, and two contests were organized in year 2015.



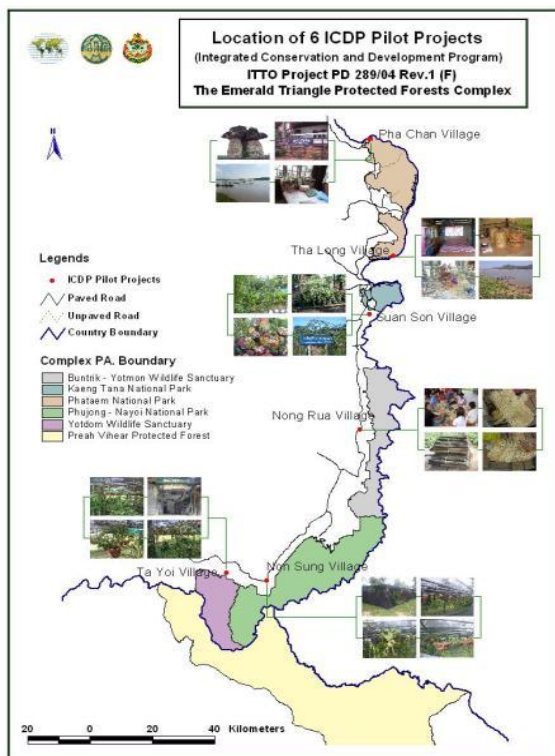
Activity 3.3.1 Meeting-Nursery, Tissue culture Lab, and bamboo.

- After field visit of project staff and stakeholders meeting, establishment of nursery, tissue culture lab and bamboo propagation were discussed and concluded that the possibility of establishment were three manual controlled nurseries, and two tissue culture lab.
- Meetings to assess the existing ICDP and possibility for new pilot program were organized during the visit. Meeting-Training were organized in May 2013.
- Meetings to assess the existing ICDP and possibility for new pilot program were organized during project field visit.



Activity 3.3.2 Monitoring and Meeting of existing ICDP.

- Monitoring and assessing of existing ICDP were carried on continuously. The project supported students from Kasetsart University to research on the outcome and the development of ICDP project supported by the project in phase II and III.



The report of the impacts of ICDP on economic, social and environment conditions of the villages that participated in ICDP activities and to compare the conditions between the participating villages and non-participating villages as shown at the last part of Section 3: Assessment the effectiveness of the integrated conservation and development project activities (ICDP).

- 6-ICDP were established in

the project Phase II, funds of USD1,400 each were allocated to six local communities in accordance with criteria jointly approved on 20-21 July 2009 (Figure 2):

Figure 2: 6-ICDP in the project Phase II,

- Home-stay and eco-tourism project, Ban Pha Chan.
- Home-stay and eco-tourism project, Ban Tha Long.
- Agro forestry-Food Bank project, Ban Suan Son.
- Handicrafts from bamboo project, Ban Nong Rua.
- Wild Orchid Tissue Culture Project, Ban Non Soong.
- Wild Orchid Tissue Culture Project, Ban Ta Yoy.



Activity 3.3.3 Meetings for new ICDP-Local People and NGOs.

- The outcome of regular meetings of Local People and NGOs for new ICDP in the field were summarized and discussed by concerned parties in the Advisory Committee and Task Force Meetings and endorsed in the Technical Working Group Meeting to allocate support to certain communities and villages.
- Meetings to prepare requests to RFD for the establishment of new ICDP, nursery and Tissue Culture Lab were organized during October – November 2013.
- Meetings to follow up the establishment of new ICDP-Local People and NGOs were organized once a month during the field visit.
- Meetings to follow up the establishment of new ICDP, nursery and Tissue Culture Lab were organized once a month during the field visit.

Activity 3.3.4 Provide additional funding.

- The first installment of the addition fund allocation to certain communities and villages was provided to the communities on 14 January 2014, the second (last) installment of the addition fund was provided to the communities on 27 May 2014.
- Six ICDPs plus three nurseries for seedlings and two Tissue culture lab established in the project Phase III (Figure 3),



**THE EMERALD TRIANGLE PROTECTED FORESTS COMPLEX (PHASE III)
ITTO PROJECT PD 577/10 REV.1 (F)**

Proposed fund provide to villages

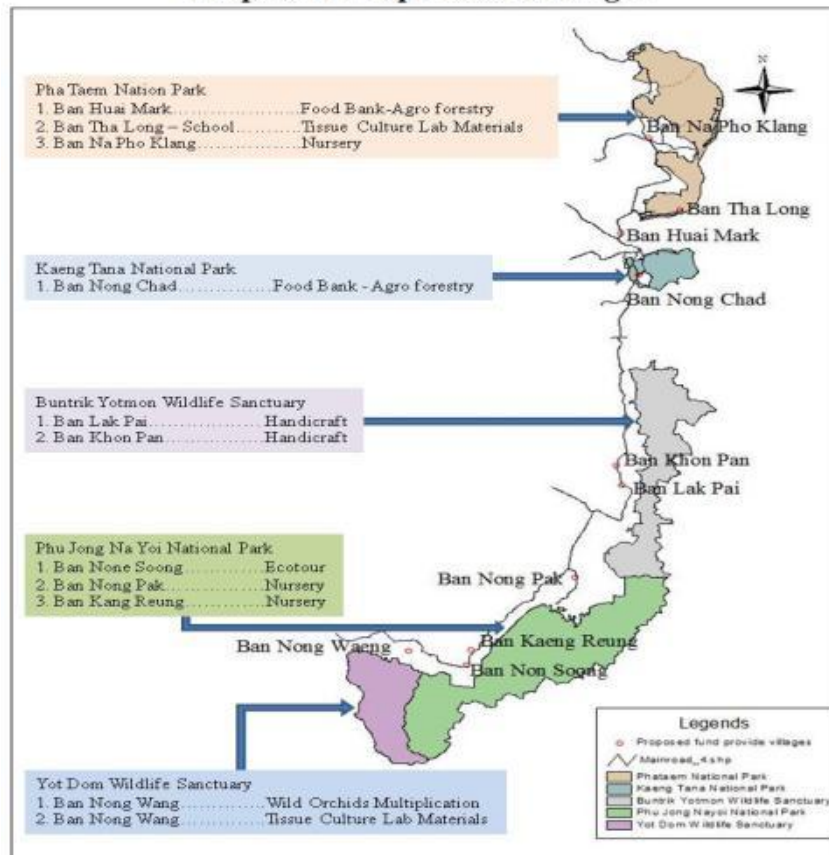


Figure 3: Six ICDPs, three nurseries, and two Tissue culture lab in the project Phase III.

No	Villages	1 st allocation		2 nd Allocation		TOTAL USD
		THB	USD	THB	USD	
6 ICDPs						
1	Ban Huay Mark – Food bank – Agro Forestry	48,000	1,500	-	-	1,500
2	Ban Nong Chad – Food bank – Agro Forestry	48,000	1,500	-	-	1,500
3	Ban LakPai – Bamboo Handicraft	48,000	1,500	-	-	1,500
4	Ban Khon Pan - Bamboo Handicraft	48,000	1,500	-	-	1,500
5	Ban None Soong – Ecotour	48,000	1,500	-	-	1,500
6	Ban NongWaeng – Wild Orchid multiplication	48,000	1,500	-	-	1,500
3 Nurseries for seedlings						
1	Ban Na Po Klang	271,000	8,468.75	514,900	16,090.63	24,559.38
2	Ban Nong Pak	296,600	9,268.75	470,200	14,693.75	23,962.50
3	Ban Kang Reung	297,600	9,300.00	424,000	13,250.00	22,550.00
2 Tissue culture lab						
1	Ban Tha Long (School)	350,000	10,937.50	545,200	17,037.50	27,968.75
2	Ban NongWaeng	309,000	9,656.25	585,000	18,281.25	27,937.50
Grand Total						135,978.13



Activity 3.4.1 Eco-tour training & workshop-Local People.

- The activity was discussed in the Task Force meetings and organized as planned in June 2013.
- Ecotourism and the benefits of trans-boundary cooperation workshops were organized for local people.
- Eco-tour training & workshop-Local People were organized during study tour of the communities as planned during 8-10 April 2014.
- Eco-tour processes and guidelines were discussed with communities during village visits.



Activity 3.4.2 Eco-tour training-PA Staff.

- The activity was discussed in the Task Force meetings and organized for PA staff on 27 June 2013. The eco-tour leaflets were produced by project fund.

Activity 3.5.1 Meetings-ICDP participants.

- Existing ICDP groups and proposed new ICDP groups were invited to a discussion on activities and experiences sharing. Meetings with communities to inform of the fund raising for ICDP projects were organized during village visits.

Activity 3.5.2 Fund raising meetings-Potential donors and NGOs.

- Project details and activities were submitted to potential donors and NGOs and discussed for future fund raising meetings. Discussions with potential donors and NGOs were on-going to support the ICDP projects.

Activity 3.6.1 Meetings, Training-PA Staff, ICDP participants.

- Meetings of PA staff and ICDP participants agreed to set up a group to assist in the implementation of new ICDP and indication of training needs. Trainings were organized during village visits regularly together with PAs staff to monitor and evaluate the implementation of ICDP activities.

Activity 3.6.2 Workshops-PA Staff, ICDP participants.

- Workshops of PA staff and ICDP participants were organized during village visits regularly together with PAs staff and also to monitor and evaluate the implementation of ICDP activities.

(c) The project's planned duration and overall costs are summarized below:

Schedule: The project was delayed due to the legislation in Thailand required that the project be approved by the cabinet.

Duration: Thirty six months.
Starting Date: 1 September 2012.

(d) Project inputs were appropriate and adequate.

<u>Overall Project Costs</u>	<u>Sources of financing (US\$)</u>
Implementation in Thailand:	ITTO 800,280
Government:	339,552
Implementation in Cambodia:	ITTO 1,250,759
Government:	<u>228,850</u>
Total ITTO:	2,051,039
Total Government:	<u>568,402</u>
Grand Total:	<u>2,619,441</u>

Lists of Meetings - Trainings - Workshops

- *Project Steering Committee Meeting*

No.	Date	Details	Venue
1	1 October 2012	Project Opening Ceremony.	Phnom Penh Hotel, Phnom Penh, Cambodia
	2 October 2012	The First Project Steering Committee Meeting	
2	1 May 2013	The Joint Project Technical Meeting.	Chaophya Park Hotel, Bangkok, Thailand
	2 May 2013	The Second Project Steering Committee Meeting.	
3	8 December 2013	The Joint Project Technical Meeting.	Chaophya Park Hotel, Bangkok, Thailand
	9 December 2013	The Third Project Steering Committee Meeting.	
4	9 July 2014	The Joint Project Technical Meeting.	Angkor Paradise Hotel, Siem Reap, Cambodia.
		The Fourth Project Steering Committee Meeting.	
5	24 February 2015	The Joint Project Technical Meeting.	Thosaeng Khong Cheam Resort, Ubon Ratchathani, Thailand
		The Fifth Project Steering Committee Meeting.	
	25 February 2015	Field Visit (Thailand Site)	Visit Bamboo Handicraft at Nong Rua Village, Community Seedling Nursery at Kang Ruang Village. Phu Jong – Na Yoi National Park, Community Orchid Propagation Nursery at Nong Wang Village.

No.	Date	Details	Venue
6	24 July 2015	The Joint Project Technical Meeting. The Sixth Project Steering Committee Meeting.	Phnom Penh Hotel, Phnom Penh, Cambodia

- ***Advisory Committee and Taskforce Meeting***

Date	Advisory Committee and Taskforce Meeting	Venue
24 September 2012	To inform the beginning of the project activities and cooperation.	UbonRatchathani
20 June 2013	Endorsed the progress of the project activities and also discussed and advised on the raising awareness on conservation activities and discussed the plan to establish of new ICDP, nurseries and tissue culture lab supported by the project.	Ubon Ratchathani
9 July 2013	Endorsed the progress of the project activities, considered and agreed with the plan of new ICDP establishment, nurseries and tissue culture lab supported by the project.	Ubon Ratchathani
5 November 2013	Reported the progress of the activities.	Ubon Ratchathani
20 March 2014	Endorsed the progress of the project activities, and providing additional fund to new ICDP projects.	Ubon Ratchathani
23-24 April 2015	Dissemination of project outputs on wildlife resources and GIS modeling and research on the livelihood improvement of the communities from ICDPs support by the project. Discussed and advised on the preparation of the Project Phase IV.	Ubon Ratchathani

- ***Technical Working Group Meeting***

Date	Technical Working Group Meeting	Venue
21 September 2012	Considered and recommended on the workplan and Proposal for Project Amendment.	RFD
21 August 2013	Approved the plan to establish new ICDP, nurseries and tissue culture lab supported by the project.	RFD
5 November 2013	Considered, approved and advised on financial, workplan and the 2 nd Year YPO.	Ubon Ratchathani
12 December 2013	The Technical Meeting on Biodiversity Conservation and Wildlife Research in Southern Lao PDR.	Champasak, Lao PDR
20 March 2014	Reported the progress of the activities and on new ICDP, nurseries and tissue culture lab supported by the project, and advised on financial and workplan, and cooperation with agencies concerned.	Ubon Ratchathani
24 April 2015	Reported the implementation of the project activities and to prepare the Completion Report, and discussed and advised on the preparation of the Project Phase IV.	Ubon Ratchathani

- ***Meeting/Training/Workshop***

Date	Meeting/Training/Workshop	No. of Participants
27 February 2013	Meeting on the preparation of a workshop on biodiversity conservation and a draft common vision of the Emerald Triangle to facilitate cooperation and discussion of tentative plan for a 2 nd PSC meeting in Lao PDR, at Faculty of Forestry, National University of Lao PDR, Vientiane, Lao PDR.	20
9 September 2013	Meeting with Champasack University, Champasak, Lao PDR	50

Date	Meeting/Training/Workshop	No. of Participants
	to discuss and sign the cooperative agreement on cooperation in the GIS and Wildlife research in the project area inside Laos border.	
28-29 November 2013	GIS for PAs staff, Forest protection Units Staff, Border Police	35
13-15 December 2013	Joint GIS and Wildlife research training workshops, organized by the Thailand Project Component in Champasak, Lao PDR.	50
5-6 February 2014	GIS and Wildlife research training/workshop for PA staff	60
10-15 March 2014	Joint Training Workshop on GIS Modeling for Forest Land Use Planning (in Cambodia)	51
29 March 2014	Wildlife survey in Yot Dome Wildlife Sanctuary	15
22-24 April 2014	Training/workshop on transboundary conservation cooperation and the mitigation of the effect of future land use changes	47
20-24 October 2014	GIS-Wildlife Distribution Modeling Joint Training Workshop, Tohsang Hotel, Khong Cheam, Ubon Ratchathani	50
3 November 2014 19 November 2014	Workshop on impact of wild elephant on communities at Nuntrik-Yodmon Wildlife Sanctuary	35-40
18-19 December 2014	Thailand-Cambodia WEN meeting and Field Excursion (Project staff Participated in the meeting organized by DNP)	
16 January 2015 19 January 2015 28-30 April 2015 7 May 2015 20-22 June 2015 13-17 July 2015 24-28 August 2015	Workshops on impact of wild elephant on communities at Buntrik-Yodmon Wildlife Sanctuary.	35-40
23-24 April 2015	Dissemination of Project Outputs on Wildlife Resources and GIS Modeling, and Research on the Livelihood Improvement of the Communities from ICDPs Support by the Project, Tohsang Khongjiam Resort, Khong Cheam, Ubon Ratchathani, Thailand.	40

- *School raising awareness and drawing contest*

No.	Activity	Target Group	No. of participants	Date
1	Raising awareness through school drawing contests and exhibition of conservation in the schools	Schools adjacent to PAs, PAs and Forest Protection Units staff	54	14 January 2013
2			114	11 March 2013
3			108	3 July 2013
4			250	30 July 2013
5			98	5 September 2013
6			72	14 January 2014
7			74	7 March 2014
8			63	6 April 2014
9			85	10 May 2014
10			96	9 October 2014
11			77	18 January 2015
12			60	22 March 2015

- *Training / Workshops*

No.	Training / Workshops	Target Group	No. of participants	Date
1	Ecotourism and the benefits of trans-boundary cooperation workshops	Local people and Beneficiaries	50	26 December 2012
2			50	27 December 2012

No.	Training / Workshops	Target Group	No. of participants	Date
3			50	8 January 2013
4			50	15 January 2013
5			50	16 January 2013
6			50	17 January 2013
7			50	24 January 2013
8	Ecotourism	PAs staff	20	27 June 2013
9	Green manure	PAs staff	42	12 March 2013
10	Agro Forestry	Local People, Beneficiaries	35	16 May 2013
11	Management of natural resources and protection	Local People, Beneficiaries	34	23 September 2013
12	Workshop on prevention of wildlife poaching, illegal logging, illegal trading and collection of wild plants.	Local People, Beneficiaries	60	28-29 November 2013
13		Protected area and Forest Protection Units staff	35	5-6 February 2014
14	Ecotourism management and field visit	Local people and Beneficiaries	45	8-10 April 2014
15	Buffer zone management	in cooperation with NGOs, Universities for local communities	42	5-6 May 2014
16	Transboundary Biodiversity Conservation	Newly recruited officers from RFD	31	19 June 2014
17	Conservation of natural resources and environment for the youth camp program	Schools adjacent to PAs, PAs and Forest Protection Units	60	20-22 November 2014
18	Training on eco-tourism for youth.		50	21 May 2015

- **Monitoring, Meeting of existing ICDP, Meetings/Training/Workshop for new ICDP**

No.	Activity	Target Group	No. of participants	Date	
1	Meetings with stakeholders and local communities for discussion and monitoring to strengthen the biodiversity conservation and protection.	Local communities and leaders participated in ICDPs	20-25	9 October 2012	
				23 November 2012	
				10, 13-14, 25 July 2013	
				15 August 2013	
				31 October 2013	
				14 January 2014	
				8, 16, 27 May 2014	
				6 June 2014	
				22 September 2014	
				14, 17, 22 October 2014	
				6, 9 January 2515	
	22 April 2515				
2	Monitoring and Meeting of existing ICDP	Local People, Community Leaders	18	9 November 2012	
3				15	12 December 2012
4				22	25 December 2012
5				20	26 December 2012
6				20	17 May 2013
7				70	23 May 2013
8				112	9 September 2013
9				62	10 September 2013
10				101	11 September 2013
11				70	12 September 2013

No.	Activity	Target Group	No. of participants	Date	
12	Fora on ICDPs (Tissue Culture Lab)		127	17 September 2013	
13	Fora on ICDPs (Nursery for seedlings)		139	19 September 2013	
14	Fora on ICDPs (Tissue Culture Lab)		116	24 September 2013	
15	Fora on ICDPs (Ecotourism)		100	25 September 2013	
16	Fora on ICDPs (Nursery for seedlings)		93	26 September 2013	
17	Fora on ICDPs (Agro Forestry)		67	30 September 2013	
18	Planning of the establishment of nursery		26	2 October 2013	
19	Planning of the establishment of bamboo handicraft		22	3 October 2013	
20	Planning of the establishment of bamboo handicraft		26	3 October 2013	
21	Planning of the establishment of Agro-forestry		26	11 October 2013	
22	Planning of the establishment of Agro-forestry		28	17 October 2013	
23	Planning of the establishment of Tissue Culture Lab		18	24 October 2013	
24	Planning of the establishment of Tissue Culture Lab		18	29 October 2013	
25	Planning of the establishment of nursery for seedlings		37	8 November 2013	
26	Meeting/ICDP project fund (first installment) provided to the target communities		Local communities and leaders participated in ICDPs	45	14 January 2014
27	Study tour for ICDP target communities			32	8-10 April 2014
28	Study tour for ICDP target communities			35	22-24 April 2014
29	Bamboo plantation establishment and utilization for PA staff and ICDP target communities			55	28 April 2014
30	Field visit to ICDPs project for ICDPs target communities to exchange of ideas and information			30	24 May 2014
31	Meeting/ICDP project fund (second/last instalment) provided to the target communities			45	27 May 2014
32	Meeting with staff and volunteers from Kasetsart University on ICDP Projects and communities livelihood improvement			25	21 June 2014
33	Micro-techniques for multiplication of orchids and ornamental plants			30	21-24 August 2014
34	Nursery seedling production			40	27-28 September 2014
35	Micro-techniques for multiplication of orchids and ornamental plants			30	15-17 November 2014
36	Tissue Culture Media Preparation			25	26 November 2014
37	Nursery Management at Ban Nong Pak	35		3 December 2014	
38	Micro-techniques for multiplication of orchids and ornamental plants	30		7-9 December 2014	
39	Tissue Culture Lab Management at Ban Tha Long	30		11 December 2014	

No.	Activity	Target Group	No. of participants	Date
40	Tissue Culture Lab and fruit tree seedling preparation and management at the community labs and nurseries, seedling production techniques.		30-35	7-9 February 2015 3-4 March 2015 1-2 April 2015 4-5 May 2015 17 June 2015 4 July 2015

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- ***Minutes of the Joint Wildlife Research Meeting and the Cooperative Agreement***

Minutes of the Joint Wildlife Research Meeting

PD 577/10 Rev.1 (F)

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

Provisional Agenda

Date: 16 September 2013 (Monday), Time: 10.00-12.00 hrs.

Venue: Vice President Office, Champasack University, Lao PDR

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List of attendants

<u>Name</u>	<u>Position/Organization</u>	<u>Tel/E-mail</u>
Dr. Bounmy Phonesavanh	Vice Rector for Research Affairs, Champasack University	+856 20 22270099
Dr. Phonesavanh Thepphasoulithone	Vice Rector for Academic Affairs, Champasack University	ptheppha@gmail.com
Mr. Kamol Wisupakan	Project Manager (Thailand Component)	081-4829169; kamolw88@gmail.com
Dr. Somkit Siripattanakilok	Faculty of Forestry, Kasetsart University	fforsks@ku.ac.th
Dr. Naris Bhumpakphan	Wildlife Consultant	ffornrb@ku.ac.th
Dr. Yongyut Trisurat	International Project Coordinator	fforyyt@ku.ac.th

Item 1. Wildlife Research

Dr. Naris Bhumpakphan, Dr. Yongyut Trisurat and Dr. Somkit Siripattanakilok informed the meeting that the Royal Forest Department (RFD) contracted the Faculty of Forestry, Kasetsart University (KUFF) to undertake wildlife research in the Pha Taem Protected Forests Complex and the Dong Khanthung Protected Area with the financial support from the Management of the Emerald Triangle Protected Forests Complex to Promote Cooperation for Trans-boundary Biodiversity Conservation between Thailand, Cambodia and Laos (Phase III). In addition, the KUFF has assigned Dr. Naris Bhumpakphan to undertake this assignment. The term of contract is from September/October 1, 2013 to (and including) November/December 30/31, 2014. The survey data obtained in these areas will be combined with data from Cambodia for joint research on wide-ranging species distribution and trans-boundary biodiversity conservation in the Emerald Triangle.

The objective of this meeting was to invite Champasack University to participate in the joint wildlife research through the existing academic cooperation between Kasetsart University and Champasack University. The responsibilities of this assignment include 1) sharing existing information on wildlife and biodiversity, 2) jointly survey wildlife occurrences and their habitats, 3) organizing training for university staff and forestry officials in Laos, and 4) supporting data required to complete the requirements of the joint wildlife research.

Dr. Bounmy Phonesavanh and his team are interested in the joint research and accepted the invitation from KUFF. Thus, both parties signed the cooperative agreement as attached and Dr. Bounmy Phonesavanh has assigned Dr. Phonesavanh Thepphasoulithone to be a focal point for further cooperation and details.

Item 2. Budget

Dr. Yongyut Trisurat provided the detailed budget of USD 30,000 (Thirty Thousand US Dollars Only) for wildlife consultant contract. Fund will be equally divided into 2 parts, the first part for

University shall transfer fund to Champasack University in accordance with the funds committed for the Kasetsart University and the second part for Champasack University. The Faculty of Forestry, Kasetsart purpose of cooperation agreement and after providing professional services to the RFD.

Item 3. PSC/Technical Meeting

Dr. Yongyut Trisurat, and Mr. Kamol Wisupakan informed attendances that the previous PSC meeting in Bangkok recommended the project staff to arrange the 3rd PSC and Technical meeting in Laos in early December 2013. In this regard, the project would like to ask Champasack University to jointly organize the meeting and field excursion. Dr. Bounmy Phonesavanh and his team are willing to undertake this request and ask the project to provide further details on schedule, potential participants from Laos and logistics

Item 4. Others

Dr. Naris Bhumpakphan and Dr. Somkit Siripattanadilok suggested Dr. Bounmy Phonesavanh to find knowledgeable staff and forestry officials from four provinces that are responsible to manage Dong Khanthung protected area to participate in wildlife training and wildlife survey. There are two training sessions under this cooperation agreement: 1) wildlife ecology and survey held at Champasack University and 2) Wildlife data analysis either held in Laos or Thailand. The purposes of the trainings are to train the staff on identification target species in the field and analyses of survey data, respectively. In addition, essential equipment such as camera and GPS will be allocated to Champasack University for wildlife survey after the first training. Champasack University shall return the equipment to the RFD in good condition after completion of the research.

Closing the meeting

Dr. Bounmy Phonesavanh thanked all attendances to participate in the meeting and look forward to seeing the project implementation very soon.

Prepared by

Dr. Yongyut Trisurat
Mr. Kamol Wisupakan

From left to right: Dr. Naris Bhumpakphan, Dr. Dr. Somkit Siripattanadilok, Dr. Bounmy Phonesavanh and Dr. Yongyut Trisurat.



Cooperation Agreement

On the Implementation of Wildlife Research in the Emerald Triangle Area in Lao PDR

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We, undersigned endorse this agreement to undertake the joint Wildlife Research in the Dong Khanthung Protected Area in the Emerald Triangle Protected Forests Complex situated between Thailand, Cambodia and Lao PDR in a framework of trans-boundary biodiversity conservation area (TBCA) in cooperation with Faculty of Forestry, Kasetsart University, Thailand.

We shall share relevant information that can contribute to effectively conserve trans-boundary biodiversity in the Emerald Triangle Protected Forests Complex situated between Thailand, Cambodia and Lao PDR in a framework of trans-boundary biodiversity conservation area (TBCA).

We shall be responsible for providing the information on wildlife habitats and conduct wildlife research and training, additional information, and data required to complete the requirements of the joint Wildlife Research in the Emerald Triangle Protected Forests in Lao PDR.

We agree to deploy the necessary personnel to provide the information on wildlife habitats and conduct of joint Wildlife Research in accordance with the funds committed for the purpose, and shall assist in the reporting requirements by providing data and information as needed.



Name : Navis Bhumpakphan, Ph.D.
Title : Associate Prof.

On behalf of the Faculty of Forestry,
Kasetsart University of Thailand

Dated: 16 Sep, 2013

Place : Champasak Univ.



Name :

Title : **DR. Boumy PHONESAVAN**
Vice - Rector

On behalf of the Champasak University
of Lao PDR

Dated: 16/9/2013

Place : _____

- **Key results of the research projects**

1) Land-use prediction in the ETFC

The land-use/land-cover change assessment for the period 2003 to 2013 indicated that the area of dry dipterocarp forest is threatened in the ETFC. Approximately 30% of its extent has already been converted to agriculture and rubber plantation, especially in the buffer zones of the PPFC. Population growth and economic transition in the region, as the result of the ASEAN Economic Community scheme, were defined as the key driving factors transforming land use patterns by 2030.

The *sustainable poverty and stable resources scenario* predicted a small amount of rubber plantation and arable land expansion. All protected areas are secured from future land use change.

Limited deforestation in the buffer zones of the PPFC and in Lao PDR was predicted under the *low economic decline and localized resource degradation*. The *unsustainable economic development and serious resource degradation* predicted greater extent of new arable land and rubber plantation. In addition, substantial conversion of dry dipterocarp forest in the Preah Vihear Protected Forest (PVPF) in Cambodia, was expected as the result of land allocation program for military and infrastructure development for tourism activities. Based on the declining rubber price due to over-supply and a stable economy, the *low economic decline and localized resource degradation or business as usual scenario* is most likely to happen (Figure 4).

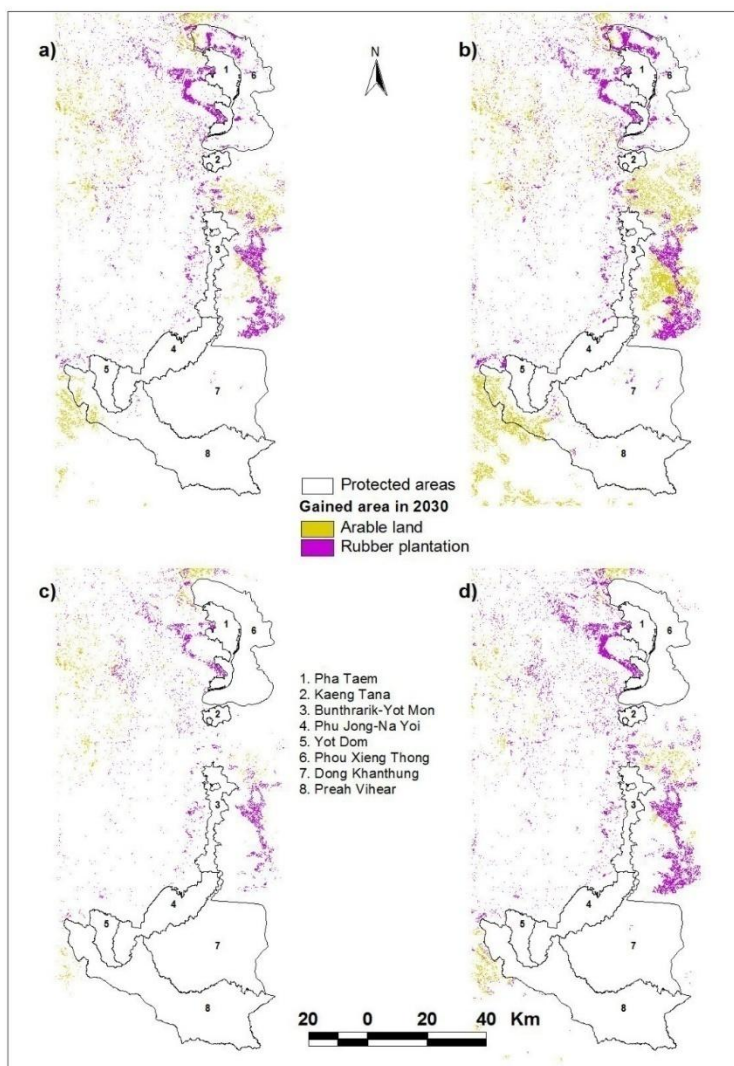


Figure 4: Predicted forest conversion as a result of different land use scenario in 2030:

- a) *business as usual*; b) *unsustainable economic development*; c) *sustainable poverty and* d) *sustainable development*

2) *Wildlife resource monitoring in the PPFC and Dong Khanthung protected forest*

Species diversity of wildlife in the ETFC, including in the Cambodia PVPF, Thailand PPFC reserves, and Lao PDR for PhuXiengthong NBCA and Dong Khanthung PF areas, is unique with 596 vertebrate species, 96 mammals, 288 birds, 81 reptiles, 30 amphibians and at least 101 fresh-water fish species (details in Table 2). Some key wildlife species are at high risk of extinction, however, including Asian elephant, banteng, Siamese Eld's deer, Sarus crane, Giant ibis, and Siamese crocodile (Bhumpakphan, 2015).

Table 2: Numbers of wildlife Species found in ETFC between Thailand and Lao PDR

Faunal Type	Total	Thailand PPFC					Lao PDR	
		Pha Taem	Kaeng Tana	Bun Thrik	Phu Jong	Yot Dom	Phou Xiang	Dong Khanth
Mammal	96	32	51	45	78	85	30	24
Bird	288	72	131	113	180	259	23	32
Reptile	81	34	56	38	72	71	15	22
Amphibian	30	15	22	16	21	28	7	8
Fish	101	52	70	24	55	73	52	37
Total	596	205	330	236	407	516	127	123

Threats to wildlife in the study areas include wildlife poaching and commercial wildlife trade, human activities of collecting non-timber forest products, land encroachment inside and near the reserves, illegal log cutting especially rosewood, livestock raising in reserves areas, and landmines. Minimizing these threats will be important objectives for Thailand, Laos, and Cambodia to protect their transboundary wildlife into the future.

Elephant population are fragmented and separated into three subpopulations, a large population with 40-45 animals in Bun Thrik – Yot Mon WS in Thailand and Laos border Protection Forest to rice paddy fields in Maung Soukhouma in Laos, and the two small populations with 3 individuals in Dong Khanthung and 5 individuals in PVPF. A future consideration is to enable connectivity to support wild elephant movements further south to Dong Khanthung PF and PVPF. As it is now, the large population cannot move south from the Laos Border Protection Forest, where they are driven back to Thailand to protect against crop raids in Champasack Province.

3) *Species distribution modeling in the ETFC*

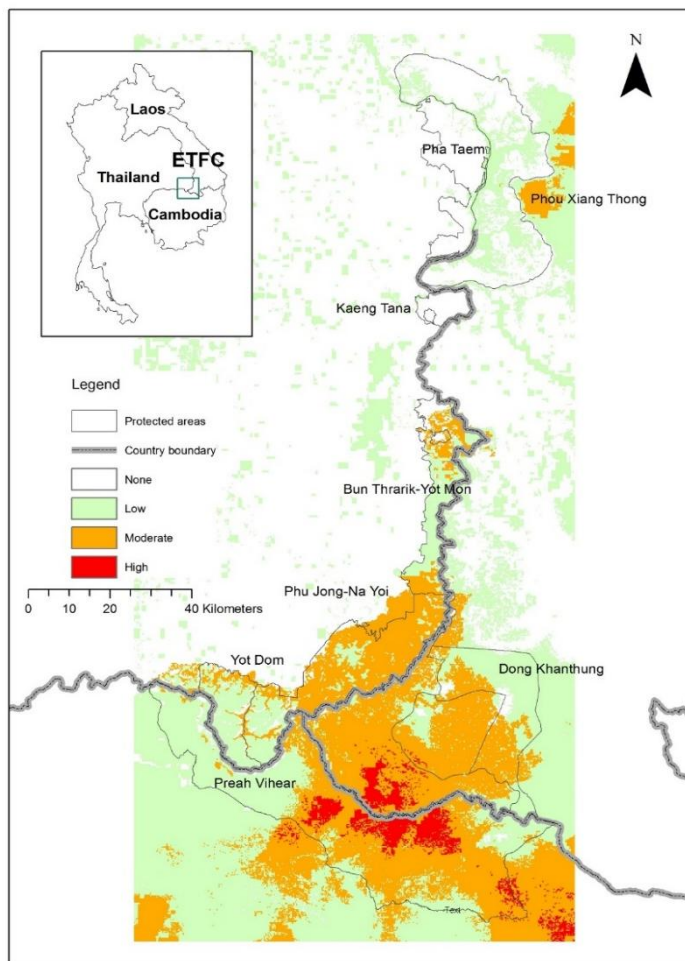
Based on the selection criteria, twelve target species were identified for modeling in the ETFC landscape at present and in the future with land use and climate change. These were: elephant (*Elephas maximus*), gaur (*Bos gaurus*), banteng (*Bos javanicus*), sambar (*Rusa unicolor*), Siamese Eld's deer (*Rucervusel diisiamensis*), barking deer

(*Muntiacus vaginalis*), tiger (*Panthera tigris*), leopard (*Neofelis nebulosa*), Sarus crane (*Grus antigone*), Lesser adjutant stork (*Leptoptilos javanicus*), Giant ibis (*Pseudibis gigantea*) and wild boar (*Sus scrofa*). Although, wild boar and, barking deer did not meet the three of four selection criteria (except adequate observation records), they are important to the ecosystem because they are the main prey species for tiger and leopard (Simcharoen *et al.* 2007, Reed *et al.*, 2012).

Future light to moderate LU/LC change will generate slight impacts on the distributions of selected species because most of the remaining suitable habitats are located in protected areas, while deforestation most likely will occur in the associated buffer zones. In contrast, under the unsustainable land-use scenario in combination with future climate change, there were predicted severe impacts on most selected species, except for on the grazing ungulates.



Figure 5 shows that approximately 45% of the Emerald Triangle landscape (study area) was classified as not suitable habitat for any selected species currently and all future land-use scenarios. If future climate change conditions were combined, the predicted



none habitat class would increase to a range of 50-55%. High species richness class was predicted along the borders between the PVPF (except the western part) and Dong Khanthung NBCA. Most areas in the PVPF, central and eastern part of Dong Khanthung NBCA and Phu Jong-Na Yoi were classified as moderate richness. In addition, the remaining areas in PVPF, Yot Dom, Bun Thrarik-Yot Mon and part of PhouXiangthong were predicted to support low richness for the selected species now and in the future. The entire areas of Pha Taem and Kaeng Tana National Parks were categorized as non-habitat for all 12 species because of heavy human pressures (Bhumpakphan, 2015).

Figure 5: Species richness classes of selected species for modeling in the Emerald Triangle protected forests complex

4) Assessment the effectiveness of the integrated conservation and development project activities (ICDP)

There are more than 80 villages situated within 3-km of the boundary of PVPF, which is part of the Emerald Triangle Protected Forests Complex. The total population is estimated approximately 89,000 individuals, whose livelihoods may affect biodiversity conservation and have conflict with protected areas, such as forest encroachment for unsustainable agriculture, raising cattle and buffalo, and wildlife poaching.

One of the objectives of the Project phases II and III is to support local communities to implement activities linking livelihoods improvement to reduced dependence on resources of protected areas through promoting integrated community development pilot projects (ICDP). These ICDP activities include handicraft from bamboo, home-stay, food bank or fruit tree plantation, and wild orchid micro-technique propagation. A

pilot fund to be used as a revolving fund was allocated to six selected villages for the start-up of pilot activities during Project Phase II from 2008-2010. During Project Phase III from 2012-2015, six new other ICDP projects and 5 other projects were established.

A research was done by a master's student in the Faculty of Forestry, Kasetsart University, on the impacts of ICDPs during the Project's phase III (Maneethong, 2015). The objectives of the research were to assess the impacts of ICDP on economic, social and environment conditions of the villages that participated in ICDP activities and to compare the conditions between the participating villages (6 villages with 280 households) and non-participating villages (10 non-participating villages with 330 households). The non-participating villages were located around the participating villages at a radius of five km. This research selected four key attributes to represent the impacts of ICDP activities: annual household income to represents economic condition; participating in conservation (5 indicators) and natural resources management (2 indicators) activities to represent social condition; and utilization of natural resources (wood and non-wood) (1+8 indicators) to represent environment conditions (Table 3).

The results revealed that net annual income of the households in the participating villages was higher than annual net incomes of the non-participating villages. Additional incomes partially obtained from higher prices value-added handicraft products and earned from extra incomes generated from the other ICDP activities. The levels of participating in reforestation, forest fire prevention in protected areas and attending raising awareness meeting with protected area staff were significantly different between the participating and non-participating villages. Table 3 also shows that the non-participating villages are involved in reforestation greater than the participating villages. This is due to the 10 non-participating villages are located outside protected areas and close to reforestation areas.

The participating villages statically harvested less bamboo poles, edible insects and bush meat (wild animals) than the non-participating villages. These results may be the outcomes of awareness raising activities and participation in filed works and other conservation activities provided by the ITTO project. It should be noted the amount of utilization of rattan and medicinal plants and herbs from the forest areas was statistically higher for the participating villages. This result is partially due to the participating villages are situated either inside or closer to protected areas, where these non-wood forest products exist. In addition, the propagation techniques were not provided and the villagers are less concerned on this issue than wildlife poaching.

Table 3: Comparison between participating and non-participating households.

Household	n	Mean	S.D.	t-test		
				t	df	Sig (2-tails)
Net income						
Participating villages	280	72,490.15	51,869.60	0.68	608	0.01*
Non-participating villages	330	35,738.87	5,755.13			
Participating in conservation activities						
1. Natural resources Training-workshop						
Participating villages	152	2.41	0.67	-0.193	306	0.847
Non-participating villages	156	2.42				
2. Reforestation						
Participating villages	266	2.49	0.67	-2.591	421	0.010*
Non-participating villages	157	3.12				
3. Fire prevention in protected areas						
Participating villages	266	2.42	0.55	3.893	421	0.000*
Non-participating villages	157	2.17				
4. Establishment of fire line in protected areas						
Participating villages	265	2.52	0.59	0.823	429	0.411
Non-participating villages	166	2.46				
5. Raising awareness meeting with protected areas staff						
Participating villages	266	2.48	0.54	3.800	582	0.000*
Non-participating villages	318	2.28				
Participating in natural resources management						
1. Participation in planning						
Participating villages	266	2.49	0.55	2.160	587	0.310
Non-participating villages	323	2.38	0.65			
2. Participation in field work						
Participating villages	266	2.54	0.58	2.393	585	0.017*
Non-participating villages	321	2.43	0.55			
Utilization of natural resources						
1. Products from non-wood						
1.1 Edible vegetation and wild fruit (Kg)						
Participating villages	195	14.85	63.30	0.696	390	0.487
Non-participating villages	197	11.67	9.15			
1.2 Bamboo (Poles)						
Participating villages	142	8.95	9.23	-3.669	223	0.000*
Non-participating villages	83	15.99	19.42			
1.3 Bamboo shoot (Kg.)						
Participating villages	128	71.44	180.88	0.767	363	0.500
Non-participating villages	237	62.83	56.21			
1.4 Rattan						
Participating villages	112	51.21	44.54	1.923	132	0.050*
Non-participating villages	22	32.41	23.83			
1.5 Mushroom (Kg.)						
Participating villages	116	36.42	47.58	0.200	364	0.842
Non-participating villages	150	35.56	32.95			
1.6 Medical wild plants and herbs (Kg.)						
Participating villages	47	17.81	22.67	2.838	93	0.006*
Non-participating villages	48	6.88	13.94			

Household	n	Mean	S.D.	t-test		
				t	df	Sig (2-tails)
1.7 Edible insects (Kg.)						
Participating villages	57	4.67	5.45	-4.674	162	0.000*
Non-participating villages	107	17.60	20.47			
1.8 Wild animals						
Participating villages	80	11.28	24.83	-4.348	36.75	0.000*
Non-participating villages	21	34.28	20.63			
2. Products from wood						
2.1 Fire wood/charcoal						
Participating villages	93	149.02	301.74	1.024	187	0.307
Non-participating villages	96	111.82	185.77			

REMARKS:* Significant differences at 0.05

In conclusion, the effects of integrating activities for conservation and development in the Emerald Triangle Forests Complex resulted in increased of income for the communities that participated, improved conservation of forest resources, improved the use of forest resources, including bamboo, rattan, wood products, non-medicinal, edible insects and wildlife species, and resulted in an increased knowledge in the field of conservation of forest resources compared to communities that did not participate. Integrated conservation and development activities helped the communities to be stronger and develop a better living standard, with extra income while at the same time, reducing the use of forest resources.

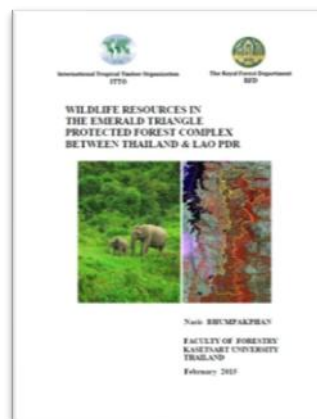
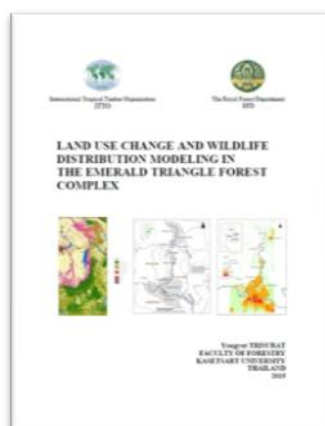
4. Project Outcome, Target Beneficiaries Involvement

(i) Project Outcome

Specific Objectives

The specific objective of the project Phase III was to strengthen the protection of trans-boundary habitats of protected wide-ranging wildlife species in the Emerald Triangle. The achievement of the Project Specific Objective are:

- Information was collected and exchanged between the three countries on wildlife distribution and applied in joint research activities. Initial studies were conducted on the distribution of several key landscape species in the Emerald Triangle and joint research efforts, in conjunction with the field exercises conducted during joint research and training activities organized in Lao PDR in December 2013, in Cambodia in March 2014, and in Thailand during 20-24 October 2014, the dissemination of project outputs on wildlife resources and GIS modeling and research on the livelihood improvement of the communities from ICDPs support by the project were organized for the Task Force Working Group from RFD and DNP and the Advisory Committee during 23-24 April 2015 in Khong Cheam District, UbonRatchathani, Thailand, continue to extend the research to include the distribution of those species in the Lao PDR protected areas of the Emerald Triangle. The cooperation between the three countries was successful both at the technical level and at the PSC meetings.
- Maps indicating the habitats of key wide-ranging landscape species in the Emerald Triangle landscape were produced. An extensive collection of habitat maps from joint research and training activities associated with the distribution of several key wide-ranging wildlife species that were organized in Lao PDR on 12-15 December 2013, the other meeting participated by staff from Thailand, Cambodia and Lao, PDR are GIS and Wildlife research training workshops (Land use scenarios prediction), which were organized in Cambodia during March 10-15, 2014, the last meeting/workshop (GIS-Wildlife Distribution Modeling) was organized in Thailand during 20-24 October 2014. Maps indicating the habitats of key wide-ranging landscape species in the Emerald Triangle landscape were produced and reported to RFD and at the PSC meeting by the consultants from Faculty of Forestry, Kasetsart University, Bangkok, Thailand.



- Capacity of park officials and management staff in the Trans-boundary Conservation Area was increased. Park officials, project staff, rangers, and staff from forest protection units were provided with equipment and trainings with smart patrol and modern GIS and Wildlife research techniques, and were able to increase the frequency of patrols and provide more information on wildlife.
- The dissemination of project outputs on wildlife resources and GIS modeling and research on the livelihood improvement of the communities from ICDPs support by the project were organized for the Task Force Working Group from RFD and DNP and the Advisory Committee during 23-24 April 2015 in Khong Cheam District, Ubon Ratchathani, Thailand. Livelihoods of local communities from the research were increased, showed that the specific objective was achieved in this phase.

(ii) Situation existing at project completion

The situation at the completion of the project Phase III is characterized by the first step of wildlife research cooperation of the three countries for a secure trans-boundary biodiversity conservation area that facilitates migration and long-term survival of large mammals in the Emerald Triangle. The actions implemented are:

- Thailand project component drafted the management plan for the next 5 years (2016-2020) to ensure the effective management of the Pha Taem Protected Forests Complex which is part of the Emerald Triangle. Baseline data are available and shared to support joint research between the participating countries. The locations of important habitats for selected wide-ranging species and potential areas of risk have been identified and used as a framework for coordinating activities to conserve trans-boundary biodiversity in the Emerald Triangle, and also for the preparation of the Proposal for Project Phase IV.
- Twelve ICDPs, three forest tree seedling nurseries and two tissue culture labs for forest and ornamental tree species micro technique propagation have been implemented, local communities involved have gained additional knowledge of alternative income-generating activities. Their livelihoods have been improved with less dependent on forest resources in protected areas, and more aware of trans-boundary biodiversity conservation issues.
- Park rangers and management staff of protected areas have been trained and learned to use more effective tools in patrolling and in collecting data, and more skills and experience from joint GIS and Wildlife researches, trainings and workshops. Technical and professional staff at regional and central levels increased the understanding of how to use systematic baseline data for trans-boundary biodiversity conservation.
- Necessary tools for effective patrolling have been provided to park officials for the prevention of encroachment and poaching in risk areas.

(iii) Target beneficiaries

The primary beneficiaries of Phase II and Phase III of the project are the same groups, included the following:

- Local communities involved in buffer zone management associated with the protected forest areas, which increased their understanding of alternative income-generating opportunities and were able to actively participate in resource

management programs and activities. Raising awareness on biodiversity conservation was a major topic to discuss in the communities, local administrative and school meetings.

- Resource managers in the protected forest areas, who were provided with refined and expanded databases, more reliable information and new techniques on GIS and Wildlife researches to inform high authorities for decision-making process.
- Park rangers, who increased their understanding of conservation management planning and had the opportunity to interact with other park rangers assigned to adjoining protected areas and were able to increase the numbers of patrols and supplement information on important species of wildlife using specialized equipment that was provided through the project.

(iv) Project Sustainability after Completion of Phase III (Thailand Project Component)

- ***Project Sustainability***

The sustainability of continuing activities of Thailand Project Component will require only minimum investment, as well as accounting for annual maintenance costs, since required infrastructure and equipment were secured during the project Phase I to Phase III. There are only domestic technical, administrative and managerial expertise will be engaged to continue activities. The capacity to achieve this purpose for staff is already increased during implementation, project staff increased their understanding and broadened their experience associated with processes required to maintain programs, update databases and initiate collaborative activities. The ICDP approach and participatory processes introduced to local communities and stakeholders also strengthened their understanding of buffer zone management and the use of alternative income-generating opportunities to alleviate local poverty and reduce encroachment. The insights gained from the ICDP program and the training provided through the project will be invaluable assets in post-project initiatives to continue activities and accommodate the ongoing Government Policy on One Tambon One Product (OTOP) project that is implemented in every village nationwide. This will provide considerable support for sustaining post-project activities.

The National Policies clearly delineates the process of establishing trans-boundary reserves with neighboring countries and promotes regional collaboration on protected area management and biodiversity conservation. It confirms that the Royal Thai Government will be able sustain the activities of the project after the completion of Phase III, integrate them into national programs and use the results as a model for other complexes that have the potential to be designated TBCAs. At the 15th Informal ASEAN Ministerial Meeting on the Environment (IAMME) in Lao PDR in late October 2014, The Ministers of Natural Resources and Environment Ministry of Thailand and Lao PDR discussed to have conservation and reforestation projects along the border region in the form of forest ecosystem restoration. The ITTO Project PD 577/10 Rev.1 (F) was reported in the meeting and the Ministry requested RFD to update the report monthly for future communication and cooperation with neighboring countries.

The communication and cooperation with neighboring countries which are Cambodia and Laos was established by the Department of National Parks, Wildlife and Plant

Conservation (DNP). Bilateral meeting between Thailand and Lao PDR and Cambodia on cooperation in wildlife enforcement were held in Thailand on 7-8 August 2014, and 18-19 December 2014, respectively. The proposed bilateral meeting aims to strengthen cooperation to combat illegal wildlife trade and wildlife crime, to provide a means of sharing information and exploring mechanisms to support information sharing, and to assess the wildlife black market in border areas between Thailand and Lao PDR and Thailand and Cambodia. After a series of discussions and meetings, it has been agreed to hold the Bilateral Meeting in Thailand.

The meeting hosted by the government of Thailand through the Department of National Parks, Wildlife and Plant Conservation. The delegation composed of representatives from the National Task Forces consisting of the CITES Management Authority, Police, Customs, and related agencies of law enforcement.

The Meeting objectives are as follows:

1. Gain knowledge and exchange information relevant to the illegal wildlife trade and criminal networks to determine trans-boundary linkages.
2. Design and develop methods of exchanging information and requests between agencies for trans-boundary investigations utilizing available resources.
3. Facilitate the opening of joint investigations between agencies/departments, and requesting of inter-agency operations and cooperate investigations.
4. Determine next steps.

Expected Outcome:

1. Open the dialogue about sharing officers or having an officer exchange between agencies.
2. Open the lines of communication and establish fast and reliable points of contact, for officers from each country, in order to share information and conduct cross border investigations.
3. To share the information concerning suspects involved in organized wildlife crime, their identifying information, method of operation, addresses, vehicle description and plate numbers, passport numbers, national identity numbers, land line and cell phone telephone numbers.
4. Agree to continue to share and update information concerning suspects involved in organized wildlife crime for eradicating illegal wildlife and wildlife crime between Thai- Cambodia border in the future.

- ***Institutional Arrangements***

According to the current 11th National Economic and Social Development Plan, Thailand's major concern has emphasized to preserve natural resources and environment to be sufficient for maintaining the ecology and a secure foundation of development. Environmental quality is improved to meet international standards, reduction of greenhouse gas emission is more efficient, and forest areas have been expanded for a more balanced ecological system. Conserve, restore and create security of natural resource and environmental bases by safeguarding and restoring forest and conservation areas. A database system and knowledge management will be developed to serve as tools for planning and management. Encouragement will be given to conservation and sustainable utilization of biodiversity, as well as motivated all stakeholders within all society to participate on natural resource management.

Institutional arrangement for forest resource management has been authorized under Ministry of Natural Resources and Environment (MONRE) where Royal Forest Department (RFD) and National Park Wildlife and Plant Conservation Department (DNP) have been assigned by the ministry to manage the land outside and inside protected area respectively.

In term of responsibility under RFD, activities under Project Phase I to Phase III will be continued under various divisions who will come to take part in the future activities. The responsible bodies have been proposed, for example, community forest establishment will be initiated and supported by Community Forest Management Office, tissue culture promotion will be conducted by Forest Research and Development Division in order to increase technology development and marketing, eco-tourism and home-stay activities will be supported by Forest Economical Development Division, biodiversity aspects will be investigated by Biodiversity Conservation Division while land use change monitoring will be performed by Forest Land Management Division.

Five protected areas under DNP will also continue their support activities similarly to previous activities that were conducted under Project Phase I to Phase III projects. Other on-going projects which have been successfully implemented in other protected areas across the country will be applied to the Project areas.

For instance, Joint Management of Protected Area (JOMPA) project which is supported by DANIDA in order to encourage NGOs to distribute their experiences in natural resource conservation to the communities where are located within and out of protected areas. Another example is corridor establishment project which is sponsored by Royal Thai Government with an attempt to connect isolated protected area together for increasing habitat areas of wild flora and fauna.

Close collaboration between RFD and DNP has been continued since the end of Project Phase I. Manpower and equipment have been shared in reciprocal activities such as wildlife survey, patrolling as well as boundary demarcation for protected areas. Accommodation like office and meeting room where are located at Pa Taem National Park will be maintained as center for communication between RFD and DNP including local authorities and communities to those two organizations. Budget for maintaining such accommodations including all equipment will be distributed by both RFD and DNP.

Educational institutions such as Faculty of Forestry, Kasetsart University including local universities will be invited to establish research sites within and out of protected areas for gaining baseline data and information which will be useful for forest resource planning and management. The researches in relation to wildlife habitat investigation and monitoring have been conducting within the project area and expected to be more in the future.

- ***Responsibilities of Local Personnel***

Experienced local staff of the Project Phase I to Phase III will be encouraged to continued their worked after the completion of the project under the continuous projects supported by various divisions from both DNP and RFD.

Biodiversity conservation will be likely the major source of funding for those experienced persons who can perform their task so quickly whenever the project started. Other officers in both Departments including communities and local organizations can use equipment and gears which belong to the Project Phase I to Phase III in term of natural resources conservation and management.

All equipment and gears will be maintained at the Project Headquarters where will be used as center for local collaboration with other organizations and communities.

- ***Requirement of Resources***

Funding support will be among the priority needs for continuing and further development of Project's activities in the future. RFD will help support implementation of forest and wildlife research activities, community livelihood pilot projects and capacity building through other source of funding.

RFD is involved in development of several related short term project proposals that could help continue Project activities. For example, funding from large private sector to support natural resources conservation and community development through their corporate social responsibility programs (CSR) which have been performing supports to both RFD and DNP for forest resource conservation and rehabilitation.

- ***Commitments by the Authorities Concerned***

With strongly concern on biodiversity conservation and people participation that have ready specified within the current 11th National Economic and Social Development Plan of Thailand (2012-2016), previous activities performing will be continuously conducted by responsible agencies (RFD and DNP). Encouragement of business sector and international organization to join and invest within some key activities such as forest rehabilitation and eco-tourism would be possible to release financial constraint from government budget while development of marketing and service of eco-tourism may sustain the activity in the long run.

RFD and DNP will continue to make close collaboration for maintaining biodiversity within and out of the project areas. Enforcement of law against illegal trade of wild fauna and flora will be tightened, and collaboration with Cambodia and Laos in term of trans-boundary conservation.

5. Assessment and Analysis

Project Elements	Indicators	Means of verification	Status of Expected Outcomes and Indicators
<p>Output 1 - Management plans incorporating research results on wide-ranging species and ecological processes, which are compatible between countries, are established and implemented.</p>	<ul style="list-style-type: none"> • Joint activities on the distribution of key wide-ranging landscape species, and forestland use, are planned and implemented by the three countries. • Staff from the three countries participate in coordinated research activities. • Research results on key landscape species are incorporated into management plans for each country in the Emerald Triangle. 	<ul style="list-style-type: none"> • Wildlife survey report. • Current and projected land use/land cover maps. • Consultant Technical reports. • Revision of Pha Taem Protected Forests Complex next five-year management plans for Thailand in the Emerald Triangle submitted to ITTO. 	<ul style="list-style-type: none"> • Staff from the three countries (including Champasack University from Laos) participated in joint research activities on wildlife and GIS. • Maps of the distribution of key wide-ranging landscape species, and forestland use, current and projected land use/land cover maps were produced by the project consultants after the joint research activities, the reports published and distributed widely. • Research results on key landscape species and forestland use, current and projected land use/land cover were incorporated into the revised Pha Taem Protected Forests Complex next five-year management plans for Thailand in the Emerald Triangle, the revised management plan was submitted to ITTO and to RFD for further discuss with agencies concerned.
<p>Activity 1.1 - Revise and establish Project Steering Committee (PSC) and other coordination structures for the TBCA in accordance with ITTO rules.</p>	<ul style="list-style-type: none"> • Appointment of PSC and other coordination structures. • Recruitment of project staff. 	<ul style="list-style-type: none"> • RFD issued appointments of PSC, Technical Team, Regional Advisory Committee, and Task Force. • Project staff started working. 	<ul style="list-style-type: none"> • Meetings of the PSC and other coordination structures as stated in the project document. • Six Biannual Progress Report were prepared and submitted. • Three Audited Financial Statement were submitted, the Final Audited Financial Statement was submitted to ITTO and finalized without further clarification.
<p>Activity 1.2 - Conduct PSC and other meetings in accordance with ITTO rules.</p>	<ul style="list-style-type: none"> • Meeting Itineraries and venues. 	<ul style="list-style-type: none"> • Meeting minutes. • Decisions and recommendations. 	<ul style="list-style-type: none"> • Organizing three PSC and Joint Technical Meetings in Thailand, one Technical Meeting in Champasack. Lao PDR, and participated another three meeting in Cambodia. • Six progress reports were presented at the PSC meetings. • Advisory Committee, Technical Working Group, and Taskforce Meetings were organized twice a year to report the progress of the project activities, discussed and advised on the raising awareness on conservation activities,

Project Elements	Indicators	Means of verification	Status of Expected Outcomes and Indicators
			discussed on the establishment of new ICDP, nurseries and tissue culture lab supported by the project, and approval of Yearly Plan of Operation before submitting to ITTO.
Activity 1.3 - Gather wildlife distribution data in the PFFC by DNP scientists and park officials.	<ul style="list-style-type: none"> • Maps of the distribution of key wide-ranging landscape species. 	<ul style="list-style-type: none"> • Consultant Technical Reports • Cooperative Agreement. 	<ul style="list-style-type: none"> • Wildlife trainings/workshops were organized successfully with cooperation of Kasetsart University, Thailand and Champasack University, Lao PDR and support of the Thailand project component • Maps of the distribution of wildlife species were produced by the project consultants, the reports published and distributed widely. • The meetings and trainings/workshops with park officials in Thailand on wildlife research and the impact of wild elephant on livelihood of communities around Bun Thrik-Yod Mon Wildlife Sanctuary for hearing and remedy the problems of wild elephants destroying the agricultural products to report to authorities were organized. • Research results were incorporated into the revised Pha Taem Protected Forests Complex Management Plan.
Activity 1.4 - Strengthen GIS capacity for Cambodian and Laotian officials on GIS for modeling land-use and species distribution.	<ul style="list-style-type: none"> • Trainings/Workshops Itineraries and venues. • Minutes of the Joint Wildlife Research Meeting and the Cooperative Agreement with Lao PDR. 	<ul style="list-style-type: none"> • Meeting Reports. • Consultant Technical Reports. • Cooperative Agreement. 	<ul style="list-style-type: none"> • GIS consultant from Kasetsart University, Thailand, led the trainings/workshops in Lao PDR, Cambodia and Thailand respectively on the GIS for modeling land-use and species distribution. • Research results were reported in the PSC meeting and disseminated to agencies concerned, and incorporated into the revised Pha Taem Protected Forests Complex Management Plan.
Activity 1.5 - Conduct joint research by the three countries on wide-ranging species distribution in the Emerald Triangle.	<ul style="list-style-type: none"> • Minutes of the Joint Wildlife Research Meeting and the Cooperative Agreement with Lao PDR. • Trainings/Workshops Itineraries and venues. 	<ul style="list-style-type: none"> • Consultant Technical Reports. • Cooperative Agreement. • Revised Pha Taem Protected Forests 	<ul style="list-style-type: none"> • Joint Training Workshops on GIS Modeling for Forest Land Use Planning were discussed and planned with cooperation of the Thailand project component, Cambodia component and staff of Champasack University, Lao PDR, with support of GIS and Wildlife consultants from Kasetsart University, Thailand.

Project Elements	Indicators	Means of verification	Status of Expected Outcomes and Indicators
		Complex Management Plan.	<ul style="list-style-type: none"> • Wildlife consultant from Kasetsart University, Thailand, led the trainings/workshops in Lao PDR, Cambodia and Thailand respectively on the research on wide-ranging species distribution in the Emerald Triangle. • Research results were reported in the PSC meeting and disseminated to agencies concerned, and incorporated into the revised Pha Taem Protected Forests Complex Management Plan.
<p>Activity 1.6- Conduct joint research by the three countries on land use changes in the Emerald Triangle.</p>	<ul style="list-style-type: none"> • Minutes of the Joint Wildlife Research Meeting and the Cooperative Agreement with Lao PDR. • Trainings/Workshops Itineraries and venues. 	<ul style="list-style-type: none"> • Consultant Technical Reports. • Revised Pha Taem Protected Forests Complex Management Plan. 	<ul style="list-style-type: none"> • GIS consultant from Kasetsart University, Thailand, led the trainings/workshops in Lao PDR, Cambodia and Thailand respectively on the research on wide-ranging species distribution in the Emerald Triangle. • Research results were reported in the PSC meeting and disseminated to agencies concerned, and incorporated into the revised Pha Taem Protected Forests Complex Management Plan.
<p>Activity 1.7- Publish the results of joint research findings.</p>	<ul style="list-style-type: none"> • Research results on key landscape species in the Emerald Triangle. 	<ul style="list-style-type: none"> • Report of research results. • Dissemination of the research results. • Paper on consequences of land-use change on wild-ranging species distributions. 	<ul style="list-style-type: none"> • Technical Reports of consultant from Kasetsart University. • Research results were reported in the PSC meeting and disseminated to agencies concerned, and incorporated into the revised Pha Taem Protected Forests Complex Management Plan. • The paper on consequences of land-use change on wide-ranging species distributions was sent to a journal by the GIS and Wildlife consultants for printing. • The dissemination of project results was on-going regularly. • Brochures and leaflets both in Thai and English were updated and published regularly, and circulated in the meetings trainings, workshops and sent to the agencies concerned • The dissemination of project results via website and VDO were regularly updated, the project activities

Project Elements	Indicators	Means of verification	Status of Expected Outcomes and Indicators
			implemented was launched and added to the Facebook of Kasetsart University on 16 June 2014, the VDO was shown in the 4 th PSC Meeting
Activity 1.8 - Preparation of TBCA common vision.	<ul style="list-style-type: none"> • Finalize Common Vision for the Emerald Triangle. 	<ul style="list-style-type: none"> • Common Vision endorsed by the three countries. 	<ul style="list-style-type: none"> • The Common Vision was formulated and agreed in the 2nd PSC meeting. • The Common Vision was disseminated in the project Facebook, and IUCN E-News (www.tbpa.net – Tbenews7). • The project communicated with authorities in Lao PDR, and the common vision was discussed.
Activity 1.9 - Facilitation of integrating the results of joint research activities on Wildlife conducted in the Emerald Triangle Protected Forests Complex into individual country management plans.	<ul style="list-style-type: none"> • Research results on key landscape species in the Emerald Triangle. 	<ul style="list-style-type: none"> • Revised Pha Taem Protected Forests Complex Management Plan for Thailand Project Component. 	<ul style="list-style-type: none"> • The Pha Taem Protected Forests Complex Management Plan which was prepared in the project Phase I, was revised and to incorporate the results of joint research activities on Wildlife conducted in the Emerald Triangle Protected Forests Complex and sent to RFD in mid-August 2015 for revision before submit to ITTO.
Output 2 - Capacity of multi-stakeholders in biodiversity conservation and monitoring is strengthened.	<ul style="list-style-type: none"> • A Regional Advisory Committee of implementing agencies and stakeholder network is established and meets on a regular basis. • Facilities and equipment are sufficient to ensure the effective implementation of conservation activities in the Emerald Triangle. • Numbers of training courses and participants are sufficient to strengthen resource management capacity. 	<ul style="list-style-type: none"> • Minutes of Regional Advisory Committee (implementing agencies & stakeholder networking) meetings. • Procurement of equipment and distribute to PAs. • Project progress reports. • Training reports and evaluations. 	<ul style="list-style-type: none"> • RFD and DNP assigned staff to participate in the project at both national and local levels. • RFD and DNP staff participated in the trainings/workshops in Thailand, Laos and Cambodia organized by the project with support of the GIS and wildlife consultants from Kasetsart University. • RFD and DNP staff learned to produce maps of the distribution of key wide-ranging landscape species, and forestland use, current and projected land use/land cover maps. • Equipment procured, used at the project field headquarters and distributed to PAs
Activity 2.1 - Update and maintain information system.	<ul style="list-style-type: none"> • Compilation of up-to-date information. 	<ul style="list-style-type: none"> • Consultant Technical Reports. 	<ul style="list-style-type: none"> • Update and maintain information system was carried on by project staff and the information was used by the GIS

Project Elements	Indicators	Means of verification	Status of Expected Outcomes and Indicators
<p>Activity 2.2 - Collaborate with forest protection unit to prevent wildlife poaching, illegal logging, illegal trading and the collection of wild plants.</p>	<ul style="list-style-type: none"> • Trainings/Workshops Itineraries and venues. 	<ul style="list-style-type: none"> • Training reports and evaluations. • Consultant Technical Reports. 	<p>and Wildlife consultants.</p> <ul style="list-style-type: none"> • Workshops/Trainings for PA staff and local people in cooperation with NGOs, Universities and forest protection unit in the project area on the benefits of conservation, forest protection, effective patrolling were organized to prevent wildlife poaching, illegal logging, illegal trading and collection of wild plants. • Workshops on prevention of wildlife poaching, illegal logging, illegal trading and collection of wild plants were organized.
<p>Activity 2.3- Collaborate with universities and NGOs to conduct training on buffer zone management.</p>	<ul style="list-style-type: none"> • Trainings/Workshops Itineraries and venues. 	<ul style="list-style-type: none"> • Training reports and evaluations. 	<ul style="list-style-type: none"> • Trainings/workshops on buffer zone management were organized in cooperation with forest protection units in the project area during field visit of the project staff. • The communities in the buffer zone aware of the buffer zone management for protection of natural resource in the long run.
<p>Activity 2.4- Provide necessary equipment and facilities to protected areas and protection units for effective patrolling and protection.</p>	<ul style="list-style-type: none"> • Facilities and equipment are sufficient to ensure the effective implementation of conservation activities in the Emerald Triangle. 	<ul style="list-style-type: none"> • Procurement of equipment and distribute to PAs. 	<ul style="list-style-type: none"> • Procurement of capital items was finalized, the items were used at the project office and also distributed to National Parks and Wildlife Sanctuaries in the project area. • The Meetings were organized to follow up the patrolling and to provide necessary equipment and facilities to protected areas and protection units for effective patrolling and protection once a month during field visit of the project staff.
<p>Activity 2.5- Organize Joint Task Force and stakeholder meetings for trans-boundary biodiversity conservation cooperation and resolving future land use changes derived from Phase II of the project, as well as proposed adjustments as may be required.</p>	<ul style="list-style-type: none"> • Trainings/Workshops Itineraries and venues. 	<ul style="list-style-type: none"> • Training reports and evaluations. • Consultant Technical Reports. 	<ul style="list-style-type: none"> • The meetings were organized to inform of the progress and for cooperation in implementation of the activities. • Task Force Meetings and meetings with PAs staff were organized during field visit to discuss the biodiversity cooperation and resolving land use changes regularly.

Project Elements	Indicators	Means of verification	Status of Expected Outcomes and Indicators
<p>Activity 2.6- Organize stakeholders meetings on TBCA and project sustainability.</p>	<ul style="list-style-type: none"> • Trainings/Workshops Itineraries and venues. 	<ul style="list-style-type: none"> • Training reports and evaluations. 	<ul style="list-style-type: none"> • Stakeholders meeting was organized to inform the project activities and cooperation, the project sustainability, the possibility and feasibility of ICDP, nursery and tissue culture lab establishment. • Workshop for local people was considered and agreed to organize. Workshops for local people on sustainability, activities and cooperation were set up during village visits.
<p>Activity 2.7- Conduct training for forest protection units, park rangers and border patrol police on GIS and effective patrolling.</p>	<ul style="list-style-type: none"> • Trainings/Workshops Itineraries and venues. 	<ul style="list-style-type: none"> • Training reports and evaluations. • Consultant Technical Reports. 	<ul style="list-style-type: none"> • The Meetings were organized to follow up the patrolling and discuss future cooperation and planning of the trainings. • GIS and Wildlife trainings/workshops were organized for border patrol police, forest protection unit in the project area on forest protection, effective patrolling and buffer zone management. • Discussions were carried on regularly during field visit with border patrol police, forest protection unit in the project area on forest protection, effective patrolling and buffer zone management.
<p>Output 3 - Local communities are empowered to implement activities linking livelihoods improvement to reduced dependence on resources of protected areas.</p>	<ul style="list-style-type: none"> • Identification of activities linking livelihoods improvement to reduced dependence on resources of protected areas was agreed in the community fora. • Community meetings agreed with regulations to establish ICDP projects and submitted the establishment plan to RFD. • Budget allocation was approved by RFD and funds transferred to the communities. 	<ul style="list-style-type: none"> • Documentation of community meetings. • Minutes of Technical Committee and Task Force meeting supported the establishment of ICDP. • Budget allocation and approval by RFD. • Project progress reports. 	<ul style="list-style-type: none"> • Meetings to discuss and assess the possibility to establish nursery and Tissue Culture Lab in the villages were organized during the visits of the project staff. Community fora and election of the responsible personnel were organized with support and assistance of the project under regulations established by the Office of Community Forest, RFD. • The project encouraged local committees to develop criteria and regulation for ICDP project selection, and also held discussions with stakeholders in local communities and officials of community development government agencies to help to identify promising ICDP projects and related activities. Common projects chosen were: Handicrafts from bamboo, Home-stay for eco-tourism, Food banks-agro forestry, Wild Orchid Micro Technique Propagation.

Project Elements	Indicators	Means of verification	Status of Expected Outcomes and Indicators
			<ul style="list-style-type: none"> • The selection criteria for the ICDP projects include: Interest to work with the project, Indigenous knowledge on sustainable management of natural resources, Potential for community-based ecotourism, Experience of working with government agencies, Need to diversify non-forest based activities • The community potential assessments were conducted in order to obtain an up-to-date situation and needs assessment for the development in target communities to search for possible collaborations in the development of livelihood improvement projects and alternatives. The results from the community assessments were used in designing capacity-building training programs and in the selection of the pilot villages. • After the selection of pilot communities, a community meeting in each village was organized to inform of the selection result and to facilitate preparation of the pilot activity proposal from the pilot fund. A group management committee was also elected by community members. Training workshop programs on eco-tourism management and development of local products were provided for representatives of target communities. During the implementation process of pilot activities, several informal monitoring visits were made by the project team. • Meetings to prepare requests to RFD for the establishment of nursery and Tissue Culture Lab were organized. • Meetings to follow up the establishment of nursery and Tissue Culture Lab were organized during field visit, the installments of the addition fund were provided to the communities. • ICDP projects were recognized and approved by officials and local communities as planned. • The installments of the addition fund to certain

Project Elements	Indicators	Means of verification	Status of Expected Outcomes and Indicators
			<p>communities and villages were provided.</p> <ul style="list-style-type: none"> • Participating communities implemented the ICDP projects according to the plan proposed to RFD for support from the project.
<p>Activity 3.1- Strengthen local community fora and networks to facilitate biodiversity conservation.</p>	<ul style="list-style-type: none"> • Trainings/Workshops Itineraries and venues. • Minutes of the Meeting. • Community members participated in the biodiversity conservation program. 	<ul style="list-style-type: none"> • Community meetings agreed with regulations to establish ICDP projects to reduce dependence on natural resources • Establishment of ICDP. 	<ul style="list-style-type: none"> • Workshops and Trainings for local people on network and raising awareness were conducted during village visits. Training on conservation of natural resources and environment for the youth camp program were organized. • Workshops for local people on network and raising awareness were conducted during village visits. • The meetings of local people and NGOs for new ICDP were discussed to allocate support to certain communities and villages. • Establishment of nursery, tissue culture lab and bamboo propagation were discussed, the possibility of establishment were three manual controlled nurseries, and two tissue culture lab. • Meetings to follow up the establishment of new ICDP, nursery and Tissue Culture Lab were organized once a month during the field visit. • The installments of the addition fund allocation to certain communities and villages were provided to the communities after approval by RFD. • Six ICDPs plus three nurseries for seedlings and two Tissue culture lab established in the project Phase III.
<p>Activity 3.2- Conduct outreach programs to local schools and local communities to raise awareness on conservation benefits associated with TBCA.</p>	<ul style="list-style-type: none"> • Schools painting contest Itineraries and venues. • Posters of the painting contest, and raising awareness on conservation benefits. • Photos of painting contests. 	<ul style="list-style-type: none"> • Participations of local schools and local communities to raise awareness on conservation in tree planting and youth camp for conservation program. 	<ul style="list-style-type: none"> • Raising awareness issues were presented in the monthly meeting of schools boards in the project area, school drawing contests and exhibition of conservation in the schools were organized once a month. • Workshops for local people on raising awareness were set up during village visits. • School drawing contest was discussed and agreed to organize in each protected areas, five contests were

Project Elements	Indicators	Means of verification	Status of Expected Outcomes and Indicators
			organized in the first year, five contests were organized in year 2013, another five contests were organized in year 2014, and the last two contests were organized in year 2015. The drawing contests were organized as planned.
<p>Activity 3.3- Maintain existing ICDP and provide additional funding for domesticated wild flora and fauna pilot program to improve the livelihoods of local communities in accordance with criteria jointly approved by the project and the local community network.</p>	<ul style="list-style-type: none"> • Community meetings agreed with regulations to establish ICDP projects and submitted the establishment plan to RFD. • Budget allocation was approved by RFD, funds transferred to communities. 	<ul style="list-style-type: none"> • Documentation of community meetings. • Budget allocation and approval by RFD. • Project progress reports. 	<ul style="list-style-type: none"> • Meetings to assess the existing ICDP and possibility for new pilot program were organized during project field visit. • Monitoring and assessing of existing ICDP were carried on continuously. The project supported students from Kasetsart University to research on the outcome and the development of ICDP project. The report of the impacts of ICDP on economic, social and environment conditions of the villages that participated in ICDP activities and to compare the conditions between the participating villages and non-participating villages was presented at the PTC and PSC meetings. • 6-ICDP were established in the project Phase II in accordance with criteria jointly approved are still active and being used for dissemination to other interesting communities: <ul style="list-style-type: none"> - Home-stay and eco-tourism project, Ban Pha Chan. - Home-stay and eco-tourism project, Ban Tha Long. - Agro forestry-Food Bank project, Ban Suan Son. - Handicrafts from bamboo project, Ban Nong Rua. - Wild Orchid Tissue Culture Project, Ban Non Soong. - Wild Orchid Tissue Culture Project, Ban Ta Yoy.
<p>Activity 3.4- Concerned parties develop and approve eco-tourism packages.</p>	<ul style="list-style-type: none"> • Task Force meetings itineraries and venues. • Minutes of the Meeting. • Eco-tour posters. 	<ul style="list-style-type: none"> • Establishment of eco-tour program in communities. • Production of leaflets and posters. 	<ul style="list-style-type: none"> • The activity was discussed in the Task Force meetings. Ecotourism and the benefits of trans-boundary cooperation workshops were organized for local people. Eco-tour training & workshop-Local People were organized during study tour of the communities. • Eco-tour processes and guidelines were discussed with communities during village visits. The activity was discussed in the Task Force meetings and organized for PA

Project Elements	Indicators	Means of verification	Status of Expected Outcomes and Indicators
<p>Activity 3.5- Organize fund raising meetings for potential donors and NGOs to sustain ICDP activities.</p>	<ul style="list-style-type: none"> • Meeting itineraries and venues. • Minutes of the Meeting 	<ul style="list-style-type: none"> • Local NGOs support and follow up the ICDPs. 	<p>staff. The eco-tour leaflets and posters were produced by project fund.</p> <ul style="list-style-type: none"> • Existing ICDP groups and new ICDP groups were invited to a discussion on activities and experiences sharing. Meetings with communities to inform of the fund raising for ICDP projects were organized during village visits. • Project details and activities were submitted to potential donors and NGOs and discussed for future fund raising meetings. Discussions with potential donors and NGOs were on-going to support the ICDP projects.
<p>Activity 3.6- Monitor and evaluate on a regular basis the implementation of ICDP activities in terms of sustainability and consistency with the TBCA concept.</p>	<ul style="list-style-type: none"> • Research on compact of ICDP on livelihood of communities. 	<ul style="list-style-type: none"> • Research results and technical report. • ICDPs activities established, members increased, and the other communities discussed for support in the next phase. 	<ul style="list-style-type: none"> • Meetings of PA staff and ICDP participants agreed to set up a group to assist in the implementation of new ICDP and indication of training needs. Trainings were organized to monitor and evaluate the implementation of ICDP activities. • Workshops of PA staff and ICDP participants were organized for the improvement and maintain the activities in terms of sustainability and consistency with the TBCA concept.

(i) Project Rationale and the Project identification process

As mentioned earlier that Thailand initially recognized the potential benefits, as well as challenges, of cooperating with neighboring countries in efforts to conserve biodiversity in trans-boundary protected areas. The establishment of conservation initiatives in PhaTaem Protected Forests Complex could call attention to neighboring countries to collaborate in efforts to conserve biodiversity in trans-boundary conservation areas. The project Phase III was identified and developed based on the outcomes and recommendations from evaluation of project Phase II. The project Phase III included the importance of protecting wildlife species, rare and endangered species from illegal hunting and poaching. The protection of critical wildlife habitats and corridors of migration offered exceptional opportunities for collaborative efforts in trans-boundary biodiversity conservation and the control of the illegal trade in plants collected from protected areas. The project also intended to strengthen research cooperation on wildlife species, to build capacity for the staff and agencies involved, and to improve the livelihood of communities inside and around the protected areas. The objectives have been successful.

(ii) Project Objectives and implementation strategy

Based on the project objectives, the implementation strategies in the project phase III were directed to the harmonization between Thailand, Cambodia and Lao PDR of guidelines for management planning and the implementation of several joint ecological monitoring activities. The research on wide-ranging wildlife species was implemented in Thailand and Cambodia and extended to Lao PDR. The sharing of information was institutionalized between the three countries, as well, as a basis for formulating sustainable management strategies to conserve forest resources, and protect wildlife populations and reduce barriers to migratory wildlife movements along the tri-national borders. At the same time, the project aimed to improve the capacity of the protected areas staff, raising awareness on transboundary biodiversity conservation and also improve the livelihood of the communities in the project area. Project implementation strategies therefore were focus on cooperation between the three countries, which was successful with the Champasack University from Lao, PDR joint the research on wide-ranging species. Building or enhancing capacity of protected areas staff was on new technique of GIS and Wildlife research by the consultants from Kasetsart University, Thailand. The trainings and workshops to improve the skill and the products were extended to the communities under ICDP program.

(iii) Critical differences between planned and actual project implementation

The project covered all necessary activities, at the early stage of the project, some activities in connection to recruitment of auditor, recruitment of the wildlife consultant, wildlife research cooperation from Lao PDR, and the procurement of capital items were delayed and affected by factors that could not be predicted or controlled. The problems were solved after the discussion with agencies concerned in RFD, as well as advices and recommendations from the PSC. Later, the delayed activities were implemented and finalized in time as planned.

The project were implemented with no change has been made to the objectives, outputs and the planned activities. New activities were inserted to reach the output 1 as recommended at the 4th PSC meeting on 9 July 2014. The inserted activities made are:

- Activity 1.9.1 Initiate the facilitation of integrating the results of joint research activities on wildlife conducted in the Emerald Triangle Protected Forests Complex into individual country management plans which are exchanged between the project's participating countries, especially Thailand and Cambodia.
- Activity 1.9.2 Establish an effective mechanism to alert participating countries of incidences of illegal wildlife activities in efforts to synchronize cross-border patrolling activities.

In conclusion, the difference between planned and actual project implementation is not significant, the change made to reach the full completion of the outcome of the project.

(iv) Adequacy of time and project inputs

The time and project inputs for formulation and implementation were adequate but were influence by factors that could not be controlled, such as the cooperation on wildlife research with Lao PDR, which caused some delayed in starting implementation of some activities.

In general, the resources provided for project implementation in terms of personnel, knowledge, expertise, equipment and finance have been adequate, but after the end of the project phase, before the beginning of the new project phase, there should be also some financial resources support to cover the expenses for communication and ongoing activities.

(v) External influences

The assumption made as regard to the implementation of the project were valid during the project duration. Authorities involved with the project in RFD supported and participated the implementation of all activities. Major external influences in the project area were weather and the support from the communities. Heavy rains during rainy season obstructed the travel of the project staff to visit the communities to make appointment and discuss for the meeting, training and workshop. During the planting and harvesting periods, most of local people work in the field and come home very late in the evening, the communication or setting up of the meeting were impossible.

(vi) Project beneficiaries

The primary project beneficiaries are a range of stakeholders which involved in the project implementation, the project has provided with means of biodiversity conservation contributing to reducing the degradation of natural resources in the project area, which are:

- Target local communities participated in ICDP activities, students and school staff participated in raising awareness activity.
- Local government authorities, local University staff, and NGOs in the project area working on biodiversity conservation, social issues and improvement of

community livelihood, had taken part as appropriate, as trainer of technical skills, resource persons of the workshop and discussions.

- Protected areas staff and rangers were provided with equipment, GIS and Wildlife research technology, conservation and management planning skills.

(vii) Project sustainability after project completion

The RFD have indicated their willingness to continue collaborating to strengthen trans-boundary biodiversity conservation in the Emerald Triangle to ensure the sustainability associated with the extent of the achievements of the project. The sustainability of continuing activities of Thailand Project Component will require only minimum investment, as well as accounting for annual maintenance costs, since required infrastructure and equipment were secured during the project Phase I to Phase III. There are only domestic technical, administrative and managerial expertise will be engaged to continue activities. The capacity to achieve this purpose for staff is already increased during implementation, project staff increased their understanding and broadened their experience associated with processes required to maintain programs, update databases and initiate collaborative activities. The ICDP approach and participatory processes introduced to local communities and stakeholders also strengthened their understanding of buffer zone management and the use of alternative income-generating opportunities to alleviate local poverty and reduce encroachment. The insights gained from the ICDP program and the training provided through the project will be invaluable assets in post-project initiatives to continue activities and accommodate the ongoing Government Policy project. This will provide considerable support for sustaining post-project activities.

- Institutional Arrangements: In term of responsibility under RFD, activities under Project Phase I to Phase III will be continued under various divisions of RFD which will take part in the future activities. Five protected areas under DNP will also continue their support activities similarly to previous activities that were conducted under Project Phase I to Phase III projects. Close collaboration between RFD and DNP has been continued since the end of Project Phase I. Manpower and equipment have been shared in reciprocal activities such as wildlife survey, patrolling as well as boundary demarcation for protected areas. Educational institutions such as Faculty of Forestry, Kasetsart University including local universities will be invited to establish research sites within and out of protected areas which will be useful for forest resource planning and management.
- Responsibilities of Local Personnel: Experienced local staff of the Project Phase I to Phase III will be encouraged to continue their worked after the completion of the project under the continuous projects supported by various divisions from both DNP and RFD. All equipment and gears will be maintained at the Project Headquarters and will be used as center for local collaboration with other organizations and communities.
- Requirement of Resources: Funding support will be among the priority needs for continuing and further development of Project's activities in the future. RFD will support implementation of forest and wildlife research activities, community livelihood pilot projects and capacity building through other source of funding.
- Commitments by the Authorities Concerned: With strongly concern on biodiversity conservation and people participation that have ready specified

within the current 11th National Economic and Social Development Plan of Thailand (2012-2016). Previous activities performing will be continuously conducted by responsible agencies. RFD and DNP will continue to make close collaboration for maintaining biodiversity within and out of the project areas. Enforcement of law against illegal trade of wild fauna and flora will be tightened while collaboration with Cambodia and Laos in term of trans-boundary conservation.

(viii) Institutions involved

The Royal Forest Department was the executing agency in Thailand responsible for project implementation in the protected forest areas with support from The Department of National Park, Wildlife and Plant Conservation, which is in charge of the protected forest complex. The implementation of project activities was also supported by local government agencies, including the Regional Office under The Royal Forest Department and The Department of National Park, Wildlife and Plant Conservation, local National Parks and Wildlife Sanctuaries, the Tourism Association, the Tourism Authority of Thailand (Ubon Ratchathani Office), non-governmental organizations (NGOs), local authorities, and the private sector involved with tourism.

Faculty of Forestry, Kasetsart University in Bangkok, Thailand is an institute supported the implementation of the project from phase I with consultants, and local universities in Ubon Ratchathani, also support with resource persons on specific issues, which are: plant micro propagation and tissue culture, production of seedlings in the nursery, ecotourism and management of home-stay, improvement of bamboo handicraft products and others.

6. Lessons Learned

Lessons learned from Project identification, design and implementation.

- Stakeholders played an important role in the project implementation. The project should have more staff and resources to expand and organize additional ICDP projects to cover the communities connected to the reserve forest areas outside the protected areas which include the meeting, training workshop and field visits.
- As Lao PDR not joining the project, but there is a chance that the institutions in Lao PDR will join the research as well as to initiate the raising awareness on biodiversity conservation in Laos protected forests in the Emerald Triangle area which need extra fund allocated to support from Thailand and Cambodia project components.
- The differences in capacity and capability of the project staff, protected areas staff and of the local communities, should be identified before planning the training and workshop to be able to execute the related activities smoothly.
- It is important of the Executing Agency and authorities to address the management plan to other relevant department concerned for more and close cooperation, to continue to strengthen the cooperation between the three countries, to improve and support livelihood of the communities in the project area, and to continue to provide guidance, and trainings of existing activities as necessary.
- Project sustainability and continuation after completion of the project phase require funding and support from the agencies concerned especially from EA to maintain communication and support to the existing ICDPs.
- Differences in bureaucracy, laws and regulations in each country may affect project sustainability after completion.

Lessons learned from Operational matters of project implementation.

- The role of Executing Agencies was identified in the Project Document and should be conducted in compliance with the definition to result in smooth implementation of the project and achievement of planned outputs.
- Close cooperation between the three countries needed to strengthen trans-boundary biodiversity conservation in the Emerald Triangle to ensure the sustainability associated with the extent of the achievements of the project. Apart from the PSC meetings, face-to-face meeting for staff at the technical level working in the field, two to three days meeting at least once a year, to get acquainted and would be beneficial for exchange of information, discussion on the success and to solve the problems of the project implementation.
- The flow of the project fund from ITTO went well as planned and agreed in the project document and the project agreement. The project fund installments during the first year of the implementation were delayed, not as stated in the project agreement, due to the regulations of the Executing Agency to procure the capital items, and to recruit the consultants.
- Procurement of necessary equipment may take time, depend on the regulations set up and procurement authorities involved.

- The continuations of communication with the local villagers are very important to the project implementation. The better communication will lead to a better relationship with local villagers and communities to cooperate on biodiversity conservation, and may be a factor influenced the project implementation.
- A factor that could cause unsuccessful to the implementation was the involvement of the authorities, project staff and the local communities that expected more benefit on financial with less participation.

7. Conclusions and Recommendations

The project activities were finished as planned. The researches on GIS, Wildlife and the impact of project support to local communities carried on by the cooperation of three countries and the universities were finalized and reported to the PSC meeting, as well as the technical papers were printed and distributed widely. The capacity of local communities was improved to reduce dependence on natural resources from the protected areas.

- i) The activities planned as in the project document and the new activities inserted as recommended by the PSC meeting were completed, The conclusion and recommendations included:

- **Identification**

- The issues relating to the biodiversity conservation, cooperation on research and improve livelihood of local communities were clearly stated in the project document and were executed as planned.
- This project was defined with clear and measurable outputs and with budget allocated, the responsible agencies could implement by follow the details in the project document.

- **Design**

- Project design met with the policy of the government on protected areas management and also benefit to the local communities without affecting the natural resources.
- The approach in implementing the project on GIS and Wildlife researches led to the successful of cooperation of the three countries and also disseminated the results to the stakeholders/beneficiaries, with the period of three years has proven sufficient.
- The project design mainly based on recommendations the project evaluation at the end of project phase II, most of the problems stated in the evaluation were solved in project phase III.

- **Implementation**

- Regular meetings and discussions of the project technical team should be organized to monitor and revised means of the implementation of the planned activities for corrections.
- Protected area staff should be further trained to gain more experience in specific subjects.
- Internal cooperation of the executing and implementing agencies should be improved and strengthened.

- **Organization**

- Transboundary cooperation project need skills and efforts in organization to deal with problems arise during implementation. Communication

between the three countries, communication and support from agencies, local communities and good relation with local stakeholders involved are necessary for the organization process and is crucial to project success.

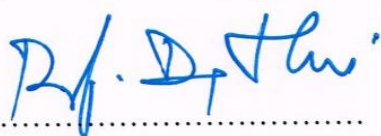
- Responsible authorities of the Executing Agency of the project need to pay more attention to manage, support and get involved with the project implementation continuously from start to the end of the project to assure the smooth cooperation inside and outside of the project and smooth implementation of the project activities as planned.

- **Management**

- Capacity of the project implementation team and the involved stakeholders should be upgraded and strengthen to take responsibility of training on specific issues for the researches and livelihood improvement of local communities.
- The research results by consultants were disseminated through the meetings of the PSC, the technical team and the project team as well as the technical reports was distributed to the agencies concerned.
- A well dedicated management team is required to support and manage the implementation of the project, and the authorities involved should be able to provide advises to execute the project successfully.

ii) With interest of the Executing Agency on transboundary biodiversity conservation, there is a potential for replicating the project in the next phase and in other areas. The support of sustainable livelihoods and the capacity building of local communities can be extended to other areas in Thailand. Cooperation between Executing Agencies with concerned agencies to research and sharing information on wildlife habitats still needs to continue.

Responsible for the Report



.....
(Mr. Pralong Dumrongthai)
Deputy Director General,
Royal Forest Department,
Project Director

Date:..... 9 Nov. 2015

Annex 1: Project financial statements (Thailand)

PROJECT FINANCIAL STATEMENT
(in United State Dollar)

Project No.: PD 577/10 Rev. 1 (F)

Period ending on: 31 August 2015

Project Title: Management of the Emerald Triangle Protected Forests Complex to Promote Cooperation for Trans- boundary Biodiversity Conservation Between Thailand, Cambodia and Laos(Phase III)

Component		Allocated	Expenditures To-date			Available Funds
		Amount (A)	Accrued (B)	Expended (C)	Total (D) {B+C}	(E) {A-D}
I	Funds managed by Executing Agency					
10	Project Personnel					
	11 National Experts (Long-term)					
	11.1 Project Manager, at US\$ 2,500 per m	90,000		90,000.00	90,000.00	-
	11.11 Project Coordinator (Part Time at US\$ 1,200 per m)	30,000		30,000.00	30,000.00	-
	11.2 Project Secretary, at US\$ 800 per m	28,800		28,800.00	28,800.00	-
	12 Other Personnel					
	12.1 Field Assistance (5), at US\$ 300 per m	48,600		48,600.00	48,600.00	-
	12.2 Assistance at RFD (for Coordinator), at US\$500 per m	17,500		17,500.00	17,500.00	-
	13 13.1 Consultant on GIS, at USD 1,500 per m	18,000		18,000.00	18,000.00	-
	19 Component Total	232,900		232,900.00	232,900.00	-
20	Sub-contract					
	21 Sub-contract (Laos Scientist), lump sum	30,000		30,000.00	30,000.00	-
	29 Component Total	30,000		30,000.00	30,000.00	-
30	Travel					
	31 Daily subsistence allowance					
	31.1 National Expert(s)/consultant(s), to Cam and Lao, at US\$ 100/day 8 days/year	21,833		21,331.79	21,331.79	501.16
	31.2 Others (4 Staff) 4 days/m, US\$30/day	22,280		22,635.10	22,635.10	-355.10
	32 International travel					
	32.1 National Expert(s)/consultant(s) to Cam and Lao, 6 Air-tickets (1 trips/year)	22,525		22,788.72	22,788.72	-263.59
	32.2 Others to Cam and Lao, 4 Air-tickets (2 trips/year)	12,000		11,483.77	11,483.77	516.23
	33 Local transport costs					
	33.1 Others (resource persons)	7,500		7,205.23	7,205.23	294.77
	39 Component Total	86,138		85,444.61	85,444.61	693.46
40	Capital Items					
	41 Capital equipments					
	41.1 2-Project Vehicles (4 Doors Pickup)	33,931		33,931.10	33,931.10	-
	41.2 1-Project Vehicles (Pickup Van)	-		-	-	-
	41.3 2-Notebook	2,155		2,154.91	2,154.91	-
	41.4 8-GPS	2,323		2,323.41	2,323.41	-
	41.5 Satellite Imaginaries	13,000		13,459.74	13,459.74	-459.74
	41.6 3-Camera	4,186		4,186.44	4,186.44	-
	41.7 2-Projector	1,103		1,103.44	1,103.44	-
	41.8 2-Printer Laser Monochrome	603		603.31	603.31	-
	41.9 2-Printer Laser color	803		802.50	802.50	-
	41.10 2-Computer	3,003		3,003.22	3,003.22	-
	41.11 2-Tissue Culture Lab equipment	61,163		61,162.66	61,162.66	-
	41.12 3-Nursery for Seedling	74,976		74,976.29	74,976.29	-
	41.13 4-Air Condition	2,276		2,275.64	2,275.64	-
	41.14 20-Table for meeting rooms	1,603		1,602.56	1,602.56	-
	41.15 60-Chairs for meeting rooms	1,731		1,730.77	1,730.77	-
	41.16 1-Photocopy Machine	-		-	-	-
	49 Component Total	202,856		203,315.98	203,315.98	-459.74
50	Consumable items					
	51 Nursery supplies	10,144		10,136.20	10,136.20	7.75
	52 Office supplies	10,590		10,592.50	10,592.50	-2.38
	59 Component Total	20,734		20,728.70	20,728.70	5.37
60	Miscellaneous					
	61 Sundry					
	61.1 Petrol and maintenance (2 x US\$ 2,400/year)	24,000		23,957.19	23,957.19	42.81
	61.2 PSC meetings (3 x US\$ 1,000)	15,000		16,248.80	16,248.80	-1,248.80
	61.3 Taskforce meeting (3 x US\$ 1,000)	6,489		6,430.83	6,430.83	57.70
	61.4 6 ICDP pilot activities	9,000		9,000.00	9,000.00	-
	61.5 Meeting, training, workshops for 400 participants US\$30/participant/day	21,884		22,083.90	22,083.90	-199.42

Component		Allocated	Expenditures To-date			Available Funds	
		Amount (A)	Accrued (B)	Expended (C)	Total (D) {B+C}	(E) {A-D}	
	61.6	Information, media, publications	43,521		42,591.73	42,591.73	928.86
	61.7	PTC Meetings (6 x 3 yr x US\$ 1,000)	18,000		17,853.08	17,853.08	146.92
	61.8	Meeting for the preparation of TBCA common vision	1,978		1,978.01	1,978.01	-
	62	Audit cost (3 x US\$1,500)	12,000	1,472.44	10,493.89	11,966.33	33.67
	69	Component Total	151,872	1,472.44	150,637.44	152,109.88	-238.26
		TOTAL	724,500	1,472.44	723,026.73	724,499.17	0.83
80	Project monitoring & administration						
	81	ITTO monitoring and review					
	82	ITTO midterm evaluation					
		Sub-total					
	83	ITTO program support costs (8% on items 10-82 above)					
	89	Component Total					
100	GRAND TOTAL		724,500	1,472.44	723,026.73	724,499.17	0.83

Annex 2: Project cash flow statements (Thailand)

PROJECT CASHFLOW STATEMENT

Project No.: PD 577/10 Rev. 1 (F)

Period ending on: 31 August 2015

Project Title: Management of the Emerald Triangle Protected Forests Complex to Promote Cooperation for Trans- boundary Biodiversity Conservation Between Thailand, Cambodia and Laos(Phase III)

	Item	Reference	Date	Amount	
				US\$	Local Currency (Baht)
A	Funds received from ITTO:				
	1 1st Installment		27/8/2012	200,000.00	6,239,032.00
	2 2nd Installment		10/9/2013	200,000.00	6,397,020.15
	3 3rd & 4th Installment		28/4/2014	200,000.00	6,407,038.65
	4 5th Installment		13/8/2014	70,000.00	2,300,606.80
	5 6th Installment		18/5/2015	54,500.00	1,816,029.90
	Total Funds Received (A) (Amount of Local Currency (Baht) after deduction of Banking Commission)			724,500.00	23,159,727.50
B	Expenditure By Executing Agency				
10	Project Personnel				
	11 National Experts (Long-term)				
	11.1 Project Manager, at US\$ 2,500 per m			90,000.00	2,868,425.00
	11.11 Project Coordinator (Part Time at US\$ 1,200 per m)			30,000.00	965,004.00
	11.2 Project Secretary, at US\$ 800 per m			28,800.00	917,896.00
	12 Other Personnel				
	12.1 Field Assistance (5), at US\$ 300 per m			48,600.00	1,546,764.00
	12.2 Assistance at RFD (for Coordinator), at US\$500 / m			17,500.00	558,560.00
	13 13.1 Consultant on GIS, at USD 1,500 per m			18,000.00	578,110.00
	19 Component Total			232,900.00	7,434,759.00
20	Sub-contract				
	21 Sub-contract (Laos Scientist), lump sum			30,000.00	952,480.00
	29 Component Total			30,000.00	952,480.00
30	Travel				
	31 Daily subsistence allowance				
	31.1 National Expert(s)/consultant(s), to Cam and Lao, at \$ 100/day 8 days/year			21,331.79	689,304.07
	31.2 Others (4 Staff) 4 days/m, US\$30/day			22,635.10	720,387.88
	32 International travel				
	32.1 National Expert(s)/consultant(s) to Cam and Lao, 6 Air-tickets (1 trips/year)			22,788.72	729,465.93
	32.2 Others to Cam and Lao, 4 Air-tickets (2 trips/year)			11,483.77	370,154.89
	33 Local transport costs				
	33.1 Others (resource persons)			7,205.23	230,735.25
	39 Component Total			85,444.61	2,740,048.02
40	Capital Items				
	41 Capital equipments				
	41.1 2-Project Vehicles (4 Doors Pickup)			33,931.10	1,085,795.15
	41.2 1-Project Vehicles (Pickup Van)			-	-
	41.3 2-Notebook			2,154.91	68,957.00
	41.4 8-GPS			2,323.41	72,626.00
	41.5 Satellite Imaginaries			13,459.74	430,791.00
	41.6 3-Camera			4,186.44	133,966.00
	41.7 2-Projector			1,103.44	35,310.00
	41.8 2-Printer Laser Monochrome			603.31	19,306.00
	41.9 2-Printer Laser color			802.50	25,680.00
	41.10 2-Computer			3,003.22	96,103.00
	41.11 2-Tissue Culture Lab equipment			61,162.66	1,961,827.84
	41.12 3-Nursery for Seedling			74,976.29	2,406,396.82
	41.13 4-Air Condition			2,275.64	71,000.00
	41.14 20-Table for meeting rooms			1,602.56	50,000.00
	41.15 60-Chairs for meeting rooms			1,730.77	54,000.00
	41.16 1-Photocopy Machine			-	-
	49 Component Total			203,315.98	6,511,758.81
50	Consumable items				
	51 Nursery supplies			10,136.20	324,563.36
	52 Office supplies			10,592.50	337,042.98

Item		Reference	Date	Amount	
				US\$	Local Currency (Baht)
59	Component Total			20,728.70	661,606.34
60	Miscellaneous				
61	Sundry				
	61.1 Petrol and maintenance (2 x US\$ 2,400/year)			23,957.19	758,126.08
	61.2 PSC meetings (3 x US\$ 1,000)			16,248.80	526,527.18
	61.3 Taskforce meeting (3 x US\$ 1,000)			6,430.83	206,497.61
	61.4 6 ICDP pilot activities			9,000.00	288,000.00
	61.5 Meeting, training, workshops for 400 participants US\$30/participant/day			22,083.90	698,064.44
	61.6 Information, media, publications			42,591.73	1,367,849.81
	61.7 PTC Meetings (6 x 3 yr x US\$ 1,000)			17,853.08	564,938.43
	61.8 Meeting for the preparation of TBCA common vision			1,978.01	61,714.00
62	Audit cost (3 x US\$1,500)			11,966.33	387,328.50
69	Component Total			150,636.64	4,810,046.05
TOTAL				724,499.17	23,159,698.22
Total expenditure to-date (B)				724,499.17	23,159,698.22
Remaining Balance of funds (A-B)				0.83	29.28
Note:					
(1)		Amounts in US dollars are converted using the average rate of exchange when funds were received by the Executing Agency.			
(2)		Total expenditure to-date (in local currency) should be the same as amount shown in sub-total of column (C) of the Financial Statement.			

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