

IUCN

in collaboration with
TRAFFIC

**REPORT ON THE MISSION TO DONG PHAYAYEN-KHAO YAI FOREST COMPLEX, THAILAND
FROM 13 TO 19 DECEMBER, 2016**



Photo © IUCN/Remco van Merm

MARCH 2017

ACKNOWLEDGEMENTS

The mission team wishes to thank the Thai authorities sincerely for the warm welcome it received. The attendance of many different government agencies and ministries at briefing meetings in Bangkok demonstrates the high level of commitment of the Thai government for the conservation of the property. We would like to thank in particular H.E. Mr. Sihasak Phuangketkeow, Ambassador Extraordinary and Plenipotentiary of the Kingdom of Thailand to France and Permanent Delegate of the Kingdom of Thailand to UNESCO, for taking the time to meet with the mission during his busy schedule in Bangkok. We also thank all the high ranking officials who attended the briefing meetings in Bangkok, including Ms. Morakot Sriswasdi, Deputy Director-General of the Department of International Organizations, Mr. Twekiat Janprajak, Director of the International Organizations' Administrative Affairs Division, and Mr. Tachasit Prasittirat, Counsellor, International Organizations' Administrative Affairs Division. Particular thanks are due also to Mr. Phudhiphong Suraphruk, Deputy Secretary-General of the Office of Natural Resources and Environmental Policy and Planning, Ministry of natural Resources and Environment, and Ms. Indhira Euamonlachat, Director, Natural and Cultural Environmental Management Bureau, Office of Natural Resources and Environmental Policy and Planning, for accompanying the mission throughout much of its visit.

Special thanks are due to Dr. Prasert Sornsathapornkul, Director, Natural World Heritage Office, Ms. Sunee Sakseau, Head of International Cooperation Section, Natural World Heritage Office, Ms. Sawanit Tiamtinkrit from the Thailand National Committee on the World Heritage Convention, Office of Natural Resources and Environmental Policy and Planning, for the excellent organization of the mission and for accompanying the mission throughout our visit. Thanks are also due to the staff of the Natural World Heritage Office, Department of National Parks, Wildlife and Plant Conservation, who provided logistical support throughout the mission.

Finally we wish to thank Dr. Chamniern Vorratnchaiphan, Country Representative, IUCN Thailand Country Programme, and Mr. Tim Redford, Surviving Together Program Director/Training Coordinator, FREELAND, for accompanying the mission and sharing valuable information about their activities supporting the Thai government in the conservation of the property, as well as all the park managers, other representatives of NGOs, government agencies (including in particular the Department of Highways and the Royal Irrigation Department), communities and the private sector, who met and openly shared information with the mission.

LIST OF ABBREVIATIONS

The Action Plan	Action Plan on Curbing Illegal Logging and Trade of Siamese Rosewood in Dong Phrayayen-Khao Yai Forest Complex 2014-2019
ASEAN	Association of South East Asian Nations
ASEAN-WEN	ASEAN Wildlife Enforcement Network
B.E.	Buddhist Era
CCTV	Closed-circuit television
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
The Committee	The World Heritage Committee
DNP	Department of National Parks, Wildlife and Plant Conservation
DoH	Department of Highways
DPKYFC (or DPKY-FC)	Dong Phrayayen-Khao Yai Forest Complex
EIA	Environmental Impact Assessment
IBA	Important Bird and Biodiversity Area
IBM	International Business Machines Corporation
ICCWC	International Consortium for Combatting Wildlife Crime
INTERPOL	International Criminal Police Organization
ITTO	International Tropical Timber Organization
IUCN	International Union for Conservation of Nature and Natural Resources
Lao PDR	Lao People Democratic Republic
MONRE	Ministry of Natural Resources and Environment
NCAPS	Network-Centric Anti-Poaching System
NGO	Non-governmental organization
NP	National Park
ONEP	Office of Natural Resources and Environmental Policy and Planning
OUV	Outstanding Universal Value
PAC	Protected Area Advisory Committee
PEA	Provincial Electricity Authority
The property	Dong Phrayayen-Khao Yai Forest Complex World Heritage Site
RFD	Royal Forest Department
RID	Royal Irrigation Department
SEZ	Special Economic Zone
SMART	Spatial Monitoring and Reporting Tool
SOMTC	ASEAN Senior Officials Meeting on Transnational Crime
SOPs	Standard Operating Procedures
UAV	Unmanned Aerial Vehicle
UNODC	United Nations Office on Drugs and Crime
WCO	World Customs Organization
WCS	Wildlife Conservation Society
WS	Wildlife Sanctuary
WWF	World Wide Fund for Nature

Table of Contents

ACKNOWLEDGEMENTS.....	ii
LIST OF ABBREVIATIONS	iii
EXECUTIVE SUMMARY	1
1. BACKGROUND TO THE MISSION	4
2. NATIONAL POLICY FOR THE PRESERVATION AND MANAGEMENT OF THE WORLD HERITAGE PROPERTY	6
2.1. Protected area legislation	6
2.2. Institutional framework	6
2.3. Management structure	6
2.4. Other international designations and programmes.....	7
3. IDENTIFICATION AND ASSESSMENT OF ISSUES/THREATS	7
3.1. Illegal logging and international trade in Siamese Rosewood	7
3.1.1. Measures on prevention of illegal logging	8
3.1.2. Measures on suppression of illegal trade and transportation	10
3.1.3. Measures on conservation and promotion of participation	13
3.1.4. Measures on promotion of international cooperation	14
3.2. Infrastructure developments	15
3.2.1. On-going expansion of Highway 304.....	15
3.2.2. Proposed expansion of Highway 348	16
3.2.3. Huay Samong Dam	19
3.3. Encroachment and illegal resort development.....	20
4. ASSESSMENT OF THE STATE OF CONSERVATION OF THE PROPERTY	22
4.1. Outstanding Universal Value.....	22
5. CONCLUSIONS AND RECOMMENDATIONS	22
Annex I – Terms of Reference.....	2
Annex II – Mission itinerary and programme	5
Annex III – List and contact details of people met.....	10
Annex IV – Maps	19
Annex V – Photographs	21

EXECUTIVE SUMMARY

Dong Phayayen-Khao Yai Forest Complex was inscribed on the World Heritage List in 2005 (Decision **29 COM 8B.11**) under criterion (x). The property has recently been subject to two previous reactive monitoring missions (in 2012 and 2014, respectively), in response to concerns raised by the World Heritage Committee on a number of conservation issues that were considered a threat to its Outstanding Universal Value (OUV). These included the ongoing expansion of Highway 304 and the construction of the Huay Samong Dam, as well as encroachment and illegal resort developments. In 2013, the Committee was made aware of a new threat to the property coming from the illegal logging of Siamese Rosewood (*Dalbergia cochinchinensis*).

The possibility of inscribing the property on the List of World Heritage in Danger has been considered by the Committee in 2012 (**36 COM 7B.17**), 2014 (**38 COM 7B.71**), and again in 2015, when the Committee decided that it would consider a possible inscription of the property on the List of World Heritage in Danger the following year, *“in the case of confirmation of the ascertained or potential danger to Outstanding Universal Value”* (**39 COM 7B.17**). Following confirmation by the State Party in its report submitted for examination by the Committee at its 40th session (Istanbul, 2016) that illegal logging of Siamese Rosewood in the property may be classified as ascertained danger, IUCN and the World Heritage Centre recommended the Committee to inscribe the property on the List of World Heritage in Danger during its 40th session (State of Conservation report, 2016). However, in light of the continued efforts undertaken by the State Party to combat illegal logging, the Committee decided (Decision **40 COM 7B.90**) that an IUCN reactive monitoring mission *“to monitor and evaluate effective implementation of the Action Plan on Curbing Illegal Logging and Trade of Siamese Rosewood in Dong Phayayen-Khao Yai Forest Complex 2014-2019”* was required prior to consideration of a possible inscription of the property on the List of World Heritage in Danger.

This mission took place from 13 to 19 December 2016, and was undertaken by IUCN in collaboration with TRAFFIC. The mission was able to assess the issue of illegal logging and the implementation of the Action Plan. In addition, the State Party provided the mission with updates on the other conservation issues previously noted by the Committee, in particular, the expansion of Highway 304 and the construction of the Huay Samong Dam.

In conclusion, considering the overall good state of conservation of the property as demonstrated by healthy and growing populations of a number of key wildlife species, and provided that the State Party continues its current efforts to combat illegal logging and further increases international collaboration to stop illegal trade in Siamese rosewood, in particular through enhanced law enforcement and prosecution of cases, the mission considers that the inclusion of the property on the List of World Heritage in Danger should not be recommended at this stage. The State Party should nevertheless continue to report to the Committee on the state of conservation of the property on a yearly basis in order to enable the Committee to continue to monitor the evolution of this issue closely. If in three years' time (at the 44th session of the Committee, following expiration of the Action Plan in 2019) an improvement in the situation cannot be convincingly demonstrated, or if at any time there is evidence that illegal extraction of Siamese Rosewood deteriorates further or starts to target other valuable species, the Committee should reconsider whether immediate inclusion of the property on the List of World Heritage in Danger is warranted.

Furthermore, the mission recommends that the State Party:

- R1** Redefine the indicators of the Action Plan on Curbing Illegal Logging and Trade of Siamese Rosewood in Dong Phrayayen-Khao Yai Forest Complex 2014-2019, ensuring that they are Specific, Measurable, Achievable, Relevant and Time-bound, and identify for each indicator adequate means of verification to enable the Department of National Parks, Wildlife and Plant Conservation to accurately measure the effectiveness of the implementation of the Action Plan and the achievement of set targets;
- R2** Develop a centralized system based on the use of analytical software tools that enables the collation and analysis of country-wide data on illegal logging and trade of Siamese Rosewood, to be managed by an assigned law enforcement agency in close coordination with the Department of National Parks, Wildlife and Plant Conservation, in order to enhance understanding and communication of the status of investigations, and to direct and manage the process of interdicting illegal financial flows and investigate and detain individuals involved in the illegal harvest and trade of the wildlife resources of the property;
- R3** With the support of law enforcement agencies, create a network for intelligence gathering surrounding the property to help in detection, prevention and suppression of illegal logging of Siamese Rosewood and poaching and illegal trade of other wild flora and fauna species;
- R4** Create a centralized and secured facility for the storage of seized Siamese Rosewood from the property and possibly from other forests, and assess and adopt the most practical and cost effective technologies to assist in monitoring, inspection and audit of the seized stockpiles;
- R5** Ensure local communities are effectively engaged and participating in the management of the property, through better representation of local communities in the Protected Area Advisory Committees or other appropriate means, and through additional support for awareness raising activities on either side of the international border between Thailand and Cambodia;
- R6** Continue to have annual regional dialogues on Siamese Rosewood, bringing together key stakeholders within the State Party, transit and destination countries, as well as international NGOs, international agencies such as the CITES Secretariat, WCO, ITTO, ASEAN-WEN, INTERPOL and UNODC, to obtain other States Parties' cooperation to investigate, enforce and interdict the illegal harvesting and trade of the species along the entire supply chain including how those supply chains are mixed with other species of Rosewood, ebony and Red Sanders to supply intermediary processing and end-use retail markets;
- R7** Develop identification guides, training tools and manuals for Customs and law enforcement agencies to enhance efforts to interdict illegal cross border movements of Siamese Rosewood;
- R8** Develop an emergency response plan in order to ensure rapid response to and containment of spills of hazardous materials in case of accidents on Highway 304, including the establishment of permanent (ground) water monitoring stations at strategic locations downstream of the highway;
- R9** In close coordination between the Department of Highways (DoH) and the Provincial Electricity Authority (PEA), study the feasibility of attaching power lines to the elevated highways and tunnel walls as part of the expansion of Highway 304, in order to avoid any additional barriers to wildlife movement within the wildlife corridors that may be caused by maintaining separate power lines;

- R10** Assess alternatives for the development of Highway 348 as part of the international transport corridor linking the Eastern Seaboard Economic Zone in Thailand to Da Nang Port in Viet Nam, including the option to align the corridor along Highways 24 and 304, in order to identify options with the lowest potential impact on the Outstanding Universal Value of the property;
- R11** Ensure that adequate resources and capacity are available to park rangers to patrol the Huay Samong reservoir and the adjoining forests effectively, in order to prevent the use of the reservoir for access to the property by poachers and for the transportation of timber logged illegally inside the property;
- R12** Permanently halt any plans for the development of any dams within the boundaries of the property, including the Huay Saton and the Lam Prayathan dam projects, in light of their likely negative impacts on Outstanding Universal Value, and in line with the Committee's position that the construction of dams with large reservoirs within the boundaries of World Heritage properties is incompatible with their World Heritage status;
- R13** Ensure that the impacts from the Sai-noi Sai-Yai dam project on the Outstanding Universal Value of the property are rigorously assessed, in accordance with IUCN's World Heritage Advice Note on Environmental Assessment;

Finally, the mission reiterates the recommendation made by the 2014 IUCN reactive monitoring mission in relation to encroachment, the implementation of which remains pending:

- R14** Urgently address the severe threats from the various types of encroachment to the property and its Outstanding Universal Value, including by:
- a) undertaking, as a priority, the detailed mapping exercise as recommended by the 2012 monitoring mission and in previous Committee Decisions, including an assessment of location and magnitude of encroachment (differentiating between agriculture, settlements and resort development), as well as the evolution of land use since the inscription of the property, using satellite imagery analysis;
 - b) developing a long-term anti-encroachment plan that adequately addresses the situation, including close long-term monitoring of encroachment in all the protected areas constituting the property;
 - c) continuing, strengthening and concentrating efforts to engage local people in the process, to ensure awareness of the boundaries of the property and garner support for its conservation, as well as an understanding of the legal basis for current efforts and enforcement decisions;
 - d) closely monitoring the level and type of land use and encroachment and develop a detailed plan for zoning of the property to improve management of impacts from areas within the boundaries of the property currently inhabited and under investigation in regards to land tenure.

1. BACKGROUND TO THE MISSION

Dong Phrayayen-Khao Yai Forest Complex (the property) was inscribed on the World Heritage List in 2005 (Decision **29 COM 8B.11**). The justification for the inscription of the property under criterion (x) is as follows (excerpt taken from the Statement of Outstanding Universal Value):

“The Dong Phrayayen-Khao Yai Forest Complex (DPKY-FC) contains more than 800 fauna species, including 112 species of mammals, 392 species of birds and 200 reptiles and amphibians. The property is internationally important for the conservation of globally threatened and endangered mammal, bird and reptile species that are recognised as being of outstanding universal value. This includes 1 critically endangered, 4 endangered and 19 vulnerable species. The property contains the last substantial area of globally important tropical forest ecosystems of the Thai Monsoon Forest biogeographic province in northeast Thailand, which in turn can provide a viable area for long-term survival of endangered, globally important species, including tiger, elephant, leopard cat and banteng. The unique overlap of the range of two species of gibbon, including the vulnerable pileated gibbon, further adds to the global value of the complex. In addition to the resident species the complex plays an important role for the conservation of migratory species [...].”

The property consists of five mostly contiguous protected areas, of which four are national parks (Khao Yai NP established in 1962 as the first national park of Thailand, Thap Lan NP established in 1981, Pang Sida NP established in 1982 and Ta Phraya NP established in 1996) and one is a wildlife sanctuary (Dong Yai WS established in 1996). Khao Yai and Thap Lan National Parks are contiguous only in two narrow parts, where they are nevertheless essentially disconnected from each other due to the presence of Highway 304. In the east, Ta Phraya National Park extends to the international border with Cambodia.

The property has recently been subject to two previous reactive monitoring missions (in 2012 and 2014, respectively), in response to concerns raised by the World Heritage Committee (the Committee) on a number of conservation issues that were considered a threat to its Outstanding Universal Value (OUV). These included the ongoing expansion of Highway 304 and the construction of the Huay Samong Dam, as well as encroachment and illegal resort developments. Based on the findings of the 2012 reactive monitoring mission, the Committee for the first time raised the possibility of inscribing the property on the List of World Heritage in Danger (Decision **36 COM 7B.17**). In 2013, the Committee was made aware of a new threat to the property coming from the illegal logging of Siamese Rosewood (*Dalbergia cochinchinensis*). In Decision **37 COM 7B.15** (Phnom Penh, 2013) the Committee requested the State Party of Thailand to *“take the necessary measures to halt all illegal logging in the property, [...] and with the support of other States Parties concerned, particularly Cambodia, China, Lao People Democratic Republic and Viet Nam, halt illegal trade in Siamese Rosewood [...].”* It also requested the State Party of Thailand to invite an IUCN reactive monitoring mission *“[...] to consider whether the property should be considered for inscription on the List of World Heritage in Danger”*.

The 2014 mission found that good progress was being made by the State Party with the implementation of the recommendations from the Committee and the 2012 reactive monitoring mission, in particular the implementation and planning of mitigation measures to address impacts from the expansion of Highway 304 and the construction of Huay Samong Dam, and the reduction of cattle grazing in the property. However, despite the State Party’s efforts to monitor land use and encroachment, the mission noted that the property continued to be under heavy pressure from encroachment, neighbouring land use practices and resort developments.

The 2014 mission also noted the State Party's strong commitment to address the issue of illegal logging of Siamese Rosewood and the commendable efforts that were being made in that regard, including the establishment of a Special Prevention and Suppression Task Force, multi-agency patrols and increased law enforcement. In March 2013, Siamese Rosewood was also added to Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) Appendix II at the initiative of Thailand, in order to regulate international trade better. Despite the State Party's commendable efforts and strong commitment, the 2014 mission nevertheless found that illegal logging by armed gangs within the property continued to escalate at a rate that outpaced the ability of park officials to address this issue.

Therefore, the World Heritage Centre and IUCN in 2014 considered that (State of Conservation report, 2014):

“both the severe and escalating threat of illegal logging, and the continued pressure from encroachment, including resort developments, represent a clear ascertained danger to the OUV of the property and thus the criteria for inscription of the property on the List of World Heritage in Danger are met, in conformity with Paragraph 180 of the Operational Guidelines”.

However, the Committee in Decision **38 COM 7B.71** (Doha, 2014) decided to not inscribe the property on the List of World Heritage in Danger, and to reconsider that possibility at its 39th session in 2015.

In Decision **39 COM 7B.17** (Bonn, 2015), the Committee commended the State Party for its efforts to address illegal logging in the property, and also noted its efforts to address encroachment. The Committee considered that more time was required to demonstrate whether these efforts were achieving the desired result of eliminating rosewood poaching, and decided that it would again consider a possible inscription of the property on the List of World Heritage in Danger, **“in the case of confirmation of the ascertained or potential danger to Outstanding Universal Value”.**

In its report submitted for examination by the Committee at its 40th session (Istanbul, 2016), the State Party made the following statement (page 45):

“Illegal logging of Siamese Rosewood in [the property] may be classified as “ascertained danger” under definition in paragraph 180 of the Operational Guidelines, since it has led to the depletion of population of endangered and/or valuable species”,

but also that:

“At present, no other plant species has been found threatened or endangered. In this regard, Thailand can confirm that [the property] still maintain its OUV as the Natural World Natural Heritage at the high level of biodiversity”.

Therefore, while the State Party had continued to make significant and commendable efforts to address the threat from illegal logging of Siamese Rosewood, including increased international collaboration, the State Party's confirmation of ascertained danger in its 2016 report, combined with verified third party information, led the World Heritage Centre and IUCN to recommend the Committee to inscribe the property on the List of World Heritage in Danger during its 40th session (State of Conservation report, 2016). However, the Committee decided (Decision **40 COM 7B.90**) that an IUCN reactive monitoring mission *“to monitor and evaluate effective implementation of the Action Plan on Curbing Illegal Logging and Trade of Siamese Rosewood in Dong Phrayayen-Khao Yai Forest Complex 2014-2019”* was required prior to consideration of a possible inscription of the property on the List of World Heritage in Danger.

This mission took place from 13 to 19 December 2016. Due to the mission's significant focus on the issue of international trade of Siamese Rosewood, which is not limited to the boundaries of the property and which required an assessment from a perspective beyond only the World Heritage Convention, IUCN conducted this mission in collaboration with TRAFFIC. TRAFFIC is a strategic alliance between WWF and IUCN, established in 1976 to respond to issues related to wildlife trade and in particular overexploitation (including timber). The mission was conducted by Remco van Merm (representing IUCN) and Chen Hin Keong (representing TRAFFIC).

2. NATIONAL POLICY FOR THE PRESERVATION AND MANAGEMENT OF THE WORLD HERITAGE PROPERTY

2.1. Protected area legislation

Relevant legislation for the preservation and management of the property has been summarized in previous mission reports. In addition, legislation particularly relevant for the protection of Siamese Rosewood includes, but may not be limited to, the following:

- Forest Act B.E. 2484 (1941) and its amendments;
- National Parks Act B.E. 2504 (1961);
- National Reserve Forest Act B.E. 2507 (1964);
- Wildlife Reservation and Protection Act B.E. 2535 (1992);
- Chain Saw Act B.E. 2545 (2002);

A full evaluation of the legal basis for the property was beyond the scope of the mission, but the laws are many and the legal framework appears to be adequate.

2.2. Institutional framework

The national focal point for World Heritage is the Office of Natural Resources and Environmental Policy and Planning (ONEP) under the Ministry of Natural Resources and Environment (MONRE). Dong Phrayayen-Khao Yai Forest Complex is administered by the Department of National Parks, Wildlife and Plant Conservation (DNP, also under MONRE). Within DNP, the unit responsible for all natural World Heritage sites in Thailand is the Natural World Heritage Office in Bangkok, which has a Coordinating Centre at both of Thailand's current natural World Heritage sites.

2.3. Management structure

The management structure for the property has not changed much since the mission of 2014, and it is therefore not discussed in great detail here. What *has* changed is that there is now more clarity regarding the reporting lines from the field to higher levels of DNP. For each of the individual protected areas that make up the property, a Superintendent remains responsible for their overall management. These Superintendents report to the Head of the Dong Phrayayen-Khao Yai Coordination Centre, who reports directly to the Director of the Natural World Heritage Office in Bangkok.

The management of all protected areas in Thailand is supported by Protected Area Advisory Committees (PACs), which consist of representatives from nine distinct groups, including i) regional administration agencies, ii) local administration agencies, iii) relevant government agencies, iv) local communities, v) DNP's local units, vi) Protected Area officials, vii) local spiritual/religious/academic leaders, viii) local media, and ix) NGOs. These PACs advise on the implementation of the management plans of each

protected area, including on issues related to local community participation in management. It is however not clear to what extent there is any consultation with local communities beyond the level of the village leaders that are members of the PAC.

2.4. Other international designations and programmes

Khao Yai National Park has been declared an ASEAN Heritage Park since 1984, and is also an Important Bird and Biodiversity Area (IBA).

3. IDENTIFICATION AND ASSESSMENT OF ISSUES/THREATS

3.1. Illegal logging and international trade in Siamese Rosewood

The mission was specifically tasked to monitor and evaluate the effective implementation of the Action Plan on Curbing Illegal Logging and Trade of Siamese Rosewood in Dong Phrayayen-Khao Yai Forest Complex 2014-2019 (the Action Plan). The Action Plan has 4 main objectives:

- a. To effectively halt illegal cutting of Siamese Rosewood in DPKYFC World Heritage Site;
- b. To prevent and block illegal transportation of Siamese Rosewood from DPKYFC World Heritage Site;
- c. To strictly undertake law enforcement measures, and;
- d. To conserve, protect and maintain natural resources and environment in DPKYFC World Heritage Site sustainably and effectively

The objectives are carried out through four Implementation measures:

- i. Measures on prevention of illegal logging
- ii. Measures on suppression of illegal trade and transportation
- iii. Measures on conservation and promotion of participation
- iv. Measures on promotion of international cooperation

Various aspects of the Action Plan are discussed in greater detail in the following sub-sections. On a more general note, the mission considers that the Action Plan and the ability of DNP to measure its effective implementation could be enhanced by reviewing the indicators for each objective, and by identifying their means of verification. Indicators should be SMART (Specific, Measurable, Achievable, Relevant and Time-bound). For example, the indicator for measures on suppression of illegal trade and transportation, which has the target *“to stop trade and removal of Siamese Rosewood out of DPKYFC World Heritage”*, is currently phrased as follows:

“Prevention and suppression of illegal logging of Siamese Rosewood in DPKYFC World Heritage is undertaken effectively. A number of arrests are increased by 10% of total arrested offender compared with the previous year.”

The first part of this indicator is neither specific nor time-bound, and is phrased more as a target (effective prevention and suppression of illegal logging) than an indicator. The second part of the indicator, while being specific, measurable and time-bound, may not be the most relevant indicator for successfully achieving the target, as a continuously increasing number of arrests could not only be an indicator of more effective law-enforcement, but could also indicate an increase in number of offences being committed in any given year. Similarly, the indicator for measures on prevention of illegal logging (which has a target to reduce illegal logging of Siamese Rosewood in the property to zero) is inadequate as a stand-alone indicator, as it only measures a reduction of the volume of seized rosewood from one year to the next. The mission considers that a measured reduction in the volume of seized rosewood is not necessarily representative of a reduction in illegal logging. Other factors could be at play, such as criminals becoming

smarter at avoiding detection, or operating in larger, more heavily armed groups making it difficult for DNP to seize the rosewood. It could even indicate a reduction in efforts to interdict illegal shipments of rosewood.

Both of these examples demonstrate that the indicators for each of the objectives in the Action Plan need to be reconsidered and carefully redefined according to SMART principles. Furthermore, given the diversity of factors that may influence the statistics measured, there is a need to identify clear means of verification (currently absent from the Action Plan), such as patrolling reports, case reports filed by police, records of court prosecutions, and intelligence gathered through an informant network and acted upon, number of interdictions of illegal Siamese Rosewood harvested and transported, number of interdictions of poaching, reports of investigations of seized cargoes, number of records in the analytical database (mentioned in 3.1.1 below), number of criminal actors identified, number of alerts shared with international enforcement agencies and trading countries, etc.

Recommendation R1

Redefine the indicators of the Action Plan on Curbing Illegal Logging and Trade of Siamese Rosewood in Dong Phrayayen-Khao Yai Forest Complex 2014-2019, ensuring that they are Specific, Measurable, Achievable, Relevant and Time-bound, and identify for each indicator adequate means of verification to enable the Department of National Parks, Wildlife and Plant Conservation to accurately measure the effectiveness of the implementation of the Action Plan and the achievement of set targets.

3.1.1. Measures on prevention of illegal logging

The mission was able to observe the use of one of the main tools to detect poachers and illegal loggers in the property; the Network-Centric Anti-Poaching System (NCAPS) is based on camera traps using the mobile telecommunications network to alert rangers as soon as a camera is activated. This system is considered a game changer, and has already proved to enable the interception of would-be poachers/illegal loggers before they succeeded at felling trees. The system does have its limitations though, as the illegal loggers have to walk past the cameras to be detected, and cameras have been known to be damaged by illegal loggers and poachers. The cameras are also not cheap to purchase, and operational costs have to be budgeted for the long term. The system can only be used in locations where there is a mobile network reception. The additional use of acoustic detection technology to pinpoint chain saws in operation in the forests deserves consideration, as it could help speed up detection of illegal logging in the property, especially in areas outside of the coverage of mobile networks on which the NCAPS relies. Such technology could provide an additional tool to assist in planning operations to effectively interdict illegal loggers.

The trends in the statistics provided by DNP showed a peak in cases of seizures of illegally logged Siamese Rosewood and apprehension of illegal loggers in 2014 before both declining until this year¹. The information and data available do not enable the mission to determine if the camera traps and other enforcement actions are the main attributing factors to the decline observed in recent years, and

¹ This situation, where both the number of illegal loggers being apprehended and the volume of seized rosewood appear to be declining, demonstrates that the indicators of the Action Plan discussed in section 3.1. of this report are inadequate and even contradictory, where one indicator is seeking a reduction in volume of seized rosewood whereas the other is seeking an annual increase in the number of offenders being arrested, both as an indicator of successfully achieving a target of reducing illegal logging to zero.

continued reports in the local media about interdictions and seizures of rosewood around the property during and after the mission indicate that illegal logging continues to regularly occur. At the same time, it is noted that Lao PDR, Cambodia and Viet Nam have been increasing their Siamese Rosewood (re)exports in recent years even though the limited inventory information showed these countries do not have sufficient stock of harvestable Siamese Rosewood to sustain such trade (Environmental Investigation Agency, 2014²).

The DNP issues administrative penalties for minor offences. For illegal logging of Siamese Rosewood, cases have to be handled by the local police. While there is collaboration between DNP and local police forces, greater coordination of the investigative and court cases between DNP and police would be desirable to ensure the cases can be followed effectively and efficiently by DNP and to ensure the best possible legal course can be taken for each case where an infraction has happened in the property but also elsewhere in the country.

Joint patrols with other agencies are an efficient way to increase the effectiveness of finite operational budgets of DNP, without increasing staff. The quick reaction patrol units, the 'Hasadin', are another innovative mechanism for reacting quickly to any detection of possible infractions occurring within the property. Consisting of the best rangers from all component protected areas of the property who have received additional specialized training, they can be dispatched anywhere within the property to apprehend illegal loggers and poachers.

The SMART (Spatial Monitoring and Reporting Tool) patrolling system is now in use throughout the property, and data collected is compiled into a central database for the property, based at Thap Lan NP headquarters. Analysis of data collected through SMART patrolling, NCAPS and other camera traps is being conducted with the help of NGOs, in particular FREELAND (which manages its own camera traps) and the Wildlife Conservation Society (WCS).

A large set of nominal and other useful information pertaining to individuals, vehicles registration and ownerships, addresses, communications information, banking, assets and modus operandi of the illegal loggers, poachers and illegal traders has been gathered over the years. However, the mission has not been able to determine if this information is correlated and analysed in any effective way, including beyond the needs of the property as the illegal timber trade crosses international borders and affects complex supply chains. The named supportive agencies in the Action Plan – the Royal Thai Police and agencies under its command (Natural Resources and Environment Crime Suppression Division, Local Police and Border Patrol Police), Internal Security Operations Command, Armed Forces, Royal Thai Navy, Ministry of Interior, Ministry of Foreign Affairs, Office of the Anti-Corruption Commission, Anti-Money Laundering Office, Office of Public Sector Anti-Corruption Commission, Customs Department, Department of Special Investigation – all have various skills, tools and expertise. These together can be effective in building intelligence information, knowledge and cases against the financiers of the illegal logging operations. These agencies should have effective networks that cross borders, including through Thailand's membership in international multi-agency enforcement institutions such as INTERPOL, United Nations Office on Drugs and Crime (UNODC) and World Customs Organisation (WCO).

Presumably some of the named supporting agencies use similar analytical tools as those used by law enforcement agencies and even NGOs in many parts of the world to assemble intelligence (such as IBM's

² Environmental Investigation Agency, 2014. Routes of Extinction: The corruption and violence destroying Siamese Rosewood in the Mekong. UK.

i2 intelligence analytical tool, or Palantir). These tools can collate and grade huge data and information gathered from different sources and can dramatically improve law enforcement agencies' ability to understand and communicate the status of investigations, and to direct and manage the process – including between agencies. The use of such tools is crucial in the context of the illegal trade in rosewood species, as the illegal loggers and financiers are not only targeting the property, but also other forests in North-eastern Thailand, and perhaps other countries including for transit, processing and (re-)export. It should also not be dismissed that the financiers may be sourcing illegal rosewood species from other continents to augment supply chain volumes. Such tools will also help to correlate any possible links between illegal trade of Siamese Rosewood, other similar high-value timber species, and other species of flora and fauna.

The use of helicopters for aerial inspection, patrolling and transportation support is an expensive tool but is welcomed by the administrations of the property. The use of the helicopter for transportation can provide useful support for enforcement efforts, and aerial inspection may have some limited use through dense forests, although it is uncertain if there is any deterrent effect in patrolling as illegal loggers can hear the helicopter from afar. The helicopter has to be requested in advance and can only support the operations of each of the protected areas in the property once a month at most. Perhaps the most effective use of the helicopter is for the rapid deployment of the Hasadin to intercept people engaged in illegal activities within the property if the helicopter can be based on the property.

Although it is part of the actions foreseen in the Action Plan, the application of Unmanned Aerial Vehicles (UAV) does not currently appear to be in use at the property. Due to challenges of endurance of the UAV, training needs of operators and possible high costs for quality and quantity of UAVs, an evaluation of the use of UAVs should be conducted to determine how UAVs can support actions to prevent illegal logging, and enhance law enforcement.

Recommendation R2

Develop a centralized system based on the use of analytical software tools that enables the collation and analysis of country-wide data on illegal logging and trade of Siamese Rosewood, to be managed by a single assigned law enforcement agency in close coordination with the Department of National Parks, Wildlife and Plant Conservation, in order to enhance understanding and communication of the status of investigations, and to direct and manage the process of interdicting illegal financial flows and investigate and detain individuals involved in the illegal harvest and trade of the wildlife resources of the property.

3.1.2. Measures on suppression of illegal trade and transportation

These measures relate very closely to the measures discussed in Section 3.1.1. The prioritization of the target areas to conduct operations appears to be well thought out for illegal logging and transport of Siamese Rosewood out of the property's forests. Checkpoints and patrolling on main highways, trunk roads to the border, and minor roads appears to be adequately coordinated by DNP staff in joint operations with other agencies, including local police, Armed Forces, and the Customs Department.

The main roads out of the property, and especially the exit road from Ta Phraya NP and the main road towards the Cambodian border have joint agencies' checkpoints. The border crossing at Aranyaprathet is a very busy crossing with people on foot, motorbikes, cars and heavy vehicles. The CITES Management

Authority of Thailand has an office at the border crossing. However, the number of vehicles and people using this border crossing makes it very difficult to conduct thorough inspections. This challenge is similar to many trans-boundary checkpoints anywhere in the world.

DNP informed the mission that they placed a tracking device on a known illegal stash of Siamese Rosewood when it was discovered by rangers. DNP has subsequently been able to track the movement of the timber to a house in Cambodia. The track record shows that the vehicle in which the logs were being transported lay in wait in an area nearby a checkpoint, until it saw a chance to pass the control post unchallenged. It is unclear to the mission whether the vehicle was allowed to pass in order to enable authorities to track the logs to their destination, or whether the fact that it was able to pass demonstrates a weakness in the effectiveness of the checkpoints. Whatever the reason, the information provided by this single tracking exercise can be used to train staff on various protocols, standard operating procedures (SOPs) and cases to interdict transportation of illegal Siamese Rosewood, and address possible loop-holes in SOPs and processes.

The mission appreciates the innovative use of satellite tracking to trace the movement of illegal stashes of Siamese Rosewood. This should be continued for specific objectives following the development of standard guidelines on the process and protocols. The evidence collected through satellite tracking could be used in joint operations by Thailand and Cambodia (and other countries concerned) to investigate the illegal rosewood traders network. While there is a good basis for international cooperation both bilaterally and regionally, much work appears to still be needed to lead to co-ordinated investigation together with other countries in the supply chain to enhance the effectiveness of such tracking. The mission was unable to clarify whether any investigative action has been undertaken or is being planned by the authorities in Cambodia on the basis of the specific evidence obtained during the above-mentioned tracking exercise. Without an agreed bilateral and multilateral cooperation on enforcement, the exercise will not be useful, and create frustrations for enforcement officials and DNP staff. Nevertheless, DNP may wish to evaluate the mechanism as even if there is a lack of enforcement at the transit or destination country, the information obtained can provide valuable intelligence if there is an ability to capture and coordinate the data centrally.

The use of appropriate analytical software tools as mentioned in Section 3.1.1. would allow for the development of risk profiling for individuals, vehicles, transport routes, companies etc., and update the protocols for inspections, investigations, and case handling. Criminals continuously find new ways to circumvent law enforcement efforts, and the only way to keep abreast and even gain ahead of the criminals is through the intelligent use of the best tools. Regularly updating SOPs and training protocols, coupled with good audits and monitoring and evaluation of the systems in use in the field, is also recommended best practice.

DNP is focused on the forests while the trade crosses borders, and other Royal Forestry Department forests are also targeted for illegal logging activities. Thus it is advisable to designate another agency with intelligence management tools and expertise, such as the Royal Thai Police or the Customs Department to lead on coordinating data compilation and analysis, and resultant intelligence-led enforcement planning aspects of the work, supported through a joint task force made up of DNP and other supporting law enforcement agencies. This inter-agency structure should help provide nominal and other data and information from the field, the borders and internationally as well, such as INTERPOL, UNODC, WCO, ASEAN-WEN, etc, and thus assemble comprehensive intelligence packages that would increase law enforcement effectiveness.

The engagement of DNP with the Protected Area Advisory Committees (PACs) is commendable. It appears the PACs are a valuable mechanism to engage with the stakeholders around the property, to enhance public awareness of the value of the property and provide support to the parks' administrations. The degree of engagement of the PAC varies between the component parks of the property, due to the different challenges facing local communities living in their proximity, as well as differences in the type of stakeholders present.

However, the mission notes that the PACs do not appear to be providing any intelligence support to the property's administration and DNP. In any case, the PAC members are leaders in the community and may not be the most appropriate people to provide information and intelligence. Informant coordination and management is a skill that can be trained and requires a degree of centralized coordination to ensure the information is kept confidential and the source is not compromised. Although the Action Plan foresees the creation of a channel for the general public to provide information related to illegal logging of Siamese Rosewood (e.g. a hotline and websites of DNP and other agencies), the mission was unable to confirm the existence of an intelligence informant network, which it considers could be helpful for the detection, prevention and suppression of both illegal logging of Siamese Rosewood and other wildlife poaching.

If an informant network does not yet exist, its creation should be a priority, in close cooperation between DNP and the Royal Thai Police which should have the skills and expertise to do this. Security, safety and confidentiality of the people working on this network, and the safety of the informants are vital preconditions.

The measures to suppress illegal logging and transport have resulted in each of the components of the property having to secure seized illegally harvested Siamese Rosewood, housed at each of the individual parks' headquarters. The mission visited two such facilities for securing the seized timber, and in one case of seized vehicles used to transport the illegally logged Siamese Rosewood. At the sites observed, the timber is stacked in a hut or wired fence compound, usually with a CCTV camera, and/or ranger guard as well. A regular audit on the seized timber is conducted by a joint team from DNP every six months. Each piece of timber is marked, and the full audit is signed by the leader of the team and the Park officer in question.

The quantity of seized timber held at different locations in the property is increasing over time. DNP should evaluate the need for a centralized secure location for housing the seized Siamese Rosewood from the property, perhaps even incorporating timber from other forests. It is not an efficient use of manpower, security and audit trail to have separate sites for storage. The mission was not able to determine if there is a written protocol and guidelines for storage, tracking, and audit of the seized timber. It is time and labour intensive to shift timber out of the facility every 6 months for an audit if this is even done. The mission could not determine if the audit checks each piece of timber, no matter how long it has been in storage or only the more accessible timber within each facility. Each piece of timber is heavy and the task of inspection is not easy.

If there is funding, then a chip-based tracking and traceability of each piece of seized Siamese Rosewood linked to a central database would help to ensure security and ease of audit. Other methods may be used, such as barcoding but this will still entail moving pieces of heavy timber, unless a proper housing of the seized timber can be built. The expertise of a logistics company could be requested to help design and build such a secure facility.

Since Siamese Rosewood is a very high value timber, the elimination of any possibilities of inventory fraud should be given a higher priority by DNP. Since there are presumably other stocks of seized Siamese Rosewood in other parts of the country, a central secured facility for storage, and electronic tracking and traceability, including a centralized database of records would be a more efficient means of monitoring and audit.

Recommendation R3

With the support of law enforcement agencies, create a network for intelligence gathering surrounding the property to help in detection, prevention and suppression of illegal logging of Siamese Rosewood and poaching and illegal trade of other wild flora and fauna species.

Recommendation R4

Create a centralized and secured facility for the storage of seized Siamese Rosewood from the property and possibly from other forests, and assess and adopt the most practical and cost effective technologies to assist in monitoring, inspection and audit of the seized stockpiles.

3.1.3. Measures on conservation and promotion of participation

The mission saw some of the activities related to this measure. Much emphasis appears to be given to the role of each PAC to ensure different sectors are aware of the conservation value of the property, and of Siamese Rosewood in particular; the mission did certainly observe a high level of awareness of these issues among the PAC members it met, including local governments and parts of the private sector (e.g. dairy farming and viticulture). However, the mission cannot determine the effectiveness of programmes to raise awareness and appreciation of the value of the property among the general public, especially the local communities living in its proximity. Participation of communities in the management of the property appears to be restricted to engagement with the PACs, which appear to the mission to be more suited for engagement with the private sector than with local communities. The mission therefore recommends that DNP explores additional avenues to ensure local community engagement and participation in the management of the property, which should not be restricted to the creation of the informant network mentioned above.

The mission wishes to note the efforts undertaken by the IUCN Thailand Country Office working with communities in Cambodia on the conservation of Siamese Rosewood, including plantation of rosewood in areas managed by these communities. The community representatives from Cambodia expressed their great appreciation for this work. The mission considers that in view of the legal limitations on participation from Cambodian communities in the management and protection of the property, this type of engagement led by the IUCN Thailand Country Office and other non-government actors is likely the most appropriate means to ensure participation of these communities in the conservation of Siamese Rosewood as it relates to the property. Nevertheless, additional support from (local and/or national) government authorities both in Thailand and in Cambodia could further increase the effectiveness of awareness raising activities on either side of the border.

Recommendation R5

Ensure local communities are effectively engaged and participating in the management of the property, through better representation of local communities in the Protected Area Advisory Committees or other appropriate means, and through additional support for awareness raising activities on either side of the international border between Thailand and Cambodia.

3.1.4. Measures on promotion of international cooperation

The DNP has been proactive in creating various committees to help solve the problem of illegal logging and international trade of Siamese Rosewood. The State Party has organized two regional dialogues on Siamese Rosewood, and has worked with international NGOs and international agencies such as CITES Secretariat, ITTO, ASEAN-WEN, and invited INTERPOL and UNODC to the dialogues. A third regional dialogue is planned for March 2017 in Bangkok.

Such committees and dialogues appear to have been helpful in exchanging information, enhance networking and communications, raising profile of the issues of illegal logging and illegal international trade of Siamese Rosewood. One challenge continues to be in coordinating with institutions in transit, trading and consuming countries/territories of Siamese Rosewood to help interdict the illegal shipments, and also investigate and prosecute the individuals and agents involved in the illegal transport, processing and consumption of illegal timber. Since all species of the *Dalbergia* genus are now listed in CITES Appendix II, CITES-enabling legislation should now be able to provide the legal basis for all countries to interdict shipments of rosewood without a CITES permit.

Additional challenges are the ability of Customs and other law enforcement agencies personnel to identify rosewood from non-rosewood timber, and the falsification of documents and other frauds. Customs and other law enforcement agencies conduct regular training on such issues and a proactive and regular training continues to be a priority.

Risk profiling and knowledge of the modus operandi of illegal timber trade and smuggling of timber are means of obtaining important information that can be imparted in comprehensive training tools developed by the partners of the International Consortium for Combatting Wildlife Crime (ICCWC), international NGOs, and other stakeholders.

Recommendation R6

Continue to have annual regional dialogues on Siamese Rosewood, bringing together key stakeholders within the State Party, transit and destination countries, as well as international NGOs, international agencies such as the CITES Secretariat, WCO, ITTO, ASEAN-WEN, INTERPOL and UNODC, to obtain other States Parties' cooperation to investigate, enforce and interdict the illegal harvesting and trade of the species along the entire supply chain including how those supply chains are mixed with other species of Rosewood, ebony and Red Sanders to supply intermediary processing and end-use retail markets.

Recommendation R7

Develop identification guides, training tools and manuals for Customs and law enforcement agencies to enhance efforts to interdict illegal cross border movements of Siamese Rosewood.

3.2. Infrastructure developments

While the Committee's request (Decision **40 COM 7B.90**) for a mission was specifically to assess the effectiveness of the implementation of the rosewood Action Plan, the State Party took advantage of the mission to also provide an update on a number of infrastructure developments that have recently been the subject of the Committee's concern and which continue to require the careful attention of the State Party and the Committee. These developments include the on-going expansion of Highway 304, the proposed expansion of Highway 348, and the construction of the Huay Samong Dam which is nearing completion.

3.2.1. On-going expansion of Highway 304

The 2014 mission found that at the time, no expansion work had yet started on the sections of Highway 304 where it runs along the joint boundary between Khao Yai and Thap Lan National Parks, between km 26 – 29 and again between km 42 – 57, pending the approval of the Environmental Impact Assessment (EIA) for the expansion of the highway and the construction of wildlife corridors in those sections. Since then, the EIAs for the expansion and wildlife corridors have been approved, and the Department of Highways (DoH) has commenced the construction work, which is expected to be completed by 2018.

The construction of wildlife corridors will consist of the following elements:

- A. Between km 26 – 29:
 - i. One elevated highway (wildlife underpass) of 600 metres length;
 - ii. Two highway tunnels (wildlife overpasses) of 250 and 180 metres length, respectively;
 - iii. Tunnels for small mammals, reptiles and amphibians;
- B. Between km 42 – 57:
 - i. One elevated highway (wildlife underpass) of 330 metres length;
 - ii. Monkey bridges that will pass underneath the elevated highway.

The elevated highways and tunnels in both sections will include the construction of fences to guide animals to the corridors. In addition, the elevated highways will be provided with sound barriers, to reduce noise disturbance in the forest.

The mission was able to visit both sections of the highway and observed considerable progress being made on the construction of elevated highways. The mission also received a detailed briefing from DoH on the

work accomplished so far and planned until 2018, and was impressed by the commitment demonstrated by DoH to mitigate any impacts on the OUV of the property. An example thereof is the careful documentation of the removal of trees, which is undertaken jointly with DNP and the Royal Forest Department (RFD). Where the removal of restricted (protected) species cannot be avoided, they are relocated to a temporary nursery, and will later be replanted within the corridors, along with other native species and food plants.

Two new ranger stations will be established in the vicinity of the wildlife corridors. This will assist in monitoring and interdicting any wildlife poaching and transport of illegal timber and Siamese Rosewood from the property attempting to use Highway 304. Contrary to concerns raised previously by the Committee (Decision **39 COM 7B.17**), no tourism centres are foreseen in the corridor areas.

During the construction, DoH has put in place sediment traps to avoid contamination of surface water. Surface water quality is being monitored twice per year, which will continue permanently even after construction has been completed. So far, studies undertaken by DoH have not concluded that there is a need to monitor groundwater, but this may be considered in future. A concern was raised during the mission that the highway is used by a large number of trucks every day, including those that carry toxic chemicals and other hazardous materials. The risk of accidents remains high as speed limits are not well respected by road users. Although DoH assured the mission that they are able to respond and clean up any fuel spills within hours following an accident, there does not appear to be any plan in place for responding to emergencies involving spills of other hazardous materials. The mission is of the view that given the risk of accidents involving hazardous materials, there is a need to put in place an emergency response plan which should include measures to avoid and mitigate any pollution of soil, groundwater and surface water in the event of a spill. This should include the establishment of permanent (ground) water monitoring stations at strategic locations downstream of the highway.

It was noted during the mission that existing power lines along the highway will remain at some distance from the highway, and concerns were raised in that regard that these power lines would create an additional barrier for wildlife movement, as animals tend to be reluctant to pass underneath them. The mission considers that such concerns could easily be resolved by attaching power lines onto the bridges and tunnel walls. It is therefore recommended that DoH coordinate with the Provincial Electricity Authority (PEA), which is responsible for electric power transmission, to undertake a feasibility study in that regard.

Recommendation R8

Develop an emergency response plan in order to ensure rapid response to and containment of spills of hazardous materials in case of accidents on Highway 304, including the establishment of permanent (ground) water monitoring stations at strategic locations downstream of the highway.

Recommendation R9

In close coordination between the Department of Highways (DoH) and the Provincial Electricity Authority (PEA), study the feasibility of attaching power lines to the elevated highways and tunnel walls as part of the expansion of Highway 304, in order to avoid any additional barriers to wildlife movement within the wildlife corridors that may be caused by maintaining separate power lines.

3.2.2. Proposed expansion of Highway 348

The 2014 mission noted that there was “ongoing consideration from the DoH of plans to also expand at least one other highway that bi-sects the property – namely Highway 348”. Subsequently, the Committee requested that the State Party urgently confirm the status of discussions on expanding Highway 348 (Decision **38 COM 7B.71**). In 2015, the State Party confirmed that a feasibility study and EIA for the expansion of Highway 348 were being undertaken by DoH, but in 2016, the State Party noted that DNP had not allowed DoH to carry out an EIA for expansion of Highway 348 along km 75 – 79 (the Chong Tago area) where it crosses Ta Phraya National Park. Surveys undertaken by DNP along km 77 – 79 and along km 91 – 96 where Highway 348 runs between separate parts of Dong Yai Wildlife Sanctuary, have shown that both these areas are rich in biodiversity.

It is evident that DoH remains keen to develop Highway 348 (figure 1). DoH informed the mission that the Chong Tago area is a dangerous bottleneck where accidents happen regularly (46 accidents between 2012 and 2016, i.e. an average of seven accidents per year) and which tends to be congested during the holiday season. DoH therefore considers that there is a need to improve safety and mobility for both humans and wildlife, and development of Highway 348 is seen as an opportunity to introduce wildlife corridors. The preliminary design of the development includes wildlife corridors at two locations (figure 2), i.e. at Chong Tago and in the area between the separate components of Dong Yai Wildlife Sanctuary. Further details about these corridors would need to be studied further along with the EIA for the project. DoH emphasized that no field activities will take place in relation to the EIA until DNP grants permission for DoH to access Ta Phraya National Park and Dong Yai Wildlife Sanctuary. At the time of writing this report, the position of DNP to not grant approval for such studies within Ta Phraya National Park remained unchanged.

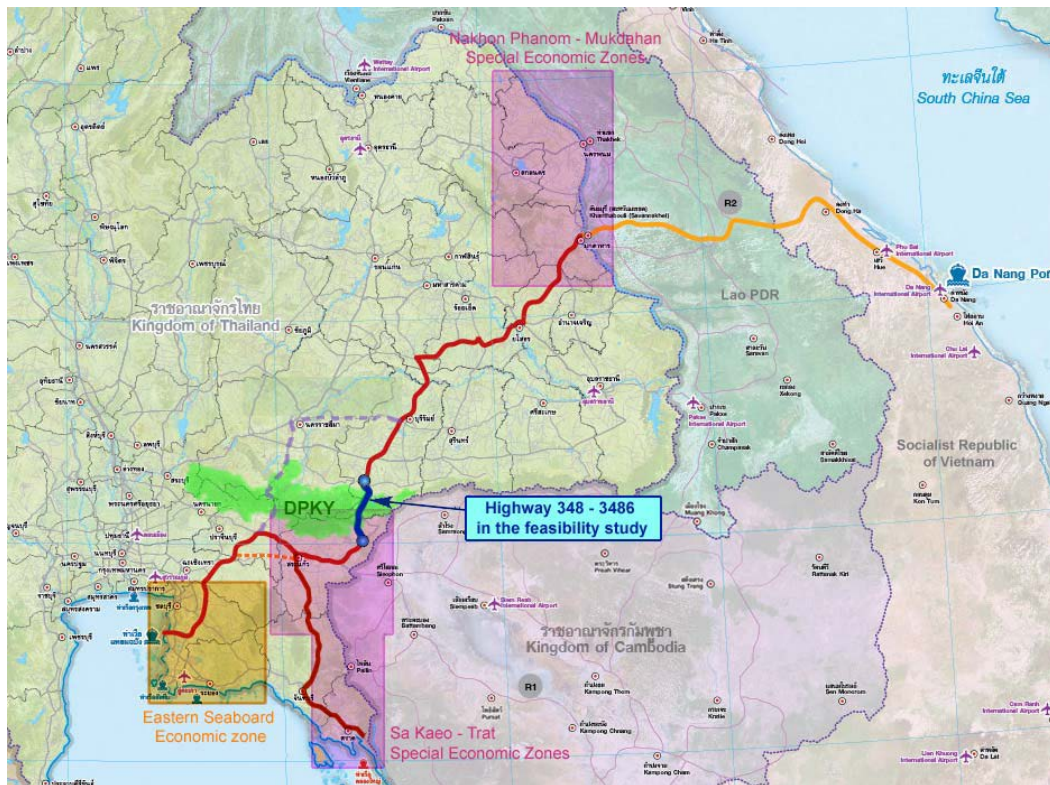


Figure 1 Economic corridor, with Highway 348 (and Highway 3486) highlighted in blue. New Special Economic Zones are highlighted in pink boxes, while the Eastern Seaboard Economic Zone is highlighted in a yellow box. *Source: Department of Highways.*

The mission was able to travel along Highway 348 in both directions. While acknowledging that it is a dangerous road, particularly for traffic traveling downhill from north to south, the mission considers that there is very limited scope for its expansion from two lanes to four lanes, given that it is located in a very narrow valley. Expanding it could therefore have significant negative impacts on ecological connectivity within Ta Phraya National Park (and hence the property), beyond impacts caused by the current situation.

The mission notes that according to the chair of the PAC of Ta Phraya National Park, who is also a high official in the local district government, an expansion of Highway 348 is not necessary for local use. In fact, as figure 1 shows, the development of Highway 348 is part of a larger, international transport corridor linking Da Nang Port in Viet Nam to the Eastern Seaboard Economic Zone of Thailand, passing through Lao PDR. Two new Special Economic Zones (SEZs) within Thailand would also be connected to this corridor, i.e. the Nakhon Phanom – Mukdahan SEZ and the Sa Kaeo – Trat SEZ. It appears that Sa Kaeo – Trat SEZ is likely to benefit most from an expansion of Highway 348. However, as depicted by the grey dashed line (figure 1), developing a connection along Highway 24 to Highway 304 (which is already in the process of expansion) could be an alternative for the economic corridor as a whole, which could still enable Sa Kaeo – Trat SEZ to benefit. This and other options should therefore be studied further by DoH as alternatives to expanding Highway 348.

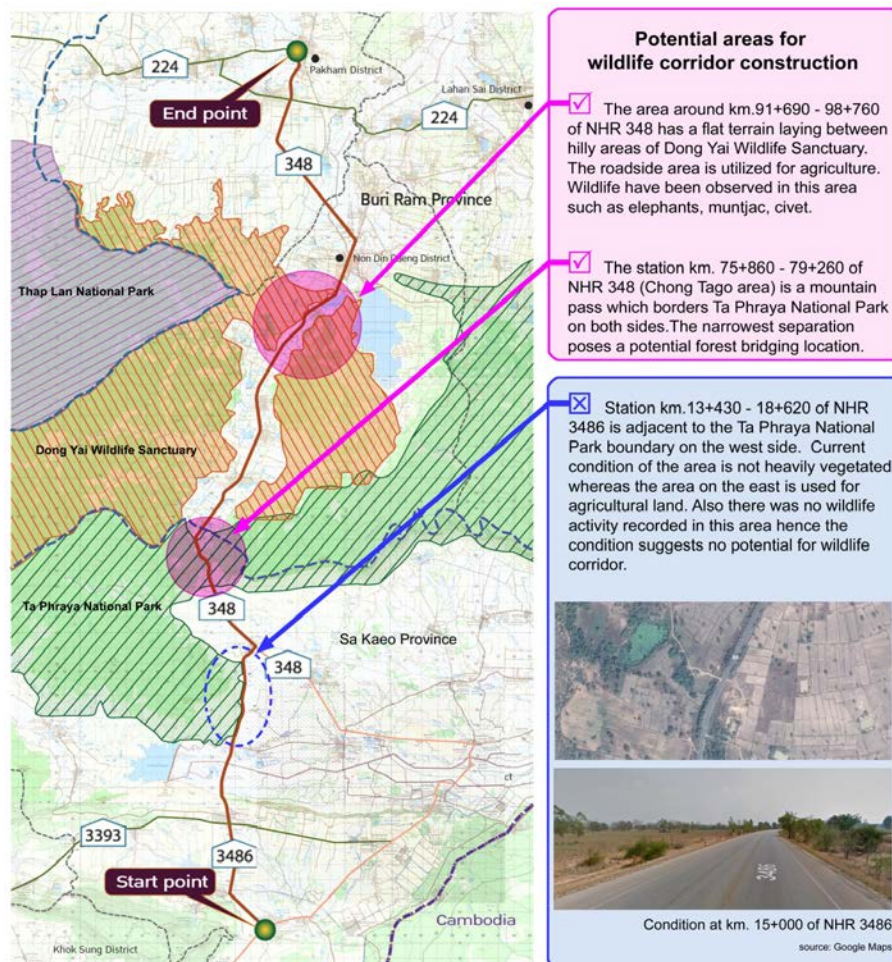


Figure 2 Location of Highway 348 (and Highway 3486) where it crosses the property through Ta Phraya National Park (green) and passes in close proximity to Dong Yai Wildlife Sanctuary (orange). *Source: Department of Highways.*

Recommendation R10

Assess alternatives for the development of Highway 348 as part of the international transport corridor linking the Eastern Seaboard Economic Zone in Thailand to Da Nang Port in Viet Nam, including the option to align the corridor along Highways 24 and 304, in order to identify options with the lowest potential impact on the Outstanding Universal Value of the property.

3.2.3. Huay Samong Dam

The mission met with representatives of the Royal Irrigation Department (RID) and visited the site of the Huay Samong Dam, including by boat on the reservoir, which has been filled to approximately 60 percent of its maximum capacity. The reservoir mostly occupies former agricultural land, but also inundates small parts of the property along the boundaries of Thap Lan and Pang Sida national parks. Previous IUCN reactive monitoring missions noted that these areas are recorded as being important for Siamese crocodile and tiger prey species. Impacts from the filling of the reservoir on the populations of these species are not currently known, however, monitoring undertaken by DNP since 2013 in the inundated area has not recorded any Siamese crocodiles.

As with the efforts undertaken by DoH to mitigate the impacts of the expansion of Highway 304, the mission was impressed with RID's commitment to mitigate any impacts from the construction of the Huay Samong Dam on the OUV of the property.

The filling of the reservoir has resulted in the relocation of one of the ranger posts of Thap Lan National Park. In addition to relocating this ranger post, RID has constructed a total of two new ranger posts around the reservoir, both in Thap Lan and in Pang Sida National Parks. RID has also provided two small patrol boats to enable DNP to patrol the reservoir, supported by the necessary funding for fuel and salaries until 2025, after which year DNP should include this funding in its annual budget.

Other mitigation measures being implemented include the construction of temporary check-dams and weirs to retain water in the forest longer. As noted in previous reports to the Committee, the reservoir will be handed over to DNP in the course of 2017 and will receive national park status, which will give DNP the authority to control access to the reservoir and prevent any illegal activities. This should address concerns raised by previous missions that the reservoir could facilitate access to the property for poachers. On the point of illegal access to the property, it was noted to the mission that since the filling of the reservoir started, there have in fact been fewer occurrences of poachers using this area to enter the forest. The mission considers that this is to be expected during the initial stage of filling the reservoir, but considers that a risk remains that poachers may come to see the reservoir as an opportunity for easy access and facilitated transport of rosewood logs. This issue therefore continues to require particular attention by DNP, in collaboration with RID.

While DNP does not provide permission for any EIA for the Huay Saton Dam inside the property, this dam and two others (Sai-noi Sai-Yai and Lam Prayathan) that could potentially impact on the property continue to feature in RID's development plans for eastern Thailand. Given its location within the property the Huay Saton Dam would be likely to have significant negative impacts on its OUV. The location of the Lam Prayathan project in relation to the property is not entirely clear, but appears to be located within Khao Yai National Park inside the property. Therefore, and in light of the Committee's position adopted at its 40th session (Decision **40 COM 7**) *"that the construction of dams with large reservoirs within the boundaries*

of World Heritage properties is incompatible with their World Heritage status”, it is recommended that the State Party permanently halt any plans for the development of any dams inside the property, including the Huay Saton and the Lam Prayathan projects. As regards the Sai-noi Sai-Yai dam project, the State Party should be reminded of the need to “ensure that the impacts from dams that could affect properties located upstream or downstream within the same river basin are rigorously assessed in order to avoid impacts on [OUV]” (Decision 40 COM 7). Such assessment of impacts should follow the guidance provided

Recommendation R11

Ensure that adequate resources and capacity are available to park rangers to patrol the Huay Samong reservoir and the adjoining forests effectively, in order to prevent the use of the reservoir for access to the property by poachers and for the transportation of timber logged illegally inside the property.

Recommendation R12

Permanently halt any plans for the development of any dams within the boundaries of the property, including the Huay Saton and the Lam Prayathan dam projects, in light of their likely negative impacts on Outstanding Universal Value, and in line with the Committee’s position that the construction of dams with large reservoirs within the boundaries of World Heritage properties is incompatible with their World Heritage status.

Recommendation R13

Ensure that the impacts from the Sai-noi Sai-Yai dam project on the Outstanding Universal Value of the property are rigorously assessed, in accordance with IUCN’s World Heritage Advice Note on Environmental Assessment.

in IUCN’s World Heritage Advice Note on Environmental Assessment³.

3.3. Encroachment and illegal resort development

The mission visited an area along Highway 304 where a community was established inside Thap Lan National Park. From all appearances, this community had been there for a long time already, and it is even connected to the electricity grid. At the edge of this community, an illegal resort has been destroyed and thoroughly removed by DNP. The only evidence that remained of the resort were some paved pathways and decorative garden plants.

While the mission only visited this one example of the removal of an illegal resort and did not discuss the issue of encroachment and illegal resort development in great detail, it is clear that encroachment continues to be a major challenge in parts of the property, and in particular in Thap Lan National Park. The development of resorts (some of which is legal) continues at a steady pace and requires strict regulation. Where (illegal) resort developments occur inside Thap Lan National Park their regulation is often complicated by lack of clarity of land use rights. A legal process is on-going to determine whether communities living inside national parks were already there before the parks were established, in which case they would be considered legal. According to Cabinet Resolution of 30th June 1998, communities are allowed to remain inside the parks for as long as this process is on-going, under the conditions of sustainable use and without the right to expand. Under those conditions, any development of resorts

³ https://www.iucn.org/sites/dev/files/import/downloads/iucn_advice_note_environmental_assessment_18_11_13_iucn_template.pdf

inside Thap Lan National Park (or elsewhere inside the property) is clearly illegal and should be halted. Close collaboration between DNP and local law enforcement (police) is required to ensure a systematic approach.

Overall, the mission considers that the recommendations made by the previous reactive monitoring mission in 2014 in relation to encroachment remain relevant. These are therefore reiterated here.

Recommendation R14

Urgently address the severe threats from the various types of encroachment to the property and its Outstanding Universal Value, including by:

- a) undertaking, as a priority, the detailed mapping exercise as recommended by the 2012 monitoring mission and in previous Committee Decisions, including an assessment of location and magnitude of encroachment (differentiating between agriculture, settlements and resort development), as well as the evolution of land use since the inscription of the property, using satellite imagery analysis;
- b) developing a long-term anti-encroachment plan that adequately addresses the situation, including close long-term monitoring of encroachment in all the protected areas constituting the property;
- c) continuing, strengthening and concentrating efforts to engage local people in the process, to ensure awareness of the boundaries of the property and garner support for its conservation, as well as an understanding of the legal basis for current efforts and enforcement decisions;
- d) closely monitoring the level and type of land use and encroachment and develop a detailed plan for zoning of the property to improve management of impacts from areas within the boundaries of the property currently inhabited and under investigation in regards to land tenure;

4. ASSESSMENT OF THE STATE OF CONSERVATION OF THE PROPERTY

4.1. Outstanding Universal Value

Although the mission was not presented with detailed wildlife monitoring data and population trends, both DNP and Freeland Foundation commented that many wildlife populations, including Elephant and Gaur are very healthy and indeed increasing. Camera trapping efforts by both organisations have furthermore obtained positive results for some other species, which appear to be faring better than previously thought.

There remains concern about the status of some species, including the Critically Endangered Siamese crocodile, which may be impacted by flooding from the Huay Samong reservoir. These impacts are as of yet unknown. As for Siamese Rosewood, it continues to be under severe pressure from illegal logging and international trade. While old stands remain, they are under significant threat and continue to require constant monitoring. The major concern with the continued threat from illegal logging is that poachers may also target other valuable species, including *Aquilaria* spp (agarwood), slow loris, pangolins, tiger and its prey species. It is therefore of crucial importance that the commendable efforts undertaken by the State Party to protect Siamese Rosewood do not distract from the need to also protect these other species, but instead enhance their conservation.

On the basis of its brief visit, the mission considers that the OUV of the property continues to be well maintained. That said, a number of issues in addition to those discussed in this report should be noted. These include:

- The proliferation of **invasive species**. The mission observed large amounts of *Lantana camara* in all areas visited, and in particular in the grasslands of Khao Yai National Park. The mission was informed that other invasive plants are also problematic. While these species are difficult to eradicate, the mission recommends increased efforts to ensure that adequate grassland habitats are maintained throughout the property;
- With the growing populations of Elephant and Gaur in particular, also comes a growing problem of **human-wildlife conflict**. The mission was informed that both Elephant and Gaur regularly cause crop damage. Retaliation killings, especially of Gaur, are known to occur. The mission recommends that efforts to manage human-wildlife conflict are increased, including by increasing the participation of local communities in the management of the property, and by ensuring adequate compensation to affected families. The establishment of communal fields could be a useful model to enable affected farmers to be compensated for crop damage, and deserves to be considered as an option.

5. CONCLUSIONS AND RECOMMENDATIONS

The OUV of the property remains in an overall good condition, and the mission notes that the State Party has demonstrated a significant commitment to the conservation of the property and its OUV. Both DoH and RID have shown a strong commitment to consider environmental issues in the development of Highway 304 and the Huay Samong Dam respectively, and the implementation of measures to mitigate impacts from these developments is on-going. Other proposed development projects, such as the expansion of Highway 348 and the construction of the Huay Saton, Sai-Noi Sai-Yai and Lam Prayathan dams are likely to have cumulative impacts on the OUV of the property and should be carefully

reconsidered in line with the recommendations provided in this report and compiled below. Of these, the proposed Huay Saton dam, being located inside the property, is clearly not in line with the Committee's position "[...] *that the construction of dams with large reservoirs within the boundaries of World Heritage properties is incompatible with their World Heritage status [...]*" (Decision **40 COM 7**), and plans for its construction should be permanently cancelled. The same applies to the Lam Prayathan dam project, if it is confirmed that this project is located within the property in Khao Yai National Park.

Encroachment continues to be a major challenge for the property, in particular in Thap Lan National Park, and the State Party should step up its efforts to implement the recommendations made in that regard by previous missions and Committee decisions.

The mission emphasizes that Siamese Rosewood continues to be under severe pressure from illegal logging. Furthermore, there is a concern that other valuable species, including tiger, may in future be targeted by poachers.

The mission recalls the Committee's decision (**34 COM 7B.2**) to include the Rainforests of the Atsinanana (Madagascar) in the List of World Heritage in Danger in view of the danger posed to its OUV by illegal logging of rosewood and ebony and hunting of endangered lemurs. In that case, the Committee noted that in spite of a decree banning the exploitation and export of rosewood and ebony, export permits continued to be provided for illegally logged timber, and at the time "*no credible measures [were] in place to enforce the ban on logging or the export of illegally logged timber*". While the danger posed to OUV by illegal logging is of a similar nature in the case of Dong Phrayayen-Khao Yai Forest Complex the State Party of Thailand has made significant efforts to combat and prevent illegal logging of Siamese Rosewood in the property, which will need to be maintained and possibly further enhanced.

The mission notes that according to the *Operational Guidelines* the Committee may decide to inscribe a property on the List of World Heritage in Danger if it "*is faced with specific and proven imminent danger, such as [...] a serious decline in the population of the endangered species or the other species of Outstanding Universal Value for which the property was legally established to protect, either by natural factors such as disease or by human-made factors such as poaching [...]*" (Paragraph 180). The mission considers that in the case of Dong Phrayayen-Khao Yai Forest Complex this condition is met, due to the significant threat from illegal logging of Siamese Rosewood. However, according to Article 11, paragraph 4 of the World Heritage Convention, the List of World Heritage in Danger includes those properties "*[...] for the conservation of which major operations are necessary [...]*". While such major operations are certainly necessary for the conservation of Dong Phrayayen-Khao Yai Forest Complex, the mission notes that these are indeed already underway. It is therefore questionable at this stage that the inclusion of the property in the List of World Heritage in Danger would trigger additional efforts that could sway the balance towards eradicating illegal logging from the property.

The mission is nevertheless of the view that international collaboration to address the illegal trade in Siamese Rosewood should be further increased. Both the inclusion of all rosewood species in CITES Appendix II and the amendment to the inclusion of Siamese Rosewood in CITES Appendix II by replacing Annotation 5 by Annotation 4 to include all Siamese Rosewood products, should further facilitate regulation of trade by all countries concerned. The upcoming Rosewood Dialogue III, which is scheduled to take place in Bangkok in March 2017, is an important opportunity to discuss strategies for collaboration with the other States Parties concerned (i.e. Cambodia, China, Lao PDR and Viet Nam) as well as with regional and international law enforcement agencies (ICCWC partners, in particular INTERPOL, WCO and

UNODC, as well as ASEAN-WEN and the ASEAN Senior Officials Meeting on Transnational Crime [SOMTC], which has identified wildlife and forest crime as a priority). The mission particularly considers that there is a need to increase international law enforcement. It was noted that when illegal loggers from Cambodia who are arrested in Thailand are extradited to Cambodia, there is no further prosecution, and they are often found to return to the property to log rosewood.

In conclusion, considering the overall good state of conservation of the property as demonstrated by healthy and growing populations of a number of key wildlife species, and provided that the State Party continues its current efforts to combat illegal logging and further increases international collaboration to stop illegal trade in Siamese rosewood, in particular through enhanced law enforcement and prosecution of cases, the mission considers that the inclusion of the property on the List of World Heritage in Danger is not recommended at this stage. The State Party should nevertheless continue to report to the Committee on the state of conservation of the property on a yearly basis in order to enable the Committee to continue to closely monitor the evolution of this issue. If in three years' time (at the 44th session of the Committee, following expiration of the Action Plan in 2019) an improvement in the situation cannot be convincingly demonstrated, or if at any time there is evidence that illegal extraction of Siamese Rosewood deteriorates further or starts to target other valuable species, the Committee should reconsider whether immediate inclusion of the property on the List of World Heritage in Danger is warranted.

Furthermore, the mission recommends that the State Party:

- R1** Redefine the indicators of the Action Plan on Curbing Illegal Logging and Trade of Siamese Rosewood in Dong Phrayayen-Khao Yai Forest Complex 2014-2019, ensuring that they are SMART (Specific, Measurable, Achievable, Relevant and Time-bound), and identify for each indicator adequate means of verification to enable DNP to accurately measure the effectiveness of the implementation of the Action Plan and the achievement of set targets;
- R2** Develop a centralized system based on the use of analytical software tools that enables the collation and analysis of country-wide data on illegal logging and trade of Siamese Rosewood, to be managed by an assigned law enforcement agency in close coordination with the Department of National Parks, in order to enhance understanding and communication of the status of investigations, and to direct and manage the process of interdicting illegal financial flows and investigate and detain individuals involved in the illegal harvest and trade of the wildlife resources of the property;
- R3** With the support of law enforcement agencies, create a network for intelligence gathering surrounding the property to help in detection, prevention and suppression of illegal logging of Siamese Rosewood and poaching and illegal trade of other wild flora and fauna species;
- R4** Create a centralized and secured facility for the storage of seized Siamese Rosewood from the property and possibly from other forests, and assess and adopt the most practical and cost effective technologies to assist in monitoring, inspection and audit of the seized stockpiles;
- R5** Ensure local communities are effectively engaged and participating in the management of the property, through better representation of local communities in the Protected Area Advisory Committees or other appropriate means, and through additional support for awareness raising activities on either side of the international border between Thailand and Cambodia;

- R6** Continue to have annual regional dialogues on Siamese Rosewood, bringing together key stakeholders within the State Party, transit and destination countries, as well as international NGOs, international agencies such as the CITES Secretariat, WCO, ITTO, ASEAN-WEN, INTERPOL and UNODC, to obtain other States Parties' cooperation to investigate, enforce and interdict the illegal harvesting and trade of the species along the entire supply chain including how those supply chains are mixed with other species of Rosewood, ebony and Red Sanders to supply intermediary processing and end-use retail markets;
- R7** Develop identification guides, training tools and manuals for Customs and law enforcement agencies to enhance efforts to interdict illegal cross border movements of Siamese Rosewood;
- R8** Develop an emergency response plan in order to ensure rapid response to and containment of spills of hazardous materials in case of accidents on Highway 304, including the establishment of permanent (ground) water monitoring stations at strategic locations downstream of the highway;
- R9** In close coordination between the Department of Highways (DoH) and the Provincial Electricity Authority (PEA), study the feasibility of attaching power lines to the elevated highways and tunnel walls as part of the expansion of Highway 304, in order to avoid any additional barriers to wildlife movement within the wildlife corridors that may be caused by maintaining separate power lines;
- R10** Assess alternatives for the development of Highway 348 as part of the international transport corridor linking the Eastern Seaboard Economic Zone in Thailand to Da Nang Port in Viet Nam, including the option to align the corridor along Highways 24 and 304, in order to identify options with the lowest potential impact on the Outstanding Universal Value of the property;
- R11** Ensure that adequate resources and capacity are available to park rangers to patrol the Huay Samong reservoir and the adjoining forests effectively, in order to prevent the use of the reservoir for access to the property by poachers and for the transportation of timber logged illegally inside the property;
- R12** Permanently halt any plans for the development of any dams within the boundaries of the property, including the Huay Saton and the Lam Prayathan dam projects, in light of their likely negative impacts on Outstanding Universal Value, and in line with the Committee's position that the construction of dams with large reservoirs within the boundaries of World Heritage properties is incompatible with their World Heritage status;
- R13** Ensure that the impacts from the Sai-noi Sai-Yai dam project on the Outstanding Universal Value of the property are rigorously assessed, in accordance with IUCN's World Heritage Advice Note on Environmental Assessment;

Finally, the mission reiterates the recommendation made by the 2014 IUCN reactive monitoring mission in relation to encroachment, the implementation of which remains pending:

- R14** Urgently address the severe threats from the various types of encroachment to the property and its Outstanding Universal Value, including by:
 - a) undertaking, as a priority, the detailed mapping exercise as recommended by the 2012 monitoring mission and in previous Committee Decisions, including an assessment of location and magnitude of encroachment (differentiating between agriculture, settlements and resort

development), as well as the evolution of land use since the inscription of the property, using satellite imagery analysis;

b) developing a long-term anti-encroachment plan that adequately addresses the situation, including close long-term monitoring of encroachment in all the protected areas constituting the property;

c) continuing, strengthening and concentrating efforts to engage local people in the process, to ensure awareness of the boundaries of the property and garner support for its conservation, as well as an understanding of the legal basis for current efforts and enforcement decisions;

d) closely monitoring the level and type of land use and encroachment and develop a detailed plan for zoning of the property to improve management of impacts from areas within the boundaries of the property currently inhabited and under investigation in regards to land tenure.

ANNEXES

Annex I – Terms of Reference

IUCN Reactive Monitoring Mission Dong Phayayen-Khao Yai Forest Complex (Thailand)

13-19 December 2016

At its 40th session, the World Heritage Committee requested the State Party of Thailand to invite a reactive monitoring mission to Dong Phayayen-Khao Yai Forest Complex World Heritage property, to be conducted by IUCN (Decision **40 COM 7B.90**, Annex 1). The objective of the monitoring mission is to monitor and evaluate effective implementation of the Action Plan on Curbing Illegal Logging and Trade of Siamese Rosewood in Dong Phayayen-Khao Yai Forest Complex 2014-2019, and to provide recommendations to the State Party and the World Heritage Committee to further enhance the protection of the property against illegal logging. The mission will be led by Mr. Chen Hin Keong and Mr. Remco van Merm, representing IUCN.

In particular, the mission should undertake the following:

1. Assess whether the implementation of the Action Plan on Curbing Illegal Logging and Trade of Siamese Rosewood in Dong Phayayen-Khao Yai Forest Complex 2014-2019 is achieving its stated objectives and desired outcomes;
2. Assess the current state of conservation of the property, in particular in relation to impacts from illegal logging (primarily of Siamese Rosewood), including an assessment of relevant aspects of park management, such as funding, patrolling capacity, and effectiveness of law enforcement;
3. On the basis of the above assessments, make a recommendation to the World Heritage Committee with regards to a possible inscription of the property on the List of World Heritage in Danger;
4. In line with paragraph 173 of the *Operational Guidelines*, assess any other relevant conservation issues that may negatively impact on the Outstanding Universal Value of the property, including the conditions of integrity and protection and management.

The State Party should facilitate necessary field visits to key locations, including border control posts. In order to enable preparation for the mission, it would be appreciated if the following items could be provided to the World Heritage Centre (copied to IUCN) as soon as possible and preferably no later than 1 month prior to the mission:

- a) The Action Plan on Curbing Illegal Logging and Trade of Siamese Rosewood in Dong Phayayen-Khao Yai Forest Complex 2014-2019, as well as any associated yearly action plans;
- b) Reports of the monitoring and surveillance of the property, including time series figures (2013-2016) on:
 - a. Patrolling capacity (financial, human and material resources),

- b. Patrolling coverage (area covered, time spent in the field),
 - c. Seizures of illegal products of Siamese Rosewood (any type),
 - d. Number of arrests and convictions made,
 - e. Any evidence of illegal use of other wild species of flora and fauna;
- c) The management plan for the property.

The mission should also hold consultations with the Thai authorities at national, provincial and municipal levels, in particular the Ministry of Natural Resources and Environment, the Ministry of Foreign Affairs, the Royal Thai Police, the Ministry of Transport, and the Thai Customs Department. In addition, the mission should hold consultation with a range of relevant stakeholders, including i) park rangers; ii) NGOs, including the Freeland Foundation; iii) the IUCN Thailand Country Office and the IUCN Asia Regional Office; and iv) representatives of local communities.

Based on the results of the above-mentioned assessments and discussions with the State Party representatives and stakeholders, the mission will develop recommendations to the Government of Thailand and the World Heritage Committee with the objective of providing guidance to the State Party for actions to be taken to address identified threats to the property, and to improve the conservation of its Outstanding Universal Value. It should be noted that recommendations will be provided within the mission report (see below), and not during the mission implementation.

The mission will prepare a concise report on the findings and recommendations within six weeks following the site visit, following the World Heritage Centre reactive monitoring mission report format (Annex 2).

Decision: 40 COM 7B.90

The World Heritage Committee,

1. Having examined Document WHC/16/40.COM/7B,
2. Recalling Decision **39 COM 7B.17**, adopted at its 39th session (Bonn, 2015),
3. Commends the State Party for the significant efforts taken to address the threat from illegal logging of Siamese Rosewood, and welcomes the international collaboration, including coordinated patrols with the State Party of Cambodia, to prevent and suppress illegal trade in Siamese Rosewood;
4. Notes that illegal logging is still a serious concern as a result of the increasing market value of Siamese Rosewood and therefore, requests the State Party to provide updated statistics on illegal logging of Siamese Rosewood for fiscal years 2014-2016 as well as outcomes from the implementation of the Action Plan to Prevent and Suppress Illegal Logging of Siamese Rosewood in the Dong Phrayayen-Khao Yai Forest Complex (DPKYFC);
5. Urges the States Parties of Thailand, Cambodia, China, Lao People's Democratic Republic and Viet Nam to further strengthen their collaboration to combat illegal logging at the source, reduce demand at its destination, and intercept shipments of illegally logged Rosewood during transit;
6. Also requests the State Party to undertake further investigations to determine the extent to which poaching, associated or not with illegal logging, is a threat to the property's OUV;
7. Notes with appreciation the efforts undertaken by the State Party to address encroachment and the construction of illegal resorts, and further requests the State Party to ensure that the process of clarifying land rights in forest areas is undertaken in a fully transparent manner and with full participation of the concerned local communities;
8. Also notes that Environmental Impact Assessments (EIAs) for the Huay Satone Dam and the expansion of Highway 348, both within the property, have not been allowed, and requests furthermore the State Party to confirm unambiguously and in writing that these projects will not be permitted to proceed;
9. Requests moreover the State Party to invite an IUCN Reactive Monitoring mission to monitor and evaluate effective implementation of the Action Plan on Curbing Illegal Logging and Trade of Siamese Rosewood in Dong Phrayayen-Khao Yai Forest Complex 2014-2019;
10. Requests in addition the State Party to provide an electronic and three printed copies of the draft Strategic Plan on Tourism in World Natural Heritage for review by the World Heritage Centre and IUCN;
11. Finally requests the State Party to submit to the World Heritage Centre, by **1 February 2017**, an updated report on the state of conservation of the property and the implementation of the above, for examination by the World Heritage Committee at its 41st session in 2017, **with a view to considering, in light of assessment of the Reactive Monitoring mission, possible inscription of the property on the List of World Heritage in Danger.**

Annex II – Mission itinerary and programme



**Tentative Programme for
Reactive Monitoring Mission (RMM) to evaluate implementation of Action plan on prevention
and suppression of illegal logging and trade**

**of Siamese Rosewood in Dong Phrayayen - Khao Yai Forest Complex (DPKYFC) 12 – 19 December
2016**

Date	Activities	Remark
Monday 12 December 2016		
	RMM arrive Thailand Mr. Remcovan Merm LX180 at 10.30 am Mr. Chen Hin Keong MH774 at 5.40 pm	1 van
	Pick-up RMM at Suwannabhumi Airport	
	Travel and check-in to the Hotel	Century Park
	Dinner at the restaurant nearby the Hotel	Hotel
Tuesday 13 December 2016		
Morning	Breakfast at the Hotel	
	Check-out and travel to the Office of Natural Resources and Environmental Policy and Planning (ONEP)	1 van Venue: ONEP
	Start at 9.30 am 1. Meeting with representatives of relevant Thai agencies, international organizations, and NGOs 2. Presentation and discussion on following topics: - State of Conservation of DPKYFC - Action plan on prevention and suppression of illegal logging and trade of Siamese Rosewood in DPKYFC - Question & Answer 3. Briefing information of RMM field visit to DPKYFC	Agencies: ONEP, DNP, MFA
	Lunch at the restaurant nearby ONEP	

Afternoon	Travel to Khao Yai National Park (KYNP), Pak Chong District, Nakorn Ratchasima Province (170km/2.5hr)	2 vans
	Check-in to the Hotel	Balios Resort
	Dinner at the Hotel	
Wednesday 14 December 2016		
Morning	Breakfast at the Hotel	
Date	Activities	Remark
	Check-out	2 vans
	Visit restoration area with <i>Dalbergia spp.</i> planting in KYNP	
	Travel to KYNP Headquarters (40km/1hr)	
	1. Meeting with representatives of KYNP, relevant local agencies, NGOs 2. Presentation and discussion on following topics: - Implementations of Action plan on prevention and suppression of illegal logging and trade of Siamese Rosewood in KYNP - Implementations of SMART Patrol in KYNP - Capacity Building on Rapid Response Unit namely "Hadsadin"	- Auditorium of KYNP - DNP Training Center 2 (KY)
	Lunch at the canteen of KYNP	
Afternoon	Travel to KYNP Sub-station 10 (Prachantakham) (40km/1hr)	
	Short walk to visit natural habitat site of Siamese Rosewood in KYNP	
	Travel to Thap Lan National Park (TLNP) (60km/1hr)	
	Check-into Verona Hotel nearby TLNP	Verona Hotel
	Dinner at the restaurant of the Hotel	Blackwood
Thursday 15 December 2016		
Morning	Breakfast at the Hotel	Blackwood
	Travel to TLNP Headquarters (opposite the Hotel)	TLNP HQ
	1. Meeting with representatives of TLNP 2. Presentation and discussion on following topics: - Implementations of Action plan on prevention and suppression of illegal logging and trade of Siamese Rosewood in TLNP - Implementations of SMART Patrol in TLNP 3. Briefing information on flying route to temporary operation base in TLNP (Lam Prang)	
	Travel to temporary operation base in TLNP (Lam Prang)	2 Helicopters

	Hiking to visit natural habitat of Siamese Rosewood in TLNP	
	Lunch in the forest	Lunch box
Afternoon	Hiking to visit natural habitat of Siamese Rosewood in TLNP	
	Return to TLNP HQ	2 Helicopters
	Return to the Hotel	Verona Hotel
	Dinner at the restaurant of the Hotel	Blackwood
Date	Activities	Remark
Friday 16 December 2016		
Morning	Breakfast at the Hotel	Blackwood
	Check-out from the Hotel and travel to restoration areas (30 min)	2 vans
	Visit forest restoration areas after encroachment cases ended in TLNP	
	Visit Highway 304 Construction Project to evaluate progress of wildlife corridors construction and implementations under mitigation plan	
	Lunch at Highway 304 Construction Project	
Afternoon	Visit Hui Samong Dam Construction Project to evaluate implementations under mitigation plan Travel by speed boat to visit new ranger station of TLNP Travel to PSNP to visit new ranger station nearby Hui Samong Dam Project	
	Travel to Arunyaprathet District, Sakaeo Province (3hr)	
	Check-in to the Hotel in Arunyaprathet District	Velo's Hotel
	Dinner at the hotel	
Saturday 17 December 2016		
Morning	Breakfast at the Hotel	
	Travel to Ta Phraya National Park Headquarters (TPNP) (1hr)	2 vans

	<p>1. Meeting with representatives of TPNP, relevant local agencies, NGOs</p> <p>2. Presentation and discussion on following topics:</p> <ul style="list-style-type: none"> - Implementations of Action plan on prevention and suppression of illegal logging and trade of Siamese Rosewood in TPNP - Implementations of SMART Patrol in TPNP - Integrated implementation of local government agencies to prevent and suppress of illegal logging and trade of Siamese Rosewood in DPKYFC - Question & Answer 	TPNP HQ
	Lunch at TPNP	
Afternoon	Travel to border check-point between Thailand and Cambodia (30km/30min)	
	Go along the border between Thailand and Cambodia	
Date	Activities	Remark
	Travel to the Hotel in Arunyaprathet District	Velo's Hotel
	Dinner	
Sunday 18 December 2016		
Morning	Breakfast at the Hotel	
	Check-out from the Hotel and travel to Bangkok	2 vans
	Lunch	
Afternoon	Check-in to the Hotel in Bangkok	Century Park Hotel
	Meeting and discussion to summarize information and preparation for debriefing meeting on 19/12	
	Dinner	
Monday 19 December 2016		
Morning	Breakfast at the Hotel	
	Check-out from the Hotel	
	Go to the Office of Natural Resources and Environmental Policy and Planning (ONEP)	

	<p>Start at 9.30 am</p> <ul style="list-style-type: none"> - Meeting with representatives of relevant Thai agencies, international organizations, and NGOs <p>Discussion on:</p> <ol style="list-style-type: none"> 1) Wrap-up of RMM field visit and discussion on following topics: 2) Opportunities and challenges in implementation of the Action plan 3) Next steps of the Action plan on prevention and suppression of illegal logging and trade of Siamese Rosewood in DPKYFC 4) Question & Answer <ul style="list-style-type: none"> - Conclusion of the mission 	<p>Venue: DNP</p> <p>Agencies: ONEP, DNP, OIC, MFA, Police, Military, AMLO, NACC, Customs, FAO, IUCN, Freeland, WCS, WWF</p>
	Lunch	
Afternoon	travel to Suwannabhumi Airport	1 van
	<p>RMM return to their countries</p> <p>Mr. Chen Hin Keong MH789 at 2.15 pm</p>	

as of 7 December 2016

**IUCN Reactive Monitoring Mission
Dong Phayayen - Khao yai Forest Complex (Thailand) 12th -
19 th December 2016**

No	Name - Surname	Organization
1	Mr. Remco van Merm	IUCN Headquarters, World Heritage Programme Rue Mauverney 28 1196 Gland Switzerland
2	Mr. Chen Hin Keong	TRAFFIC 3-2 , 1st Floor Jazan ss 23/11 Tamansea, 47450 Petacing Jaya Selangor Malaysia
3	Mr. Sihasak Phuangketkeow	Ambassador of Thailand in Paris, Ambassade Royale of Thailand in France 8, rue Greuze 75116 Paris
4	Mr. Tweekiat Janeprajak	Department of International Organizations Ministry of Foreign Affairs, Sri Ayudhya Road, Bangkok 10400
5	Mrs. Indhira Euamonlachat	Office of Natural Resources and Environmental Policy and Planning (ONEP) 60/1 Soi Phibul Wattana 7 Rama 6 Rd., Samsennai Phayathai Bangkok 10400 Thailand

6	Miss Korraphin Phayakprakarn	Office of Natural Resources and Environmental Policy and Planning (ONEP) 60/1 Soi Phibul Wattana 7 Rama 6 Rd., Samsennai Phayathai Bangkok 10401 Thailand
7	Mrs. Sawanit Theimtinkrit	Office of Natural Resources and Environmental Policy and Planning (ONEP) 60/1 Soi Phibul Wattana 7 Rama 6 Rd., Samsennai Phayathai Bangkok 10402 Thailand
8	Ms. Sirilak Chanpho	Office of Natural Resources and Environmental Policy and Planning (ONEP) 60/1 Soi Phibul Wattana 7 Rama 6 Rd., Samsennai Phayathai Bangkok 10403 Thailand
9	Ms. Tippawan Raksangob	Office of Natural Resources and Environmental Policy and Planning (ONEP) 60/1 Soi Phibul Wattana 7 Rama 6 Rd., Samsennai Phayathai Bangkok 10404 Thailand
10	Mr. Thanaroj Photisaro	Protected Area Regional Office 1 (Prachinburi) 498/1 Na mueang road, Na mueang Sub district, Mueang district, Prachinburi province 25000 Thailand
11	Mr. Thagorn Lomsataporn	Protected Area Regional Office 7 (Nakhon Ratchasima) 1393 Chomsurangyat road, Nai Muang sub district, Muang

		district, Nakhon Ratchasima province 30000 Thailand
12	Mr. Prasert Sornsathapornkul	Natural World Heritage Office 61 Phaholyothin Road, Chatuchak, Bangkok 10900, Thailand
13	Mr. Wichai Pornleesangsuvan	Natural World Heritage Coordination Centre of Dong Phayayen-Khao Yai Forest Complex, Protected Area Regional Office 1 (Prachinburi) 498/1 Na mueang road, Na mueang Sub district, Mueang district, Prachinburi province 25000 Thailand
14	Mr. Kanchit Srinoppawan	Superintendent, Khao Yai National Park PO Box 9, Musi sub district, Pak Chong district, Nakorn Ratchasima province 30130 Thailand
15	Mr. Prawatsart Chanthep	Superintendent, Thap Lan National Park 520 Moo 1 highway no.304 Kabinburi-Pakthongchai, Buphram sub district, Nadi district, Prachinburi province 25220 Thailand

16	Mr. Tassanet Phetkong	Superintendent, Pang Sida National Park PO Box. 55 Thayaek subdistrict, Mueang sakaeo district, Sakaeo province 27001 Thailand
17	Mr. Phanadchakorn Phobundit	Superintendent, Pang Sida National Park PO Box. 55 Thayaek subdistrict, Mueang sakaeo district, Sakaeo province 27001 Thailand
18	Mr. Booncherd Charoensuk	Superintendent, Ta Phraya National Park PO Box. 20 Ta phraya, Ta phraya district, Sakaeo province 27001 Thailand
19	Mr. Somsuan Raksat	Superintendent, Dong Yai Wildlife Sanctuary Non dindang sub district, Non dindang district, Burirum 31260 Thailand
20	Mr. Praphatpong Sukhuprakarn	Thap Lan National Park 520 Moo 1 highway no.304 Kabinburi-Pakthongchai, Buphram sub district, Nadi district, Prachinburi province 25220 Thailand
21	Mr. Seksan Tiangphlab	Thap Lan National Park 520 Moo 1 highway no.304 Kabinburi-Pakthongchai, Buphram sub district, Nadi district, Prachinburi province 25220 Thailand

22	Mr. Kasidis Chanpradab	Thap Lan National Park 520 Moo 1 highway no.304 Kabinburi-Pakthongchai, Buphram sub district, Nadi district, Prachinburi province 25220 Thailand
23	Mr. Kriengkrai Phothingam	Thap Lan National Park 520 Moo 1 highway no.304 Kabinburi-Pakthongchai, Buphram sub district, Nadi district, Prachinburi province 25220 Thailand
24	Mr. Suphol Khamsano	Khao Yai National Park PO Box 9, Musi sub district, Pak Chong district, Nakorn Ratchasima province 30130 Thailand
25	Pol.Cpl. Kunlabon Phollawan	Khao Yai National Park PO Box 9, Musi sub district, Pak Chong district, Nakorn Ratchasima province 30130 Thailand
26	Mr. Pattaraphon Soonhua	Ta Phraya National Park PO Box. 20 Ta phraya, Ta phraya district, Sakaeo province 27001 Thailand
27	Mr. Rangsan Petra	Dong Yai Wildlife Sanctuary Non dindang sub district, Non dindang district, Burirum 31260 Thailand

28	Mr. Khomsan Maneekarn	Pang Sida National Park PO Box. 55 Thayaek subdistrict, Mueang sakaeo district, Sakaeo province 27001 Thailand
29	Mrs. Sunee Sukseau	Natural World Heritage Office 61 Phaholyothin Road, Chatuchak, Bangkok 10900, Thailand
30	Mr. Payak Maneeanakekul	Natural World Heritage Office 61 Phaholyothin Road, Chatuchak, Bangkok 10900, Thailand
31	Ms. Wichitra Poojomdao	World natural heritage office 61 Phaholyothin Road, Chatuchak, Bangkok 10900, Thailand
32	Ms. Chunyaphuk Thanachart-akarakun	World natural heritage office 61 Phaholyothin Road, Chatuchak, Bangkok 10900, Thailand
33	Ms. Wipawee wannasatid	Natural World Heritage Office 61 Phaholyothin Road, Chatuchak, Bangkok 10900, Thailand
34	Dr. Scott Perkin	IUCN Asia Regional Office 63 Sukhumvit 39 Soi Phrompong, Sukhumvit Road, Wattana, Klongton-Nua, Bangkok, Thailand 10111
35	Dr. Chamniern Vorratchaiphon	Country Representative, IUCN Thailand 63 Sukhumvit 39 Soi Phrompong, Sukhumvit Road, Wattana, Bangkok, Thailand

		10111
36	Mr. Kamol Faengbubpha	Wildlife Conservation Society 55/295 Muang Thong Thani Project 5 Soi 3, Chaengwattana Road, Pak Kret, Nonthaburi 11120
37	Mr. Tim Redford	Freeland Foundation 518/5 Maneeya Center Building, 8th Floor Ploenchit Road, Lumpini, Pathumwan, Bangkok 10330
38	Mr. Cao Zhouhua	The Embassy of the People's Republic of China in the Kingdom of Thailand 57 Ratchaddaphisek Road, Bangkok 10401
39	Dr. Rungnapar Pattanavibool	Office of International Cooperation, Ministry of Natural Resources and Environment (MNRE) 92 Soi Phahol Yothin 7, Phahol Yothin Road, Sam San Nai, Phayathai, Bangkok 10400
40	Mrs. Wacharee Chuaisri	Office of International Cooperation, Ministry of Natural Resources and Environment (MNRE) 92 Soi Phahol Yothin 7, Phahol Yothin Road, Sam San Nai, Phayathai, Bangkok 10400

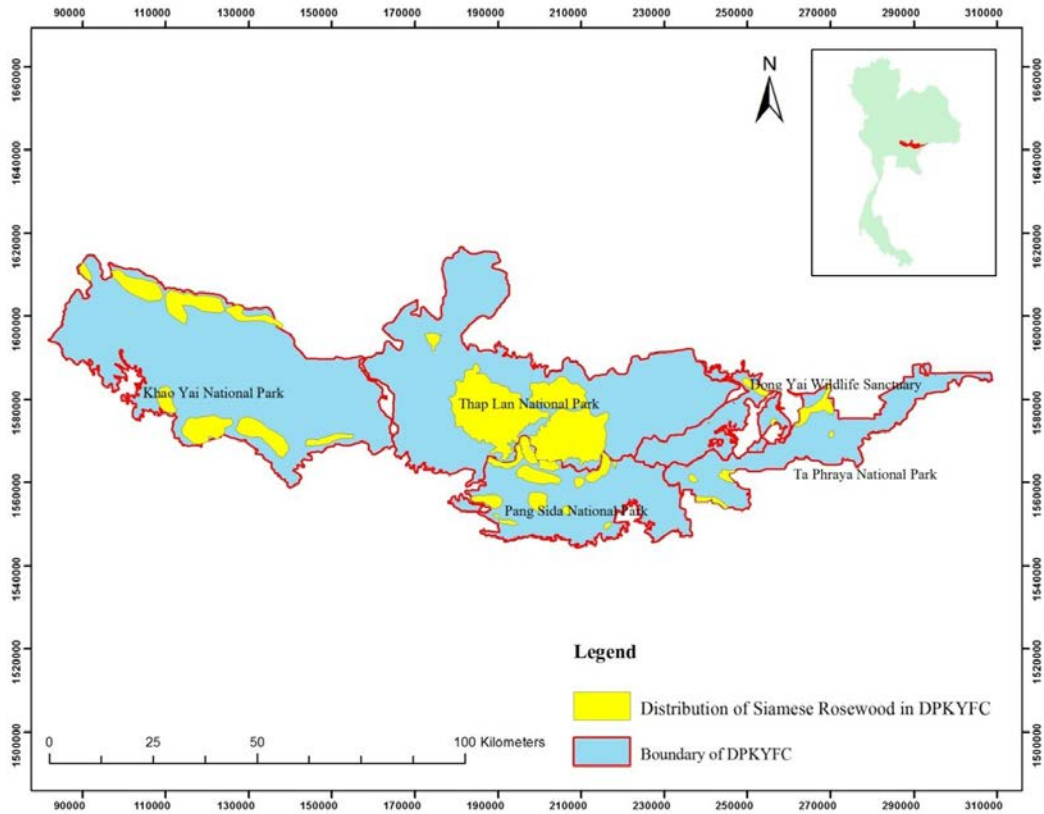
41	Pol.Maj. Anothorn Sritongbai	Natural Resources And Environmental Crime Division 61 Phaholyothin Rd. Lat Yao, Chatuchak, Bangkok 10899
42	Mr. Harin Horwang	Royal Thai Customs 1 Sunthornkosa Rd. Klongteoy Bangkok 10110
43	Col. Saman Trisutha	Military Operations other than War Directorate of Operations Royal Thai Armed Forces Headquarters
44	Ms. Veerana Sompeewong	Forest Research and Development Bureau Royal Forest Department 61 Phaholyothin Rd. Lat Yao, Chatuchak, Bangkok 10899
45	Mr. Kitiwut Changcharoen	Forest Research and Development Bureau Royal Forest Department Silviculture Research Center, Nakorn Ratchasima
46	Ms. Sopapan Panchumchit	Department of Special Investigation (DSI) Chaeng Watthana Rd. Lak Si, Bangkok
47	Dr. Win Trivitayanurak	Department of Highways 2/486 Sri Ayudhaya Rd. Phayathai Ratchathewi, Bangkok 10399
48	Mr. Thana Suwattana	Royal Irrigation Department 811 Samsen Rd. Dusit, Bangkok

49	Ms. Chanowan chaidee	Anti - Money Laundering Office (AMLO) 422 Phayathai Rd. Wangmai Phatumwan, Bangkok 10330
50	Mr. Tachasit Prasitirat	Department of International Organizations, MFA
51	Mr. Petch Manopawitr	IUCN Asia Regional Office
52	Ms. Pornsiri Khanayai	Royal Irrigation Department
53	Mr. Udomsak Dulyapraphant	National Anti-Corruption Commission 361 Nontaburi Rd. Tha Sai, Muang, Nonthaburi 10999
54	Mr. Duong Rich Hand	UNESCO Bangkok
55	Ms. Sujitra Kiatsuthakorn	Office of International Cooperation on National Resources and Environment, MNRE
56	Ms. Morakot Sriswasdi	Deputy Director General, Department of International Organizations, MFA

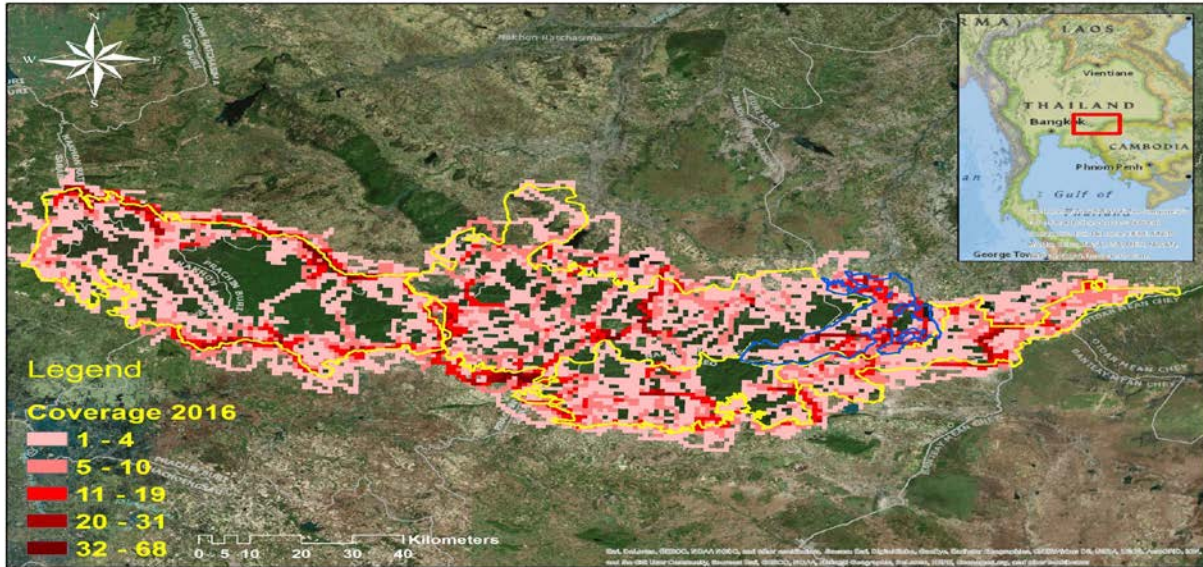
Annex IV – Maps



Map 1: Dong Phrayayen-Khao Yai Forest Complex World Heritage Site, with its component Protected Areas. *Source: Department of National Parks, Wildlife and Plant Conservation / MNRE*



Map 2: Natural distribution of Siamese Rosewood in the property (based on data collected during March – May 2016). *Source: Department of National Parks, Wildlife and Plant Conservation / MNRE*



Map 3: Frequency and routes of patrols during fiscal year 2016. *Source: Department of National Parks, Wildlife and Plant Conservation / MNRE*



Map 4: Entry points for illegal loggers and routes used to transport illegally logged Siamese Rosewood. *Source: Department of National Parks, Wildlife and Plant Conservation / MNRE*

Annex V – Photographs

All photos © IUCN/Chen Hin Keong



Image 1: DNP patrol boat donated by RID, Huay Samong reservoir.



Image 4: Siamese Rosewood research plantation, Khao Yai National Park.



Image 2: New ranger station in Pang Sida National Park, Huay Samong reservoir.



Image 5: Seized rosewood storage facility at Thap Lan National Park.



Image 3: Multiple-agency checkpoint on the road from Ta Phraya National Park to Cambodia.



Image 6: Seized truck with hidden compartment for smuggling rosewood



Image 7: Makeshift shoulder straps for transporting heavy pieces of rosewood.



Image 9: Handcarts for transporting rosewood logs through the forest.



Image 8: Construction of an overpass as part of the expansion of Highway 304.



Image 10: View towards the hills of Khao Yai National Park, as seen from Thap Lan National Park ranger substation 11.