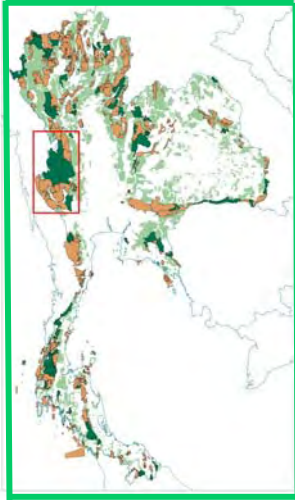


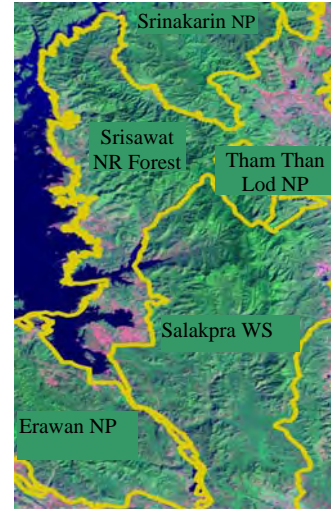
# The Elephant Conservation Network: Kanchanaburi

## Target Area

The Kanchanaburi-based Elephant Conservation Network (ECN) is implementing a programme of activities to tackle the dual challenges of elephant conservation and human-elephant conflict (HEC) in and around the Salakpra Elephant Ecosystem which includes the Salakpra and Tham Thanlod conservation areas (928 km<sup>2</sup> in total), the Srisawat national reserve forests, and privately owned lands around the protected areas. This area lies in four districts of west Thailand's Kanchanaburi province: Muang, Nong Prue, Bo Ploi and Srisawat.



Salakpra Wildlife Sanctuary and Than Thanlod National Park (hereafter referred to simply as Salakpra) form the south-eastern arm of Thailand's Western Forest Complex (known as WEFCOM), the country's largest conservation area with 11 national parks and 6 wildlife sanctuaries that together cover over 18,000 km<sup>2</sup> of mosaic monsoon forest. The core area of WEFCOM, the Thung Yai-Huai Kha Khaeng Wildlife Sanctuary, is a Natural World Heritage Site.



## ECN Programme Rationale

Elephants are the national, royal and religious icons of Thailand and yet their survival in the wild is threatened by the legitimate and illegitimate demands of an ever-increasing human population.

As a result, fewer than 2,000 wild elephants are thought to survive nationwide (half of them in the western forest area) and human-elephant conflicts are increasing all over the country. Road signs, like this one at Ta Manao are a common sign alongside Salakpra.



Created in 1965, Salakpra was the first wildlife sanctuary in Thailand. It is home to over 150 wild elephants whose optimal forest habitat has been persistently diminished by encroachment and over-exploitation, as well as by dams, roads and associated ribbon development. As a result, more and more local farmers are troubled by crop-raiding. Sustainable solutions are urgently needed to allow elephants and people to live side-by-side in relative harmony.

## ECN Background

The ECN is a small non-government organization that works in partnership with local people, and other NGOs as well as local and national government agencies. It was founded in 1998 by Belinda Stewart-Cox and Jittin Ritthirat under the Seub Nakhasathien Foundation (of which Belinda was a founding trustee) but became independent in 1999 when it moved to Kanchanaburi. The idea for an elephant conservation network, along with the ideal of an integrated western forest conservation area, grew out of Belinda's co-authorship of the Thung Yai-Huai Kha Khaeng World Heritage nomination with the late Seub Nakhasathien. Thailand's largest population of wild elephants depends for its long-term survival on the conservation integrity of the world heritage site but that, in turn, depends for its survival on the conservation integrity of the larger ecosystem that is WEFCOM. Salakpra represents the front-line of human-elephant conflict in WEFCOM, a front-line line that provides the opportunity to seek a sustainable long-term solution to this iconic national problem.

## History of Work

From 1999 to 2001, ECN conducted two background elephant surveys in Thailand's western forest area. The first survey targeted a representative sample of WEFCOM rangers and domestic elephant owners to find out what is known and felt about elephants, elephant conservation and human-elephant conflict in the western forest area and, more particularly, where elephants are most threatened. The answer was Salakpra.

The second more focused survey used semi-structured interviews, focus groups and site visits to get data from guard stations in Salakpra-Tham Thanlod and from villages around the protected area, especially those known to suffer from crop-raiding. This survey identified the need for seasonal surveys inside the protected area and a community-based human-elephant conflict monitoring and mitigation programme. As a result, ECN now focuses on the vulnerable population of elephants and their forest habitat in and around the Salakpra protected area. Since 2005, it has been supported by the Conservation Programme of the Zoological Society of London.



Jittin recording crop-raiding data



Belinda checking elephant prints

## Aim

The aim of the Elephant Conservation Network is to secure the future of Salakpra's elephants and their forest ecosystem for the sustained benefit of local people and wildlife.

## Objectives

1. Monitor, map and measure the incidents of human-elephant conflict in order to provide the factual basis upon which to seek an effective and sustainable solution.
2. Monitor the seasonal distribution and habitat associations of elephants inside the protected area in order to establish what links there may be to crop-raiding.
3. Undertake human-elephant conflict mitigation measures, both to reduce the cost of crop-raiding and to offset the cost of living with elephants.
4. As part of HEC mitigation, establish a system of crop-protection trials in the main HEC locations to find out which methods work best and are the most cost-effective.
5. To help offset the cost of human-elephant conflict, establish a community-based ecotourism initiative that makes elephant ecosystem conservation an aim and an asset.
6. Secure an effective forest corridor between Salakpra-Tham Thanlod and Srinakarin protected areas in order to prevent the total isolation of Salakpra's elephants.
7. Monitor the land-use and socio-economic links to human-elephant conflict in order to identify areas most in need of mitigation and to enable the evaluation of interventions.
8. In due time, investigate the potential for alternative sources of supplementary income linked to more sustainable systems of community-based natural resource management.



## Current ECN projects

### 1. Monitoring HEC/crop raiding

Crop-raiding by elephants (being measured right by Mem) is the main form of human-elephant conflict around Salakpra and it is a growing problem. Over the years, it is a problem that has changed in scope and distribution as the socio-economic and environmental context has changed, and yet it has never been monitored, mapped or properly documented. Without a solid factual understanding of the details of crop-raiding over time, it is not possible to find a solution to the problem that is effective, sustainable and fair to the people and elephants affected.



So in early 2006, ECN recruited and trained thirty village monitors (left with Jittin) from key villages to help report, record and map every incident of crop-raiding and any other form of



human-elephant conflict. These men and women are important, much valued members of the Elephant Conservation Network. Together, we have systematically gathered data through the dry, wet and cool season harvesting periods when crop-raiding is most intense. Over time, this day-to-day long-term activity, combined with information about natural resource exploitation and land use, will provide a much better understanding of the patterns, preferences, frequency, seasonality, locations and intensity of crop raids as well as the success or failure of crop protection measures.

### 2. Forest elephant surveys

Being large herbivores with inefficient digestive systems, elephants need large quantities of food (from 150-350 kg/day) and water (100-200 litres/day) year round. They also need shade, and a secure place to raise offspring. The Salakpra ecosystem is a mosaic of tropical deciduous forest types which include a variety of seasonal and perennial water-bodies, both natural and man-made.



Salakpra's rangers help conduct forest surveys



Belinda marking elephant tracks beside a pond

The Salakpra ecosystem has been chronically degraded over the years by excessive logging, hunting, cattle-grazing and fire. Working with forest rangers and villagers, the ECN team conducts regular elephant surveys (above & left) to learn more about the seasonal distribution and habitat associations of the Salakpra elephants, including what factors may encourage them to raid crops.



### 3. Land-use mapping

Land-use patterns in and around Salakpra have changed dramatically over the last 40 years (especially since the Srinakarin dam was built in 1980) as more and more people have settled the area. As well rainfall, temperature and fire data, we need informative land-use maps of settled areas in and around Salakpra in order to understand what factors are, and are not, linked to crop-raiding, so that we can identify the most effective HEC mitigation measures, including a sustainable system of forest use and protection that involves villagers as well as protected area personnel. To date, ECN has mapped land use in three intensive crop-raiding areas (Chongla, Ta Manao and Mo Tao), using aerial photographs linked to GPS point data. In time we aim to map every sub-district around Salakpra, and to monitor seasonal changes in land use so we can compare this data with crop-raiding data.



An aerial photograph of agricultural land around Salakpra which is linked to GPS location data that allows us to match photographs to satellite maps

### 4. Socio-economic surveys

In late 2006, ECN began a socio-economic survey with the help of Dr Napat Sirisamphand, a retired researcher from the Chulalongkorn Social Research Institute. Using focus group meetings, questionnaires and interviews, the ECN team conducted surveys in selected villages around Salakpra to get a better understanding of the lives and livelihoods of those who suffer from crop-raiding and those who have, or have had, an impact on the forest ecosystem.



Left: Jittin and Karen villagers in Ban Khao Lek. Above & below: veterans with invaluable insights

In time, this data will also allow us to measure the impact of project interventions such as crop protection measures, ecotourism initiatives or alternative income options. We need to know whether our efforts to mitigate human-elephant conflict are making a difference in economic terms, and whether local attitudes and behaviours have become more supportive of elephants, forest conservation and sustainable natural resource use.



## 5. HEC mitigation

### (a) Crop protection trials



In early 2007, the ECN team will initiate crop-protection trials with farmers affected by crop-raiding in order to find out which methods work and which ones are the most cost-effective over time. Some methods are Thai designs that have been tried locally and are believed to be effective but have not yet been properly monitored, such as string and plastic bags (below). Other methods have been used effectively elsewhere in Asia and Africa but have not been tried locally.

Technical help is being provided by our Kenyan associate, Dr Noah Sitati (above with Jittin), who has eight years experience managing a human-elephant conflict mitigation project around the famous Maasai Mara wildlife reserve. Crop protection is unlikely to stop all crop-raiding although it may reduce the costs incurred. Other measures, such as alternative incomes, collaborative forest protection, natural resource management, and environmental education, will also be necessary.



### (b) Conservation tourism

In April 2007, with the help of Charlotte Johnston, a sustainable tourism specialist from the UK, we will complete a feasibility study that is finding out how best to develop an effective and viable conservation tourism initiative for the benefit of local communities, forest conservation and the elephants of Salakpra. Kanchanaburi hosts more than 5 million tourists a year, but most of them come to see its famous 'Bridge over the River Kwai' and associated war memorials. Few people appreciate the province's natural attractions and even fewer know that it still supports several populations of increasingly threatened wild elephants.



Overlooking Thung Salakpra, the sanctuary's central savannah forest and the heartland of its elephant population



## 6. Elephant Corridor Protection

Salakpra supports some 20% of the largest surviving population of wild elephants in Thailand, but their future is not assured. In the last 30 years, the sanctuary has shrunk so much that it is now a forest peninsula, severed from the rest of WEFCOM by the Srinakarin Reservoir, by the River Kwae Yai road and ribbon development, and by human settlement and agriculture. The ecological lifeline for these elephants is a triangular tract of poorly protected reserve forest in Srisawat district (see map above) that connects Salakpra to the Srinakarin National Park and Huai Kha Khaeng and thereby to the world heritage core of WEFCOM. Without this forest triangle, Salakpra will become an island, crop-raiding will increase, human tolerance will diminish and the elephants will be doomed.

In 2007, ECN will work with protected area personnel and local communities to find a way to protect this critical corridor triangle from the depredations of illegal logging, land grabbing and unregulated hunting. Already most valleys have been settled by farmers. Unfortunately, land that is accessible and well-watered is as valuable to elephants as it is to farmers, for such fertile areas invariably support the best elephant habitat.



Intensive vegetable agriculture in the narrow valleys of the corridor triangle

## Acknowledgements

The Elephant Conservation Network is hugely grateful to its partners, donors and sponsors for their practical support. Without them, we can do nothing useful.

### Partners

- Conservation Programme, Zoological Society of London (ZSL)
- Department of National Parks, Plant and Wildlife Conservation
- Local communities around Salakpra and Tham Thanlod PAs



### Donors

- Darwin Initiative (UK)
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