

# Defusing the transboundary minefield

**A reserve linking Thailand's Pha Taem Protected Forests Complex with forest reserves in Cambodia and Laos will assist both biodiversity conservation and international relations**

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**River view:** the Pha Taem Protected Forests Complex, the subject of an ITTO project, is bordered to the east by the Mekong River and comprises mostly monsoonal forest. *Photo: E. Müller*

**T**HE Pha Taem Protected Forests Complex (PPFC), located in Ubon Ratchathani Province in northeast Thailand, covers an area of about 174 000 hectares and comprises four protected areas—the Pha Taem, Kaengtana and Phu Jong Na Yoi national parks and the Yot Dom Wildlife Sanctuary—and the proposed Buntrik-Yot Mon Wildlife Sanctuary (*see table and map*). The area slopes gently towards the southeast and is drained by the Mekong River, which forms the border between Thailand, Laos and Cambodia. The PPFC's buffer zone contains 82 villages populated by about 89 000 people, but the PPFC itself contains no human settlements.

On the Laos side, the 120 000-hectare Phouxeingthong National Biodiversity Conservation Area (NBCA) is located adjacent to the northern part of the PPFC, while the 190 000-hectare Chom Ksan Forest abuts the border on the Cambodian side. The tripartite border area has been dubbed, in Thailand at least, the Emerald Triangle because of its extensive tracts of monsoonal forest. The PPFC contains three main vegetation types: dry evergreen forest, mixed deciduous forest, and dry dipterocarp forest, while lowland mixed deciduous forest predominates in Cambodia and Laos.

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The PPFC has some special protection needs that require close cross-border cooperation. In particular, biodiversity in the PPFC and the intervening landscapes is experiencing increased pressure due to cross-border poaching and trade in plant and animal parts. Large animal species such as wild elephant, banteng, gaur, tiger and possibly kouprey (a forest ox) are believed to occur only in the border areas. These are

large mammals that require considerable areas of habitat; their survival depends on contiguous habitats on all sides of the border and adequate protection from poaching. The PPFC has 18 ranger stations manned by eight park officials and 355 'casual' employees; their effectiveness in protecting habitats and species is severely limited by cross-border habitat destruction and poaching.

## Project activities

ITTO PROJECT PD 15/00 (F) is being implemented by the Thai Department of National Parks, Wildlife and Plant Conservation to strengthen the management of the PPFC and to initiate cooperation in transboundary biodiversity conservation between Thailand, Cambodia and Laos. Under its first phase, which started in October 2001 and will be completed in September this year, the project has initiated a management planning process for the PPFC in a framework of transboundary biodiversity conservation. This involves establishing an effective organisational and management system for the PPFC, collecting basic data, the installation of an information system and database, and the commencement of a process of cooperation between the three countries.

## Threats and opportunities

The PPFC project faces a number of threats to its effectiveness; these must be dealt with if the project is to meet its biodiversity, trans-border and socioeconomic objectives.

### Threats

**International relations:** the management of cross-border reserves requires a high degree of cooperation. However, Laos is reluctant to nominate the Phouxeingthong NBCA for inclusion in the TBCA in the project's second phase,

even though this was agreed at the first tri-national meeting convened by the project in 2002. Cambodia has officially proposed that its Chom Ksarn Forest should become part of the TBCA, and has even formulated a project proposal for submission to ITTO. However, diplomatic ties between Thailand and Cambodia were downgraded and suspended after the sacking of the Thai Embassy in Phnom Penh on 29 January 2003 and the future of Cambodia's involvement in the TBCA is now in doubt.

**Encroachment:** forest in the buffer zone outside the PPFC is being encroached for agriculture; further forest-clearing could jeopardise the viability of already-rare large mammals. Forest is also being degraded in Laos and Cambodia, mainly due to unsustainable commercial-scale logging.

**Poaching:** wildlife is poached and plant parts collected for trading along the border of the three countries. The main demand is for bush meat, which is an important source of protein for rural households, particularly in Laos, the only country of the three that is not a party to the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES). In any case, only one of the region's eleven border crossings (between Thailand and its two neighbours) boasts a CITES checkpoint.

**Capacity:** Cambodia and Laos both lack the capacity at all levels to manage their protected areas effectively. Staff have little or no access to training, budgets for management are very small, and there are few park rangers on the ground.

**Landmines:** thousands of landmines were laid along the borders between Thailand, Cambodia and Laos in the 1980s and 1990s. These now constitute a major threat to local residents, park rangers, researchers and large mammals.

### Opportunities

**International significance:** the PPFC is the only protected forest complex in Thailand that contains both terrestrial and aquatic ecosystems of regional ecological significance. The area features rare and endangered species such as freshwater crocodiles and tigers. It may also provide a sanctuary for the kouprey; scientists have not observed this species since 1988, but anecdotal evidence suggests that it may not yet be extinct. The area therefore has globally significant biodiversity value, which should help in attracting continuing international support.

**Existing cooperation:** multilateral cooperation in this region has strengthened in recent years. Regional bodies such as the Mekong

River Commission (MRC) and the Food and Agriculture Organization (FAO) have offered to mediate the conflict between Thailand and Cambodia and to help initiate cooperation at the decision-making level. They, and multilateral organisations such as ITTO, provide a basis on which cooperation in transboundary conservation can be built in the region. Recent international initiatives on protected area management that advocate a landscape-approach to protected area management and look beyond the boundaries of individual protected areas should also help. Lessons learned from ecosystem management in the Western Forest Complex—located in western Thailand and jointly implemented by the Royal Forestry Department and Danish Cooperation for Environment and Development—are also proving valuable in strengthening management in the PPFC.

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At the project level, the chief technical advisor and project manager are highly respected by junior staff, which assists greatly in the achievement of project aims. Moreover, ITTO's strong support for TBCAs in general and the PPFC in particular suggests a long-term future for the project. This offers the opportunity to improve cross-border cooperation and further raise management capacity, including in Cambodia if an ITTO project eventuates there.

PPFC planning must include attention to the broader landscape, encompassing both the protected areas themselves and the surrounding landscapes. Conservation corridors between existing protected areas should be considered and created where feasible. In a similar vein, conservation would be greatly improved if Laos would create a conservation reserve alongside Thailand's Phu Jong Na Yoi National Park.

### Strategies to strengthen the TBCA

On the Thai side, the PPFC project is proceeding well and will be further assisted by a second phase, which will be

### Park particulars

Key features of the Pha Taem Protected Forest Complex

Name	Establishment date <sup>1</sup>	Area (km <sup>2</sup> ) <sup>2</sup>	Perimeter (km) <sup>2</sup>	Country boundary km (%) <sup>4</sup>	Shape Index <sup>5</sup>	No. ranger stations	Officials <sup>6</sup>
Pha Taem National Park	31 Dec 91	353.2	242.7	63.3 (27%)	3.64	5	3/100
Kaengtana National Park	13 Jul 91	84.6	62.5	30.0 (48%)	1.92	4	2/90
Phu Jong Na Yoi National Park	1 Jun 87	697.4	215.9	93.9 (43%)	2.31	4	1/90
Yot Dom Wildlife Sanctuary	11 Oct 77	235.9	88.2	33.2 (37%)	1.62	4	1/60
Buntrik-Yot Mon Wildlife Sanctuary	Proposed	365.9	186.2	96.4 (52%)	2.75	1	1/15
<b>Total</b>		<b>1737</b>	<b>795.5<sup>3</sup></b>	<b>316.8 (43%)</b>		<b>18</b>	<b>8/355</b>

Notes: <sup>1</sup>Royal Gazette; <sup>2</sup>Calculated by GIS; <sup>3</sup>Excluding shared border; <sup>4</sup>Length of country boundary; <sup>5</sup>Perimeter/2(π x a); <sup>6</sup>Government official/temporary employee



### Tripartite tract

The Pha Taem Protected Forest Complex, with the location of villages shown on the Thai side of the border. Prepared by Y. Trisurat for the ITTO PPFC project, based on data from IUCN and DoNp



Detail Scale 0 10 20 Kilometres

considered for funding by ITTO shortly. However, there is an urgent need to strengthen cross-border cooperation for more effective transboundary management. Existing multilateral relationships in the region should be used as a gateway to rebuilding the relationship between Thailand and Cambodia, in addition to inviting international bodies to initiate cooperation among the three countries, especially at the decision-making level. Given the reluctance of authorities in Laos to participate in the TBCA, cooperation could start with 'soft' collaborative activities such as training programs or joint research programs on flagship species and be followed by visits on both sides by park officials.

*Ecotourism will only work, though, if the local communities benefit from it and are fully involved in its management.*

To further foster cross-border cooperation, an integrated joint task force could be established among the three countries to combat encroachment, poaching and illegal logging. International organisations such as ITTO, IUCN, the World Wide Fund for Nature, MRC and others should encourage the Vientiane government to develop sustainable forest management and reduce the impact of logging on biodiversity. In remote areas where accessibility is limited due to landmines, cooperation with military staff and border patrol police will be essential to reduce poaching and illegal logging. In fact, greater cross-border cooperation in the TBCA could conceivably help attract greater international interest in clearing the area of landmines, which will cost an estimated US\$70 million but would add greatly to the potential for ecotourism and also improve safety for residents.

### Livestock

The cross-border transmission of livestock disease is a significant issue in the region and in some cases threatens biodiversity; addressing this as part of the TBCA approach would provide real socioeconomic benefits for local residents and generate goodwill for the TBCA itself. Veterinarians should be employed at border crossings to monitor animal health and prevent the entry of diseased animals. In addition, ecological management zones using the biosphere reserve zoning concept should be developed to define core biodiversity areas, buffer zones and transition zones where domestic animal-raising could be permitted.

### Ecotourism

Another way of generating local enthusiasm for the TBCA—and therefore reduce encroachment and poaching—would be to promote it as a tourism destination. A TBCA not only offers excellent opportunities for the appreciation of nature, it can also provide a multinational and multicultural experience. The Mekong River has a mystique that attracts international tourists, whose visits will be greatly enriched by contact with Thai, Laotian and Cambodian communities. Ecotourism will only work, though, if the local communities benefit from it and are fully involved in its management.

### Transboundary approach the key

Given that encroachment is perhaps the most important threat to the PPFC, its success ultimately rests on whether or not local communities can be convinced that the pursuit of conservation objectives is in their interests. A transboundary approach that helps to attract international funding, curb illegal activities, prevent the cross-border transmission of livestock disease, promote ecotourism and remove the safety hazard posed by landmines will provide a solid basis for effective biodiversity conservation, not only in the PPFC but also at a broader landscape level—on both sides of the Mekong.