



## CAMBODIA COMMUNITY WILDLIFE RANGER PROGRAM

Final Program report (March 01, 2002 – April 31, 2003)  
for:



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## INTRODUCTION

The Community Wildlife Ranger Program (CWRP) submitted a full report of team activities to the donors in December 2002 (Ouk Kimsan et al., 2002). That report covered two grant periods: 2001-2002 final program report and 2002-2003 interim progress report.

**This year's report follows a similar format and constitutes:**

▶ **The Final Program report for the period from March 2002 until May 2003**

This period was funded by a \$50,000 grant from STF, a \$54,533 grant from the USFWS AECF and a \$36,355 grant from RTF through Cat Action Treasury.

The 2002-2003 grant proposal, titled "Community-based Monitoring and Protection of Endangered species in Cambodia's Largest Wildlife Areas", had the following three basic objectives:

- Strengthen government capacity to enforce the new wildlife legislation currently in preparation by incorporating local police into the community wildlife ranger program.
- Increase awareness of the importance of endangered species conservation within the communities in our program areas by continuing to hold village conservation workshops that introduce the concepts of conservation and show that government takes this seriously.
- Strengthen government capacity to monitor and manage tiger and elephant populations through continuation of the third year of the community wildlife ranger network, and additional training in field survey and data analysis techniques.

▶ **An interim progress report for the period May 2003 until May 2004**

This period is funded by a \$45,000 grant from STF, a \$40,000 grant from the USFWS AECF and \$35,048 grant from RTF through Cat Action Treasury.

The 2002-2003 grant proposal, titled "Cambodia Tiger Conservation Project / Community Wildlife Ranger Program", has three similar objectives to the previous proposal:

- Strengthen the government capacity to enforce the new forestry law adopted by the government on the 31st August 2002. This law includes a chapter on wildlife protection. We will particularly focus on the endangered species living in the Protected Forests.
- Strengthen the government capacity to monitor and manage tiger and elephant populations through continuation of the third year of the community wildlife ranger network, and additional training in field survey and data analysis techniques;
- Increase awareness on the importance of endangered species conservation within the communities in our program areas by continuing to hold village conservation workshops that introduce the concepts of conservation and show that the government takes this seriously.

A considerable amount of work was documented in the December 2002 report regarding the presentation and analysis of CWRP wildlife data, which emphasized the monitoring of tiger and elephant presence. As monitoring is a process that gives significant results only after a relatively long period of time, the team does not have significant changes to present since the last report in December.

During the last six months, the CWRP has emphasized anti-poaching and wildlife trade control activities. This report will focus on presenting the teams' efforts to reduce the poaching of key species and related subsequent trade.

## PROJECT MANAGEMENT

We have achieved longer-term sustainability in the Northern Plains of Preah Vihear Province through integration of our program into the MOE/MAFF/WCS Conservation Areas through Landscape Management (CALM) GEF project. Full integration was achieved during the period of January through April 2003.

Following the integration of Preah Vihear into the CALM project, we have restructured our program organization and redefined our objectives in line with the specific needs of the Eastern plains dry-forest of Monduliri Province and the evergreen-forest Cardamon Mountains of Koh Kong Province.

We have pursued the effort of providing the national wildlife community with monthly reports summarizing our regional activities in Monduliri and Koh Kong Provinces.

### *Equipment*

We acquired new equipment during two phases:

- ▶ In August and September 2002 we bought 10 GPSs, three ICOM radios, four motorbikes and one laptop computer.
- ▶ In August 2003 we bought an additional six GPSs and five radios.

The management team carried out a review of the project equipment in October 2003 and reported that:

- Four GPS's and four motorbikes were broken down
- The provincial teams need additional cameras and medical kits

Hunter Weiler took the GPSs to Bangkok in order to get them fixed. Three of the four have been repaired at half the cost of new GPS's. One GPS was not repaired, as it would have required a complete reconstruction at a cost 50% higher than purchase of a new GPS. Divan and Dany visited several motorbike shops and decided the best solution was to sell the four broken bikes and use the proceeds to buy two new ones. The new motorbikes have been allocated to the Monduliri team. Enough medical kits were acquired to supply each staff member of the Provincial ranger and police teams. Somethy reported that two additional cameras would be necessary in Monduliri. The team decided to purchase one additional camera and to reallocate the camera currently kept in Phnom Penh to Monduliri. In Koh Kong, Seiha advised that each ranger team should be equipped with a camera. This request was passed on to Conservation International, since no CWRP funds were budgeted for this purpose. CI has purchased a camera for each of the five CWRP ranger units in the Cardamoms, and the cameras are being turned over to the CWRP teams during the December joint training.

Following this review, each member of the management team was provided with a full list of CWRP equipment available in Phnom Penh, Koh Kong and Monduliri (Appendix III). The Provincial managers are now responsible for regularly updating this list. The goal is to assure that needed equipment is acquired, maintained, and replaced in a timely and cost-effective manner to facilitate program implementation.

### *Personnel*

#### ▶ **The management team:**

Fundamental changes have recently taken place among the program senior staff. Program Manager Omaliss Keo left in mid-September to carry out a PhD in England. He retains his WPO position and will be returning to Cambodia next year to conduct thesis research on the Giant

Ibis in Preah Vihear. Chheang Dany is the new CWRP Program Manager. Before joining our team, Dany was working for FFI as National Coordinator for the Cambodia Crocodile and Asian Elephant Conservation Program. He has a Master's degree in Forestry from Russian, and is fluent in English and computer literate. Ouk Kimsan, Administrative coordinator, left for Japan in July, where he is currently carrying out a MSc. He also retains his WPO position and will be returning to Cambodia next year to conduct thesis research on community conservation in Mondulkiri. Kry Maspal has taken a position with Birdlife International as Project officer for community conservation activities and left CWRP in early October 2003. The position of Administrative Coordinator was changed to Administrative Assistant and filled by Nong Divan, who recently transferred to WPO from the Forestry administration. Divan has a Master's in Forestry from Germany and is English and computer literate. Pank Vong Somethy has recently joined the project as Mondulkiri WPO manager. Previously he managed the joint Conservation International/Forestry Administration & Military Police Ranger teams in the Cardamon Mountains. CWRP continues its tradition of attracting some of the most talented managers in the Forestry Administration, and is evidence of the popularity and support for this program by the government.

► **Koh Kong rangers:**

In Koh Kong province, April 2003, Kong Vuthy was fired (see frame below) and replaced with Tom Ny. In June 2003, the O Som ranger unit was disbanded, due to difficult access from the Koh Kong office, location in Pursat province which raised administrative issues for our Koh Kong Province based program, and establishment of FFI and CI programs in the commune, which overlapped our activities. In August 2003 CWRP recruited and trained two new rangers in Chay Reap commune, Sre Ambel district. Both rangers started to work for the project on September 01 2003. It took us a year to achieve this, due to the difficulties of access in this area, both logistically and politically, including the presence of ex-Khmer Rouge military units involved in illegal forest activities. The establishment of our ranger unit and visits by our provincial management team has already achieved an increase in interest in conservation and a decrease in hunting activities in this area, which is strategically located in the ecological transition between the dry open forest and the evergreen mountains and near the boundaries of the Cardamom Protected Forest, the Phnom Aural Wildlife Sanctuary, and the Samling logging concession.

Ros Lim, our Provincial Forestry Department counterpart in Koh Kong, was recruited by WildAid to manage a Mobile Ranger Unit in 2002. He was suspended in summer of 2003 for 3-months, but not contacted by WildAid at the end of his suspension. CI is now interviewing him for a Community Development position.

**Kong Vuthy Case:** From the first to the tenth of March 2003, Kong Vuthy went to the forest and conducted the normal 10-day monthly patrol. Then, he told the lead ranger he wanted to go deeper into the forest and did not come back from the field. That month he did not provide the CWRP team with any datasheet and did not bring back his GPS. In April during a meeting with WPO Koh Kong manager, he stated that he went in the forest about 15-20 km from his house to collect resin and clear land for a plantation. Kong Vuthy failed to fulfill his job responsibilities by not carrying out any field patrol during two months. He was, therefore, fired and replaced with Tom Ny, a new ranger from Chipat.

In June 2003 CWRP was informed by Ben Hammond (FFI) about a group of poachers who came to Thmor Bang district to kill elephants. The first deputy director of the district confirmed this information in late June. An investigation carried out by CWRP rangers indicated three hunting camp locations through which the gang rotates. One of the hunting gangs is lead by Kong Vuthy and has five to six hunters. Their objective is to kill elephants. Their main base camp is located in Knong Seik Bronang, Thmor Don Pouv commune, Thmor Bang district. It is on top of a hill on a plateau surrounded by cliffs, and defended with mortars, grenade launchers, and automatic weapons. Province and district police have been reluctant to approach and storm the position, and negotiations have continued intermittently for months.

In August 2003 a group of krisna wood collectors reported they met seven men in the forest who work for Kong Vuthy. These men were armed and are known to be robbers and kidnappers. They work in Knong Srol, Seik Bronang and Chhay Ki areas. In late August the Chi Pat district police deputy stated he suspected that Kong Vuthy was still placing snares and hunting wild species. His wife in Chi Pat market sells the game. Local villagers from Chipat and from Roleark Khang Chhun in Phnom Aural Wildlife Sanctuary periodically deliver supplies to the forest camps. At this writing, Kong Vuthy is still out there.

- **Mondulkiri rangers and police officers:**

In Mondulkiri province, June 2003, CWRP recruited two more rangers and eight police officers in Pich Roda district and Koh Nhek districts. Those men started to work for the project on August 01 2003, immediately after the Cambodian national elections.

The project currently employs 10 rangers in Koh Kong and 10 rangers and eight police officers in Mondulkiri (see organization chart and staff list in appendices I & II). In March 2003, the CWRP office replaced 2 rangers because of their health problems.

## **REDUCTION IN WILDLIFE POACHING AND TRADE**

- ▶ We have continued reporting and investigating poaching and trade activities.
- ▶ A major initiative this year was to formally incorporate a police law enforcement component into the program. Several police officers were informally recruited and equipped in Mondulkiri and Preah Vihear districts in August and September 2002, with the specific objective of cooperating with us in stopping wildlife trade and hunting.

Eight police officers signed a formal contract with TCP effective August 1. (model provided in Appendix IV). Each police recruited received initially a one-day training on law enforcement covering the following points:

- Project objectives in relation to police tasks: crack down on all wildlife trading and hunting activities and destroy hunting equipment.
- Identification of targeted species using the book "Mammals of Cambodia" (Men Soriyun *et al* 2000). Specific attention is given to primate species because the police have difficulties in distinguishing among them.

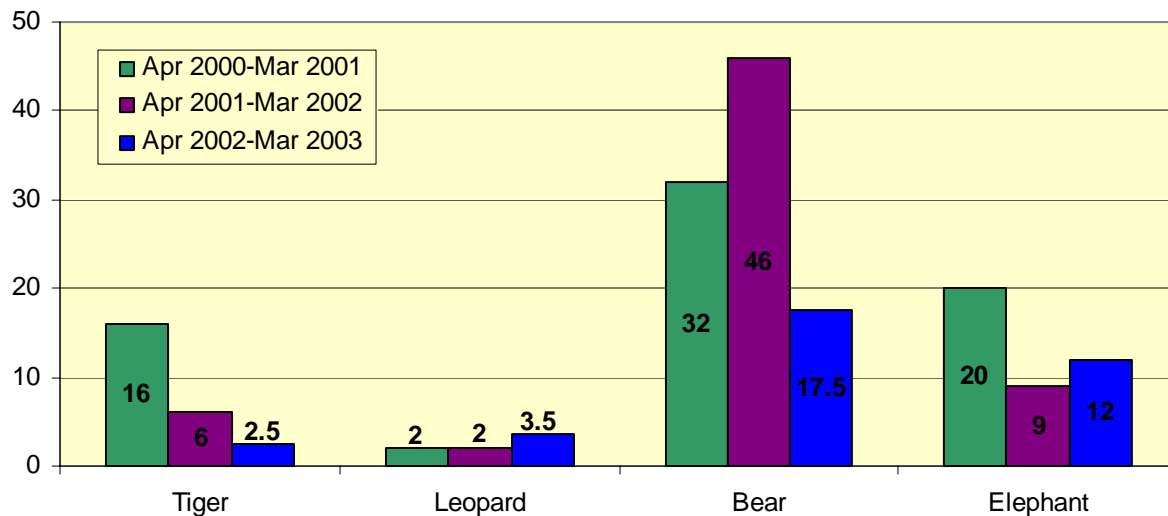
- Presentation and explanation of the section on wildlife of the Forestry Law and the Ministry of Agriculture, Forestry and Fisheries (MAFF) Wildlife Protection Act which provide a list of species to protect.
- Use of Global Positioning System (GPS) and Radios
- Communication techniques (particularly how to provide information)
- Report writing
- Directives to follow including CWRP rules and Cambodian laws (MAFF, Forestry and Police).

Then CWRP rangers also continuously train them during patrols on track identification, and data collection, etc. The original plan was to have rangers and police patrol independently, but joint patrols have been so successful that they are now the Standard Operation Procedure. Now each two-man ranger team is almost always accompanied by at least one district police officer.

***Poaching and Trade Activities recently reported:***

The following key species were reported by CWRP as killed or caught from March 2002 to April 2003: two or three tigers, three or four leopards, seventeen or eighteen bears, six or eight elephants, ten gaur & eleven banteng. The numbers provided for tiger, leopard and bear are not definite because one animal was not accurately identified and was reported as one of these three species. The number of elephant is not certain because local villagers reported these cases and we have not been able to confirm if the same case had been reported twice or if it was two different events. A further four elephants were reported by CI and WildAid killed in Koh Kong and one reported by WWF killed in Mondulkiri.

***Graph 1: Poaching activities reported over our three year project***



Note: Elephant data in 2001 and 2002 include reports from other sources (CI, WildAid in Koh Kong and WWF in Mondulkiri).

Tables 1 shows a list of poaching activities targeting tiger, leopard, bear, elephant, gaur and banteng from January 2003 to September 2003. No banteng were reported killed during this period.

**Table 1: Poaching activities on key species reported from January to September 2003.**

Month	Province	District	Species	Number	Description
Jan 2003	Mondulkiri	Koh Nhek	Tiger	1 or 2 Killed	By tiger hunters from Ratanakiri. 1 of the tigers could be a leopard or a bear
March 2003	Koh Kong	Mondul Sema	Bear	2 Caught	Hunters from Kampot province, sold for US\$ 500
March 2003	Mondulkiri	Pich Roda	Leopard	1 Killed	
April 2003	Koh Kong	Areng	Bear	2 Caught	The gall bladders were sold in Chipat
May 2003	Koh Kong	Chipat	Bear	2 Killed	Four hunters trap bear & sold feet & gall bladders to Chipat traders
June 2003	Mondulkiri	Pich Roda	Gaur	1 Killed	
July 2003	Koh Kong	Chipat	Bear	1 Caught	A villager snared a bear cub & sold it to Chipat trader
August 2003	Koh Kong	Chipat	Bear	1 Sold	By hunter to Chipat trader
August 2003	Koh Kong	Areng	Bear		A wildlife trader transported 4-5 Gall Bladders to Phnom Penh with official vehicles.
August 2003	Koh Kong	Areng	Tiger		Thmor Bang villagers sold 9kg of tiger bones to Chipat trader
August 2003	Mondulkiri	Pich Roda	Elephant	1 killed	Rangers found a dead elephant, ivory cut off
September 2003	Koh Kong	Areng	Leopard	1 killed	A villager snared a leopard and sold it on Chipat market
September 2003	Koh Kong	Areng	Bear	1 killed	A villager transported a bear to Chipat market.

Fewer key species were reported killed or caught than in previous years; however we do not have any means to measure these population trends. Less poaching activities could be partly due to the efficiency of our project or to the decrease in the number of animals. We are presently working at upgrading our monitoring method to try to measure the range of these key population increase or decline.

Answering this type of question requires calculating indices of relative abundance. To achieve this, we need to standardize our methods. This will imply the design of small trails, each of identical length, located on likely routes for tigers and elephants. Ideally the rangers will participate in the design of the trail and a team (two rangers) will be responsible for two trails. During the setting up of the method the paths will be marked using red paint and the coordinates of several location points (including start and end points) will be recorded using a GPS. Precise recommendations will be provided to the rangers including which species to record and the type of sign to record for each species. The trails will be surveyed monthly. Specific datasheets will be designed for this exercise. Both a sketch map of the route and a short text, written in Khmer, explaining what the rangers are supposed to do during this exercise (with precise recommendations) will be included on the datasheet. The interpretation will be deduced from the comparison of species indices over time. This method is designed to be simple, and involve low costs and time. The rangers will only assign one to two of their patrol days to this exercise, allowing us to keep certain flexibility to the project. This model was developed after a

literature review and consultation with WCS. Implementation has been delayed due to the rainy season and the priority of recruiting and training police.

***Law enforcement activities:***

In eastern Mondulkiri no other programs are carrying out law enforcement. The CWRP team is particularly committed to a strong emphasis on law enforcement in this area. Collaboration between our project and the provincial and district police was established in Pich Roda and Koh Nhek districts last summer. In Mondulkiri eight district police officers are now contracted to our project.

In Koh Kong both Conservation International (CI) and WildAid already have their own DFW ranger/military police units to enforce wildlife and forestry law in the Cardamoms. We regularly communicate to those programs our reports on illegal wildlife trade and poaching. Because of the strong programs of CI and WildAid in law enforcement in the Cardamoms, CWRP to date has carried out only minimal cooperation with the local police for the occasional special case. However, recent re-deployments of CI and WildAid teams have resulted in a large gap between the coastal highway and the Cardamom Protected Forest within which only the CWRP teams are patrolling off the roads. CI has recently endorsed the CWRP program enlisting district police to accompany the ranger teams to complement and reinforce the CI/DFW/ Military Police teams. Formal collaboration with the local police similar to the Mondulkiri program is being evaluated for possible implementation in the Cardamoms in 2004.

- **Trap/Snares Removal**

From March 2002 to September 2003, CWRP removed, destroyed and confiscated more than 500 traps or snares in Koh Kong, Mondulkiri and Preah Vihear (See table 4 for details). These included tiger traps. In Koh Kong CWRP cooperated with WildAid and in Preah Vihear and Mondulkiri with the local polices.

***Table 4: Number of traps and snares removed or destroyed for each CWRP Province.***

	Mondulkiri	Preah Vihear	Koh Kong	Total
Traps/snares removed	177	35	308-318	<b>520-530</b>

In Mondulkiri, several snares were found along the boundary between Cambodia and Vietnam; Vietnamese hunters can easily cross the border place some of these snares. The teams in this area have a few times dealt with some of these hunters, warning them not to come back and confiscating any snares or wild species they had in possession.

In Koh Kong a big operation took place in August 2002 where CWRP, WildAid and Koh Kong provincial Forestry officials cooperated to remove 173 traps. However several hundred more snares were reported carried by hunters or seen in the field.

Several tiger traps were removed in May 2002 in Preah Vihear but not numbered. In February 2003 the team removed 4 clap nets and release the birds held prisoner. During the same month CWRP destroyed 27 cable traps and a shelter built to wait for these traps to catch animals in the Kulen Promtep Wildlife Sanctuary forest. The whole trap has a length of 1075 meters from its start point to its end point.

- **Confiscations**

Several wild species or parts of these species owned illegally were confiscated in the three provinces where CWRP is active. Among those are leopard and fishing cat skin and bones, a

leopard cub, a banteng horn, a banteng calf, a young black bear, an elephant calf, an Eld's deer calf, a young monkey, several water monitor lizards, turtles, pythons, etc. These animals were sometimes released when alive and in a good health. When skin, bones or meat were confiscated they were either burnt on the place or brought back to CWRP office.

Forty-two guns were confiscated (41 in Mondulkiri and 1 in Koh Kong) including CKC semi-automatic rifles and AK47 assault rifles. These were confiscated from villagers, local hunters and even from police officers that were using their guns illegally to hunt wild species. The fact that CWRP has enlisted police and is now confiscating guns, including police guns illegally used, is strong evidence that CWRP has moved from only monitoring and awareness activities to strong law enforcement.



***Gun confiscation:*** Hunting by local people with guns is the single biggest threat to large mammals in Cambodia. Some military police engaged in hunting. CWRP employs ex-hunters as rangers and district police officers. Confiscating guns is one of our priorities.



***Skin confiscation:*** A CWRP Mondulkiri ranger and police officer team inspect a leopard skin and bones they confiscated from a local hunter in the field.

A table of confiscations is provided in Appendix V

- **Contract agreement to prevent illegal poaching activities**

When hunters are discovered carrying out an illegal activity, CWRP asks them to sign a contract stating that they understand the new wildlife law and they will stop carrying out any illegal poaching activities of wild species. Within the CWRP overall project a total of 52 contracts of agreement to stop hunting, trading and providing guns were made from March 2002 to March 2003 in Preah Vihear and from March 2002 to September 2003 in Mondulkiri. (See table 5 for details) These contracts were only made in Mondulkiri and Preah Vihear, since Wild Aid and CI are responsible for law enforcement activities in Koh Kong and CWRP chose to cooperate with them rather than taking its own actions. Per previous discussion, this policy is being reconsidered. In Mondulkiri, when CWRP made no-hunting contracts with the police, they also attached a stop providing guns clause, since some police rent out their guns to civilian hunters for a share of the harvest.

***Table 5: Number of contracts made in Mondulkiri and Preah Vihear per category.***

Contract agreement	no-hunting	no-trading	stop providing guns	Total
Mondulkiri	36 or more	8	2	46
Preah Vihear	3	1	4	8
				<b>52</b>

- **Problems and Difficulties**

In some situation CWRP rangers or the cooperating police were not able to make contracts with known hunters because they escaped, were hiding or did not come to the local police when summoned to do so. Kry Masphal, Mondulkiri WPO Manager, reported that it had been, so far, impossible to meet a well-known tiger hunter because this hunter spent most of his time in the forest and he lived in Ratanakiri Province, which is outside the jurisdiction of the Mondulkiri police. Ratanakiri police were contacted. They attempted to visit his home, but were unsuccessful and discontinued the investigation on the grounds there was no hard evidence to pursue the case.

Another problem arises from the fact that in most cases the local authorities require evidence that exclude the testimony of CWRP rangers. Kry Masphal reported that it was often difficult to take actions against the offender because of the lack of evidence recognized by the authorities. The evidence must come from law enforcement personnel. Adding police to the ranger teams should reduce this problem.

In February 2003 Pich Roda (Mondulkiri Province) rangers encountered a problem with some border military. The military refused to agree on a no-hunting contract and threatened the rangers. The rangers had to retreat. The recruitment of police officers carrying a gun within our project should limit this type of problem, depending on whether the police or the military have the most firepower during any given encounter.

Mondulkiri provincial office also reported a lack of budget to employ more local police and rangers and patrol through both Pich Roda & Koh Nhek districts. CWRP rangers and police officers are not numerous enough compared to the area to be covered. Thanks to the new funding allocated to our project, we were able to upgrade to 10 rangers and eight policemen on direct contract in this province. We are focusing all of our efforts on one particular area: The Mondulkiri Protected Forest. This is the most important area for large mammals.

### WILDLIFE MONITORING

- ▶ We have carried out an assessment of our track discrimination keys between tigers and leopards. This shows that we cannot yet accurately discriminate among felid species with tracks measuring less than 100mm.

In May 2003 two of the world's leading big cats experts (Mel Sunquist and Ullas Karanth) were consulted relating to the interpretation of tracks found by CI rangers in the Cardamoms. The experts were provided with two photographs of the tracks and measurements of the pad dimensions. Initially the local people who recorded them identified them as tiger tracks. The big cats experts gave opposite answers; one of them stated that, without question, it was the track of a female tiger. The other one asserted that, without question, it was the track of a leopard. Jim Sanderson commented on all this and thought that it was a leopard. Joe Walston, WCS Phnom Penh stated that it was not possible from the evidence presented to determine whether it was a tiger or a leopard and the find should be categorized as Big Cat. This shows how difficult it is to discriminate between tiger and leopard tracks. The problem does not appear to be specific to CWRP. (By the way, in the case presented CWRP rangers were not involved. However, the report said the local people knew this animal, because per the photograph it was missing two toes. They said it was a tiger. However, there are problems with local people calling all big cats tiger and language translation problems from Khmer to English, so this does not resolve the matter in this particular case. CWRP criteria classifies tracks measuring over 100mm as tiger, but in the

case described above the measurements provided were well over 100mm, but several of the experts believed the measurements were not performed correctly, because from the appearance of the photo they didn't look that big.

- ▶ We have mapped the geographic distribution of the rangers patrol areas. This work allows us to assess the survey effort of our ranger teams and to see which areas should receive additional coverage based on most important tiger and elephant areas determined to date and additional areas where more info is needed. Using CWRP survey data we have prepared and analyzed maps of these key species records in relation to patrol routes. We then produced a single Cambodia distribution map showing records for the past two years for both species, color-coded by year. (Appendix VI) From this map, it appears that there are some areas where animals were present the first year but absent the second year.. However, after review of ranger patrol routes plotted quarterly, it was obvious that our rangers are not systematically monitoring the same areas over time, but instead are varying their routes each month in response to a variety of considerations. For example, due to security reasons, an area in Thmor Bang district with several tiger signs in 2001-2002 was not monitored in 2002-2003. In most situations, intermittent monitoring of certain areas is due to the fact that our rangers are combining anti-poaching and law enforcement activities with wildlife monitoring. When this is done, it compromises both activities—if teams are diverted from a wildlife monitoring route to follow up on poaching investigation, strict monitoring cannot be done. Likewise, if some wildlife presence/absence work is being done, it lessens focus on law enforcement. For this reason, many programs keep the two activities under separate teams. For our unique program, we think it best to combine the two activities, recognizing the inherent compromises. Of the two, anti-poaching and law enforcement are the higher priorities over wildlife monitoring, for the obvious reason that if these activities are not controlled in the short term, there are not going to be any animals to monitor in detail in the long term.
- ▶ Despite these monitoring shortcomings, we are able to identify the most- important areas for tigers and elephants in each region. For example, the Koh Kong Distribution of Tiger Location Records map in Appendix VI clearly shows an area in Mondul Sema district where tiger sign is recorded along the same route at the same approximate locations each year, indicating a resident population of tigers. We plan more intensive coverage for tiger in that area of the Cardamoms, and also for elephant and tiger in the Thmor Bang-Sre Ambel-Kampong Spea tri-border area, and for elephant and tiger in western Koh Nhek district in Mondulkiri, all based on our monitoring data over the past two years.
- ▶ We calculated the encounter rate of 14 species of large mammals recorded by CWRP. The review of the survey data used for this analysis highlighted a number of regional differences in the methods and decisions taken when recording signs. This shown the need for redesigning our methods and developing national standards.

### *Training*

The STF council approved this year's grant on the condition that CWRP coordinate mechanics of the training program with WCS and WildAid.

#### ▶ **Mondulkiri**

The training originally planned with WCS last year needs to be updated to meet the objectives set for this year's project. Preliminary discussions have been held with Joe Walston, Acting Country Director, while Colin Poole is in on leave to write a book. Hunter Weiler also has had preliminary discussions with Tony Lynam in Thailand. Tony is developing a wildlife law enforcement-training course for the WCS project in Mondulkiri, and

it is hoped our CWRP Mondulkiri police and possibly the rangers can attend. An alternative is to send the police to the enforcement training and develop a separate course that focuses on wildlife monitoring for the rangers.

WWF is recruiting an international advisor for their new wildlife sustainable use program in the Mondulkiri Protected Forest, which will also employ local community rangers and district police, based on the South African model. The WWF and CWRP have agreed to combine our two programs into one management structure, and it is anticipated the international advisor, a South African with ranger experience in a game preserve, will provide joint training to both the WWF and CWRP rangers and police sometime after his arrival in January 2004.

- **Koh Kong**

From December 3 to December 23, 2003, all ten of our Cardamom rangers and the WPO Koh Kong Manager and Provincial counterpart are attending training organized by Conservation International at their Cardamom Field Training Center. The former WildAid law enforcement trainer now works for CI and is organizing the training. The training will cover all aspects of rangers, except law enforcement tactics, which will be covered in a Phase 2 course in January/February conducted by WildAid at Bokor National Park. All of the CI Program DFW rangers are attending the training along with the CWRP rangers and also rangers from the FFI/MOE Samkos and Aural Wildlife Sanctuaries program. CI has purchased cameras for all our ranger teams and the rangers will be trained in proper use and given the cameras at the end of the course. This is obviously an important positive step in Cardamom conservation among the CAT, CI, and FFI supported MAFF and MOE programs.

### **INCREASED CONSERVATION AWARENESS AMONG RURAL CAMBODIANS**

Several informal workshops were organized in Preah Vihear, Mondulkiri and Koh Kong to educate the population about wildlife conservation and inform them about recent developments in wildlife law.

Workshops are not provided regularly but are given according to the needs identified by the provincial manager.

In Mondulkiri, village workshops gather the district and commune authorities and several villagers (up to 30 participants). However some families cannot attend village workshops due to their geographical location and the very bad state of the roads. For hunter and trader's families (from two to five persons) who live in these remote areas, workshops are directly organized in their house.

In Koh Kong two types of workshop are provided:

- ▶ Workshops provided to hunters: they gather about 10 persons and are given by the Koh Kong WPO manager, the provincial counterpart and the local authorities. After the workshop wildlife posters and brochures are distributed.
- ▶ Workshops provided to local people: the rangers and the provincial counterpart go directly to family's houses (three to five persons). After the workshop a brochure on wildlife conservation is distributed and read to the family to ensure a better understanding and a poster is stuck on the wall.
- ▶ In September 2003 Uch Seiha, Koh Kong Provincial manager, and Chay Reap rangers (new CWRP area) cooperated with the local authorities to organize a meeting with 4 villages (80 persons) and raise awareness on conservation issues. This was a great beginning to our

program in this area, which as discussed previously, is strategically important for conservation of the Cardamoms.

## OTHER MAJOR ACTIVITIES

### *Human-Elephant Conflict*

While the forest estate is still extensive, the proximity of people's houses to the forest, especially in old communes, is getting further from the forest edge. Due to increasing numbers of people living in areas traditionally inhabited by domestic elephants, destruction of crops while foraging is becoming more common.

Other the last two years, four major incidents involving elephants and local populations occurred in Cambodia:

- ▶ Two months ago, in the Cardamoms, near Sre Ambel, a crop raider elephant was captured by villagers, released upon the Department of Forestry and Wildlife (DFW) orders, and ultimately tranquilized by the Wildlife Protection Office (WPO) and taken to the zoo.
- ▶ In January 2002 a Cambodian Police Patrol boat saw an elephant cow and her calf swimming from the mainland to an inhabited island in the Gulf of Thailand. The elephants were brought to a village on the island where the villagers tied them up because they were afraid they would cause trouble. WildAid and DFW ordered the elephants released and plans were elaborated to capture these animals and take them out of the island. But before they could take any actions, the two elephant swam back to another island and then back to the mainland.
- ▶ In November 2001 a village chief and two of his deputies killed an elephant inside a village that had repeatedly destroyed crops and pushed over houses. The village chief was charged with the shooting. The man's family and neighbors pleaded for his release in a petition gathering more than 200 thumbprint signatures. The villagers stated that he killed the elephant to protect their plantations. When the case went to trial the charges against him were dismissed. This case was covered by a national newspaper (The Cambodia Daily)
- ▶ In July 1999 a farmer was arrested for killing an elephant cow and selling her calf for US\$460. He stated that he shoot the elephant to protect his crop and was released after he paid a fine of US\$265. The provincial deputy police chief said they did not put him in prison because the killing was unintentional. Later the calf was resold for US\$1,800 to a government official who owned a private zoo.

Two provinces are currently faced with human – elephant conflicts: Mondulkiri (southeast) and the Cardamoms (southwest). Although this problem is still small in Cambodia compared to other countries such India (nobody has yet being killed), it is taking on more and more importance.

The Community Wildlife Ranger Program (CWRP) has regularly reported several cases of two elephant raiding local communities' crops and destroying their houses in Pich Roda district, Mondulkiri province, since last February. Most of the incursions were reported to occur at night. The villagers asked to receive compensation from the government and actions to prevent against further unfortunate events of that type. Investigations are continuing. Latest status is that the two raiders are probably renegade feral domestic elephants. The local people are suggesting that they be allowed permission from DFW to knock down the rogues at the first opportunity. The elephants are getting more aggressive and have recently chased villagers. It may be only a matter of time until people get killed.

There is currently no policy from the government on crop raiding elephant. One of the problems is that DFW does not have a long-term experience of this problem. However they do recognize that it is their responsibility to protect the people from wild elephants and limit the damages cause on their goods. They have already considered several alternatives but no selections have yet been made. The following possibilities have been evaluated:

- Do nothing and hope the problem will solve itself
- Study the problem in more detail
- Dispatch a DFW team to shoot the problem elephants
- Pay compensation for damages done by the elephants
- Distribute pamphlet to locals on damage control
- Build fences and trenches around fields
- Post trained teams supplied with flash bangs and other exotic gimmicks
- Capture the problem elephants and relocate them to the zoo or to Siem Reap
- Capture the problem elephants and relocate them to a remote area

DFW organized a round table on Human Elephant Conflicts (HEC), co-chaired by CWRP Program Manager Keo Omallis and Project Officer Hunter Weiler. All Cambodia experts on elephant were invited, including representatives from WCS, WWF, FI, and WildAid. The alternatives listed above were debated, and a reluctant consensus was reached that it may be necessary to kill these two particular problem elephants, which appear to be feral domestic animals. Time seemed to be a major component that divided the participants between the ones who thought that we could not wait anymore, and take the risk of a villager being killed, and had, therefore, to give a special authorisation to the local authorities to deal with the problem themselves and the participants who preferred to take the time to set up a proper legal framework and selecting and building a team of professional elephant control officers, including training in Malaysia.

Following this debate, five persons (Hunter Weiler, Kry Masphal and three FFI staff) were sent to the Sri Lanka Symposium on Human Elephant Relationships and Conflicts. Field tours were attended in human-elephant conflict areas. The team returned to Cambodia with a new Cambodia strategy—DFW/MOE/FFI Human-Elephant Rapid Response Teams would be formed and trained in Mondulkiri and the Cardamoms.

These teams are now operational and are charged with investigating any further conflicts and reassuring and advising local villagers facing such conflicts on mitigation and self-defense measures. CWRP will provide information and support to these teams as appropriate.

### ***Collaboration with NGOs***

- ▶ **Koh Kong:** The CWRP continues to collaborate with the Conservation International (CI)/DFW Cardamom Conservation Program (CCP) in the Koh Kong/Cardamoms region, as evidenced by the joint training discussed previously. TCP is also sharing information with the Fauna and Flora International (FFI)/DFW project to designate a Managed Elephant Range (MER) in the Cardamom mountains area. The FFI/DFW Crocodile Project has requested CWRP to support field surveys in the Cardamoms and to have ranger teams monitor crocodiles as well as tigers and elephants.
- ▶ **Preah Vihear:** The cooperation of TCP with the WCS Cambodia Program has led to the formulation by WCS of a GEF program of wildlife conservation for the Northern Plains: Conservation Areas through Landscape Management (CALM). All Preah Vihear TCP staff and

activities have now been integrated into the CALM project. DFW is the executing agency for the project, with technical and financial support from WCS. The first year of the project, which consisted of data gathering and planning, has been completed, and the project is now moving into the implementation phase.

- ▶ **Mondulkiri:** The CWRP and WCS cooperated to establish the DFW/WCS Southern Mondulkiri Conservation Project in the Samling logging concession, and CWRP rangers have now been fully integrated into the project

CWRP Koh Nhek rangers collaborated with the FFI team to conduct an elephant survey in East Koh Nhek within the framework of a FFI elephant collaring operation. Four CWRP rangers were involved in this project. They were given informal training, by FFI, covering basic information on the collaring protocol. The rangers were responsible for locating and tracking the elephants. An expert elephant darting team was brought in from Malaysia to support the operation. During the first attempt, a herd of elephants was sighted, but out of range of the dart gun.

On the second attempt, the team left Koh Nhek on the third of February 2003 and spotted the first evidence of elephant presence on the sixth (tracks of three elephants, approximately two days old). On the seventh they found fresh sign (tracks, dung – still wet – and feeding signs) of around 50 elephants. Two CWRP rangers were then left to follow these elephant while the rest of team moved to another place to locate a second herd. Unfortunately the operation was terminated at this point due to several delays and problems encountered by FFI, including impossible logistics due to heavy rains. A third attempt will be made in the next dry season in late early 2004. FFI has requested CWRP to begin monitoring the elephants in December. The Malaysian team will arrive in January. It is hoped to collar two elephants, one in the Mondulkiri Protected Forest and one in the Phnom Prich Wildlife Sanctuary. The elephant's movements would then be tracked by satellite for a year to determine range extent, and a ground team would follow the elephants to determine food, water, and salt lick use.

WWF has secured \$116,000 per year for the next two years to establish a pilot program in the Mondulkiri Protected Forest to test the South African model of wildlife conservation by sustainable use. The initial goal of the project is to establish a totally protected core area in the best of the habitat to bring the large mammals back to the point where high end ecotourism, licensed sport big game hunting, and bushmeat harvest can be conducted in the adjoining areas, which will pay for management of the project. It is anticipated that it will take at least 10 years to reach this point. A South African international advisor has been recruited and will begin work in January. Local rangers will be recruited and trained to secure the Intensive Protection Zone (IPZ);, operating out of field posts that will be constructed in early 2004. Since ten CWRP rangers and eight district police, operating out of their communities, already patrol this area, WWF, DFW, and CAT are attempting to negotiate a single management structure and integrated project. The funding acquired to date by WWF is only about half what is required, so continued funding of the CWRP project by the existing donors will be required to properly initiate this joint project. WWF will attempt to find additional donors to adequately fund the first 10 years of the project.

### ***International, National and Media***

Kry Masphal received training on Wildlife Conservation and management at the Wildlife Institute of India (WII) from November 1<sup>st</sup>, 2002 to January 31<sup>st</sup>, 2003. In September 2003, He and Hunter Weiler attended a Symposium on "Human Elephant Relationships and Conflicts" in

Colombo, Sri Lanka along with three FFI staff (see details provided in the Human Elephant Conflict section).

Cheang Dany participated in the XII World Forestry Congress in Quebec, Canada held between the 21<sup>st</sup> and 28<sup>th</sup> of September 2003. Dany also participated in the tri-national meeting "Transboundary Biodiversity Conservation" in Bangkok from the 17<sup>th</sup> to the 20<sup>th</sup> of November 2003, which was funded by the ITTO project for the Thailand-Laos-Cambodia tri-border area.

The UNDP/GEF project assisting Yok Don National park in Vietnam, which borders on the Mondulkiri Protected Forest, has contacted Dany to initiate staff exchange to promote joint conservation of the transboundary area. These exchanges could begin in early 2004."

Several CWRP staff were invited to the "National Workshop on Biodiversity Conservation and the Millennium Development Goals: The Sustainable Use of Ecosystem Services for Poverty Reduction in Cambodia" organized in Phnom Penh by the United Nation Development Program (UNDP) and the Cambodian Ministry of Environment (MoE).

Hunter gave a presentation on the "Conservation Status of Eld's Deer in Cambodia" during a WCS/Smithsonian sponsored workshop on Eld's deer conservation and restoration organized in Thailand in November 2003. A map and table showing the distribution of Eld's deer in Cambodia is provided in Appendix VI and a summary of Hunter's presentation will be published in the workshop proceedings in early 2004. Hunter was one of three Cambodian representatives at the workshop. The others were Tom Clements of WCS and Proum Sovanna of WCS/WPO. Sovanna gave a presentation on Eld's deer conservation in Preah Vihear. Representatives from India, Myanmar, Thailand Laos, Vietnam and China also attended.

In February 2003, Hunter Weiler and Chheang Dany acted as "fixers" to organize and provide overall coordination of the Animal Planet/Jeff Corwin Experience film in Cambodia. Mondul Sema rangers were filmed traveling up a Cardamom's river with Jeff and removing mine snares placed for tigers. The film includes segments on Conservation International Cardamoms program, WildAid Wilderness Protection Mobile Team, and the WPO Phnom Tamao Zoo and Wildlife Rescue Center. The film premiered in October 2003. Copies will be provided to the project and the donors.

During January and February 2003, Hunter Weiler and Ouk Kimsan acted as "fixers" to organize the National Geographic documentary on the ancient jars containing human skeletons that were discovered by the CWRP rangers in the Cardamom Mountains. Two the jars were flown by helicopter to Phnom Penn and placed in the National Museum at the request of Princess Bupha Devie, Minister of Culture and Fine Arts. Carbon dating results indicated a date range of 1434-1481. The film credits the tiger rangers with discovering the jars and Hunter Weiler and the tiger rangers appear in the film and are credited with organizing the film expedition to the Cardamoms. The film premiered worldwide in over 100 countries in August 2003 as "Body Jars" on the National Geographic International series Riddles of the Dead series. Copies of the film have been provided to the donors. King Sihanouk praised the film by letter, and the film has been selected as one of 59 finalists to compete in the prestigious Guangzhou International Documentary Film Festival. This year's festival theme is cultural heritage/diversity and ancestor stories. "Body Jars" is the only National Geographic finalist.

It is important to note that it would have been impossible for the CWRP to be involved in any of the above important international activities without the support of NFWA/STF and USFWS. The fact that CWRP has played an important role in these activities is an indicator of the value-added multiplier effect of the project.

### ***GIS training of WPO Senior Staff***

Due to the heavy agenda of DFW Senior Staff, we decided to organize an intensive course over a long weekend. The training covered both operations applied to the specific need of DFW Senior Staff and common tasks (see List of Topic in Appendix VII). Although this training was particularly intense, the trainees had the opportunity to practice each lesson and to ask questions. A guidebook was produced specifically for this training and distributed to 15 DFW staffers. This guide shows the lessons step by step with numerous illustrations. It was an aid during the training but will also allow the trainees to practice independently and ask questions even after the training. Seven DFW staff assiduously attended the course and received a certificate from MAFF. Overall DFW GIS capabilities have definitely improved over the past year.

### **EVENTS IN PREAH VIHEAR SINCE INTEGRATION WITH CALM PROJECT**

Eight community rangers, most former CWRP, are presently working for the CALM project. Four of them are based in the Kulen Promtep Wildlife Sanctuary and four in Chhep Protected Forest. From January to June 2003, in both areas, they conducted surveys on key mammal species and large water birds. Several signs of banteng and gaur were recorded in areas of evergreen forest. Among water birds, 3 species of vulture (red-headed, white-rumped and long-billed), giant ibis, white shoulder ibis, sarus crane and lesser adjutant were recorded. No signs of tiger have been recorded since CWRP was integrated with CALM in January 2003. However, it is important to note that CALM has not yet re-visited the Preah Vihear/Siem Reap frontier in and adjacent to central Kulen Promtep Wildlife Sanctuary, which is where camera trap and sign previously confirmed the only resident tiger population in the Northern Plains.

WCS provided training both to the provincial forest officials and to the rangers (details in table 6). At the end of the training the participants were given certificates signed by the Provincial Department of Agriculture, Forestry and Fisheries and the Provincial Department of Environment.

***Table 6: Training provided to the CALM team***

<b>Provincial Forest Officials</b>	<b>Rangers</b>
Use of field technical map Use of Global Positioning System (GPS) Camera Trap	Use of Global Positioning System (GPS) Use of Compass and Map Camera Trap Data Sheet Further training in field survey

All activities included cooperation between the provincial staff, policemen and local authorities. This allowed the removal of several traps and the confiscation of wildlife in villages.

MoE now manages all Kulen rangers, since they work within the Kulen Promtep Wildlife Sanctuary.

Chhep rangers work for the Forestry Administration (formerly DFW). Chhep rangers work plan for the near future will focus on:

- The status of logging concessions adjacent to the Chhep core zone protected forest
- The setting of Camera Traps
- The distribution of Eld's deer during the wet season
- The survey of water birds nesting sites

One of WCS local guides, Mr. Muy Can, (former CWRP ranger) from Preah Vihear Province, working on the CALM project, was killed in October in the Chhep protected forest. He was murdered as he walked back to his village after completing some Giant Ibis monitoring. The relevant Government agencies were informed and an investigation is currently underway. It appears it was a robbery, carried out by a gang of local Cambodian cattle thieves that had been operating in the area and were on their way to Laos to sell stolen cattle. WCS is taking care of Can's family. Can was operating in a two man team, but his partner had turned off the road to his village prior to the murder. In light of this incident security procedures were reviewed for CWRP rangers. All of CWRP Mondulkiri two-man ranger teams now patrol with an armed police officer. In Koh Kong, from December 2003, the Provincial Manager and the Provincial Counterpart will each separately accompany a ranger team each month and will be accompanied by two armed police. For next year's project, we will seek funding for incorporating district police into the Cardamoms ranger program in a manner similar to the successful Mondulkiri model. Moreover, all Cambodian CWRP staff is covered by a group policy that covers hospitalization and also has a US\$5000 life insurance clause. If CWRP has the misfortune of an employee death, we will work with the family to make sure the US\$5000 is used in a manner to best insure the long-term interests of the affected family.

## ASSESSMENT

Shortly after joining the team, Chheang Dany traveled to CWRP Provincial offices to evaluate the project and listen to the issues raised by the Provincial teams. Back in Phnom Penh he reported his observations to Hunter Weiler and together they discussed how to improve the project.

Based on ranger recommendations, a new patrol policy was adopted and will be implemented from December 2003: Rather than one long patrol of around 10 days each month, the rangers will go out on two patrols of a week or so, with a break of at least a week between. This will result in more total time in the field each month.

Also from December 2003, we are requiring the Koh Kong Regional Manager and the Provincial Counterpart to each separately accompany a ranger team each month. Due to the high profile of these two individuals and the fact that ex-ranger Kong Vuthy is still running an armed poaching gang in the Cardamoms and do to our policy of attempting to develop our own law enforcement capability in the Cardamoms based on the Mondulkiri model, the KK Regional Manager and Provincial Counterpart will be accompanied by two armed police when they go out with the rangers. We will evaluate the desirability and feasibility of having police accompany all KK ranger teams in our next proposal.

Both Mondulkiri and Koh Kong rangers asked for additional medical supplies. Uch Seiha and Pak Vong Somethy were provided with fully equipped standard medical kits obtained in Phnom Penh, which were distributed to every ranger and police officer.

The management team carried out a full review of all program equipment and an appropriate decision was taken relating to any non-functioning equipment. As detailed in a previous section, a new policy was adopted to ensure each member knows about the state of the equipment and immediately report any problems.

### *USFWS Fred Bagley visit in May 2003*



*Track measurement: the CWRP team is leading Hunter Weiler (CAT), Fred Bagley (USFWS) and Andy Maxwell (WWF) on a field expedition in the Mondulkiri Protected Forest.*

After visiting projects in Thailand, Fred toured the Cardamoms with WildAid and the WCS/DFW project in Keo Seima, Mondulkiri. The CWRP Team then met him in the Provincial capital, Sen Monorum. The Project Officer, Regional Manager, Provincial Forestry Office counterpart, Provincial Police Chief, District Police Officers, and rangers proceeded by Russian Jeep to the most remote portion of the Mondulkiri Protected Forest, near the Vietnam border, where they rendezvoused with a elephant-mounted Phnong minority CWRP ranger team. The CWRP team showed Fred around what is widely regarded as the best large mammal area in Cambodia. The area has tiger, leopard, elephant, wild water buffalo, gaur, banteng, and Eld's deer. The three-day trip demonstrated CWRP operational capabilities in planning, management, field craft, logistics, etc., under extremely difficult conditions at the beginning of the rainy season.

### ***Elephant Audit***

Our project was one of 21 elephant conservation projects in Asia evaluated by an environmental audit process funded by the UK NGO elephant family (Jepson and Canney 2003). This first-of-its-kind performance assessment involved visits to project sites, interviews with project staff, and extensive review of project documents. Our project received the highest score in Cambodia and one of the best rankings overall, with a Very Strong rating for Project Delivery (Track Record), and Strong ratings for Vision and Strategy, Organizational Systems, and Capacity to Act. The audit has received considerable attention from the conservation community, and was the subject of articles in *The Economist* magazine and the *Phnom Penh Post*, both available from the CAT website <http://www.felidae.org>. The full text of the audit report (56 pages) can be obtained from the elephant family website <http://www.elephantfamily.org>

## CONCLUSION AND FUTURE

This report was completed in December 2003, along with our proposal for the year beginning May 1, 2004. At this point there are many uncertainties about the future. Since the national election in July, a new government has yet to be formed, delaying many conservation-related initiatives. The Department of Forestry and Wildlife has been upgraded to the Forestry Administration. The Wildlife Protection Office is proposed for Department status. The Forestry Administration will de-centralize into four Regional Offices for project management, with implications for CWRP management structure. All legal logging is still suspended, but a year-long review of new forest concession plans is expected to result in a resumption of logging in 2004 in some areas. The government's forest monitor, Global Witness, has been terminated and replaced with SCS, which is just beginning to operate. New implementing regulations for the new Forestry law are under development, as well as new protected species lists and wildlife and community forestry and natural resource management laws, regulations, and sub-decrees and parkas. All of these activities are evolving under extreme controversy, with little agreement among the various parties on many key issues.

Within the international conservation NGO community, rapid change and uncertainty is occurring as well. Several country directors and project managers have left and are being or have been recently replaced. Several new international NGO's are moving into Cambodia and trying to establish programs. Existing major programs are being re-structured. Funding for the next year or two is a problem for many programs in most organizations. Full funding beyond two years has not been achieved for any major conservation program in any region of Cambodia by any major conservation NGO.

Against this backdrop, there is one constant. The CWRP program has been successfully working in the field since 2000, carrying out successful month to month wildlife monitoring, anti-poaching, and conservation awareness activities by rapidly responding to new developments and requirements. It is essential for the CWRP program to continue in its present form for at least another year. CWRP is the only program currently working in the Cardamoms in the vast area between the WildAid coastal program and the CI Central Cardamoms program. CI has requested the CWRP to not only continue to operate independently for another year, but to add district law enforcement personnel to complement CI and WildAid efforts, because neither CI nor wild Aid enforcement teams are adequate in themselves. In Mondulkiri, WWF is starting up a major new program in the Mondulkiri Protected Forest that includes stationing of local rangers and police at outposts in the forest. However, the program only has half the funding needed, and has agreed with CWRP to jointly manage the area, with the community-based CWRP rangers and police complementing the IPZ out-post based rangers and police.

An STF condition of the current CWRP grant is "Aggressively pursue matching and/or alternative funding or partnerships to build sustainability for the future of this project." CWRP has clearly met this requirement for matching funding and partnerships. Regarding alternative funding, CWRP participated in the Cambodia workshop to establish Cambodia priorities for the new Critical Ecoregion Priority Fund in summer 2003. It is anticipated that CWRP will be highly qualified to compete for some of this funding. However, applications for this funding will not be accepted until summer 2004, and funds will not be available until autumn 2004. Since the CWRP completes its current grant by May 1, 2004, it will be essential for CWRP to receive another year's funding from STF and USFWS for 2004-2005, with possible supplementary funding available from CEPF by late 2004.

For additional details on next years plans, please see the proposal we have submitted for the year beginning May 1, 2004.

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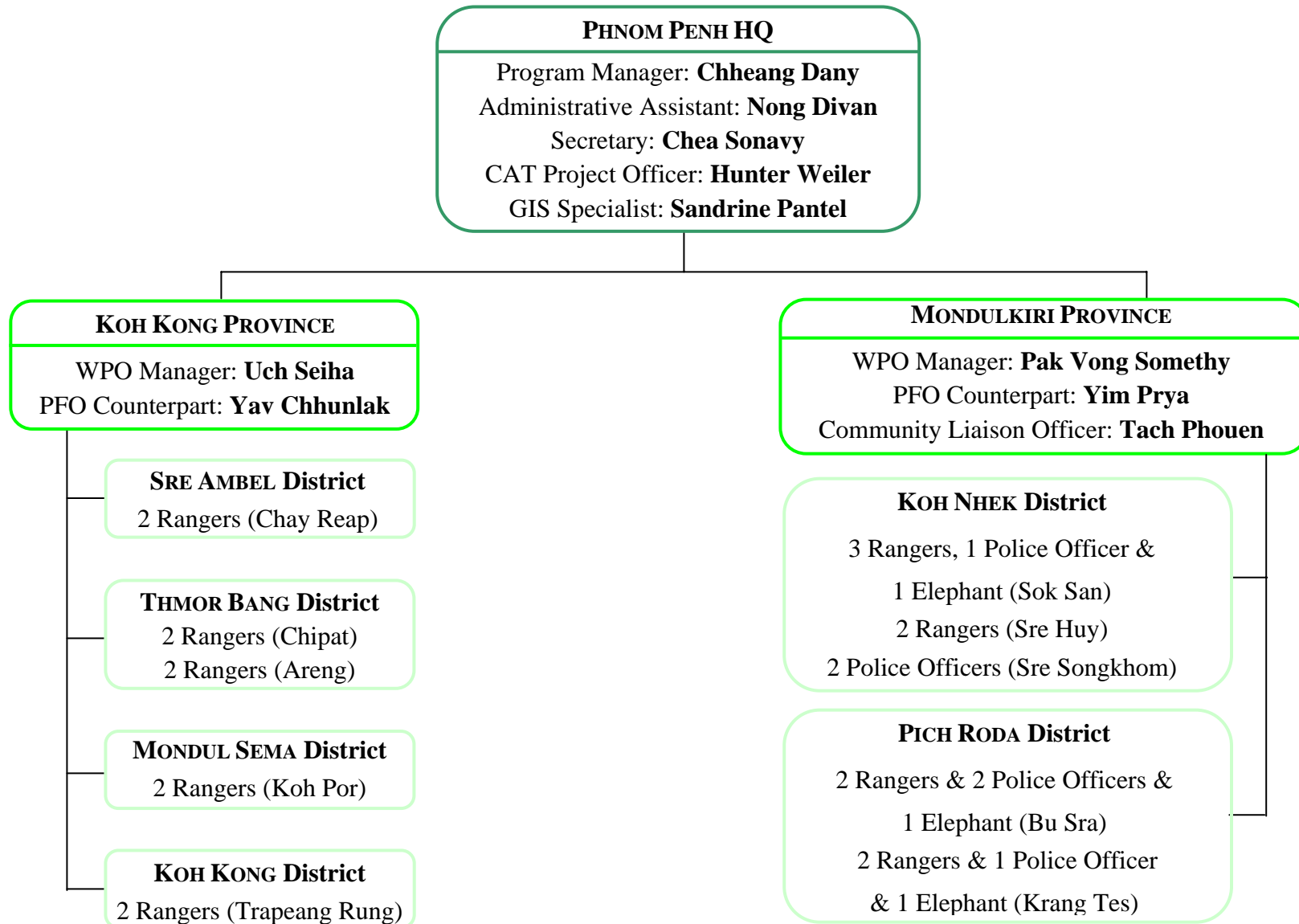
## ACRONYMS

AECF	Asian Elephant Conservation Fund
CALM	Conservation Areas through Landscape Management
CAT	Cat Action Treasury
CCP	Cardamom Conservation Program
CI	Conservation International
CWRP	Community Wildlife Ranger Program
DFW	Department of Forestry and Wildlife (Now Forestry Administration)
FFI	Fauna and Flora International
GEF	Global Environmental Facility
GPS	Global Positioning System
HEC	Human Elephant Conflict
KK	Koh Kong
MAFF	Ministry of Agriculture, Forestry and Fisheries
MER	Managed Elephant Range
MK	Mondulkiri
MoE	Ministry of Environment
NFWF	National Fish and Wildlife Foundation
NGO	Non Governmental Organization
PV	Preah Vihear
TCP	Tiger Conservation Program
RTF	Rhino and Tiger Fund
STF	Save the Tiger Fund
SWEC	Southwest Elephant Corridor Program
UNDP	United Nation Development Program
USFWS	US Fish and Wildlife Service
VHF	Very High Frequency
WCS	Wildlife Conservation Society
WWF	World Wide Fund for Nature / World Wildlife Fund

**APPENDIX I: ORGANIZATION CHART**

Ministry of Agriculture, Forestry and Fisheries  
Department of Forestry and Wildlife  
Wildlife Protection Office

**Community Wildlife Ranger Program**



**APPENDIX II: STAFF LIST**

## Community Wildlife Ranger Program Staff List - December 2003

<b>N°</b>	<b>Name</b>	<b>Role</b>	<b>Location</b>
01	Kristin Nowell	CAT Grant Administrator	USA
<b>Phnom Penh Headquarters</b>			
02	Hunter Weiler	CAT Project Officer	Phnom Penh
03	Sandrine Pantel	GIS Specialist	Phnom Penh
04	Chheang Dany	WPO Program Manager	Phnom Penh
05	Nong Divan	Administrative Assistant	Phnom Penh
06	Chea Sonavy	Secretary	Phnom Penh
<b>Koh Kong Region</b>			
07	Uch Seiha	Koh Kong Manager (WPO)	Koh Kong
08	Yeav Chhunlak	Provincial Forestry Office Counterpart	Koh Kong
09	Sous Sim	Ranger, Thmar Bang district (Areng)	Koh Kong
10	Nat Vun	Ranger, Thmar Bang district (Areng)	Koh Kong
11	Chhun Savat	Ranger, Thmar Bang district (Chipat)	Koh Kong
12	Tom Ny	Ranger, Thmar Bang district (Chipat)	Koh Kong
13	Chan Lon	Ranger, Koh Kong district (Trapeang Rung)	Koh Kong
14	Piek Mar	Ranger, Koh Kong district (Trapeang Rung)	Koh Kong
15	Kim Khen	Ranger, Mondul Sema district (Koh Por)	Koh Kong
16	Sam Sophal	Ranger, Mondul Sema district (Koh Por)	Koh Kong
17	Sao Somnang	Ranger, Sre Ambel district (Chay Reap)	Koh Kong
18	Som Veun	Ranger, Sre Ambel district (Chay Reap)	Koh Kong
<b>Mondulkiri Region</b>			
19	Pak Vong Somethy	Mondulkiri Manager (WPO)	Mondulkiri
20	Thac Phoeun	Community Liaison Officer (WPO)	Mondulkiri
21	Yim Parya	Provincial Forestry Office Counterpart	Mondulkiri
22	Leang Kha	Ranger, Koh Nhek district (Sok San)	Mondulkiri
23	Sam Pros	Ranger, Koh Nhek district (Sok San)	Mondulkiri
24	Chan Mony	Ranger, Koh Nhek district (Sok San)	Mondulkiri
25	Chhoum Buntheun	Police Officer, Koh Nhek district (Sok San)	Mondulkiri
26	Leang Nor	Ranger, Koh Nhek district (Sre Huy)	Mondulkiri
27	Main Ren	Ranger, Koh Nhek district (Sre Huy)	Mondulkiri
28	Yom Hon Eing	Police Officer, Koh Nhek district (Sre Songkhom)	Mondulkiri
29	Reun Ly	Police Officer, Koh Nhek district (Sre Songkhom)	Mondulkiri
30	Reun Sophal	Police Officer, Koh Nhek district (Nong Khilek)	Mondulkiri
31	Ghan Thin	Ranger, Pich Roda district (Bu Sra)	Mondulkiri
32	San Lors	Ranger, Pich Roda district (Bu Sra)	Mondulkiri
33	Yim Mok	Police Officer, Pich Roda district (Bu Sra)	Mondulkiri
34	Sram Phat	Police Officer, Pich Roda district (Bu Sra)	Mondulkiri
35	Krong Nov	Ranger, Pich Roda district (Krang Tes)	Mondulkiri
36	Eum Vit	Ranger, Pich Roda district (Krang Tes)	Mondulkiri
37	Chhep Bunlong	Police Officer, Pich Roda district (Krang Tes)	Mondulkiri
38	Chhop Pheun	Police Officer, Pich Roda district (Pou Chri)	Mondulkiri
39	Keugn Rotha	Ranger, Pich Roda district (Pou Chri)	Mondulkiri

### **APPENDIX III: EQUIPMENT LIST**

#### **Phnom Penh Office Equipment:**

Desktop computer	1
Laptop computer	1
Truck, Hilux	1
Rifle, Ruger M77.375 H&H Magnum	1
GPS	3
Video Camera	1

#### **Mondulkiri Office Equipment:**

GPS	8
Camera	5
Handheld radio	7
Table radio	1
Small motorbike	5
Big motorbike, 250cc	1
Generator	1
Personal Medical Kit	21
Individual Field Equipment	20

#### **Koh Kong Office Equipment:**

GPS	7
Individual Field Equipment	10
Desktop	1
Camera	6
Office Radio	1
Handle Radio	1
Motorbike, 100cc	1
Motorbike, 250cc	1
Personal Medical Kit	12

Note: Individual Field Equipment includes hammock, raincoat, backpack, tarp & mosquito net

**APPENDIX IV: POLICE CONTRACT**

**Kingdom of Cambodia**

**Nation Religion King**

Department of Forestry and Wildlife  
Wildlife Protection Office  
Tiger Conservation Program

**Working contract of police official**

My name: Mr. .... Age.....years old, Nationality.....  
Address: Village.....Commune.....District.....Province.....  
Occupation:.....Position.....

I have been recruited to work for The Tiger Conservation Program of Department of Forestry and Wildlife in Mondulkiri and agreed as following:

1. Work as fulltime counterpart with Tiger Conservation Program.
2. Join to conserve wildlife under supervision of TCP's Regional coordinator.
3. Regularly investigate and take action on illegal wildlife trading and hunting.
4. Destroy and collect hunting traps, snares and instrument in the forest.
5. Join patrol with TCP rangers when it is necessary.
6. Every cracking down activity has to lead by forestry official.
7. Arrest offenders and evidences whenever no presence of forestry official.
8. Attend training course that TCP official, wildlife specialist group or law enforcement team provided.
9. Report urgently any hunting of tiger, elephant, wild cattle and/or prohibited species.
10. Provide monthly report to TCP's Regional coordinator at the end of each month.
11. Take care all equipments that provided by TCP.
12. Provision of information and report must be true.
13. No other actions to be acted without a consensus from TCP's Regional coordinator.

I do obey and comply with the above terms of reference and promise to work for TCP with pleasant manner. I would like to abide by the TCP regulations and the government laws.

To ensure that the above statements are true, I like to give my thumbprint as evidence.

Made in.....2002

TCP official

Have seen and agreement  
District governor

Thumbprint

**APPENDIX V: TABLE OF CONFISCATION: MARCH 2002 – SEPTEMBER 2003**

<b>Confiscated Wildlife/Guns</b>		
<b>Mondulkiri</b>	<b>Koh Kong</b>	<b>Preah Vihear</b>
<ul style="list-style-type: none"> <li>▪ CWRP found a local trader in possession of an Eld deer calf. But the calf dies of diarrhea. It was buried near the trader house</li> <li>▪ CWRP confiscated an elephant calf, but it died 3 days later</li> <li>▪ the provincial forest office confiscated several wildlife specimen from the provincial town market &amp; destroyed them</li> <li>▪ the rangers asked the 2 groups of Vietnamese to release monitor lizards (Pich Roda)</li> <li>▪ Gaur horns were confiscated</li> <li>▪ collaborated with polices and other district officials to confiscate banteng horns (Koh Nhek)</li> <li>▪ collaborated with police in Senmonorom to confiscate sambar meat &amp; release a monitor lizard (Pich Roda)</li> <li>▪ 1 python skin, 5 monitor lizards &amp; 6 turtles (Koh Nhek)</li> <li>▪ cooperated with police to withdrew an AK machine gun from the district police officer who killed a sambar</li> <li>▪ Pich Roda rangers released a monkey baby used as bait by trappers</li> <li>▪ Koh Nhek police (cooperating with our project) found 4 villagers using guns (3 CKC &amp; 1 AK47) illegally &amp; confiscated them.</li> <li>▪ cooperated with district military police along the Vietnamese border. Confiscated 3 bicycles from 3 Vietnamese.</li> <li>▪ confiscated a gun &amp; dry Sambar meat from a hunter in Pich Roda</li> <li>▪ Pich Roda cooperation police confiscate 7 machine guns from local people &amp; police who use gun without permission</li> <li>▪ Pich Roda cooperation polices confiscated a CKC machine gun &amp; wild species dry meat</li> <li>▪ Koh Nehk cooperation police confiscated a machine gun from a villager.</li> <li>▪ cooperation police &amp; CWRP provincial counterpart confiscated a baby banteng &amp; released it to the wild (Koh Nhek)</li> <li>▪ confiscated 5 machine guns in Koh Nhek</li> <li>▪ cooperated Pich Roda police to confiscate 2 machine guns &amp; a leopard skin &amp; bones from a group of hunters. The leopard meat was burnt. The</li> </ul>	<ul style="list-style-type: none"> <li>▪ Areng rangers removed 24 traps including 6 tiger traps and 18 pangolin traps</li> <li>▪ collaborated with WildAid to confiscate 15kg of turtle shell from a villager (Sre Amble). The turtle shells were burned.</li> <li>▪ collaborated with WildAid to confiscated 5 chain saw (Sre Amble)</li> <li>▪ Areng Rangers are investigating to find traps location</li> <li>▪ WildAid confiscated a hunted sambar from a soldier</li> <li>▪ CWRP cooperated with WildAid to confiscate a machine gun from 2 hunters. The hunters escaped after gun withdrawal.</li> <li>▪ a turtle (11.5kg), a water monitor lizard (5.7kg) &amp; a python (12.2kg) were confiscated from a trader in Sre Amble. The animals were released in Botom Sakor the next day.</li> <li>▪ CWRP cooperated with district police to confiscate a bear cub, the cub was taken to Phnom Tamao Wildlife Rescue Center</li> <li>▪ Chay Reap-based Rangers found a trap made of a 40m long cable</li> </ul>	<ul style="list-style-type: none"> <li>▪ confiscate wild bird</li> <li>▪ leopard cub caught in April 2002 (Koulen)</li> <li>▪ cooperated with police to confiscated a captive young black bear. Brought it to CWRP office</li> <li>▪ cooperated with WildAid to confiscate wildlife species and a carcass from a local trader (Tbeng Meanchey)</li> <li>▪ Cooperated with WildAid and the provincial governor release wildlife species in the forest</li> </ul>

<b>Confiscated Wildlife/Guns</b>		
<b>Mondulkiri</b>	<b>Koh Kong</b>	<b>Preah Vihear</b>
<p>skin &amp; bones were taken to Phnom Penh office.</p> <ul style="list-style-type: none"> <li>▪ cooperated with Pich Roda police to confiscate an AK machine gun from an administrative police using the gun without permission along the Cambodian-Vietnamese boundary.</li> <li>▪ cooperated with Koh Nhek police to confiscate a CKC machine gun.</li> <li>▪ confiscated 2 machine guns (Koh Nhek)</li> <li>▪ confiscate 4 monitor lizards and a fishing cat skin. The lizards were released in the forest and the skin taken to MK CWRP office.</li> <li>▪ Cooperated with Pich Roda district authorities to confiscated 2 AK-47 rifles</li> <li>▪ Cooperated with district authorities to confiscate 3.3kg of sambar meat from a trader. The meat was burnt</li> <li>▪ Cooperated with district authorities to confiscate 44kg of gaur meat. The meat was burnt in front of the trader.</li> <li>▪ confiscated 1 CKC rifle from a group of hunter who killed a sambar</li> <li>▪ confiscated 4 CKC and 1 AK rifles from villagers</li> <li>▪ Koh Nhek team confiscated 3 rifles from villagers</li> <li>▪ Pich Roda team confiscated 1 riffle from villager</li> <li>▪ Koh Nhek team confiscated 1 CKC rifle from a local hunter who killed a barking deer</li> <li>▪ Pich Roda team confiscated 1 CKC rifle from a local hunter who killed a sambar</li> <li>▪ Koh Nhek team confiscated 1 CKC rifle from a local hunter</li> <li>▪ A CWRP Police officer confiscated a B40 rocket and 4 grenades, kept for killing wildlife, including fishes, from a villager.</li> </ul>		

### Distribution of Eld's Deer in Cambodia

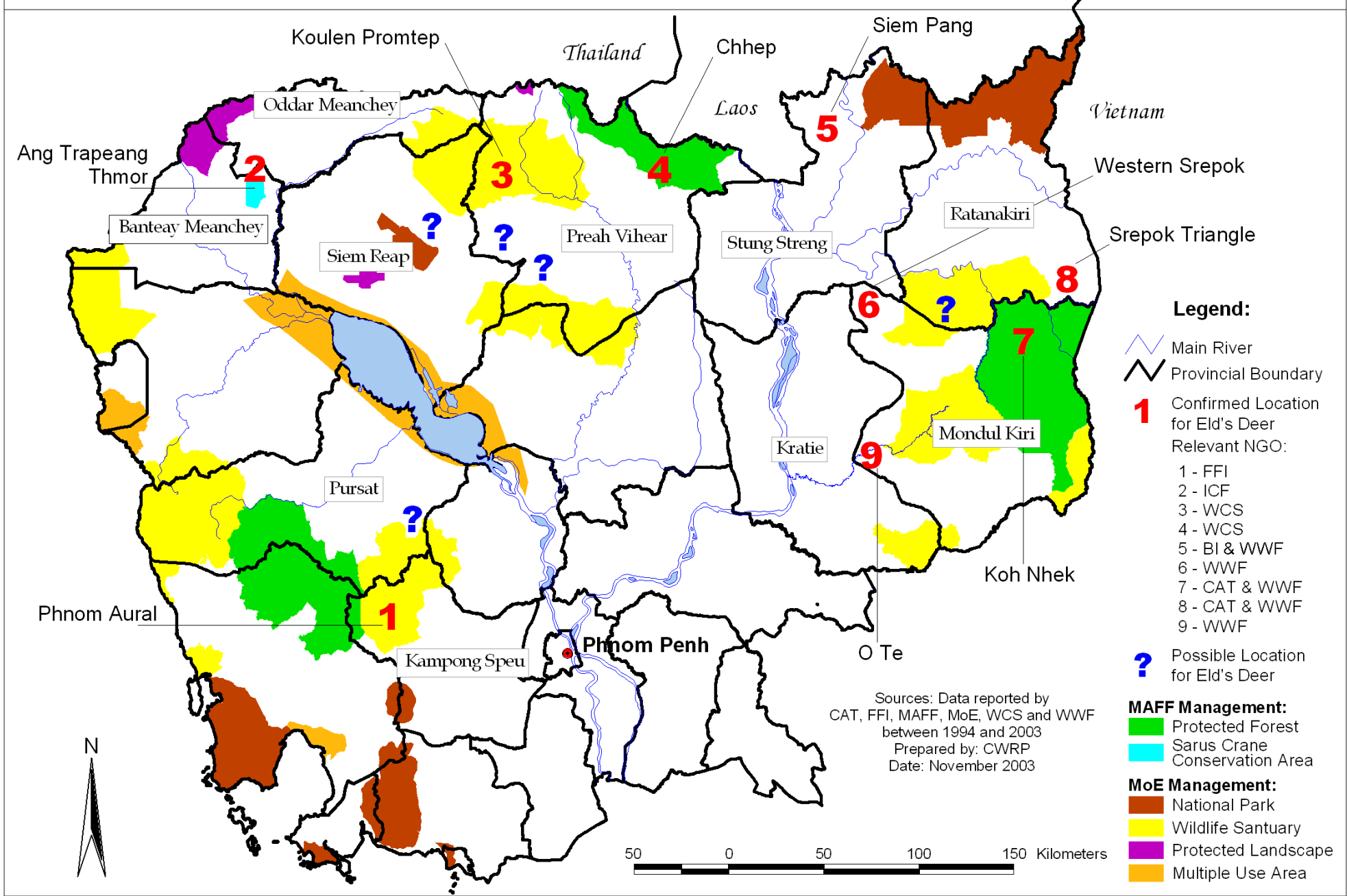
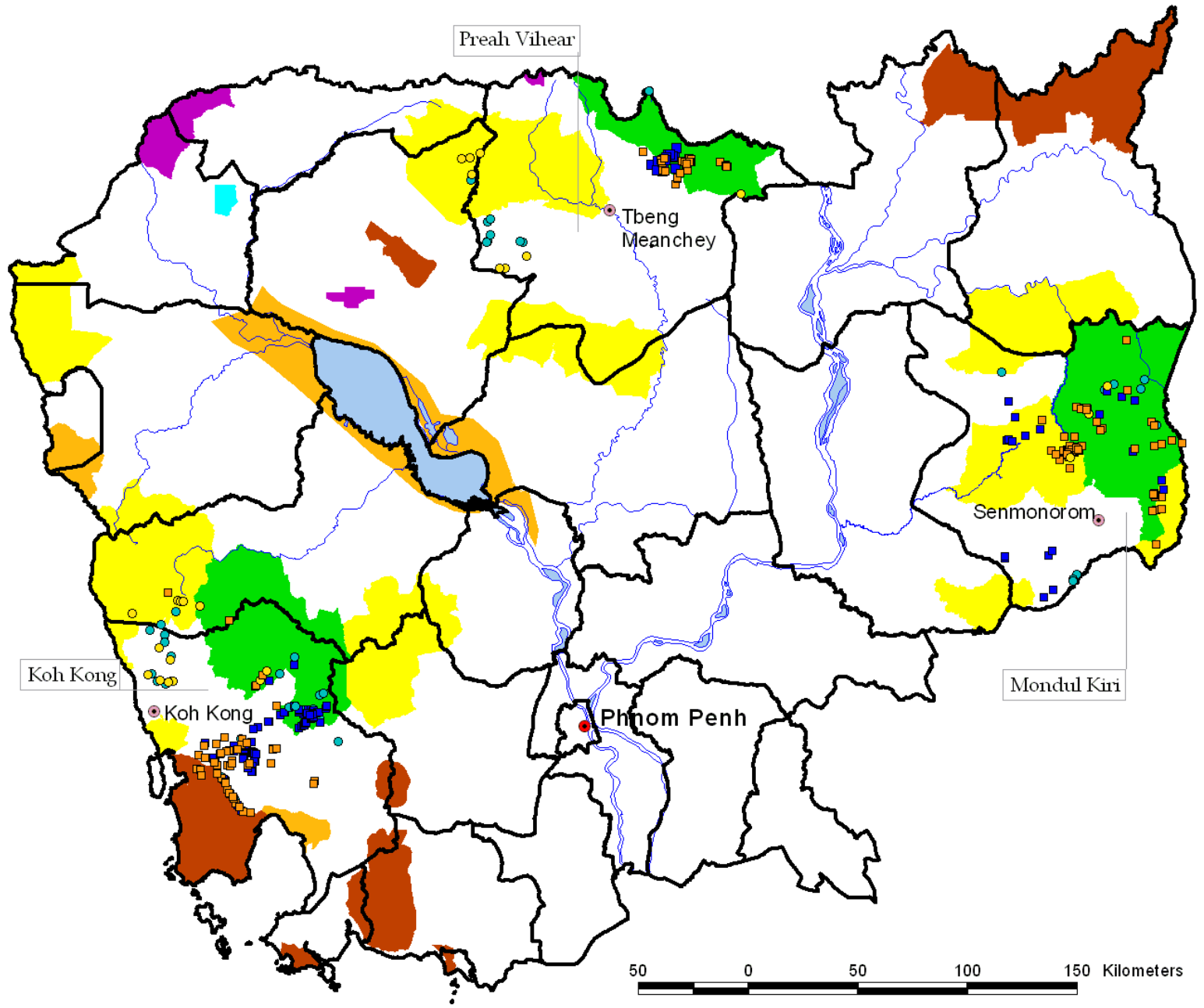


Table: Distribution of Eld's Deer in Cambodia (accompanying map)

Map #	Name	Confirming Information	Estimated Population	Relevant Ministry	Relevant Conservation NGO
1	Phnom Aural	Direct observation: 2000 Reliable reports: 2000-2003 Tracks: 2001	15 – 20	Ministry of Environment (MoE)	Fauna & Flora International (FFI)
2	Ang Trapeang Thmor	Direct Observations, Reliable reports, Tracks: 2000-2003	10 – 20	Ministry of Agriculture Forestry & Fisheries (MAFF)	International Crane Foundation (ICF)
3	Koulen Promtep	Direct observations, reliable reports Tracks: 2001-2003	35 – 60	MoE	Wildlife Conservation Society (WCS)
4	Chhep	Camera-trap photos, Direct observations: Reliable reports, Tracks: 2001-2003	45 – 60	MAFF	WCS
5	Siem Pang	Camera-trap photos, Reliable reports, Tracks: 2002	25 – 50	MAFF	Birdlife International (BI)
6	Western Srepok	Camera-trap photos, Tracks 2003	05 – 10	MAFF	WorldWide Fund (WWF)
7	Koh Nhek	Direct observation (aerial survey): 1994 Direct observations, Reliable reports, Tracks: 2001-2003	10 – 20	MAFF	WWF & Cat Action Treasury (CAT)
8	Srepok Triangle	Direct observation (aerial surveys): 1994 & 2001, Reliable report: 1999	10 – 20	MAFF	WWF & CAT
9	O Te	Camera-trap photos, Direct observations: 2003, Reliable reports, tracks: 2001-2003	20 – 30	MAFF & MoE	WWF

# Distribution of Tiger and Elephant Sign in Cambodia



## Legend:

- Main River
- Provincial Boundary

Signs recorded from Oct 02 to Sep 03:

- Elephant
- Tiger

Signs recorded from Oct 01 to Sep 02:

- Elephant
- Tiger

## MAFF Management:

- Protected Forest
- Sarus Crane Conservation Area

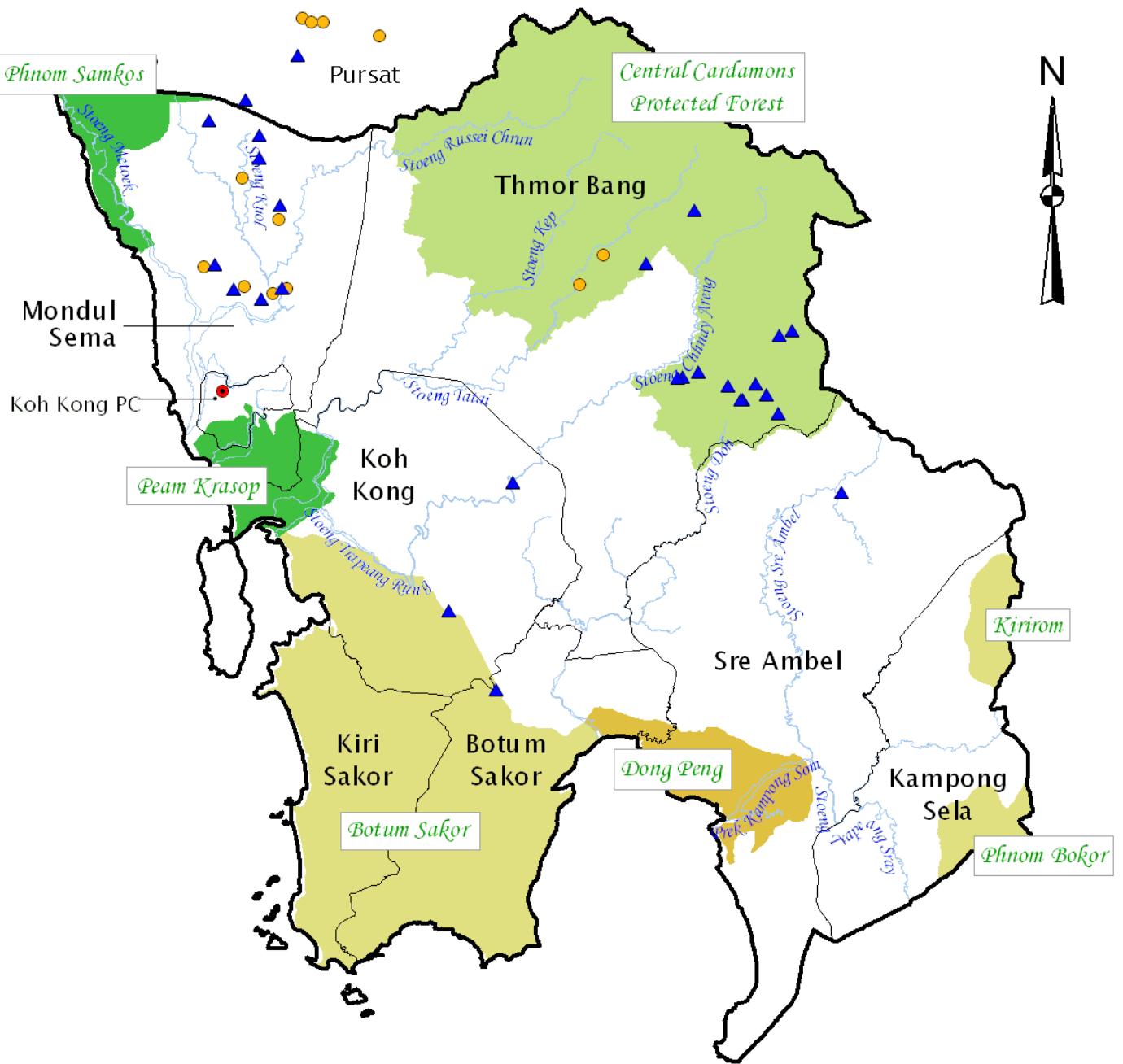
## MoE Management:

- National Park
- Wildlife Sanctuary
- Protected Landscape
- Multiple Use Area



Sources: Data reported by CWRP/CAT between 2001 and 2003  
Prepared by: CWRP  
Date: November 2003

# Koh Kong Distribution of Tiger Location Records



## Legend

- Provincial Capital
- Provincial Boundary
- District Boundary
- River

### Tiger Sign:

- ▲ Recorded between Oct 01, 2001 and Sep 30, 2002
- Recorded between Oct 01, 2002 and Sep 30, 2003

### Protected Areas:

- National Park
- Wildlife Sanctuary
- Multiple Use Area
- Protected Forest

20 0 20 40 Kilometers

## **APPENDIX VII: GIS TRAINING – LIST OF TOPICS**

### **4-5-6 April 2003 GIS Training**

#### **List of Topics**

##### **Introduction to GIS**

*The introduction aimed at giving a definition of GIS, an idea of what you can do with it and a presentation of ArcView.*

##### **Data used in ArcView**

*Described the type of data you can use in ArcView and indicated how to open/create/modify spatial data in ArcView.*

##### **How to import a spreadsheet in ArcView**

*Described how to import a Microsoft Excel spreadsheet in ArcView. A concrete example was used to illustrate this operation. The trainees were able to use wildlife data points recorded with GPS by CWRP Rangers.*

##### **Attribute table**

*This lesson aimed at showing the link between an attribute table and the geographical features. Using this property we saw how to label the features, select an object, find an object, build a query and join two tables.*

##### **Route length Calculation**

*Using the ranger spreadsheets we imported during the third lesson, the trainees learnt how to calculate the route length patrolled by the rangers during an expedition, a day, ...*

##### **Legend Editor**

*The trainees learnt how to change the appearance of the features such as color, size and pattern. This lesson also aimed at showing how we can classify the data and create some information using this tool.*

##### **Buffer Zones**

*This lesson explained what is a buffer zone and how to buffer. Due to the lack of time the trainees did not practice a lot this lesson. However, a step by step explanation was provided in the guide.*

##### **Geoprocessing Wizard**

*Described the six options available in ArcView: dissolve features, merge themes, clip theme, intersect two themes, union two themes and assign data by location.*

##### **Layout**

*Before printing or exporting our work in an image format, we saw how to add and organize a list of graphic objects such as the map(s) created, a legend, a scale bar, a north arrow, a logo and a title.*