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Cambodia Tiger Conservation Program

Community-based Monitoring and Conservation of Tigers in Cambodia's Most Important Tiger Conservation Units

FINAL REPORT TO
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Abstract

Since the early 1990s, the conservation community has feared that poaching for the illegal markets in tiger parts and products represents the most serious threat to the tiger's continued survival in the wild (Mills and Jackson 1994, Hemley and Bolze 1997, Meacham 1997, Seidensticker et al 1999, Tilson et al 2000). Cambodia continued to have a large and visible market for tiger parts through this period, while supplying markets went underground and presumably diminished in most other range states (Nowell 2000, Sun 2000). While Cambodian forests continue to harbor a rich prey base, as indicated by interview and biological surveys, it is also apparent that tiger populations in many parts of Cambodia have been seriously depleted by targeted market hunting (Weiler et al 1998, Nowell et al 1999, Ouk et al 1999, Momberg and Weiler 1999, Long et al 2000, Sun 2000, Walston et al 2001).

Our project staff has been working with rural Cambodian hunters since the early 1990s. We began working with hunters from the outset, because Phnom-Penh based wildlife officials understand that their knowledge of and ability to work in the wilder parts of Cambodia have been compromised by years of war. They needed the assistance and skills of local people. In 2000, we initiated a bold experiment: hiring selected hunters as community wildlife rangers. Our goal was to gain an immediate reduction in the level of tiger poaching in Cambodia, and to use the ex-poachers' considerable tiger-finding skills to develop community-based conservation capacity in the main tiger habitats (TCUs).

We accomplished all the key objectives outlined in our October 1999 project proposal. We established three field offices in Cambodia's three largest tiger conservation units (TCUs). Each office is managed by

a combination of provincial and national level forest staff, and currently oversees a network of 9 to 12 community wildlife rangers. The University of Minnesota team conducted extensive technical training exercises, and all levels of staff have been trained in GPS data collection and GIS data analysis techniques. Our program staff carries out regular monitoring patrols in key unprotected tiger habitats, and have collected valuable data on tiger (and other wildlife) poaching and trade. Our staff meets frequently with provincial, district and village level officials, as well as military personnel, and has greatly increased the priority given to wildlife conservation and law enforcement. We have identified several groups of professional hunters and wildlife traders, brought their activities to the attention of the relevant authorities, and negotiated contracts with them to stop hunting and trading. Our program works closely with other Cambodian government ministries and international conservation groups, and together we have conducted a number of important wildlife surveys, law enforcement operations, and educational programs. Through village workshops and our network of community wildlife rangers, we are spreading the message of tiger conservation through rural Cambodia.

This program's innovative approach to tiger conservation has received significant media attention, both within Cambodia and without, with articles in publications including Time magazine, Conde Nast Traveller, Far East Economic Review, London Sunday Times (see our project page on the Felidae website to read these articles: <<http://www.felidae.org/index.htm>>). Several film crews have worked closely with our program staff, most recently Becker Entertainment, whose film "The Lost World of the Khmer Rouge" will air on the Discovery Channel "Journeys to the Ends of the Earth" series in March 2002.

Other conservation organizations have also followed our lead in Cambodia and begun setting up community ranger networks in the areas they work. This is a welcome development, and as discussed below, we are cooperating in all these efforts. But our program stands out as the only one that is providing monthly information and data directly to the central government year-round from the three largest and most important large mammal regions of the country. Each month the staff of the three field offices meets with all the rangers, and compiles activity and financial reports. These reports contain a wealth of information relevant to tiger conservation. The highlights of the monthly reports have been summarized in four large tables within this text, and the financial reports are part of the Excel Final Budget report sheet ([Appendix 1](#)). Monthly activity reports written in English are now circulated by email among the Cambodian conservation community to share information and promote cooperation. A sample activity report is included as [Appendix 2](#). In summer 2001 the DFW program staff also prepared a major Khmer language report for the Ministry on this program (not included here).

This report focuses on the period of the grant, June 2000-May 2001. However, inasmuch as this is an ongoing evolving project, current status of certain key aspects of the project are summarized through October 2001 so that an accurate impression of the project is given. The data maps included in this report show most of the areas the project rangers currently patrol, and are illustrative of the kinds of data we are receiving and entering, but the maps represent only a fraction of the information we have received monthly in narrative and point form. In general, the maps only show partial data acquired from November 2000 through June 2001.

For more background on the evolution of this project from 1997-1999, see the [Research section of this project's website](#), which includes all previous progress and final reports, as well as additional material. All appendices and attachments to this report (except Appendix 1, the financial report) are stored on our website. Some are available only by clicking on links in this report; others are available to the general public.

1. Establishment of field offices

The first step was establishing field offices within Cambodia's largest Tiger Conservation Units. Through previous interview survey work for this program, DFW Tiger Team officials are well acquainted with the main tiger conservation regions and the key stakeholders living there. Although our original proposal envisioned two field offices – one in the Cardamom mountains and the other in Mondulkiri province – we decided to extend the program to the former Khmer Rouge-held areas in the north (Preah Vihear). Continued analysis of our 1998 interview survey data and additional data from the 1999 interviews and

wildlife trade surveys pointed to rich pockets of wildlife in this region, including tigers, elephants and rare cervids and bovids. The information also showed the wildlife in the region was declining rapidly due to hunting, and therefore the emergency decision was made to open a third office. [Map 1](#) shows the location of the three regions in Cambodia covered by our program, including the protected areas that lie within each region. (Note: these maps are JPEG images best viewed using graphics software such as Adobe Photoshop.)

In May-August 2000, DFW Tiger Team officials held meetings with key provincial and local officials, including forest and agriculture staff, provincial governors, police and local government representatives (see [Appendix 3](#) for minutes of one of these meetings). The field offices were officially recognized, space was rented in the province capitals of Koh Kong and Preah Vihear and constructed in the Forestry Compound in Mondulhiri Province. Provincial forestry counterparts were selected and seconded to the tiger program. The offices are staffed as follows:

Koh Kong (Cardamoms): Uch Seiha (DFW), Ros Lim (Provincial Forestry Dept.)
Mondulhiri: Kry Masphal (DFW), Chaunn Seryvat (Provincial Forestry Dept.)
Preah Vihear: Sin Polin (DFW), Tong Gi (Provincial Forestry Dept.)

In addition, space was allocated within DFW headquarters in Phnom Penh for management of the tiger conservation program. This office was staffed by Sun Hean, the project leader and Deputy Director of the Wildlife Protection Office, Ouk Kimsan (project administrative coordinator), and Roth Buntheon. In June 2001, Roth Buntheon was reassigned as coordinator of the FFI/WPO national gibbon survey and conservation project. Hunter Weiler, International Advisor, works out of his home office, and program meetings are often held there.

2. Recruiting rangers

The first tasks of the field offices were to recruit teams of community wildlife rangers. The best of the hunters who participated in our previous interview surveys were contacted, and informal meetings were held with a variety of local people to identify other candidates. The first rangers began patrolling and submitting monthly survey and intelligence reports in July 2000.

Recruitment focused on men known to hunt tigers – some more actively than others. In several cases men who had recently been caught hunting tigers were recruited into our program rather than prosecuted under the existing weak forestry regulations. A Cambodia Daily newspaper article on our website provides a detailed description of recruitment of one such hunter in Mondulhiri ([Appendix 4](#)).

Rangers signed contracts agreeing to regular survey patrols and reporting. They agreed to cease hunting, to refrain from drinking on the job, and to be truthful in their reporting (translated contracts in [Appendix 5](#) – Mondulhiri and [Appendix 6](#) – Koh Kong). In over a year of operation, no ranger has been fired for misconduct. Several rangers have been replaced due to personal and business reasons, and one ranger in Preah Vihear was promoted to work out of the regional office on wildlife trade issues and to coordinate all the field rangers.

The program is currently completing final staffing up to the level planned for activities over the next year. In Preah Vihear, 3-man ranger units patrol Kulen, Choam Ksan, and Chhiep districts for a total of nine field rangers ([Map 2](#)). In Koh Kong, 2-man ranger units operate in Mondul Sema, Koh Kong, Thmar Bang, Botum Sokor districts, and shortly, Sre Ambel District. A 2-man unit also operates out of O Soam in Veal Veng (formerly Kra Vanh) District of Pursat Province, for a total of 12 field rangers for the Cardamom Mountains ([Map 3](#)). In Mondulhiri, 3 rangers in Keo Sema and 2 in O Rang districts patrol the Samling logging concession, four rangers patrol Koh Nhek district, and a 2-man Phnong minority tribe elephant-based ranger unit has just been recruited for Pich Roda district, for a total 11 rangers in the Mondulhiri region ([Map 4](#)).

3. Training and capacity building

Staff training began in October, led by the University of Minnesota team. Phase 1 was held in Phnom Penh from October 7-10. Sun Hean, Pete Cutter, and Dave Smith provided training to the DFW Tiger Team from the 7th to the 9th, and on the 10th a technical workshop was held in the morning to exchange methodology of field surveys with other governmental (MOE) and non-governmental organizations (WCS, WWF, FFI, Wild AID). On the afternoon of the 10th a seminar, Community Based Tiger Conservation, was organized by the Director General of the Department of Forestry and Wildlife to present the tiger project to the staff of the Department, representatives of all major international NGOs, Ministry of Environment and the press. The Director General, Deputy Director General, Sun Hean, heads of the 3 Tiger Conservation Offices, Dave Smith and Hunter Weiler made presentations covering the goals, progress to date and long term plans for the tiger project.

Beginning October 12 the workshop shifted to the Cardamoms. Participants flew to Koh Kong and then traveled by boat, truck and foot into the southern Cardamoms. The field component of the workshop (12th to 19th), was supervised by Pete Cutter, his research assistant from Thailand and Dave Smith. The tiger team, provincial officers and wildlife rangers divided into 3 groups. They tested field survey methodology and trained in the use of GPS and mapping. At the conclusion of the field training the tiger team returned to Phnom Penh and from October 21-24 the tiger team, Sun Hean and Pete Cutter reviewed and modified field procedures, continue data management training (Training documents: [Appendix 7](#)). The International Tiger Field Techniques field manual (1997) was revised and translated into Khmer.

In November, field office staff in Preah Vihear and Monduliri led ranger training in their regions, based on what they had learned the previous month. Rangers were trained to use Garmin etrex GPS units, to fill out data sheets ([sample: Appendix 8](#)), and to make plaster casts of animal tracks. The training took 4 days, and included breaking up into teams for practice surveys. As additional rangers were recruited throughout the next few months, each was given the same sort of training by field office staff.

In March, Perry Nacionales from UMN led a four day GIS training workshop in Phnom Penh for all field office staff, other national government officials, and staff from conservation NGOs. Then he travelled to each field office, helping install computers, Arc View software, and assisting with organization and analysis of the rangers' GPS data. Ranger field skills were also evaluated by Dave Smith and Hunter Weiler during a special training and team building expedition in eastern Koh Nek district involving all of the rangers in Monduliri, the regional manager, the provincial counterpart, and Ouk Kimsan from the Phnom Penh HQ Office.

Throughout the year, opportunities for additional ranger and staff training have arisen as our program cooperates with other NGO-led surveys. In January in Monduliri, and in February-April in Cardamoms area, rangers and staff cooperated with Fauna and Flora International for elephant (and other large mammal) surveys. In December-May, Preah Vihear area rangers and staff worked together with Wildlife Conservation Society staff to carry out a comprehensive large mammal and water bird survey of Northern Preah Vihear, which confirmed the presence of tiger, leopard, elephant, gaur, banteng and the endangered Eld's deer, *Cervus eldii*. Monduliri field office staff and Koh Nek area rangers learned camera trapping techniques from WCS staff in May, and helped organize a survey which ultimately led to the photo of a very rare wild Asian buffalo *Bubalis bubalis*, confirming its presence.

Training activities concentrated mainly on the biological survey techniques, but there was also capacity building in the area of law enforcement. Sun Hean represented Cambodia at the first meeting of the CITES Tiger Trade Enforcement Task Force in April in New Delhi.

In the administrative and management area, with advice and oversight by Hunter Weiler, significant progress has been made. Regional Office coordinators have developed the capacity to prepare monthly summary activity reports based on the ranger reports and to prepare accurate and complete monthly budget requests and monthly financial reports, complete with all receipts. In Phnom Penh, Ouk Kimsan has developed the capacity to prepare the integrated project monthly financial report using MS Excel, to maintain the Arc View GIS database by entering monthly ranger GPS data, and to summarize and translate

the monthly activity reports. Kimsan and the three regional coordinators have become increasingly proficient at preparing and presenting project briefings at various conferences, meetings, and workshops.

See [Appendix 9 \(on our website\)](#) for training photos. Table 1 below summarizes training activity on a monthly basis for the main Phnom Penh tiger conservation offices and the three regional field offices.

In all of the tables in this report, most of the activities are reported under the three regional field offices, understating the important role of the Phnom Penh office, which directs, supports and coordinates the entire project. All three regional coordinators travel to Phnom Penh for several days monthly for meetings with the Phnom Penh staff to review financial reporting for the previous month, budget for the current month, major activities requiring follow up action, and new initiatives. Guidance and direction is given by the Phnom Penh Office, and follow up evaluation conducted on progress. Phnom Penh staff are in regular contact with FFI, CI, WWF, WCS, and WildAid to coordinate programs and plan future collaboration. Phnom Penh staff also monitor government policy and legal developments and national and international reports and publications for the purpose of keeping the project up to date with recent developments. Weekly contact with field offices is maintained by national mobile phone service, now operational for all three regions. (Effective and economic email communication is not yet possible.)

Table 1. Monthly activity summary: Training and Capacity Building

| | Phnom Penh | Cardamoms | Mondulkiri | Preah Vihear |
|----------------|---|--|---|--|
| May-June 2000 | OFFICES SET UP | STAFF AND | RANGERS | RECRUITED |
| July 2000 | | Initial training and information gathering from 6 community wildlife rangers | Staff training for provincial counterpart | Initial training and information gathering from 5 community wildlife rangers |
| August 2000 | | Initial training and information gathering from 6 community wildlife rangers | Initial training and information gathering from 8 community wildlife rangers | Initial training and information gathering from 2 community wildlife rangers |
| September 2000 | | | | |
| October 2000 | GPS +GIS training for office staff w/ Univ. Minn. | GPS +GIS training for office staff w/ Univ. Minn. | GPS +GIS training for office staff w/ Univ. Minn. | GPS +GIS training for office staff w/ Univ. Minn. |
| November 2000 | | Two additional rangers recruited from elephant poaching group and given initial training. | GPS and data sheet training for rangers | GPS and data sheet training for rangers |
| December 2000 | Program mid-year evaluation and planning for second year. | GPS and data sheet training for new rangers | GPS and data sheet training for new ranger | 2 days training for surveys w/WCS |
| January 2001 | | | Joined training w/ WWF on community assessment techniques at Mondulkiri town. | |
| February 2001 | | GPS and data sheet training for new rangers. | | |
| March 2001 | Staff GIS training workshop led by UMN (Dave Smith). Mondulkiri field survey training. Review program vehicle policy. | 2 new rangers recruited. Staff GIS training. | Extensive training for staff and rangers in GIS and field survey techniques w/ UMN (Dave Smith) | Staff GIS training. |
| April 2001 | | GPS and data sheet training for new rangers. Rangers interview other potential candidates. | | GIS training at field office w/ UMN's Perry Nacionales. |
| May 2001 | | | Camera trap training by WCS for staff and Koh Nhek rangers. | Review data sheet and GIS use w/ rangers. |

4. Monitoring and survey data collection and analysis

Rangers normally operate in two or three man teams and carry a GPS. Every month patrols are carried out, usually 10 to 15 days total time in the field. Not all teams currently have a GPS, and some of the new teams now being recruited will not have a GPS until new funding is received. Fixed patrol routes have not been set up as was originally envisioned. Instead, rangers on their own initiative patrol different parts of their area, depending on season, weather, information on poaching, etc. Frequently the regional coordinator or his provincial counterpart will request information from a particular area. Regional coordinators download the GPS's monthly to verify ranger patrols. Data is reported to Phnom Penh in monthly narrative summaries and GPS data points are entered into the ArcView GIS system.

Our survey results are summarized according to the three regions, and illustrated with maps prepared by Ouk Kimsan from the GPS data gathered by ranger teams and compiled by the field office staff. At this point, the maps do not completely reflect our survey results, since some ranger teams do not yet have GPS, and ranger teams acquired GPS units at different times. There have been problems with malfunctioning GPS's and problems with data recordation and entry into the computer system. The attached maps generally only show partial data acquired and reported monthly, and only for the period of November 2000 through June 2001. We plan to equip all teams with GPS units in the near future, and plan significant upgrades of the data management system with technical support from UMN. The following discussion is based on all of the information in the monthly reports through November 2001, which is only partially reflected in the maps.

Our data from 1998 onwards has consistently pointed to the central Cardamom Mountains area in southwest Cambodia as being the as the largest and most important area for tigers and elephants in the country. Over the last year, far more reports come from the Cardamoms about tiger and elephant than any other region of the country. Direct evidence of tigers has been reported by our rangers from every district in the region, along with much intelligence on tiger poaching. As can be seen from the maps, the area relatively thinly populated. It is so vast and difficult to patrol that our rangers never reach a large part of the inner core area. No scientific surveys have been conducted there either. [Map 5](#) shows some GPS locations of tiger, leopard and bear sign collected during ranger patrols. [Map 6](#) shows the tiger locations alongside prey. Sambar are abundant, as are red muntjac (although this last species may be too small to be preferred tiger prey). Gaur and banteng are widely scattered and not as numerous as in the dry forest regions. As an example of how the current maps understate the complete data base, only 7 tiger locations are shown in Mondul sema district, but the monthly reports for the past year include over 20 specific locations in that district alone. The monthly reports also contain specific detailed intelligence obtained by our rangers that eight tigers were killed by hunters in the Cardamom mountains over the past year. This can be considered a confirmed minimum—the actual total is undoubtedly far higher, considering the size of the area and how few rangers are patrolling.

Mondulkiri province is recognized as the largest and most important large mammal area of dry forest in Cambodia. Survey data collected by our program and also by WCS (Walston et al 2001), FFI (Long et al 2000), and WWF (Timmins in press) indicates good numbers of large ungulates, including elephants. In cooperation with WCS, we have documented the presence of rare species in Koh Nhek district, including Eld's deer and wild water buffalo ([Appendix 10](#)). [Map 7](#) shows some of the GPS locations of tiger and elephant sign collected during ranger patrols. [Map 8](#) shows distribution of tiger prey species: gaur, banteng, sambar deer and red muntjac.

The other large area of dry forest in Cambodia is in the north, in Preah Vihear and adjoining provinces. Our decision to open a third office here was based on specific reports that 27 tigers were killed in this region in 1998-1999 (Ouk et al 1999). It appears that the tiger has declined rapidly over the past few years due to extraordinary hunting pressure brought about by the end of the war in 1998, which opened up large areas previously denied to hunters. It is unlikely more than a handful of tigers remain in all of Preah Vihear, specifically in Kulen Distict near the Siem Reap border. Our project has reported only one incident of tiger tracks in Chhiep district in the past year. Leopards are much more widely distributed ([Map](#)

9). Prey base is good, with wild pig, sambar and red muntjac widely distributed. Small numbers of Elds deer remain in Kulen, Cheoam Khsan, and Chhep districts. Multiple intact herds of gaur and banteng still exist ([Map 10](#)). Elephant are limited to about 10 in northern Chhep District. There is no evidence that the kouprey still survives. Tiger numbers are probably not biologically viable right now in Preah Vihear, and there are no adjoining areas with viable populations that could re-populate the region. However, the habitat and prey base are intact, and with continued conservation efforts hunting could be controlled to the point that tiger populations could recover.

Table 2 shows monthly activity summaries for the offices in this category.

Table 2. Monthly activity summary: Survey data collection and analysis

| | Phnom Penh | Cardamoms | Mondulkiri | Preah Vihear |
|----------------|--|---|---|--|
| July 2000 | initial field survey of Phnom Aural with FFI (Appendix 10) | | | |
| August 2000 | | First data on local hunting and wildlife trade activities from rangers. | 23 days ranger patrols | Initial ranger patrols and first data on wildlife, hunting and trade. |
| September 2000 | | | | |
| October 2000 | | | | |
| November 2000 | | Ranger patrols in three districts. | 28 days ranger patrols. | 15 days ranger patrolling, plan surveys w/WCS |
| December 2000 | | 29 days ranger patrols | 16 days ranger patrols | all rangers and staff participated in joint transect, camera trap, and bird surveys w/WCS in Chhep |
| January 2001 | | | Elephant surveys w/ FFI (14 days): Koh Nhek district. Other districts 12 days ranger patrols. | all rangers and staff participated in joint transect, camera trap and bird surveys w/ WCS in Tror Peang Prasat and Chepp |
| February 2001 | | Elephant surveys w/ FFI in Thmar Bang district. 20 days ranger patrols. | 23 days ranger patrols | joint Eld's deer survey w/ WCS in Chhep; bird survey in Chhep; wildlife trade survey at border market in Ann Ches. |
| March 2001 | | 23 days ranger patrols. | 15 days ranger patrols. Meet w/ FFI to coordinate elephant conservation. | 10 days ranger patrols. Eld's deer camera trap surveys w/ WCS. Giant ibis surveys w/ A. Michaud. |
| April 2001 | | 59 days patrols by 10 rangers | 24 days ranger patrols. | 25 days ranger patrols. Plan future surveys w/ WCS |
| May 2001 | | 48 days patrol by 9 rangers | 18 days ranger patrols. Camera trap surveys in Koh Nhek w WCS. | 30 days patrol by 9 rangers. Continue work on Eld's deer and water bird surveys. |

5. Monitoring poaching and trade, and supporting law enforcement

Our program has turned a number of professional tiger poachers, who were some of our first community wildlife rangers hired ([Appendix 4](#)). Our rangers have provided valuable intelligence about tiger poaching

and other wildlife hunting and trade. In December 2001 a major tiger and elephant poaching gang was uncovered in the Cardamom mountains ([Appendix 11](#)). New wildlife legislation is being developed in Cambodia, and Sun Hean has had a major role in this ([Appendix 12](#)). Our approach when discovering illegal hunting is to have our rangers and staff negotiate no-hunting contracts with the perpetrators. These are negotiated in the presence of district and police officials and carry a good deal of weight. This procedure is equivalent to a stern warning, and so far none of the people who have signed such contracts with us have been caught poaching again.

One major case we are currently dealing with involves a notorious tiger poacher, Yor Ghoun. He was originally interviewed by our project several years ago. He claims to have killed over 60 tigers in his lifetime. We made contact with him and invited him to join our program, but he refused. Our staff then encountered him in Preah Vihear and tried to bring him into town where he could be arrested by authorities, but he refused to come with us. He then left the northern part of the country and moved to the Cardamoms region, where our rangers there picked up reports of his presence but have been unable to pin him down. We are now cooperating with the new WildAid-funded forest police unit to try to bring this major poacher to justice.

Throughout the year our program staff and rangers have had numerous meetings with government officials from all levels, including police and Customs, to raise awareness about tiger conservation, and controlling illegal hunting and trade. The importance of such coordination is highlighted by an incident which took place in April 2001, when ex-soldiers working for the Samling Logging company arrested one of our Cardamoms ranger teams. They were unaware of our team's presence and mistook them for bandits. Since then the head of the company, Henry Kong, issued a formal apology. In all three regions, special efforts have been made to assure that all relevant organizations are aware of our program and who our rangers are.

Table 3 summarizes the monthly enforcement-related activities of our project offices. Over the next year, a major focus of the program will be seconding police capacity to the three field offices, with more focus on controlling wildlife trade.

Table 3. Monthly activity summary report: Monitoring poaching and trade, and supporting law enforcement

| Office | Phnom Penh | Cardamoms | Mondulkiri | Preah Vihear |
|----------------|--|---|--|--|
| June 2000 | | | Investigated tiger hunting case in Keo Sema (recruited this hunter as first ranger) | |
| July 2000 | | | investigated tiger poaching case in O Raing district | |
| August 2000 | | | met w/ local officials and O Raing tiger hunters, who signed contracts to stop hunting. | Conservation and law enforcement awareness meetings with local officials in 3 districts. |
| September 2000 | | | | |
| October 2000 | | | | |
| November 2000 | Arrange transfer of Tiger Team trade expert Heng Kimchay to WildAid as Cambodia program officer. | Investigation of major elephant poaching case uncovered by ranger, as well as illegal sawmill. Officials found and met w/ elephant hunters; two hired as rangers. | met w/ Oraing district officials about wildlife law. Investigated tiger mine snare case in O Raing w/ local authorities. | met w/ Preah Vihear provincial officials about wildlife conservation confiscated rare wild birds from trader and negotiated stop trading contract. Investigated illegal tiger hunting incident |
| December 2000 | DFW promotes govt action against armed poaching gangs and other illegal activities in | Wildlife hunting and trade surveys along Thai border (Hundred Mtn area). Met Areng | Investigate case of illegal hunting: baby elephant . Oraing district meeting | meeting with Chhep district governor |

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|---------------|---|---|--|---|
| | the Cardamoms. | village police officials for conservation and law enforcement support. Intelligence gathered on several professional tiger and elephant hunting groups. | to discuss illegal hunting and wildlife law; district governor helps negotiate no-hunting contracts | |
| January 2001 | Participate in drafting new wildlife law. | Rangers gather information on wildlife hunting and trade. | Wildlife law and conservation awareness special meeting held with local officials in wildlife trade areas of Koh Nhek district. Met w/ WCS to discuss wildlife trade and hunting near the Samling forest concession. | Preah Vihear governor sends notice to local officials on poaching prevention, esp. tiger. Met w/ Tror Peang Prasat district army commander to discuss case of notorious tiger hunter Yor Ghoun (believed to have killed more than 60 tigers, and at large). |
| February 2001 | | | Investigated case of 5 bantengs killed and the meat sold – trade links to Ratanakiri province. | Tried to locate tiger hunter Yor Ghoun for authorities to arrest (he reportedly escaped to Cardamoms) |
| March 2001 | | Information gathered on wildlife poaching and trade; meet w/ officials. | High level conservation awareness meeting with district officials in Keo Sema. | High level meeting w/ chief border customs official about tiger conservation and law enforcement. Meet w/ WildAid to help plan their law enforcement program. Meet Chhep district leader w/ WCS to promote conservation. |
| April 2001 | | High-level conservation awareness meetings with provincial officials. Investigation of ranger detention by Samling logging concession guards. | Rangers report on several major hunting groups, species incl bear, gaur, sambar, pangolin. | Wildlife confiscation, translocation and release w/ local officials from Kampong Prornak wildlife market. Rangers caught two district police officials illegally hunting barking deer. |
| May 2001 | Workshop for development of new Cambodian wildlife law (Appendix 12). Evaluation of ranger program mgt under the draft legislation. | Investigate mine snare incident and in Cham Sa village where local man injured by tiger, coordinate w/ CI and local officials. | Meetings w/ Koh Nhek officials and villagers to promote conservation and law enforcement. Negotiated stop-hunting contracts w/ hunters who recently killed sambar and banteng (case reptd April by rangers). | Investigate illegal hunting and fishing by Lao people in border area. Reports on illegal wildlife trade. |

6. Raising public awareness and conservation education

Throughout the year we continued to hold tiger conservation awareness meetings in villages within our program areas. The ["Benefits of Tiger Conservation"](#) poster designed by WPO has been widely distributed. A [May 2001 article](#) in the magazine Conde Nast Traveller details one of these workshops. We also assisted other kinds of awareness activities, including the November 2000 visit of famous conservationist Jane Goodall, the making of a major Discovery Channel documentary, and the development of a new conservation education program, Saving Cambodia's Wildlife.

Table 4. Monthly activity summary: Raising public awareness and conservation education

| Office | Phnom Penh | Cardamoms | Mondulkiri | Preah Vihear |
|---------------|---|---|---|--|
| November 2000 | Helped arrange visit of Jane Goodall to raise intl awareness of Cambodia wildlife | Village awareness meetings in two villages | met w/ Koh Nhek officials on strengthening conservation met w/ Oraing district officials about wildlife law. met w/ Mondulkiri Red Cross to explore conservation cooperation, malaria protection for staff and rangers. | met w/ Preah Vihear provincial officials about wildlife conservation |
| December 2000 | DFW press release raises public awareness of armed hunting gangs and military involvement in illegal logging. | Awareness meetings in five villages | Village awareness meeting in Rokathmey; discuss community development options with district governor | village conservation workshop in Mlou Prey commune; meeting with Chhep district governor |
| January 2001 | Assist Discovery channel film crew in Preah Vihear. | Worked with film crew (Discovery channel). Awareness meeting in two villages. | Conservation awareness meeting with key village officials from Koh Nhek district. | informal village conservation education meetings in Tror Peang Prasat. Chhep ranger met Mlou Prey commune leader to review conservation policies. Worked with film crew (Discovery channel). |
| February 2001 | | | Education and awareness meetings held in 6 villages | village education workshops in 4 districts, incl local officials, villagers and rangers. Met with CARE Siem Reap to explore cooperation. |
| March 2001 | | Village conservation awareness meeting in O Som. | Education and awareness meetings held in two villages. | |
| April 2001 | | Village conservation awareness meeting in village where Samling detained rangers. | Village awareness meeting in Rothkamie village. Meet w/ Koh Nhek officials about project. Plan cooperation w/ ITTO, Medecin du Monde, and Refugees Intl for village assistance. | Plan village conservation workshops for next month. Assist book writer (K. Conrad) for book on Asia's wild cats. |
| May 2001 | | Village conservation awareness meeting in Cham Sa village (where man attacked by tiger, hospitalization costs supported by CI). | Village conservation awareness meeting in Koh Nhek. Assisted Japanese documentary film makers. | Four days awareness meeting and interview with Chhep villages Dang Plet, Sra Lao |

7. Integration with other conservation programs

Over the past several years international conservation interest in Cambodia has greatly intensified, and a number of conservation organizations have developed substantial programs in Cambodia. Initially there was concern that these programs were in danger of compromising effectiveness through lack of cooperation. In May 2000 the US Fish and Wildlife Service held a meeting in Washington DC to review tiger conservation in Cambodia, and Save the Tiger Fund proposed that a memorandum of cooperation be signed between the key tiger programs (done in October 2000: [Appendix 13](#)).

The Letter of Intent concerned our program, WCS and WWF. Since then we have collaborated in field surveys in Preah Vihear and Mondulkiri with both organizations. In June 2001, we participated in the WCS/Samling Logging Co. Workshop "Biodiversity Conservation in Managed Forests." We are now discussing collaboration with WCS on village conservation and law enforcement activities in both regions. We have been providing information and conducting discussions with WWF to assist their development of a GEF for western Mondulkiri. We are currently discussing collaboration on village conservation awareness meetings and wildlife law enforcement initiatives in Mondulkiri. There have been some discussions on data sharing, but all government and NGO organizations continue to maintain separate databases with different standards. There has been little progress on establishing national metadata standards and a National Spatial Database, and little agreement that this is a necessary or desirable goal.

In addition, we have supported and participated in field surveys conducted by FFI/WPO/MOE in Mondulkiri, Kampong Thom and the Cardamoms region. Conservation International in collaboration with DFW is establishing the Cardamom Protected Forest for watershed protection and biodiversity conservation. Over 50 rangers, in combination with Military Police, have recently completed training and have been assigned to patrol the area. We provided instructors for their ranger training program. We have shared information from the start with the CI/DFW program, and will continue to collaborate, by providing intelligence on hunting to enforcement rangers and by continuing to develop a biodiversity data base and to support future scientific surveys. We are currently discussing the development of a formal process for our ranger program to quickly and efficiently get poaching information to the CI/DFW Law Enforcement Rangers. We are also discussing joint village conservation meetings. The CI/DFW Cardamom Conservation Program plans to develop a Research center in Thmar Bang District, and their own GIS biodiversity data base. Future scientific surveys are being planned. In the meantime, our project is conducting the only systematic large mammal monitoring anywhere in the Cardamoms.

We have helped the NGO Save Cambodia's Wildlife develop a plan for conducting village conservation education activities in Preah Vihear and Mondulkiri. Should their proposal be approved, our program will collaborate in implementation.

One of the original members of the Tiger team, Heng Kimchhay,, was seconded to WildAid in December. His specialty is wildlife trade, and the WildAid-sponsored program focuses on stopping illegal tiger and other wildlife trade. Our program staff has cooperated by providing ranger-gathered intelligence to WildAid. The DFW/WildAid Wilderness Protection Mobile Unit became operational in July 2001, and specializes in difficult wildlife law enforcement cases nationwide. We are engaged in ongoing strategic discussions with WildAid on how are program can best support the Mobile Team efforts. Discussion is also underway on having WildAid provide law enforcement and anti-poaching training to or program in 2002.

Collaboration with the Ministry of Environment is limited to date. MOE patrols the Wildlife Sanctuaries, and our program patrols the national forests. In most areas we operate in, the MOE does not have much of a ranger program to collaborate with. As MOE programs develop, our project will collaborate integrate MOE and DFW programs. Currently, per the attached maps, our program does patrol the heart of Kulen Promtep Wildlife Sanctuary in lieu of any kind of substantive MOE presence, and in Mondulkiri we patrol part of Phnom Prich Wildlife Sanctuary. Boundaries are not too meaningful at this time. In all three regions, we work closely with the Provincial Environmental Department and there have been no conflicts to date.

Beginning in May, Hunter Weiler began circulating the monthly activity reports of our three program field offices among an email list of those working in conservation in Cambodia. These reports are very popular and widely read by the conservation NGO community. This process has helped to establish a regular Cambodia wildlife email group to share information about current news and developments.

8. Evaluation of program effectiveness and continued program development

All senior Cambodia-based program staff met for a day-long evaluation program evaluation summit in Phnom Penh in April. Heng Kimchay, an original Tiger Team member who was despatched to WildAid to work on wildlife trade law enforcement earlier in the year, also attended. Hunter Weiler wrote a detailed summary of the meeting ([Appendix 14](#)).

For program management, it was agreed that the Department of Forestry and Wildlife has the lead administration and management role, with the assistance of Hunter Weiler, CAT Program Officer. CAT in the US is tasked with aiding the Department to seek operational funding for the tiger program. University of Minnesota is responsible for organizing training and assisting the Department with database management.

In June 2001, all relevant conservation NGO's, DFW, MOE and other interested parties participated in two landmark workshops in June 2001: the DFW/USDFWS-sponsored Tiger and Elephant Conservation Workshop, and the WWF-sponsored Conservation Strategy Workshop: Dry Forest Landscapes of Northern and Northeastern Cambodia. The outcome of these workshops was agreement that the Preah Vihear, Mondulkiri, and the Cardamoms regions are the most important priorities for large mammal conservation in Cambodia. Illegal anarchic hunting, largely by professional hunters and often with the support of police and military, was agreed to be the biggest threat to tigers and other large mammals. These conclusions validate our program's regional focal points, and call for increased programmatic emphasis on combating illegal hunting and trade.

Some major new initiatives are being developed. We plan to bring all the community wildlife rangers together in Phnom Penh, for the first time, for a workshop to bring them more fully into the management process. Sun Hean has been detailed as personal staff to the new Minister of Agriculture, Forestry, and Fisheries. He will concentrate on wildlife law enforcement. Effective November 1, DFW leadership of the tiger program devolved to Keo Omallis, a senior WPO staff member who recently returned from earning his conservation masters degree in Great Britain, thus continuing to build managerial capacity within the Department. We plan to expand the ability of District Police to conduct wildlife law enforcement in Preah Vihear and Mondulkiri by supporting and coordinating District Police activities in each District where we have a ranger unit operating. (See attached new project organization chart: [Appendix 15](#).) In Koh Kong, our project will integrate the monitoring activities of our rangers with the law enforcement activities of the DFW/CI Cardamom Protected Forest program. We also plan to work closely with the new DFW/WildAid Wilderness Protection Mobile Unit, which specializes in difficult law enforcement cases. WildAid is considering expanding their training programs for wildlife law enforcement and developing a Thailand-Cambodia Regional Training Center. We are discussing with WildAid the possibility of additional anti-poaching training for both our rangers and the District Police. We plan to upgrade our GIS data base, and to conduct village conservation meetings in collaboration with CI in the Cardamoms, WCS in Preah Vihear, and WCS and WWF in Mondulkiri.

We are now about halfway through the new STF grant period of June 2001-June 2002, the budget for which is April 2001-April 2002, due to the shortfall for the June 2000-June 2001 grant. As an outcome of an intensive project review stimulated by the USFWS Cambodia Tiger and Elephant Project coordination meeting in June 2001, we are currently preparing supplemental grant applications for the project to the USFWS under both the tiger and elephant funds. We also plan to submit a new STF grant request in January 2002.

Notes on Budget

Our program experienced a funding shortfall, having expended all STF and FWS funds by March 2001, instead of May 2001 as originally planned. This was for two major reasons: our decision to open three field offices instead of the two originally budgeted for, and the cost to purchase a project truck was twice what was originally budgeted.

Budget expenditures are detailed in the attached Excel file ([Appendix 1: <Final report budget Mar 2001.xls>](#)). In order to simplify budget administration, it was decided in the future to have CAT assume

management of operational costs, and UMN to assume management of costs pertaining to training and data analysis.

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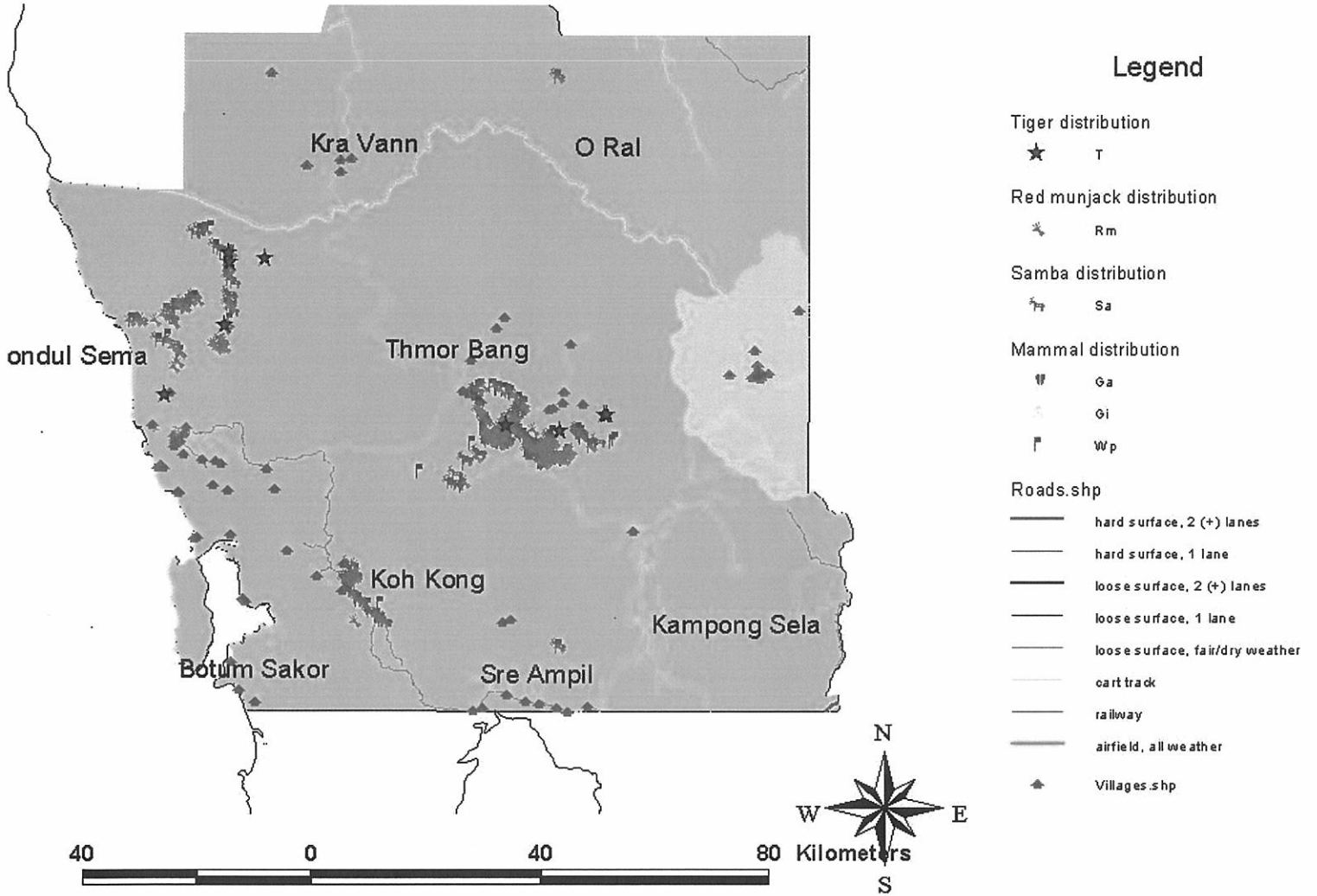
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Tiger and Prey distribution map



CAMERA TRAPPING IN THE CARDAMOM MOUNTAINS: PRELIMINARY RESULTS AND NEXT STEPS

Jim Sanderson

May 9, 2001

In March-April 2001, I deployed 22 camera phototraps in two locations in the Cardamom Mountains of Southwest Cambodia. Twelve cameras were placed in the Eastern Cardamom Mountains north of the village Rolerk Kang Cheung near the Aural Wildlife Sanctuary border. Ten were placed in the Central Cardamom Mountains north of the village of Thma Bang. Both sets of cameras will remain in place for 90 days, which is the lifetime of the batteries powering the camera and infrared detector, and will be collected by my trained assistants.

Before leaving Cambodia, I returned to the Eastern Cardamoms to recover the film and check on the first set of cameras. Film from seven cameras was collected for preliminary analysis. Cameras with only a few photographs were not opened. Preliminary results showed that many animals roam the forest in the Eastern Cardamoms. We recorded the first camera phototrap of an Asian Black bear. Also recorded were red muntjac, crab-eating mongoose, Temmick's Golden cat, Leopard cat, hog-nosed badger, Silver Pheasant, and an illegal wood collector.

There was evidence of hunting on all the trails I visited over the three weeks I spent in the Eastern Cardamoms. Snare traps were found on all trails but none were set. Kong Mongkol, my assistant from Rolerk, reported that snare traps were used to catch tigers, bears, and large herbivores. He also reported that snare traps were 100% effective in snaring wildlife. Hunters typically go into the forest for a week at a time, set a dozen or more snare traps, and check the traps every day. Captured wildlife is either consumed immediately, sold for food, or in the case of bears and tigers sold to a local dealer for sale in well-known wildlife markets in Phnom Penh.

I assumed that the Eastern Cardamoms had been trapped out. With so many traps laid, wildlife using trails would not stand a chance. However, the results from this first campaign suggest otherwise. The cameras documented Asian Black bears, Golden cats, red muntjac, and wild pigs. **These results show that despite heavy hunting wildlife still exists in the Eastern Cardamoms and that populations would probably increase if hunting was stopped.** However, without effective protection, wildlife populations will continue to decline and rare species such as tigers will disappear forever.

In July 2001, the cameras from the area around Thma Bang will be collected and returned to the DFW office in Thma Bang. We will then be able to compare wildlife populations and estimate hunting pressure between the Central and Eastern Cardamoms. I will return in December 2001 to deploy the cameras in other areas in the Cardamom Mountains. I have trained three assistants to help me deploy and service the cameras.

Every six months, I will visit the Cardamoms to move the cameras to two new locations. The cameras will stay in place for six months, but my assistants will replace the batteries and film after three months. This will allow us to obtain good samples, cover wider areas, and compare different locations in terms of wildlife populations and conservation status. The results will influence the deployment of rangers and other protection activities.

Elephant poaching continues

[Photo: Pursat Department of Environment staff pose with the remains of an elephant killed August 4.]

By Michael Hayes

Two wild elephants have been confirmed killed by poachers in the Phnom Samkos Wildlife Sanctuary, according to an official with the Pursat Department of Environment (DoE).

Rangers in Anlong Reap village, about 30 kms from the Thai-Cambodian border, heard gunfire and elephant screams on Aug 4. Two days later they discovered the carcasses of one male and one female elephant which had been stripped of tusks, tails and the male elephant's penis, said Ben Hammond, Environment Advisor to Pursat's DoE, who investigated the incident.

The animals' remains were surrounded by six cable and noose traps that are used to catch tigers which would be drawn to the site by the scent of the rotting flesh.

The elephant slaughter highlights a growing problem for the Kingdom's wildlife, one which will be difficult to combat.

"According to local rangers, there is now more hunting, more organized hunting and more elephants and tigers being killed in the Cardamom Mountains than ever before," said Hammond. "If something is not done to combat this hunting, in ten years time these animals will join the rhinoceros and the khting vor-present in Cambodian legend but as good as extinct in the wild."

A report on ranger patrol activity in the Phnom Samkos area submitted to the Ministry of Environment and seen by the Post says that there are unconfirmed reports of two other elephants killed this wet season, as well as reports of five unconfirmed tiger kills and one confirmed kill. The tiger bones and skin were reportedly sold in Pramaoy village in Veal Veng district for \$5,000 cash.

Rangers in the area say they are aware of at least two groups of poachers wearing Military Police uniforms who are all armed with AK-47s and grenades. Some are known to carry 82mm mortar rounds that are used to set up booby traps to kill wildlife.

In a related development, a Bilateral Conference for the Conservation of Elephants in Cambodia and Vietnam was held in Danang Sept 14 -15. Nine Cambodian officials from the Ministries of Agriculture, Forestry & Fisheries and Environment participated. The event, hosted by Vietnam's Ministry of Agriculture and Rural Development and Fauna & Flora International (FFI), resulted in an agreement by Cambodian and Vietnamese officials to cooperate jointly to protect the elephant populations in Mondolkiri province and adjacent areas in Vietnam.

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Kingdom of Cambodia Nation Religion King

Cardamom Conservation Program Minutes

Cooperation and integration work between the Cardamom Conservation Program and Tiger Conservation Project

On 1st December 2001 at 1400 hrs at Thmar Bang HQs of the Cardamom Conservation Program a meeting with Tiger Conservation Project was held to discuss integration of the two programs. The Meeting was chaired by Mr Hour Limchhun, Manager of the Cardamom Conservation Program.

An Attendance list was attached.

After discussion over two days, the two programs agreed with the following procedures:

I. *Procedure for the Tiger Project providing information:*

1. *Information to be reported:*

- Coming to report by foot
- Sending letters
- Using ICOM
- Keeping one hunter to monitor the situation

2. *Type of information to be reported:*

- Place
- Time
- Number of illegal activities
- Type of illegal activities

II. *Urgent information should be reported:*

- Saw mills
- Land clearance
- Illegal possession of weapons and explosives
- Illegal wildlife activity i.e. skinning wildlife
- Possessing Equipment for hunting wildlife (tiger, elephant, bear ...)
- Transporting timber, Charcoal, yellow wine powder, Kresna wood collection and catching dragon fish spawn.
- Mining and artifacts collection

III. *Difficulties for Tiger Teams:*

- Areas covered by mines
- Threats from locals
- Offenders having weapons
- Lack of field equipment and transportation

IV. *Support Requests:*

* Medical supplies are the responsibility of the TCP Project.

Finally, Mr Hunter Wailer also mentioned that:

- The TCP would discuss all field equipment requests from the hunters in order to budget for next year.
- The TCP would try to provide some equipment for current urgent needs.

On 2nd December 2001 at 1430 hrs, the meeting was closed in a successful, friendly and happy atmosphere.

Thmar Bang 02 Dec 2001
Prepared Minutes by

Chhum Samnang

**Tiger, Elephant and other large mammals killed
in the three regional tiger conservation units
May 2000 to October 2001**

Koh Kong Province:

| Month | District | Species | Number | Method | Description |
|----------------|------------------------|-------------------|----------|--------------------|---|
| May 2000 | Koh Kong | Tiger | 01 | Shot | - Tiger sold to Thailand for \$1250. |
| June 2000 | Thmor Bang Koh Kong | Tiger Bear | 01 01 | Shot Mine Snare | - Tiger killed by GAT Concession solder and bones sold to Thailand for \$350/kg |
| August | Mondul Sema | Sambar | 02 | Shot | - Bush meat sold to Dang Tong trader for \$5/kg |
| | Mondul Sema | Bear | 02 | Snared | - Weight of each bear about 35kg and sold for \$150/each to Dang Tong trader. |
| | Mondul Sema | Serow | 01 | Snared | - Serow died after they brought it home. |
| September 2000 | Thmor Bang | Bear | 01 | Snared | - Bear sold to Chipat trader. |
| | Thmor Bang | Bear | 01 | Snared | - Bear, weight 40kg, killed by soldiers and sold in their village. |
| | Koh Kong | Elephant | 01 | Shot | - Elephant killed by a group of elephant poachers for Ivory. |
| October 2000 | Thmor Bang | Elephant | 07 | Shot | - The 7 elephants killed by an elephant-hunting group. |
| | Thmor Bang | Bear | 03 | Shot, Snared | - The 3 bears sold to Chipat for \$350/each |
| | Thmor Bang | Siamese Crocodile | 01 | Caught | - Caught by villager. |
| November 2000 | Thmor Bang | Bear | 06 | Shot, snared | - The 6 bears killed by local people. |
| | Thmor Bang | Sambar | 03 | Shot | - By local villager. |
| | Thmor Bang | Elephant | 06 | Shot | - 5 local poachers involved. All the elephant parts were sold to Chipat traders. |
| November 2000 | Thmor Bang | Bear | 01 | Snared | - Elephant-hunting group set mine by using dead elephant as bait for killing tiger, but it killed the bear. It was sold to Chipat trader. |
| | Koh Kong | Elephant | 01 | Shot | - Rangers found recently killed elephant during their patrolling. |
| | Thmor Bang | Sambar | 03 | Snared | - Sambars sold to Dang Tong Trader. |
| November 2000 | Thmor Bang | Elephant | 05 | Shot | - Ranger found 5 dead elephant during patrolling. |
| | Mondul Sema | Sambar | 02 | Snared | - Sold to Dang Tong trader. |

| | | | | | |
|----------------|--|--|--|--|--|
| August 2001 | Koh Kong Koh Kong Koh Kong Thmor Bang Thmor Bang Mondul Sema | Sambar Bear Tiger Guar Elephant Sambar | 01 01 01 01 03 02 | Snared Snared Snared Snared Shot Shot | - Villager sold to Dang tong trader for 45B/kg - Villager killed - Sold to PP trader for 15000B/kg - Solder sold to Chipat trader for 30B/kg. - Ranger found the dead elephant - Poacher killed the 2 Sambar. |
| September 2001 | Koh Kong Koh Kong Koh Kong Koh Kong Mondul Sema O Som | Bear Sambar Sambar Sambar Sambar Elephant | 02 02 02 02 01 02 | Shot Snared Snared Snared Snared Shot | - A female and cub killed and sold to Botum Sakor trader for \$450. - Sold to middle traders for 40B/kg - Sold to middle traders for 40B/kg - Sold to middle traders for 40B/kg - Local farmer killed - Elephant hunting group killed the 2 elephants in Pursat province. |
| October 2001 | Koh Kong Koh Kong Thmor Bang Mondul Sema Mondul Sema Mondul Sema O Som | Bear Bear Tiger Sambar Sambar Bear Tiger | 01 01 01 01 02 01 01 | Snared Snared Snared Snared Snared Caught Shot | - By local villager and sold meat in 50B/kg and gal/-blander in 5,000B - By villager and sold in 7000B to middle trader. - By villager - Villager Snared a sambar and sold to Dang Tong trader in 70B/kg - By local farmer. - Cub of bear caught by Crassna collector. - Villager killed this tiger. |

Total wild animals killed In Koh Kong/Pursat:

- Tiger 10
- Bear 32
- Elephant 26
- Serow 01
- Guar 02
- Banteng 01
- Sambar 41
- Siamese crocodile 01

| | | | | | |
|----------------|------------|---|----------------------------|--------------------------------------|--|
| May 2001 | Chom Khсан | Guar | 01 | Shot | - By soldier and sold dry meat to wildlife market along Thai & Cambodian border. |
| August 2001 | Chom Khсан | Tiger Sambar | 01 01 | Shot Shot | - By soldier - By soldier and sold to Chom Khсан market. |
| September 2001 | Chom Khсан | Sambar Sambar Sambar Bear Leopard | 02 01 01 01 01 | Shot Shot Shot Shot Shot | - Villager, but police supplied guns. - By villager and sold at Peach Vihear temple. - Soldier and sold to Market. - By soldier and sold to wildlife trader for \$75. - By soldier and sold to middle trader for \$75. |

Total wild animals killed in Preah Vihear:

- Tiger 07
- Leopard 01
- Bear 07
- Guar 13
- Banteng 11
- Eld's deer 02
- Sambar 13

| | | | | | |
|----------------|--|-----------------------------------|----------------------|------------------------------|--|
| May 2001 | Keo Sema Keo Sema Keo Sema Koh Nehk | Bear Guar Sambar Banteng | 01 01 01 01 | Shot Shot Shot Shot | - By local people. - By local people. - By local people. - By local people. |
| June 2001 | Keo Sema Keo Sema | Guar Sambar | 04 03 | Shot Shot | - Local hunter. - Local hunter. |
| July 2001 | Keo Sema Keo Sema Keo Sema | Sambar Sambar Guar | 02 01 01 | Shot Shot Shot | - By villager. - By villager. - By villager. |
| August 2001 | Keo Sema | Guar | 01 | Shot | - By villager. |
| September 2001 | O Rang O Rang | Sambar Banteng | 02 01 | Shot Shot | - Outsider. - Outsider. |
| October 2001 | Keo Sema | Guar | 01 | Shot | - By police. |

Total wild animals killed in Mondulkiri:

- Tiger 03
- Leopard 02
- Bear 08
- Guar 13
- Banteng 14
- Sambar 17