LOMPHAT CONSERVATION PROJECT

Continuation of wildlife conservation and park protection practices in Lomphat Wildlife Sanctuary, Cambodia

Programmatic Report
May 2004 – April 2005
(Year 2)

STF grant 2004-0103-008
USFWS grant 98210-4-G783

Ministry of Environment

Department of Nature Conservation and Protection

US Fish and Wildlife Rhino and Tiger Conservation Fund grant #98210-4-G783
National Fish and Wildlife Foundation / Save the Tiger Fund grant #2004-0103-008
Care for The Wild International

The Lomphat Conservation Project, a joint DNCP/WildAid initiative, has introduced conservation management practices to Lomphat Wildlife Sanctuary, Northeast Cambodia. There are three international donors to this project: NFWF-Save the Tiger Fund (STF); US Fish and Wildlife Service (USFWS); and, Care for the Wild International (CFTWI). USFWS matched NFWS-STF's fund; there are shared expenses but no duplication of funding. Care for the Wild International's grant mostly covered costs for field equipment, boats, radios, and motorbikes not covered by the two other grants.

INTRODUCTION

The Lomphat Wildlife Sanctuary (LWS) is one of the richest wildlife habitats in Cambodia and appears to be one of the last viable habitats for tigers in the Kingdom. The Lomphat project, launched in June 2003, is training and equipping rangers and field staff to ensure that wildlife in LWS is protected over the long term. The rangers patrol the sanctuary, monitor wildlife with camera traps and other techniques, and work with communities to build local support for the sanctuary and for anti-poaching efforts. The program has significantly decreased poaching in the LWS and has documented tigers and rare species in the sanctuary. This report summarizes the project activities and successes over the last year.

PROJECT RELEVANCE TO TIGERS

Routine ranger patrols have sighted numerous tiger tracks and signs in Lomphat over the last year. The camera trap photograph of the large adult tiger shown here confirms the presence of tigers in Lomphat. This photograph is the most recent wild-tiger photograph from anywhere in Cambodia (previous photographs were from Bokor National Park in southern Cambodia.) Wildlife monitoring in Lomphat has so far been very low key, with just a few months of camera trap data and few specific surveys. With the ranger patrols of this project and more surveys, we expect even more evidence that Lomphat should continue to receive special attention and protection as one of Cambodia's last and relatively unspoiled tiger habitats.

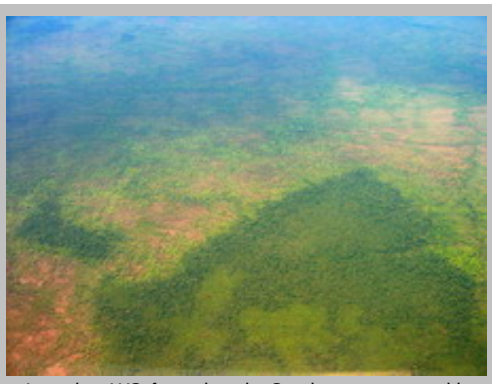
The prey base in Lomphat seems to be increasing, due in part to increased enforcement, which bodes well for the tiger population. Large herds of Gaur and Banteng are regularly observed in the Park, and camera trapping has captured whole herds of these large bovines at mineral licks. As park-based wildlife monitoring activities accumulate more data, Lomphat appears to score very highly as a tiger conservation area. Factors such as the high ungulate biomass, low human population density, and pristine environment connected to other protected forests all point to Lomphat being one of the last remaining viable tiger habitats in Cambodia.

It is essential to maintain the LWS protection efforts in order to conserve tigers, leopards, dhole and other carnivores. Other rare and enigmatic creatures that also inhabit the park—such as Sarus cranes, vultures and two species of ibis—will also benefit from this protection.

PROJECT DESCRIPTION

Project Overview

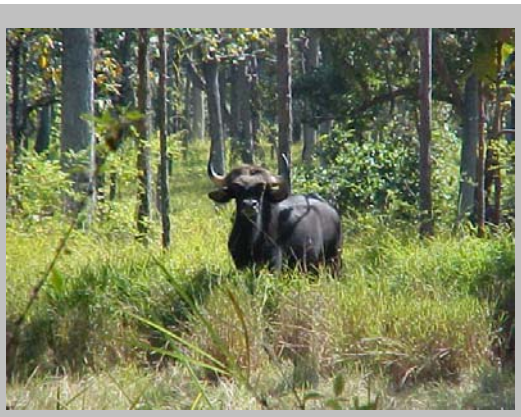
The Lomphat Wildlife Sanctuary (LWS) is in northeastern Cambodia, close to the border with Vietnam. The sanctuary is in the Mondulkiri and Ratanakiri provinces, but four provinces, Kratie, Mondulkiri, Ratanakiri, and Stung Treng, share responsibility to administer it; the park management must coordinate with all four provinces on administrative matters. The 2,500km² of LWS is covered with largely intact mixed dipterocarp forest, grasslands, volcanic lakes, seasonal ponds and wetlands. Some of South East Asia's most rare and endangered animals are found here including the tiger, leopard, Sun bear, Sarus crane, the Giant Ibis, Eld's deer and herds of gaur and banteng. BirdLife International listed LWS as an important bird area in Asia in their 2004 publication, *Important Bird Areas in Asia: key sites for conservation*. In December 2004, camera traps caught pictures of a leopard and a Sun bear in evergreen patches adjacent to park boundaries. In March 2005, camera traps photographed a large male tiger and dhole (Asiatic wild dogs) in this same area. Over 85 different species of wildlife have now been recorded within the park during the initial two years by Lomphat Conservation Project, and rangers are finding previously unrecorded species almost every month.



Lomphat WS from the air, Southwest sector with small patch of evergreen forest in which tiger and leopard have been photographed.

The Cambodian Department of Nature Conservation and Protection (DNCP) of the Ministry of the Environment implements the Lomphat project; WildAid provides technical advice and training. The project began with 27 newly recruited rangers receiving Basic Ranger Training in May 2003 at the National Protected Area Training Center at Bokor National Park (see report ERBTC 2-2003). Since then, the sanctuary has hired and trained additional rangers, with more training on park protection patrols and wildlife monitoring. Rangers also visit local communities, educating them on the importance of nature conservation and building relations with communities adjacent to the sanctuary.

The Lesser Adjutant stork is relatively abundant in the sanctuary.



In April 2004, rangers spotted a herd of over 20 gaur. Rangers consistently report signs or gaur and banteng within LWS.

Project Objectives

To help rangers protect wildlife at Lomphat, the project has the following objectives:

1. Give rangers an understanding of protected areas management.
2. Train rangers to patrol, enforce, monitor, report and communicate.
3. Inform local communities about the importance of conserving the sanctuary.
4. Lessen the dependence of local communities on LWS resources.
5. Create a local infrastructure enabling rangers to collaborate with district police and army officials in enforcing nature laws.

During the second year the following objectives were selected for further attention:

- Improve the rangers' (and the DNCP's) reporting abilities.
- More field training in patrolling techniques.
- Further equip the park with essential equipment to implement protection activities.
- Improve the rangers' ability to communicate with local authorities and communities.

METHODOLOGY AND RESULTS

The project continues to successfully emulate the effective park protection model implemented at Bokor National Park. This three-pronged approach involves protecting the park, outreach to the community, and monitoring wildlife.

1. Park Protection

Six 5-man, anti-poaching teams rotate patrols. Each team patrols no less than 15 days per month; each patrol lasts 5 days, unless more time is needed to cover greater distances. The main objectives are to: locate, push out and/or arrest poachers; confiscate poaching equipment (guns, snares, electrical fishing equipment, etc.); collect information about poaching activity and wildlife populations inside the park; and, record data which will be reviewed and used to help adapt patrolling strategies


Local communities conduct seasonal burning and collect resin within LWS boundaries.

During this reporting period, 902 days were spent on patrol. (*See Appendix 2 for a summary of ranger patrols*). The patrols intercepted 47 poachers, discovered and destroyed nine camps,

and confiscated 80 live wild animals which they released back into the park. Patrols also encountered 15 logging violators and confiscated 16 logs, nine boards and planks, and 2.96m^3 of wood. (*See Appendix 1 for a summary of all enforcement activities*). The most frequent forest violations continue to be logging, encroaching, hunting, fishing and collecting resinous tree oil.

Table 1. Items Confiscated/Destroyed

Items Confiscated/Destroyed	No.
Logs	16
Boards/Planks	9 + 2.96m3
Wood Oil (kg)	0
Chainsaws	5
Crossbows	0
Electric Fishing Equipment	12
Fishing nets/stream barriers	4
Boats	3
Guns	1
Machetes	2

Table 2. Violations

Violation	No.
Illegal Logging Cases	23
Logging Violators Apprehended	15
Illegal Hunting/Fishing Cases	21
Hunting/Fishing Violators	30

(Data represents May 2004 – April 2005)

Care for the Wild International provided a grant of $5,118 in February, 2005, to purchase equipment in LWS. Equipment purchases included: three wooden boats including engines, fuel and maintenance costs for one year; one motorbike including fuel and maintenance costs for one year; and, three ICOM radio units.

Lack of cooperation from local authorities (commune leaders, district authorities, police) make a difficult job even harder. It appears that some local authorities are providing equipment to offenders, such as chainsaws, electric fishing gear and ICOM radios. In December 2004, local people informed park authorities about illegal fishing at O'chbar point; the violators were tipped off and the fishermen were gone when the rangers arrived. Those offenders who are arrested are often not prosecuted since the protected area law is still awaiting final approval from the National Assembly.

Rangers investigate illegal logging case

Small boats help rangers navigate rivers and seasonally flooded areas within the sanctuary.

Other reports indicate that local people are used to monitor ranger locations in the park so illegal activities may be conducted in other areas away from the patrols. Informants have told park staff that the park radios are monitored constantly. This occurred in Bokor National Park; the ranger team leaders there now use mobile phones to plan counter-poaching operations. Unfortunately, there is no mobile phone network at Lomphat.

In November 2004, a police commander located in Koh Nhek, Mondulkiri Province, confiscated the weapons of rangers patrolling in the area. The park director explained the rangers' role in protecting the park, showing a map of the park boundaries, the MoE mission letter and Ministry of Interior gun permits. Still, the police commander held their weapons, unlawfully declaring that there would be no guns in his district. Due to the dangerous nature of protecting the park, these rangers were unable to conduct meaningful and safe patrols until their weapons were returned. The issue was resolved in February 2005. We suspect, but can not prove, that this matter was connected to illegal logging being conducted in that area by persons connected with this officer.

The District Governor has also unlawfully prevented us from constructing a substation at Sre Chhouk village, which the Provincial Governor had approved; the Minister of Environment finally resolved this delay in May, 2005. But the district of Koah Nhek continues to be a difficult area for the park rangers to work in. Park rules were poorly enforced in this area In the past, allowing it to be a hotspot of violations, often involving influential officials subsidizing their meager government salaries.

Rangers continue to have problems finding potable drinking water in some areas of the park, especially during the dry season. Malaria is constantly a problem. The size of the park also makes it impossible for the current number of rangers to patrol thoroughly. Marking the park boundary would help rangers by clearly identifying park jurisdiction to communities, police and authorities.

The Park director has asked the Ministry of Environment to employ additional rangers, but this is not yet possible. They have also asked for more basic equipment, such water bottles, digital camera batteries, uniforms, and an increase in the monthly food and supplements for rangers, (the worldwide increase in fuel prices is inflating all costs in Cambodia and the ranger's food allowance needs to increase to match inflation.)

Commercial game hunting may become a new threat to the tiger population of Lomphat. In December, a Spanish safari hunting company, NSOK Safaris, proposed to the Ministry of Environment to explore the possibility of hunting-related tourism in the Lomphat and Beng Per wildlife sanctuaries in Central and Northeastern Cambodia. (See reports from MoE entitled "Proposal for a Pilot project of Sustainable Hunting in Northern Cambodia" by the Iberian Institute For Environment, Madrid August 2004). The concept progressed as far as company representatives making site visits with the Director of the Department of Nature Conservation and Protection Mr. Chay Samith. The Director did not respond to our repeated requests to clarify the possibility of the DNCP allowing commercial hunting inside the PA. We finally sent a formal letter to the Minister of Environment in late December. Unofficial reports suggest the MoE has rejected the proposal, but the Forestry Administration (FA) is still exploring commercial hunting in reserved forests outside of the MoE controlled protected area system.

Introducing commercial hunting in this area risks undoing our success is reducing poaching. Commercial hunting could give the impression that the wildlife is being preserved for the rich. This would send the wrong message about why biodiversity needs to be conserved and would make it much more difficult to enforce the no-hunting regulations among local communities. Also, reserved forests that are outside the MoE control connect most of the protected areas in the Northeast; the wildlife migrates through these forests. There is little information on wildlife abundances in this region of Cambodia and the cost to produce reliable data needed to manage sustainable hunting would be substantial. It is unlikely that one safari company could cover

these costs, but without this research, commercial hunting is generally unsustainable; the long-term benefits to local communities of such unsustainable hunting are debatable.

2. Community Outreach

Rangers continue their community outreach efforts with communities within the protected area and around the park. Visits help to build relationships with local communities and leaders, and allow rangers to collect baseline data on attitudes toward the park and villagers' understanding of protected area laws.

Despite the importance of these visits, monthly reports on project activities suggest that rangers lack the capacity to educate communities and to collect accurate field data. WildAid has started to work with The People, Resources, and Conservation Foundation (PRCF) to further develop and implement a strategy to address this issue.

Rangers and park staff meet with local communities to educate them on the importance of protecting the park.

3. Wildlife Monitoring

Introducing camera traps to monitor wildlife has yielded pictures of tiger, two leopards (although we are unable to confirm two individuals), and a Sun bear, as well as a large number of other species of mammals and birds.

Rangers continue to report signs of an abundance of large herbivores such as Gaur, Banteng and Eld's Deer, as well as seasonal populations of large water birds including Greater and Lesser Adjutant storks, Sarus Cranes and Woolly Necked Storks. The preserve is also thought to hold one of the largest remaining vulture roosts in Asia, where they also breed. The Wildlife Conservation Society and BirdLife International identified three vulture species in the LWS during a vulture census at Veal Trapaing Trach Thom in July, 2004. The list of species present in LWS continues to grow (*see Appendix 4 for full species list)*.

Table 3 shows wildlife recorded in Lomphat to date. Despite such large species diversity, little wildlife research has been done in Lomphat Wildlife Sanctuary; therefore, WildAid continues to train the park rangers to collect wildlife data (details below). Past wildlife monitoring efforts were mainly conducted on an ad-hoc basis due to budgetary constraints. However, a Wildlife Survey and Training course was conducted in late October 2004 to expand on skills taught at the Patrol Ranger Training course held at the beginning of the project. Table 5 details the species caught

and released by rangers during this reporting period. This list includes 51 Bengal monitors, 32 of which were confiscated from one individual, and nine Alexandrine parakeet chicks taken from nests; unfortunately, the chicks were too young and died.

Table 3. Direct Wildlife Sightings

Banteng	39
Gaur	39
Red Muntjac	45
Sambar Deer	1
Wild Boar	32
Sun Bear	3
Asiatic Jackal	3
Dhole	1
Binturong	1
Common Palm Civet	16
Large Indian Civet	5
Large Spotted Civet	10
Leopard Cat	2
Leopard	2
Tiger	1
Yellow-throated Marten	2
Crab-eating Macaque	2
Pig-tailed Macaque	7
Monkey sp.	76
Black-shanked Douc Langur	32
Cynopterus Bat	1
Black-banded Squirrel	1
Greater Adjutant Stork	5
Lesser Adjutant Stork	14
Sarus Crane	26
Crane sp.	7
Siamese Fireback	24
Javan Pond Heron	1
Hoopoe	1
Oriental Pied Hornbill	1
White-shouldered Ibis	2
Red Junglefowl	21
Black-shouldered Kite	1
Red-wattled Lapwing	1
Common Myna	1
Hill Myna	1
Brown Fish-owl	1
Red-breasted Parakeet	1
Green Peafowl	10
Thick-billed Green Pigeon	10
Milky Stork	1
Woolly-necked Stork	6
Vulture sp.	20
Greater Yellownape Woodpecker	1
Common Bronzeback	1
Marble Cat Snake	2
Common Cobra	1
Monocellate Cobra	1
Red-necked Keelback	1
Reticulated Python	2
Long-nosed Whip Snake	1
Garden Fence Lizard	2
Moustached Lizard	1
Bengal Monitor	3
Elongated Tortoise	6
Asian Box Turtle	1

Table 4. Wildlife Tracks and Signs Observed

Banteng	38
Gaur	5
Eld's Deer	7
Red Muntjac	12
Sambar Deer	10
Wild Boar	17
Asiatic Black Bear	1
Sun Bear	3
Bear sp.	4
Asiatic Jackal	1
Dhole	3
Civet sp.	3
Fishing Cat	3
Leopard Cat	3
Clouded Leopard	2
Leopard	7
Tiger	1
Sarus Crane	4
White-necked Stork	1

Table 5. Wildlife Confiscated and Released

Bengal Monitor	51
Water Monitor	1
Elongated Tortoise	2
Asiatic Soft-shell Turtle	1
Tortoise sp.	50
undetermined sp.	100 kg
Alexandrine Parakeet	9

(Data representing May 2004 – April 2005)


Collecting wildlife for food or to be sold into the illegal pet trade continues to be an issue. Above, a porcupine in poor health sustained injuries from a rope tied around its midsection. On the right, Alexandrine parakeet chicks that were taken from nest in the park. Birds of this age rarely survive outside the nest.


More camera trap photos

Preliminary Wildlife Survey and Training - October 2004, Lomphat Wildlife Sanctuary

WildAid conducted a Preliminary Wildlife Survey and Training course at LWS headquarters in October 2004. WildAid hopes to continue to develop the capacity of the park rangers to collect wildlife data to serve two purposes: 1) provide baseline information on wildlife presence, abundances, distributions and movements to support park management decisions; and, 2) to confirm the existence of key species such as leopard and tiger to encourage further outside support for research and protection efforts.

The survey indicated that there are a high number of large cattle and wild pigs in the survey area, particularly towards the south. Two sets of tiger prints were found, one outside of the western park boundary, and one set of leopard tracks, also outside of the boundary. Eight camera traps were placed at or near major waterholes, later moved to an evergreen patch outside of the southwestern park boundary.

Course Objectives

- Train rangers to use camera traps and basic wildlife basic wildlife survey techniques.
- Collect information on animal presence the western area of the park, both within and outside the western park boundary.
- Set camera traps.

Training

We conducted an introduction and training session at the park headquarters in Lomphat town for all team leaders, a group of 12 rangers from each substation, and the Director and Assistant Director of the sanctuary. Two of the team leaders who had attended a two-week wildlife monitoring training course that WildAid conducted earlier in the year participated as trainers.

Rangers learn how to change the settings on a camera trap

Class-room topics covered how to set and locate the Camtrakker camera trap and how to use camera trap and wildlife observation datasheets. The training stressed recording signs of focal species such as tiger, leopard, bear and elephant in detail, since these species are of particular interest to both park managers and outsider groups. Over four days, the participants applied the classroom training in the field, with participants in the decision-making roles and trainers present only to reinforce lessons as needed. No mammals were sighted during the survey but their presence was documented through photos and plaster casts of tracks.

Rangers were consulted on survey route planning.

Participants set eight camera traps during the initial field survey at or near waterholes where animals appeared to congregate. In late November, the Sre Angkrong ranger team collected the used films and moved the camera traps to the initial target zone 1 outside of the western park boundary. Camera trap images from this area could emphasize the importance of this forest patch for the local wildlife and support an argument for the need to extend the park boundary farther to the west.

Rangers using data sheets in the field

In Lomphat Wildlife Sanctuary, the open terrain, human presence and high risk of fire in March and April are major constraints to camera trapping. The majority of the survey area covered during this trip is represented by dry dipterocarp and grassland where animal trails are less distinctive; resin collectors were active in all significant forest patches. Rangers said resin collectors could potentially steal any camera traps they found, which severely limited the number of viable camera trap sites.

Results

***Table 6.* Species list from sign observations**

No.	Species	Type of sign			Level of confidence in identification	Sign abundance
		Prints	Feces	Other		
1	Elephant			✓	High	Low
2	Large cattle (Gaur & Banteng)	✓			High	High
3	Wild Pig	✓		✓	High	High
4	Muntjac (Barking Deer)	✓		✓	High	Med
5	Sambar Deer	✓			High	Low
6	Siamese Hare		✓		High	Low
7	Porcupine		✓		Med	Low
8	Civet*	✓	✓		Med / High	Med
9	Leopard Cat*	✓			Med / Low	Med
10	Fishing Cat*		✓		Low	Low
11	Tiger	✓			Med / High	Low
12	Leopard	✓			Med / High	Low
13	Jackal *	✓	✓		Med / High	Med
14	Dhole *	✓	✓		Med / High	Med
15	Parakeets			✓	High	Med
16	Large Birds (Adjutants, Storks, Cranes etc.)		✓		Med	Low

Human activity – Surveys encountered areas of rice paddy along the river bank that is the park boundary. Rangers say the paddy fields have been there for three years, and are occupied only seasonally. Discussions with the rangers revealed that this is common practice in several areas

adjacent to villages along the park boundary as well as along river banks and wetland areas south of Lomphat town.

Resin collecting is prevalent wherever large trees are found in the park. One resin collector camp with three bamboo and rattan shelters had been used recently. Resin is harvested by cutting a hole in the side of a tree and then using fire to extract the resin. Trees harvested in this way may still live for years. This activity is not controlled because of its subsistence nature and low direct environmental impact (indirect impacts from uncontrolled fires can be greater.)

Human activity can also be inferred from the charred trees. The majority of the vegetation in the park is burnt off every year around March and April. The reason for this is not clear, but there may be several including accidental fires from collecting resin, burning of the high grassland for ease of access, or simply habit.

Resin collection continues to be a problem in LWS not only for the damage it causes to the trees but also because it draws people into the park. Collectors often set up houses and stay in the sanctuary for long periods of time.

Further Camera Trapping

For November, camera traps were placed next to permanent streams and water holes within small isolated patches of bamboo or evergreen forest; these patches were surrounded by large areas of dry dipterocarp and low bamboo or grassland. Of the few camera trap images recorded in November, Muntjac deer and Wild Pig images were the most frequent. In December, the camera traps were placed just inside the northern edge of target zone 1, a large patch of evergreen forest outside of the park boundary. These traps returned significantly higher image frequencies. Wild Pigs were not recorded, but Muntjac recordings increased, and image frequencies for other forest animal species such as Macaque and Siamese Fireback were also high. Camera trapping in January-April 2005 confirmed a large male tiger, two pictures of a leopard, leopard cat, dhole, large spotted civet, large Indian civet and others. We are still analyzing the results.

Tale 7. Camera Trap Results

Banteng	1
Gaur	3
Red Muntjac	37
Wild Boar	4
Sunbear	3
Asiatic Jackal	1
Dhole	1
Common Palm Civet	15
Large Indian Civet	5
Large Spotted Civet	10
Leopard Cat	1
Leopard	2
Tiger	1
Yellow-throated Marten	1
Pig-tailed Macaque	7

Green Peafowl	6
Lesser Adjutant Stork	2
Yellow-naped Flameback	1
Siamese Fireback	23
Javan Pond Heron	1
Red Jungle Fowl	2
Wooly-necked Stork	4

Also captured by camera traps:

Domestic Dog	4
Poacher	5
Villager	6

(Data collected from Oct 04- Apr 05)

Conclusions of Wildlife Monitoring Training

Overall ability of the rangers in setting up the camera traps was impressive. Most had gained a good understanding of the technique and the experienced team leaders were competent in providing assistance where needed. Very little instructor input was given after the initial demonstration. Datasheets however seemed more confusing; the rangers may need more class time to understand the datasheets. Some rangers also appeared to have difficulty due to limited literacy. A full report entitled *Preliminary Wildlife Monitoring Survey and Training, October 2004,* is available upon request.

Selected Camera Trap Photos:

Tiger

Red Muntjac

Banteng

Leopard

Asiatic Jackal

Sun Bear

4. Staff development training summary:

September 2004	The director of the sanctuary participated in the National Workshop on the Rapid Assessment and Prioritization of Protected Area Management conducted by BPAM in Phnom Penh.
October 2004	All team leaders and a group of 12 rangers representing each substation attended an introduction and training session at the park headquarters in Lomphat town. The Director and Assistant Director of the sanctuary were also present. This training was followed up by a 4-day field survey trip.
January 2005	Park Chief traveled to Phnom Penh to participate in meeting to review the declaration of Protected Areas management at Ministry of Environment.
February 2005	Park Chief participated in the meeting with H.E. Ty Neng and Kong Srim as a representative of supreme judge council of the Ministry of Justice to discuss the role and responsibility of justice police in prosecuting offenders.
March 2005	Park Chief attended the 2004 annual environmental activity sum-up meeting and the proposed work activities for the next year at Ministry of Environment. He also joined a meeting with the provincial governor to discuss modifying the administrative system and decentralization issues.

5. Review and Evaluation:

Conducted May 2005	Review conservation practices and protection systems in LWS – Year 2

As in Year 1, a small team of selected project staff and an outside consultant will review the ongoing conservation and protection systems at LWS during Year 2. This team will make site visits, interview staff, and travel into the park to observe rangers and the overall status of activities within the park. All funders will receive the final report from this evaluation.

6. Conclusion:

The WildAid-administered Lomphat Conservation Project has made great progress during its first two years. We have trained rangers in patrolling practices, enforcement strategies, weapons safety, reporting and communications skills, camera trapping, and wildlife survey and monitoring techniques. The park director continues to be involved in information courses held by the Ministry of Environment and works closely with his MoE counterparts. His enthusiasm for his work has even motivated him to study English, which will benefit his professional development and his ability to read contemporary information on park management.

The park has sufficient equipment for now to implement regular patrols throughout the sanctuary during all seasons, although lack of manpower and inhospitable terrain will continue to be hurdles for rangers. The park director requested that the project employ additional rangers to increase their capacity to protect the sanctuary. The equipment wears out quickly under the demanding conditions of patrolling Lomphat and it is critical to replace it quickly. Otherwise, Rangers are too often less equipped than poachers.

While the rangers' presence continues to deter poachers, community outreach activities progress slowly. The Lomphat Conservation Project and partners are helping communities reduce their reliance on sanctuary resources while still maintaining their way of life. As these

projects continue to improve community relations, we anticipate that communities will increasingly realize the importance of protecting Lomphat Wildlife Sanctuary and of the presence of the rangers.

Lomphat Wildlife Sanctuary is at a critical stage in its development and shows a lot of promise. As with all projects of this scale, the Lomphat Conservation Project will develop and adjust to information from ranger patrols, wildlife monitoring surveys, and community activities. A long-term commitment is required from all of the hard working individuals involved if we are to continue to improve the measurable results.

WildAid thanks Save the Tiger Fund for your support, and for sharing the view that this investment will provide direct and indirect benefits to Cambodia.

Appendix 1. Summary of Enforcement Activities May 2004 – April 2005

DETAIL	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	TOTAL
Patrol Details													
Number of patrols	6	8	10	12	13	10	16	21	23	15	18	16	**168**
Number of patrol days	70	73	81	73	71	48	62	73	77	91	89	94	**902**
Overall Case Results													
Total poacher intercepts	3	0	1	1	5	5	1	4	0	0	0	0	**20**
Total poacher intercepted	2	0	4	2	15	7	2	6	0	0	2	7	**47**
Cases sent to court	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Specific Violations													
Logging cases **	2	0	2	2	2	3	0	0	9	2	0	1	**23**
Logging violators **	0	0	4	2	1	3	0	0	0	5	0	0	**15**
Hunting / fishing cases	1	1	0	1	7	4	1	4	0	0	1	1	**21**
Hunting / fishing violators	2	0	0	0	16	4	2	6	0	0	0	0	**30**
Forest fires extinguished	0	0	0	0	0	0	1	0	0	0	0	0	**1**
Wood oil producing cases	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Wood oil producing violators	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Tree ring-barking cases	0	0	0	0	0	0	0	3	0	0	0	0	**3**
Tree ring-barking violators	0	0	0	0	0	0	0	3	0	0	0	0	**3**
Items confiscated / destroyed													
Poacher camps	0	0	0	0	4	0	1	0	3	0	1	0	**9**
Poached Products:													
Logs	16	0	0	0	0	0	0	0	0	0	0	0	**16**
Boards / planks	3	0	0	6	.5 m3	0	0	0	0	.3 m3	0	2.16 m3	**9 + 2.96m3**
Wood oil (kg)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Live wildlife (released)	0	0	0	0	55 +100kg	0	0	0	25	0	0	0	**80 +100kg**
Poaching Equipment:													
Axes / hatchets	0	0	0	1	0	0	0	0	0	0	0	0	**1**
Chainsaws	0	0	0	1	1	0	0	0	0	3	0	0	**5**
Crossbows	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Electric fishing equipment (set)	1	0	0	0	0	2	0	4	1	1	0	3	**12**
Fishing nets/stream barriers	0	0	0	0	0	0	0	0	0	0	2	2	**4**
Guns	0	0	0	0	1	0	0	0	0	0	0	0	**1**
Boats	0	0	0	0	2	0	0	0	0	1	0	0	**3**
Machetes / knives	0	0	0	1	1	0	0	0	0	0	0	0	**2**
* Violations may include more then one illegal activity													
** Logging not including blackwood													

Appendix 2: Species Identified in the Lomphat Wildlife Sanctuary

Appendix 4. Species Identified in Lomphat Wildlife Sanctuary

Mammals

No.	English Name	Scientific Name
1	Asian Elephant	*Elephas maximus*
2	Banteng	*Bos javanicus*
3	Gaur	*Bos gaurus*
4	Eld's Deer	*Cevus eldi siamensis*
5	Red Muntjac	*Muntiacus muntjak*
6	Sambar Deer	*Cervus unicolor*
7	Wild Boar	*Sus scrofa*
8	Asiatic Black Bear	*Ursus thibetanus*
9	Sun Bear	*Ursus malayanus*
10	Asiatic Jackal	*Canis aureus*
11	Black-backed jackal	*Canis mesomelas*
12	Dhole	*Cuon alpinus*
13	Binturong	*Arctictis binturong*
14	Common Palm Civet	*Paradoxurus hermaphroditus*
15	Large Indian Civet	*Viverra zibetha*
16	Large Spotted Civet	*Viverra megaspila*
17	Fishing Cat	*Prionailurus viverinnus*
18	Leopard Cat	*Prionailurus bengalensis*
19	Clouded Leopard	*Neofelis nebulosa*
20	Leopard	*Panthera pardus*
21	Tiger	*Panthera tigris*
22	Yellow-throated Martin	*Martes flavigula*
23	Crab-eating Macaque	*Macaca fascicularis*
24	Long-tailed macaque	*Macaca fascicularis*
25	Pig-tailed Macaque	*Macaca nemestrina*
26	Black-shanked Douc Langur	*Pygathix nemaeus nigripes*
27	Cynopterus Bat	*C. brachyotis or C. sphinx*
28	Black-banded squirrel	*Callosciurus nigrovittatus*
29	Cambodian Striped Squirrel	*Tamiops rodolphii*
30	Three-striped Ground Squirrel	*Lariscus insignis*

Birds

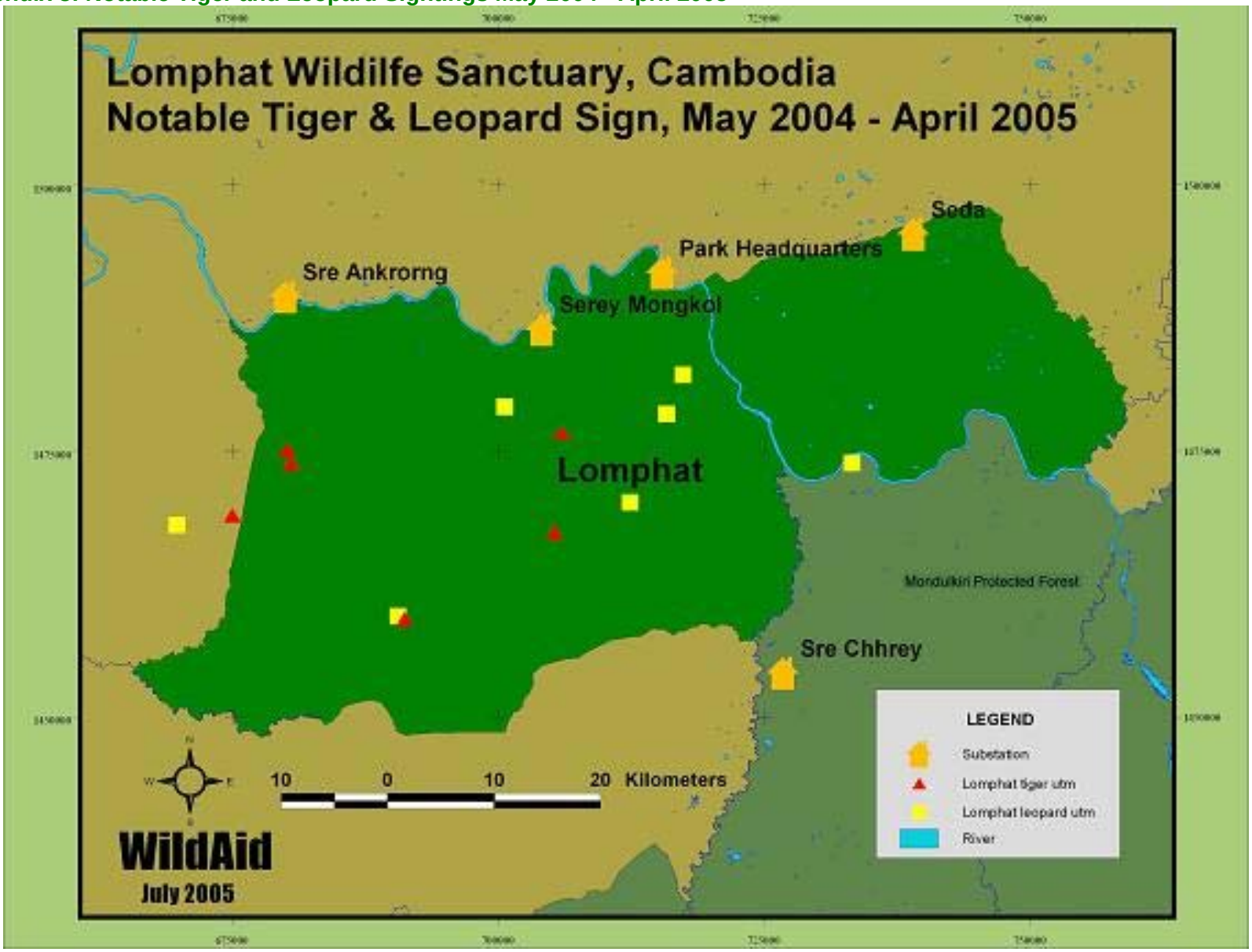
No.	English Name	Scientific Name
1	Greater Adjutant	*Leptoptilos dubius*
2	Lesser Adjutant	*Leptoptilos javanicus*
3	Sarus Crane	*Grus antigone*
4	Cattle Egret	*Bubulcus ibis*
5	Peregrine Falcon	*Falco peregrinus*
6	Collared Falconette	*Microhierax caerulescens*
7	Siamese Fireback	*Lophura ignata*
8	Grey-headed Fish Eagle	*Ichthyophaga ichthyaetus*
9	Common Flameback	*Dinopium javanense*
10	Chinese Fracolin	*Francolinus pintadeanus*
11	Javan Pond Heron	*Ardeola speciosa*
12	Hoopoe	*Upupa epops*
13	Oriental Pied Hornbill	*Anthracoceros albirostris*
14	Giant Ibis	*Pseudibis gigantea*
15	White-shouldered Ibis	*Pseudibis davisoni*
16	Red Junglefowl	*Galus galus*

17	Collard Kingfisher	*Halcyon chloris*
18	Stork-billed Kingfisher	*Halcyon capensis*
19	Black-shouldered Kite	*Elanus caeruleus*
20	Red-wattled Lapwing	*Vanellus cinereus*
21	Blue Magpie	*Urocissa erythrorhyncha*
22	Common Myna	*Acridotheres tristis*
23	Hill Myna	*Gracula religiosa*
24	Brown Fish Owl	*Ketupa zeylonensis*
25	Alexandrine Parakeet	*Psittacula eupatria*
26	Red-breasted Parakeet	*Psittacula alexandri*
27	Green Peafowl	*Pavo muticus*
28	Thick-billed Green Pigeon	*Treron curvirostra*
29	Black-necked Stork	*Ephippiorhynchus asiaticus*
30	Milky Stork	*Mycteria cinerea*
31	White-headed Stork	*Balaeniceps rex*
32	Woolly-necked Stork	*Ciconia episcopus*
33	Red-headed Vulture	*Sarcogypus calvus*
34	Slender-billed Vulture	*Gyps tenuirostris*
35	White-rumped Vulture	*Gyps bengalensis*
36	Greater Yellownape Woodpecked	*Picus flavinucha*

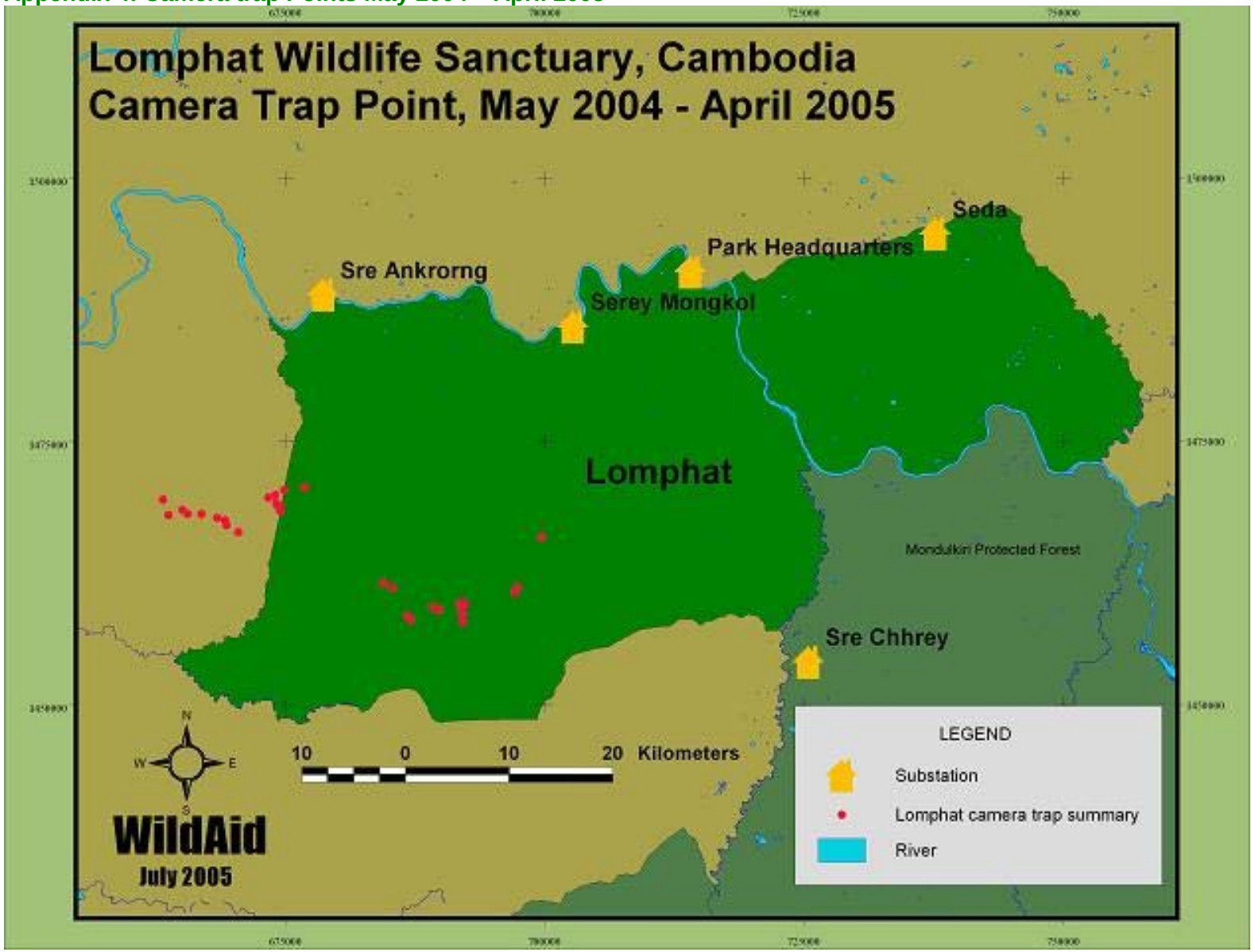
Reptiles

No.	English Name	Scientific Name
1	Common Bronzeback	*Dendrelaphis pictus*
2	Mountain Bronzeback	*Dendrelaphis subocularis*
3	Marble Cat Snake	*Boiga multomaculata*
4	Common Cobra	*Naja naja*
5	Common Chinese Cobra	*Naja atra*
6	Monocellate Cobra	*Naja kaouthia*
7	Red-necked Keelback	*Rhabdophis subminiatus*
8	Big Eyed Pit-viper	*Trimeresurus macrops*
9	Burmese Python	*Python molurus bivittatus*
10	Reticulated Python	*Python reticulatus*
11	Indo-Chinese Rat Snake	*Ptyas korros*
12	Variable Reed Snake	*Calamaria lumbricoidea*
13	Long-nosed Whip Snake	*Ahaetulla nasuta*
14	Garden Fence Lizard	*Calotes versicolor*
15	Moustached Lizard	*Calotes mystaceus*
16	Bengal Monitor	*Varanus bengalensis*
17	Water Monitor	*Varanus salvator*
18	Asiatic Soft-shell Tortoise	*Amyda cartilaginea*
19	Elongated Tortoise	*Indotestudo elongata*
20	Asian Box Turtle	*Cuora amboinensis kamaroma*
21	Asian Giant Soft-shelled Turtle	*Pelochelys cantorii*

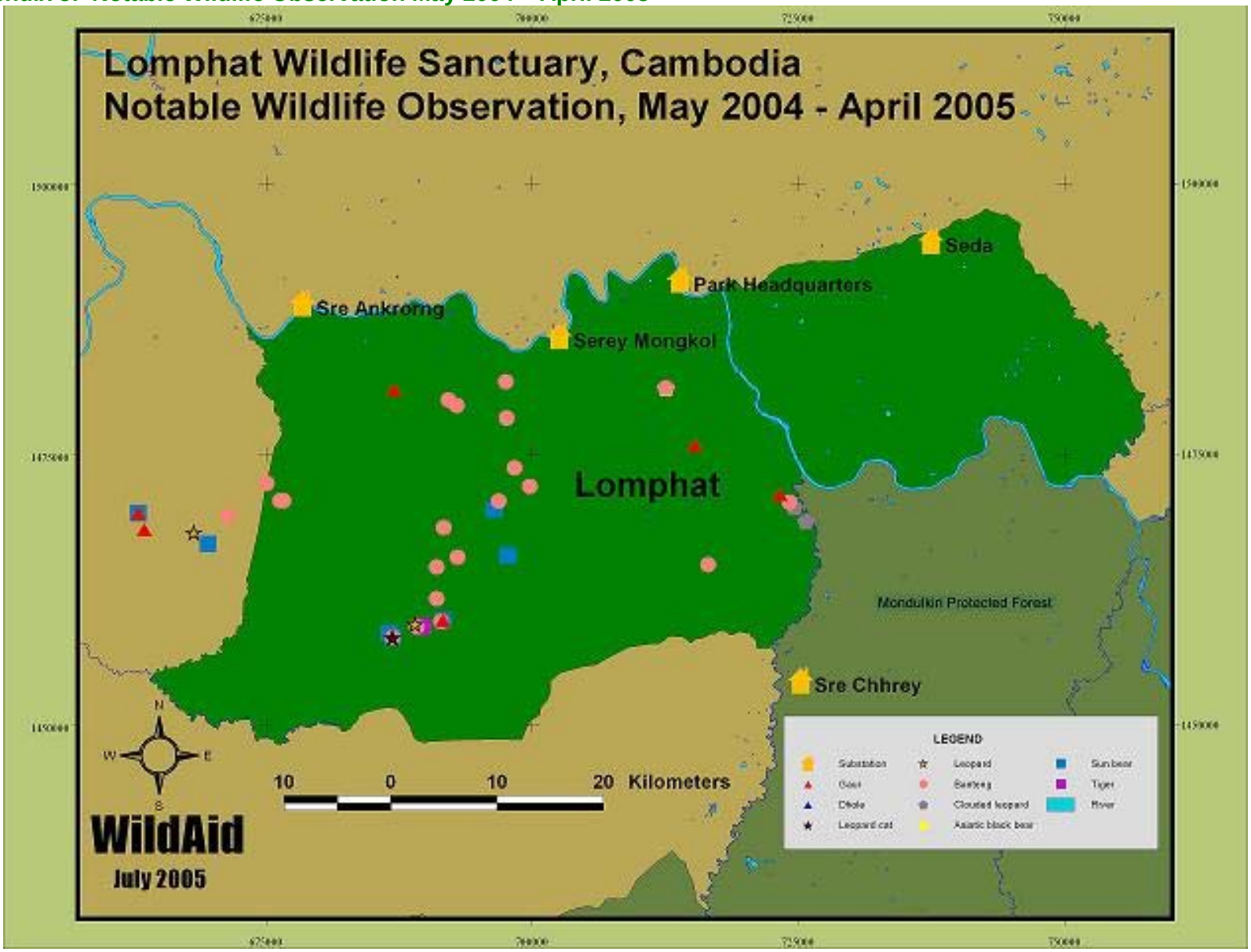
Appendix 3: Notable Tiger and Leopard Sightings May 2004 - April 2005



Appendix 4: Camera trap Points May 2004 – April 2005



Appendix 5: Notable Wildlife Observation May 2004 – April 2005



Appendix 6: Ranger Patrol Routes May 2004 – April 2005