

Conservation Force Eld's Deer Activities 2005



By Chris Hallam (Research Assistant WCS Lao PDR)

Overview

The Eld's Deer Conservation Project is a community-based wildlife management project located in Chonnabuly District, Savannakhet Province. In 2002 WCS confirmed the presence of a new population of ~30 Eld's deer *Cervus eldi siamensis*. This resulted in the successful establishment of a 93,000 hectare sanctuary in 2004 (Figure 1). Preliminary studies involving villagers from within the sanctuary area, government officials and WCS staff suggested that direct threats to deer were; 1) hunting, 2) mortality resulting from dog attacks, and 3) habitat loss and fragmentation. It is also thought that lack of awareness, regulations, and enforcement are indirectly contributing to the development of direct threats to deer at the site. As a result of WCS and partners work in the area monitoring these threats, regulations are now in place at the provincial and national level to protect the deer. WCS and partners continue to monitor the effectiveness of these regulations.

This project continues to focus on:

- 1) Awareness and education,
- 2) Patrolling and enforcement,
- 3) Surveys and monitoring and,
- 4) Providing incentive to villagers for the protection of the deer.

There is the possibility to investigate reports of other populations in Champasak province, Mounlapamok district in the future. The long-term management aim is to increase deer numbers at existing deer sites, expand populations into adjacent suitable habitat and provide benefits and incentives to villager's livelihoods to conserve the deer population.

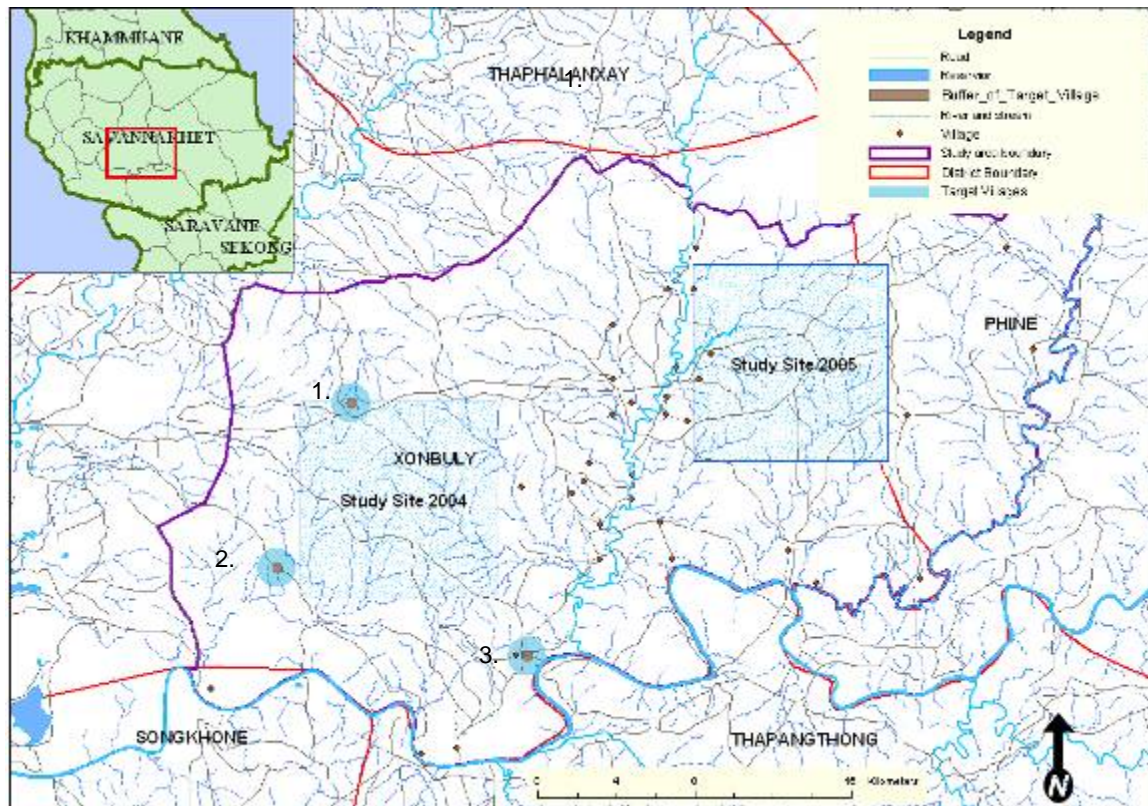


Figure 1: Eld's Deer Sanctuary Location, target villages (1. Mai Sanamxay, 2. Nong Songhong 3. Tangvai-Nam) and study sites (2004 and 2005)

ACTIVITIES/PROGRESS 2005

Chonnabuly Site

Surveys and Monitoring: May 2005 and December 2005

Villagers, WCS and government counterparts continue to work with three target villages (Figure 1) within the sanctuary to monitor the Deer population in the area. Field surveys were completed in May and December of 2005. The data from these most recent surveys completed on 17th December 2005, completes a set of three early dry season (November-December) and late dry season (April-May) transects completed with WCS supervision. Villagers, Government officials and WCS staff traverse a set of nine, eight km transects and record, sightings, tracks and scats of deer encountered.

A total of 384 km of transects have been completed to date. Of the 312 km of transects completed and analyzed to May 2005, signs of deer (scats or tracks) have been encountered 206 times representing an average of 0.67 signs encountered per km. Fig 1.0 shows that there is no significant increase or decrease in the incidence of signs.

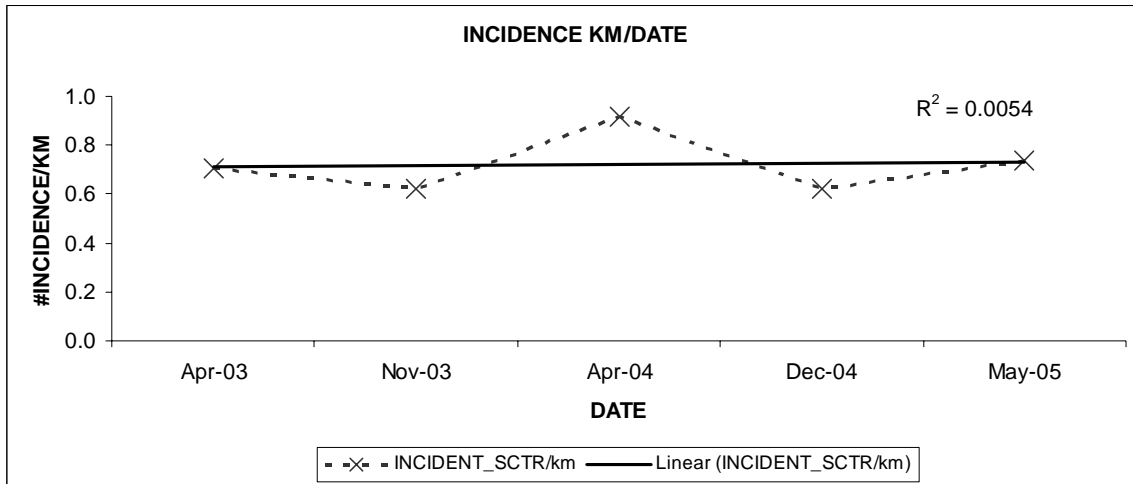


Figure 2.0: Incidence of Scat or Track detection over survey events.

Opportunistic sighting records by villagers from the three target villages were collected from April 2003 to December 2005. New records from the December surveys are yet to be added.

In total, 1772 sightings were recorded in the 26-month period. The average group size was 4.6 deer, and on average this included 1.2 young deer and 1.0 adult male deer (n=1772). The maximum group size recorded in one sighting incident in October 2004 was 39 deer. The maximum number of young deer was 14 in one group, and at most, 5 adult male deer were seen in one group. There was no significant increase or decrease in group size over the 26 month period (Figure 4 and Figure 5).



Figure 3: Village conservation team, WCS and Government Officials May 2005

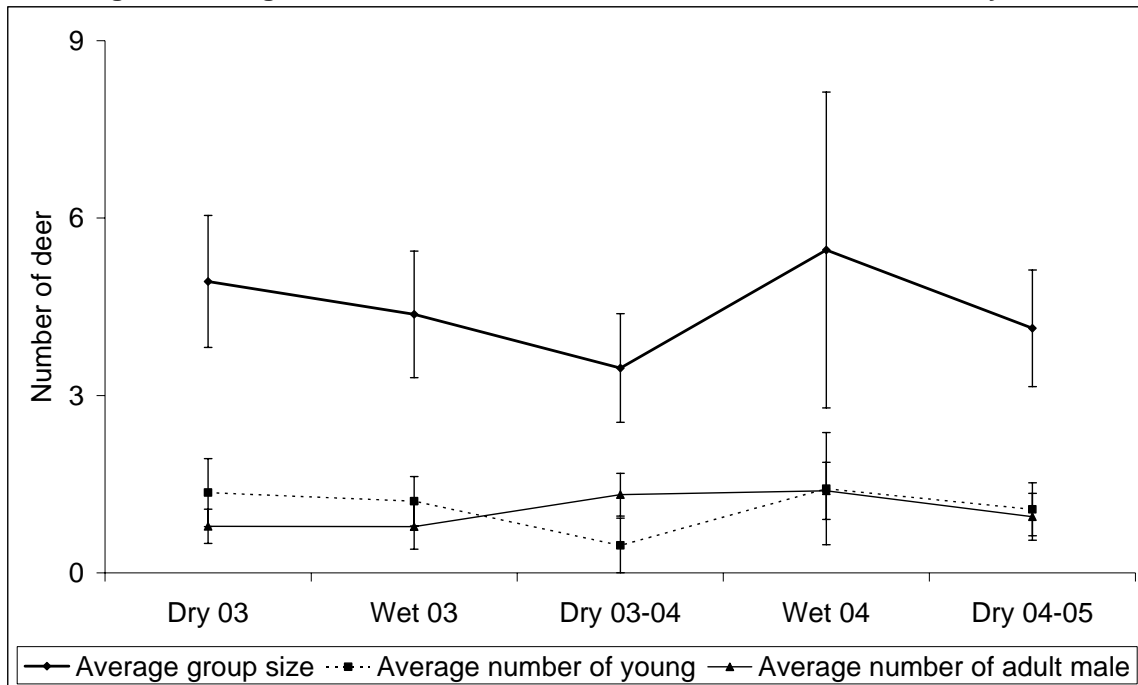


Figure 4: Average total group size, average number of young deer, and average number of adult male deer in wet and dry seasons, from 1772 opportunistic sighting records by villagers.

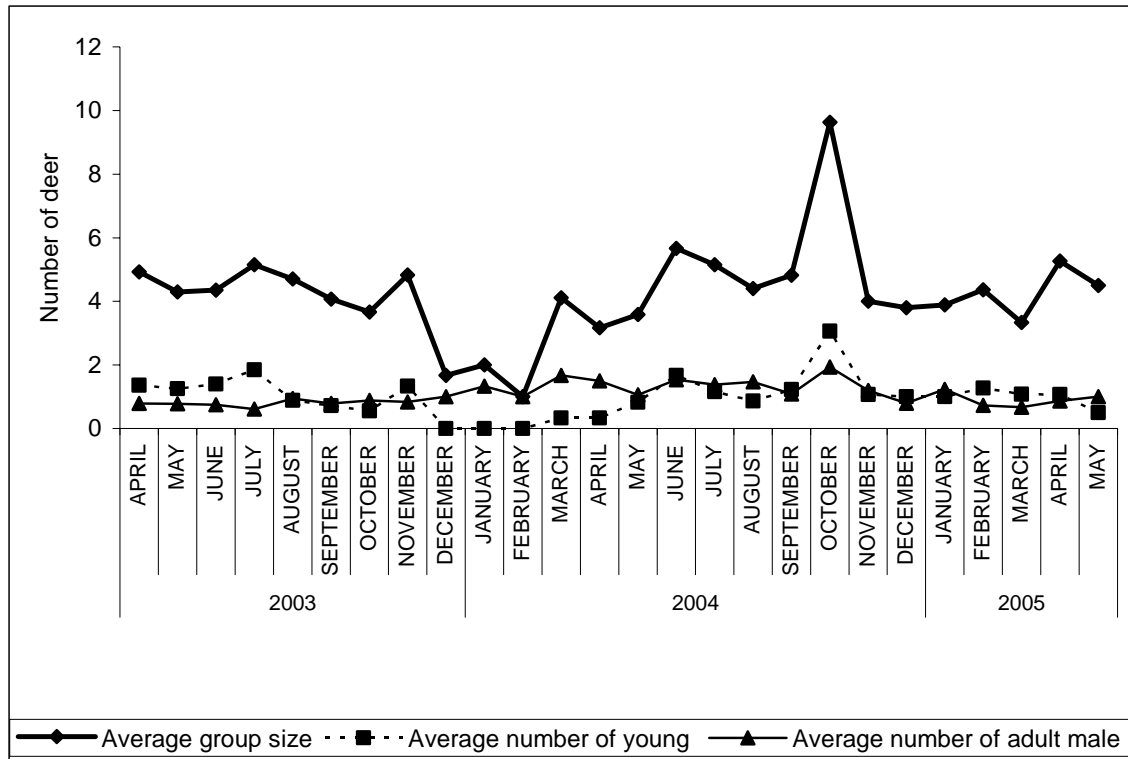


Figure 5: Average total group size, average number of young deer, and average number of adult male deer over time, from 1772 opportunistic sighting records by villagers.

These data and data from the December 2005 surveys are currently being further analyzed for inclusion in a WCS technical report for 2005, a manuscript in preparation for submission to The Journal of Conservation Biology, and the information gained will also be used to create a management plan for the Sanctuary by the end of March 2006.

Student Research Projects May-July 2005

Between May and July 2005, four final year students from The National University of Lao were supported through Conservation Force funds; two from the faculty of forestry and; two from the faculty of science. Funds supported student training and field work in the sanctuary and helped to produce the students' final year theses. Students worked on one of two projects.

- (a) An investigation into the possible conflict between villager forest product collection and Eld's deer.
- (b) A study into the land use and ownership of rice fields and watering holes in a 100km² area of the Sanctuary.

Forest Products Project

This project investigated the use of forest products (FP's) by seven target villages within the Sanctuary.

Four hundred and twenty people (male and female experiences) in seven villages adjacent to the Eld's deer forest were interviewed. Data was collected on which species were used and when and where species were collected. Villagers also ranked: the most valuable FPs for trade and use.

The survey found that over 275 plant and 99 animal species were being collected by the seven target villages. Villagers traveled up to 10 km to collect FP's and collected mostly from mixed deciduous (48%) and Dipterocarp forest (37%). Four of the top ten forest products used by the villagers were also thought to be important food sources for the deer. The information points to an overlap in resources use between villagers and the deer. More work is needed into the quantities of forest products collected to further evaluate the impact on the deer and establish sustainable off-take of resources.

This year was also the first regional meeting for the Society of Conservation Biology, held in Nepal from 17 November 2005. Mr Souvanny Ounmany, Eld's Deer Project Officer for WCS, presented findings on the student research project, developing greater regional interest in conservation activities in Lao PDR.



Figure 6: Mr. Souvanny Ounmany presents on findings from the 2005 student research projects at the first SCB Asia regional meeting



Figure 7: Students collect information on villager forest product use

Land use surveys

Students surveyed a 100km² area of the eastern side of the Sanctuary to determine number of rice paddies and human-made water holes, area taken up by rice paddies, which villages own the rice paddies and water holes, and main vegetation type(s) cleared for the rice paddies. The study compared results with the previous year's survey undertaken in the western half of the sanctuary. Students developed a GIS map that shows ownership, area and distribution for the paddies

(Figure 8) and found that more of the eastern survey site was taken up by rice paddies and watering holes than the western site (6.5% eastern site and 2.6% western site). The eastern site was also far more populous, with 10 villages owning rice paddies in this area compared to 7 in the western site.

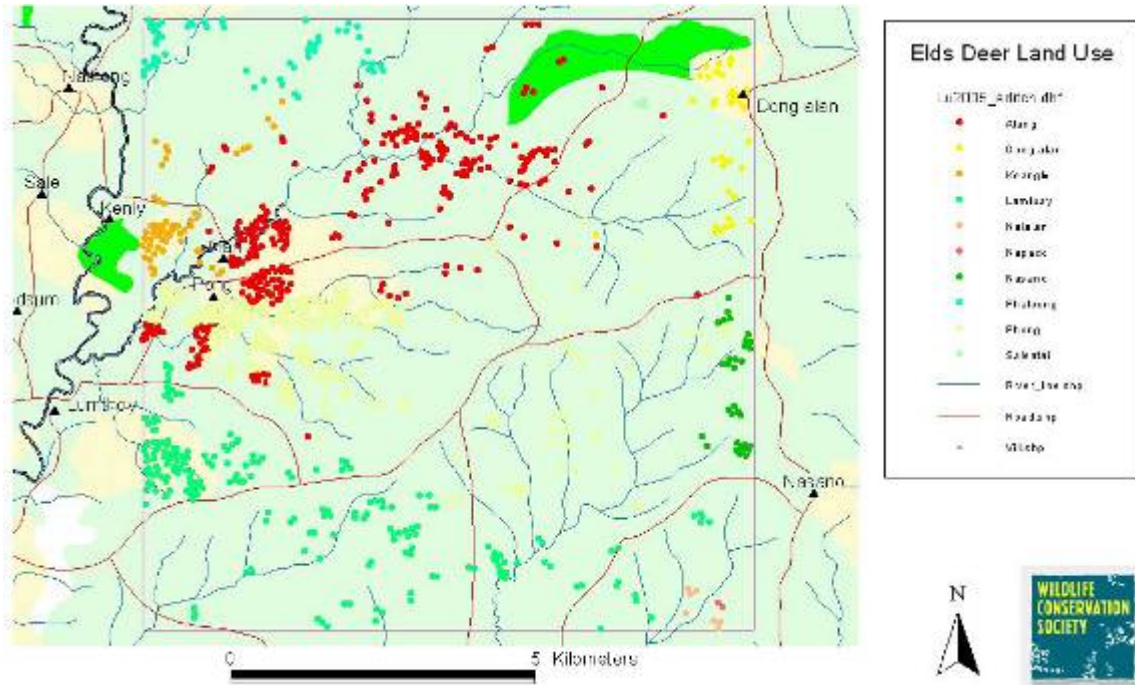


Figure 8: Rice paddy distribution and ownership in the 2005 study site

The spatial and ownership information will be useful for establishing areas for core zones for the Deer and further analysis involving habitat data from 2004 student research projects will further guide decisions on land allocation. This work is scheduled to be done in March and April 2006. The students from this project gained the highest mark in their year level for their thesis defense.



Figure 9: Students gather GPS data on rice paddies in the eastern survey site

Incentives

Incentives to the three target villages were handed over in December 2005 the incentive ensure villager support for the project and go to improving whole village livelihoods. This years incentive funds will continue to build whole village benefits by contributing to purchasing badly needed school equipment and materials, building a village headquarters and restocking fish dams around the villages. WCS is investigating more sustainable options for village income and has approached the Provincial Tourism Office in Savannakhet regarding the ecotourism potential of the area. Tourism consultants from SNV have expressed interest in accompanying teams on field surveys in the future to undertake and ecotourism assessment of the area. The World Wildlife Fund (WWF) Lao and Cambodia Program have also expressed interest in the sanctuary through their Dry Forest Eco-region Program.



Figure 10: Handover of Village incentive funds for Ban Mai Sanamxay



Figure 11: Villagers dig canal to stock pond with fish in Ban Mai Sanamxay

Education and Awareness Raising

To coincide with the Lao national games awareness raising activities were undertaken in Savannakhet from the 14-17th December 2005.

The aim of the campaign was to promote Eld's deer to a wider audience and to educate people on the importance of the deer to both Lao and the world's natural heritage. Theatrical performances and games were used to communicate the message to audiences at "Thalat Gao" (two nights) and "That Ing Hang" (one night) festivals to an estimated total audience of over 5000 people. Over 1500 pamphlets were handed out to members of the public and calendar posters, t-shirts and stickers were given away as prizes. A multi-media presentation was also used to provide an informative overview of the current situation of the species in the province. In addition to the public campaign materials were distributed to government officials and the provincial tourism office to educate key decision makers on the plight of the Deer. Posters (Figure 12) were also distributed to local guest houses and restaurants in Savannakhet. Remaining posters and materials will be distributed along with regulation books to 36 villages in the Sanctuary in 2006.

Eld's deer was one of two animals chosen as the mascot for the Lao national games, and it featured in the opening ceremony to the games on the 13th December (Figure 15) at the newly constructed stadium. A three by five meter sign will also be erected at the stadium featuring the Deer. This is due for completion by the close of 2005 and will be a permanent feature of the stadium.

The campaign was followed up with news articles in both the Savannakhet and Vientiane newspapers.

ສະຫວັນນະເຂດ ດິນແດນແຫ່ງ ໂອ່ງ-ມັ່ງ

Savannakhet: Home of the Eld's Deer

- ຂ້ອຍ ແມ່ນສະນິດພັນທີ່ຖືກຂົ່ມຂູ່ໃນລະດັບໂລກ ແລະ ເປັນສັດຫວ່າງທ້າມໃນກົດໝາຍລາວ.
- I am a globally threatened species and am protected by Lao law
- ແຂວງສະຫວັນນະເຂດ ແມ່ນດິນແດນແຫ່ງດຽວທີ່ເຈົ້າສາມາດພົບເຫັນຂ້ອຍ!
- Savannakhet, is one of the last places you can see me in the wild!
- ພວກຂ້ອຍມີປະຊາກອນປະມານ 30 ໂຕເທົ່ານັ້ນ. ແລະ ອານາຄົດຂອງພວກຂ້ອຍແມ່ນຍັງບໍ່ແນ່ນອນ.
- Only around 30 of me remain, and my future is in doubt
- ດ້ວຍການຊ່ວຍເຫຼືອຂອງປະຊາຊົນລາວທັງຊາດ, ພວກເຮົາສາມາດຢູ່ນຳກັນໄດ້ ແລະພວກຂ້ອຍ ກໍ່ຈະເປັນມໍລະດົກຂອງສປປ ລາວ ແລະເປັນມໍລະດົກຂອງໂລກ.
- With your help we can live together and I can remain a part of Lao PDR's, and the world's natural heritage

Year	Month	Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2017	Jan	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
2017	Feb	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
2017	Mar	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
2017	Apr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
2017	May	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
2017	Jun	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
2017	Jul	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
2017	Aug	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
2017	Sep	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
2017	Oct	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
2017	Nov	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
2017	Dec	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	

Lao PDR Program
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Figure 12: Eld's Deer Calendar Poster



Figure 13: Winners pose with t-shirt at That Ing Hang festival



Figure 14: Boy reads over pamphlet at That Ing Hang festival



Figure 15: Eld's deer costumes at the open ceremony to the Lao National Games



Figure 16: Onlookers enjoy the spectacle of "Pin the Tail on the Deer" at That Ing Hang festival

Champasak Site

Formal surveys in Mounlapamok District in Champasak Province are yet to be completed due to issues with government permissions to work in the area.

However, reconnaissance and informal meetings with Mounlapamok District Agriculture and Forestry Office (DAFO) and Champasak Provincial Agriculture and Forestry Office (PAFO) in the area in September 2005 by WCS staff, suggested that deer may still exist in the area, despite Department of Forestry (DoF) suggesting otherwise. WCS is working with the PAFO office in Champasak to try and facilitate formal surveys. Surveys will go ahead as soon as, and when possible.

Next Steps

Land Allocation

In an attempt to stop expansion of the rice paddies further into the Eld's deer Sanctuary and encourage better farming techniques, land allocation is scheduled to take place in the three focal villages from March 2006. Data collected by WCS and students over the past two years will be used to advise PAFO officials on the optimum areas for land allocation, so as to balance the needs of both the Deer and villagers living within the sanctuary.

Regulation and awareness raising activities

The recently drafted regulations for the sanctuary are scheduled to be distributed to the 36 villages within the sanctuary in mid February 2006. The distribution of the regulation booklet will coincide with further awareness raising activities in order to try and instill a sense of ownership and pride in the deer for the villagers living in the sanctuary.

Production of Management Report

WCS staff will work in conjunction with PAFO and DoF staff to produce a management plan for the sanctuary for the next five years. This will serve to direct the long term stability of the project and provide PAFO and DAFO staff with ways to move forward.

Mounlapamok Surveys

Surveys will go ahead as permissions are granted.

Financial Summary

Table 1: Financial summary of conservation force spending March 31st-December 31st 2005

Activity	Date	Cost
Field Surveys	May-05	\$965.00
Field Surveys and Awareness	Dec-05	\$1,304.77
Student Project Support	February to July 2005	\$2,714.00
Incentives	Dec-05	\$1,350.00
Bank Charges	-	\$88.00
Support for Souvanny to attend SCB meeting	Nov-05	\$150.00
PAFO admin support	June 05 to March 06	\$90.00
<i>Subtotal</i>		<i>\$6,661.77</i>

Budget for proposed Activities

Table 2: Proposed activities for Quarter 3, 2005/2006

Activities to complete	Date	Expected Cost
Land Allocation	March and April 2006	\$4,113.00
Regulations	Feb-06	\$2,204.00
Management Plan	January-March 06	\$300.00
Mounlapamok Surveys	2006	\$600.00
<i>Subtotal</i>		<i>\$7,217.00</i>

Outputs

Presentations

Ounmany .S, Hallam .C, Stenhouse .R, Nouansyvong .S, Johnson .A , & McShea .W, A Student Research Project on Forest Product (FPs) use in the Eld's Deer Sanctuary, Lao PDR Presented at: Society for Conservation Biology Asia Section 1st Regional Conference, Biodiversity Conservation In Asia: Current Status and Future Perspectives, Kathmandu, Nepal 17-20 November 2005.

Trip Reports

Ounmany .S, & Nouansyvong .S Field Report for the student Research Project in Chonnabuly District from February11, 2005-March6, 2005 WCS Lao PDR Program Vientiane Lao PDR

Ounmany .S Field Trip Report on Surveys in the Eld's Deer Sanctuary, Savannakhet May 6th-9th 2005 WCS Lao PDR Program Vientiane Lao PDR

Ounmany .S, Field Trip Report: Radio Collar Collection and Eld's Deer Fact Finding, September 28-30, 2005 WCS Lao PDR Program Vientiane Lao PDR

Ounmany .S, & Nouansyvong .S Field Trip Report: Eld's Deer Monitoring and Awareness Raising Activities December 8th-17th 2005 WCS Lao PDR Program Vientiane Lao PDR (in press)

Student Thesis

Duangbupa, B. and K. Pimnavongsa (2005). Study of Distribution of Agricultural fields and Watering Holes in Eld's Deer Sanctuary, Chonnabuly District, Savannakhet Province. Lao PDR, WCS & Smithsonian Institute: 1 - 51.

Sevisay, M. S. and M. M. Mongkhounvily (2005). The use of Forest Products by 7 village in the Eld's deer sanctuary, Chonnabuly District Savannakhet Province. Lao PDR, WCS and Smithsonian Institute: 1 - 51.

Technical Report

Stenhouse, R.N., Johnson, A.J., McShea, W.J., Nouansyvong, S., Chansyna, C., Saiyavong, O. Leelianou, N., & Hallam, C. Eld's deer habitat in the Eld's Deer Sanctuary, Chonnabuly, Savannakhet, Lao PDR: Vegetation types, foragable plants, and land use WCS Lao PDR & Smithsonian Institute December 2005

Manuscript

(In preparation)

Stenhouse, R.N., Hallam, C.D., McShea, W.J., Johnson, A., Ounmany, S. and Nouansyvong, S. Direct payments for conservation: encouraging participative endangered species conservation and research in rural villages in Lao PDR for submission to *Conservation Biology*

