CEPF FINAL PROJECT COMPLETION REPORT

Organization Legal Name:	King Mongkut's University of Technology Thonburi
Project Title:	**Understanding and inspiring conservation of Saola and other endemic species in a new protected area in Lao PDR**
Date of Report:	4 June 2015
Report Author and Contact Information	Dr. George A. Gale King Mongkut's University of Technology Thonburi 49 Soi Tientalay 25, Bangkhuntien-Chaitalay Road, Thakham, Bangkhuntien, Bangkok 10150, THAILAND +66 2470 7555 +66 2452-3455 george.and@kmutt.ac.th

CEPF Region: Indo-Burma

Strategic Direction: 1.) Safeguard priority globally threatened species by mitigating major threats

Grant Amount: $19,200

Project Dates: 1 April 2014- 30 April 2015

Implementation Partners for this Project (please explain the level of involvement for each partner):

Wildlife Conservation Society Lao Program: WCS was involved from the beginning in helping to plan the local logistics of this project, and liaising with Lao government officials at the central, provincial and district levels for project approval.

Bolikhamxay Province and Xaychamphone District offices of the Lao Department of Forest Resources Management: They assigned counterparts to support the main project field leader Mr. Chanthasone Phommachanh (a Lao national from Vientiane) in this survey, and he had multiple meetings with both, to collect their input to the planning and implementation of the project. They formally supported the project.

Saola Working Group (of the IUCN SSC Asian Wild Cattle Specialist Group): The SWG provided 84 camera traps and the memory cards to the project. The SWG also advised Chanthasone on technical aspects of the project.

Conservation Impacts

Please explain/describe how your project has contributed to the implementation of the CEPF ecosystem profile.

This 13-month project focused on increasing our understanding of the status and ecology of the Saola *Pseudoryx nghetinhensis*, one of the most threatened vertebrates globally and a priority species for investment by CEPF as highlighted in the profile. Its status is particularly dire because the ecology of the species remains almost entirely unknown and there is not a single animal in captivity and thus there is no chance for ex-situ conservation for the foreseeable future. As knowledge of the Saola is so poor, this short-term project focused primarily on describing the local distribution of the species and trying to locate extant Saola within the Phou Sithon Endangered Species Conservation Area (PST), in Xaychamphone District, Bolikhamxay Province, Lao using local people as the primary source of information. No scientist has observed this species in the wild and thus local hunters are the only source of locational and ecological information. We focused on PST because one Saola was caught alive and photographed there in 2010 (the animal died shortly after capture). The goal was to obtain better information on where Saola occur in PST (to better prioritize protection efforts, some of which have been supported by CEPF through the Wildlife Conservation Society). The second objective was long-term, positive engagement with local residents – to encourage and support them to shift from unwitting threats to Saola conservation, to allies. We believe that this project has contributed to the improved understanding of the ecology of Saola and quantified habitat use, which has not been previously reported in a quantitative, systematic fashion. We believe that local people living around PST are more aware of Saola then prior to the project and were highly cooperative in working with us on this project. Furthermore, our camera trapping data suggest that PST still holds significant amounts of wildlife that are typically hunted, such as Chinese Serow (*Capricornis milneedwardsii*) and at least 13 threatened or Near-threatened species, not including Saola. Thus, PST is clearly a site of high conservation value in the region, especially in Laos and Vietnam where hunting is particularly intense.

Please summarize the overall results/impact of your project.

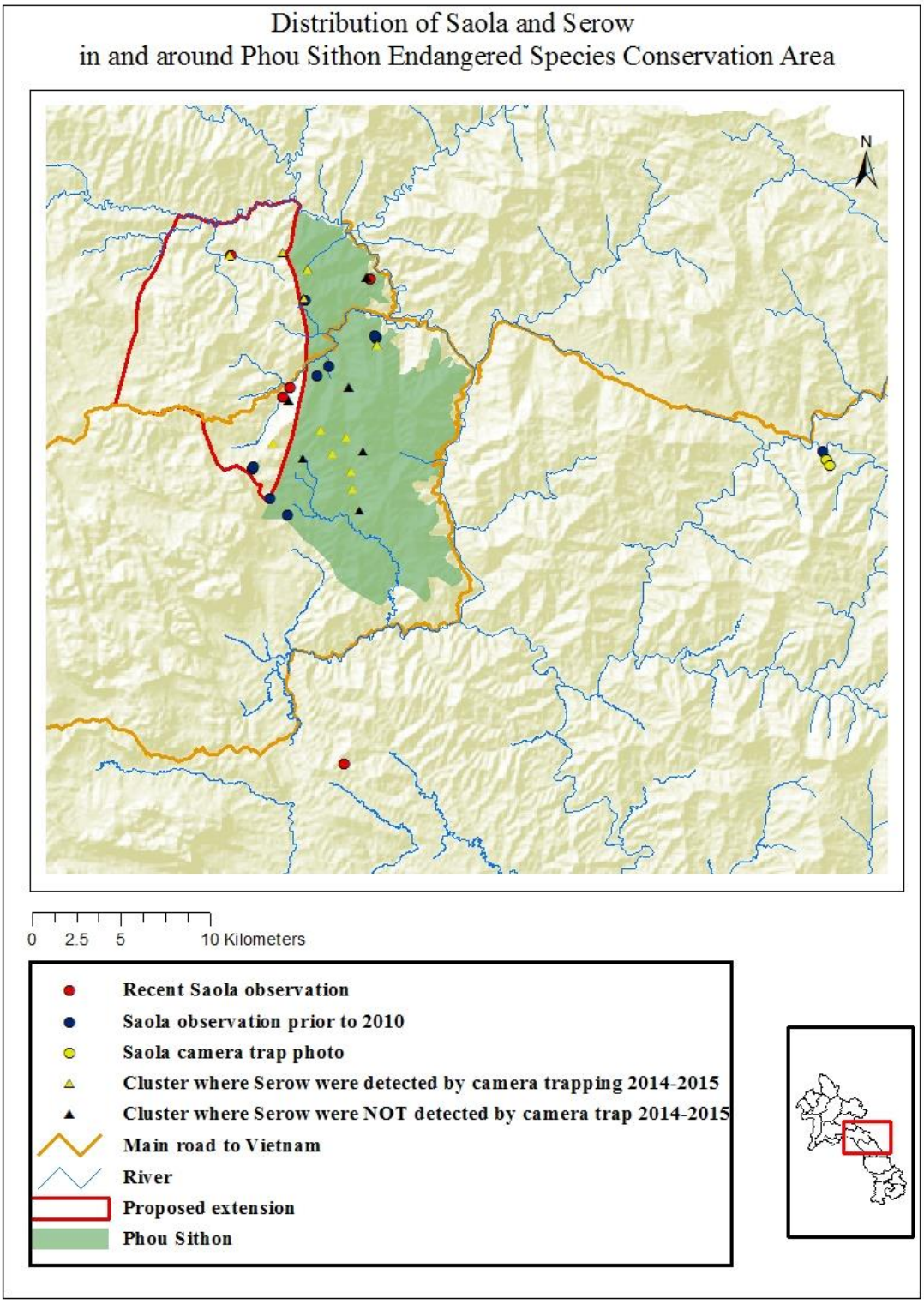
We directly obtained from the field habitat location data of the abovementioned Saola 2010 capture point and an additional 18 sight locations (19 total independent locations) from what we believe to be reliable sources in and around PST. This also included two point locations 20 km east of PST where camera trap photos were obtained in 1999. Chanthasone conducted extensive interviews with people from ten villages around PST who were thought reliable in describing Saola habits. As part of the project strategy we also obtained local information on two threated, similarly-sized large ungulates (Sambar *Rusa unicolor* and Chinese Serow) as a means of increasing our understanding of the ecology of Saola by comparing locational data with these better-known species. We also used camera traps (164 locations throughout PST and the proposed Extension immediately to the west of PST) in an attempt to document the current locations of Soala, Sambar and Serow.

No Saola or Sambar were photographed during the survey. Our data suggested that Soala are now at best extremely rare in PST and were probably rare during the past 20 years as well. The results from the interview data also indicated that while the Sambar and Saola, overlap little or not at all spatially, at least two locations where Serow was confirmed during camera-trapping also coincided with recent (2010 or later) Saola observations from local people. During our camera-trapping survey, we obtained over

1000 photographs of Serow and this species was photographed in 11 out of 17 roughly, independent camera trap clusters (a cluster consisted of 2-13 cameras), suggesting that the Serow is not scarce where we searched in PST. This further suggests that overhunting, while clearly a threat to Saola, probably does not completely explain the lack of Saola detections during this extensive camera-trap survey. The continued persistence of Serow, a relatively uncommon species in Laos (Vongkhamheng et al. 2013), suggests that hunting at least in some sections of PST, is sufficiently low to support reasonable number of large-sized ungulates and raises a number of questions as to why not a single Saola was detected in the same locations. One possible hypothesis is that Saola are not territorial, or at least not territorial in the habitat in and around PST, instead wander over very large areas in search of food and mates and that a regular grid of cameras spread widely over the most likely habitat may increase the chance of detecting the few remaining individuals in and around PST if any animals persist. All Sambar records from local people were from outside the boundaries of PST (including the Extension) (Figure 1), which corresponds to the lack of camera trap records within PST, while there have been recent records of Saola from both inside and outside of PST. Overall, we conclude that Saola are in urgent need of further study as the number individuals remaining may be vanishingly small.

Vongkhamheng, C., A. Johnson and M. E. Sunquist (2013). A baseline survey of ungulate abundance and distribution in northern Lao: implications for conservation. Oryx 47:544-552.

Figure 1. A map of Saola records in and around Phou Sithon (and proposed Extension) 1996-2013 and Chinese Serow records from camera-trapping April 2014-May 2015. The recent Saola records are defined as from 2010 onwards. All Saola points were sourced from interviews of local people except two points which are from camera trapping in 1999 and one point with a photographed captured animal in 2010.



Planned Long-term Impacts - 3+ years (as stated in the approved proposal):

The project had several attributes of long-term sustainability:

- Builds capacity in one of the most promising young conservationists in the one of the countries most in need of capacity-building in the ecoregion. This is the first project Chanthasone will lead, and the hope is he will make it 'his own', and continue working there for years to come. He has already said that he wants to devote his career to Saola conservation
- Adds traction, momentum and support to the government of Lao's establishment of PST, a new protected area in this Key Biodiversity Area.
- The project adds value and builds on the outcomes of previous CEPF investments in Saola conservation, in particular WCS's work in Bolikhhamxay and to the recent meeting of the Saola Working Group (where Chanthasone gave a presentation on his proposed project, and engaged SWG technical support). This fits with CEPF's Indo-Burma priority to "build on the experience of the first investment phase".
- If Chanthasone succeeded in camera-trapping a Saola, it would have been only the second wild Saola photo in almost 15 years. The photos would have gone around the world, catalyzing additional donor and government support for conservation of Phou Sithon. This would further support CEPF Investment Priority 6.4, "Engage the media as a tool to increase awareness and inform public debate of environmental issues."
- The international publicity from a Saola camera-trap photograph from the project would have increased international recognition of CEPF's approach and accomplishments.

Actual Progress Toward Long-term Impacts at Completion:

The project has several attributes of long-term sustainability although no Saola was photographed during the project period:

- This project greatly assisted in building capacity in Mr. Chanthasone one of the most promising young conservationists in one of the countries most in need of capacity-building in the ecoregion. This is the first project Chanthasone led, and the hope is that he will continue working in PST for years to come. He has already said that he wants to devote his career to Saola conservation. He has also hired and mentored two Lao undergraduate students to assist him during this project, another promising sign for the country.
- We believe that the project added traction, momentum and support to the Lao government's establishment of PST in this Key Biodiversity Area. Thirteen globally threatened or Near-threatened species were confirmed there, including three endangered primates gibbon *Nomascus sp.* (the species photographed is probably *Nomascus leucogenys*, which is critically endangered, but it not possible to confirm this from the available photograph), Red-shanked douc *Pygathrix nemaeus* and Phayre's Langur *Trachypithecus phayrei.*
- The project adds value and builds on the outcomes of previous CEPF investments in Saola conservation, in particular WCS's work in Bolikhhamxay and to the

recent meeting of the Saola Working Group (where Chanthasone gave a presentation on this project, and engaged SWG technical support). This fits with CEPF's Indo-Burma priority to "build on the experience of the first investment phase".

In conclusion, sustainable outcomes from any project are hard to guarantee, but supporting an inspired young conservationist to initiate his career in a new, highly important protected area, by working with local residents on one of the most important and least known species in the ecoregion, is an excellent start.

Planned Short-term Impacts - 1 to 3 years (as stated in the approved proposal):

There were no explicitly stated short-term impacts in the proposal (Letter of Inquiry). Chanthasone's project with the villagers was his entry point for shifting their attitudes, and enlisting them as allies in Saola conservation. Such extended, informal contact may, in fact, be more effective at achieving conservation change with local residents than structured, short-term conservation awareness programs. While it is not easy to schedule actions or measure outcomes for this sort of informal relationship-building, not all things of value and significance can be counted.

Actual Progress Toward Short-term Impacts at Completion:

We believe that local people living around PST are more aware of Saola, then prior to the project and were highly cooperative in working with us on this project, although there were no explicit awareness programs planned in the proposal.

Please provide the following information where relevant:

Hectares Protected: N/A
Species Conserved: N/A
Corridors Created: N/A

Describe the success or challenges of the project toward achieving its short-term and long-term impact objectives.

As noted above, sustainable outcomes from any small, short-term project are difficult to guarantee, but supporting an inspired young conservationist like Chanthasone to initiate his career in a new, highly important protected area, by working with local residents on one of the most important and least known species in the ecoregion, is an excellent start.

Were there any unexpected impacts (positive or negative)?

There were no unexpected negative impacts. It is probably too early to assess the potential unexpected impacts. For example, the hiring of the two Lao undergraduate students was unexpected, and could have several positive impacts if they continue to work with Chanthasone in and around PST, but this yet to be determined.

Project Components

Project Components: *Please report on results by project component. Reporting should reference specific products/deliverables from the approved project design and other relevant information.*

Component 1 Planned:

Objective 1 *To collect updated information on recent Saola records in and around the study area*

Deliverable: Locations and a map of all Saola records in and around the PST study area, over the past 5-6 years. If older records are available these will also be included

Component 1 Actual at Completion: Activity 1.1:

Qualitative description of local hunting patterns, particularly where in the PST study area people hunt, how frequently the hunt, how many traps they set, and where they have seen Saola, Serow, and Sambar in the study area .

Chanthasone conducted interviews with local people in 10 villages (Phonsy, Phonngam, Sopkhone, Muangcham, Phonmuang, Kouang, Phaingkhueng, Phaingpho, Khamkouna and Phondou) adjacent to PST, interviewing 6-11 people per village. Based on a total of 85 people interviewed using this method, there were 14 Saola capture points, 6 other points of direct observation and 2 camera trapping points in 1999, giving a total 22 Saola records. These include 7 recent records (caught/seen after 2010) (see Figure 1).

Activity 1.1

Community mapping exercises at 10 or more villages around the study area focusing on selected local people who are intimately familiar with wildlife of the study area.

Deliverable: Qualitative description of local hunting patterns, particularly where in the PST study area people hunt, how frequently the hunt, how many traps they set, and where they have seen Saola, Serow, and Sambar in the study area .

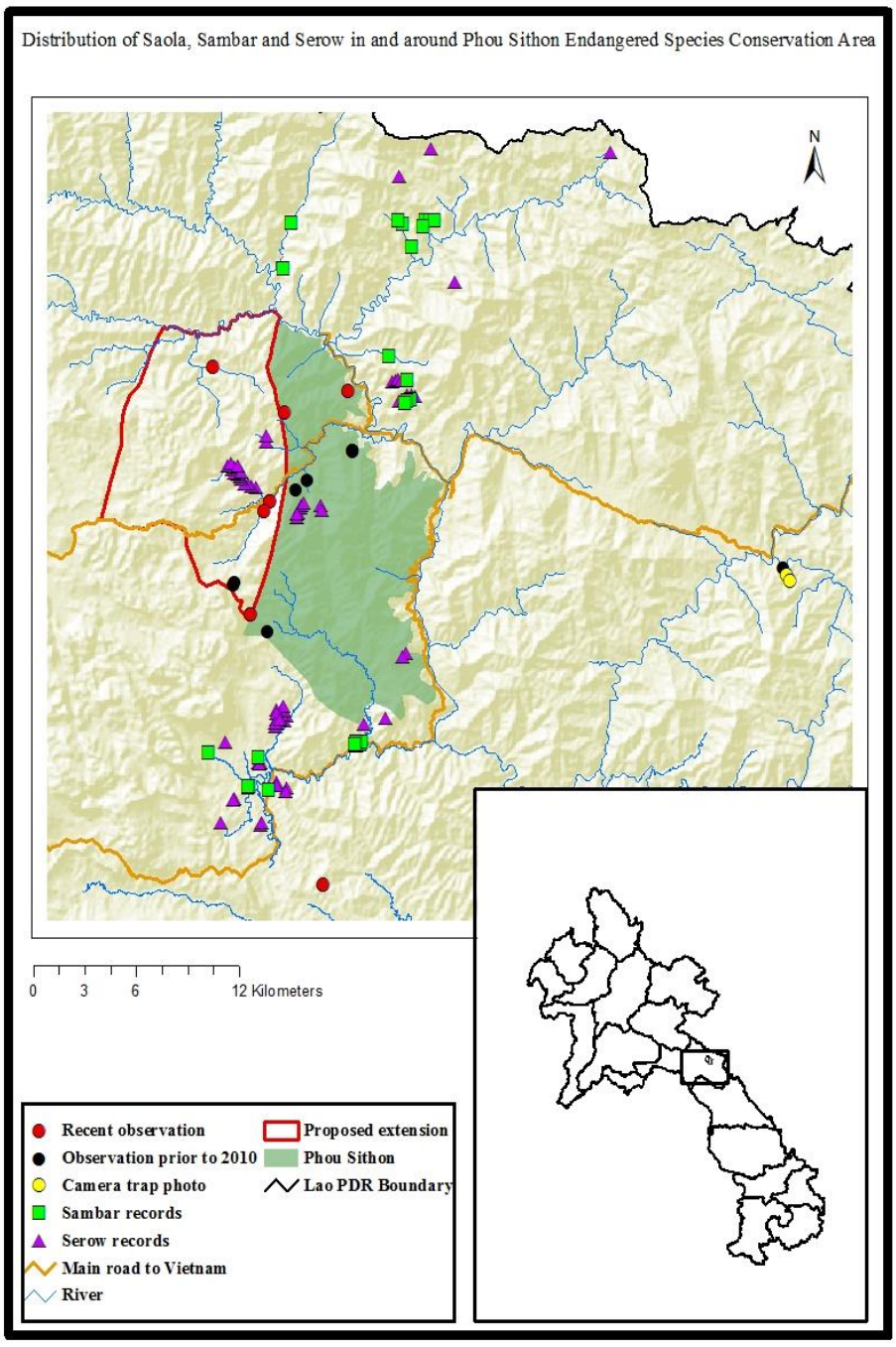
We conducted interviews with local people in 10 villages (Phonsy, Phonngam, Sopkhone, Muangcham, Phonmuang, Kouang, Phaingkhueng, Phaingpho, Khamkouna and Phondou) adjacent to PST, interviewing 6-11 people per village. Based on a total of 85 people interviewed using this method, there were 14 Saola capture points (including one photographed), 6 other points of direct observation and 2 camera trapping points in 1999, giving a total 22 Saola records both inside and outside PST and the proposed Extension. These include 7 recent records (caught/seen after 2010) (see Figure 1).

There are two types of hunting in 10 villages surrounding PST, firstly is for local consumption and secondly for cash income to cover basic family expenses, it is likely not commercial hunting. There were no differences between the frequency of hunting during the dry season and rainy season but frequency depended more on the level that local people are engaged on their farms. Hunting appears to be most frequent during July to October and February to April when hunters are less occupied tending their rice paddies. Hunting patterns appear to have changed over time. PST hunting is done using guns, dogs and wire snares. Guns have been used only roughly in last 15 years. Hunting with dogs

happened a long time ago (>40 years), it was inherited from father to son particularly by the Mhong people. In addition, access to several areas within PST greatly increased when the road (from early 2008 to until the time this report was submitted) started to come through in 2008; hundreds of snares were placed because hunters were highly motivated to sell animal meat to the road construction workers. Animals even Saola were caught, particularly areas close to the road. The target species used for consumption include Eurasian Wild Pig *sus scrofa* and muntjac sp, but the main species for the wildlife trade in the area is the Sambar *Rusa unicolor* because the price of 300 USD per antler (based on 2015 data).

In 2010, PST was officially established as an endangered species conservation area to protect Saola and other threatened animals. More than 8000 snares were collected from PST from 2011 to 2013 (McWilliams 2014). Hunting by local people appears to have declined in PST--recent records (2014) suggest that the number of snares placed in PST has been notably reduced (McWilliams 2014). Local people also reported the distribution of large globally threatened (or Near-threatened) ungulate species, Saola, Sambar and Serow (see Figure 2) based on the above interviews. So although hunting may have been reduced, based on discussions with villagers, they estimated that Saola, Sambar and Serow have all significantly declined during the last 20 years. The species with the largest decrease was Saola although all three species have appeared to have declined greatly. The median estimated population decrease based on the interviews of local people for Saola, Serow and Sambar was 95%, 70% and 80% respectively.

Figure 2. A map of the distribution of Saola, Serow and Sambar during the last 20 years (1994-2014) in and around Phou Sithon based on interviews with local villagers in 10 villages adjacent to PST. Observations included animals both caught in snare traps and seen



Activity 1.2: *Community mapping exercises at 10 or more villages around the study area focusing on selected local people who are intimately familiar with wildlife of the study area.*

Deliverable: A quantitative description of Saola habitat in the PST study area focusing on elevation, vegetation characteristics, and levels of human disturbance

Based on the 22 Saola observation points, the Saola occurred in a wide range of elevations 592-1112 m (median = 747 m) in PST. This roughly matches with previous research suggesting Soala occur in lower to mid-elevations 400-1000 m (Robichuad et al. 2004) and Schaller and Robinowitz who indicated half of their records were from 500-1000 (1995), but also there were records up to 1400 m. There was no seasonal trend in captures, indicating no clear movement/migration patterns. There was no significant increase in the number of captures at higher elevations with time ($R^2 = 0.108$), but there might be a trend (p=0.089). This may reflect the increased accessibility to higher elevations and new habitats after the road was constructed in 2008 and the possibility that the few remaining individuals were hunted out at lower elevations. Saola were more frequently caught/seen in 2008 for example. Vegetation plots at locations where local people have seen Saola, suggest that Saola are also found in evergreen forest mixed with bamboo. The median ground cover and canopy cover (using 5 m radius plots) was high, 75% and 84% respectively. The median slope was steep (23 degrees), but probably not significantly different from Serow observation points. Saola seem to prefer the vicinity of small streams/rivers (the median Saola observation was <10m from a stream/river), but this may only reflect the trails/routes people travel, rather than habitat Saola prefer. At the landscape level, there appeared to be no clear differences in habitat use between Serow and Saola.

Component 2 Planned:

Describe the locations of Sambar, Serow and Saola (if photographed) from camera trapping.

Deliverable: A map of locations of where Saola, Serow, and Sambar photographed in the PST study

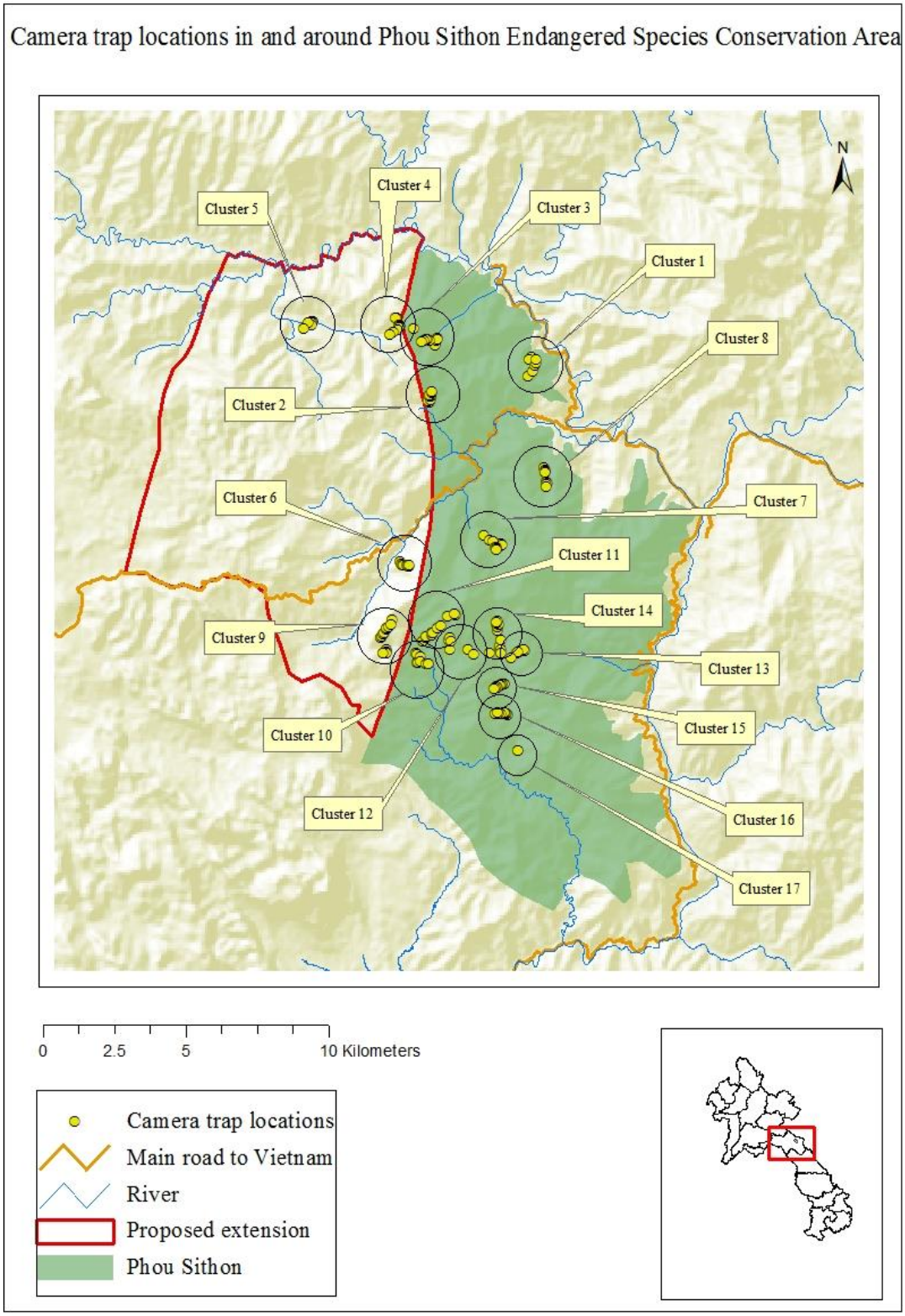
Activity 2.1 *Camera trapping the study area*

The first camera trap survey was initiated 23 April 2014. The survey was carried out within PST and the Extension. The study used two types of camera models Bushnell 8 MP Trophy Cam HD Hybrid Trail Camera and Browning Dark Ops Trail Camera. The surveys were divided into two parts (northern and southern) to cover as much of the study area as possible.

The surveys in the northern part were conducted from 23 April to 23 September 2014 (10,814 trap-nights -one camera set out for one, 24 hour period = one trap night). A total of 80 cameras were set (Figure 3). The camera traps were operational to take photographs 24 hours per day, with a camera delay of 10 seconds. Each unit was programmed to take 3 photos whenever the camera was triggered and each photo was stamped with the date, time, and temperature. Camera placement was based on the analysis of interview and Saola observation point microhabitat data. Cameras were checked every 6 weeks to change batteries and memory cards. A clustered design was used, each cluster consisted

of 7-13 tightly spaced cameras (10 cameras as a median) to maximize probability of detection in the most likely habitats. Within a cluster, camera spacing was not defined and was opportunistic (range 10-500 meters apart, median = 32 m). A total of 8 clusters were placed in northern part of PST and the proposed Extension area (Figure 3).

Figure 3. Camera trapping locations in Phou Sithon and proposed Extension area, 2014-2015. A total of 164 cameras, arranged in 17 clusters of cameras, each cluster consisted of 2-15 cameras spaced approximately 10-500 meters apart (the median = 40m).



The setting of cameras in the southern part of PST was conducted from 28 September 2014 to 2 May 2015 (15,936 trap/nights). A total of 84 camera locations were used. The Cam HD Hybrid Trail and Browning Dark Ops Trail Camera were set to operate as above but each Browning was programmed to take 4 photos per trigger (following the operation manual). As above, we placed cameras based on the analysis of interview and microhabitat data. Cameras were checked every 6 weeks to change batteries and memory cards. A clustered design was also used as above, each cluster consisted of 2-15 cameras (10 cameras as a median). More cameras were placed in a cluster if more animal sign (tracks and dung) were detected. As above, camera spacing was not defined but opportunistic (range 10-500 meters apart, the median = 49 m). A total of 9 clusters were placed in the southern part of PST.

There was a total of 164 camera trap locations in PST and the proposed Extension area with a total of 17 clusters (Figure 3). The total trapping effort was very large, with a total of 26,750 camera trap nights and a total of 61,029 photographs of wildlife taken. This included 1,120 photos of Serow, 2% of the total photographs (1120/61029). A total of 11 clusters were occupied by Serow (65%, 11/17) (clusters 2, 3, 4, 5, 8 in the northern part and 9, 11, 12, 14, 15 and 16 in the southern part) (see Figure 1 and Figure 3). Saola and Sambar were not detected during the survey.

Findings from this survey provide an important baseline for future monitoring of the effectiveness of management actions and implementation to protect threatened wildlife in PST. However the reasons for the lack of detection of Saola and Sambar are not known at this time. For Sambar it is likely that the species was historically extremely rare within PST as there were no local records from PST (including the proposed Extension), although multiple records from outside the boundaries of PST. While it is possible that Saola is now absent from the site, more surveys are needed urgently to confirm this. It also raises questions about why Saola is now so rare in the site, and points to an urgent need for more research on Saola particularly to try to understand its ecology in order to improve sampling and perhaps to find and capture individuals for captive breeding to prevent its extinction.

Component 3 Planned: NA
Component 3 Actual at Completion: NA

Were any components unrealized? If so, how has this affected the overall impact of the project?
There were no major components unrealized. No photos of a Saola were obtained, which was unfortunate but this was from the outset of the project going to be very unlikely because the Saola is so extremely rare.

Please describe and submit (electronically if possible) any tools, products, or methodologies that resulted from this project or contributed to the results.
NA

Lessons Learned

Describe any lessons learned during the design and implementation of the project, as well as any related to organizational development and capacity building. Consider lessons that would inform projects designed or implemented by your organization or others, as well as lessons that might be considered by the global conservation community.

Project Design Process: (aspects of the project design that contributed to its success/shortcomings)

Most of the project design was fairly standard.

Project Implementation: (aspects of the project execution that contributed to its success/shortcomings)

It is very clear that having a good relationship with the local community and every level of government officer is very important. This makes implementation of any aspect of such projects in the study area significantly easier. We had relatively little trouble getting permission and access to sites in and around PST—this is not a trivial point as the Lao government considered this area "sensitive" and greatly restricted access in the recent past. Having the good will of the people has allowed us to gather what we believe to be relatively reliable information. We have also learned that we have to be fully aware of agricultural cycles/planting and harvesting periods because during critical periods of the cropping cycle local people will largely be unavailable to interview or help with wildlife survey work/camera trapping. In addition, before starting work with each local community, we discussed with each headman (or whoever had power to decide or solve problems in a village) regarding policy/methods for paying local people to clearly spell out to local villagers how much they will get paid from the project for assisting. We used this approach in every village. We had to return to headmen several times to mediate/arbitrate as typically people asked for more money than originally agreed upon, but because we had established good relations beforehand, we were able to successfully negotiate in each instance without difficulty.

Other lessons learned relevant to conservation community:

We set the cameras in a cluster design. Because we have so little understanding of Saola ecology, we can only make very rough guesses as to how best to sample for them. The large number of Serow photos tentatively suggest repeated detections of the same individuals, and the absence of this pattern with the recent photo of the Saola in Vietnam (2013), it is possible that Saola wander over large areas, and if this is the case, perhaps a more dispersed camera-trapping design is needed where individual cameras are spread (dispersed) as widely as possible in all likely habitat. Furthermore, we had at two locations (and perhaps three) where confirmed Serow camera-trapped locations coincided with Saola observations (including one recent observation) of local people (Figure 1). So it is possible that setting cameras in locations known for Serow, may increase chances of Saola detection, however, as noted above the ecology of the species is based almost entirely on speculation.

Additional Funding

Provide details of any additional funding that supported this project and any funding secured for the project, organization, or the region, as a result of the CEPF investment in this project.

Donor	Type of Funding*	Amount	Notes
European Association of Zoos and Aquaria	A	$12,450	
Los Angeles Zoo	A	$8,000	
Wildlife Conservation Network	A	$5,000	

Additional funding should be reported using the following categories:

- ***A*** *Project co-financing (Other donors or your organization contribute to the direct costs of this project)*
- ***B*** *Grantee and Partner leveraging (Other donors contribute to your organization or a partner organization as a direct result of successes with this CEPF funded project.)*
- ***C*** *Regional/Portfolio leveraging (Other donors make large investments in a region because of CEPF investment or successes related to this project.)*

Sustainability/Replicability

Summarize the success or challenge in achieving planned sustainability or replicability of project components or results.

Typically changing people's behavior is a long-term, complex process. Successful projects related to reducing unsustainable hunting for example typically involve multiple approaches over several years (e.g., Steinmetz et al. 2014). Thus, while we believe our project had a positive impact, without continued funding over several years, the long-term impacts are expected to be modest. However, we do believe the project is readily repeatable if sufficient resources are made available in future.

Steinmetz, R, S. Srirattanaporn, J. Mor-Tip, and N. Seuaturien. 2014. Can community outreach alleviate poaching pressure and recover wildlife in South-East Asian protected areas? *Journal of Applied Ecology* 51: 1469-1478

Summarize any unplanned sustainability or replicability achieved.

No unplanned sustainability or replicability achieved

Safeguard Policy Assessment

Provide a summary of the implementation of any required action toward the environmental and social safeguard policies within the project.

Free, prior, and informed consent was the approach used in all project activities. Community mapping meetings was held with 8-10 of the most knowledgeable members of each village regarding the identification and locations of targeted wildlife. This mapping exercise was held in each of the 10 villages. From these meetings, individuals from the villages which had regular direct observations of the Saola, were asked to bring Chanthasone to points in the forest where animals were seen. All such community members who agreed to participate in these follow-up surveys were paid for their time following fair and appropriate rates for the area. Most of the target individuals for the follow-up surveys Chanthasone had already met during community interviews conducted under the Integrated Ecosystem and

Wildlife Management Protected Area (IEWMP) Project in 2011 under the Wildlife Conservation Society-Lao Program, thus a great deal of trust had already developed between the locals and Chanthasone.

Measures to avoid adverse impacts and provide culturally appropriate benefits

There were no adverse impacts from this project. There were no invasive management activities planned as part of this project, the goal was simply information sharing about threatened species with follow-up surveys to try to locate animals through camera trapping and measure habitat at points where animals are observed either via cameras or by local people. Local people with direct knowledge were employed to help guide camera placement. Although we provided extra income to a few individuals, particularly those fortunate enough to have seen Saola in the forest, because of our project's temporary and occasional nature, we do not anticipate that it was so much money that it was likely to generate jealousy or ill will. Furthermore, we instructed our team to not bring in alcohol. Finally, to the extent possible, field teams were self-sufficient and did not rely on local communities to provide food or accommodation. If logistics prevented complete self-sufficiency, and such services are occasionally required, we paid appropriate local rates for whatever services are provided. Field teams also adhered to internationally–accepted codes of conduct.

Monitoring of potential adverse impacts

We did not anticipate any adverse impacts however we monitored behavior of other members of the community towards our selected guides and assistants for signs of jealousy or other ill-will due to their temporary employment with the project.

Grievance mechanism

The project created grievance mechanism, where any persons who were dissatisfied with the project or had a disagreement with any member of the project team were able to raise these concerns. We produced A-4 handouts for project participants, in the local languages containing a brief summary of the project's objectives and provided contact details of the WCS-Lao coordinator in Vientiane (Laos) who could have passed these grievances on to senior project coordinators in Bangkok (Thailand) so that anyone who had a grievance which they do not wish to discuss with the local project team, can raise it with staff in Bangkok. We had no such grievances during the project.

Additional Comments/Recommendations

Information Sharing and CEPF Policy

CEPF is committed to transparent operations and to helping civil society groups share experiences, lessons learned, and results. Final project completion reports are made available on our Web site, www.cepf.net, and publicized in our newsletter and other communications.

Please include your full contact details below:

Name: George A. Gale
Organization name: King Mongkut's University of Technology Thonburi
Mailing address: King Mongkut's University of Technology Thonburi
49 Soi Tientalay 25, Bangkhuntien-Chaitalay Road,
Thakham, Bangkhuntien, Bangkok 10150, THAILAND

Tel: +66 2470 7555
Fax: +66 2452-3455
E-mail: george.and@kmutt.ac.th

Performance Tracking Report Addendum

CEPF Global Targets

(Enter Grant Term)

Provide a numerical amount and brief description of the results achieved by your grant.
Please respond to only those questions that are relevant to your project.

Project Results	Is this question relevant?	If yes, provide your numerical response for results achieved during the annual period.	Provide your numerical response for project from inception of CEPF support to date.	Describe the principal results achieved during the grant term (Attach annexes if necessary)
1. Did your project strengthen management of a protected area guided by a sustainable management plan? Please indicate number of hectares improved.	No			Please also include name of the protected area(s). If more than one, please include the number of hectares strengthened for each one.
2. How many hectares of new and/or expanded protected areas did your project help establish through a legal declaration or community agreement?	No			Please also include name of the protected area. If more than one, please include the number of hectares strengthened for each one.
3. Did your project strengthen biodiversity conservation and/or natural resources management inside a key biodiversity area identified in the CEPF ecosystem profile? If so, please indicate how many hectares.	No			
4. Did your project effectively introduce or strengthen biodiversity conservation in management practices outside protected areas? If so, please indicate how many hectares.	No			
5. If your project promotes the sustainable use of natural resources, how many local communities accrued tangible socioeconomic benefits? Please complete Table 1below.	No			

If you answered yes to question 5, please complete the following table

Table 1. Socioeconomic Benefits to Target Communities

Please complete this table if your project provided concrete socioeconomic benefits to local communities. List the name of each community in column one. In the subsequent columns under Community Characteristics and Nature of Socioeconomic Benefit, place an X in all relevant boxes. In the bottom row, provide the totals of the Xs for each column.

Name of Community	Community Characteristics								Nature of Socioeconomic Benefit													
									Increased Income due to:													
	Small landowners	Subsistence economy	Indigenous/ ethnic peoples	Pastoralists/nomadic peoples	Recent migrants	Urban communities	Communities falling below the poverty rate	Other	Adoption of sustainable natural resources management practices	Ecotourism revenues	Park management activities	Payment for environmental services	Increased food security due to the adoption of sustainable fishing, hunting, or agricultural practices	More secure access to water resources	Improved tenure in land or other natural resource due to titling, reduction of colonization, etc.	Reduced risk of natural disasters (fires, landslides, flooding, etc)	More secure sources of energy	Increased access to public services, such as education, health, or credit	Improved use of traditional knowledge for environmental management	More participatory decision-making due to strengthened civil society and governance.	Other
Total																						

If you marked "Other", please provide detail on the nature of the Community Characteristic and Socioeconomic Benefit: