

CEPF SMALL GRANT FINAL PROJECT COMPLETION REPORT

Organization Legal Name:	Wildlife Conservation Society
Project Title:	Northern Plains of Cambodia Kouprey Survey
Date of Report:	9 June 2011
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CEPF Region: Indochina

Strategic Direction: 1. Safeguard globally threatened species in Indochina by mitigating major threats.

Grant Amount: US\$19,888

Project Dates: March 2010 – March 2011

Implementation Partners for this Project (please explain the level of involvement for each partner): Wildlife Conservation Society implemented the project in partnership with the Cambodian government agencies of the Forestry Administration and the Ministry of Environment. The government is the legal authority managing the areas in which the project is based and WCS provides technical support to improve management.

Conservation Impacts

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

The Northern Plains of Cambodia Kouprey Survey worked directly towards the implementation of CEPF Strategic Direction 1. We addressed the need to improve information on the status and distribution of Kouprey. The goal of this study was to investigate the populations of wild cattle in the Northern Plains of Cambodia focusing on finding signs of the survival of the Kouprey. This survey also provided valuable data on the distribution of other wild cattle species. Preah Vihear Protected Forest (PVPF) could have been one of the locations in which any remaining Kouprey would have persisted as it contains such large areas of grassland and open forest. PVPF and Kulen Promtep Wildlife Sanctuary (KPWS) are where this species had been previously seen by Wharton (1957). The Northern Plains landscape is remote from human habitation and contains large grasslands, dry open forest, waterholes and salt licks. These are the four essential components of Kouprey habitat identified by Wharton (1957); the last site in which this species was known to occur was in Preah Vihear. We searched for Kouprey using digital camera traps in sites where they were formerly known to exist. Although we detected many wild cattle during this study, we were unable to detect any Kouprey. Our survey is not exhaustive, but we have covered a large area of a landscape which was previously preferred by Kouprey.

Please summarize the overall results/impact of your project against the expected results detailed in the approved proposal.

We presented three target outcomes in the project proposal:

1. *Identify and define the most suitable study area within PVPF.*
Based on WCS databases, local knowledge and recent reports of wild cattle we selected areas where we would be likely to capture images of wild cattle using digital camera traps. These included salt licks and water holes. After reviewing the survey plan with colleagues, including Rob Timmins, we decided to survey a larger area of the Northern

Plains so that it included both PVPF and KPWS. These sites were both visited by Charles Wharton in the 1950s and hold large areas of suitable deciduous dipterocarp forest, salt licks and water holes.

2. *Implement a wild cattle survey in suitable habitat using camera-trapping and other suitable techniques.*

Wild cattle are difficult to locate by direct observation as a result of hunting pressure. It is unlikely that traditional transect-based observational surveys would be efficient or effective in detecting wild cattle in sufficient numbers to provide useful data on distribution and species of wild cattle in the Northern Plains. We chose to carry out camera-trapping at specific sites including water holes and salt licks in habitats which we had identified as potentially suitable for wild cattle. We purchased 20 Reconyx digital camera traps in 2010 and have used these to survey sites in the landscape. The majority of the cameras were placed in around salt licks and water holes in open forest but we also placed them in such sites in evergreen forest.

3. *Survey report and assessment of wild cattle population status and implementation of conservation recommendations.*

This survey documented the presence of healthy populations of gaur and banteng in the Northern Plains landscape in both PVPF and KPWS. No kouprey were recorded during this study. The survey indicated that the gaur is more often located inside dense evergreen and semi-evergreen forest than banteng which shows some preference for open deciduous dipterocarp forest (Figure 1). However, there is considerable overlap between these two species in their habitat choice. This survey technique may not have the capacity to distinguish habitat choice as camera traps were placed at salt licks and water holes. Particularly in the dry season, wild cattle may have to travel some distance to drink water and the nearest such sites may not be in the most preferred habitat. The absence of records from eastern KPWS and much of Chendar is more likely to reflect lack of survey effort than an absence of wild cattle in these areas. However, in eastern KPWS, camera traps were placed in locations which were most likely to have wild cattle based on the knowledge of field staff and local community members. Overall, there is less intensive management effort in Chendar and thus monitoring efforts have historically been low there. The data in Figure 1 are presented as points rather than minimum convex polygons as wild cattle distribution is still poorly understood in the landscape, but this survey expanded greatly the known distribution of wild cattle (Figure 1) which shows both data from the WCS database and records from the CEPF-funded camera traps. Extensive transect-based large mammal surveys were carried out across the whole landscape from February to May 2011. These may improve our knowledge of the wild cattle species in the Northern Plains in combination with the more intensive data capture by camera traps.

Please provide the following information where relevant:

Hectares Protected: Not applicable.

Species Conserved: Gaur, banteng, kouprey

Corridors Created: Not applicable

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

We surveyed a very large area of suitable wild cattle habitat in which we detected populations of Endangered Banteng and Vulnerable Gaur across both PVPF and KPWS. This has been very

helpful in understanding the extent of their distribution in the Northern Plains. We did not detect Kouprey during the survey which suggests that any remaining population is likely to be very small.

Were there any unexpected impacts (positive or negative)?

Two cameras were stolen during the funded period. This type of problem is relatively common with camera trap surveys in inhabited areas. Considering we had so many cameras out over nine months in an area with quite high human activity, the loss of only two cameras is a relatively minor loss.

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.

Camera trapping as a survey tool has a number of positive characteristics which recommend its use for wildlife surveys. However, there are limitations which must be taken into account when considering their use. Camera traps are relatively simple to install in the field and can be used by most individuals with a limited amount of training. They can be used to detect elusive species that are likely to be very wary of human survey teams as well as being capable of capturing images at any hour of the day for long periods. They have advantages over DNA-based dung surveys for wild cattle as it is often difficult to collect sufficient dung for such as study; these species, although large, do not drop as much dung as elephants and distinguishing their dung from domestic livestock can be difficult.

The main problems with camera trapping is that the area 'surveyed' by one camera trap is very small and so site selection is critical. We found that during the wet season, cameras placed at salt licks were often effective in detecting wild cattle. However, in the dry season, cameras at water holes detected more wild cattle. This information helped us detect target species effectively during these different seasons over such a large areas.

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

The relatively simple methodology deployed in this study enabled us to cover a large area in a short period of time. We probably were able to detect the presence of many of the wild cattle present in the Northern Plains landscape during this study. Evidence for this is indicated by the comparison between observations of wild cattle during a concurrent large mammal transect-based survey covering the whole landscape and this study. The transect survey detected wild cattle in only a few locations with less than 10 detections. This camera trap survey detected wild cattle in a much wider range of locations and found more individuals. However, it is not possible to say with any certainty that we could have detected kouprey despite recording numerous banteng and gaur.

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

Targets were well identified during planning and thus implementation was straightforward. The relatively simple methodology facilitated rapid implementation.

Other lessons learned relevant to conservation community:

Camera-trapping can only target small areas and these must be selected carefully. Digital camera traps generate very large quantities of data. Without appropriate management and storage of data, there is little point in implementing such surveys as the data will not be used effectively. An effective database and survey record form are necessary to maximize use of these data.

ADDITIONAL FUNDING

Provide details of any additional donors who supported this project and any funding secured for the project as a result of the CEPF grant or success of the project.

Donor	Type of Funding*	Amount	Notes
UNDP/GEF	A	\$18,000	
Wild4Ever	A	\$4,000	

***Additional funding should be reported using the following categories:**

- A** Project co-financing (Other donors contribute to the direct costs of this CEPF 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 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.

The camera traps funded by CEPF are now under the control of the management authorities in the Northern Plains. They are robust and will provide data for monitoring wildlife populations in this landscape for years to come with little extra input required other than technical analysis of the information collected.

Summarize any unplanned sustainability or replicability achieved.

None relevant.

Safeguard Policy Assessment

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

This project did not involve activities designed to prevent individuals carrying out legal livelihood activities.

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 from July 1, 2009 to June 30, 2010. (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.	n/a			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?	n/a			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.	n/a			
4. Did your project effectively introduce or strengthen biodiversity conservation in management practices outside protected areas? If so, please indicate how many hectares.	n/a			
5. If your project promotes the sustainable use of natural resources, how many local communities accrued tangible socioeconomic benefits? Please complete Table 1 below.	n/a			

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													
	Small landowners	Subsistence economy	Indigenous/ ethnic peoples	Pastoralists/nomadic peoples	Recent migrants	Urban communities	Communities falling below the poverty rate	Other	Increased Income due to:				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	
									Adoption of sustainable natural resources management practices	Ecotourism revenues	Park management activities	Payment for environmental services										
Total																						

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

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.cepfn.org, and publicized in our newsletter and other communications.

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