CEPF FINAL PROJECT COMPLETION REPORT

Organization Legal Name:	Royal University of Phnom Penh
Project Title:	Identifying priority sites and conservation actions for fishing cat (*Prionailurus viverrinus*) in Cambodia
Date of Report:	30 July 2015
Report Author and Contact Information	Ms Thaung Ret, Ms Pheng Sokline, Vanessa Herranz Muñoz, Dr Nicholas J Souter, Centre for Biodiversity Conservation, Royal University of Phnom Penh

CEPF Region: Indo-Burma hot spot

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

Grant Amount: $ 19,999

Project Dates: 1st November 2014 - 30 June 2015

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

Wildlife Conservation Society (WCS) assisted with camera trap deployment on the Tonle Sap floodplain at Prek Toal. Mr Daniel Wilcox provided technical advice.

Prey Nup Mangroves provided access to their private protected mangroves area at Prey Nop.

Ministry of Environment (MoE) provided permission and ranger support at Peam Krosaop wildlife sanctuary, Botum Sakor National Park and Ream National Park.

Ministry of Agriculture, Forestry and Fisheries provided official staff and permission to conduct the survey at Prey Nop district.

Local community local community members were employed as local guides and in monitoring and re-baiting camera traps. Site information was gathered from local community members prior to camera trap deployment. They also participated in threat assessment interviews.

Conservation Impacts

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

This project conducted camera trap and interview surveys to identify priority sites for fishing cats and their conservation throughout Cambodia. This addressed strategic direction 1 from the CEPF ecosystem profile: safeguard priority globally threatened species by mitigating major threats. The project found that fishing cats are still present in Cambodia at two sites, Peam Krosaop Wildlife Sanctuary (PKWS) and Ream National Park (RNP). As both of these sites are protected areas the resident fishing cats should be afforded some protection. The interview survey of attitudes to fishing cats within these areas can be used to assist in threat mitigation. This work has led us to begin considering programmes to raise awareness of the importance of fishing cat conservation amongst the local communities and ways to avoid conflict between humans and fishing cats.

Please summarize the overall results/impact of your project.

Five sites were surveyed for presence of fishing cats: Prek Toal Bird Sanctuary in the Tonle Sap Biosphere Reserve (PT), Prey Nop district (PN), Botum Sakor National Park (BSNP), Peam Krosaop Wildlife Sanctuary and Ream National Park. Two individual fishing cats (a male and possibly a female) were recorded by camera trap on seven separate occasions between January and May at Koh Srolao, (PKWS). They were individually identified based on distinctive patterns of spots on the rump. A single fishing cat was recorded by camera trap from Ream National Park between March and April. This is a remarkable discovery as fishing cats are very vulnerable to human persecution and both were found in areas close to human settlements and substantial human activity was also recorded within both protected areas by the camera traps. We have informed the relevant authorities (both local and national) and local villagers of our findings so that they may better protect the fishing cat at these sites. Our work has already started educating people about the importance of fishing cat conservation and local villagers are better at identifying fishing cats, particularly in telling the difference with leopard cats. However, we have recently learnt from a local contact at Koh Srolao that a fishing cat was caught and killed by a fisherman after the cat had damaged his nets. This highlights the need for raising social awareness of fishing cat conservation to stop this conflict, both at sites where we found fishing cat as well as other sites which possibly have fishing cats.

Our surveys also recorded four other IUCN Red List species at PKWS: Sunda Pangolin (*Manis javanica*, Critically endangered), Hog Deer (*Axis porcinus*, Endangered), Smooth-coated Otter (*Lutrogale perspicillata*, Vulnerable), Large-spotted Civet (*Viverra megaspila*, Vulnerable) and Sambar Deer (*Rusa unicolor*, Vulnerable). We have alerted the relevant authorities of these findings.

Fishing cats were not recorded from Prek Toal Bird Sanctuary in the Tonle Sap Biosphere Reserve, Prey Nop district or Botum Sakor National Park.

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

No planned long-term impacts included in the proposal

Actual Progress Toward Long-term Impacts at Completion:

NA

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

We are looking at developing a fishing cat conservation action plan that will focus on both sites where fishing cats were recorded. This will primarily involve community education and threat mitigation measures as described above. We also plan to further fishing cat research and improve the capacity of local rangers to correctly identify fishing cats and assist in fishing cat research and conservation.

Actual Progress Toward Short-term Impacts at Completion:

Results have been shared with local authorities and the fishing cat working group who are updating the IUCN red list fishing cat assessment. A number of small grants looking at further studying fishing cat ecology and conservation in Cambodia have been submitted as a part of a proposed PhD project by our camera-trapping consultant, Vanessa Herranz Muñoz through the Universidad Rey Juan Carlos, Madrid, Spain.

Local villagers now have a better understanding about fishing cats. Local guides and rangers can now clearly identify fishing cats and not confuse them with leopard cats. Many villagers now know that they are not harmful to humans. In the Khmer language tigers are ‘K’la’ and fishing cats ‘K’la

trey' (trey = fish). This has led to local people equating fishing cats with tigers and the belief that they are dangerous to humans.

Please provide the following information where relevant:

Hectares Protected: Not applicable
Species Conserved: Fishing Cat *Prionailurus viverrinus*
Corridors Created: Not applicable

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

Before this project there was only one confirmed record of a wild fishing cat from Cambodia, a single camera trap image from Kulen Promtep Wildlife Sanctuary taken in March 2003. Until this project the only other evidence of fishing cats in Cambodia was two kittens recovered from Botum Sakor after a natural fire in 2008 and a number of confiscated captive fishing cats (although the possibility of them being trafficked from another country cannot be discounted). This project confirms the presence of fishing cats in coastal Cambodia.

Besides finding a new population of fishing cats in the wild, local capacity and fishing cat knowledge and conservation awareness has been improved within the local communities at the two fishing cat sites.

The main challenge to long term fishing cat conservation at these two sites is managing human fishing cat conflict. The recent killing of a fishing cat which damaged a fisherman's nets at PKWS highlights this. In this case conflict was brought about by competition for natural resources and this is unlikely to be isolated as we recorded intense human extractive activity (particularly fishing and crab trapping) in the area. Whilst PKWS has management zones including a core or no take zone reserved for biodiversity conservation, human animal conflicts may indicate low levels of enforcement and possibly overexploitation of resources. The site where the fishing cat was recorded at Ream National Park is under threat of development as the Ministry of Environment is considering handing the land over to a private economic land concession.

Were there any unexpected impacts (positive or negative)?
There were no unexpected impacts of the project.

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: The current status of knowledge about priority sites for fishing cat in Cambodia is well understood.
Activity 1.1: Carry out a review of currently available information from both published and unpublished literature and surveys
Activity 1.2: Use review of literature and surveys to determine priority sites for fishing cat

Component 1 Actual at Completion:
Knowledge of priority sites for fishing cats in Cambodia is well understood. The review revealed the single wild record from Cambodia (Kulen Promtep wildlife sanctuary, 2003) and a two kittens captured in 2008 from Botum Sakor National Park after a natural fire. Further information was gathered through interviewing relevant experts. Fishing cats were believed to have been hunted for food by local villagers in the Tonle Sap area in 2010. The Wildlife Alliance rescue team seized

two fishing cat kittens, one from Prey Nop district, the other from Koh Kong province in 2014. Interviews with locals at Koh Sralao lead us to strongly suspect fishing cat were present in PKWS. From this five priority sites were selected for survey: Koh Srolao in Peam Krosaop Wildlife Sanctuary, Ream National Park, Botum Sakor National Park, Prey Nop district and Prek Toal in Tonle Sap Biosphere Reserve.

Component 2 Planned:
Objective 2: Priority sites are surveyed for fishing cat presence.
Activity 2.1: Carry out a survey of local people at priority sites in order to determine (if possible) presence of latrine sites, and therefore optimal locations for camera traps.
Activity 2.2: With help from local guides, scope potential camera trap sites
Activity 2.3: Conduct camera trap surveys

Component 2 Actual at Completion:
Local people at all priority sites were interviewed to determine presence of latrine sites and areas used by fishing cats. In PKWS six locations were investigated for the presence of fishing cat foot prints and scats. From these, camera traps were deployed at five locations with six cameras deployed from January to May 2015. At BSNP we scoped three wetland sites where a ranger believed he used to see fishing cats. However, only one site remained in relatively natural condition and three camera traps were set up around the lake that had signs of civet, sambar and possibly fishing cats. At PN four sites around a private mangrove protected area where the ranger believed he had seen fishing cats were scoped. Three traps were deployed at two of these sites. At RNP areas close to fresh water were scoped and three camera traps deployed. At PT three main canals in the core area were scoped. Sixteen camera traps were deployed where signs of otter and cat's foot prints were found. Fish were used as bait to lure fishing cats to the camera traps. Habitat assessments were also made at each trap location. Traps were deployed from January until May 2015. In total 32 camera traps were set for 16,640 trap nights, fishing cats were recorded from two sites Koh Srolao at Peam Krosaop Wildlife Sanctuary and Ream National Park.

Component 3 Planned:
Objective 3: Threat assessment and conservation action
Activity 3.1: Carry out a threat assessment of priority sites by determining land use zoning (e.g. protected area, economic concession, etc.), human activity around the site, and through interviews (hunting pressure and community attitudes to fishing cats and other wildlife species)
Activity 3.2: Use the results of the field surveys and threat assessments to recommend conservation actions for fishing cat in Cambodia.

Component 3 Actual at Completion:
Villagers most likely to come into contact with fishing cats at each priority site were interviewed via a questionnaire investigating threats and local attitudes towards fishing cats. Most of the villagers asked were migrants and 50 % were fishermen who used to know of, or had heard about, fishing cats. Most respondents thought fishing cat numbers were decreasing because of hunting pressure and deforestation. Ninety percent claimed they didn't harm fishing cats even though they occasional damaged their fishing nets. However a recent killing of a fishing cat that damaged a fishing-net was reported from Koh Sralao, casting doubt on these claims.
Although fishing cats were recorded from protected areas, the site at RNP has been marked for development as a private economic land concession. Fishing cats were not found at BSNP, however, significant degradation and illegal logging was observed, casting doubt on their likely presence there.

Given the case outlined above conservation strategies that reduce human-fishing cat conflict are required. This should be part of a broad community education programme aimed at improving local perceptions of fishing cats. Developing fishing methods that either exclude, discourage or are inaccessible to fishing cats are also recommended. Assessment and further recommendations on the effectiveness of the management zones to conserve natural resources

and thus sustain the fishing cat population, minimizing competition with humans is also necessary. Individual identification of a male and possibly a female fishing cat indicates that there might be a breeding population in the area. A more detailed investigation of population density, status and trends is required at both PKWS and RNP and used to create a species conservation plan for each sites in collaboration with government officials.

It is recommended that any developments planned for Ream National Park should be re-examined or if they take place are done so to either avoid or mitigate any impact to the local fishing cat population.

Were any components unrealized? If so, how has this affected the overall impact of the project?
All project components were realized.

Please describe and submit (electronically if possible) any tools, products, or methodologies that resulted from this project or contributed to the results.
Not applicable

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.
The design and implementation largely went to plan. The research officer and research assistants improved their capacity by gaining experience with fishing cats and also now have improved skills in project planning, implementation, reporting and analysis.

Project Design Process: (aspects of the project design that contributed to its success/shortcomings)
The project design worked well, first determining potential sites using published and unpublished information as well as local knowledge. By undertaking the attitudes survey at the end of the project we were able to get a greater feel for the issues surrounding fishing cats and create a better survey. Establishing good relations with rangers and community members at the survey sites proved most useful both for scoping potential fishing cat sites and keeping us informed of any fishing cat-human conflict.

Project Implementation: (aspects of the project execution that contributed to its success/shortcomings)
We found that correct camera trap placement is important. Many of the traps were found by local people (many ‘selfie’ photos of local villages were taken) and one was stolen from PKWS. There is a trade-off between concealing traps from people to ensure their security and placing them in places where they are most likely to detect animals. We consulted closely with the Ministry of Environment and kept them informed of our results. This helped in gaining necessary permissions, particularly when at at Koh Sralao (PKWS) the local policeman attempted to stop us setting camera traps. By having the correct permissions and senior government contacts we were able to access the site.

Other lessons learned relevant to conservation community:
We found that local knowledge of fishing cats at the different sites varied. At Koh Sralao the local villagers claimed they could tell the difference between leopard cats and fishing cats and provided good descriptions of both animals appearance and behavior. This proved to be correct by the presence of fishing cats at the site. At sites were fishing cat were not found the level of knowledge was much less. At all sites the global importance of fishing cats was not initially

recognized by the local people and they expressed little interest in their conservation. However our brief explanations of their importance do seem to be positively changing attitudes towards the species. This highlights the importance of community education, both in providing training in species identification and the importance of conservation.

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.

No direct additional financial contributions were made to the project, all additional support was inkind:

WCS provided US$ 3,000 of direct project support though technical advice, Government liaison and field surveys, and US$ 3,720 in-kind contribution as twelve camera traps for the Prek Toal field survey.

RUPP-CBC provided US$ 1,860 in-kind contribution as six camera traps for the field survey and US$ 1,630 (two weeks work) contribution from the Project Manager, University Capacity Building Project in project management and technical advice.

Donor	Type of Funding*	Amount	Notes

***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.

This project has allowed appropriate follow-up conservation activities to be identified and prioritized for fishing cats. A collaborative approach will likely be implemented to conserve fishing cats, with the involvement of several stakeholders, including Ministry of Environment, Forestry Administration and CBC-RUPP.

The challenge is raising funds for extended surveys, awareness raising and preventing human-fishing cat conflict well as protecting fishing cats from hunting.

Summarize any unplanned sustainability or replicability achieved.

We have established good relations with the local rangers who keep us informed of any developments regarding fishing cat's at their sites. For example we were contacted by the ranger at Koh Sralao with the information of the illegal hunting and killing of the fishing cat.

Safeguard Policy Assessment

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

Local communities within the project site were informed about the project's aims and methods. No safeguards were triggered by the implementation of this project.

Additional Comments/Recommendations

None

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:

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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, 2007 to June 30, 2008. (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: