CEPF SMALL GRANT FINAL PROJECT COMPLETION REPORT

Organization Legal Name:	Wildlife Conservation Society
Project Title:	Finding a place for Bengal Florican in an agricultural landscape
Date of Report:	12 November 2013
Report Author and Contact Information:	Mr. Simon Mahood smahood@wcs.org

CEPF Region:

IndoBurma
Hotspot

Strategic Direction:

Strategic Direction 3. Engage key actors in reconciling biodiversity conservation and development objectives, with a particular emphasis on the Northern Limestone Highlands and Mekong River and its major tributaries

Grant Amount:

$19,164.80

Project Dates:

1 February 2013–31 October 2013.

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

Forestry Administration (FA): FA staff were involved in all elements of the project, particularly the gathering of information on land-use and ownership at key sites, and the development of the report that consolidated information gathered during the project.

BirdLife Cambodia Programme: Involved in project development and in discussions about potential conservation measures; took part in the recce to Bakan.

Lotty Packman and Nigel Collar: Involved in discussions about various aspects of florican conservation during implementation of the project.

Conservation Impacts

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

The project has made a significant contribution to the implementation of the CEPF ecosystem profile because it has identified and evaluated mechanisms that will potentially reconcile Bengal Florican conservation needs with development. Development of the Tonle Sap floodplain, largely for dry-season rice cultivation, is proceeding at a rapid pace. The project has enabled us to gain new insights into this process, and to characterise it spatially using GIS

analysis. It has related this to Bengal Florican population trends across a part of the floodplain that supports 80% of Cambodia's Bengal Florican population. At key sites it has identified some of the individual actors involved in dry season rice cultivation, and shown that they are both large-scale farmers and small holders. Based on these data it has developed mechanisms that might reconcile biodiversity conservation and development needs. These have been evaluated and documented in full. A document has been produced that contains this information; this constitutes the main physical output of the project.

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

The project examined habitat trends in the Tonle Sap grassland zone centred on Kompong Thom Province, an area that supports c. 80% of Cambodia's Bengal Florican population. It compared dry-season rice cultivation in 2010 with 2013 (2010 was the last year for which there are published data on dry-season rice cultivation in Kompong Thom Province). It used the abundance and distribution dams, which are built to facilitate dry-season rice cultivation, as a proxy for dry-season rice cultivation itself. Satellite data indicate a substantial increase in the construction of dry-season rice dams during this period (see Figure 1; dams built prior to 2010 are outlined in yellow, those built subsequently are outlined in red).

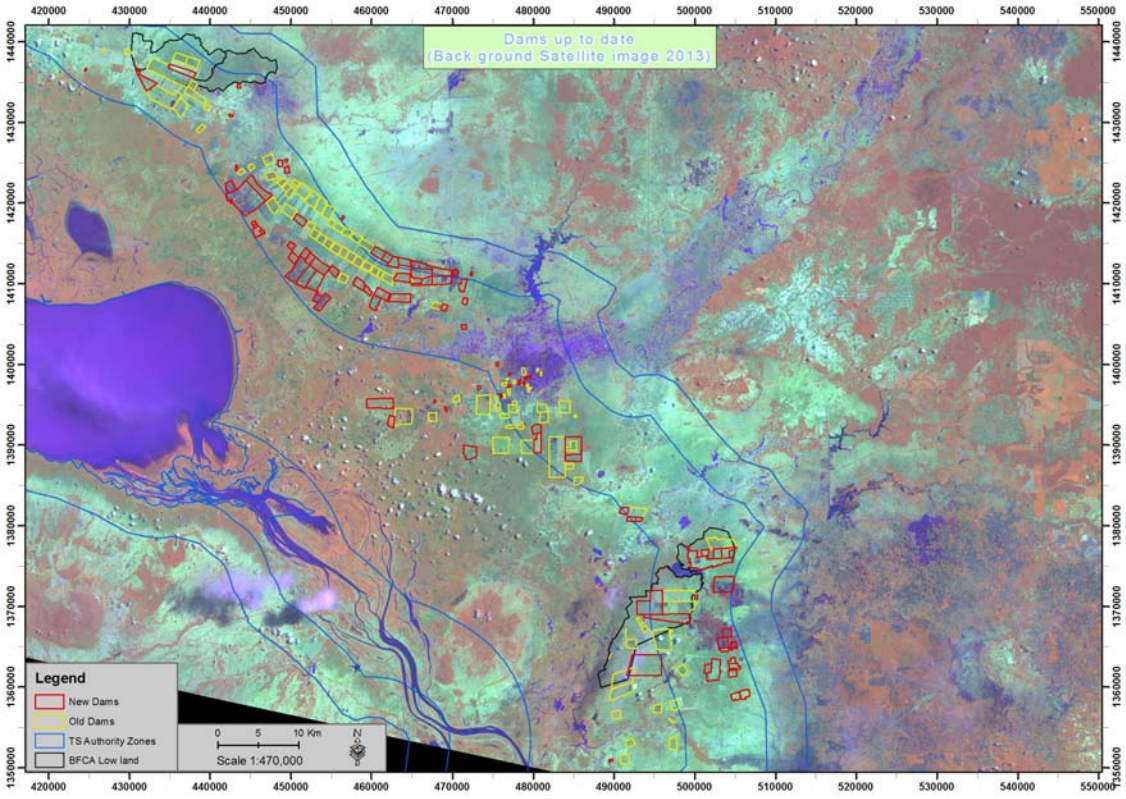

Figure 1. Dams built for dry-season rice cultivation in the Tonle Sap floodplain, centred on Kompong Thom Province

The project then defined the monitoring units (largely BFCAs, some former IFBAs and some additional sites) and their areas (in hectares), a necessary step to ensure clarity of discussion. Within sites that are monitored annually, Bengal Florican population estimates vary

considerably from year to year. At sites that are not annually monitored it was therefore thought to be unwise to base Bengal Florican conservation planning on the results of one survey. Consequently florican population surveys implemented in 2012 were repeated in 2013 at all monitoring units defined in the project (80% of Cambodia's florican population). This proved to be prudent; because population estimates obtained for some monitoring units differed considerably between 2012 and 2013 (Table 1; for full discussion of these data see the full project report).

Table 1. Bengal Florican monitoring data from monitoring units centred on Kompong Thom Province, numbers in parenthesis are 95% CI.

Monitoring unit (area in ha)	**Estimated number of displaying males**					
	2007	**2009**	**2010**	**2011**	**2012**	**2013**
Stoung-Chikraeng BFCAs (7,448)	66 (46–83)	37 (18–57)	66 (41–91)	37 (18–56)	46 (20–71)	75 (57–92)
Baray–Chong-Doung BFCAs (9,883)	25 (5–54)	22 (5–39)	26 (5–46)	11 (0–24)	7 (0–18)	15 (0–30)
Baray (including unprotected areas) (25,800)	65 (19–111)	-	-	-	18 (0–37)	70 (47–94)
Veal Srongai (8,198)	32 (8–56)	5 (1–15)	4 (0–13)	17 (1–39)	4 (0–13)	13 (0–29)
Sankor (16,637)	91 (51–129)	-	-	-	55 (21–89)	76 (40–113)
Kouk Preah Beoung Trea (12,544)	30 (8–52)	-	-	-	31 (6–56)	0
Krous Kraom (4,600)	17 (9–26)				0	0

Note: there are no comparable data for 2008.

The project then mapped current land use at the monitoring units. This stage took much longer than expected because remote sensing of satellite images could not differentiate between grass and rice at the scale required for the project. Instead, various satellite images of each site were examined manually, and the current (2013) extent of grass, rice and scrub mapped (see example in Figure 2, showing current land use patterns at Sankor, an unprotected site).

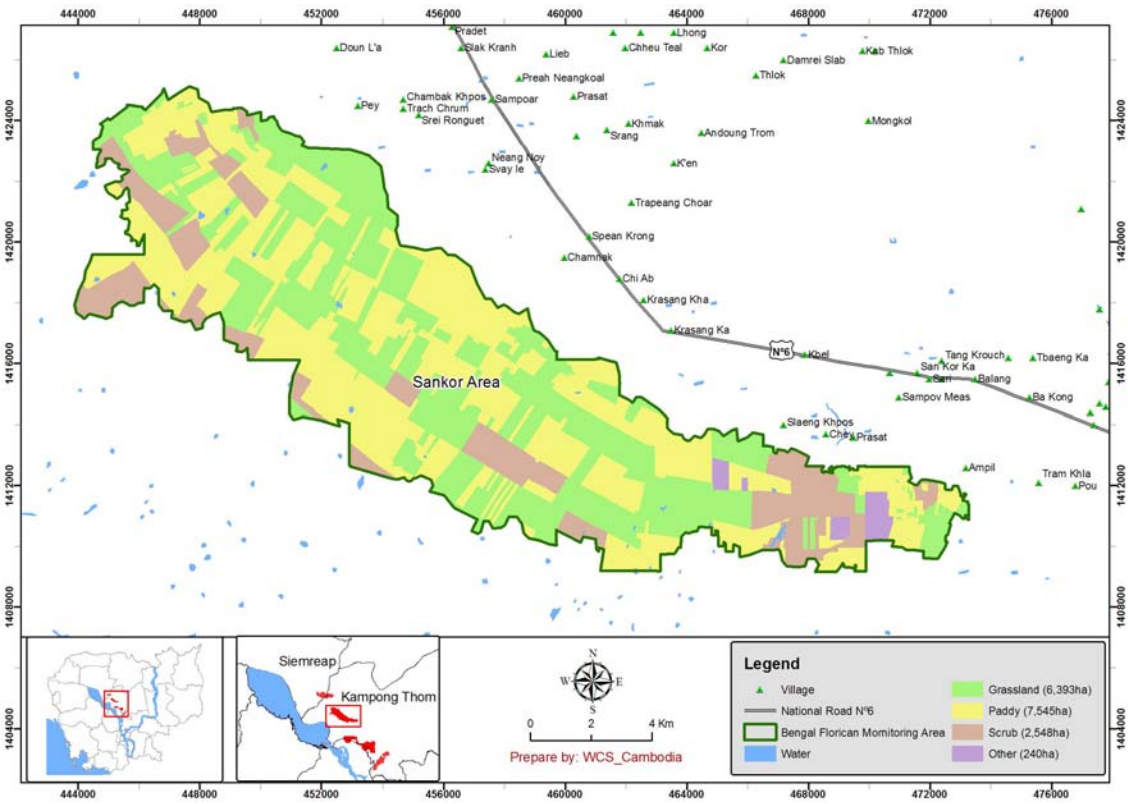

Figure 2. Land-use patterns at Sankor in May 2013.

The mapping exercise illustrated that substantial areas of grassland have been lost from all sites, including the BFCAs. It quantified the extent of remaining grassland, much of it found within dams constructed for dry-season rice cultivation. It also indicated that some grassland areas within dams were beginning to be encroached by scrub. Intriguingly, it showed that there was a miss-match between the density of floricans at a site and the percentage grass cover, regardless of whether 2012 or 2013 florican density data were used. This precipitated a discussion of the potential mechanisms through which Bengal Floricans might be declining, which are important to understand in order to design and implement appropriate conservation solutions. At some sites the project identified the actual ‘land users’, both individuals with title who farm large areas of land and small-scale farmers. It was not possible to do this at all sites, owing to time constraints. It was also not possible to obtain development plans for the floodplain, owing to sensitivities surrounding the national election.

The project also stepped outside of the Kompong Thom area and made a short recce visit to Bakan, in Pursat Province. This initial visit was intentionally short, because although surveys conducted in 2012 indicated that the site supported a high density of floricans, the population is thought to be very low. The site visit revealed that the extent of grassland at Bakan might be greater than previously thought. Moreover, grassland at Bakan is varied in type and sward height (Figure 3). It is not currently directly threatened by dry-season rice cultivation; although there is dry-season rice expansion immediately to the south of the area. Male and female floricans were recorded, although there are indications that some subsistence hunting of floricans is ongoing. A priority for the next dry season will be mapping the full extent of grassland in the area.

Figure 3. Grassland at Bakan, June 2013.

Based on data already discussed, the project identified various potential solutions to reconcile Bengal Florican conservation with development that fall either side of the land sparing-land sharing paradigm. As well as strengthening protection within Stoung–Chikraeng BFCAs (by far the most important site for Bengal Florican conservation based on both numbers of floricans and, especially, density of displaying males) the project evaluated the following approaches to expanding the scope of Bengal Florican conservation in the floodplain:

- Increasing the size of existing BFCAs;
- Increasing the level of protection of current BFCAs to sub-decree;
- Designating new BFCAs;
- Private land purchase (or similar);
- Integration of Bengal Florican conservation needs into farming practices in the wider landscape.

A full discussion of these potential options is contained in the project report and summarised here.

We identified and mapped areas of grass or scrub adjacent to the BFCAs that could be added to them, simply through changing the boundaries. This ought to be a relatively easy win, since these additional areas are not under cultivation. The feasibility of increasing the level of protection of the BFCAs to sub-decree was discussed; it was noted that some parts of some of the BFCAs are already covered by at least one sub-decree that theoretically protects natural habitats but in reality does little to add to protection on the ground.

Designating new BFCAs was thought to only be possible at Bakan in Pursat Province, owing to the prevalence of dry-season rice in Kompong Thom Province. The project also identified potential sites for land acquisition, including BFCAs and areas outside of them. It engaged a law firm in assessing the efficacy of different legal options for land acquisition and investigated the legal procedures that would need to be followed. Based on legal reasons, it was concluded that purchase of hard title, issued by the National Cadastre office, was the only appropriate means to hold and manage land for florican conservation. The project fully documented the process by which hard title could be obtained, and exhaustively evaluated pros and cons of land purchase at potential sites identified. Conclusions drawn from this evaluation are tentative and are still under discussion. The law firm is also still investigating the actual feasibility of land purchase in some of these areas, and to an extent the outcome of this this will dictate whether or not this conservation option is taken further.

The project also outlined one potential way in which Bengal Florican conservation could take place within the farming landscape. Because dry-season rice cultivation retains grassland patches inside dams, and Bengal Floricans persist in such areas, it is thought that by increasing habitat quality within the grassland patches and reducing Bengal Florican mortality it might be possible for Bengal Floricans to persist outside of dedicated grassland reserves. Methods by which this could be achieved are discussed the report.

Overall it was concluded that there is no magic bullet with which Bengal Floricans can be saved. Instead, all possible conservation options should be pursued in appropriate locations.

Please provide the following information where relevant:

Hectares Protected: None

Species Conserved: Bengal Florican *Houbaropsis bengalensis*

Corridors Created: None

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

As detailed above the project was successful at meeting its main objectives in the time frame.

The dry-season was relatively well advanced when the project began and consequently some field activities, such as ground-truthing of the habitat maps, was not as thorough as hoped. Partly for this reason Bakan was not visited until very late in the dry-season, so only two short visits were possible and some important data, particularly regarding the extent of grassland, could not be collected. These data will be collected in the next dry-season.

Producing the habitat maps took much longer than expected, because it was a laborious process that had to be done very carefully. Much of the report that was the main output of the project hinged on these maps, and consequently there was not time during the reporting period to present elements of the report to the wider group that are involved in Bengal Florican conservation for their input. The report is now complete in a form in which it is suitable for review by a wider audience, and this will be done during the next month.

Were there any unexpected impacts (positive or negative)?

During the first visit to Bakan the project team and staff from BirdLife International (on a supervision mission) found a population of Rufous-rumped Grassbird *Graminicola bengalensis.* This Near Threatened grassland passerine has not been recorded in Thailand or Indochina since 1923, so this was a genuine rediscovery. It was the first record of the species in Cambodia, although it is perhaps not surprising that it persists there since the country supports the most extensive grassland in the region.

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 main lesson that was illustrated during implementation of the project was that the situation that a threatened species is in is typically complicated, whilst solutions are rarely clear-cut. The Bengal Florican is a particularly enigmatic species in this regard, although the population is clearly declining as a result of dry-season rice expansion trends in protected sites are not all better than those in areas subject to intensive rice cultivation. Through the project the Bengal Florican Conservation Project team at WCS Cambodia were made to think anew about the issues surrounding the conservation of the species, to both re-examine old concepts and consider new ideas.

The project also built the capacity of a new junior GIS staff at WCS.

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

Various factors contributed to the success of the project. It was designed based on needs identified in the Bengal Florican Species Action Plan. It addressed the need for a comprehensive evaluation of alternative conservation modalities. It maximised its relevance by focussing on the areas where there is the greatest chance of conservation success, specifically because of the size of the florican populations, presence of ongoing conservation efforts and the area of habitat remaining within these areas. It took advantage of institutional strengths of the organisation involved. Most importantly, it was successful because it fitted into existing conservation activities and supported existing objectives of WCS Cambodia's Bengal Florican Conservation Project.

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

The project was successful because it was implemented by appropriate staff who are familiar with the target species and landscape. Some activities took longer than expected (in particular the habitat mapping), because they were more difficult than anticipated.

Other lessons learned relevant to conservation community:

None.

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
MacArthur Foundation	A	$8,140	
WCS Core funds	A	$2,896	

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 project has produced a report that will serve as a foundation for Bengal Florican conservation effects in the Tonle Sap floodplain. It has clearly documented the current status of Bengal Florican populations and habitat within key sites. It has identified and evaluated potential options for reconciling Bengal Florican conservation and development and is continuing to investigate their feasibility. WCS and partners will discuss and use the outputs of the project to guide Bengal Florican conservation in Cambodia. It has therefore achieved its aims in terms of sustainability.

Summarize any unplanned sustainability or replicability achieved.

None.

Safeguard Policy Assessment

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

N/A

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.	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:

Additional Comments/Recommendations

A range of relevant stakeholders is currently reviewing a report entitled 'Finding a place for the Bengal Florican in an agricultural landscape'. This report is a key output of the project. It will guide the development of plans that will integrate Bengal Florican conservation needs into the wider landscape. The report will be uploaded to the CEPF web site when it has been revised based on stakeholder comment.

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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