CRITICAL ECOSYSTEM PARTNERSHIP FUND

CEPF Final Project Completion Report

Organization Legal Name:	Royal University of Phnom Penh
Project Title:	Strengthening Community Based Bird Biodiversity Conservation and Monitoring through Local Livelihood Improvement and Capacity Building in 3S River Basin, Cambodia
Grant Number:	64126
CEPF Region:	Indo-Burma II
Strategic Direction:	4 Empower local communities to engage in conservation and management of priority key biodiversity areas
Grant Amount:	$177,000.00
Project Dates:	October 01, 2014 - September 30, 2017
Date of Report:	January 15, 2018

Implementation Partners

List each partner and explain how they were involved in the project

Project activities involved five key sites for wildlife conservation (two on Sekong River and 3 on Se san River) and included community participants from nine villages (Nyeun, Nyang Som, and Thmor Keo villages on Sekong River; Koh Pong, Hat Pok, Voen Hoy, Lumphoat, Svay Rieng, and Ksach Thmei villages on S esan River). The implementation of some project activities were sub-granted to two non-governmental organizations - Wildlife Conservation Cambodia (WCC) and Birdlife International. WCC engaged two new communities on the Sekong River to participate in the project, and WCC was also responsible for strengthening communities and implementing livelihood improvement activities for the targeted local communities. Birdlife International was responsible for overseeing law enforcement at key conservation sites and for monitoring waterbird nests and conservation activities. In addition, Culture and Environmental Preservation Association (CEPA) and (Three Rivers Protection Network (3SPN); and three provincial government departments like Fisheries Cantonments in Stung Treng and Ratanakiri provinces, and Department of Environment in Stung Treng provided technical and legal support on establishment of CFI, community based monitoring and interventions, and crack down on illegal activities.

Conservation Impacts

Summarize the overall impact of your project, describing how your project has contributed to the implementation of the CEPF ecosystem profile

The primary focus of the project was to utilize participatory community based approaches to conservation of species and habitats along the Sekong and Sesan Rivers. All aspects of the project maintained a participatory focus, through consultations with the communities and relevant stakeholders, so that communities could make informed decisions and be empowered to have active roles in the decision-making processes regarding natural resource use and conservation. The NRMD/RUPP project team members have extensive experience with conducting community consultations and implementing participatory methodologies, as well as in education, awareness-raising, and capacity building. During the project period of October 01, 2014 – September 30, 2017, NRMD/RUPP held several awareness-raising events, as well as participatory consultations with nine communities on the Sekong and Sesan Rivers regarding upcoming implementation of the nest protection program during the project period. Following the initial community presentations and consultations, several follow-up meetings were held in each community to draft and sign voluntary community conservation agreements. We made conservation agreements with the focal villages to conduct bird and turtle nest monitoring and protection, as well as to conduct community patrols. Community conservation teams located, monitored, and protected 247 nests of five species of regionally threatened waterbirds, and 2 nests of endangered softshell turtles.

Among five targeted communities at Stung Treng and Ratanakiri Provinces, three communities were registered as formal Community Fisheries which provide legal designation for community conservation areas, while two others are in processing by the provincial governor's office (sub-national level). Capacity-building training workshops were held for all communities to improve their capacity for conducting nest monitoring and conservation activities. We presented on community-based nest protection activities and results at an international sustainability conference hosted by RUPP and co-organized by Dr. Seak Sophat who is the Principal Investigator leading this project. We conducted rapid biological surveys covering most project areas.

We worked with project villages to complete the steps towards establishing community fisheries (CFis), including the creation of CFi management plans. Several community meetings were held, which were designed to guide and support communities through the process to designate community fisheries areas (management plans). We also met with commune and district authorities, and provincial fisheries cantonments about these agreements; the community meetings were conducted with direct involvement of provincial fisheries cantonments. We worked with communities to map and physically demarcate fish conservation areas, and to hold CFi member elections which are necessary steps in the formal legal process to designate CFis. We also colleced data on socioeconomic and fish resources, and inventoried deep pools that provide critical fish habitats. We worked closely with the communities to complete CFi management plans. Furthermore, we held several capacity-building workshops for participating communities to tain them in monitoring and methodologies for nest protection and community fisheries management plan preparation and implementation, as well as to ensure broad understanding of the project goals by the participating communities. In addition, we also organized a series of participatory consultations with communities regarding the establishment of fish conservation areas, and for development of

Community Fisheries Management Plans. Community boundary demarcation was completed, and drafts of the Community Fisheries Management plans have been completed for all targeted communities which lay out strategies to protect, use and conserve fish resources. CFi management plans were finalized for five communities, and submitted to provincial Fisheries Cantonments for final approval. Protection of sandbar breeding habitat for threatened birds and softshell turtles was also incorporated into the Community Fisheries Management Plans.
For two communities at Ratanakiri Province, we also prepared official documents for updating the Community Fishieries structure for each community. Community Fisheries had previously been established in 2011, but the CFi mandates for these communities then expired. NRMD/RUPP prepared official documents for submitting the extention of the mandates, and we worked with Fishery Cantonment at Ratanakiri Province for re-legalizing the mandates of the two communities.
We consulted with and provided support to communities for developing alternative livelihood mechanisms such as establishing small enterprise and creation of community markets. We held community consultations about potential alternative livelihood support mechanisms, and we began strengthening the established pilot project in Ksach Thmey village to support alternative livelihood options such as fish farming, chicken raising, home gardens and community market. Based on the successful experiences of the pilot project with Ksach Thmey village, we also began supporting alternative livelihood projects in Nhang Sum, Sdau communes in Stung Treng and Hat Pok and Koh Pong communes in Ratanakiri provinces.

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

Impact Description	Impact Summary
• Improved capacity of communities, government agencies, and RUPP to conduct monitoring and conservation activities.	Local community members are trained on how to search for bird nests and how to guard and monitor the nests of water birds and soft shell turtle. Moreover, community members are also trained on how to incorporate the monitoring data of nest and habitat protection and use these for efficient management interventions. During the training - NRMD/RUPP students are invited and joined. Students are encouraged to do further study about biodiversity monitoring and conservation research as their thesis requirement at the final year of their study. In addition, official from provincial fishery cantonment at Stung Treng and Ratanakiri are invited to participate in every training and monitoring guides - in order to improve their knowledge and skills.
• Improved communication between communities, government, NGOs, and academe.	The project has focused on creating strong relationships with the local communities. Because our project includes members of academia, NGOs and government staff, this has led to improved communication between these different stakeholder groups. Moreover, we have partnered and sub-granted some project activities to NGOs such as BirdLife

	International, CEPA, and WCC which has led to increased communication between RUPP and these NGOs, as well as between the partner NGOs and the communities. Additionally, we have worked with communities to establish Community Fisheries, which has led to increased communication between communities and provincial government authorities such as provincial Fisheries Cantonments and Departments of Environment.
• Improved habitat connectivity.	The project has established three community fisheries. Additionally, two more community fisheries are currently being reviewed by the provincial governors of Stung Treng and Ratanakiri and are expected to formally go into effect in mid-2018. These community fisheries protect aquatic features such as deep pool refugia that are critical to fish populations, and also protect adjacent sandbar areas that are critical breeding habitat for threatened waterbirds and softshell turtles. The establishment of these community fisheries will improve habitat connectivity for fish and other aquatic organisms and will also improve habitat connectivity for threatened terrestrial wildlife such as waterbirds and softshell turtles. Additional project activities such as nest protection and reduction of illegal activities on sandbars also improve habitat connectivity for waterbirds and softshell turtles.
• Increased populations of sandbar-nesting bird and turtle species in 3S river region of Cambodia	Overall, nesting success of threatened sandbar-nesting bird and turtle species on the 3S rivers has increased since the project began. Populations of sandbar-nesting birds have generally remained stable or have had slight increases. The River Tern, which is the most threatened of the riverine bird species in Cambodia with only about 30 pairs left in the entire population, experienced a slight net population increase in the study area during the project; the population increased by several pairs on the Sekong River, although the one remaining pair on the Sesan River disappeared (2015 was the last year River Tern was recorded on the Sesan River). Although we did not directly monitor the softshell-turtle population, the project successfully protected several turtle nests.
• Integration of community monitoring into government conservation management.	Community monitoring of bird and turtle nest protection, sandbar habitat, and fish populations were included in the Community Fisheries Management Plans which have been approved by the provincial government agencies for all five communities.

• Long-term behavior changes among community members that support conservation goals (e.g., not taking bird and turtle eggs).	In the first year of the project people took eggs from 2-3 bird nests, but no eggs were taken by people in the last two years of the project. During the project we conducted a Knowledge, Attitudes, Practices (KAP) survey. According to the KAP survey results, communities generally improved their knowledge of the key species and their awareness of the conservation program. By the 3rd year of the project, the majority of community members interviewed knew about the program, believed that the program provided positive livelihood benefits, and believed that the program had reduced threats to riverine wildlife such as waterbirds and turtles.
• Maintenance of biotic assemblages.	The project has successfully maintained the intact community of sandbar-nesting birds at several sites on the Sekong and Sesan Rivers. The project is also protecting endangered sandbar-nesting softshell turtles. Furthermore, the project has established Community Fisheries which will help maintain fish biodiversity.
• Maintenance of ecosystem function.	The project has focused on the biological components of ecosystem function. Overall, the project has helped maintain or improve ecosystem function by protecting aquatic and terrestrial biodiversity through protection of threatened waterbirds and turtles, as well as fisheries. The project's conservation activities have helped protect biodiversity as well as aquatic-terrestrial food webs.
• Protection of riverine channel habitat.	The project organized community-based conservation of riverine sandbar habitat that is critical for threatened sandbar-nesting waterbirds and softshell turtles. The project also mobilized community-based rangers to report on illegal and destructive activities within the river channel. Additionally, the project established legally designated Community Fisheries which protect critical aquatic habitat for fish, and also protect adjacent sandbar habitat.
• Reduction in illegal and destructive activities that impact sandbar and river channel habitat.	Overall, the project has reduced illegal and destructive activities such as illegal wood-cutting and settlements on sandbars, as well as a destructive gold-mining operation that negatively impacted sandbar and river channel habitat. Furthermore, the project has reanimated Community Fisheries (CFis) that were legally designated by the Fisheries Administration between 2010 and 2012 but subsequently became inactive, and project has supported the development of CFi Management Plans. The formal designation of these CFis and and implementation of the CFi

	management plans should result in further reduction of illegal and destructive activities, as well as contributing to long-term conservation of aquatic and terrestrial biodiversity and protection of sandbar and river channel habitat in the 3S Rivers.
• Greater empowerment and participation of communities in conservation decision-making.	The project is based on a participatory community-based approach to conservation. Therefore, we aim to involve communities in all aspects of the conservation activities, including decision-making. Furthermore, we have provided support and technical assistance to communities to establish community fisheries (CFi) which included holding community elections for CFi members, developing CFi management plans which also included conservation of critical sandbar habitat for threatened birds and softshell turtles. We have also worked with communities to establish community monitoring teams (for bird and turtle nest monitoring) and community rangers. Thus, the project has resulted in greater empowerment and participation of communities in the implementation of conservation activities as well as in conservation decision-making.

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

Impact Description	Impact Summary
• Community awareness raised regarding conservation issues.	Community awareness raising regarding conservation issues was conducted with all targeted communities at Stung Treng and Ratanakiri Provinces. During the events - there were approximately 150 people in each community that joined the events and watched the education film about conservation activities and issues on natural resources, especially waterbirds species along the 3S Rivers, Cambodia. As well as local people in all targeted communities, primary and secondary school students were also invited and attended the awareness-raising events.
• Creation of community fisheries or community-managed protected areas	Three community fisheries were established with technical support by NRMD/RUPP; these three community fisheries have already received formal designation by provincial authorities. Two additional community fisheries are still in processing and are currently being reviewed by the provincial governor of Stung Treng Province. In these cases, the two communities are expected to have their community fisheries be formally recognized by the Ministry of Agriculture, Forestry, and Fisheries (MAFF) by mid-2018. In addition, all targeted communities have developed community fisheries management plans - which are currently being reviewed by the provincial

	fishery cantonment of Stung Treng and Ratanakiri Provinces. These community fisheries management plans only need approval at the provincial level. Therefore, after the Head of Fishery Cantonment, and Director of Department of Agriculture Forestry and Fisheries approve the community fisheries management plans they will be legalized and can then be put into implementation.
• Formal recognition of community fisheries or community-managed protected areas by government agencies.	Three community fisheries were established with technical support by NRMD/RUPP; these three community fisheries have already received formal designation by provincial authorities. Two additional community fisheries are still in processing and are currently being reviewed by the provincial governor of Stung Treng Province. In these cases, the two communities are expected to have their community fisheries be formally recognized by the Ministry of Agriculture, Forestry, and Fisheries (MAFF) by mid-2018. In addition, all targeted communities have developed community fisheries management plans - which are currently being reviewed by the provincial fishery cantonment of Stung Treng and Ratanakiri Provinces. These community fisheries management plans only need approval at the provincial level. Therefore, after the Head of Fishery Cantonment, and Director of Department of Agriculture Forestry and Fisheries approve the community fisheries management plans they will be legalized and can then be put into implementation.
• Increased capacity of community members, local project staff, and RUPP students to conduct biodiversity monitoring and conservation activities.	Local community members are trained on how to search for bird nests and how to guard and monitor the nests of water birds and soft shell turtle. Moreover, community members are also trained on how to incorporate the monitoring data of nest and habitat protection and use these for efficient management interventions. During the training - NRMD/RUPP students are invited and joint. Students are encouraged to do further study about biodiversity monitoring and conservation research as their thesis requirement at the final year of their study.
• Overall increase in nest success of sandbar birds and turtles.	Nest protection activities implemented by NRMD/RUPP were effective and resulted in an overall increase in nest success of sandbar bird and turtles. In total, community nest protectors guarded 52 nests in 2015, 82 nests in 2016, and 113 nests in 2017. Estimates of apparent nest success (the proportion of successful nests to total nests) was 82%, 84%, and 81% in 2015, 2016, and 2017, respectively. These high rates of nest

	success during the project were a significant improvement to nest success rates prior to project implementation. In comparison, in 2003, Claassen (2004) reported a nest success rate of only 46% for sandbar-nesting waterbirds on the Sesan and Sekong Rivers. The primary reason for the improvement in nest success was a reduction in people taking eggs for personal consumption. During our project, only 1% of nests were taken by people, whereas in 2003, 33% of nests were taken by people (Claassen, 2004).
• Reduction in humans collecting eggs of sandbar birds and turtles in 3S river region of Cambodia.	Since the first year of the project, there were no records of humans collecting eggs of sandbar birds or turtles in the 3S River Region of Cambodia. In 2003, Claassen (2004) reported that 80% of river tern nests in the 3S Rivers were taken by people (and the remaining 20% failed due to animal predation). Therefore, results from this project indicate that nest protection activities have been effective at reducing human collection of eggs of sandbar-nesting birds. Anecdotal information also suggests that collection of turtle eggs has also declined since the project began, although there is no previous baseline information about turtles in the 3S region; in fact, our project is the first to document occurrence and breeding of soft-shelled turtles in this area.
• Reduction in illegal and destructive activities on sandbars.	Community nest protectors are permanently based at key sandbar sites from January to late April. There have been no reports of illegal and destructive activities on the protected sandbars during 2016-2017. Prior to 2016, there was some destructive wood cutting and settlement at one important sandbar site, but community rangers reported these activities to the project, and we were able to mobilize law enforcement to stop these activities. Also, at the beginning of the project, a gold-mining operation began at one key sandbar near Kaoh Pang village on the Sesan River; however, the project supported a successful community-led effort to shut down this destructive gold-mining operation. These results indicate that the project activities have been successful to reduce some of the illegal and destructive activities that negatively impact sandbar and river channel habitat. However, the project has not been effective at preventing negative impacts from large-scale developments such from hydropower dams.

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

Overall, the project has been successful in achieving its goals and objectives. The project has contributed to increased scientific knowledge of threatened biodiversity and has implemented conservation of threatened waterbird and turtle species through community conservation activities such as nest monitoring and protection. According to the results from community monitoring and protection activities for threatened birds, the number of nests recorded by community nest protectors has inreased in each subsequent year of the project. The increase in nests is likely due to a combination of bird nest protection having a positive impact on bird populations in the study area as well as from the improved capicity of participating community members to locate and monitor bird nests.

Additionally, the project assisted communities to implement and manage community fish conservation zones. The project assisted communities to complete the steps that are legally required to establish community fisheries management plans and demarcate fish conservation zones. The project provided full ownership of conservation incentives to communities for their own management, and empowered them to driver their local needs.

The project has also aided protection of ecosystems and natural resources through improved law enforcement and reduction in illegal activities such as illegal logging and fishing, and other harmful activities such as gold mining on sandbars. Furthermore, the project has improved environmental awareness by local communities, improved capacity of local communities, government staff, NGO staff, and local university students and staff to conduct ecological monitoring and conservation activities, and improved communication between local communities and authorities in regards to natural resource management issues.

Furthermore,the project provided benefits to local communities in several ways. The project provided benefits to poor communities through direct payments (conservation incentives) for protecting key nesting sites for birds and turtles. Additionally, NRMD/RUPP worked with communities to investigate and implement strategies for diversifying livelihood options to provide broader benefits to communities. Additionally, NRMD/RUPP worked with communities and relevant government agencies to establish community fish conservation zones, which will provide food security and other livelihood benefits to communities.

Challenges of the project include large scale land-use activities and developments, such as hydropower dam construction, rubber plantations, and gold mining. Construction of the Lower Sesan 2 dam was occuring during the project period, and the dam became operational in September 2017. It has been a challenge to find ways to implement project activies that can reduce negative impacts of the dam on threatened biodiversity, fisheries, and local human livelihoods. In particular, our project focal communities of Ksaich Thmei and Svay Rieng are near the Lower Sesan 2 reservoir and will have less access to natural resources due to the dam and rubber plantations. Also, fisheries will decline for all of the communities on the Sesan River, so we have tried to include strategies for protecting remaining fish populations in the development of community fisheries management plans. Also, it has been a challenge to prevent gold-mining activities from causing habitat destruction and disturbance to breeding waterbirds; however, we supported community-led efforts by Koh Pong and Hat Pok communities to stop gold-mining operations in their areas.

Furthermore, logging and deforestation (both illegal and legal) are occuring at a very rapid pace in the study area, which is a challenge for implementing conservation of natural resources. Although our project focuses on aquatic and riverine ecosystems rather than forest ecosytems, the sheer amount of logging has led to increased use and disturbance of river habitats. For our project, it was at times slightly difficult to find community members willing to participate in the conservation program, because they could earn more money doing illegal logging than the conservation incentives that we were offering.

Additionally, at times we faced logistical difficulties of implementing some project activities fully or in a timely way. One of the biological surveys had to be cut short due to logistical difficulties of accessibility and navigability of some areas of the river and finding appropriate boat drivers. Vehicle break-downs and poor road conditions also made it difficult to access the project communities, especially during the rainy season. Also, low education (illiteracy) of community monitoring teams has hindered our ability to obtain accurate and complete ecological monitoring data. Also, processing of community fisheries into offical legal legislation by local government authorities has occured at a very slow pace. Our efforts to implement community fisheries was also hindered by the necessity to hold more than one community election after some of the intially-elected community fisheries members resigned (due to limited time or other personal reasons).

Were there any unexpected impacts (positive or negative)?

Unexpected positive impacts were that communities were more eager to set up and formalize community protected areas that we anticipated. Thus, based on discussions with communities we soon realized that we needed to put greater attention to the issue of formalizing the community protected areas, because communities desired to have increased legitimacy and ability to enforce their conservation interventions. We met with provincial and community based fisheries groups to explore the potential for integrating bird conservation activities with community fisheries establishment and activities, because formal legal structures already exist for community fish protection areas, but there is no formal legal process that currently exists for community protection of habitats such as sandbars. We expect that establishment of community fisheries will lead to positive impacts on fish populations and human livelhoods, as well as to improved and formalized protection for bird nesting areas. Legal protection and recognition of community conservation areas by provincial government agencies will also facilitate integration of community-based monitoring and interventions into government conservation management, especially at commune levels like commune development and investment plans.
Unexpected negative impacts to bird nests occured due to the mis-use of anti-predator exclosures (i.e. fencing) around nests. We initially planned to use exclosures to protect nests of River Terns, the species of highest conservation concern. A study by Claassen et al. (2017) on the Mekong River found exclosures to be very effective in reducing nest predation, especially by rodents. However, miscommunications between staff, and between staff and communities, led to two instances of nest abandonment when communities that had not received proper training incorrectly installed the exclosures. Afterwards, communities were provided with extensive training in correct installation and monitoring procedures. Despite the extensive training, the involved communities were too apprehensive and reluctant to install the exclosures, fearing that the disturbance would lead to nest abandonment. Part of the reluctance of communities to install the exclosures was due to fear that they would be held responsible if nests were abandoned. However, without the exclosures, several nests failed due to predation by animals.
Additionally, we faced some obstacles to achieving our goal of spreading benefits to the entire communities in which we work. Currently, community members that participate as community rangers (nest protectors or roaming patrols) receive benefits, but we are still working to implement the program to confer broader benefits to more members of the communities. Initially, we planned to set up community funds, but we were not able to successfully identified individuals who could manage the community funds. Upon further discussion with communities and relevant NGOs, the implementation of community funds seemed to have many potential challenges and did not seem to

be realistic for the project to implement. Therefore, we shifted our focus towards investigating other ways to spread benefits more widely across communities, such as through alternative livelihood support mechanisms. During this project we worked with communities to identify and implement activities that can more widely benefit communities. We successful implemented a pilot project for alternative livelihood strategies in Khsach Thmey village, and expanded these activities to four additional communities.

Project Components and Products/Deliverables

Describe the results from each product/deliverable:

Component		Deliverable		
#	Description	#	Description	Results for Deliverable
3	Protect sandbar and river channel habitat on Sekong (approximately 1285 ha) and Sesan (approximately 1410 ha) Rivers through the creation of community fisheries, and formalizing community fisheries with relevant government agencies.	3.4	Preparation of management plans for the five community fisheries in the project area (3 communities on Sesan and 2 communities on Sekong rivers)	Achieved. As part of active Community Fisheries, it requires the appropriate management plan to guide the protection, conservation and use of fisheries resources in the community fishing areas. The management plan is revised at every three years in order to reflect the real situations of fisheries resources in the community area. Until present day, our project has completed the management plans for five communities (in Khmer language) through processes indicated in the Guideline to create Community Fisheries of Fisheries Administration.
4	Raise conservation awareness of approximately 6,500 people in 8 villages (Nyang Som, Nyeun (Koh Tbeng island), Koh Pong, Hat Pok, Voen Hoy, Rumpoat, Svay Rieng, and Ksach Thmei); topics will include conservation legislation	4.1	Awareness-raising materials (sign boards, posters, video clips followed by interactive question and answer session, and booklets on targeted species protection guidelines).	Achieved. We developed and implemented the awareness raising materials in five communities of our project area. The event was organized once per year in each community. These awareness raising materials include 1) short video and quiz about waterbird conservation, 2) posters, 3) sign boards, and 4) booklets.
4	Raise conservation awareness of approximately	4.2	Comparison of attitude surveys at project start	We were not able to complete a KAP survey at the project start. However, we did complete a KAP survey in the middle of the first year of project which yielded useful information and results. We produced a technical report

	6,500 people in 8 villages (Nyang Som, Nyeun (Koh Tbeng island), Koh Pong, Hat Pok, Voen Hoy, Rumpoat, Svay Rieng, and Ksach Thmei); topics will include conservation legislation		and end (KAP survey: Knowledge, Attitude, and Practice) covering at least 30% of households in at least 75% of villages targeted by the project.	on the KAP survey results, and we also produced an academic paper on the KAP survey which was submitted to Springer for publication and is currently under review.
5	Build conservation capacity of approximately 50-60 people (community members, RUPP students, project staff, government staff) in biological monitoring and conservation methods.	5.1	At least two training materials for biological monitoring and conservation methods.	Achieved. We developed the training manual for biological monitoring and conservation methods, and translated these into Khmer language for use by our target community members. The book contains short description of target waterbird species, techniques on locating bird nest, protecting nest, data record sheet of nest, egg and human disturbance activities, and summary of data recorded.
5	Build conservation capacity of approximately 50-60 people (community members, RUPP students, project staff, government staff) in biological monitoring and conservation methods.	5.2	Increased capacity, demonstrated by increased number of nests located following training and increased nest success at sites under community protection, and ability to create a community development plan incorporating	Achieved. Capacity of community members to locate nests increased during the project from 52 nests in 2015, to 82 nests in 2016, to 113 nests located and monitored by the community in 2017. Community development plans incorporating nest protection activities were created by the communities (Koh Pang, Hat Pok, and Ksaich Thmey on the Sesan River, and Nyang Som and Nyeun on the Sekong River).

			nest protection activities.	
5	Build conservation capacity of approximately 50-60 people (community members, RUPP students, project staff, government staff) in biological monitoring and conservation methods.	5.3	Comparison of civil society tracking tool scores at project start and end show an increase in the conservation capacity of the Department of Natural Resource Management and Development at RUPP.	Achieved. The capacity of project team members have been enhanced further as a result of CEPF investment, especially technical aspects on project management and implementation, participatory biodiversity monitoring and interventions, stakeholder engagement by working across diversity stakeholders with local community, sub-national government authorities, and relevant NGOs.
6	Mechanisms for integrating community monitoring, NGO conservation activities, and government conservation management plans enhanced.	6.1	Government management plans that integrate community monitoring and intervention, especially through Annual Commune or District Development Plans.	Previously designated but inactive Community Fisheries were reanimated for 3 communities, and the designation of new CFis for 2 communities was initiated, but these are still being reviewed by the provincial governors and will be completed in mid-2018. The 3 CFis that have already been revived are: 1) Hat Pok community fishery in Hat Pok commune in Veun Said district, 2) Koh Pong community fishery in Koh Pong commune in Veun Sai district of Ratanakiri province, and 3) Sdao community fishery in Sdao commune in Sesan district, Stung Treng province. The 2 CFis currently in review by the Provincial Governor's of Stung Treng Province are: 1) Talat Rungroeung community fishery in Talat commune in Sesan district of Stung Treng province and 2) Samros Chantaban community fishery in Thmor Keo and Santepheap communes in Siem Pang district of Stung Treng province. Community Fisheries management plans have been completed for all target communities; these management plans will include community monitoring and intervention for protection of fish, as well as birds, turtles, and sandbar habitat.
7	Compliance with CEPF Social Safeguard Policies	7.1	Records of free, prior and informed consultations	Free, prior, and informed consultations were held with all communities prior to project activities. Records of these consultations were maintained by RUPP.

	monitored and reported to CEPF.		held with indigenous communities prior to start of nest protection activities.	
7	Compliance with CEPF Social Safeguard Policies monitored and reported to CEPF.	7.2	Monitoring report on CEPF Social Safeguard Policy compliance.	Bi-annual monitoring reports on Social Safeguard Policy compliance were submitted to CEPF.
8	Sub-grant (covering travel and per diem) to BirdLife International for monitoring and enforcement activities.	8.1	Bi-annual and annual reports from BirdLife International on monitoring and enforcement activities.	Because the sub-grants were for activities to be performed during the breeding season of birds and turtles, BirdLife International submitted annual reports to RUPP after each breeding season on monitoring and enforcement activities.
8	Sub-grant (covering travel and per diem) to BirdLife International for monitoring and enforcement activities.	8.2	Award and monitoring report of sub-grant to BirdLife International.	We prepared annual award and monitoring reports of the sub-grants to BirdLife International.
9	Sub-grants (covering travel and per diem) to WCC, CEPA, and 3SPN for establishing community fish conservation areas with Provincial Fisheries Cantonments that include protection for sandbar	9.1	Government agreements formally recognizing five community fisheries conservation areas that include protection for sandbar breeding habitat of birds and	Achieved for three Community Fisheries; two additional Community Fisheries are currently in review by the provincial governors of Stung Treng and Ratanakiri provinces and are expected to be formally recognized by mid-2018.

	breeding habitat of birds and soft shell turtles.		turtles.	
9	Sub-grants (covering travel and per diem) to WCC, CEPA, and 3SPN for establishing community fish conservation areas with Provincial Fisheries Cantonments that include protection for sandbar breeding habitat of birds and soft shell turtles.	9.2	Award and monitoring report of sub-grants.	We prepared award and monitoring reports of sub-grants to BirdLife International for monitoring and law enforcement, and to WCC, CEPA, and 3SPN for establishment of community fisheries.
1	Component 1: Set conservation incentive levels for nest protection according to participatory consultations with communities.	1.1	Technical report on community "willingness to accept" (conservation incentive level).	We produced a technical report on Willingness to Accept (WTA), and we also produced an academic paper on the WTA survey which we submitted for publication and is currently in review.
2	Protect sandbar-nesting bird and turtle species in Sekong River (14,116 ha) and Sesan River (20,504 ha) IBAs; approximately 35 nesting sandbars will be protected.	2.1	Nest protection, biological survey, and monitoring protocols.	Achieved. We have entered agreements of bird nest protection with five communities (two in Sekong river, and three in Sesan river) to guard waterbird nest and sand bar habitats. During the project we have carried out the biological survey in March 2016 to assess the bird population in project area. The monitoring protocols include the data record sheets, nest protection, nest locating, and intervention measure. These were first developed in 2013, and revised regularly based on consultation with local communities.
2	Protect sandbar-nesting bird and turtle species in	2.2	Technical report on biological	Achieved. Based on field survey in March 2016, this report documented the status of population of waterbird, related wildlife and human disturbance on Sesan and

	Sekong River (14,116 ha) and Sesan River (20,504 ha) IBAs; approximately 35 nesting sandbars will be protected.		survey results.	Sekong rivers.
2	Protect sandbar-nesting bird and turtle species in Sekong River (14,116 ha) and Sesan River (20,504 ha) IBAs; approximately 35 nesting sandbars will be protected.	2.3	Technical report on nest protection program.	A detailed technical report on the nest protection program will be completed in 2018; this report will combine results from CEPF and MacArthur funded nest protection activities, and will compare these results with other previous studies.
3	Protect sandbar and river channel habitat on Sekong (approximately 1285 ha) and Sesan (approximately 1410 ha) Rivers through the creation of community fisheries, and formalizing community fisheries with relevant government agencies.	3.1	Technical report on habitat protection activities (may be incorporated into technical report on nest protection program).	Results of habitat protection activities, especially protection of sandbar breeding habitat for threatened waterbirds and turtles, will be incorporated into a technical report on nest protection, which will be completed after the 2018 breeding season.
3	Protect sandbar and river channel habitat on Sekong (approximately 1285 ha) and Sesan	3.2	Approximately five community protection agreements and two mobile	Achieved. We have made the agreements with five communities (Sesan river: Hat Pok, Koh Pong in Veun Sai district of Ratanakiri, and Talat in Sesan district of Stung Treng provinces; and Sekong river: Nheun in Sesan district and Nhang Sum in Siem Pang district of Stung Treng province), and three mobile individual fishermen (two in Sekong river of Siem Pang district, and one in Sesan river

	(approximately 1410 ha) Rivers through the creation of community fisheries, and formalizing community fisheries with relevant government agencies.		individual fisherman protection agreements, covering the conservation area of 1285 ha on Sekong river, and 1410 ha on Sesan river.	of Sesan district). The conservation areas under the project interventions cover 2,420 ha in Sesan river and 3,214 ha in Sekong.
3	Protect sandbar and river channel habitat on Sekong (approximately 1285 ha) and Sesan (approximately 1410 ha) Rivers through the creation of community fisheries, and formalizing community fisheries with relevant government agencies.	3.3	Government agency agreements formalizing at least five community fisheries, covering a total area of 3978 ha in Sesan and Sekong rivers	Achieved for three Community Fisheries; these are: 1) Hat Pok community fisheries in Hat Pok commune in Veun Said district, 2) Koh Pong community fisheries in Koh Pong commune in Veun Sai district of Ratanakiri province, and 3) Sdao I community fisheries in Sdao commune in Sesan district, Stung Treng province. An additional two Community Fisheries are currently in review by the Provincial Governor's of Stung Treng Province and will be completed in mid-2018; these are: 1) Talat Rungroeung community fisheries in Talat commune in Sesan district of Stung Treng province and 2) Samros Chantaban community fisheries in Thmor Keo and Santepheap communes in Siem Pang district of Stung Treng province. Thus, the project has helped support five community fisheries. In total, the conservation areas under the project interventions cover 2,420 ha on the Sesan river and 3,214 ha on the Sekong river.

Please describe and submit any tools, products, or methodologies that resulted from this project or contributed to the results.

We developed protocols and training documents for bird nest monitoring and protection. The project created bird nest monitoring protocols and data recording sheets to be used by the communities at each nesting site; the record sheets included information on nests, as well as on human activities, disturbances, and illegal activities in the vicinity of nesting sites. The project also created training documents with guidelines for how to locate bird nests, and how to install predator exclusion devices (i.e., fences) around nests of certain key bird species. We developed awareness-raising materials such as posters and brochures, as well as an educational video about the project, key species, and relevant conservation issues. We established community conservation agreements with the participating communities in regards to nest protection of key bird and turtle species and key sandbar habitat areas. We conducted biological surveys during 2013 and 2015 and produced two technical reports on results of the biological surveys. The first biological survey report was published in the RUPP journal.

We implemented participatory, community-based protection for nests and breeding habitat of key bird and turtle species and produced one technical report on the results of the nest protection activities. We produced one report on community willingness-to-accept (WTA) the level of incentives for participating in conservation activities. We conducted knowledge, attitude, and practice (KAP) surveys in the communities and produced one technical report on the KAP surveys. We worked with the participating communities to produce maps demarcating community fish zones. The maps are a required step in the process towards formalizing the community fisheries zones. We worked with communities to draft Community Fisheries Management Plans; all of the CFi Management Plans have been completed, and submitted to the provincial government authorities (Fisheries Cantonments) for final approval, but the communities have utilized the draft management plans for protection and conservation of waterbird, soft-shelled turtle, fisheries and related wildlife.

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:

- Project Design Process *(aspects of the project design that contributed to its success/shortcomings)*
- Project Implementation *(aspects of the project execution that contributed to its success/shortcomings)*
- Describe any other lessons learned relevant to the conservation community

From the project activities, the most interesting lessons learned included: 1) best practices for conservation of birds, turtles, and fish populations, 2) how to engage local communities in natural resource monitoring and conservation, 3) how to integrate community-based conservation activities with government conservation management plans, 4) how to set up the intervention team consisting of local authorities and officials from concerned provincial departments, and 5) how to strengthen conservation capacity in Cambodia. Lessons learned from this project are important for conservation of threatened wildlife, ecosystems, and human livelihoods in Cambodia, and are also applicable to conservation in other developing countries around the world.

We have learned that each community is very different in their needs and abilities and that we need to be flexible and tailor our approach to what is appropriate for each community. A flexible and participatory approach has been incorporated into our project design from the beginning; however, we have learned that we need to have a similar approach in regards to training and monitoring because each community has very different needs and abilities in these regards. We do our best to empower the communities and provide follow up training that is appropriate.

One of our main project goals was to establish Community Fisheries. We worked with the communities to develop community fisheries management plans which can then be used to inform conservation plans for sandbar nesting birds and soft-shelled turtles. We learned that each community is very different in their abilities in terms of processing the management plans. Some communities needed to have more assistance than others during community consultations, for conducting surveys of critical habitats for fish conservation zones, and for implementing protection of sandbar habitat during the breeding period.

Another lesson learned was regarding small community enterprise. In our interviews and discussions with communities about potential small enterprise, we realized that the communities have very different ideas than we do about what constitutes small enterprise and what is realistic to achieve. We realized that we need to define our objectives more specifically and use that as a basis for discussions with communities, because when we leave the discussion too open for communities to define their objectives it might not always align with project objectives. For example, communities expressed wanting to raise livestock or engage in larger scale agriculture; however, some of their ideas may not align with our project goals and objectives of promoting sustainable small scale enterprises that complement conservation activities.
Regarding support to community livelihood options from small scale enterprise, we realized that communities have different commitment levels and abilities to take this on. In this regard, we implemented a pilot project whereby we supported livelihood options (frog and fish farming and home garden) and community market for Khsach Thmey community fisheries as a model community in our project area. This project was successful, and we expanded these practices to two additional communities (Nyang Som and Sdau). However, two other communities still required further understanding and training before undertaking new livelihood activities. additional knowledge and traiand If successful, we will expand these practices to the other four communities in our target area.

Sustainability / Replication

Summarize the success or challenges in ensuring the project will be sustained or replicated, including any unplanned activities that are likely to result in increased sustainability or replicability.

One key to the project's success was the strong focus on participatory community-based methodologies. We consulted with communities at every step of the project, and adapted our approach in each community to the local needs and context. We feel that this approach led to strong support of the project by communities.
Another key to our success was that we had a strong team with extensive and varied previous experience in participatory, community-based monitoring and conservation, biodiversity and environmental monitoring, bird and turtle nest protection, community fisheries establishment and management, and community development.

Safeguards

If not listed as a separate Project Component and described above, summarize the implementation of any required action related to social, environmental, or pest management safeguards

Social safeguards monitoring reports have been submitted to CEPF bi-annually.

Additional Comments/Recommendations

Use this space to provide any further comments or recommendations in relation to your project or CEPF

Although the project has brought successful practices in terms of participatory community based bird monitoring and conservation, there is a need of continued assistance to support and build capacity of the local community members, especially those who have just joined the Community Fisheries and conservation group. The target waterbird species under current project are nearly threatened, and require continued protection of their sandbar habitats and guard of their nests due to habitat disturbances. Therefore, our project team will put concerted effort for fund raising with other potential donors, and possibly will apply for grant from the CEPF's next call.

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 CEPF investment

Total additional funding (US$)
$69,128.00

Type of funding
Please provide a breakdown of additional funding (counterpart funding and in-kind) by source, categorizing each contribution into one of 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)

McArthur Foundation provided co-financing support to the CEPF funded project within amount of USD 34,878.
In-kind contribution from RUPP, BirdLife International, CEPA, WCC, 3SPN organizations was estimated to be about USD 34,250.

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.

1. Please include your full contact details (Name, Organization, Mailing address, Telephone number, E-mail address) below

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