CEPF Final Project Completion Report

Organization Legal Name:	Rising Phoenix Co. Ltd.
Project Title:	Flight of the Phoenix: A Pilot Trial to Re-wild a Cambodian Forest
Grant Number:	65870
CEPF Region:	Indo-Burma II
Strategic Direction:	6 Engage key actors in mainstreaming biodiversity, communities and livelihoods into development planning in the priority corridors
Grant Amount:	
Project Dates:	July 01, 2016 - December 31, 2019
Date of Report:	March 17, 2020

IMPLEMENTATION PARTNERS

List each partner and explain how they were involved with the project.

Wildlife Alliance supported Rising Phoenix in the creation of a peer reviewed Rewilding Feasibility Study for Siem Pang Wildlife Sanctuary.
Angkor Centre for Conservation of Biodiversity (ACCB), provided direct support in the designing and implementation of the large water bird rewilding demonstration at SPWS. This including support in pre-release research, selection of site for the release enclosure, as well as supporting the design and construction. ACCB provide technical input on the development of release protocols, as well as supplying the rescued and recuperated birds for the release into SPWS. They also supported post-release monitoring of the large water birds.
Stung Treng Provincial Department of Environment of the Ministry of Environment, were consulted and engaged at each step of the project. They also led on the enforcement of the protected areas laws at Siem Pang, which was part of the greater project at SPWS outside the funding from CEPF. Stung Treng Province and Siem Pang District local government were consulted and engage at each step of the project, through regular coordination meetings and a study tour to Majete Wildlife Reserve in Malawi, Africa.
BirdLife International worked in partnership with Rising Phoenix in biodiversity monitoring of the wildlife sanctuary and livelihood support of the local community that surrounds the reserve.

CONSERVATION IMPACTS

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

The project had four objectives, which were all achieved within the project period.
1. To develop a feasibility study for a pilot re-wilding project.
A peer reviewed rewilding feasibility study was produced for Siem Pang Wildlife Sanctuary and published in the December 2019 edition of the Cambodian Journal of Natural History. This study assessed the suitability of 51 IUCN Threatened and Near Threatened species of mammals, birds and reptiles for rewilding intervention at SPWS. Each species was ranked for their rewilding suitability based upon their global threat status, ecosystem servicing role, charisma and the practicality of rewilding in the Cambodia setting. The feasibility study then discussed in more detail the top ranking species, providing steps that would need to be completed for rewilding to take place of these species.
This published study has laid the foundations for the future rewilding work at Siem Pang Wildlife Sanctuary.
2. To establish a re-wilding demonstration plot.
A rewilding demonstration of large water birds was established at SPWS. This included the construction of a soft release enclosure (20m X 32m x 5m), creation of a new Trapeang (waterhole), and development of accommodation facilities included four safari tents, and a fire break which surrounded the demonstration area.
As part of the demonstration six Vulnerable Lesser Adjutant storks (*Leptoptilos javanicus*) and four Vulnerable Wooly-necked storks (*Ciconia episcopus*) were released at the demonstration site. Two release methods were utilised; soft and hard release. The accommodation facilities hosted over 20 visits by different groups to the demonstration site over the project period. This included local and national government officials, international donors (including CEPF), representative from international NGOs as well as independent supporters of Rising Phoenix.
3. To develop a protocol for evaluating and designing ecological restoration and re-wilding projects in deciduous dipterocarp forests.
The project produced a series of protocols, and documented the different steps in the large-water bird rewilding process. We also started a research programme to be able to investigate the different success rates between hard and soft release methodology, which should be able to guide future work within Cambodia.
The protocols include husbandry protocols for Lesser Adjutant and Woolly-necked Stork, a general release protocol, and a soft release enclosure protocol. In addition 5 release reports were produced which documented the pre-release steps and the post release monitoring.
A soft copy of the protocols and release reports will be published on the Rising Phoenix website (www.risingphoenix.ltd), on the next update of the website.
A short communication is also in development for the 1st edition of the Cambodian Journal of Natural History in 2020. To support documentation of the rewilding steps taken so far.
4. To increase awareness amongst decision makers of the need and opportunity for ecological restoration in deciduous dipterocarp forests.
Over the project period six groups of key decision makers in the government of Cambodia visited the Rewilding Demonstration site. In addition a study tour to Majete Wildlife Reserve (Malawi) was implemented from the 12th to 20th

March 2019. This trip was attended by the Head of Stung Treng Department of Environment (Eng Phirong), Stung Treng Deputy Provincial Governor (Doung Pov) and the Siem Pang District Governor (Phan Yuth). Two members of Rising Phoenix project team (James Lyon and hour Pok) also joined as well as Rising Phoenix Board of Directors (Dominic Scriven and Jonathan C. Eames.
These trips were very successful in increasing the awareness of the need and opportunity for ecological restoration in deciduous dipterocarp forests.

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

Impact Description	**Impact Summary**
The Ministry of Environment adopts the protocol for evaluating and designing ecological restoration and re-wilding projects in deciduous dipterocarp forests.	Stung Treng Provincial Department of Environment of the Ministry of Environment, were consulted and engaged at each step of the project. The head of Stung Treng Department of Environment also attended the study tour to Majete Wildlife Reserve. Rising Phoenix Board of Directors met with the Minister of the Ministry Environment 3 times over the project period. The protocols have been shared and discussed with our partners in the Ministry of Environment and Stung Treng Department of Environment.
The project will contribute to a better understanding of the conservation management needs for deciduous dipterocarp forests.	The peer reviewed and published Rewilding feasibility paper has added to the scientific literature for conservation of deciduous dipterocarp forests. The study assessed the suitability of 51 IUCN Threatened and Near Threatened species of mammals, birds and reptiles for rewilding projects at SPWS. Each species was ranked for their rewilding suitability based upon their global threat status, ecosystem servicing role, charisma and the practicality of rewilding in the Cambodia setting. The feasibility study then discussed in more detail the top ranking species, providing steps that would need to be completed for rewilding to take place of these species. This information is relevant and useful for various organisation working in the deciduous dipterocarp forest and works towards the achievement of Strategic Direction 6.3.
Awareness is increased amongst decision makers of the need for ecological restoration and re-wilding projects.	A study tour to Majete Wildlife Reserve (Malawi) was implemented from the 12th to 20th March 2019. This trip was attended by the Head of Stung Treng Department of Environment, Stung Treng Deputy Provincial Governor and the Siem Pang District Governor. These three key local government decision makers all saw first-hand the success rewilding project could achieve, and see the need for ecological restoration at Siem Pang Wildlife Sanctuary. It is hoped that decision these key decision makers make in relation to land-use will be influenced from their increased awareness and health achieve Strategic Direction 6.2.

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

Impact Description	**Impact Summary**
A feasibility study for a pilot re-wilding project is completed and shared. Staff from BirdLife International, although not written into the proposal are overall project partners and can expect to increase capacity too.	The publication of the rewilding feasibility study for Siem Pang Wildlife Sanctuary has contributed towards the achievement of CEPF of Strategic Direction 6.3. by providing a published study investigating the feasibility of rewilding/ecological restoring dry deciduous dipterocarp forest, and which would be the priority species to focus on, in initial efforts. This study acts as a protocol which can be used by other organisations in the Indo-Burma hotspot.
A re-wilding demonstration plot approximately 2x2 km2 (400 hectares) is established and functional within Western Siem Pang Forest. The actual size may vary and a plot established may smaller than this.	The creation of a Rewilding demonstration plot in Siem Pang Wildlife Sanctuary, and the release of 10 large water birds, combined with the hosting over 20 trips to visit this demonstration has contributed towards the achievement of CEPF Strategic Direction 6.3. By providing a demonstration

	project that promotes ecological restoration in dry deciduous dipterocarp forest, and creating the facilities that allow people to visit the demonstration.
Re-wilding is a new concept in Cambodia. No organisation (other than Wildlife Alliance) has any practical experience in re-wilding in Cambodia. So any increase must be measured from a baseline of zero prior experience.	Rising Phoenix, BirdLife International Cambodia Programme, ACCB now have practical experience in rewilding in Siem Pang Wildlife Sanctuary. This experience has allowed Rising Phoenix to further develop its rewilding vision for Siem Pang Wildlife Sanctuary and the implementation of its programme of support to SPWS, helping meet Strategic Direction 6.1.
Three organisations will increase their capacity in this field, Wildlife Alliance, who have not yet undertaken a project of this in in deciduous dipterocarp forest, Rising Phoenix, and their government partner (either Forestry Administration or Ministry of Environment) who are implementing a project like this for the first time.	Achieved. Wildlife Alliance, Rising Phoenix and Angkor Center for Conservation of Biodiversity (ACCB) we be the organisations that will see the highest increase in their capacity in rewilding through this project. In addition the Ministry of Environment and Steung Treng Department and Environment and Birdlife will see increased capacity within the field of Re-wilding. This achievement is supporting Strategic Direction 6.1.
Thus all organisations are increasing their capacity 100% but from different baselines.	Achieved, for the successful implementation of the project.

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

Initial challenges were faced in the establishment of a Rewilding demonstration plot. The initial plan was to demonstrate the rewilding of Eld's Deer at SPWS, through translocation Eld's Deer from another Wildlife sanctuary and Phnom Tamao Zoo to a large enclosure at SPWS. It became clear at that stage that this rewilding demonstration was no feasible due to difficulties in getting two different Cambodian ministries to coordinate, as well as high risks of capture myopathy for the deer from transporting them which could have led to their death. As a result we had to change our plans and led to the demonstration of Large Water birds at Siem Pang Wildlife Sanctuary instead of Eld's Deer.
Challenges were also found in the post release monitoring of the large water birds which were released as part of the project. GPS-GSM trackers were purchased from two companies to support gathering accurate data on the survival rate and movements of the released birds. One company, produced and delivered trackers very effectively, which were attached to the Woolly-necked storks. The other company was very slow in the production and delivery of the trackers. In addition when the trackers were attached to the Lesser Adjutant for a trial period before being moved to the released enclosure. These trackers designs were not robust or appropriate, and the data they provided was inaccurate. The decision was made to return these trackers to the company for a refund. We then had to combine a combination of wing tags, and wing bleaching to allow post-release monitoring. This meant less data was able to be collected on the Lesser Adjutant survival rate and movement after the release, than that of the Woolly-necked Storks.
The project was successfully in delivering the other short term and long term impacts.

Were there any unexpected impacts (positive or negative)?

It was unexpected how successful the study tour to Majete Wildlife Reserve in Malawi (Africa). The study tour was very effective in persuading the three key decision makers that joined in the importance of rewilding and ecological restoration. They all stated that they would like to see what occurred at Majete to

be replicated in Siem Pang Wildlife Sanctuary. In addition a report of the trip was shared with the Minister of the Ministry of Environment.
This study tour also allowed Rising Phoenix to improve its long term vision for Siem Pang Wildlife Sanctuary, and the type of relationship it would like to develop with the government of Cambodia. As Majete Wildlife Reserve is managed by African Parks, who has signed a public-private partnership with Malawi Government 15 years prior to our visit, which gave them the management authority over the reserve. African parks then proceeded to game fence the reserve and rewild it, which allowed them to then implement high end tourism at the reserve, to the conservation success story it is today.

PROJECT COMPONENTS AND PRODUCTS/DELIVERABLES

Describe the results from each product/deliverable:

Component		Deliverable		
#	**Description**	**#**	**Description**	**Results for Deliverable**
2	To establish a re-wilding demonstration plot.	2.4	Animals monitored	Four Woolly-necked storks all have GPS-GSM trackers attached to them, which take 1 GPS location per hour during the day. Reports were produced regular on the released birds, and all had survived their first 3 months from release, which is seen as a critical period. One Woolly-necked stork was also caught on a camera trap which had been set up at a Trapeang. The monitoring of these birds will continue after the project has finished. Two Lesser Adjutant that were hard released had wing tags attached, and two Lesser Adjutant that were soft releases had their tail wings bleached. The biodiversity monitoring team of Siem Pang Wildlife Sanctuary were updated and told to record if they came across them in their survey's across the reserve.
3	To develop a protocol for evaluating and designing ecological restoration and re-wilding projects in deciduous dipterocarp forests.	3.1	Re-wilding bibliography collated	Bibliography collated.
3	To develop a protocol for evaluating and designing ecological restoration and re-wilding projects in deciduous dipterocarp forests.	3.2	Membership list of project advisory group	Discussion held with advisory group at start of project.
3	To develop a protocol for evaluating and designing ecological restoration and re-wilding	3.3	Protocol drafted	Protocol drafted, and staff were trained in them. Protocols were refined based upon implementation of large water bird releases.

	projects in deciduous dipterocarp forests.			
3	To develop a protocol for evaluating and designing ecological restoration and re-wilding projects in deciduous dipterocarp forests.	3.4	Peer reviewed protocol	The protocols include husbandry protocols for Lesser Adjutant and Woolly-necked Stork, a general release protocol, and a soft release enclosure protocol. In addition 5 release reports were produced which documented the pre-release steps and the post release monitoring.
4	To increase awareness amongst decision makers of the need and opportunity for ecological restoration in deciduous dipterocarp forests.	4.1	Study tour to Majete National Park under taken	A study tour to Majete Wildlife Reserve (Malawi) was implemented from the 12th to 20th March. This trip was attended by the Head of Stung Treng Department of Environment, Stung Treng Deputy Provincial Governor and the Siem Pang District Governor. Two members of Rising Phoenix project team also joined as well as Rising Phoenix Board of Directors. Majete Wildlife Reserve is managed by African Parks, who has signed a public-private partnership with Malawi Government 15 years prior to our visit, which gave them the management authority over the reserve. African parks then proceeded to game fence the reserve and rewild it, which allowed them to then implement high end tourism at the reserve. Within this study tour we had a behind the scenes look at how African Parks managed Majete Wildlife Reserve including their general reserve management work, law enforcement, biodiversity research and livelihood development interventions.
4	To increase awareness amongst decision makers of the need and opportunity for ecological restoration in deciduous dipterocarp forests.	4.2	Forestry Administration/Ministry of Environment adopts the protocol for evaluating and designing ecological restoration and re-wilding projects in deciduous dipterocarp	Ministry of Environment endorsed Rewilding Project, and were engaged in each stage.

			forests (as indicated by this logo on the document).	
4	To increase awareness amongst decision makers of the need and opportunity for ecological restoration in deciduous dipterocarp forests.	4.3	Government of Cambodia endorses one other re-wilding project during project life.	The project team is not aware of another project that has been endorsed.
1	To develop a feasibility study for a pilot re-wilding project.	1.1	Re-wilding bibliography collated	Bibliography collated.
1	To develop a feasibility study for a pilot re-wilding project.	1.2	Membership list of project advisory group	Advisory group formed and included representatives from Wildlife Conservation Society, World Wide Fund for Nature, Wildlife Alliance, BirdLife International and Knowsley Safari.
1	To develop a feasibility study for a pilot re-wilding project.	1.3	Draft feasibility study	A draft feasibility study was developed by the implementing partners of the project, which investigated the rewilding feasibility for different species at Siem Pang Wildlife Sanctuary.
1	To develop a feasibility study for a pilot re-wilding project.	1.4	Peer reviewed feasibility study	Feasibility study was published in the Cambodian Journal of Natural History December 2019 edition.
2	To establish a re-wilding demonstration plot.	2.1	Area selected	Rewilding demonstration area selected in Siem Pang Wildlife Sanctuary, near Tuol Kamnob Ranger Station.
2	To establish a re-wilding demonstration plot.	2.2	Infrastructure in place	Infrastructure put in place included a soft release enclosure (32m x 20m x 5m) for large water birds and small carnivores. A Trapeang was created and a fire break constructed along the boundary. Accommodation was established at the rewilding demonstration site incorporating a tented camp with four tents and sleeping 8 people. .
2	To establish a re-wilding demonstration	2.3	Animals introduced	Six Lesser Adjutant storks (Leptoptilos javanicus) were released at the demonstration site. Four hard releases and two soft releases where the birds

	plot.			remained in the soft enclosure for one month. Four Wooly-necked storks (Ciconia episcopus) were released at the demonstration site. Two hard releases and two soft releases where the birds remained in the soft release enclosure for one month.

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

The project produce the following outputs:

1. **Peer reviewed rewilding feasibility study published in the Cambodian Journal of Natural History (https://cms.fauna-flora.org/wp-content/uploads/2020/01/FFI_201912_Cambodian-Journal-of-Natural-History-.pdf).**
2. **Published rewilding protocols for large water birds based on project implementation experience at Siem Pang Wildlife Sanctuary. Implementing partners trained in protocols and soft copy available on Rising Phoenix website.**
3. **Post release monitoring reports for released Woolly-necked stork and Lesser Adjutants produced and made available on the Rising Phoenix website.**
4. **A short communication is in development on the progress of the rewilding Demonstration for the first 2020 edition of the Cambodian Journal of Natural History.**

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)
- Any other lessons learned relevant to the conservation community

The soft release enclosure was built in the Wildlife Sanctuary close to Tuol Kamnob Ranger station. This location mitigated potential disturbance from humans, although the presence of domestic dogs is quite high and difficult to control; the dogs represent a danger for the wildlife in general and a disturbance for the animal in the soft release cage. Concerns included that the dogs could scare the birds in the enclosure and result in them getting injured. It may also impact the soft release procedure as dogs may come to the enclosure to eat the food left out for the released birds.
Initially ideas for developing a perimeter fence was discussed, but actions here was limited by cost. The eventual solution was to feed the birds outside the

enclosure (not inside with the doors open as originally planned). Also changes to the enclosure design were identified which could allow the birds to fly out of the enclosure above ground level.
The project also learnt the importance of effective training on the husbandry protocols for the large water birds that were developed as part of the project. Instead of keeping this training theoretical we took the team that would be managing the birds to ACCB rescue centre, where they could have practical practise at following the husbandry protocols. This was very effective at allowing the project team to master the required skills.
We also learnt how effective study tours could be in allowing project team to be reflective on their own work. It is very easy to work in your own little bubble, and get cornered into your own issues that you are dealing with. Being able to step out of your site, allows a greater overview and ability to critic and reflect on your own work, leading to its improvement.

SUSTAINABILITY/REPLICATION

Summarize the successes 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.

The project team posed the research question to test which release methodology was most effective in the release of large water birds; hard or soft. To be able to answer this question and provide guidance for future releases of large water birds in Cambodia and the region, a far larger sample size of monitored releases needs to be completed. Rising Phoenix will continue to use the rewilding facilities developed as part of the project, to release similar amounts of birds with trackers attached each year to continue the rewilding of large water birds as well as building the data set to answer the research question.
The published rewilding feasibility paper clearly identified lots of work needs to be done on enforcement of Protected Area laws, to remove the threats that drove the populations down of the key species identified in the study. Rising Phoenix will continue to provide financial and technical support to the Provincial Department of Environment in implementing regular patrols of the wildlife sanctuary and effectively enforcing the laws. On the same hand continued support will be provided to the local communities through BirdLife international livelihood programme.
The published feasibility paper has identified the key species that rewilding effort at SPWS should focus on the key next steps to achieving this. Rising Phoenix will move forward to the next steps of testing the individual feasibility of key species in each group identified (mammals, birds, herpes). To achieve Rising Phoenix rewilding vision for Siem Pang Wildlife Sanctuary will take a large investment of time and funds.

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.

No actions were required related to social or environmental safeguards.

ADDITONAL COMMENTS/RECOMMENDATIONS

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

The feasibility has been tested and foundations laid for the Rewilding of Siem Pang Wildlife Sanctuary. Siem Pang now requires constant support from the implementing partners to see the vision reached. This commitment will have to see the project expand from a demonstration to full implementation. Financial support of this process from international donor organisation such as CEPF will be crucial in achieving the vision that the project has laid out for Rewilding Siem Pang.

ADDITONAL FUNDING

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

Total additional funding (US$)
$175,000.00

Type of funding
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)

A:
Rising Phoenix Conservation INC (501c3) provided a grant of 10,000USD to ACCB. This grant activites were to support the Large Water Bird Rewilding at Siem Pang Wildlife Sanctuary.
In additional cofinancing was provided by Rising Phoenix core funds. Specific to this project included:

- **Purchase of project vehicle: 41,000USD**
- **Investement in 'tented camp' accomodation at rewilding demonstration plot: 51,000USD**
- **Support of the project povided by CEO and Board of Directors, including travel to Majete Wildlife reserve 73,000USD**

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 website, www.cepf.net, and may be publicized in our e-newsletter and other communications.

1. Please include your full contact details (name, organization, mailing address, telephone number, email address) below.

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