CRITICAL ECOSYSTEM PARTNERSHIP FUND

Environmental Impact Assessment
and
Environmental Management Plan

10 March 2020

CEPF-110337

BirdLife International

Inundated forest conservation through wetland restoration and disease reduction

Siem Pang Wildlife Sanctuary, Cambodia

Grant Summary

1. Grantee organization: BirdLife International Cambodia Programme
2. Grant title. Inundated forest conservation through wetland restoration and disease reduction
3. Grant number. CEPF-110337
4. Grant amount (US dollars): US$ 179,996
5. Proposed dates of grant: 5/1/2020 -4/30/2022
6. Countries or territories where project will be undertaken: Cambodia
7. Summary of the project.
8. Date of preparation of this document: 10 March 2020

1. Status of area to be impacted: This section should describe the applicant's understanding of the site.

Siem Pang Wildlife Sanctuary(formerly commonly known as Western Siem Pang Wildlife Sanctuary) and hereafter SPWS, is located in the Northern Plains Seasonally Inundated Forests and the Sekong River, part of the Mekong River 3S Rivers Confluence flows through the site. This site, inundated for part of the year, includes over 200 ephemeral wetlands known as *trapeangs*. *Trapeangs* are a vital source of food and water for wildlife including important populations of two CEPF priority species the Critically Endangered White-shouldered ibis *Pseudibis davisoni* and Giant Ibis *Thaumatibis gigantea* (Gray et al. 2015, Wright et al. 2012). The site also supports the largest known population of the Endangered Eld's deer *Recervus eldii* a species likely to become Critically Endangered following future assessment. Additionally SPWS supports populations of the Endangered Banteng *Bos javanicus*, and the Vulnerable Gaur *Bos frontalis*. A recently published paper and output from a CEPF supported project, recommended reinforcement and reintroduction of Siem Pang's Eld's Deer and Banteng populations (Gray et al. 2019). Many protected areas in Cambodia, especially in the deciduous dipterocarp landscape are now empty forests, almost entirely devoid of populations of the large charismatic mammals that existed until recently. Re-wilding involving species restoration and reintroduction coupled with habitat restoration are viewed as essential management tools but the factors leading to species' decline must be addressed before such costly efforts can be attempted. This is made more complicated when the ecological roles of extinct wild mammal species, such as Asian elephant *Elephas maximus* and Wild Water Buffalo *Bubalus arnee* responsible for maintaining *trapeangs* have been replaced by domestic cattle and buffalo, which may themselves be carrying disease preventing the rehabilitation of wild mammal populations. Evidence suggests that numbers of domestic livestock are declining at SPWS and insufficient to ensure the ecological integrity of the *trapeangs* so that human manipulation is now required to maintain their suitability as vital foraging areas for the two CEPF priority ibis species present.

The protected area is currently open access and villagers graze their domestic cattle and buffalo Widely with no restriction on access, thereby risking disease transmission to wild ungulates.

Gray, T.N.E., W.J. McShea, A. Koehncke, P. Sovanna & M. Wright (2015). Artificial deepening of seasonal waterholes in eastern Cambodia: impact on water retention and use by large ungulates and water birds. Journal of Threatened Taxa 7(6): 7189–7195; http://dx.doi.org/10.11609/JoTT.o3935.7189-95.
Gray, T.N.E., Eames, J.C., Lyon, J.R.A. & Meyerhoff, M. (2019) Rewilding in Southeast Asia: an assessment of conservation opportunities in Western Siem Pang Wildlife Sanctuary, Cambodia. Cambodian Journal of Natural History, 2019 (2) 98-113.

Wright, H. 2012. Synanthropic survival: low-impact agriculture and White-shouldered Ibis conservation ecology. PhD Thesis. University of East Anglie [UEA], England
Wright, H.L., Collar, N.J., Lake, I.R., Bou Vorsak and Dolman, P.M. 2012. Foraging ecology of sympatric White-shouldered Ibis Pseudibis davisoni and Giant Ibis Thaumatibis gigantea in northern Cambodia. Forktail 28: 93-100.

2. Approach: This section will describe proposed actions during the project. Specifically, what do you intend to do and how will you do it?

The project proposes a programme of *trapeang* restoration management in collaboration with local communities. As sources of fish and frogs this will also increase wetland productivity for the benefit of people visiting the wildlife sanctuary. BirdLife has already worked with nearby villages for five years to restore *trapeangs* and to date 28 *trapeangs* have been deepened using locally hired paid labour, recruited on a voluntary basis, additionally providing a much needed source of household cash income. BirdLife has also pioneered controlled buffalo grazing at *trapeangs* to better understand how grazing pressure affects use by large water birds (Eames et al, 2018). In 2019 Rising Phoenix Co. Ltd, (a social enterprise working with BirdLife at the site) have in addition sunk six bore wells so that water can be provided through the dry season at six key trapeangs.

Under this new CEPF project 20 *trapeangs* across the protected area will be restored and monitored. Both teams of villagers and mechanical means will be employed to achieve this. The impact of this activity will be monitored utilizing known baselines of key species. The results will be published and protected area manages from elsewhere in the landscape will be invited to visit the site to see the programme, understand its utility and the opportunity for transferring the approach to their sites. A cattle and buffalo vaccination programme against haemorrhagic septicaemia and foot and mouth disease will be conducted in the seven villages surrounding the wildlife sanctuary. This will maintain healthy more valuable herds and help maintain wetland integrity in the sanctuary. Vaccinated animals will be ear-tagged with a long-term goal of eliminating non-vaccinated animals from the sanctuary. This will reduce risk of disease transmission to wild ungulates. This activity represents an expansion of a previous voluntary vaccination programme which proved the receptiveness and demand from local communities to participate and improve the quality of their stock.

Participating families will be asked to sign conservation agreements (similar to those under the Ibis Rice Programme), agreeing to abide by the law in relation to the Sanctuary, and will be monitored by the already established compliance system, established to monitor the Ibis Rice programme on going at these villages.

Existing Village Forums that support farmer initiatives and commit to WSPWS protection will be strengthened. Local authorities will be engaged in village forums, providing endorsement and supervision for the animal health care activities.

Eames, J. C., Eang, S., Loveridge R., and Gray, T. N. E., (2018) Impact of experimental domestic water buffalo Bubalus bubalis grazing on waterhole dynamics in north-eastern Cambodia Cambodian Journal of Natural History, 2018, 101–109.

3. Anticipated impact: this section will describe the impact and how this impact has been determined.

In relation to *trapeang* modification there are expected and potential positive and negative impacts. The potential and expected positive impacts are longer water retention in the *trapeang* which provides a source of drinking water for wildlife, especially Eld's Deer during the drought period of the dry season, an increased food source, in terms of availability of fish and frogs for White-shouldered Ibis and Giant Ibis, and increased fish and frog availability for humans. Increased frequency of visits to a *trapeang* with water also result in the creation of micro-habitats such as the depressions caused by buffalo and cattle deep foot prints that provide hiding places for frogs and insects.

The potential negative impacts are increased human disturbance during deepening, increased levels of fishing at the modified *trapeang* following deepening, loss of habitat for certain species during deepening, and the introduction of invasive species.

The expected negative impacts are some disturbance during deepening, and the removal of top soil which may contain egg or larval stages of aquatic life. It should be remembered however that these expected negative impacts are no different to the impacts of a herd of elephant or buffalo visiting the *trapeang*.

These potential and expected impacts have been determined by the experience of deepening 28 *trapeangs* at this site to date. The monitoring of these modified *trapeangs* has shown no decrease in their use by wildlife or people and no invasive species have been recorded.

4. Mitigation measures: Describe measures that will be taken to mitigate negative impacts.

The BirdLife field monitoring team regularly monitors 200 *trapeangs* in SPWS. This project will deepen 20 *trapeangs*, 10% of the total number under monitoring.

The *trapeang* deepening occurs during the first quarter of the year (January to March). This is the peak of the dry season. At this time trapeangs to be deepened are dry. Usually the *trapeang* deepening occurs in February before the ground is too hard to break with a shovel or pick. So no aquatic organisms in any water body are harmed because there is no water. Because there is no water there are no wildlife species coming to drink at the *trapeang* so this minimises disturbance. Also because at this time of year the substrate is hard it doesn't provide feeding opportunities for ibis. Any areas of "crazy-paving" mud around the *trapeang* which may support frogs are not disturbed by the digging.

During the deepening process the teams of laborers are supervised by a foreman and a member of BirdLife staff. This minimises disturbance by keeping the excavation period to five working days and ensures any plastic or other waste can be removed from the site and burnt.

We cannot mitigate any increased fishing at the *trapeangs* by local people as they currently enjoy unrestricted access.

5. Actions to ensure health and safety: Describe actions that will be taken to ensure the health and safety of workers as well as the site. Include a description of waste management and/or disposal.

Volunteers wishing to be engaged as daily hired laborers to dig *trapeangs* will be recruited after consultation with village head men. It will be explained to them that their participation is voluntary.

Birdlife will ensure first aid kits are on site and that adequate food and water is provided, in addition to providing transport to and from the *trapeangs.* Any non-organic food waste of packaging will be removed from the sites or burnt in situ.

6. Monitoring and Evaluation: This section aims to outline what steps the proponent will take to monitor and evaluate the impact of the proposed intervention.

At the start of the project the current *trapeang* monitoring protocol will be reviewed and revised accordingly. This will included weekly monitoring of deepened *trapeangs*. The project will draft and submit for publication a paper on the trepang deepening experience which will specify and propose mitigation for any negative impacts observed during the project. Thereby minimizing the risk of others repeating any shortcomings in this project.

Evaluation will occur regularly throughout the project by reference to or conducting baselines ranging from surveys of villagers to data collected from regular biodiversity monitoring.

15. Permission of the landowner: Please verify permission of the landowner to undertake actions on the site, and verify that you have the required permits to undertake this work.

The activities included within the project fall within the scope of a new memorandum of agreement between BirdLife International and the Ministry of Environment.

16. Consultation: This section aims to outline the range of informed consultations that the grantee has had both with experts to optimize the potential for success, and with stakeholders, particularly local communities, who are potentially affected by the proposed actions. Include dates of consultations.

Trapeang digging and buffalo and cattle vaccination programmes have been part of BirdLife's Programme of livelihood activities for a number of years already. To date 28 *trapeangs* have been deepened and five hundred and sixty villagers at the target villages have previously been engaged in the earlier programme of *trapeang* deepening and have participated as wage laborers to dig the *trapeangs*. The buffalo and cow vaccination programme has been ongoing for at least five years. For example in 2019, 1,514 cattle and buffalo owned by 206 families from the seven target villages were vaccinated. Regular consultations with villagers via the existing village forums and during the preparation of this proposal indicted continued support for these activities. The most recent village forum was held on 27 January 2020.

17. Disclosure: CEPF requires that safeguard documents are disclosed to affected local communities and stakeholders prior to project implementation. Please describe efforts to disclose this impact assessment and environmental management plan and provide dates.

Within the first quarter of project implementation villagers in the participating villages will as part of the project implementation process be advised of this impact assessment and environmental management.

18. Grievance mechanism: All projects that trigger a safeguard must provide local communities and other relevant stakeholders with a means to raise a grievance with the grantee, the relevant Regional Implementation Team, the CEPF Secretariat or the World Bank.

BirdLife International

Inundated forest conservation through wetland restoration and disease reduction

Siem Pang Wildlife Sanctuary, Cambodia

Grievance mechanism

To Whom It May Concern

This document provides a grievance mechanism in relation to the above named project.

Stakeholders will be informed of the objectives of the project and the existence of the grievance mechanism via a public notice posted outside the Birdlife office Siem Pang in Khmer, Lao and English languages.

Stakeholders will further be made aware of the objectives of the project and the existence of the grievance mechanism via notices available at project meetings and public announcements at village meetings in Khmer.

BirdLife International Cambodia Programme will share all grievances – and a proposed response – with the Regional Implementation Team and the CEPF Grant Director within 15 days. If the claimant is not satisfied following the response, they may submit the grievance directly to the CEPF Executive Director at cepfexecutive@conservation.org or by surface mail. If the claimant is not satisfied with the response from the CEPF Executive Director, they may submit the grievance to the World Bank at the local World Bank office.

Any signboards and posters created as a project output will contain the contact information for BirdLife, CEPF and the World Bank provided below. Anyone wishing to communicate with the grantee, the CEPF Regional Implementation Team and the local World Bank Office on matters relating to this project may do so via the following contact information:

BirdLife International Cambodia Programme, 32 A, 494 Sangkat Phsar Daeum Thkov,
Phnom Penh, Cambodia.
Telephone: +855(0)23 993 631.
Email: admin@birdlifecambodia.org

Lou Vanny
CEPF Regional Implementation Team
IUCN
Room 592, 5th Floor, Phnom Penh Centre,
Sothearos Boulevard, Sangkat Tonle Bassac, Phnom Penh, Cambodia.
Telephone +855 12 703 033.
Email: Vanny.lou@iucn.org

CEPF Executive Director: cepfexecutive@conservation.org