



## Darwin Initiative/D+ Project Half Year Report (due 31<sup>st</sup> October 2019)

<b>Project reference</b>	Ref No: 24-023
<b>Project title</b>	Safeguarding a critical biodiversity conservation corridor in Cambodia's Eastern Plains
<b>Country(ies)/territory(ies)</b>	Cambodia
<b>Lead organisation</b>	WWF Cambodia
<b>Partner(s)</b>	Provincial Department of Environment (PDoE)/ Ministry of Environment (MoE), Provincial Department of Agriculture Forestry and Fisheries (DAFF), Cambodia Centre for Study and Development in Agriculture (CEDAC), and Wildlife Trust of India (WTI)
<b>Project leader</b>	Milou Groenenberg
<b>Report date and number</b>	HYR3
<b>Project website/blog/social media etc.</b>	<a href="http://www.wwf.org.kh/projects/darwin_project/">http://www.wwf.org.kh/projects/darwin_project/</a>
<p><b>1. Outline progress over the last 6 months (April – Sept) against the agreed baseline timetable for the project (if your project has started less than 6 months ago, please report on the period since start up to end September).</b></p> <p><b>Output 1. Vulnerable farming households from 8 remote forest communities inside a Protected Area improve their livelihoods through the learning and implementation of innovative, sustainable and more efficient agricultural practices (crop selection and rotation, irrigation techniques, natural fertilizer and pest killer, fire breaks, HWC mitigation tools)</b></p> <p>Output 1 is collaboratively led by two implementing partners:</p> <p>The Provincial Department of Agriculture Forestry and Fisheries (DAFF), and the Cambodia Centre for Study and Development in Agriculture (CEDAC). The training on conservation-compatible drought-resistant home gardens (HG) was completed and attended by 212 participants (75% female) in all eight target villages (see Appendix 1). In addition, training on System of Rice Intensification (SRI) was completed and attended by 242 participants (88% female) (see Appendix 2). The latter was attended by WWF staff for training quality evaluation and trainer performance as well as training materials and content were positively reviewed. Follow-up coaching and assistance on HG and SRI application has been consistently provided on a monthly basis to the beneficiaries. Thus far, forty beneficiaries (72.5% female) were confirmed to have applied the home garden training in practice. Eighty-two (87% female) beneficiaries plan to apply SRI and their progress will be monitored over the coming months. So far, drip irrigation systems have been installed in 26 locations, which includes private systems for home gardens and community systems that were partly supported by the community financially and with commitment of labour. CEDAC will monitor the impact of these irrigation systems on vegetable production and market sales over the coming months, and assess the viability of community-based irrigation systems in the remaining target villages.</p> <p><b>Output 2. Greater understanding of local communities' perception of Human Wildlife Conflict (HWC) in the PPWS/SWS complex</b></p>	

A preliminary results sharing meeting on the HWC survey data was conducted on the 26<sup>th</sup> of September 2019 and attended by representatives of WWF-Cambodia, CEDAC, the Cambodian Rural Development Team (CRDT), and the visiting WWF Habitat HWC lead (see Appendix 3).

Results suggest that overall HWC levels by large mammals appear to be relatively low in comparison to other Asian countries. However, crop raiding and damage is considered a serious problem for the majority of farmers and is primarily caused by wild pigs, followed by the globally endangered green peafowl (*Pavo muticus*), and parakeets. Asian elephants were not identified as a crop-damaging species by interviewees in PPWS/SWS. Three-quarters of the farmers who experience crop damage by wildlife, applied mitigation measures which were considered by at least half of these farmers as partially successful. Out of the people currently utilising lethal mitigation methods, 90% would consider implementing alternative successful methods were available. Only a third of livestock owners reported depredation by wildlife species, primarily by smaller mammals and birds. On average the attitude towards wildlife was positive and there appeared to be a willingness to be involved in conservation initiatives.

This context provides opportunities to promote and to further develop positive interactions and relationships between people and wildlife sharing resources across PPWS and SWS, and to further engage with these communities and discuss improvements to the current mitigation measures to protect their crops and livestock whilst supporting the conservation of neighbouring wildlife populations. To ensure the future engagement and participation of community stakeholders in the next steps forward, CEDAC will be presenting these results to the target communities, obtain their feedback and additional information, and then work towards the development of tools and measures based on specialist advice.

### **Output 3. Better knowledge of Asian elephant movements across two critical protected areas in Cambodia**

In early June, immediately after the onset of the monsoon rains, an introductory elephant training course was delivered to thirteen staff, both government and community-based (see Appendix 4). The training comprised of a mix of theoretical and practical sessions covering the project and its' significance, basic elephant ecology and biology, field craft skills, elephant collaring protocols. The last part of the course involved a mix of different practical scenarios which involved joint participation of new participants and existing elephant team members to ensure that they could work together seamlessly to track, capture and collar wild Asian elephants in Cambodia. Subsequently, the Provincial Department of Environment (PDoE) continued to provide strong support towards this output by offering full availability of these protected areas rangers between June-August 2019. As a result, the collaring team was expanded to 21 members which allowed wider coverage of the search area.

In July several herds were successfully located in suitable and safe locations. Unfortunately, the required veterinary support from the Wildlife Trust of India (WTI) could not be provided promptly due to (1) major flooding in India which threatened various endangered species safety and which required WTI presence for rescues, and (2) the government of India had requested support of WTI staff to advise on the escalating levels of human elephant conflicts (HEC) across multiple sites in India. Through continued co-ordination between WWF and WTI, the WTI veterinarians could join the Cambodian collaring team between 26<sup>th</sup> July – 7<sup>th</sup> August. Despite an intensive effort, and near-opportune encounters, no elephants could be collared due primarily to challenges related to habitat, and elephant behavior and heavy monsoons rains, thus jeopardizing the safety of both people and elephants.

Unfortunately, consistent heavy rains have continued since August resulting in a decreased area of accessibility within the elephant known range. In addition, WTI key staff availability remained limited during the monsoon season. Consequently, it was decided to resume collaring attempts in the following dry season (Q3&4). Despite the delay in collaring, the field activities did yield a wealth of data and knowledge on elephant presence, habitat use, and behavior, as well as invaluable data of other globally threatened species. A potential future hotspot for HEC was identified in an economic land concession that is shifting from rubber to cashew cultivation. Finally, as the elephant team consists of a mix government and community rangers, all illegal activities encountered were immediately recorded and appropriate actions taken.

**Output 4: The revised management plan of SWS is approved and implemented by PDoE and local communities to preserve globally significant biodiversity while promoting and supporting appropriate and sustainable development to assist in alleviating poverty**

A technical consultation meeting to finalise the SWS Management Plan is scheduled for the 28<sup>th</sup> October 2019 by the Ministry of Environment and will be attended by WWF technical experts.

**2a. Give details of any notable problems or unexpected developments/lessons learnt that the project has encountered over the last 6 months. Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.**

The environmental, logistical, and technical challenges causing delays in the planned elephant collaring activities were described in the previous report the collaring was delayed. Although it was initially hope that collaring could potentially take place in Q1 of Year 3, this had to be postponed to the next field season due to causes described above. It is still expected that the collaring will occur in the projects' lifespan.

There has been a relatively slow-uptake by farmers to adopt SRI or home garden techniques due to a lack of available unskilled labour, and an unwillingness to commit time to employ the time-intensive techniques of SRI, despite the proven benefits of higher yields and subsequently increased income. For most households this can be attributed to alternative income sources, including forest-based income (whether legal or illegal), which disincentives farmers to commit time to agricultural production. To further promote these practices, CEDAC is identifying those farmers that have shown a willingness to implement SRI techniques or to produce organic rice/vegetables, and handover this information to CRDT who are currently working on achieving organic certification for farmers' groups. SRI is one-step in this process, and once farmers understand that higher incomes are achievable through production of organic rice and sale to these niche markets, they could be incentivised to commit more. The lesson learnt is that following trainings, farmers need to make a firm commitment to implement the techniques learnt, coupled with strong external support to walk the farmers through each step of organic rice certification. There will be further collaboration with CRDT to ensure that this is completed with the identified farmers.

It should be noted that the SRI and home garden training topics and proposed conservation-compatible agricultural solutions were carefully selected to be suitable to the local socio-economic and environmental context. Unfortunately, there exists no 'one-size-fits-all solution', but by taking a diversified approach, offering a variety of different solutions and forms of support, we aim to maximise our impact. Changes will occur on a 'step-by-step' basis and the uptake of tools and techniques will be further promoted through demonstrated success by engaged farmers strengthened by recorded benefits backed-up by a monitoring system.

**2b. Have any of these issues been discussed with LTS International and if so, have changes been made to the original agreement?**

Discussed with LTS: No

Formal change request submitted: No

Received confirmation of change acceptance No

**3a. Do you currently expect to have any significant (e.g., more than £5,000) underspend in your budget for this year?**

Yes  No  Estimated underspend: £

**4. Are there any other issues you wish to raise relating to the project or to Darwin's management, monitoring, or financial procedures? No**