



## Darwin Initiative Main Project Annual Report

To be completed with reference to the “Writing a Darwin Report” guidance: (<http://www.darwininitiative.org.uk/resources-for-projects/reporting-forms>). It is expected that this report will be a **maximum** of 20 pages in length, excluding annexes)

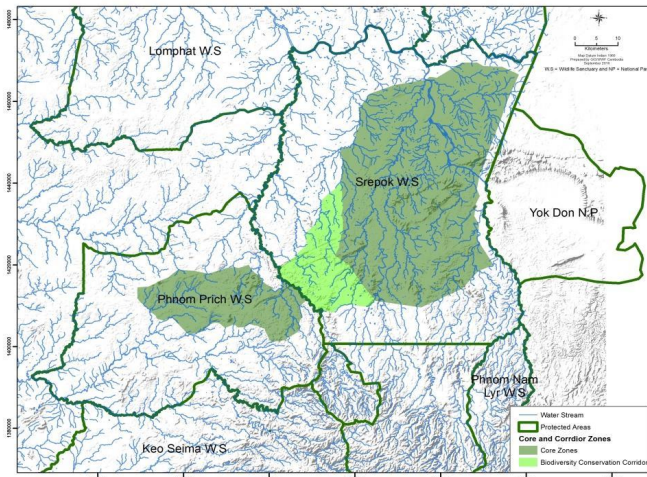
**Submission Deadline: 30<sup>th</sup> April 2018**

### Darwin Project Information

Project reference	Ref No: 24-023
Project title	Safeguarding a critical biodiversity conservation corridor in Cambodia’s Eastern Plains
Host country/ies	Cambodia
Contract holder institution	WWF Cambodia
Partner institution(s)	Provincial Department of Environment (PDoE)/ Ministry of Environment (MoE), Provincial Department of Agriculture Forestry and Fisheries (DAFF) and Cambodia Centre for Study and Development in Agriculture (CEDAC)
Darwin grant value	£ 300,211
Start/end dates of project	1 April 2017 to 31 March 2020
Reporting period (e.g., Apr 2017 – Mar 2018) and number (e.g., Annual Report 1, 2, 3)	1 April 2017 to 31 March 2018 ( Project commenced in June 2017), Annual Report 1
Project Leader name	Samuel Hamy
Project website/blog/Twitter	N/A
Report author(s) and date	Molyvann By, Rachel Crouthers, Phath Moul, Kimheak Chhay 11 May 2018

### 1. Project rationale

Cambodia’s Eastern Plains Landscape (EPL) covers 28,000 km<sup>2</sup> and hosts a network of six Protected Areas forming the largest remaining relatively intact block of dry forest and one of the last biodiversity hotspots in Southeast Asia. The EPL is recognized as one of the 200 globally most valuable biodiversity eco-regions by WWF and other conservation organizations. This Key Biodiversity Area (KBA3) has been experiencing rapid deforestation and is increasingly threatened by anthropogenic drivers including systemic poverty, unclear land rights, non-participatory land-use planning and weak governance. In the core area of the EPL, Srepok Wildlife Sanctuary (SWS) and Phnom Prich Wildlife Sanctuary (PPWS) cover almost 6,000 km<sup>2</sup>, providing agriculture and NTFP-based subsistence livelihoods to 30,000 individuals including 8,000 indigenous people. This mosaic forest landscape hosts populations of endangered and critically endangered species including Asian elephant, leopard, dhole, banteng, Siamese crocodile, Eld’s deer, Giant ibis and three species of vultures. The ecological integrity of the PPWS/SWS complex is threatened by loss of connectivity between the core zones of the two Protected Areas, affecting globally threatened species of wildlife and the livelihoods of local communities relying on the forest.



The target area of the project is the last potential wildlife corridor between these two core zones. Although it connects the core zones of the two Protected Areas, the wildlife corridor entirely legally sits within the SWS boundaries, covers approximately 250 km<sup>2</sup>, and is home to eight communities totalling 3,500 people (including 50% indigenous people). Loss of connectivity happens mainly through illegal forest clearing by communities for agricultural purposes and in the absence of an enforced SWS management plan. Forest encroachment drives potential human-wildlife conflicts and the loss of

forest ecosystem services such as NTFPs, water provision and climate regulation on which the communities depend.

This project is aiming to ensure that the biodiversity corridor connecting the core zones of PPWS and SWS is maintained, by improving the livelihoods of vulnerable forest communities through sustainable and forest-friendly agricultural practices and by achieving legal protection of biodiversity corridors at national and provincial levels. Together with the improvement of the agricultural practice of the farmers helps develop a sustainable and profitable community-based enterprise value-chain contributing to poverty alleviation for local communities and stop deforestation. Moreover, the clear demarcation and zoning of SWS benefits wildlife and communities through conservation-based agriculture and alternative livelihoods such as the promising ecotourism sector supported by a new expected ecotourism development legislation.

## 2. Project partnerships

The three project partners are Provincial Department of Environment (PDoE), Provincial Department of Agriculture, Forestry and Fisheries (PDAFF), and Cambodian Centre for Study and Development in Agriculture (CEDAC).

As Project lead, WWF Cambodia provided a project overview presentation to CEDAC representative, PDoE and PDAFF Directors, since then all partners have led the way in designating specific staff to cooperate together in implementing project activities.

In partnership with PDAFF, CEDAC led the work under Objective 1 in conducting crop assessment analysis and improvement of agricultural practices for subsistence farmers living in the biodiversity conservation corridor linking PPWS and SWS by using Rapid Rural Appraisal (RRA) and Commune Agro-ecosystem Analysis (CAEA), and establishing conservation-based agriculture groups in those critical protected areas. Regarding activities under Objective 2 which is about Greater understanding of local communities' perception of Human Wildlife Conflict (HWC) in the PPWS/SWS complex, WWF led in designing questionnaire, interviewing household, producing report and mitigation tools and CEDAC will lead in dissemination those tools to the communities. PDoE and PDAFF have formed a team to study the Asian elephant movements across PPWS and SWS. PDoE has been the lead partner in the project planning side under Objective 3 such as requesting permits and licenses for the importation of key equipment with technical support from WWF. The team is solely responsible for collaring and immobilising elephants; the team consists of three PDoE rangers, 1 vet from PDAFF and one community research rangers (Supporting doc1&2). During the next stage this team will receive an additional two training courses on elephant ecology, veterinary care, darting and immobilising elephants and HEC, thus building staff capacity to be able to deal with any small or major conflict incidents including any future life threatening situations to both humans and elephants. Unfortunately, there have been some severe delays in purchasing and importing the necessary equipment such as collars, dart guns and medicines. This is largely due to the fact that no legislation or protocols currently exist for importing such equipment. This has also been slightly complicated as previous protocols and laws linked to any wildlife protection or management previously fell under the remit of a different government body. This had

repercussions on other activities that coincided with the training. However, a great effort between provincial and national levels governments has commenced this during the last quarter of the reporting period and once all relevant documents and permits are completed, this output should start moving quite quickly; it will also pave the way for similar future conservation projects.

WWF-Cambodia also provided different presentations to law enforcement, research and community Protected Areas teams. Since then there has been joint multiple participatory stakeholders (government, police, communities) involvement in the planning and conducting the corridor surveys with the aim of gathering additional data on elephant and biodiversity presence whilst also combating illegal crimes within the crucial biological corridor.

For Objective 4, MoE has led the zonation process entirely through facilitating and holding joint mapping and zonation meetings in Phnom Penh, to facilitating and managing participatory planning workshops involving government and community stakeholders on both Provincial and National Levels. To address Objective 5, in close collaboration with MoE, a Policy Coordinator of WWF engaged in the process of developing the natural and environmental code by providing technical inputs, submitting individual and joint comments with other NGO partners to Vishnu law group whom contracted with MoE.

### **3. Project progress**

#### **3.1 Progress in carrying out project Activities**

**Objective 1: 1.1 & 1.3** The assessment of current agricultural patterns, productivity and market viability was conducted in eight targeted villages in Kaoh Nheak district namely Srae Thum, Chi Khab, A Buon, Toul, Srae Huy, Roya, Mean Chey and Serei Mongkol in order to identify the current agriculture production practices and markets and other main economic activities of the communities. This was done in order to identify potential sustainable and forest-friendly agricultural practices and market opportunity in the local context that can potentially help these communities diversify livelihood options, generate income, reduce pressure on forest resources and to suggest recommendations on appropriate agriculture techniques and other support to be introduced to the communities in order to improve their livelihood. The two following research methods were applied. First, the secondary data or desk review was used to collect available information on agriculture production, main economic activities and market of agriculture and non-timber forest products (NTFP) from relevant reports, articles and project/program documents. Second, the field surveys were conducted in the project target villages, from 26 February to 5 March 2018. The research team consisted of four staff from CEDAC and four officers from PDAFF Mondulkiri.

Data collection method for the field survey included: focus group discussion (FGD) with key villagers, household interviews, participatory village mapping (focus on farming system, natural resources and local infrastructure), and key informant interview (KI), case study, market observation and consultation workshop with the communities. FGD was conducted in all eight target villages with participant rates ranging from 7-25 individuals including men and women who represent village authority, committee of Community Protect Area (CPA), and farmers. FGD focused on general information on main crop and livestock production size, yield, selling of products, farming practice, off-farm activities, NTFP collection, and challenges. KI with village chiefs focused on village statistic data such as population, economic occupation, water sources, irrigation system, institutions, and other infrastructures. The research team was also able to interview with a field staff of NGO Development and Partnership in Action (PDA) and agriculture extension workers of PDAFF Mondulkiri who have been working on agriculture in that area.

A total of 108 households (HH) were interviewed by random selection, which represents a sample size of about 5-6% of total HHs per village. The HH interview focused on agriculture land area, production, off-farm activities, income, expenses, and their interest in improving agriculture production. Case studies were conducted with five farmers who produced rice seed and vegetables and fruits for market. Additional information from field observation allowed the researchers to identify farming techniques that are appropriate for improving agriculture

practices and market in this area. On the last day of field survey, a consultation workshop was held at Srae Sangkom communal hall, attended by 33 participants from the eight studied villages in order to present preliminary findings, collect feedback and identify farmers who are able to produce specific agriculture products (fragrant rice, vegetable, fruits, chicken and so on) for market. Another workshop was held on 19<sup>th</sup> March 2018 with WWF team in Phnom Penh to present the findings of assessment, recommendation and collect feedbacks.

The training needs assessment was conducted during the village general meetings by asking the participating farmers to select the agriculture techniques that were presented in the meeting, and also asked if they need other technical support from the project. Based on the plenary discussion, the farmers were interested to learn about animal raising, rice plantation and vegetable and fruit tree growing. Each village was asked to select priority training techniques based on their need and available resources, including rice, animal, vegetable and fruit tree production techniques. The farmers also requested for crop seeds, irrigation system and market facilitation so that they will be able to sell products at better price.

**Objective 1.2:** The project targets working directly with 150 farming households, including 20 of the most vulnerable women-led households within eight communities through forming one group of 15 to 20 farming households per community and implementing conservation-based agriculture models. In order to achieve this activity, following the field assessments village general meetings (VGM) were organized in each target village from 20-23 March 2018. Workshops were scheduled for half day to disseminate the project implementation activities including training on forest-conservation agriculture techniques and market linkage; assess the farmers' need for training and support; and select interested farmers and form them in village-based learning groups. The meetings were facilitated by the project team from CEDAC and PDAFF Mondulhiri. A total of 370 participants including 270 women attended VGMs in the eight villages. Certain villages such as A Buon, Srae Thum and Royar, had many farmers coming to the meeting. After the presentation of project activities, the farmers were asked for their interest to join the project and then registered their name in learning group in each village.

**Objective 2:** 2.1 As part of a co-funded project and in collaboration with the Community Protected Area Leaders, WWF-Cambodia conducted a short focal group questionnaire in 12 different Community Protected Areas of which eight communities that are located within the target Biodiversity Conservation Corridor (BCC). A total of 90 participants (72 male, 20 female) were interviewed in August, 2017. Results suggested Human Wildlife Conflict (HWC) occurred in all villages, although at differing levels. The highest levels of crop loss and damage were caused by wild pigs and were consistent across all 12 villages. The globally endangered peafowl was also identified as a pest species in all villages, although the extent of damage caused was highly variable. Other species listed included primates and parakeets although crop damage caused by these two species occurred at lower levels and was not consistent across all villages. Currently only one village considered conflict was a serious concern.

In preparation for the HWC household interview survey scheduled in the first quarter of Year 2, WWF has collated all known HWC and Human Elephant Conflict (HEC) studies previously conducted in country and is currently designing an interview that incorporates similar questions so basic results are comparable with other study sites. The survey design is almost completed and will be based upon the most recent population census (household) data from 2017.

A one and half day training for HWC interview was delivered to four students from Pannasastra University, unfortunately another four could not attend due to examination and project commitments. Training topics included (a) overview of the EPL and biodiversity significance (b) Darwin Project overview (c) Results from previous HWC and HEC surveys conducted in Cambodia (d) Social survey methods and data collection and (e) examples questionnaires (Supporting doc 3).

**Objective 3:** 3.1 During the initial stages of the project, introduction meetings were held with PDoE Director, PPWS and SWS Directors and PDAFF Directors to discuss roles and responsibilities of each partner to ensure the success of the project. Additional presentations and meetings were held with varying levels of park management staff (Deputy Director to ranger levels) to ensure full cooperation during and after the project life span. Additional meetings have been held between PDoE and MoE to discuss in-country capacity, current

legislation, permits, and systems. These intergovernmental meetings highlighted some current procedural gaps, especially pertaining to the importation of collars, dart guns and medicines. This policy/procedure gaps is currently been addressed by both provincial and national levels governments. The letter has been sent to the Minister of Environment during the fourth quarter of Year 1. Hopefully the documentation will be finalised in May and all equipment will be purchased immediately thereafter.

**Objective 3.2** Field surveys commenced at the end of August, initial surveys conducted in 2017 involved a combined effort by research and law enforcement to map initial elephant and other species presence through recording all direct and indirect signs of mammals. During these surveys all threats such as land encroachment, illegal logging and poaching were recorded and mapped and enforcement officials applied penalties as per the Cambodia Law.

Surveys continued throughout the 2018 reporting period, utilising law enforcement and community patrol teams. Implementing an adaptive strategy integrating law and community patrol teams has allowed species data to be collected and mapped in addition to having a constant law enforcement presence to combat illegal activities within this critical biological corridor. A total of ten species have been recorded within the corridor area (five classified as endangered, two vulnerable and three listed as Least concern under the IUCN guidelines).

**Objective 3.4 & 3.5** A designated team has been created through the joint partnership of PDoE and PDAFF. The newly formed team consists of three PDoE rangers, one PDAFF vet and one community research ranger. The team has received one two-day training course led by WWF and Elephants Livelihood Initiative Environment (ELIE), which covered topics such as EPL Overview, Darwin project aims, Asian elephant population status, elephant ecology, anatomy and behaviour. Day two was spent at the Elephant Valley Project where basic training was provided on monitoring elephant health, observing behaviour, taking measurements and basic tracking skills (Supporting doc 4&5). Unfortunately, training has been delayed due to reasons stated in 3.1; however, once permits and importation documents are completed, it is hoped that further training will be conducted in Cambodia and India in the first quarter of Year 2, with the elephant collaring procedures following shortly afterwards (environmental conditions permitting).

**Objective 4:** MoE with a technical support from WWF has developed the final draft zonation of Srepok Wildlife Sanctuary (SWS). A series of consultations were conducted at provincial level and final draft consultation will be done at National Level led by the MoE. The meetings agreed to have four zones (Ref: Law on Natural Protected Area, 2008): core zone, conservation zone, sustainable use zone, and community zone. Meanwhile, the meetings resulted in agreement to have core connectivity at south-western area of SWS with Phnom Prich Wildlife Sanctuary (PPWS) and connecting conservation zone at the north-western SWS with Lumphat Wildlife Sanctuary.

**Objective 5:** WWF-Cambodia was very actively engaged in the process of developing the National Natural and Environmental Code. WWF provided technical input directly to Vishnu law group whom is contracted with MoE to draft the Code. Additionally WWF participated as a member of the technical working group/expert group which was facilitated by MoE to draft the specific articles to be incorporate into the code. WWF submitted individual comments to Vishnu law group as well as developing joint comments with conservation NGO partners and CSO coalition to build strong voice to make positive change in the Environmental Code. WWF was actively engaged with MoE in the consultation process of establishment of the national biodiversity conservation corridor. We provided input/information of the BCC at the North East part which covered PPWS and SWS.

### **3.2 Progress towards project Outputs**

**Output 1:** There are four technical agricultural innovations that are forest-friendly and natural resource conservation which have been introduced to 150 farming households from eight communities (Supporting doc 6). The proposed techniques and practices include improved rice production and marking, high value fruit tree production, home garden, solar pumping and water-saving irrigation system.

A total of eight farmer learning groups were formed with 238 farmers including 167 women. Group size ranges from 21 to 40 people per village which is larger size than expected. Based on the scatter locations of their residence, each group selected 2-4 representatives who will play a main role in informing their members to join training/meetings. As the project has started late, the training on efficient, innovative conservation-based and the sustainable agricultural techniques and practices to the newly formed eight groups have not been conducted (The changed request has been approved by Darwin). It is supposed to be done in Year 2 in June 2018.

**Output 2:** HWC focal group discussion across twelve villages revealed that HWC occurs in each village albeit at differing levels. Currently several steps are underway to ensure the large scale household conflict questionnaire will be administered in the first half of Year 2 to meet the objective and indicators listed under 2.1. To date, baseline village maps and human population census data have been reviewed to assist with developing the household survey methodology on sample size. All historical literature of previous conflict surveys has been reviewed to assist in the development of the questionnaire survey design. Four students from Pannasastra University have been trained on social survey techniques, data collection on interviewing skills and the survey will aim to commence and be completed first half of Year 2 with reports aimed to be produced by December 2018.

**Output 3:** Unfortunately progress has been slower than expected for this output for reasons listed in section 3 (Output 3.1-3.5). The carry forwards (Second changed request) is going to submit along with the annual report requesting for the continuation implementing the key activities in Year 2 instead of Year 1. Should both the requests be accepted, we anticipate this output will be met although the timeframe for the indicator may need to be altered to the end of 2019.

**Output 4:** The final draft zone of SWS was developed. A series of studies and consultation have been conducted at ground level and final draft will be done at National Level led by the MoE. Due to the lengthy process of forming the technical working group and getting it approved by Minister of MoE, the National Consultation Workshop could not be organised in year 1 as planned. It is supposed to be conducted in early April. The final draft zone of SWS will be submitted to General Director of General Department of Administration for Nature Conservation and Protection (GDANCP) of MoE for endorsement and it is further submission to Minister of the MoE by May 2018 so that the Minister delivers approval from Prime Minister of Cambodia by June or July 2018 (Supporting doc 7, 8, & 9).

**Output 5:** Biodiversity conservation corridor (BCC) has been considered as a critically important area of the protected area system. The recognition of the importance of incorporating BCCs in the protected area system has been reflected in the newly developed Natural and Environmental Code. It has been written in Article 282 that components of the protected area system include protected area, biodiversity conservation corridor, special conservation areas and other conservation areas in Cambodia". Article 292, the continuation of validity of BCC, emphasizing the validity of the boundary, protection and management of any BCC already established by law or legal regulation. Article 297 refers to valuation on the BCC the institution responsible for environment protection need to study the situation in BCC.

The Royal Government of Cambodia, established biodiversity conservation corridor of Protected Area system through sub decree dated in January 2017. The sub decree established 3 BCCs include, 1) North East Biological Diversity Conservation Corridor System which covers 754,661 ha, Northern Biological Diversity Conservation Corridor System which covers 500,810 ha and Cardamom Biological Diversity Conservation Corridor System which covers 169,469 ha.

### 3.3 Progress towards the project Outcome

Despite the project kicking off later than expected, there has been significant progress in some of the outputs, specifically Output 1, 4 and 5, as listed under section 3.1. Thus based upon current progress and future expectation it is believed that the main project outcome will be achieved within the project lifespan. Some indicators have been slightly modified as per recommendation to ensure they are attainable, realistic and measurable from the project start date.

Indicator 0.1 was modified after considering Darwin recommendation from zero deforestation to Annual level of legal forest cover loss will remain below the 2016 forest loss rate of 0.72%

Indicator 0.2 was modified as per Darwin recommendation, as no current baseline exists. Therefore, we suggest the following Indicator: 0.2 Levels of Human- Wildlife Conflict will be lower in the Biodiversity Conservation Corridor compared to the 2018 baseline.

### **3.4 Monitoring of assumptions**

Since the project has started several months late and it has been implemented just for Year 1, risks and assumptions remain true as described in the project proposal with the exception of a new crucial assumption of Output 3 that required full government support to lead and move this section of the project forward. Both Provincial and National government partners have been proactive in supporting the objective. However, the progress has been slower than hoped, largely due to the gaps in current legislation, procedures and protocols linked to the darting, immobilizing and collaring elephants. Progress is underway, with a letter recently sent to the Minister of Environment and hopefully there will be a lot more momentum on this output during the second financial year.

### **3.5 Impact: achievement of positive impact on biodiversity and poverty alleviation**

Joint patrolling and biodiversity monitoring of the critical biodiversity corridor of PPWS and SWS has helped combat and reduce some of the current pressures that threaten the integrity of this corridor. Action taken by government law enforcement officials has involved cracked down on the illegal timber and hunting trade and applying the relevant penalties to offenders as per the Cambodian Law.

Some major steps have been taken by government stakeholders and WWF in preserving this a vast tract of valuable forest through under the legal zonation of SWS. This process has involved extending the core zone to PPWS core zone, and ensuring connectivity with all adjacent protected areas either through extension of the core or conservation zones to the PA boundaries, thus offering the highest levels of protection for conserving forest and biodiversity within these areas.

## **4. Contribution to the Global Goals for Sustainable Development (SDGs)**

As functioning forest ecosystems provide food, clean water and energy, as well as various other goods and services essential for human well-being, and contribute to economic growth, poverty alleviation, climate change mitigation and adaptation, the project significantly contributes to the achievements of Global Goals for Sustainable Development (SDG).

Activities during Year 1 have started contributing to Improved agricultural practices and livelihoods including NTFP valorisation, thus contributing to SDG 1 "end poverty in all its forms everywhere", SDG 2 "end hunger, achieve food security and improved nutrition and promote sustainable agriculture", SDG 10 "reduced inequalities among countries" and SDG 12 "ensure sustainable consumption and production patterns". Activities during Years 2 and 3 will contribute to SDG 5 "achieve gender equality and empower all women and girls" through well-designed improved agricultural practices led by women and through women's inclusion in the elaboration and implementation of the SWS management plan. The overall outcome of the project supports SDG 15 "protect, restore and promote sustainable use of terrestrial ecosystems, sustainable manage forests (...) and halt biodiversity loss".

Replication and upscaling of the successful project design beyond 2020 through the establishment of a farmers' association and community-based agricultural and NTFP enterprises will contribute to SDG 5, to SDG 8 "Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all", to SDG 12 and ultimately to SDG 2 and SDG 15.

## **5. Project support to the Conventions, Treaties or Agreements**

Under the Convention on Biological Diversity, the project supports articles 7, 8, 10, 12, 13, and the five Strategic Goals (SGs) A, B, C, D and E formulated in the Strategic Plan for Biodiversity



2011-2020. Incorporating the concept of biodiversity conservation corridors in the new Cambodian Environmental Code and the National Environmental Strategy and Action Plan (NESAP) contributes to SG A “mainstreaming biodiversity across government and society” which in turns support SG B “reducing pressure on biodiversity and promote sustainable use” and SG C “safeguarding ecosystems and species”. SG B, SG C, as well as SG D “enhance biodiversity and ecosystem services to all” are also be supported by improved and sustainable agricultural practices (crop and seeds selection, crop rotation, irrigation technics, natural fertilizer and pest killer, fire breaks, HWC mitigation tools) in the biodiversity corridor. The participation of the local communities in the elaboration and implementation of the SWS management plan contributes to SG E “participatory planning and capacity-building”. During Year 1, there was no specific interaction with any host country convention focal points

## **6. Project support to poverty alleviation**

WWF acknowledges the importance of a holistic approach including social safeguards including when implementing conservation programs. The project is working to conserve the biodiversity and reduce the poverty rate in the corridor of PPWS and SWS. The beneficiaries of this project would be the people from the eight communities totalling 700 households and 3,500 people which overwhelming majority live under the poverty threshold of 1,25\$ income per day (WB, 2015). One of the key objectives of this project is to enhance the living condition of these eight communities through their agricultural activities improvement. During Year 1 implementation, the project did the assessment on their agricultural patterns, productivities, and market availabilities and provided recommendation to improve as specified in Section 3.1, Objective 1. The project is expected that the livelihood of the people in the communities will be improved through the proposed sustainable agricultural practice.

## **7. Project support to gender equality issues**

The project aims to promote gender equity in the target groups. In sustainable agriculture-based livelihood improvement, as part of the Commune Agro-Ecosystems Analysis (CAEA), a gender-based approach has been identified through participatory discussion. The project is expected to have more women, at least 120 women from 120 farming households involved in conservation-based agriculture. During Year 1, under Output 1, eight conservation-based agriculture groups were established comprising 150 farming households, including 20 of the most vulnerable women-led households.

## **8. Monitoring and evaluation**

Most of the indicators listed for Objective 2 & 3 will not be commented until the latter part of 2018 or 2019, thus internal checks have been put in place to ensure procedures and activities are on track. For example, part of the corridor survey work is collected by multiple teams (research, law enforcement (LE) and community patrols teams) which is then shared and entered into a central database, and shared internally within WWF. This information is also incorporated into the SMART reports and presented as part of a larger dataset in the LE monthly strategy planning meeting to inform future planning and strategy patrols.

All project work plans and indicators were integrated in WWF Action Plan Monitoring System (APMS) and Key Performance Indicator (KPI).

## **9. Lessons learnt**

Unfortunately we were unable to recruit a project manager during this period, thus tasks for various outputs were delegated to department leads, resulting in extra workloads per position. An alternative solution must be sought to ensure the following years are implementing activities within a timely manner.

Having a partner liaison may be a suitable suggestion to ensure that all administrative task and key activities are implemented within the allocated timescales. This will also help with constant



follow up and offering continuous support to partner organisations. The other considerations include:

- Plan a lower expenditure for year one and expect potential delays especially in relation to the development of new policies/law/permits and or procedures.
- Ensure that realistic timescales are met when concerning multiple parts. It is also worthwhile holding monthly meeting between all partners engaged in the project to ensure that all activities are on track.
- To ensure that year two runs according the scheduled work plan, monthly meetings will be held with partners and progress will be checked during these meetings, these meeting will discuss activity progress and expenditure. However, some delays are a results of environmental and seasonal factors, thus flexibility must be permitted if some activities are altered to for with seasonal factors (monsoon vs. dry seasons).

## **10. Actions taken in response to previous reviews (if applicable)**

Due to the late commencement of the project, the budget and activity work plan was amended to deal with these delays. However, due to some of the factors listed within the assumptions, especially pertaining to Output 3, some activities were delayed significantly, resulting in a lower burn rate than expected. Another 'Changed Requests' forms will be submitted requesting a transfer of funds from Year 1 to Year 2, to allow these activities to be this financial costs into year 2. Although some aspects are behind the schedule, these will be conducted in Year 2. With regards to Output 3, especially activity 3.4 (collaring elephants) this will be conducted when weather and environmental factors (habitat and topography) are considered optimal, so that there is minimal risk to both people and elephants. Environmental and topographical features will be considered.

## **11. Other comments on progress not covered elsewhere**

Although the project has faced some critical issues including kicking off late, fail to recruit committed and qualified project manager, the initially estimated time was reasonably insufficient and the unavailability of the rural farmers caused the project activities to commence later, the significant progress has been made and the project outcomes will be achieved within the project period.

## **12. Sustainability and legacy**

Throughout Year 1, specific presentations and overview of the Darwin project have been delivered to multiples stakeholders, including Director of PDoE and PDAFF, the Director and Deputy Directors of the two protected areas and the newly formed Elephant Dart Team and partners in ELIE. All WWF landscape staff received a presentation during the commencement of the project. In addition Darwin overview and project outputs have been incorporated into multiple law enforcement and biodiversity trainings sessions, including a total 83 participants (69 law enforcement and 23 research staff), which comprise of PDoE, police and community members. In preparation for the HWC interview surveys four students from Pannasastra University also received a project over presentation.

Additional information was delivered to the above participants on basic ecosystem functions, importance of conserving biological corridors, forest habitats and all biodiversity. This also involved presenting on current pressures and threats to the corridors and the wider landscape as well as presenting the current status and significance of wildlife populations in the landscape.

Although training is on-going the Elephant Dart Team, has gained a vast amount of knowledge on elephant ecology and behaviour in preparation for the collaring project due to commence in Year 2.

### 13. Darwin identity

- The Darwin logo and project outcomes and outputs were highlighted in all the presentation listed under section 8 (Sustainable Legacy)
- Presentations listed under Section 8 were provided as either a specific entity or linked in with other training programmes, however, all presentation delivered had a separate focus on the Darwin project

### 14. Project expenditure

**Table 1: Project expenditure during the reporting period (1 April 2017 – 31 March 2018)**

<b>Project spend (indicative) in this financial year</b>	<b>2017/18 Grant (£)</b>	<b>2017/18 Total Darwin Costs (£)</b>	<b>Variance %</b>	<b>Comments (please explain significant variances)</b>
<b>Staff costs (see below)</b>				
Project manager				
Project advisor				
Provincial Government Liaison coordinator				
Community development officer				
Biodiversity monitoring advisor				
Biodiversity monitoring assistant				
Finance officer				
National policy coordinator				
Monitoring & Evaluation officer				
<b>Consultancy costs</b>				
<b>Overhead Costs</b>				
<b>Travel and subsistence</b>				
<b>Operating Costs</b>				
<b>Capital items (see below)</b>				
<b>Monitoring &amp; Evaluation (M&amp;E)</b>				
Others (see below)				
<b>TOTAL</b>				

## Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2017-2018

Project summary	Measurable Indicators	Progress and Achievements April 2017 - March 2018	Actions required/planned for next period
<p><b>Impact</b></p> <p>Critical biodiversity corridors linking Protected Areas in Cambodia are legally protected and safeguarded through the engagement of local communities benefiting from improved and sustainable livelihoods practices.</p>		<p>During the first year Darwin project supported joint biodiversity and law enforcement surveys within the biological corridor have provided a greater understanding of biodiversity presence in conjunction with combatting illegal crimes as part of forming joint patrols between law enforcement and community members.</p> <p>The draft zonation plan produced by the Royal Government of Cambodia involved joint participatory meeting with WWF, communities and other governmental and non-governmental stakeholders have designated part of the biological corridor of SWS as a core zone, thus highlighting this areas within the highest level of protection</p>	
<p><b>Outcome</b></p> <p>Eight forest-dependent communities including women improve their livelihoods through enhanced agricultural practices and sustainable management and protection of the PPWS/SWS Biodiversity Conservation Corridor in collaboration with authorities</p>	<p>0.1 No deforestation detection in the Biodiversity Conservation Corridor each year from 2017 to 2020</p> <p>0.2 No Human-Elephant Conflict (HEC) in the Biodiversity Conservation Corridor each year from 2017 to 2020</p> <p>0.3 By 2020, at least 150 farming households (20% of the total households) are involved in the conservation-based agriculture project and improve their output by in average of 20%</p> <p>0.4 By 2020, a least 120 women from farming households report improved well-being either</p>	<p>Even though there some delay for some key Objectives, the significant progresses have been made specifically Objective 1, 4 and 5. Based upon the current progress and future expectation, the main project outcome will be achieved within the project lifespan.</p>	<p>0.1 Law enforcement patrols will continue in the key areas with the ultimate aim of reducing deforestation, hunting and land encroachment (supported by co-funded projects)</p> <p>0.2 A Wide scale HWC interview surveys will be conducted to identify key areas of HWC. Dependent upon the results simple mitigation measures will be designed and presented to communities with the aim to reduce conflict reduce conflict</p>

	through increased food security or cash income		
<b>Output 1.</b> 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 technics, natural fertilizer and pest killer, fire breaks, HWC mitigation tools)	<p>1.1 By 2018, at least 2 technical agricultural innovations are proposed to 150 farming households from eight communities</p> <p>1.2 By 2018, at least 150 farming households from eight communities are trained and start engaging in sustainable agriculture practices</p>	<p>The four technical agricultural innovations were introduced to 150 farming households from eight communities. Based on the findings, the agricultural techniques and practices that are natural resource conservation and forest-friendly are improved rice production and market, high value fruit tree production, home garden, and solar pumping and water-saving irrigation system.</p> <p>As the project has started late, the training on the agricultural techniques and practices under objective 1.4 &amp; 1.5 to the newly formed eight groups have not been conducted. It is supposed to be done next year in June 2018.</p>	
1.1 Conduct an assessment of current agricultural patterns, productivity and market viability with the 8 communities living in the PPWS/SWS Biodiversity Conservation Corridor through Rapid Rural Appraisal (RRA) and Commune Agro-ecosystem Analysis(CAEA) models or similar		The proposed techniques and practices are Improved rice production and market, High value fruit tree production, Home garden, Solar pumping and water-saving irrigation system.	
1.2 Establish eight conservation-based agriculture groups comprising 150 farming households, including 20 of the most vulnerable women-led households, within eight communities (forming one group of 15 to 20 farming households per community, each group represented by an elected farmer), to implement conservation-based agriculture models		Total of eight farmer learning groups were formed with 238 farmers including 167 women, which the group size ranges from 21 to 40 people per village which is larger size than expected.	
1.3 Conduct an agricultural training needs assessment for the 150 farming households		The training needs assessment for the 150 farming households was done together activity 1.1	
Activity 1.4 & 1.5		are scheduled for Year 2 (these two outputs depend on the results of output 1.1; 1.2; &1.3 due to the project has started late, the estimated time was reasonably insufficient, the availability of the farmers, together with the absence of project manager caused these activities to move to conducted in Y2.	
Activity 1.6.		is scheduled for Year 3	
<b>Output 2.</b> Greater understanding of local communities' perception of Human Wildlife Conflict (HWC) in the PPWS/SWS complex	<p>2.1 By 2018, HWC status and perception will be understood from at least 300 households from eighteen villages within and around the biodiversity corridor</p> <p>2.2 BY 2020, communities'</p>	Through the support of an addition project rapid wide-scale focal group sessions centred on HWC was conducted to identify key species involved in HWC incidents. Household surveys are scheduled for Year two, which will provide baseline data on current levels of HWC and how respondents mitigate HC incidents.	

	tolerance levels towards wildlife, especially elephants will remain stable or will have improved from the 2018 baseline	
Activity 2.1. Design questionnaire on the perception of HWC by local communities and provide training to interviewers (timing based on rainy season)		Based on preliminary results of the focal group HEC surveys, and revision of historical surveys conducted in Cambodia the HWC household survey and questionnaire design commenced and will be completed in Year 2.
Activity 2.2. Interview households from 18 communities in and around the PPWS/SWS complex, including 8 communities in the BCC, on their perception of HWC		Training has been provided to 4 students to conduct the Household interviews surveys Household surveys will be implemented in at least eighteen villages in Year 2 and results will be compiled in a report to identify key areas of conflict.
Activity 2.3 & 2.4 are scheduled for Year 2.		
<b>Output 3.</b> Better knowledge of Asian elephant movements across two critical protected areas in Cambodia	3.1 By 2019, elephant movements of at least one elephant group within the PPWS/SWS corridor are mapped	There are several meetings have been held between WWF, PDoE and DAFF. PDoE have nominated 5 individuals to form the new specialist dart team, which will be trained to ensure output 3 will be met. The official letter have been drafted from PDoE to the General Department of Administration for Nature Conservation and Protection (GDANCP), asking for documentation and permission to conduct the elephant collaring process and import the necessary equipment require. Permission is underway with GDANCP requesting permission from the MoE.
3.1 Conduct preparatory meetings with government partners and relevant stakeholders on seeking permissions, reviewing current legislation and assessing in-country capacity to collar elephants		Capacity and knowledge gaps have been identified and a training schedule is underway, which will be completed in Year 2.
3.2 Monitor elephant groups presence and identify individual(s) to collar within the biodiversity corridor		Joint surveys between research, law enforcement and community patrol groups have been undertaken at various stages throughout the year and elephant presence has been mapped. It is likely that two separate elephant groups exists within the corridor. More in-depth surveys will be conducted in Year two immediately prior to attempting to collar elephants.
3.3 Provide training and build capacity of in-country personnel for collaring process with the support from Asian elephant experts		One training course has been provided to the newly formed specialized darting team (Agenda and photos attached in Annex xx). Two additional training courses 1 in Cambodia and 1 in India are scheduled for Year 2.
3.4 Collar individual(s) and monitor and analyse elephant movements in the PPWS/SWS complex		Scheduled for Year 2
<b>Output 4.</b> The revised management plan of SWS is approved and implemented by PDoE and local communities to preserve globally significant biodiversity while promoting	4.1 By 2018, SWS management plan will be approved by MoE, the importance of the biodiversity corridor will be recognized, and the correct zonation will be applied to maintain the	The final draft zone of SWS will be submitted to General Director of GDANCP of MoE for endorsement and it is further submission to Minister of the MoE by May 2018 so that the Minister delivers approval from Prime Minister of Cambodia by June or July 2018.

and supporting appropriate and sustainable development to assist in alleviating poverty	connectivity between PPWS and SWS	
4.1 Conduct a series of consultation meetings and workshops led by MoE with all relevant stakeholders including the 8 communities to revise the Management Plan of SWS		A series of studies and consultation have been conducted at ground level and final draft was done at National Level led by the MoE. Due to the lengthy process of forming the technical working and get it approved by Minister of MoE, the National Consultation Workshop could not be organised in year 1 as planned, it is supposed to be conducted in early April.
4.2 Develop evidence-based documentation to support MoE in recognizing the critical role of the corridor in the management plan of SWS		The final draft zone of SWS will be submitted to General Director of GDANCP of MoE for endorsement and it is further submission to Minister of the MoE by May 2018 so that the Minister delivers approval from Prime Minister of Cambodia by June or July 2018.
Activity 4.3 is schedule for Year 2		
<b>Output 5.</b> The concept of biodiversity conservation corridor is nested in the Cambodian Environmental Policies	<p>5.1 By 2018, biodiversity conservation corridor are addressed in at least 1 chapter of the Environmental Code (National level)</p> <p>5.2 By 2017, biodiversity conservation corridors have been designated by the Royal government of Cambodia</p>	<p>The biodiversity conservation corridor has been written in article 282 such that the component of the protected area system includes protected area, biodiversity conservation corridor, special conservation areas and other conservation areas in Cambodia". Article 292 the continuation of validity of BCC, emphasis validity of the boundary, protection and management of any BCC that already established by law or legal regulation. Articles 297 refer to valuation on the BCC the institution responsible for environment protection need to study the situation in BCC.</p> <p>Royal Government of Cambodia, established biodiversity conservation corridor of Protected Area system through sub decree dated in January 2017. The sub decree established 3 BCCs include, 1) North East Biological Diversity Conservation Corridor System which covers 754,661 ha, Northern Biological Diversity Conservation Corridor System which covers 500,810 ha and Cardamom Biological Diversity Conservation Corridor System which covers 169,469 ha.</p>

## Annex 2: Project’s full current logframe as presented in the application form (unless changes have been agreed)

Project summary	Measurable indicators	Means of verification	Important assumptions
<p><u>Impact:</u></p> <p>Critical biodiversity corridors linking Protected Areas in Cambodia are legally protected and safeguarded through the engagement of local communities benefiting from improved and sustainable livelihoods practices. (Max 30 words)</p>			
<p><u>Outcome:</u></p> <p>Eight forest-dependent communities including women improve their livelihoods through enhanced agricultural practices and sustainable management and protection of the PPWS/SWS Biodiversity Conservation Corridor in collaboration with authorities</p>	<p>0.1 No deforestation detection in the Biodiversity Conservation Corridor each year from 2017 to 2020</p> <p>0.2 No Human-Elephant Conflict (HEC) in the Biodiversity Conservation Corridor each year from 2017 to 2020</p> <p>0.3 By 2020, at least 150 farming households (20% of the total households) are involved in the conservation-based agriculture project and improve their output by in average of 20%</p> <p>0.4 By 2020, a least 120 women from farming households report improved well-being either through increased food security or cash income</p>	<p>0.1 Maps and final report comparing forest cover change within the identified PPWS/SWS biodiversity conservation corridor</p> <p>0.2 The Final report will include Community Perception surveys</p> <p>0.3 The final report will highlight changes of both economic income and crop yield outputs from the identified farming households</p> <p>0.4 The final report will include women survey and a report on agro-ecosystem analysis</p>	<p>Engagement and “buy-in” at their respective levels of all relevant stakeholders including local communities, universities and government authorities (provincial and national MoE and MAFF)</p> <p>No civil unrest resulting from communes and national</p>
<p><u>Outputs:</u></p> <p>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</p>	<p>1.1 By 2018, at least 2 technical agricultural innovations are proposed to 150 farming households from eight communities</p> <p>1.2 By 2018, at least 150 farming households from eight communities are trained and start engaging in</p>	<p>1.1 A baseline report on agro-ecosystem analysis and recommendations for improvement is produced</p> <p>1.2 Training module and report</p>	<p>Will to support from the Provincial Department of Agriculture, Forestry and Fisheries (DAFF)</p> <p>Will to engage of the farmers</p> <p>No climate-related disaster (extended period of drought or flooding) affects the project area</p>



and rotation, irrigation technics, natural fertilizer and pest killer, fire breaks, HWC mitigation tools)	sustainable agriculture practices  1.3 By 2020, at least 150 farming households (including 20 women-led households) increase their agricultural-based income by at least 20% through a combination of improved agricultural yield, added value and cost reduction in practices (seed selection, post-harvest, chemicals use reduction..)	including attendance certificates  1.3 The final report will highlight changes in both economic income and crop yield outputs from the identified farming households	
2. Greater understanding of local communities' perception of Human Wildlife Conflict (HWC) in the PPWS/SWS complex	2.1 By 2018, HWC status and perception will be understood from at least 300 households from eighteen villages within and around the biodiversity corridor  2.2 BY 2020, communities' tolerance levels towards wildlife, especially elephants will remain stable or will have improved	2.1 A summary baseline report on tolerance levels towards wildlife and HWC will be produced and shared with stakeholders. This report will include maps highlighting HWC hotspots and occurrences  2.2 Final report documenting perception and tolerance levels compared to the 2018 baseline.	Involvement of University students to conduct interview surveys
3. Better knowledge of Asian elephant movements across two critical protected areas in Cambodia	3.1 By 2019, elephant movements of at least one elephant group within the PPWS/SWS corridor are mapped	3.1 Report of seasonal movements of at least one elephant group is produced and disseminated to relevant stakeholders	Government support: delivering permits for collaring elephants and providing technical staff to conduct collaring surveys. If expertise is unavailable from within Cambodia, the government agrees to allow external experts and veterinarians to perform the darting and collaring of elephant while providing training to the relevant local staff
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	4.1 By 2018, SWS management plan will be approved by MoE, the importance of the biodiversity corridor will be recognized, and the correct zonation will be applied to maintain the connectivity between PPWS and SWS	4.1 SWS management plan is endorsed by MoE, and a brief on dissemination of SWS management plan is shared to relevant stakeholders	Government and its Protected Areas management body, MoE pursues the current momentum towards biodiversity conservation and plans for eco-tourism expansion in Protected Areas
5. The concept of biodiversity conservation corridor is nested in the Cambodian Environmental Policies	5.1 By 2018, biodiversity conservation corridor are addressed in at least 1 chapter of the Environmental Code (National level)	5.1 Either the "Protected Area management" or the " National Conservation Corridor" chapter of the Environmental Code	Government and its Protected Areas management body MoE pursues the current momentum towards biodiversity conservation

	5.2 By 2017, biodiversity conservation corridors have been designated by the Royal government of Cambodia	5.2 Sub decree and maps of biodiversity conservation corridors	
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### Annex 3: Standard Measures

Please expand and complete Table 1: new projects should complete the Y1 column and also indicate the number planned during the project lifetime. Continuing project should cut and paste the information from previous years and add in data for the most recent reporting period. Quantify project standard measures over the last year using the coding and format from the Darwin Initiative Standard Measures (see website for details: <http://darwin.defra.gov.uk/resources/>) and give a brief description. Please list and report on relevant Code No's only. The level of detail required is specified in the Standard Measures Guidance notes under 'definitions and reporting requirements' column. Please devise and add any measures that are not captured in the current list. Please note that these measures may not be a substitute for output level objectively verifiable indicators in the project logframe.

**Due to constraints during Year 1, this will be updated and submitted in the next update report**

**Table 1 Project Standard Output Measures**

Code No.	Description	Gender of people (if relevant)	Nationality of people (if relevant)	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
Established codes	N/A in Year 1							

**Note:** Most of the publications will be produced in Year 2 and Year 3.

**Will be produced in years 2 and 3**

**Table 2 Publications**

Title	Type (e.g. journals, manual, CDs)	Detail (authors, year)	Gender of Lead Author	Nationality of Lead Author	Publishers (name, city)	Available from (e.g. weblink or publisher if not available online)
N/A						

**Annex 4 Onwards – supplementary material (optional but encouraged as evidence of project achievement)**

**Checklist for submission**

	Check
<b>Is the report less than 10MB?</b> If so, please email to <a href="mailto:Darwin-Projects@ltsi.co.uk">Darwin-Projects@ltsi.co.uk</a> putting the project number in the Subject line.	Ok
<b>Is your report more than 10MB?</b> If so, please discuss with <a href="mailto:Darwin-Projects@ltsi.co.uk">Darwin-Projects@ltsi.co.uk</a> about the best way to deliver the report, putting the project number in the Subject line.	Ok
<b>Have you included means of verification?</b> You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	Ok
<b>Do you have hard copies of material you want to submit with the report?</b> If so, please make this clear in the covering email and ensure all material is marked with the project number.	Ok
Have you involved your partners in preparation of the report and named the main contributors	Ok
Have you completed the Project Expenditure table fully?	Ok
Do not include claim forms or other communications with this report.	