



## Darwin Initiative Main Project Annual Report

**Important note:** To be completed with reference to the Reporting Guidance Notes for Project Leaders:

*it is expected that this report will be no more than 10 pages in length, excluding annexes*

**Submission Deadline: 30<sup>th</sup> April 2017**

### Darwin Project Information

Project reference	23-027
Project title	Cultural and economic incentives for endangered species conservation in Cambodia
Host country/ies	Cambodia
Contract holder institution	Fauna & Flora International
Partner institution(s)	Promvihearhor (PVT) Organization The Forestry Administration of the Royal Government of Cambodia Engineers Without Borders Australia
Darwin grant value	<b>£311,177</b>
Start/end dates of project	01 April 2016 - 31 March 2019
Reporting period (e.g., Apr 2016 – Mar 2017) and number (e.g., Annual Report 1, 2, 3)	Apr 2016 - Mar 2017 Annual Report 1
Project Leader name	Dr Jackson Frechette
Project website/blog/Twitter	<a href="http://www.fauna-flora.org">www.fauna-flora.org</a>
Report author(s) and date	Jackson Frechette and Tim Bergman; April 25, 2017

### 1. Project rationale

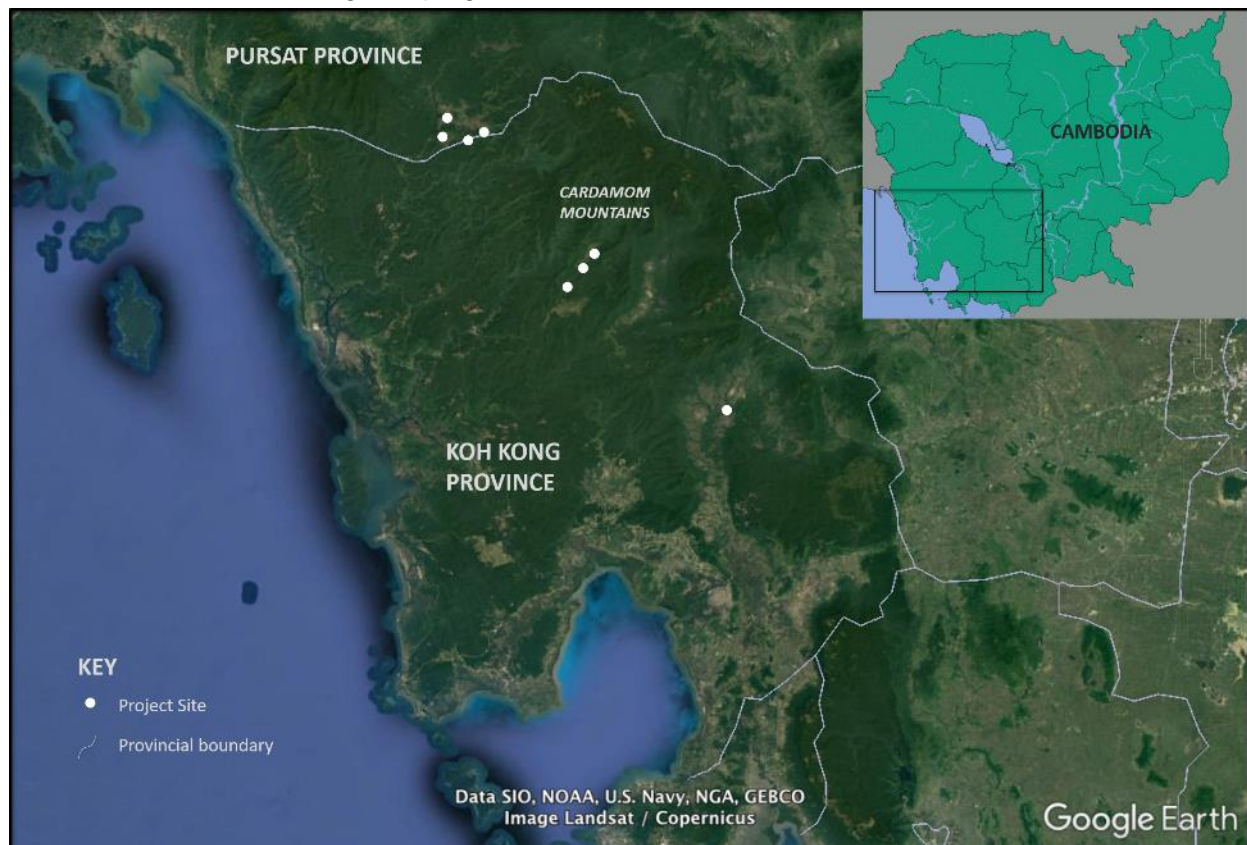
The focus of this project are the indigenous Khmer Daeum people, an isolated population living within one of the region's most diverse and important forest ecosystems. Working alongside the Khmer Daeum and other non-indigenous rural and marginalised communities, this project is designed to harness their expertise and cultural values to promote the conservation of highly threatened species, while enhancing economic incentives and supporting livelihood diversification to ultimately improve food security and decrease pressure on the forest.

These isolated communities are among Cambodia's poorest. They are generally subsistence farmers and fishermen, dependent on the forest for medicine, material and emergency food. Earning as little as US\$0.50 a day and suffering from three hunger months annually, the concern is the escalating deterioration of their natural resources due to land grabbing and logging by outsiders, which threatens their livelihoods and exposes endangered species to poaching and human-wildlife conflict. Respecting and promoting indigenous people's cultural values and rights is critical for the sustainable use of the mountainous landscape. However, even though indigenous people's rights are written into national policy (IWGIA 2015), their ability to realise these rights remains limited.

The project focuses on the Cardamom Mountains (see map), one of Indochina's largest contiguous rainforests and home to endemic and globally threatened species. The Cardamom

Mountains contain more than half the world's Siamese Crocodiles, a critically endangered species that is revered as sacred by the Khmer Daeum. This landscape is also a globally significant endangered Asian Elephant conservation landscape and is described by the UNFAO as "one of the most important areas for biodiversity conservation in Asia".

The project aims to address both human development (poverty, food insecurity, indigenous rights) and biodiversity challenges (habitat degradation, poor enforcement, encroachment, poaching, human-elephant conflict, unsustainable resource use) by empowering and achieving recognition of the rights and unique knowledge of these marginalised communities, while enabling them to increase food and livelihood security through the sustainable use of natural resources. This will be achieved by (1) building capacity for communities to sustainably increase and diversify food production through agricultural improvements; (2) promoting sustainable use of forest resources through enterprise development; (3) enabling locally-led protection of culturally important species and environmental stewardship; and (4) promoting indigenous skills and knowledge through national awareness-raising campaigns.



Key challenges and priority development needs for the communities were identified through rigorous socio-economic surveys conducted in 2015 which identified the core problems and priority development needs for the communities. Biodiversity challenges were identified using existing knowledge and field experience from Cambodia's Crocodile Conservation Programme [see CCCP two-pager], which successfully worked with O'Som Commune in the Cardamom Mountains to establish and manage the country's first crocodile sanctuary, and Cambodia Elephant Conservation Group [see CECG two-pager] which works with communities to monitor and protect elephant populations and mitigate human-elephant conflict.

## 2. Project partnerships

The main partners on this project are Promvihearthor Organisation (PVT), Engineers without Borders Australia (EWB) and the Cambodian Government Forestry Administration (FA).

PVT has been the main implementing partner for objectives 1 & 2, and have been involved in the project since the start. Although they have not worked in the project communities before, they have been working in neighbouring communities and were very interested to expand.

A joint inception meeting was held in September once contracts were finalised and together created a Year 1 workplan. PVT staff then received training on the baseline survey and jointly implemented this with FFI over a three week period. After this, PVT received a

booster training in conducting a market analysis based on Practical Action's Participatory Market Systems Development (PMSD) approach, by which FFI facilitated a priority product exercise and PVT later conducted a market mapping for the value chains of these priority products [see Market Analysis Report].

This is the first time FFI and PVT have partnered and they have shown good financial and M&E reporting skills from the start. Unfortunately however, we have also faced several challenges within these first six months, including low quality of implementation, high staff turnover and a lack of management oversight. To rectify these issues, several management meetings have been had to discuss the problems in detail and find solutions. A re-budgeting (approved by Darwin) has modified staff costs to enable the recruitment of higher qualified and better paid field staff in an attempt to improve staff retention, quality of implementation and field staff management. FFI was heavily involved in the new recruitment process at all stages, from developing new job descriptions, improving advertising channels and sitting on the interview panel, all at the request of PVT. New staff have now been recruited with clear roles and responsibilities and FFI will now supply increased management oversight to ensure quality of implementation.

The partnership with EWB has been relatively smooth, with good communication between management and joint problem solving. There were slight issues with the first set of bio-digesters which were installed, however EWB has handled it well, taking good decisions and keeping FFI updated throughout. They have finalised a completion report for the first set have supplied background M&E data [see Bio-digester Report].

FFI has been working in partnership with the Cambodian Forestry Administration (FA) since 1999. We have three seconded FA staff who have been working in these communities for over a decade and take the lead on all aspects of the crocodile conservation activities and oversee the crocodile wardens. The partnership hasn't evolved much over past year as it is already well established and strong. But it is a good example of long-term capacity building and collaboration that has resulted in a programme with strong government support and highly capable staff.

### **3. Project progress**

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

Due to the three month delay on project initiation, this project is only nine months in with the majority of the first six months dedicated to partner development and baseline and market analysis research in order to shape the specificities of the project. Since January the focus has been on project inception meetings, producer group creation and preliminary trainings.

***Output 1: Hungry months of at least 500 target households are reduced by at least 25% from 2015 baselines, by building capacity to sustainably increase and diversify food production, through agricultural development***

The initial priority for the start of the project was to set up a robust and holistic monitoring and evaluation framework (A1.1), which not only captures key indicators but can track other potential impacts to ensure accountability and learning [see Socio-Economic Survey]. One of our first steps was establishing an experiential multi-layered definition of 'hungry months' [see SE Baseline]. An agricultural and crop survey was integrated into the baseline survey, substantiated through focus group discussions. Partner staff were trained to help to implement the baseline, alongside internal reporting formats and expectations. Establishing the socio-economic baseline allowed us to also set up our M&E framework (A 1.7)

A total of 379 individuals, 65% female, have participated in at least one project activity to date. 224 people, 72% female, attended one of six project extension meetings and a total of 208 individuals participated in a group formation meeting (Rice x2, Chicken x4, Vegetables x3, Cash Crop x1) with a 60% female participation rate. One chicken training has taken place to a group of 23 villagers where 65% were female (A1.2, 1.3, 1.4) [see participant tracking sheet]. PVT has led the inception meetings, group formations and trainings and the quality has been acceptable however with some issues and much room for improvement. Staff quality was low and partner management oversight was substandard. This was recognised early and new, higher quality partner staff have been hired and FFI has stepped up its management oversight and partner staff development. These activities have been implemented on time.

EWB installed 14 biodigesters in O'som and is currently supporting all technical support that the households require (A 1.5). We are working together to track the impact.

In Y1 we also trained local guarding groups from four different communities in HEC mitigation techniques and provided mitigation tools and training to 91 households within the

Cardamom landscape (A1.6). In total, we distributed 3650 fireworks and 106 flashlights, provided rope (155kg), wire (40 pieces) and 307 bells for alarm bell fences that act to deter elephants from farming sites and alert guarding groups.

**Output 2:** *By Year 3, women and men in at least 8 target villages adopt measures to promote their sustainable use of forest resources and at least 500 households generate increased revenue from renewable non-timber forest products (NTFPs), agricultural activities and sustainable enterprises*

An in-depth market systems analysis was applied at the start of the project to inform the focuses of the market strengthening aspect of this project (A 2.1) [see Market Analysis Report]. Practical Action's *Participatory Market Systems Development approach* was taken and a training given to partner staff was given. Product selection criteria was agreed alongside an identification of key potential products and a market mapping of each product in each site [see market analysis report]. In addition, an agricultural survey and income sources analysis was completed to broaden the understanding of income generating activities, challenges and opportunities (A 2.1) [see SE Baseline].

Fourteen bio-digesters were installed in Y1 (A2.4). Due to co-funding stipulations, eight were installed in April 2016 at the time of the originally planned project start, however due to technical errors, these were replaced in December 2016 alongside the instalment of six more [see Bio-digester Report].

**Output 3:** *By Year 3 enable at least 8 villages (of 13 in the project area) to establish special measures to protect and conserve sacred and culturally important biodiversity including Siamese crocodiles and Asian elephants and their habitats*

We recruited a total of seven Elephant Wardens from three different communities to patrol important elephant habitats to monitor threats to elephants and support our team in monitoring elephants and other biodiversity (A 3.1). The wardens were trained in Spatial Monitoring and Reporting Tool (SMART) data collection [see Elephant Warden SMART Data Sheet]. They began patrolling in January and have since patrolled a total of 829.85 km [see Elephant Warden SMART Report]. The wardens also worked with our team to help set 50 camera traps across the landscape to monitor elephant habitat use and movement (A 3.5) [see Guideline for occupancy & monitoring; Elephant Monitoring Summary].

In consultation with a GIS and Remote Sensing technician, we have begun the development of a forest change monitoring programme (A 3.2) [see Forest Monitoring System]. In Q1 Y2 we will proceed with training of our GIS technician in forest cover mapping and create the baseline for monitoring of forest change.

We supported 28 Community Crocodile Wardens to patrol five crocodile sanctuaries (A 3.3). We use SMART data from the wardens to monitor threats, crocodiles and other species [see Crocodile Warden SMART Report and Data Sheet]. Over the past year they patrolled a total of 293 days covering 5,462 km through the crocodile sanctuaries.

A Cambridge University Masters student has been contracted to initiate an indigenous rights needs assessment in Q2, Y2, to ensure indigenous rights training is actually relevant and helpful to the communities (A 3.6). In addition, several informal meetings with experts in indigenous rights in Cambodia have been taken place in order to support wider information gathering and local networking on previous work into the subject.

**Output 4:** *Messages promoting the traditional knowledge and skills of indigenous people in the Cardamom Mountains have reached at least 10% of the Cambodian population by Y3, including government officials and other decision makers*

A dedicated background research report has been written [see Indigenous Knowledge Review] and other relevant background research has been collated in order to inform the rest of the communication activities (A 4.1). An inception meeting with a professional advertising agency, Melon Rouge Agency, took place which resulted in the development of a timeline for the creation of a communications strategy was made for Q1, Y2 (A 4.2)

A poster depicting indigenous community's role in conserving the Critically Endangered Siamese Crocodile has been developed and dispersed by a female staff member at a Young Southeast Asian Leaders Initiative meeting and will be used for later communications events (A 4.2) [See Crocodile poster].

## 3.2 Progress towards project Outputs

It is likely that the project will be able to achieve all outputs, with only slight concern over reaching the target number of households

**Output 1:** *Hungry months of at least 500 target households are reduced by at least 25% from 2016 baselines, by building capacity to sustainably increase and diversify food production, through agricultural development*

Through our socio-economic baseline survey [see SE Baseline Survey] we established the baseline to be an average of 3.14 hungry months. Changes in rice yield are a key and relevant indicator for measuring this output and a baseline will be taken once the rice production groups have been formed at the start of rice growing seasons (Q1, Y2) (I 1.1). Data on average community rice yields was captured in the baseline [See SE Baseline] however this will be used as a counterfactual rather than a monitoring tool to ensure targeted and relevant M&E.

Dietary diversity is a strong, measurable indicator to track food access and nutrition through time. A baseline has been taken with an average dietary diversity score of 4.0 [see SE Baseline] and will be monitored throughout the project (I 1.2).

Chicken production and consumption can increase both income and nutrition, therefore a good indicator of reductions in hunger months. Both were recorded in the baseline showing that an average of 3.1 chickens per year were raised to adulthood with an average of 2.7 chickens them being consumed annually per household (I 1.3). The percentage of wild fish consumed will also be used as an indicator highlighting the connections between livelihoods and conservation (I 1.3). The baseline survey revealed that on average 78% of the fish in people's diet was wild fish, making it a highly significant source of protein.

Progress to (I 1.4) has started, with the installation of 14 biodigesters, eight of which broke and have been repaired, however recent monitoring has shown that uptake has been slow. This will be reviewed in Q1 of Y2 with EWB and adapted accordingly [See Bio-digester Report].

In 2016, a total of 63 documented human elephant conflict (HEC) incidents occurred in seven different villages in the Cardamom Mountain Landscape [see HEC Annual Report 2016]. This is a slight decrease from 2015, which saw 74 incidents (I 1.5).

**Output 2:** *By Year 3, women and men in at least 8 target villages adopt measures to promote their sustainable use of forest resources and at least 500 households generate increased revenue from renewable non-timber forest products (NTFPs), agricultural activities and sustainable enterprises*

In the target areas, income is generated from a variety of sources, predominantly; wage labour, cash crops, fishing and NTFP collection. In those communes where cash crops are a main source of income, strengthening market systems will be a core driver to improving incomes.

Indicators (I 2.1, 2.2) tracking this output are therefore focused around market system strengthening activities, including # of business trainings (0), Agriculture and NTFP network creation/ strengthening (0), # of small-scale enterprises started (0) and incomes generated from such (0). We are also tracking the average annual income for the combined target villages which has a 2016 baseline of \$588 (I 2.4) [see SE Baseline].

In order to improve sustainable use of forest resources, the use of bio-digesters aims to reduce the amount of firewood used by households, alongside reducing the time women spent collecting wood (I 2.5, 2.6). There have been several complaints from the bio-digester recipients about the limited amount of gas produced, and that it will typically boil one or 2-4 kettles of water before stopping. In dry season especially, as they keep their buffalos in the fields rather than close to the homestead, manure collection is less and so there is less use. Only two of the recipients are using the bio-digesters successfully, one has reduced their firewood intake by 100%, the other 30% (I 2.6). There seems to be no mechanical issues with the bio-digesters, they may just not be suited to this rural communities way of life.

**Output 3:** *By Year 3 enable at least 8 villages (of 13 in the project area) to establish special measures to protect and conserve sacred and culturally important biodiversity including Siamese crocodiles and Asian elephants and their habitats):*

We initiated our Asian elephant monitoring program in Y1 by recruiting seven Community Elephant Wardens from three different villages and deploying 50 camera traps to monitor elephants and threats (I 3.1) [see Elephant Monitoring Summary]. The wardens were

trained in SMART data collection [see Community Elephant Warden SMART Data Sheet] and have already patrolled 829.85 km [see SMART Report Summary].

The baseline for this output is that we had already established Community Crocodile Wardens (from 10 different villages) to protect the community agreed upon crocodile sanctuaries (5) (I 3.3). The 2015 baseline is 192 patrol days and 2,483 km patrolled [see Crocodile Warden SMART report 2015], in Y1 of this project they patrolled total of 293 days covering 5,467 km, this is a 52% increase in patrol days (our indicator goal was 25% increase by Y3) and a 220% increase in total patrol distance [see Crocodile Warden SMART 2016 report]. The baseline for fishing nets observed in the crocodile sanctuaries is 18 across all sanctuaries (I 3.4) [this is from Crocodile Warden SMART 2016 report as the wardens were not reliably collecting these data in 2015], in 2015 and 2016 there were 0 crocodile deaths from fishing entanglement or incidences of poaching (I 3.4).

**Output 4:** Messages promoting the traditional knowledge and skills of indigenous people in the Cardamom Mountains have reached at least 10% of the Cambodian population by Y3, including government officials and other decision makers

The background research [see Hiroyuki report] that was needed to inform the rest of the messaging and activities is complete (I 4.1). There are no baseline conditions to take into consideration as the indicators reflect the completion of activities/reports/materials and will be measured as such. A stakeholder analysis, government trainings, communication materials and a mass media campaign are still good indicators to ensure the completion of this output. Reaching 1.5 million Cambodians through the mass media campaign is an ambitious target, and relies heavily on the ability of the media channels to be able to track their viewings, however through a well thought out communications strategy is still achievable.

### 3.3 Progress towards the project Outcome

As before, due to the start of the project, baselines have been captured however in general there has not been enough time passed to see relevant progress on the indicators.

#### **Project Outcome**

*At least 500 households across 8 indigenous villages in the Cardamom Mountains empowered to sustainably overcome poverty and hunger, and their roles in conserving globally threatened biodiversity are recognised nationally.*

This project is likely to achieve this outcome by the end of project cycle.

#### **Outcome Indicators**

**0.1** *For female and male members of at least 500 households (25% of HH in project area), number of hungry months is reduced by at least 25% by Year 3 from the 2015 baseline, through sustainably increased food production*

On average, 74% of households in the target areas have 3.14 hunger months a year [SE Baseline]. Hunger months have been defined as being unable to eat healthy and nutritious food due to a lack of money or other resources. In having a specific, relevant and clear definition we are now able to measure progress. The indicator is clear however hunger months can be reduced through a multitude of actions, not only increased food production. To date, we have had 208 participants join group formation meetings (38% female) and 23 participants join chicken trainings (29% female) [see Participant Tracking Sheet].

**0.2** *At least 250 households experience at least 25% increase in income by Year 3 from the 2016 baseline, from renewable NTFP enterprises and/or through sales of surplus crops*  
Average annual incomes across all sites is \$587.78 (\$1.61 a day) and on average, \$286.52 (49%) of total income comes from the sale of surplus crops. There are currently no NTFP enterprises in any of the sites [see SE Baseline]. These are clear and measurable indicators to measure the project outcome.

**0.3** *Culturally and economically important wildlife (specifically including the sacred Siamese crocodiles and Asian elephants) and forest resources are under active protection and management by at least 8 villages by Y3*

By the end of Y1, we have successfully supported community wardens to monitor and protect five community crocodile sanctuaries and three key elephant habitats [see Crocodile and Elephant Warden SMART 2016 Reports]. These wardens represent 12 different villages (2015 baseline was 10).



**0.4** At least 30% of commune, district and provincial government officials in the target sites are able to articulate the value of indigenous custodianship by Y3

Due to the nature of the indicator, there is no baseline condition for this indicator. It is a relevant indicator to ensure that the trainings on indigenous rights are understood.

### **3.4 Monitoring of assumptions**

**Outcome Assumption 1:** *Rising living standards in target villages does not lead to influx of immigration and land-grabbing by non-indigenous peoples*

Comments: Still holds true.

**Outcome Assumption 2:** *Willingness of lowland population to overcome prejudice against indigenous peoples in the mountains*

Comments: Still holds true.

**Outcome Assumption 3:** *Political will to uphold laws protecting the rights of indigenous peoples*

Comments: Still holds true.

**Outcome Assumption 4:** *Project team's specific efforts to overcome socio-cultural barriers to the participation of indigenous women and girls are successful*

Comments: Still holds true.

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**Output 1 Assumption 1:** *No unusual adverse weather/climatic conditions*

Comments: Early monsoon rains are a potential threat to farming success due to confusion in planting times. The situation is being monitored and advice can be sought from senior agronomists in Cambodia.

**Output 1 Assumption 2:** *At least some project beneficiaries willing to overcome risk-averseness to try novel techniques*

Comments: Still holds true, there do seem to be some 'risk takers' who are willing to work with the project.

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**Output 2 Assumption 1:** *Trainers able to find innovative ways to successfully overcome the weak literacy and numeracy of target communities*

Comments: A true assumption, there are low literacy rates however some

**Output 2 Assumption 2:** *Researchers correct in identifying sufficient and reliable markets for cardamom spices and other renewable produce from the Cardamom Mountains*

Comments: A Market analysis was implemented to a minimally satisfactory standard [See Market Analysis]. To counter this, secondary research and a shorter higher quality market analysis will take place with newly hired partner staff with a background in value chain strengthening in Q1, Y2.

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**Output 3 Assumption 1:** *Willingness of younger generation to protect animals that are traditionally sacred to their communities*

Comments: Holds true.

**Output 3 Assumption 2:** *Government approval of new community protected areas is secured without unreasonable delays*

Comments: Community protected areas (CPAs) have moved to be under the jurisdiction of a new government department which means there now might be delays. This is being monitored alongside research in Y2 on the effectiveness and viability of a CPA in protecting indigenous rights.

**Output 3 Assumption 3:** *Political will of government agencies to establish and implement protocols to uphold the lawful rights of indigenous communities*

Comments: Holds true.

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**Output 4 Assumption 1:** *Will of other record-keepers such as radio and other media stations to share data*

Comments: Holds true.

**Output 4 Assumption 2:** *Recent research is correct in identifying the Khmer Daeum culture and traditions as having had a key part in preserving biodiversity in the Cardamom Mountains*

Comments: Holds true.

**Output 4 Assumption 3:** *Increased knowledge leads to improved attitudes and behaviour*

Comments: Holds true.

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

Impact on biodiversity: The overall goal is to support sustainable livelihoods so that people are less dependent on unsustainable levels of natural resource extraction. If successful, our impact will be on the reduction of hunting, fishing, habitat encroachment and logging. We are in the beginning stages of the project, so the impact is not evident yet, but several of our indicators focus on these aspects.

Impact on poverty alleviation:

This project aims to alleviate economic poverty through increasing incomes and decreased expenditures (increasing rice yields leading to less buying/borrowing of rice). Through participation in the project activities, the projects aims for participants not only to be able to increase their rice yields, chicken production and incomes, but also for empowerment to be built, confidence to be grown and opportunities opened. Many farmers hold great anxiety over the success or failure of their crops, and past experience has shown that by having a trained agronomist or veterinarian able to help and teach them when needed, that anxiety is released or minimised, an often overlooked psychological benefit of projects. A quantitative impact analysis report based on a Sustainable Livelihoods framework will be implemented in Y3 to measure these successes.

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

The SDGs 1. No Poverty, 2. Zero Hunger, 5. Gender Equality, 10. Reduced Inequalities, 12. Responsible consumption and production and 15. Life on land are relevant to our project. In the 2016 – 2017 Financial Year, for SDGs 1,2,5, 12 and 15, there has been minimal direct impacts due to the majority of the activities being background research and group formation as previously noted, however this is setting the way to greater contributions.

To promote gender equality, we have ensured at least 30% of participants are women and that women have at least a 33% representation rate on all group executives, with on average, 48% of women being on the group executive committees [see Participant Tracking].

In terms of SDG 15. Life on Land, we are supporting the reduction of encroachment, logging and hunting through increasing food security and incomes. As people's livelihoods become less dependent on unsustainable levels of natural resources, they can afford to manage them into the long-term.

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

The project contributes to the capacity of Cambodia to implement the Convention on Biological Diversity primarily through reducing the direct pressure on forests and biodiversity (Aichi Goal B) and enhancing species and habitat protection (Aichi Goal C). In the last year we have completed baseline surveys, analysed markets and conducted workshops [see Market Analysis) to understand how best to reduce pressure on forests, rivers and associated biodiversity alongside communities (Aichi target 5, 6, 7, 8). We have begun developing projects to incentivise sustainable livelihood alternatives such as chicken farming (Annex 4 – evidence) and helping improve agricultural techniques through training workshops and the formation of agriculture groups (Annex 4 - PVT report and photos).

The project has supported the protection of the Critically Endangered Siamese crocodile and the endangered Asian elephant, directly contributing to Aichi target 12. Using local knowledge and respecting customary resource use, capacity has been built for 36 community wardens to patrol and protect these traditionally revered species and habitats using the SMART approach (Aichi 2, 5, 11, 12, 14, 18). In Y1, Local and Khmer Daeum community wardens 1901 hours of patrols in crocodile sanctuaries throughout Y1 and 283 hours of patrols in key elephant habitat since January 2017 [see SMART Summary Report].

Fifty camera traps have been deployed in Y1 to monitor key areas of elephant habitat connectivity and usage and elephant populations have been estimated through a capture-mark-recapture analysis completed in 2016 [Indicator 3.1; see Elephant Monitoring Protocol]. Support and local knowledge from Khmer Daeum community wardens has been essential in collecting this ecological data (Aichi 17, 18, 19; Indicator 3.1) as has their integral involvement



in the successful release of 13 Critically Endangered Siamese crocodiles into sanctuaries in 2016 and 2017 (Annex 4 - Crocodile release photos). In addition, a project-level methodology to monitor forest encroachment (Indicator 3.2) for the Cardamom Mountains has been developed to aid protected area management (Aichi Target 11; Annex 5 – Forest Monitoring Methodology).

Community workshops and print material (Annex 5 – Conservation Education and Outreach) Communications and Indicator 4.4) has raised awareness of species protection and biodiversity value within the community (Aichi 1, 2) and 14 bio-digesters have been installed (Annex 4 - Biodigester report) to build capacity for sustainable resource use (Aichi target 1, 8). These achievements have helped the project addresses various Aichi targets (3, 4, 6, 8, 10, 11, 14, 17, 20) in Cambodia's National Biodiversity Strategy and Action Plan (NBSAP) including "systematic monitoring", "development and implementation of recovery programmes", and "measures ensuring the protection of critical habitats".

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

In terms of economic poverty, 65% of the target population live off less than \$1.25 a day, and 41% of the target population less than \$0.5 a day [SE Baseline]. The project is expected to directly increase their incomes, and alleviate some of their economic poverty.

In terms of indirect impacts on poverty, the target population suffers from an inadequate diet with an average dietary diversity score of 4.0 [SE Baseline]. Through increasing incomes and food production, food access should rise indirectly leading to a better dietary diversity.

Other indirect impacts includes increased empowerment, reduced anxiety and enhanced opportunities, as mentioned in Section 3.5.

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

This project is aiming to be gender sensitive in its activities, with scope for gender transformative indirect impacts. An emphasis is given to having at least 30% female representation on group executives and 50% female group member participation. As it stands, 56% of group members are female, while 48% of the executive committee are female [see participant tracking form]. Indirect benefits of a higher representation of females in positions of power may lead to increased empowerment and a shift in expectations of gender roles.

Through the use of bio-digesters, we expect improvements in women's health and free time, due to the reduced amount of time keeping a fire going cook [see EWB report]. We also have one female staff (Project Officer) taking the lead in much of the field implementation.

## **8. Monitoring and evaluation**

A socio-economic baseline was employed to gather baseline data alongside quarterly reporting and activity and participant tracking [see all in annex]. An M&E plan was created however is currently being edited to align to the annual reporting schedule and extra information.

## **9. Lessons learnt**

The most pertinent lesson learned in this first period has been the need for increased oversight and management support to the partner field staff and management. Poor partner decision making and a lack of sufficient field staff management has led to several issues and high staff turnover rates.

We are building this learning into our project two main ways; firstly by allocating a higher amount of budget to hire higher quality field staff; and secondly for FFI to increase their management oversight of field staff and field activities. A productive joint management meeting has been had with all issues communicated and expectations set.

To other projects starting with a new partnership, we would firstly recommend a rigorous due diligence process before making a decision. In addition, for the start of the project, we would recommend working closely together with the partner in all areas and identifying capacity gaps yourself rather than on self-identified weakness.

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

NA

## 11. Other comments on progress not covered elsewhere

The scope of the project has been slightly modified as initially there was a focus on piloting aquaculture however after further analysis, this was to be too risky and expensive. The project will now focus on Poultry raising instead as a protein alternative which has a higher rate of success and can reach more people. It also fits better into the overall project outcomes.

## 12. Sustainability and legacy

In terms of livelihoods open access, the socio-economic baseline data and information has been shared with several other NGOs working in the same region and bio-diversity and conservation. In addition, FFI has initiated a quarterly livelihoods/conservation lunch meeting in order to share information and best practice.

The sustainability of this project lies in the focus on market systems strengthening and emphasis on village group capacity development. Through strengthening the village group structures, laws and executive, sustainability should ensure, and through taking a hands off facilitation approach with private sector actors and subsidising strategically, market forces should dictate the sustainability.

Additional networking and fundraising is also being conducted with the aim of extending the agricultural support as past experience shows that around 4 years is the needed amount of time for sustainable upkeep of agricultural practices.

## 13. Darwin identity

The Darwin Initiative has been promoted as both a distinct project and as part of larger programme both to all project participants at project inception meetings. The project leader also presented about the Cambodian Crocodile Conservation Programme (with credit to support from the Darwin Initiative) to a wider audience with two talks at the joint meeting of The Society for Conservation Biology Asia section and the Association for Tropical Biology and Conservation Asia-Pacific chapter, 29 June - 2 July 2016 in Singapore.

The Darwin logo has been used on all project staff T-Shirts, on posters given out to school children on the role of indigenous communities and conservation [see crocodile poster], on the FFI Global website and on the FFI Cambodia Facebook page.

Informally, many of the upper and management levels of the large conservation NGOs in Cambodia are aware of the project and Darwin' role through director networking meetings.

## 14. Project expenditure

**Table 1: Project expenditure during the reporting period (1 April 2016 – 31 March 2017)**

Project spend (indicative) since last annual report	2016/17 Grant (£)	2016/17 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)			103%	
Consultancy costs	-	-	-	
Overhead Costs			101%	
Travel and subsistence			95%	
Operating Costs			82%	We lost three staff right before activity trainings which reduced expenses on operational costs.
Capital items (see below)			101%	
Others (see below)			102%	
<b>TOTAL</b>				

## Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2016-2017

Project summary	Measurable Indicators	Progress and Achievements April 2016 - March 2017	Actions required/planned for next period
<p><b>Impact</b></p> <p>Cambodia's indigenous Khmer Daeum achieve a higher social status and living standards, and contribute effectively to the protection and recovery of Cambodia's Siamese crocodile and Asian elephant populations</p>		<p>The community wardens have lead patrols in critical elephant and crocodile habitat, successfully deterring threats and maintaining a monitoring programme.</p>	
<p><b>Outcome</b></p> <p>At least 500 households across 8 indigenous villages in the Cardamom Mountains empowered to sustainably overcome poverty and hunger, and their roles in conserving globally threatened biodiversity are recognised nationally</p>	<p><b>0.1</b> For female and male members of at least 500 households (25% of HH in project area, number of hungry months is reduced by at least 25% by Year 3 from the 2015 baseline, through sustainably increased food production</p> <p><b>0.2</b> At least 500 households experience at least 25% increase in income by Year 3 from the 2015 baseline, from renewable NTFP enterprises and/or through sales of surplus crops</p> <p><b>0.3</b> Culturally and economically important wildlife (specifically including the sacred Siamese crocodiles and Asian elephants) and forest resources are under active protection and management by at least 8 villages by Y3</p> <p><b>0.4</b> At least 30% of commune, district and provincial government officials in the target sites are able to articulate the value of indigenous custodianship by Y3</p>	<p>0.1 Hunger months have been defined, baselines collected and group formations and trainings for income generating and food production activities are underway (see section 3.3, SE Baseline]. Emphasis on group strengthening at the beginning.</p> <p>0.2 Market information has been collected including market mapping for priority products.</p> <p>0.3 We trained and supported Community Wardens representing 12 villages who patrol and protect 5 crocodile sanctuaries and 3 key elephant habitats</p> <p>0.4 Background information detailing indigenous population's role in conserving Cambodia's wildlife has been completed and collated. Indigenous rights experts have been consulted.</p>	<p>0.1 Trainings in rice production and chicken production will take place. Group structures will be strengthened.</p> <p>0.2 Market system network strengthening meetings with key actors along the value chains and creation of community based enterprises to improve market access and negotiating power for the farmers.</p> <p>0.3 Continue supporting and monitoring the wardens through Y2</p> <p>0.4 In Y2, Communications strategy creation for outreach and communication materials to be developed.</p>
<p><b>Output 1</b></p> <p>Hungry months of at least 500 target</p>	<p>Across project area's target</p>	<p>1.1 Additional rice groups will be set up and trainings will commence in accordance to the crop calendar. Average rice yields have been collected [SE Baseline] on the target population that will be used as a counterfactual with</p>	

<p>households are reduced by at least 25% from 2015 baselines, by building capacity to sustainably increase and diversify food production, through agricultural development</p>	<p>households:</p> <p><b>1.1</b> Improve average per-hectare yields of rice by 25% by Y3 based on the 2015 baseline</p> <p><b>1.2</b> Improve community level dietary diversity by Y3 based on the 2016 baseline</p> <p><b>1.3</b> By Y3 based on the 2016 baseline, produced and consumed farmed animals increases by 20%; wild caught animals decrease by 10%</p> <p><b>1.4</b> By Y3 at least 40 HH bio-digester units installed and producing fertiliser</p> <p><b>1.5</b> In at least 5 villages community guard teams successfully reduce the number of incidents of human elephant conflict on cropland using non-lethal methods from 2015 baseline</p>	<p>improved rice yields for participating actors in the project. Their baseline will be taken once rice growing season starts and the rice production groups are up and running. It is an appropriate indicator for reducing hunger months.</p> <p>1.2 Baseline dietary diversity has been taken with an average total score of 4.0. This indicator was revised and approved through a CR form. This new indicator was chosen to monitor the changes in dietary diversity intake as a proxy for nutritional status, which is an appropriate measure for reducing hunger months.</p> <p>1.3 Four chicken groups have been formed of 100 participants (38% female) and one training commenced. A Veterinarian has been hired for technical backstopping on poultry health and husbandry. Baseline data on # chickens farmed, # farmed chickens consumed and % of wild fish in diet has been collected [SE baseline]. These indicators were agreed upon in a detailed M&amp;E meeting to find the balance between the difficulties in collecting true data on hunting and consumption of wild meat.</p> <p>1.4 14 biodigester units have been installed [see EWB report].</p> <p>1.5 Guards teams saw a slight decrease in HEC events, see Section 3.2</p>
<p><b>Activity 1.1</b> Conduct surveys to inform agricultural output baselines, community-led identification of additional crops for introduction and harvesting.</p> <p><i>NB Activity 1.1 will be designed and implemented to enable project team to identify the different roles, skills, knowledge and interests of women and men. This gendered analysis will inform which of the other activities under this output are targeted at women, men or both, and ensure that training/support provided is relevant and accessible to each target group.</i></p>		<p>A comprehensive Socio-Economic Baseline including an Agricultural survey has been completed. Focus group discussions highlighted the identification of priority crops.</p>
<p><b>Activity 1.2</b> Provide agricultural training and ongoing support for rice intensification, support rice-growing techniques, provide technical expertise during cultivation and harvesting</p>		<p>Additional funding has been found to hire an agronomist to focus on rice growing and two rice groups have been set up with 56 attendants (38% female).</p>
<p><b>Activity 1.3</b> Provide agricultural training and ongoing support for crop diversification, support crop-growing techniques, provide technical expertise during cultivation and harvesting</p>		<p>Three vegetable planning groups have been initiated with a total of 42 members, 27 female, with group law and structures facilitated.</p>
<p><b>Activity 1.4</b> Pilot use of household-level aquaculture as a protein source alternative, establish baselines on household consumption of farmed vs wild-caught animals</p>		<p>Due to ground-truthing showing that piloting aquaculture would be expensive, risky and low impact, chicken raising has replaced it as a protein alternative due to its higher rate of success, need and outreach. Baselines on household consumption of farmed vs wild caught meat has been completed, however the veracity of the responses to wild meat consumption was unclear. We therefore decided to focus on wild fish consumption due to its appropriateness of an indicator. This was approved by a CR form.</p>

<p><b>Activity 1.5</b> Install pilot bio-digesters, ensure maintenance of units and provide support for production and application of fertiliser, and monitor the impact of bio-digesters at pilot households</p>	<p>14 bio-digesters have been installed, 8 were faulty and were replaced. See Bio-digester report in annex.</p>	
<p><b>Activity 1.6</b> Provide support and training for community guard teams on human-elephant conflict mitigation, and maintain communication and data collection methodologies</p>	<p>We trained community guarding groups from four different communities. See Section 3.1 and HEC Annual Report 2016</p>	
<p><b>Activity 1.7</b> Set up frameworks and methods to enable gendered monitoring and evaluation of agricultural indicators</p>	<p>An in-depth baseline survey has been developed and implemented alongside a project M&amp;E plan. A gender training for staff has been developed and will be delivered in Q1 of year 2. This has been delayed due to high partner staff turnover.</p>	
<p><b>Output 2.</b></p> <p>By Year 3, women and men in at least 8 target villages adopt measures to promote their sustainable use of forest resources and at least 500 households generate increased revenue from renewable non-timber forest products (NTFPs), agricultural activities and sustainable enterprises.</p> <p><b>We would like to apply for a change to Output 2 to:</b></p> <p>By Year 3, women and men in at least 8 target villages adopt measures to promote their sustainable use of forest resources and at least 250 households generate increased revenue from renewable non-timber forest products (NTFPs), agricultural activities and sustainable enterprises.</p> <p><b>Justification:</b> In October 2016, several indicators under output 2 were modified to mitigate the drop in the value of the GBP and loss to project budget due to Brexit. Specifically the amount of trainings were halved however we forgot to change the corresponding outcome targets which should also</p>	<p><b>2.1</b> Training on business and enterprise skills provided to 500 adults and young people, of whom at least 50% are female</p> <p><b>2.2</b> Number of small-scale enterprises increases across target villages against 2015 baseline</p> <p><b>2.3</b> Agricultural and NTFP networks are created or strengthened, benefiting at least 8 villages. Relative participation of women and men will depend on gendered roles in agricultural and NTFP sectors</p> <p><b>2.4</b> By Y3 women and men in at least 250 households generate increased incomes from new enterprises, from 2015 baselines</p> <p><b>2.5</b> By Y3 at least 50% of women in households with bio-digesters that are successfully implemented spend reduced time collecting firewood</p> <p><b>2.6</b> Where bio-digesters are implemented successfully by the end of Y2 there is at least a 50% reduction in firewood as a household fuel, by the end of Y3</p>	<p>2.1 Marketing groups who will receive this dedicated training will be set up in Y2. The target of 500 adults and young people is quite ambitious.</p> <p>2.2 Marketing groups who will grow into small-scale enterprises will be set up in Y2.</p> <p>2.3 An appropriate indicator, product market mapping has taken place to understand current Agricultural and NTFP networks [See Market analysis report]</p> <p>2.4 Baseline data on annual income has been captured through a holistic methodology capturing all streams of income. This indicator specifies income improvements only through new enterprises however households may sell produce outside of these enterprises, so this information will also be captured.</p> <p>2.5 EWB supplied research [see Bio-digester report] has substantiated a reduction in time. This will be used alongside our own M&amp;E which will capture changes in time collecting firewood. This will be done through dedicated research and is not in the baseline. It is an appropriate measure.</p> <p>2.6 EWB supplied research [see Bio-digester report] has substantiated a reduction in fuel. This will be used alongside our own M&amp;E which will capture changes in firewood as a household fuel. This will be done through dedicated research and is not in the baseline. It is an appropriate measure.</p>

<p>have halved. This has just been picked up and is the reason for the change request.</p> <p><b>Consequences of non-approval:</b> An unrealistic target for project staff, perhaps leading to a focus on quantity over quality.</p>		
<p><b>Activity 2.1</b> Identify existing agricultural and NTFP networks, cooperatives and local harvesting of NTFPs, identify opportunities for creation/strengthening of networks, undertake market analysis for relevant NTFP and agricultural products, and identify different training needs of women and men in business and enterprise skills</p> <p><i>NB As for Activity 1.1, analysis of existing networks and capacity building needs will be gendered to ensure subsequent activities under Output 2 are tailored to the different contexts and needs of women and men.</i></p>		<p>Agricultural surveys and market mapping for priority products has been completed [see Bio-digester report]. This will be complemented by a brief value chain analysis in Q1 of Y2 by a new Project Coordinator. A training needs assessment will also occur in Y2 once marketing groups have been set up. Farmer exposure visits to district markets and key value chain actor meetings will take place in order to strengthen networks.</p>
<p><b>Activity 2.2</b> Provide business and enterprise skills training and support to small-scale initiatives that contribute to diversification of sustainable livelihoods, provide education and outreach to link the sustainable use of natural resources and development of sustainable diversified livelihoods</p>		<p>Activity will be completed in Y2.</p>
<p><b>Activity 2.3</b> Provide support to new and existing agricultural and NTFP network operations, sustainability and governance</p>		<p>Activity will be completed in Y2</p>
<p><b>Activity 2.4</b> Conduct training and provide support on application of bio-digester derived bio-gas as an energy alternative, to women in pilot households, and monitor the impact of bio-digesters at pilot households</p>		<p>14 bio-digesters have been installed and monitoring is taking place.</p>
<p><b>Activity 2.5</b> Set up frameworks and methods to enable ongoing monitoring and evaluation of forest use and income indicators</p>		<p>A thorough baseline and M&amp;E plan has been developed to monitor overall income indicators. Separate research will take place with participating households to measure specific income streams.</p> <p>Initial forest use data was captured by EWB however is insufficient to properly monitor changes over time. FFI will complete dedicated data collection at the start of Y2 to enable changes over time.</p>
<p><b>Output 3.</b></p> <p>By Y3 enable at least 8 villages (of 13 in the project area) to establish special measures to protect and conserve sacred and culturally important</p>	<p><b>3.1</b> By Y3 Asian elephant monitoring and protection programme is established across at least 3 villages, with indigenous communities as skilled custodians</p>	<p>3.1 We have wardens from three different villages patrolling areas and established a camera trap monitoring program, see Elephant Monitoring Summary</p>



<p>biodiversity including Siamese crocodiles and Asian elephants and their habitats</p>	<p><b>3.2</b> Project-level methodology established to monitor forest encroachment in at least 8 villages</p> <p><b>3.3</b> By Y3 the number of community patrol days for Siamese crocodile monitoring and protection increases by at least 25% from the 2015 baseline, led by indigenous communities across the 5 community-managed sanctuaries</p> <p><b>3.4</b> By Y3, at least a 50% reduction in prevalence of fishing nets in Siamese crocodile sanctuaries compared to 2015 baseline, and not more than 3 crocodiles lost to poaching or drowning in nets across 5 community-managed sanctuaries during the project period</p> <p><b>3.5</b> By the end of Y3, recommendations to government made for demarcation of key protected areas for elephant conservation</p> <p><b>3.6</b> Training provided to at least 1,000 (target includes 500 women) indigenous community members on their rights and official processes</p> <p><b>3.7</b> By the end of Y2 guidelines produced for indigenous communities to improve understanding of how to resolve land conflicts and seek local authority support</p>	<p>3.2 To be complete Q1 Y2, see Forest Monitoring System Draft</p> <p>3.3 We have seen a 52% increase in patrol days, see Crocodile Community Warden SMART reports and Section 3.2</p> <p>3.4 We have set a baseline on fishing nets, and there were 0 poaching or crocodile deaths in 2016; see Crocodile Community Warden SMART reports and Section 3.2</p> <p>3.5 This will be based on monitoring results, so will commence in Y3</p> <p>3.6 Activity will commence in Y2/Y3, indicator is relevant, targets are slightly ambitious</p> <p>3.6 Activity will take place in Y2, indicator is relevant.</p>
<p><b>Activity 3.1</b> Establish and support community-led Asian elephant monitoring and protection programme</p>		<p>This has been initiated, see section 3.1</p>
<p><b>Activity 3.2</b> Monitor forest encroachment using landscape-level analysis and ground-truthing of forest boundaries</p>		<p>Initial plans have been completed, see Forest Monitoring System, this will be completed Y2</p>
<p><b>Activity 3.3</b> Support and increase in patrol days for community-led Siamese crocodile monitoring and protection in crocodile sanctuaries</p>		<p>Ongoing, already seen a 52% increase in days, see Section 3.1</p>
<p><b>Activity 3.4</b> Undertake outreach and education on effects of fishing and nets on wild crocodiles and awareness raising on illegal fishing laws</p>		<p>This will be completed in Y2 &amp; Y3</p>

<p><b>Activity 3.5</b> Conduct surveys to identify key areas of elephant habitat connectivity and usage, and present recommendations for protected area demarcation to the government</p>	<p>This has been initiated with the deployment of camera traps, see Section 3.1, see Guidelines for occupancy &amp; camera trap</p>		
<p><b>Activity 3.6</b> Provide training and support to female and male indigenous community members and local government stakeholders on land rights and official processes, for a greater understanding of tenureship and its relation to forest conservation</p>	<p>Initial scoping discussions with human rights organisations has taken place and in Q1 or Y2 a consultant will conduct an in depth needs assessment for the indigenous populations related to their land rights. Materials and trainings will be developed based upon this.</p>		
<p><b>Activity 3.7</b> Set up frameworks and methods to enable ongoing monitoring and evaluation of forest encroachment and species conservation indicators</p>	<p>Species level monitoring is set with Community Wardens and camera traps, forest encroachment monitoring will be complete in Y2</p>		
<table border="1"> <tr> <td data-bbox="91 443 595 1129"> <p><b>Output 4.</b> Messages promoting the traditional knowledge and skills of indigenous people in the Cardamom Mountains have reached at least 10% of the Cambodian population by Y3, including government officials and other decision makers</p> </td> <td data-bbox="595 443 1093 1129"> <p><b>4.1</b> Assessment finalised during Y1 of existing information on indigenous knowledge and cultural values in the project area, to inform subsequent activities</p> <p><b>4.2</b> Stakeholder analysis completed during Y2 to identify priority audiences for messages</p> <p><b>4.3</b> By Y3 100 government staff trained on the rights of indigenous peoples and their skills/knowledge of environmental stewardship</p> <p><b>4.4</b> By Y2 communications materials have been developed and disseminated to priority audiences</p> <p><b>4.5</b> By Y3 mass media communications have reached at least 1.5 million Cambodians</p> </td> </tr> </table>	<p><b>Output 4.</b> Messages promoting the traditional knowledge and skills of indigenous people in the Cardamom Mountains have reached at least 10% of the Cambodian population by Y3, including government officials and other decision makers</p>	<p><b>4.1</b> Assessment finalised during Y1 of existing information on indigenous knowledge and cultural values in the project area, to inform subsequent activities</p> <p><b>4.2</b> Stakeholder analysis completed during Y2 to identify priority audiences for messages</p> <p><b>4.3</b> By Y3 100 government staff trained on the rights of indigenous peoples and their skills/knowledge of environmental stewardship</p> <p><b>4.4</b> By Y2 communications materials have been developed and disseminated to priority audiences</p> <p><b>4.5</b> By Y3 mass media communications have reached at least 1.5 million Cambodians</p>	<p>4.1 One dedicated report has been written and one more found [See Indigenous Knowledge Review].</p> <p>4.2 Indicator was changed from Y2 to Y1 as due to the three month delay in project start, this activity has been moved to Q1 Y2 and approved by Darwin.</p> <p>4.3 Activities are not relevant for year 1, indicator is appropriate if a bit ambitious. Activity due in Y2/3.</p> <p>4.4 Indicator is relevant. Activity due in Y2.</p> <p>4.5 Indicator is relevant but ambitious</p>
<p><b>Output 4.</b> Messages promoting the traditional knowledge and skills of indigenous people in the Cardamom Mountains have reached at least 10% of the Cambodian population by Y3, including government officials and other decision makers</p>	<p><b>4.1</b> Assessment finalised during Y1 of existing information on indigenous knowledge and cultural values in the project area, to inform subsequent activities</p> <p><b>4.2</b> Stakeholder analysis completed during Y2 to identify priority audiences for messages</p> <p><b>4.3</b> By Y3 100 government staff trained on the rights of indigenous peoples and their skills/knowledge of environmental stewardship</p> <p><b>4.4</b> By Y2 communications materials have been developed and disseminated to priority audiences</p> <p><b>4.5</b> By Y3 mass media communications have reached at least 1.5 million Cambodians</p>		
<p><b>Activity 4.1</b> Collate existing data on indigenous knowledge and cultural values of both women and men to inform project activities, and devise appropriate communications messaging</p>	<p>Several relevant past reports have been collated and one dedicated report has been written for FFI by a PhD student specialising on the indigenous community.</p>		
<p><b>Activity 4.2</b> Develop communications materials and identify key audiences for outreach and awareness on indigenous knowledge and skills and benefits for biodiversity conservation</p>	<p>A partnership has been made with a local advertising company called Melon Rouge Agency (MRA) to help professionally devise a communications strategy to best identify and reach key audiences. Preliminary meetings have gone well and a joint strategy meeting will take place in Q1 Y2.</p> <p>A poster depicting the role of indigenous communities in protecting the critically endangered Siamese Crocodile was created and given out to attendants to a</p>		

	conservation event at the Scholars Library [see poster in annex].
<b>Activity 4.3</b> Provide specific training to government counterparts on indigenous knowledge and skills and benefits for biodiversity conservation	Initial scoping of potential partners to implement this training has taken place, nothing has been confirmed.
<b>Activity 4.4</b> Set up frameworks and methods to enable ongoing monitoring and evaluation of communications indicators	This will be focused on in collaboration with MRA in Q1, Y2.

## 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
<b>Impact:</b> Cambodia's indigenous Khmer Daeum achieve a higher social status and living standards, and contribute effectively to the protection and recovery of Cambodia's Siamese crocodile and Asian elephant populations.			
<p><b>Outcome:</b></p> <p>At least 500 households across 8 indigenous villages in the Cardamom Mountains empowered to sustainably overcome poverty and hunger, and their roles in conserving globally threatened biodiversity are recognised nationally</p>	<p>0.1 For female and male members of at least 500 households (25% of HH in project area, number of hungry months is reduced by at least 25% by Year 3 from the 2015 baseline, through sustainably increased food production</p> <p>0.2 At least 500 households experience at least 25% increase in income by Year 3 from the 2015 baseline, from renewable NTFP enterprises and/or through sales of surplus crops</p> <p>0.3 Culturally and economically important wildlife (specifically including the sacred Siamese crocodiles and Asian elephants) and forest resources are under active protection and management by at least 8 villages by Y3</p> <p>0.4 At least 30% of commune, district and provincial government officials in the target sites are able to articulate the value of indigenous custodianship by Y3</p>	<p>0.1 Baseline and endline household survey reports including no. of hungry months</p> <p>0.2 Baseline and endline household survey reports</p> <p>0.3 Patrol and monitoring protocols</p> <p>0.4 Pre and post-training questionnaires</p> <p>At both outcome and output levels, participant lists for all activities disaggregated by sex; household survey instruments and training evaluation tools designed to elicit gendered differences in roles, knowledge and impacts for women and men</p>	<p>Rising living standards in target villages does not lead to influx of immigration and land-grabbing by non-indigenous peoples</p> <p>Willingness of lowland population to overcome prejudice against indigenous peoples in the mountains</p> <p>Political will to uphold laws protecting the rights of indigenous peoples</p> <p>Project team's specific efforts to overcome socio-cultural barriers to the participation of indigenous women and girls are successful</p>
<p><b>Output 1</b></p> <p>Hungry months of at least 500 target households are reduced by at least 25% from 2015 baselines, by building capacity to sustainably increase and diversify food production, through agricultural development</p>	<p>Across project area's target households:</p> <p>1.1 Improve average per-hectare yields of rice by 25% by Y3 based on the 2016 baseline</p> <p>1.2 Improve community level dietary diversity by Y3 based on the 2016 baseline</p> <p>1.3 1.3 By Y3 based on the 2016 baseline, produced and consumed farmed animals increases by 20%; wild caught animals decrease by 10%</p>	<p>1.1 Agricultural records, household survey report</p> <p>1.2 Baseline and endline household survey measuring UNFAO Dietary Diversity survey through a 30% representative sample size of the communities.</p> <p>1.3 Baseline and endline household survey monitoring: # farmed chickens produced</p>	<p>No unusual adverse weather/climatic conditions</p> <p>At least some project beneficiaries willing to overcome risk-averseness to try novel techniques</p>

	<p>1.4 By Y3 at least 40 HH bio-digester units installed and producing fertiliser</p> <p>1.5 In at least 5 villages community guard teams successfully reduce the number of incidents of human elephant conflict on cropland using non-lethal methods from 2015 baseline</p>	<p># farmed chickens consumed % of wild fish in diet</p> <p>1.4 Physical bio-digester installations</p> <p>1.5 Records of human-elephant conflict, household survey report</p>	
<p><b>Output 2</b></p> <p>By Year 3, women and men in at least 8 target villages adopt measures to promote their sustainable use of forest resources and at least 500 households generate increased revenue from renewable non-timber forest products (NTFPs), agricultural activities and sustainable enterprises</p>	<p>2.1 Training on business and enterprise skills provided to 500 adults and young people, of whom at least 50% are female</p> <p>2.2 Number of small-scale enterprises increases across target villages against 2015 baseline</p> <p>2.3 Agricultural and NTFP networks are created or strengthened, benefiting at least 8 villages. Relative participation of women and men will depend on gendered roles in agricultural and NTFP sectors</p> <p>2.4 By Y3 women and men in at least 250 households generate increased incomes from new enterprises, from 2015 baselines</p> <p>2.5 By Y3 at least 50% of women in households with bio-digesters that are successfully implemented spend reduced time collecting firewood</p> <p>2.6 Where bio-digesters are implemented successfully by the end of Y2 there is at least a 50% reduction in firewood as a household fuel, by the end of Y3</p>	<p>2.1 Training materials, attendance records</p> <p>2.2 Enterprise registration records, commune/village records, household surveys, NTFP/agricultural network records</p> <p>2.3 Paperwork for set-up of networks and operational protocols/guidelines/structures; network meeting records</p> <p>2.4 Household survey report, relevant community institution surveys</p> <p>2.5 Physical bio-digester installations, household survey report</p> <p>2.6 Household survey report</p>	
<p><b>Output 3</b></p> <p>By Y3 enable at least 8 villages (of 13 in the project area) to establish special measures to protect and conserve sacred and culturally important biodiversity including Siamese</p>	<p>3.1 By Y3 Asian elephant monitoring and protection programme is established across at least 3 villages, with indigenous communities as skilled custodians</p> <p>3.2 Project-level methodology</p>	<p>3.1 Training materials, monitoring plans and protocols, patrol data sheets</p> <p>3.2 Methodology protocol, GPS records, remote sensing and ground-truthing data and maps</p>	<p>Willingness of younger generation to protect animals that are traditionally sacred to their communities</p> <p>Government approval of new community</p>

<p>crocodiles and Asian elephants and their habitats</p>	<p>established to monitor forest encroachment in at least 8 villages</p> <p>3.3 By Y3 the number of community patrol days for Siamese crocodile monitoring and protection increases by at least 25% from the 2015 baseline, led by indigenous communities across the 5 community-managed sanctuaries</p> <p>3.4 By Y3, at least a 50% reduction in prevalence of fishing nets in Siamese crocodile sanctuaries compared to 2015 baseline, and not more than 3 crocodiles lost to poaching or drowning in nets across 5 community-managed sanctuaries during the project period</p> <p>3.5 By the end of Y3, recommendations to government made for demarcation of key protected areas for elephant conservation</p> <p>3.6 Training provided to at least 1,000 (target includes 500 women) indigenous community members on their rights and official processes</p> <p>3.7 By the end of Y2 guidelines produced for indigenous communities to improve understanding of how to resolve land conflicts and seek local authority support</p>	<p>3.3 Training materials, monitoring plans, patrol data sheets</p> <p>3.4 Sanctuary monitoring records</p> <p>3.5 Report with recommendations for demarcation submitted to government</p> <p>3.6 Training materials, attendance records</p> <p>3.7 Community guidelines on land conflict resolution mechanisms</p>	<p>protected areas is secured without unreasonable delays</p> <p>Political will of government agencies to establish and implement protocols to uphold the lawful rights of indigenous communities</p>
<p><b>Output 4</b></p> <p>Messages promoting the traditional knowledge and skills of indigenous people in the Cardamom Mountains have reached at least 10% of the Cambodian population by Y3, including government officials and other decision makers</p>	<p>4.1 Assessment finalised during Y1 of existing information on indigenous knowledge and cultural values in the project area, to inform subsequent activities</p> <p>4.2 Stakeholder analysis completed during Y2 to identify priority audiences for messages</p> <p>4.3 By Y3 100 government staff trained on the rights of indigenous peoples and their skills/knowledge of environmental</p>	<p>4.1 Research report on indigenous knowledge and cultural values</p> <p>4.2 Stakeholder analysis report</p> <p>4.3 Training materials, attendance records</p> <p>4.4 Communications materials (audio/video/print)</p> <p>4.5 Records of viewing/listening figures</p>	<p>Will of other record-keepers such as radio and other media stations to share data</p> <p>Recent research is correct in identifying the Khmer Daeum culture and traditions as having had a key part in preserving biodiversity in the Cardamom Mountains</p> <p>Increased knowledge leads to improved</p>



	<p>stewardship</p> <p>4.4 By Y2 communications materials have been developed and disseminated to priority audiences</p> <p>4.5 By Y3 mass media communications have reached at least 1.5 million Cambodians</p>		attitudes and behaviour
<p><b>Activities</b> (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)</p> <p><b>Output 1:</b> Hungry months of at least 500 target households are reduced by at least 25% from 2015 baselines, by building capacity to sustainably increase and diversify food production, through agricultural development</p> <p>1.1 Conduct surveys to inform agricultural output baselines, community-led identification of additional crops for introduction and harvesting.</p> <p>1.2 Provide agricultural training and ongoing support for rice intensification, support rice-growing techniques, provide technical expertise during cultivation and harvesting</p> <p>1.3 Provide agricultural training and ongoing support for crop diversification, support crop-growing techniques, provide technical expertise during cultivation and harvesting</p> <p>1.4 Pilot use of household-level aquaculture as a protein source alternative, establish baselines on household consumption of farmed vs wild-caught animals</p> <p>1.5 Install pilot bio-digesters, ensure maintenance of units and provide support for production and application of fertiliser, and monitor the impact of bio-digesters at pilot households</p> <p>1.6 Provide support and training for community guard teams on human-elephant conflict mitigation, and maintain communication and data collection methodologies</p> <p>1.7 Set up frameworks and methods to enable gendered monitoring and evaluation of agricultural indicators</p> <p>NB Activity 1.1 will be designed and implemented to enable project team to identify the different roles, skills, knowledge and interests of women and men. This gendered analysis will inform which of the other activities under this output are targeted at women, men or both, and ensure that training/support provided is relevant and accessible to each target group.</p> <p><b>Output 2:</b> By Year 3, women and men in at least 8 target villages adopt measures to promote their sustainable use of forest resources and at least 500 households generate increased revenue from renewable non-timber forest products (NTFPs), agricultural activities and sustainable enterprises</p> <p>2.1 Identify existing agricultural and NTFP networks, cooperatives and local harvesting of NTFPs, identify opportunities for creation/strengthening of networks, undertake market analysis for relevant NTFP and agricultural products, and identify different training needs of women and men in business and enterprise skills</p> <p>2.2 Provide business and enterprise skills training and support to small-scale initiatives that contribute to diversification of sustainable livelihoods, provide education and outreach to link the sustainable use of natural resources and development of sustainable diversified livelihoods</p> <p>2.3 Provide support to new and existing agricultural and NTFP network operations, sustainability and governance</p> <p>2.4 Conduct training and provide support on application of bio-digester derived bio-gas as an energy alternative, to women in pilot households, and monitor the impact of bio-digesters at pilot households</p> <p>2.5 Set up frameworks and methods to enable ongoing monitoring and evaluation of forest use and income indicators</p> <p>NB As for Activity 1.1, analysis of existing networks and capacity building needs will be gendered to ensure subsequent activities under Output 2 are tailored to the different contexts and needs of women and men.</p> <p><b>Output 3:</b> By Y3 enable at least 8 villages (of 13 in the project area) to establish special measures to protect and conserve sacred and culturally important biodiversity including Siamese crocodiles and Asian elephants and their habitats</p>			

- 3.1 Establish and support community-led Asian elephant monitoring and protection programme
- 3.2 Monitor forest encroachment using landscape-level analysis and ground-truthing of forest boundaries
- 3.3 Support and increase in patrol days for community-led Siamese crocodile monitoring and protection in crocodile sanctuaries
- 3.4 Undertake outreach and education on effects of fishing and nets on wild crocodiles and awareness raising on illegal fishing laws
- 3.5 Conduct surveys to identify key areas of elephant habitat connectivity and usage, and present recommendations for protected area demarcation to the government
- 3.6 Provide training and support to female and male indigenous community members and local government stakeholders on land rights and official processes, for a greater understanding of tenureship and its relation to forest conservation
- 3.7 Set up frameworks and methods to enable ongoing monitoring and evaluation of forest encroachment and species conservation indicators

**Output 4:** Messages promoting the traditional knowledge and skills of indigenous people in the Cardamom Mountains have reached at least 10% of the Cambodian population by Y3, including government officials and other decision makers

- 4.1 Collate existing data on indigenous knowledge and cultural values of both women and men to inform project activities, and devise appropriate communications messaging
- 4.2 Develop communications materials and identify key audiences for outreach and awareness on indigenous knowledge and skills and benefits for biodiversity conservation
- 4.3 Provide specific training to government counterparts on indigenous knowledge and skills and benefits for biodiversity conservation
- 4.4 Set up frameworks and methods to enable ongoing monitoring and evaluation of communications indicators

## Annex 3: Standard Measures

**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
6A	Number of people to receive other forms of education/training	Mixed	Cambodian	27	-	-	37	1050
6B	Number of training weeks to be provided	Mixed	Cambodian	0	-	-	0	0
7	Number of training materials inc. leaflets, posters, videos etc (type not volume) to be produced for use by host country	Mixed	Cambodian	1	-	-	1	7
9	Number of species/habitat management plans (or action plans) to be produced for Governments, public authorities, or other implementing agencies in the host country	NA	NA	0	-	-	0	2
11A	Number of papers to be published in peer reviewed journals	NA	NA	0	-	-	0	2
11B	Number of papers to be submitted to peer reviewed journals	NA	NA	0	-	-	1	2
12A	Number of computer based databases to be <b>established</b> and handed over to the host country	NA	NA	4	-	-	4	4
12B	Number of computer based databases to be <b>enhanced</b> and handed over to the host country	NA	NA	7	-	-	7	7
14A	Number of conferences/seminars/workshops to be <b>organised</b> to present/disseminate findings	Mixed	Cambodian	0	-	-	0	1
14B	Number of conferences/seminars/workshops <b>attended</b> at which findings from Darwin project work will be presented/ disseminated	NA	NA	0	-	-	0	3
20	Estimated value (£'s) of physical assets to be handed over to host country(ies)	NA	NA	0	-	-		0
21	Number of permanent educational/training/research facilities, structures, or <b>organisations</b> to be established and then continued after Darwin funding has ceased	NA	NA	0	-	-	0	0
22	Number of permanent field plots and sites to be established during the project and continued after Darwin funding has ceased	NA	NA	0	-	-		
23	Value of resources raised from other sources (e.g., in addition to Darwin funding) for project work	NA	NA	60,000 GBP	-	-		60,000 GBP

**Table 2 Publications--**

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

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

### **ANNEX 4 - Attachments**

- Annex 4.1.** CCCP 2 pager 2017
- Annex 4.2.** CECG 2 pager 2017
- Annex 4.3.** Bio-digester report 2016, EWB
- Annex 4.4.** Community Elephant Warden Datasheet Patrol Booklet
- Annex 4.5.** Community Elephant Warden SMART Report 2017
- Annex 4.6.** Crocodile Community Warden Datasheet Patrol Booklet
- Annex 4.7.** Crocodile Warden SMART Report 2015
- Annex 4.8.** Crocodile Warden SMART Report 2016
- Annex 4.9.** Market Analysis Report and Market Maps, PVT
- Annex 4.10.** SMART Summary Report Apr 2016 - Mar 2017
- Annex 4.11.** Socio-Economic Survey (Baseline questionnaire)
- Annex 4.12.** SE Baseline (Draft)
- Annex 4.13.** Elephant Monitoring Summary 2016-17
- Annex 4.14.** Forest Monitoring System Report
- Annex 4.15.** Guidelines for occupancy & camera trap
- Annex 4.16.** Indigenous knowledge review
- Annex 4.17.** Crocodile Poster
- Annex 4.18.** HEC Annual Report 2016
- Annex 4.19.** Participant tracking sheet
- Annex 4.20.** Croc leaflet
- Annex 4.21.** SMART and GPS training Elephant Wardens

## 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.	Y
<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.	Y (annexes)
<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.	Y
<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.	NA
Have you involved your partners in preparation of the report and named the main contributors	Y
Have you completed the Project Expenditure table fully?	Y
Do not include claim forms or other communications with this report.	



