



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)

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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)	Promvihearthor (PVT) Organization The Forestry Administration of the Royal Government of Cambodia Engineers Without Borders Australia
Darwin grant value	£311,177
Start/end dates of project	01 April 2016 - 30 June 2019
Reporting period (e.g., Apr 2017 – Mar 2018) and number (e.g., Annual Report 1, 2, 3)	April 2017 – March 2018 Annual Report 2
Project Leader name	Dr Jackson Frechette
Project website/blog/Twitter	www.fauna-flora.org
Report author(s) and date	Tim Bergman and Jackson Frechette, April 30 2018

1. Project rationale

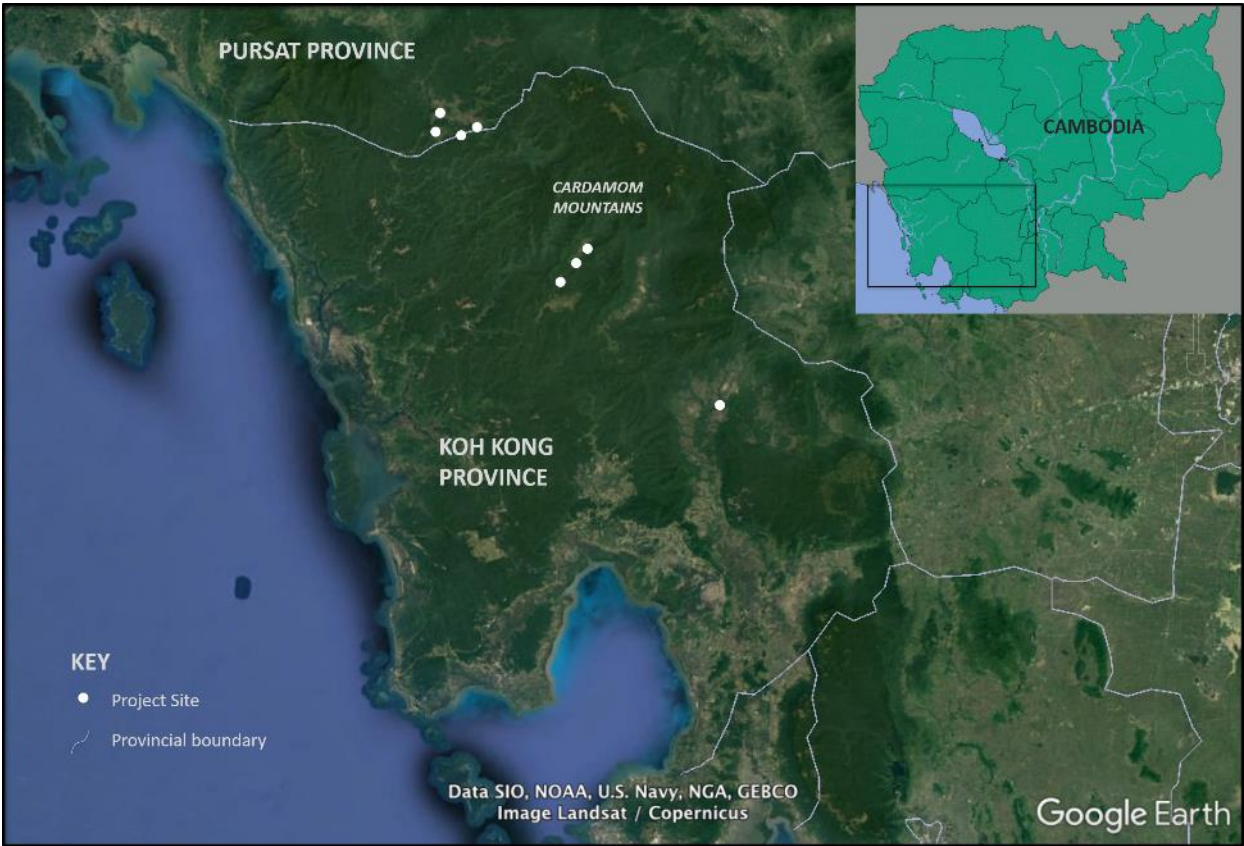
The focus of this project are the indigenous Khmer Daeum people, an isolated population living within one of the region's most diverse and important forest ecosystems. Working alongside the Khmer Daeum and other non-indigenous rural and marginalised communities, this project is designed to harness their 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 & income insecurity) and biodiversity challenges (habitat degradation, poor enforcement, encroachment, poaching, human-elephant conflict, unsustainable resource use) by empowering and achieving recognition of the 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 and 2016 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, 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 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)*. In addition, new collaborative partnerships have been formed this year, most notably with a private sector apothecary and spa company, *Bodia*, and *Hydrologic*, a water filter social enterprise.

Promvihearthor Organisation

PVT are the main implementing partner for outputs 1 and 2, focusing on delivering technical rice trainings and enterprise development. They are fully involved in project planning, monitoring and evaluation and decision making via two key mechanisms. Firstly, FFI and PVT each year co-create an annual activity plan, setting out the yearlong project schedule. Secondly, FFI meet PVT field staff every month to discussing the past month's activities, progress and challenges. This is facilitated by FFI however the input comes from PVT, and many of the suggestions and decisions come from joint discussion.

Coming in to the second year of this project, PVT were on probation due to low quality implementation, high staff over and insufficient management oversight throughout the first year. We are happy to report that they passed the probation, and have had a consistent team implementing activities to a good standard. One of the main challenges was poor management, therefore FFI adapted their staff roles and responsibilities, and have taken on increased management oversight. In addition, extra funding was found to expand the team to reduce pressures and enable focused implementation of team individuals. One particular challenge we faced was the difficulties in field staff working in such remote locations over a long period of time, especially when their families are based in other provinces. To resolve this, we worked with the partner to create a flexible work schedule where staff can work one weekend in a month, and take that time in lieu over a later weekend, thus allowing them to travel and see their families. One noticeable achievement has been the personal growth of one of the PVT staff, who joined a year ago as a field officer and has really progressed in skills and confidence to the benefit of the project, team and himself.

Engineers without borders

Since the completion of the bio-digester component of the project in year 1, there has been no more involvement with EWB.

Forestry Administration

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 two years 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.

New partnerships/collaboration

Bodia Apothecary and Spa

Bodia is a Cambodian apothecary and spa company working with one of the project enterprises who produce and sell lemongrass essential oil. FFI has been facilitating the connections between Bodia and the enterprise, whereby Bodia has been offering technical expertise on the building and use of the distillation unit, alongside being a buyer of the product. FFI has taken a facilitatory approach to the market systems strengthening element of the project, and Bodia has been a key private sector actor who have been very motivated and patient working with the project enterprise. Facilitating Bodia to come and visit the communities several times has been very beneficial for both Bodia and the community, in understanding the challenges and expectations or working together.

Hydrologic

Hydrologic are a Cambodian social enterprise who manufacture and sell ceramic water filters to the urban and rural Cambodian population. FFI collaborated with them in improving access to water filters for the remote populations. Hydrologic staff accompanied the project field team to the sites, and gave sales presentations to community members so that the community could buy the water filters straight from Hydrologic (at a subsidised rate). Through this market based approach, water filters were bought at an affordable price while not creating expectations of unsustainable NGO giving practices. Hydrologic were involved in the planning and decision making for this element of the project, alongside training FFI staff in water filter sales and maintenance to ensure proper use and sustainability.

3. Project progress

3.1 Progress in carrying out project Activities

Output 1: *Improved capacity among 8 target villages to sustainably increase and diversify food production.*

Based on community discussions, baseline data and the agricultural and market analysis of year 1, rice and chickens were decided as core products to improve production of in the villages. Project activities took a two pronged approach to enhancing production; firstly, project partners focused on improving in-situ technical ability on production techniques while promoting and supporting horizontal farmer to farmer knowledge sharing; Secondly, activities focused on improving market access for recommended agricultural inputs for the identified products.

To improve rice production, 15 farmers across three villages were identified to be role model farmers, and were supported to test the productivity of different seeds and farming techniques in order to understand which inputs and methods are contextually the most successful. The model farmers received around 5 individual coaching sessions each throughout the season, and best practices from this season were written up and will be integrated into the modules of next season.

Village level rice groups were also formed and project staff led a set of theoretical and practical training sessions to 116 participants across three villages and provided on-site support when necessary. Systemic Rice Intensification (SRI) techniques were promoted when contextually relevant, and both organic and Good Agricultural Practices (GAP) fertilizer and pest control methods were taught (see Annex 4.3 for full list of training modules).

One exposure visit was conducted for selected model farmers who were then to be trained as Village Rice Advisors who will have a more prominent role in Y3; conducting trainings, supporting other farmers and improving access to quality inputs in the villages.

With the exception of a late start to the group trainings due to partner staffing issues, all activities were carried out in the time and manner planned. At the end of the season, participating farmers saw an average increase rice yield increase of 9%. Please see Annex 4.3, *Year Two Summary Report: Rice production*, for all evidence.

To improve chicken production, this project implemented a 'paravet' model focusing on strengthening the technical capacity of farmers to raise poultry while simultaneously improving their access to high quality animal medicine, feed and veterinary care. This model was chosen for several reasons, one being that previously in these sites, poultry raising was only performed through traditional methods with no use of vaccinations, medication or biohazard controls, resulting in a chick mortality rate of around 65% and minimal commercial chicken raising.

The first stage of the project identified 5 demo farmers across three communes and coached them for one chicken production cycle. After this, the best and most committed farmers were selected to become a Village Poultry Advisor (VPA), also known as a paravet, and provided with a weeklong intensive top-up training. This training course focused on improving their

technical poultry raising abilities, including veterinary care, their facilitation skills and their business development skills (see annex 4.4). In addition to this, they were connected to trusted animal medicine suppliers. These VPAs then returned to their communes, each commune having two VPAs.

In the third stage of the project, 6 village-level chicken production groups were formed, and participants were trained in chicken production by the VPAs, supported by project staff. At the same time, one VPA per commune was supported to build an animal medicine enterprise, utilising the previous connections they had to trusted animal medicine companies. This resulted in the villagers having local access to high quality trusted chicken inputs and medicine, previously not available, in addition to a VPA or 'Paravet' who was able to identify, prevent and treat chicken diseases for the villages.

In the group trainings, throughout all the courses, at least 90% of participants left with medium or good understanding and knowledge of the topic, and the VPAs had, on average, a 75% increase in knowledge from low to high after their week long training course. By the end of this year, the average number of chickens produced by project participants in the past three months had increased by 95%, from 19 to 37. Evidence for all is provided in Annex 4.1, *Year 2 Indicator Tracking* and Annex 4.4, *Year 2 Summary Report: Chicken Production*.

Initially, this project span over three communes however due to local motivation and staff capacity, stage 2 and 3 continued in only two communes and six villages.

In 2017 we documented 85 incidences of Human-Elephant Conflict (HEC) occurring in five different villages (see HEC and Camera Trap Summary Report). This is an increase from the 2015 baseline of 74, and last year's 63 cases.

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 200 households generate increased revenue from, agricultural activities and sustainable micro-enterprises.*

In order to increase revenues from agricultural activities and micro-enterprises, while encouraging community members to adopt measures to sustainably use forest resources, three specific products which lead to sustainable use of forest resources and income generation, were identified and promoted; chickens, lemongrass essential oil and water filters. There has been good progress this year on activities promoting these products.

Chicken raising activities, as outlined above, led to increased chicken production which primary data has shown leads to increased chicken consumption and decreased wild meat/fish consumption (Annex 4.1). In addition, increased revenue is being made by both chicken group members who sell their chickens, reporting a 242% increase in income from chicken sales, and VPA micro-enterprises (Annex 4.1 and 4.4). VPA's have been supported by project activities to build their businesses, connect with private sector partners and improve their accounting.

The second product identified able to generate income and encourage sustainable use of forest resources was lemongrass essential oil. This was chosen due its high market demand, prevalence in the community, ability to be intercropped within local banana tree plantations, use as an Integrated Pest Management crop and because everyone in the community, poor and rich, already grew it. In addition, to make essential oil, one only needs to process the leaf, therefore the plant can be harvested up to 4 times year.

FFI scouted and identified a local private sector company called *Bodia Apothecary and Spa*, who highlighted their interest in sourcing some of the raw ingredients from Cambodian communities. A connections meeting was set up with the community and Bodia where they discussed their needs and expectations.

Project staff then facilitated the creation of producer groups which, due to the desire, ease and efficiency, turned into an enterprise group (which buys raw lemongrass from other villagers rather than a PG share based system). The enterprise was provided a course of business trainings, focusing building their knowledge and understanding in enterprise development,

business and markets. After the trainings, project staff facilitated the negotiation of a preliminary contract between Bodia and the Lemongrass Enterprise (LGE) in order to start a research phase.

The distillation unit was then constructed, funded by Project Partners, Bodia and the LGE members, and Bodia supplied technical trainings in lemongrass essential oil production and a research phase commenced. The research phase was initiated in order to test all the different contextual variables in order for the community to be as productive as possible. Project staff supported and a small grant was given to cover costs.

The community sold their first KG of essential oil to Bodia in January for \$120, themselves organising its transport from the rainforest to Phnom Penh, and 17 farmers from two villages have sold 859kg of lemongrass leaf to the LGE for \$107. In addition, six enterprise members have received wages totally \$204 for processing the oil (see Annex 4.2 for evidence).

Project activities have been on track, however the dry season has reduced the amount of lemongrass in the village, so production has slowed down until May/June. The community are about half way through the research phase which will continue into Year 3.

Lastly, water filters were identified as a third product which promotes the adoption of sustainable forest use. Water filter use reduces pressure on the forest through reducing fuel needs for boiling water, in addition to supplying life-saving access to clean water. Furthermore, clean water reduces risk of disease and diarrhoea, enabling nutrient absorption, better health and increased on-farm productivity.

To sustainably promote water filter access and use, FFI formed a strategic partnership with a local social enterprise called *Hydrologic* who produce and sell ceramic water filters in Cambodia. A price was agreed by Project staff, Hydrologic and the Commune Chief at \$5, a cost which the poorest could afford yet still high enough to be of value to the better off community members. Project funds subsidised the rest of the cost, which Hydrologic graciously set at cost price. Project staff facilitated Hydrologic to give sales presentations to one of the most remote communes, where they had zero water filters and where about 50% of the community drank raw water. Hydrologic gave sales presentations to the community and 116 villagers who were interested gave a \$1 deposit

Project staff then transported 116 water filters to the forest to the community, where the villagers collected and paid in full and received trainings in water filter use and hygiene.

Output 3: 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

We continued to support our seven Community Elephant Wardens from three different villages, and had already established Community Crocodile Wardens (from 10 different villages) to protect the community agreed upon crocodile sanctuaries (5). The ~50 camera traps which were deployed in year 1 to monitor elephants and threats are on-going with regular check-ups and analysis [see HEC and Camera Trap Summary Report]. The wardens were all trained in SMART data collection to monitor threats [see Annex 4.9 and 4.10, 2017 Crocodile and Elephant Warden SMART Reports].

Output 4: Communications campaign to raise awareness of the traditional knowledge and skills of indigenous and marginalized people in the Cardamom Mountains, and their role in protecting Cambodia's sacred and culturally important biodiversity.

In order to complete this output, FFI firstly compiled a summary of all existing data from Y1 research, and synthesised key points on the role of the Chong population in conservation, challenges they face, and parallels between Khmer and Chong Culture (see Annex 4.6.). FFI then enlisted the services of a professional creative agency called *Melon Rouge Agency* to help to review all data and to develop a messaging concept, strategy and stakeholder analysis (see Annex 4.7). A Facebook campaign was deemed the most impactful and after meetings with

local indigenous communities, interviews, photo and video media was taken, combined with relevant facts and information, and developed into Facebook posts. A six-month campaign strategy was formulated and three months was delivered at the end of Year 2.

All activities were on time and Melon Rouge Agency provided an excellent service.

3.2 Progress towards project Outputs

All indicators (found in Annex 1) are still relevant due to a log-frame modification process earlier in the year which was approved by the donor. Details of how the indicators are being monitoring and measured can be found in section 8 of this report.

Output 1: *Improved capacity among 8 target villages to sustainably increase and diversify food production*

Good progress has been made towards this output with likely achievement of all its indicators.

In year two, rice yields have increased by 9% across three villages, dietary diversity score has increased from 4.0 to 4.56, produced farmed animals have increased by 95% in 6 villages, consumed farmed animals have increased by 150% and VPAs are reporting a decrease in wild-meat/fish as a component of their diet (Annex 4.1).

In addition, 116 out of a total of 239 households across four villages bought a water filter, representing 50% of the population, all of which had never owned a water filter before (annex 4.2).

As reported in year 1, the bio-digesters failed and so were not continued (annex 4.1).

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 200 households generate increased revenue from, agricultural activities and sustainable micro-enterprises*

Good progress has been made towards Output 2 with likely achievement of all its indicators while Year 2 specific targets have been met.

In year two, targeted business and enterprise training courses were provided to two enterprises, the LGE and VPAs, both of which are up and running (Annex 4.2).

Three key market actor connection workshops were conducted to strengthen the market networks for three products; lemongrass essential oils, poultry medicine and water filters across 7 villages (Annex 4.2).

The average income in rice group members has risen from \$657.24 to \$697.50 (6% increase) and the average annual income for chicken members has risen from \$366.21 to \$384.9 (5% increase) (Annex 4.1). In addition, 17 Farmers from two villages sold 859kg of lemongrass leaf to the LGE for \$107, making on average \$6.30 per household and 6 enterprise members have received wages totalling \$204 for working on the distillation unit.

Output 3: *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*

2017 was the first full year of support for our Community Elephant Wardens. They patrolled 2717 km across 195 patrol days in key elephant habitat areas. We used SMART to monitor their patrols in which they identified elephant sign and observations as well as threats (see 2017 Elephant Warden SMART report). It is unclear how reliable their data collection of snares observed is, so this may be requiring follow-up training. The wardens also worked with our team in the maintenance of our camera ~50 camera traps for elephant population monitoring.

We have now a protocol set for monitoring land use change across all 12 villages. The first forest cover analysis of the project area has been drafted (see Annexed Land Cover Change Report) for all but the three villages around Chhay Reap. In total we have seen minimal forest clearance into the protected areas. This report will be further refined, but for the covered areas 5,300 ha of forest was lost. Much of this was in community land, although O'Som saw clearance of more forested land in the protected areas lost.

In 2017 our 32 community crocodile wardens patrolled 18,247 km across 314 patrol days in 5 Siamese crocodile sanctuaries (see 2017 Crocodile Warden SMART Report). This constitutes a 162% increase over the 2015 baseline of 192 patrol days and a 735% increase of the 2,483 km patrolled. We also found no crocodiles dead from poaching or in nets. Wardens observed 12 fishing nets in the sanctuaries, a modest decrease from the 18 seen last year (baseline).

We continue to support two non-government teachers in two villages where children would not get access to school otherwise. This has included salary support, and the provision of textbooks (including environmental educational materials) and stationary to over 80 students in both communities.

Additionally, we distributed 60 wildlife posters to visitors to Phnom Tamao Zoo. Conducted two outreach to trips to Kampong Thom where we distributed 220 fan posters about elephant conservation to both kids at schools and tourists. We distributed 80 posters about crocodiles and indigenous communities to young kids at school. We played conservation awareness games with students, with animal colouring books as prizes, and had a competition of answering the question after we played biodiversity videos. At night we played videos to 50 villagers about nature in Cambodia. We also provided each villager with an animal conservation themed fan poster. Also distributed notebooks, posters, school supplies to 170 students and other villagers in 5 villages.

Output 4: *Communications campaign to raise awareness of the traditional knowledge and skills of indigenous and marginalized people in the Cardamom Mountains, and their role in protecting Cambodia's sacred and culturally important biodiversity.*

Very good progress has been made on output 4, with all of the indicator targets being hit in year 2, and with three months left of the communications campaign to go.

The Year 1 research on indigenous knowledge and cultural values was synthesised into a brief report (Annex 4.6) and then both a stakeholder analysis and specifically designed communications materials were designed to promote the role of indigenous communities in protecting Cambodia's landscapes, both of which can be found in Annex 4.5 and 4.7.

The social media campaign has reached 252,092 Cambodians with an average monthly engagement of 7,387 individuals (Annex 4.5), surpassing indicator targets.

3.3 Progress towards the project Outcome

We believe that the project is likely to achieve all outcomes by the end of funding and that all indicators are adequate for measuring the intended outcomes.

Project Outcome

At least 350 households across 8 villages of indigenous and marginalised populations in the Cardamom Mountains, are empowered to strengthen food security, and engage in effective conservation of globally threatened biodiversity.

Outcome indicators

0.1 For female and male members of at least 350 households (25% of HH in project area), number of hungry months is reduced by at least 25% by Year 3 from the 2015 baseline.

A sample of hunger month data was taken across rice group members and chicken group members. Average hunger months for rice group members has decreased from 2.96 to 1.89 (37% decrease) and the average hunger months from chicken group members has decreased from 5.1 to 3.6 (31% decrease) (Annex 4.1). This are promising results and we believe the project is likely to achieve this outcome indicator.

0.2 At least 200 households experience increase in income as a result of project activities by Year 3, with an average income increase of 20% from project baseline.

Progress has been good, increases in income as a result from project activities can be seen from both the Lemongrass essential oil enterprise and chicken production. As a result of the LGE, 17 Farmers from two villages sold 859kg of lemongrass leaf to the LGE for \$107, making on average \$6.30 per household and 6 enterprise members have received wages totalling \$204 for working on the distillation unit, in addition to \$120 for selling their first KG of oil (Annex 4.2). The average income gained from chicken production in the last three months from chicken group participants has increased from \$12.83 to \$41.71, a 242% increase (Annex 4.1).

In terms of average income changes, the average annual income of the rice group members has risen from \$657.24 to \$697.50 (6% increase) and the average annual income for chicken group members has risen from \$366.21 to \$384.9 (5% increase) (Annex 4.1).

0.3 By Y3, project beneficiaries report increased wellbeing from participation in project activities, uncovered through deep dive case studies focusing on at least 6 different project actors and shorter, wellbeing focused questions in the end line survey.

This will be completed at the end of year 3.

0.4 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

Community wardens from 12 different villages patrol, monitor and protect five crocodile sanctuaries and three key elephant habitats.

0.5 By end of project, knowledge and recognition of the role of indigenous and marginalised communities in protecting and conserving Cambodia's culturally important/globally threatened biodiversity is increased as reported by a sample of the population in response to a project administered Facebook questionnaire.

This will be completed in year 3 at the end of the communications campaign.

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.

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.

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 but project is managing them fine.

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

Comments: The initial market analysis was of sufficient if not high standard, what has been more important has been finding active and driven core market actors along the product value chains which has been achieved for lemongrass essential oils and chickens.

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. But now all the forested areas around the villages are legally protected National Parks or Wildlife Sanctuaries which the government is working towards zoning and working the communities to co-manage community use zones.

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.

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

Comments: Less relevant as changed from a radio campaign to a Facebook campaign where we have access to all data.

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. Our endline surveys will pick up on the impacts of these initiatives, but anecdotally, the paravets report increasing their chicken consumption and decreasing their wild meat and wild fish consumption (annex 4.1). The protective support of the crocodile wardens has meant that we could release seven captive reared Siamese Crocodiles into the wild, boosting the wild population of this critically endangered species and helping its recovery.

Impact on poverty alleviation

A major focus of this project is poverty alleviation which is implemented through activities focusing on sustainably improving food and income security. Working with indigenous and marginalised agrarian dependent communities who suffer from over 3 hunger months a year due to poor rice yields and low incomes, this project has had a positive impact on poverty alleviation in various streams; improving on-farm productivity (increased rice yields by 9%, increased chicken production by 95%); income generating opportunities (key product market systems strengthened and micro-enterprises developed, leading to increased incomes from those products); and improved access to clean water (facilitated sale of 116 water filters).

Recognising the multi-dimensionality of poverty alleviation, the impact of these activities this year has specifically led to reduced hunger months, improved dietary diversity and increased meat consumption. We also predict that gains in health through water filter use and psychological wellbeing, especially for the female participants, will ensue, however this is to be evaluated in year 3.

Evidence for all figures and statements shown can be found in Annex 4.1 and 4.2.

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

In the 2017 – 2018 Financial Year, for SDGs The SDGs 1. No Poverty, 2. Zero Hunger, 12. Responsible consumption and production and 15. Life on land are relevant to our project.

SDG 1 – No Poverty

Overall average incomes have improved by 6% and 5% respectively for members for the rice groups and chicken groups. Chicken group members make an average of 242% more income from chickens than before, and the 6 LGE members have made an average of \$38 from salary. In addition, 17 local farmers have sold 859kg of lemongrass for \$107 (Annex 4.1 and 4.2 for evidence).

SDG 2 – Zero hunger

Rice yields have increased by 9% and rice group members have decreased hunger months by 36% and chicken group members decrease by 29%. (Annex 4.1)

SDG 12 – Responsible consumption and production

Organic and Good Agricultural Practices (GAP) have been promoted and taught to farmers, improving their responsible production techniques.

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).

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 39 community wardens to patrol and protect these traditionally revered species and habitats using the SMART approach (Aichi 2, 5, 11, 12, 14, 18) [see SMART Reports].

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 20 Critically Endangered Siamese crocodiles into sanctuaries in 2016, 2017, and 2018. 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).

Our Facebook media campaign has raised awareness of species protection and biodiversity value within the country (Aichi 1, 2) and 116 waterfilters have been sold 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

Poverty alleviation is a predominant focus of this project, specifically for marginalised and indigenous populations located in Cambodia's Cardamom mountains. Direct impacts of this project include improving food and income security via technical trainings on identified high impact products including, chickens, rice and lemongrass essential oil, alongside strengthening their corresponding market systems and core market actors (see section 3.1 and 3.2).

This year, hunger months have decreased by 36% for rice group members and 29% for chicken group members, rice yields have risen by 9%, incomes have been generated from all three key products and 116 water filters have been sold to families otherwise 50% likely to not treat their water at all (see annex 4.1 and 4.2 for evidence).

Through implementing all our activities through a market-based approach alongside a horizontal knowledge sharing system, we hope that this project will continue to contribute to local poverty alleviation in the long run.

7. Project support to gender equality issues

This project takes a gender sensitive approach, and while it may include gender transformative impacts, these will not be specifically evaluated until the end of the project.

Female participation is tracked for all trainings with a target of 50% which is often exceeded. Within the enterprise and marketing activities, trainings had 75% female participation and 48% of all coaching was to women. For Rice, 60% of participants receiving training were female and

41% of all coaching was to women. Within the chicken related activities, groups trainings had 51% female participation and 20% of all coaching was to women.

This project aims to support women to hold leadership positions within the community which can promote them to be role models for other women and potentially lead to a change in gendered social norms. 83% of the Lemongrass enterprise member are female, 33% of the Village Rice Advisors are female and 25% of the Village Rice Advisors are female. For evidence please see all Year 2 summary reports found in Annex 4.2/3/4.

Notably this year, both the strongest VPA and member of the LGE are female, and we are providing them with additional support and encouragement. We expect that these women will grow this year to be both strong role models within their communities for younger women to look up to, but also to grow as individuals which may lead to changes in their household power relations.

In addition to this, through increased income generation from the project activities, household income decision making power may be improved, however this will be evaluated at the end of year 3.

8. Monitoring and evaluation

Robust online and offline monitoring systems have been put in place to ensure the project efficiency and effectiveness. On a monthly basis, field teams submit participation activity data prior to monthly meetings which the FFI Project Manager, field staff and partner staff participate in. These meetings review the month's work and discuss successes, challenges and solutions. On-site spot checks and informal feedback discussions are had with the communities.

To monitor impact and results, quarterly data collection takes place for chicken groups members and bi-annual rice data collection. LGE data is collected on a monthly basis due to it still being in research phase. Pre-tests and post-test are given for training activities and data is recorded and analysed to see what elements may need more focus (see all Y2 summary reports for data).

Data forms have been adapted throughout the year to streamline the processes and ensure the correct data is being collected. FFI has also conducted trainings to partner staff on data collection and data entry. A project database has been created to keep an overall picture of all activities. This M&E strategy has been adapted throughout to reduce unnecessary admin while ensuring the capture of relevant data.

9. Lessons learnt

We came into this year with a very weak project partner, with big issues in management oversight and implementation. With this in mind, FFI invested a lot of human resources into the hiring of a new partner field team and a restructuring of the project staff. In addition, FFI's Project Manager held monthly meetings with partner field staff in the field, and had a close managerial oversight for eight months, while investing a lot of time into building the capacity of the partner Project Coordinator. For the final four months of the year, more managerial responsibilities was handed over and there is now a confident partner field team. Their upper management however, is still weak and un-motivated. If we were to do this differently, we would structure higher level FFI staff in the field from the start, for oversight, support and capacity development.

The locations of our sites are incredibly isolated, hard to reach and time consuming to get there. To visit one of the sites necessitates a 4-hour motorbike trip then a 10-hour boat ride during rainy season. To keep up energy and morale for our field team, we took on a flexible work schedule where, once a month, staff could work a weekend and then take those days as

compensation leave at the end of the month as a four-day weekend. This allows them to see their families, rest and recuperate for the next month. Low staff retention is a common issue in Cambodia, and one we suffered from in the first year, this year however, has been a lot better.

In this year, we have also tightened up our reporting structures which has helped for oversight and catching issues before then grow into bigger problems. I would recommend others working with low capacity partners to put time into developing simple workplan templates and regular reporting systems in order to have structural oversight.

Our decision to take a market-based approach to all of our interventions, for the moment, seems to be working well, and looks to be a sustainable methodology. Traditional community development approaches have a lot of failure in Cambodia due to the commonality of non-homogenous or cohesive communities, a remnant of recent history, which is magnified in this context as the communities this project works with comprise of ex-khmer rouge, indigenous populations and outsider individuals all together. We see taking this approach as one of the biggest strengths of this project and would recommend other partners in project development to consider it.

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

The comments from the last annual report focused on modifying the logframe and realigning several indicators, this has been completed and approved.

11. Other comments on progress not covered elsewhere

After a visit from LTS from a mid-term review, a thorough analysis of the logframe was taken and changes were made. An output focusing on providing indigenous rights trainings was removed due to the deteriorating political climate in Cambodia, which would have made the activities high risk and low impact. In addition, the inclusion of enhancing the market system and local access to water filters was added, due to its low cost and high impact on health and conservation.

12. Sustainability and legacy

This project has been promoted at national workshops and international conferences including; UNFAO Symposium on Agro-Ecology; *Darwin Initiative 25 Year Celebration* at Westminster where the project was personally discussed with Secretary of State for Environment, Food and Rural Affairs Michael Gove and Sir David Attenborough. In addition, an article was written and published in the Christian Science Monitor (see Annex 4.8), which, using Meltwater software analysis, had a reach of over 1 million readers.

Sustainability is a core element of this project and is promoted via several streams; All activities focus on incorporating and enhancing local knowledge which will stay in the community, while promoting horizontal farmer to farmer learning. In addition, a market-based approach has been taken so that the transition of knowledge is incentivised by profit, a model which works well in Cambodia due to the complexities of their recent history often resulting in non-homogenous or cohesive communities. A market-based approach, strengthening core market actors, allows both the knowledge and inputs needed for improved agriculture, to continue after the life of the project.

The on-going species specific conservation activities are part of a long-term approach with additional fundraising being secured to allow for continued support into the future. Our projects focused on capacity building and collaboration with the government stakeholders has ensured that species conservation is a primary concern of the government and will be a focus into the future. Especially the recovery of flagship species such as the Siamese crocodile and Asian elephant.

13. Darwin identity

This year, the Darwin logo has been most prominently publicised in our communications campaign, which had a total reach of over 252,000 people, where the Darwin logo is presented at the end of all video's. It is also on our work shirts which we wear to conferences and while in the field. In addition, this project has its own page and link on Fauna & Flora International's website. The Communications Campaign can be found at www.facebook.com/FaunaFloraCambodia/

14. Project expenditure

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

Current Year's Costs	2017/18 Grant (£)	2017/18 Total actual Darwin Costs (£)	Variance %	Comments (please explain any variance)
Staff costs	£	£	0%	
Consultancy costs	£	£	2%	
Overhead costs	£	£	3%	
Travel & Subsistence	£	£	2%	
Operating costs	£	£	2%	
Capital items	£	£	0%	
Monitoring & Evaluation	£	£	-8%	
Others	£	£	10%	
Audit Cost	£	£		
Total		£	0%	

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>Impact</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>There has been good progress towards improving living standards of local communities through the rise in incomes and strengthening food security. The social status of the Khmer Daeum has been promoted by the successful implementation of a communications campaign promoting their role in protecting Cambodia's landscape. The community wardens have lead patrols in critical elephant and crocodile habitat, successfully deterring threats and maintaining a monitoring programme.</p>	
<p>Outcome.</p> <p>At least 350 households across 8 villages of indigenous and marginalised populations in the Cardamom Mountains, are empowered to strengthen food security, and engage in effective conservation of globally threatened biodiversity</p>	<p>0.1 For female and male members of at least 350 households (25% of HH in project area), number of hungry months is reduced by at least 25% by Year 3 from the 2015 baseline.</p> <p>0.2 At least 200 households experience increase in income as a result of project activities by Year 3, with an average income increase of 20% from project baseline.</p> <p>0.3 By Y3, project beneficiaries report increased wellbeing from participation in project activities, uncovered through deep dive case studies focusing on at least 6 different project actors and shorter, wellbeing focused questions in the end line survey.</p>	<p>0.1 Progress is on track, during Y2, rice group members decreased hunger months by 36% and chicken group members decrease by 29%.</p> <p>0.2 Progress in on track, rice group members have had a 6% increase income. Chicken group members have had a 5% increase income. VRA has had a 500% increase in income. 20% overall increase in income is ambitious.</p> <p>0.3 To be monitored next year.</p> <p>0.4 We trained and supported Community Wardens representing 12 villages who patrol and protect 5 crocodile sanctuaries and 3 key elephant habitats</p> <p>0.5 Good progress in Y2, the communication campaign has been specifically designed, targeted and</p>	<p>0.1 Expand rice group and initiate rice purification activities to purify the local seeds.</p> <p>0.2 Expand chicken group activities, strengthen VPAs and focus on weak chicken groups in O'Soam and the input market chain in O'Soam.</p> <p>0.3 Implement deep dive case studies</p> <p>0.4 Continue support</p> <p>0.5 Create and implement Facebook questionnaire to monitor depth of understanding of population from communications campaign.</p>

	<p><i>0.4 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</i></p> <p><i>0.5 By end of project, knowledge and recognition of the role of indigenous and marginalised communities in protecting and conserving Cambodia's culturally important/globally threatened biodiversity is increased as reported by a sample of the population in response to a project administered Facebook questionnaire.</i></p>	<p>has reached over 250,000 individuals in its first three months.</p>	
<p>Output 1. Improved capacity among 8 target villages to sustainably increase and diversify food production</p>	<p><i>1.1 Improve average per-hectare yields of rice by 25% in 5 beneficiary villages by Y3 for 2016 baseline</i></p> <p><i>1.2 Improve community level dietary diversity in 8 beneficiary villages by Y3 based on the 2016 baseline</i></p> <p><i>1.3 By Y3 based on the 2016 baseline, produced and consumed farmed animals increases by 20% in four villages; wild caught animals decrease as a component of diet.</i></p>	<p><i>1.1 Good progress and indicator still appropriate. Rice yields have increased by 9%, evidence provided in Annex 4.1.</i></p> <p><i>1.2 Good progress and indicator still appropriate. A sample of 81 respondents over 7 villages showed an improved dietary diversity from 4.0 (baseline) to 4.56, evidence provided in Annex 4.1.</i></p> <p><i>1.3 Good progress and indicator still appropriate. Chicken production has a increased by 95% and consumed chickens increased by 150% across five villages, evidence provided in Annex 4.1. Monitoring of wild caught animals will take place in Y3.</i></p> <p><i>1.4 Indicator appropriate, 14 bio-digesters were pilots with minimal success so not continued as part of the project. Evidence provided in Annex 4.1.</i></p> <p><i>1.5 Indicator appropriate, there were no successful bio-digesters implemented. Evidence provided in Annex 4.1.</i></p>	

	<p>1.4 By end year 2, 14 bio digesters piloted in upland sites and results fed back to inform project implementation</p> <p>1.5 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>1.6 By end Y3 and based on project baseline, 50% increase in water filter use across 4 villages, resulting in improved household safe water drinking practices and reduced household diarrhoea resulting in improved nutrient absorption, health, productivity and food security.</p> <p>1.7 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>1.6 Good progress and indicator still appropriate. The project facilitated the sale of 116 water filters across 5 villages and data has been collected on safe drinking practices to be monitored, evidence provided in Annex 4.1.</p> <p>1.7 Guard teams saw a slight increase in HEC in 2017, see HEC Summary Report</p>
<p>Activity 1.1 Conduct surveys to inform agricultural output baselines, community-led identification of additional crops for introduction and harvesting.</p>		<p>Completed and reported in Y1.</p>
<p>Activity 1.2. Provide agricultural training and ongoing support for rice intensification, support rice-growing techniques, provide technical expertise during cultivation and harvesting</p>		<p>First full rice season completed, Y3 will see another full course of rice production training, this time to additional farmers.</p>
<p>Activity 1.3 Provide agricultural training and ongoing support for crop diversification, support crop-growing techniques, provide technical expertise during cultivation and harvesting</p>		<p>This activity no longer is relevant to the revised logframe.</p>

<p>Activity 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>Instead of aquaculture, Y1 analysis resulted in an official change to Chicken raising instead as it was more effective and efficient. Baselines have been taken and village poultry advisors and chicken groups have been trained. See section 3.1 for details.</p>								
<p>Activity 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>Completed in Y1.</p>								
<p>Activity 1.6 Provide support and training for community guard teams on human-elephant conflict mitigation, and maintain communication and data collection methodologies</p>	<p>This is an ongoing process. HEC incidents often fluctuate year to year. Moving forward though, we will move towards a co-existence approach, using more education and outreach, greater support of the local officials to hear complaints, and we will seek non-confrontational approaches that reduce overall conflict</p>								
<p>Activity 1.7 Set up frameworks and methods to enable gendered monitoring and evaluation of agricultural indicators</p>	<p>General baseline taken at project start, and all producer groups have individual baselines taken to track individual progress and learning for more targeted monitoring, learning, adapting and accountability.</p>								
<p>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 200 households generate increased revenue from, agricultural activities and sustainable micro-enterprises</p>	<table border="1"> <tr> <td data-bbox="618 614 1104 774"> <p><i>2.1 Targeted business and enterprise training courses provided to five enterprises, 2 by the end of end of year 3.</i></p> </td> <td data-bbox="1104 614 2096 774"> <p>2.1 Good progress and indicator still appropriate. Two business and enterprise training courses provided in year 2; one to the lemongrass essential oil enterprise (LGE), see <i>Annex 4.2</i> for evidence; one provided to Village Poultry Advisors (VPA), see <i>Annex 4.4</i>.</p> </td> </tr> <tr> <td data-bbox="618 774 1104 949"> <p><i>2.2 Four profitable small-scale enterprises created in target villages, supported by the project, two up and running by the end of year two.</i></p> </td> <td data-bbox="1104 774 2096 949"> <p>2.2 Good progress and indicator still appropriate. Both LGE and one VPA are running profitable businesses. See <i>Annex 4.2</i> and <i>4.4</i> for evidence.</p> </td> </tr> <tr> <td data-bbox="618 949 1104 1220"> <p><i>2.3 By end of project, key market networks are created or strengthened for 2 key products in at least 6 villages and by end of year 2, two market actor connection workshops successfully implemented.</i></p> </td> <td data-bbox="1104 949 2096 1220"> <p>2.3 Good progress and indicator still appropriate. Key market network strengthened and market actor connections workshops facilitated for chickens and lemongrass essential oil across 7 villages. See <i>Annex 4.2 and 4.4</i> for evidence.</p> </td> </tr> <tr> <td data-bbox="618 1220 1104 1441"> <p><i>2.4 By Y3, women and men in at least 200 households generate increased incomes from new enterprises. Overall average annual incomes increase by 20%.</i></p> </td> <td data-bbox="1104 1220 2096 1441"> <p>2.4 Good progress and indicator still appropriate. Chicken group members make an average of 242% more income from chicken than before, and the 6 LGE members have made an average of \$38 from salary. In addition, 17 local farmers have sold 859kg of lemongrass for \$107, See <i>Annex 4.2</i>. Overall average incomes have improved by 6% and 5% respectively for members for the rice groups and chicken groups. See <i>Annex 4.1</i> for evidence.</p> </td> </tr> </table>	<p><i>2.1 Targeted business and enterprise training courses provided to five enterprises, 2 by the end of end of year 3.</i></p>	<p>2.1 Good progress and indicator still appropriate. Two business and enterprise training courses provided in year 2; one to the lemongrass essential oil enterprise (LGE), see <i>Annex 4.2</i> for evidence; one provided to Village Poultry Advisors (VPA), see <i>Annex 4.4</i>.</p>	<p><i>2.2 Four profitable small-scale enterprises created in target villages, supported by the project, two up and running by the end of year two.</i></p>	<p>2.2 Good progress and indicator still appropriate. Both LGE and one VPA are running profitable businesses. See <i>Annex 4.2</i> and <i>4.4</i> for evidence.</p>	<p><i>2.3 By end of project, key market networks are created or strengthened for 2 key products in at least 6 villages and by end of year 2, two market actor connection workshops successfully implemented.</i></p>	<p>2.3 Good progress and indicator still appropriate. Key market network strengthened and market actor connections workshops facilitated for chickens and lemongrass essential oil across 7 villages. See <i>Annex 4.2 and 4.4</i> for evidence.</p>	<p><i>2.4 By Y3, women and men in at least 200 households generate increased incomes from new enterprises. Overall average annual incomes increase by 20%.</i></p>	<p>2.4 Good progress and indicator still appropriate. Chicken group members make an average of 242% more income from chicken than before, and the 6 LGE members have made an average of \$38 from salary. In addition, 17 local farmers have sold 859kg of lemongrass for \$107, See <i>Annex 4.2</i>. Overall average incomes have improved by 6% and 5% respectively for members for the rice groups and chicken groups. See <i>Annex 4.1</i> for evidence.</p>
<p><i>2.1 Targeted business and enterprise training courses provided to five enterprises, 2 by the end of end of year 3.</i></p>	<p>2.1 Good progress and indicator still appropriate. Two business and enterprise training courses provided in year 2; one to the lemongrass essential oil enterprise (LGE), see <i>Annex 4.2</i> for evidence; one provided to Village Poultry Advisors (VPA), see <i>Annex 4.4</i>.</p>								
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<p><i>2.4 By Y3, women and men in at least 200 households generate increased incomes from new enterprises. Overall average annual incomes increase by 20%.</i></p>	<p>2.4 Good progress and indicator still appropriate. Chicken group members make an average of 242% more income from chicken than before, and the 6 LGE members have made an average of \$38 from salary. In addition, 17 local farmers have sold 859kg of lemongrass for \$107, See <i>Annex 4.2</i>. Overall average incomes have improved by 6% and 5% respectively for members for the rice groups and chicken groups. See <i>Annex 4.1</i> for evidence.</p>								

Activity 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		Agricultural surveys and market analysis were completed in Y1 with a focus on chickens and lemongrass essential oil as core products. Training needs were assessed and gaps in business and enterprise were identified courses were given. In Y3, more training will be given when necessary.
Activity 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		These activities were completed (see above), and will be continued into year three, expanding to more small enterprises and supporting existing ones.
Activity 2.3 Provide support to new and existing agricultural and NTFP network operations, sustainability and governance		These activities have been completed however will continue into Y3 with the focus on lemongrass essential oil and chicken value chains.
Activity 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		Completed in Y1.
Activity 2.5 Set up frameworks and methods to enable ongoing monitoring and evaluation of forest use and income indicators		Completed and will continue to be monitored in Y3.
Outcome 3. 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><i>3.1 By Y3 Asian elephant monitoring and protection programme is established across at least 3 villages, with indigenous communities as skilled custodians</i></p> <p><i>3.2 Project-level methodology established to monitor forest encroachment in at least 8 villages</i></p> <p><i>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 and marginalised communities across the 5 community-managed sanctuaries</i></p>	<p>3.1 We have wardens from three different villages patrolling areas and established a camera trap monitoring program, see 2017 Elephant Wardens SMART report and HEC and Camera Trap Monitoring Summary</p> <p>3.2 Protocol is finished and analyses are underway, see Land Cover Change Draft Report</p> <p>3.3 We have seen a 162% increase in patrol days, see 2017 Crocodile Community Warden SMART Report and Section 3.2</p> <p>3.4 We saw a 66% reduction from the baseline of fishing nets in the sanctuaries, and there were 0 poaching or crocodile deaths in 2016 and 2017; see 2017 Crocodile Community Warden SMART Report and Section 3.2</p> <p>3.5 This will commence in Y3</p> <p>3.6 We have conducted several local outreach sessions, see section 3.2, as well as run the Facebook media campaign, Annex 4.5.</p>

	<p><i>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</i></p> <p><i>3.5 By the end of Y3, recommendations to government made for demarcation of key protected areas for elephant conservation</i></p> <p><i>3.6 By the end of Y3, increased local understanding of the importance of, and human impact on, key target species.</i></p>	
<p>Activity 3.1 Establish and support community-led Asian elephant monitoring and protection programme</p>		<p>This activity has been initiated and support is ongoing, see 2017 Community Elephant Warden SMART report</p>
<p>Activity 3.2 Monitor forest encroachment using landscape-level analysis and ground-truthing of forest boundaries</p>		<p>This has been initiated and initial Land Cover Change report has been drafted, see Annex</p>
<p>Activity 3.3 Support and increase in patrol days for community-led Siamese crocodile monitoring and protection in crocodile sanctuaries</p>		<p>Ongoing, 2017 saw a 162% increase in patrol days</p>
<p>Activity 3.4 Undertake outreach and education on effects of fishing and nets on wild crocodiles and awareness raising on illegal fishing laws</p>		<p>Communities have agreed on no-fishing zones in the crocodile sanctuaries. We have posters up in every village. In Y3 we will have community meetings to re-affirm the commitment to the sanctuaries.</p>
<p>Activity 3.5 Conduct surveys to identify key areas of elephant habitat connectivity and usage, and present recommendations for protected area demarcation to the government</p>		<p>Camera trap monitoring is ongoing, see HEC and Camera Trap Summary Report. We are currently working with the Ministry of Environment to see demarcation complete in key areas in Y3.</p>
<p>Activity 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</p>		<p>This activity has been redacted due to the sensitive nature of Cambodia's political climate. This redaction was approved by CR request.</p>

Activity 3.7 Set up frameworks and methods to enable ongoing monitoring and evaluation of forest encroachment and species conservation indicators		Species level monitoring is set with Community Wardens and camera traps, forest encroachment monitoring protocols are set and analyses are being finalized.
Output 4. Communications campaign to raise awareness of the traditional knowledge and skills of indigenous and marginalized people in the Cardamom Mountains, and their role in protecting Cambodia's sacred and culturally important biodiversity.	<p><i>4.1 Assessment finalised during Y1 of existing information on indigenous knowledge and cultural values in the project area, to inform subsequent activities</i></p> <p><i>4.2 Stakeholder analysis completed during Y2 to identify priority audiences for messages</i></p> <p><i>4.3 By Y2 communications materials have been designed and developed to specifically targeted priority audiences to promote the role of the indigenous communities in protecting Cambodia's landscapes</i></p> <p><i>4.4 By Y3, social media communications campaign has reached 250,000 Cambodians with at least 7000 individuals engaging directly on posts per month of the campaign.</i></p>	<p>4.1 Indicator appropriate and completed during Y1.</p> <p>4.2 Indicator appropriate and completed, see Annex 4.7 for evidence.</p> <p>4.3 Indicator appropriate and completed, see Annex 4.7 for evidence.</p> <p>4.4. Indicator appropriate and communication campaign has reached 252,098 Cambodians with an average monthly engagement of 7,387 individuals, see Annex 4.5 for evidence.</p>
Activity 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		<i>Completed in Y1</i>
Activity 4.2 Develop communications materials and identify key audiences for outreach and awareness on indigenous knowledge and skills and benefits for biodiversity conservation		<i>Completed in Y2, see annex 4.7 for evidence.</i>

<p>Activity 4.3 Provide specific training to government counterparts on indigenous knowledge and skills and benefits for biodiversity conservation</p>	<p>Redundant due to change in logframe, approved through CR request.</p>
<p>Activity 4.4 Set up frameworks and methods to enable ongoing monitoring and evaluation of communications indicators</p>	<p>Facebook analytics is being utilised to monitoring effectiveness of the campaign, see <i>Communications Campaign Report 2018</i> for evidence, and an interactive Facebook survey will be implemented in Y3 to evaluate the impact of the Campaign.</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>Impact: 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>Outcome: At least 350 households across 8 villages of indigenous and marginalised populations in the Cardamom Mountains, are empowered to strengthen food security, and engage in effective conservation of globally threatened biodiversity.</p>	<p><i>0.1 For female and male members of at least 350 households (25% of HH in project area), number of hungry months is reduced by at least 25% by Year 3 from the 2015 baseline.</i></p> <p><i>0.2 At least 200 households experience increase in income as a result of project activities by Year 3, with an average income increase of 20% from project baseline.</i></p> <p><i>0.3 By Y3, project beneficiaries report increased wellbeing from participation in project activities, uncovered through deep dive case studies focusing on at least 6 different project actors and shorter, wellbeing focused questions in the end line survey.</i></p> <p><i>0.4 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</i></p> <p><i>0.5 By end of project, knowledge and recognition of the role of indigenous and marginalised communities in protecting and conserving Cambodia's culturally important/globally threatened biodiversity</i></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 Qualitative in-depth interviews/wellbeing surveys e.g WEDC SL Framework</p> <p>Project actors inclu. VPAs, VRAs, f/m rice group members, f/m chicken group members, enterprise group members</p> <p>0.4 Patrol and monitoring protocols</p> <p>0.5 Interactive Facebook 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>

	<i>is increased as reported by a sample of the population in response to a project administered Facebook questionnaire.</i>		
Output 1. Improved capacity among 8 target villages to sustainably increase and diversify food production	<p><i>1.1 Improve average per-hectare yields of rice by 25% in 5 beneficiary villages by Y3 for 2016 baseline</i></p> <p><i>1.2 Improve community level dietary diversity in 8 beneficiary villages by Y3 based on the 2016 baseline</i></p> <p><i>1.3 By Y3 based on the 2016 baseline, produced and consumed farmed animals increases by 20% in four villages; wild caught animals decrease as a component of diet.</i></p> <p><i>1.4 By end year 2, 14 bio digesters piloted in upland sites and results fed back to inform project implementation</i></p> <p><i>1.5 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</i></p> <p><i>1.6 By end Y3 and based on project baseline, 50% increase in water filter use across 4 villages, resulting in improved household safe water drinking practices and reduced household diarrhoea resulting in improved nutrient absorption, health, productivity and food security.</i></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 # 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>No unusual adverse weather/climatic conditions</p> <p>At least some project beneficiaries willing to overcome risk-averseness to try novel techniques</p>

	<i>1.7 By Y3, 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</i>		
<p>Output 2.</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 200 households generate increased revenue from, agricultural activities and sustainable micro-enterprises</p>	<p><i>2.1 Targeted business and enterprise training courses provided to five enterprises, 2 by the end of end of year 3.</i></p> <p><i>2.2 Four profitable small-scale enterprises created in target villages, supported by the project , two up and running by the end of year two.</i></p> <p><i>2.3 By end of project, key market networks are created or strengthened for 2 key products in at least 6 villages and by end of year 2, two market actor connection workshops successfully implemented.</i></p> <p><i>2.4 By Y3, women and men in at least 200 households generate increased incomes from new enterprises. Overall average annual incomes increase by 20%.</i></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>Outcome 3.</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 crocodiles and Asian elephants and their habitats</p>	<p><i>3.1 By Y3 Asian elephant monitoring and protection programme is established across at least 3 villages, with indigenous communities as skilled custodians</i></p> <p><i>3.2 Project-level methodology established to monitor forest encroachment in at least 8 villages</i></p> <p><i>3.3 By Y3 the number of community patrol days for Siamese crocodile monitoring and</i></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>3.3 Training materials, monitoring plans, patrol data sheets</p> <p>3.4 Sanctuary monitoring records</p>	<p>Willingness of younger generation to protect animals that are traditionally sacred to their communities</p> <p>Government approval of new community protected areas is secured without unreasonable delays</p> <p>Political will of government agencies to establish and implement protocols to</p>

	<p><i>protection increases by at least 25% from the 2015 baseline, led by indigenous and marginalised communities across the 5 community-managed sanctuaries</i></p> <p><i>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</i></p> <p><i>3.5 By the end of Y3, recommendations to government made for demarcation of key protected areas for elephant conservation</i></p> <p><i>3.6 By the end of Y3, increased local understanding of the importance of, and human impact on, key target species.</i></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>uphold the lawful rights of indigenous communities</p>
<p>Output 4.</p> <p>Communications campaign to raise awareness of the traditional knowledge and skills of indigenous and marginalized people in the Cardamom Mountains, and their role in protecting Cambodia's sacred and culturally important biodiversity.</p>	<p><i>4.1 Assessment finalised during Y1 of existing information on indigenous knowledge and cultural values in the project area, to inform subsequent activities</i></p> <p><i>4.2 Stakeholder analysis completed during Y2 to identify priority audiences for messages</i></p> <p><i>4.3 By Y2 communications materials have been designed and developed to specifically targeted priority audiences to promote the role of the indigenous communities in protecting Cambodia's landscapes</i></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) and facebook analytics reports.</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 attitudes and behaviour</p>

	<p><i>4.4 By Y3, social media communications campaign has reached 250,000 Cambodians with at least 7000 individuals engaging directly on posts per month of the campaign.</i></p>		
<p>Activities (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>Output 1:</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>Output 2:</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>Output 3:</p> <p>3.1 Establish and support community-led Asian elephant monitoring and protection programme</p>			

- 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:

- 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

Co de 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	714	-	741	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	6	-	7	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	1	-	1	2
11A	Number of papers to be published in peer reviewed journals	NA	NA	0	0	-	0	2
11B	Number of papers to be submitted to peer reviewed journals	NA	NA	0	0	-	0	2
12A	Number of computer based databases to be established and handed over to the host country	NA	NA	4	0	-	4	4
12A 12B	Number of computer based databases to be enhanced and handed over to the host country	NA	NA	7	0	-	7	7
14A	Number of conferences/seminars/workshops to be organised to present/disseminate findings	Mixed	Cambodian	0	0	-	0	1
14B	Number of conferences/seminars/workshops attended at which findings from Darwin project work will be presented/ disseminated	NA	NA	0	1	-	1	3
20	Estimated value (£'s) of physical assets to be handed over to host country(ies)	NA	NA	0	0	-		0
21	Number of permanent educational/training/research facilities, structures, or organisations to be established and then continued after Darwin funding has ceased	NA	NA	0	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	0	-	0	0
23	Value of resources raised from other sources (e.g., in addition to Darwin funding) for project work	NA	NA	60,000 GBP	100,000 GBP	-	160,000 GBP	60,000 GBP

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)

Checklist for submission

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