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 about 10 pages in length, excluding annexes*

Submission Deadline: 30 April

Darwin Project Information

Project Reference	20-014
Project Title	Conserving biodiversity and reducing poverty through wildlife-friendly farming in Cambodia
Host Country/ies	Cambodia
Contract Holder Institution	Wildlife Conservation Society (WCS)
Partner institutions	Sansom Mlup Prey (SMP), Imperial College London, Ministry of Environment (MoE), Ministry of Agriculture, Forestry and Fisheries (MAFF)
Darwin Grant Value	**£249,951**
Funder (DFID/Defra)	Defra
Start/end dates of project	**Start date:**1 April 2013 **End date:** 31 March 2016
Reporting period (e.g., Apr 2015 – Mar 2016) and number (e.g., Annual Report 1, 2, 3)	April 2014 - March 2015, Annual Report 2
Project Leader name	Ross Sinclair
Project website/blog/Twitter	www.wcscambodia.org
Report author(s) and date	Simon Mahood, Alistair Mould, Ashish John; 17 April 2015

1. Project Rationale

The forests and wetlands of northern Cambodia and the Tonle Sap Biosphere Reserve are of exceptional importance for biodiversity conservation, lying within the Indo-Burma Biodiversity Hotspot and including two of the Global 200 Ecoregions. The region supports over 30 Globally Threatened species, including 8 listed as Critically Endangered. The remaining populations of these species are found almost entirely within a complex of protected areas that cover the range of forested and wetland habitat types. These protected areas are heavily threatened by over-hunting and conversion to agriculture, driven by the local resident human population from existing villages (which pre-date the parks) and agro-industrial concessions. The local people are amongst the poorest in Cambodia, and are dependent upon the forest and land resources of the parks for their livelihoods. Cambodia's Poverty Reduction Strategy Paper particularly prioritises these people who are stuck in a cycle of poverty owing to remoteness of location, limited market access and insecure land tenure. Reconciling the development needs of local people whilst meeting national and global objectives for biodiversity conservation is therefore a critical question in Cambodia. This project was identified based upon WCS's long-term work on-the-ground at the sites and our research programme with Imperial College.

The outcome of the project will be to reduce deforestation rates across 300,000 hectares of three protected areas in Cambodia by 25-50%, protect globally significant populations of highly threatened species, support the livelihoods of up to 10,000 local residents through greater land

security and greater incomes, increase understanding regarding how to integrate poverty reduction and conservation, and build the capacity of local partners to sustain the project outcomes. This will be achieved through the implementation of an innovative, payment for environmental services scheme that links poverty reduction to successful conservation of forests and critically endangered species through conditional agreements.

The project works across three protected areas, Preah Vihear Protected Forest (PVPF), Kulen Promtep Wildlife Sanctuary (KPWS) and Bengal Florican Conservation Areas (BFCAs), totalling over 450,000 hectares of forest and wetland that supports 20,000 people and over 30 globally threatened species, including Asian elephant and six Critically Endangered birds (e.g. Giant Ibis and Bengal Florican).

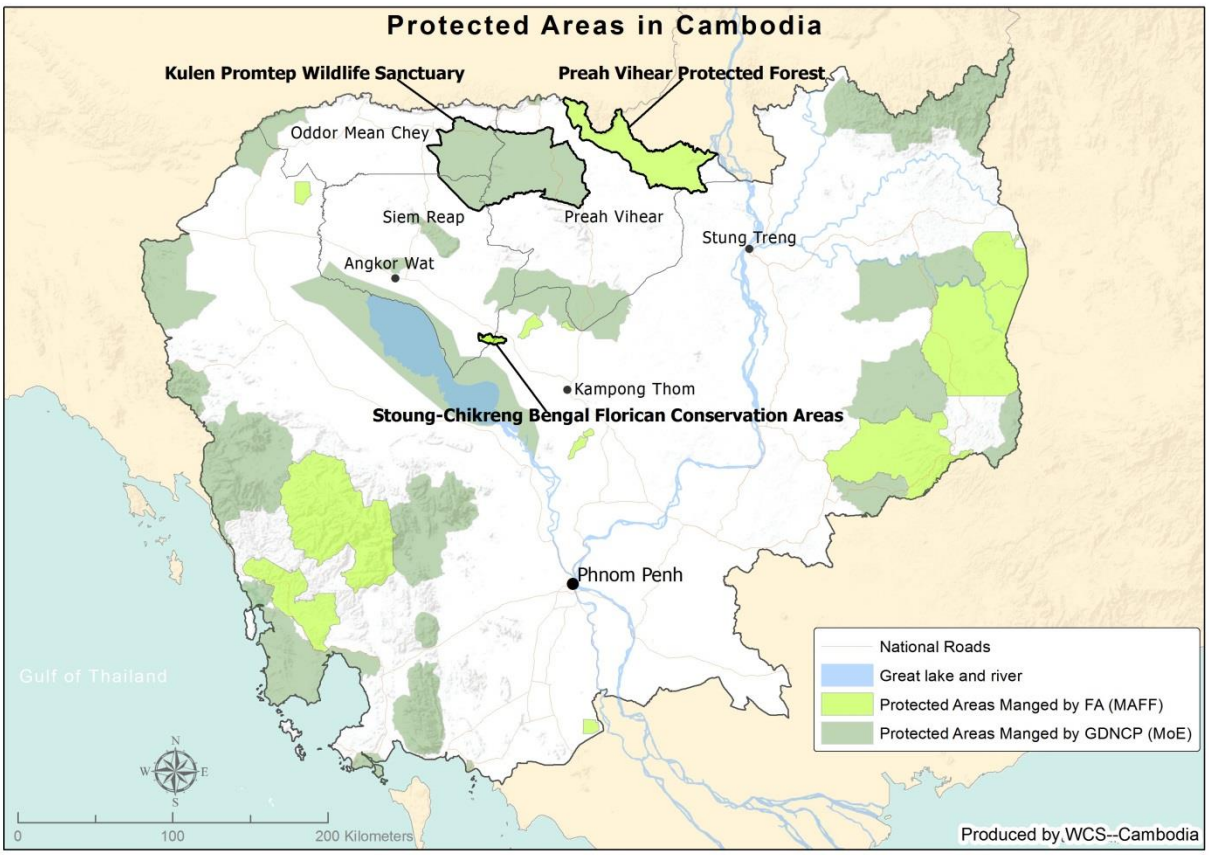

Figure 1: Project Sites

2. Project Partnerships

WCS has worked in partnership with the Forestry Administration (FA) of the Ministry of Agriculture, Forestry and Fisheries (MAFF) and the Ministry of Environment (MOE), under our MoU, to conserve the project sites since 1999. These partnerships have continued through the Darwin project, with FA and MOE counterpart staff playing an active role in the management of the target protected areas. With support and oversight from WCS, the staff from each ministry are responsible for implementation of protected area management activities in areas under their jurisdiction. Within these areas they are responsible for protecting the forest, ensuring that land-use plans are adhered to and that the rights of local people to access resources within appropriate zones are respected. The technical support and oversight provided by WCS ensures that these activities are completed to the highest standard possible, including respecting the rights of local people and their development aspirations.

In the second year of the project, WCS addressed challenges expressed by FA and MOE counterpart staff in conducting and managing project activities in the context of increased pressure on natural resources resulting from in-migration of people. A massive increase in road construction and agro-industrial development has led to an increase in illegal activities. This has been addressed through training government partners in SMART – a spatial tool that

facilitates adaptive management of patrol activities – and providing logistical and financial support to land-use planning and law enforcement skills.

The Ibis Rice project is also undertaken in partnership with Sansom Mlup Prey (SMP), the Cambodian-run civil society organisation that works with farmers to implement Ibis Rice. Under the Darwin project, WCS continues to work closely with SMP, providing financial and technical support. During the past year, WCS has assisted SMP in hiring a new director, who has added dynamism to the team and developed a new business plan for Ibis Rice.

Imperial College London (ICL) has partnered with WCS to design and implement high-quality research on the impacts of environment and development programmes in Cambodia since 2008. The international standard research design and data collection skills have been put to use in the field with counterparts from the Royal University of Cambodia (RUPP) accompanying an ICL student who is studying impacts of the project on livelihoods and well-being, and conducting research into the impact of agricultural techniques change on threatened species. The research data collection phase is currently completed.

3. Project Progress

In the second year of this three-year award, the project has accomplished all tasks and activities on time, making considerable progress towards the overall goal of ensuring the long-term conservation of biodiversity and maintenance of ecosystem services in Cambodia's protected areas. It has demonstrated a rights-based approach to local planning by securing land-tenure for local communities within protected areas. The size of the Ibis Rice scheme has doubled during the reporting period, helping a greater number of people than ever before to achieve their development aspirations, and incentivising sustainable resource-use across three protected areas.

3.1 Progress in carrying out project activities

All planned activities have been accomplished according to the timetable submitted.

Activities 1.1-1.6; Output 1: 2,000 households (10,000 people) taking part in the Ibis Rice initiative.

During 2014-5, SMP conducted monthly consultation meetings in 18 local villages regarding Ibis Rice (*Activity 1.1*). Village Marketing Networks (VMNs) were formed and farmer agreements signed in an additional 7 villages, bringing the total number of participating villages to 18 in the projects' second year (*Activity 1.2*). This exceeds our goal of 15 functioning VMNs. In each village, WCS facilitated participatory discussions between the VMNs and community members to refine and agree conditional agreements relating to hunting of threatened species and forest clearance (based on the agreed land-use plan) which form the basis of the Ibis Rice regulations. As a result of these meetings, 192 new households agreed to join the scheme (*Activity 1.3*). A record number of farmers are now taking part in the Ibis Rice initiative: nearly 1,000 households in total (4,865 people).

SMP provided training and rice seed (5,000 kg) to farmers who needed them (*Activity 1.4*), and together with the VMNs and the village authorities, identified eligible farmers to sell rice through the scheme (*Activity 1.5*). Eligible farmers are those that have adhered to the Ibis Rice regulations, which are monitored by the VMN and the WCS Cambodia Compliance Unit. A total of 510.2 tons of Ibis Rice was bought from 341 eligible households (*Activity 1.6*) during the harvest between November 2014 and March 2015.

Activities 2.1-2.3; Output 2: Land-use planning conducted in 9 additional villages (15 total).

Land use planning activities were conducted in an additional 7 villages (*Activity 2.1*), bringing to 18 the number of villages with land-use planning activities underway or completed. As described under Activities 1.1-1.6, we have continued to expand the Ibis Rice scheme to some of these new villages with agreed land-use plans. In fact we have already exceeded our expected output under indicator 2.1 to 18 villages with land-use planning activities underway or

completed. During 2014-2015, three land-use plans were agreed with the protected areas, local authorities and the villagers (*Activity 2.2*).

Following national elections in mid-2013 the zonation process in KPWS progressed rapidly with a total of 68,365 ha in 31 villages finalised as community zones (*Activity 2.3*). Additional to the community zonation process (mapping of residential and agricultural land), Community Protected Areas (CPA's) in 8 villages were mapped and agreed upon by commune councils and relevant government authorities with a further 5 CPAs awaiting final approval from national level authorities (total of 19,661 ha). These processes have assisted in securing land tenure for 7,131 households, whilst legalising access to forest resources and reducing additional habitat loss. The community zonation process will continue with another four villages within KPWS in 2015-2016.

Activities 3.1-3.3; Output 3: Implementation of land-use plans by Government agencies (FA and MoE)

The project has mainstreamed land-use planning into protected area management through training of the two main government agencies (FA and MoE) regarding implementation of the land-use plans and improved protected area management (*Activity 3.1*). Twenty-three FA and MoE staff have received additional training in protected area management and implementation of land-use plans, with a focus on improving staff capacity and patrolling efficiency. In March 2014 WCS provided technical support and training in the recently developed conservation software 'Spatial Monitoring And Reporting Tool' (SMART). This has enabled government protected area managers to efficiently analyse and interpret field patrol data, facilitating adaptive management that allows them to evaluate and set appropriate patrol targets and measure their success. Owing to the roll-out of SMART, in 2014 patrol strategies were refined and areas of increased human activity were targeted. Set against a backdrop of increases in illegal logging and encroachment, improvements in protected area management have resulted in better protection of forest resources.

Regular monitoring of forest cover in KPWS and PVPF has been undertaken by WCS using Landsat 6 satellite images (*Activity 3.2*). These results have been shared with the two main government agencies and are used as a basis for discussion over land-use planning decisions (*Activity 3.3*).

Activities 4.1-4.3; Output 4: Bird nest monitoring and protection.

We advertised for bird nest protectors in Ibis Rice villages and provided them with training to ensure their effectiveness in protecting threatened bird species (*Activity 4.1*). Across the two Protected Areas, 78 local people from 18 villages were directly employed to protect nests of threatened birds. A total of 270 nests were protected, fledging 449 chicks (*Activity 4.2*). The activity of the nest protectors and the outcome of protected nests was monitored by the WCS rangers (*Activity 4.3*).

Activities 5.1-5.3; Output 5: Ibis Rice PES programme is self-financing and sustainable.

Two out of the three activities listed in Output 5 are ongoing and SMP is progressing towards financial independence. Total sales in 2014/5 amounted to $166,879, from $121,433 the previous year (Figure 2). Ibis Rice is currently sold in 60 wholesale, 65 retail and 157 individual outlets, an increase of 82 on the previous year (Activity 5.2).

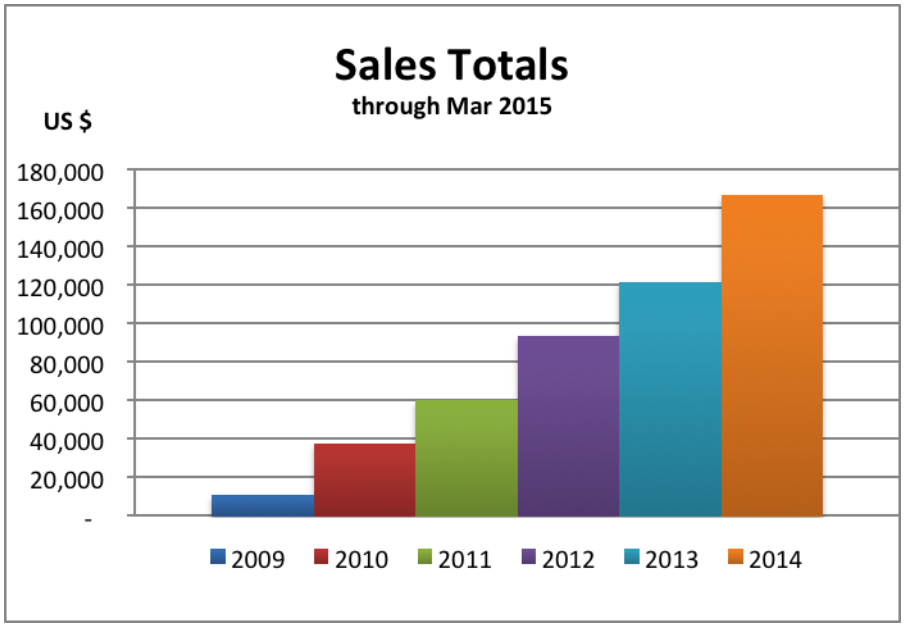

Figure 2. Total Annual Ibis Rice sales from retail and wholesale outlets

Activities 6.1-6.3; Output 6: Impact evaluation monitoring.

Household surveys were conducted by WCS and Imperial College London between July and December 2015, covering 1,130 households across 20 villages. The results will be available later in 2015. They will provide evidence towards the change in poverty status at the household level between 2008 and 2014, as well as between 2011 and 2014, comparing participants and non-participants in the PES programme.

The surveys also looked at defining the impacts of the programme on a wider set of wellbeing indicators, including perceptions of security of access to land and forest resource, fairness of the interventions; and trust in local institutions such as the Village Marketing Network and the Community Protected Area committee.

3.2 Progress towards project outputs

Output 1: 2,000 households from 15 villages engaged in Ibis Rice

VMN membership has grown from 707 households in 2012 to **973 households** as of the 2014-15 harvest season (Figure 3; Indicator 1.1). This represents a substantial increase from 2008, when only 264 households were participating. The rate of increase is slower than that predicted at the start of the project at it has reached only 50% of its target of 2,000 households. A total of **341 households** (Indicator 1.2) from 13 participating villages adhered to conservation agreements and sold over 510.2 tonnes of fragrant paddy rice to SMP (510,245 kg). This is a 17.1% increase over last buying season. The proportion of participating households selling rice into the scheme is relatively low. There are two reasons for this. Firstly, the level of compliance with conservation agreements has declined as the project has grown, due to inherent difficulties in monitoring at scale, and due to socio-economic changes in the operating environment that have increased opportunities for illegal activity. New roads and Economic Land Concessions (large scale rubber and sugar plantations) have brought a wave of migrant workers to the region and opened up routes for timber and wildlife traders, all of which create potentially lucrative means of obtaining income. In recognition of this, a strategic decision has been taken to reduce the rate of expansion of Ibis Rice, focussing instead on increasing compliance of existing VMN members in order to increase conservation gains, and create social change towards a society that broadly values sustainable resource use. As such, Indicator 1.1 is not an accurate measure of the conservation benefits of the Ibis Rice scheme, although it remains a useful metric for gauging its scale. At the same time, SMP have recruited a new business manager, who has re-focussed the organisation on consolidation rather than rapid growth, in order to ensure that there is always a market for all of the rice that compliant farmers produce.

Taken together, these factors mean that it is unlikely that the project will reach its target of 2,000 households under Indicator 1.1, or its target under Indicator 1.2, which is to a large extend dependent on the scale of Indicator 1.1. At this stage in the project we believe that it would be prudent to revise downwards the targets under Indicators 1.2 and 1.2, to 1,500 households and 1,000 households respectively.

In contrast, targets under Indicator 1.3 were exceeded. A total of **18 villages** currently have functioning VMNs (Indicator 1.3), which is greater than our target goal of 15 villages. On top of the four that existed at the start of the project, we added five functioning VMNs during the first year of the project and an additional seven during the second year (Figure 3). The VMNs are the institutions through which the project delivers a change in attitudes towards natural resource use. This process has been slower than anticipated, because the project team must work with each VMN individually at a pace that their members are comfortable with, to develop the land-use plans and regulations that form the basis for the Ibis Rice conditional agreements.

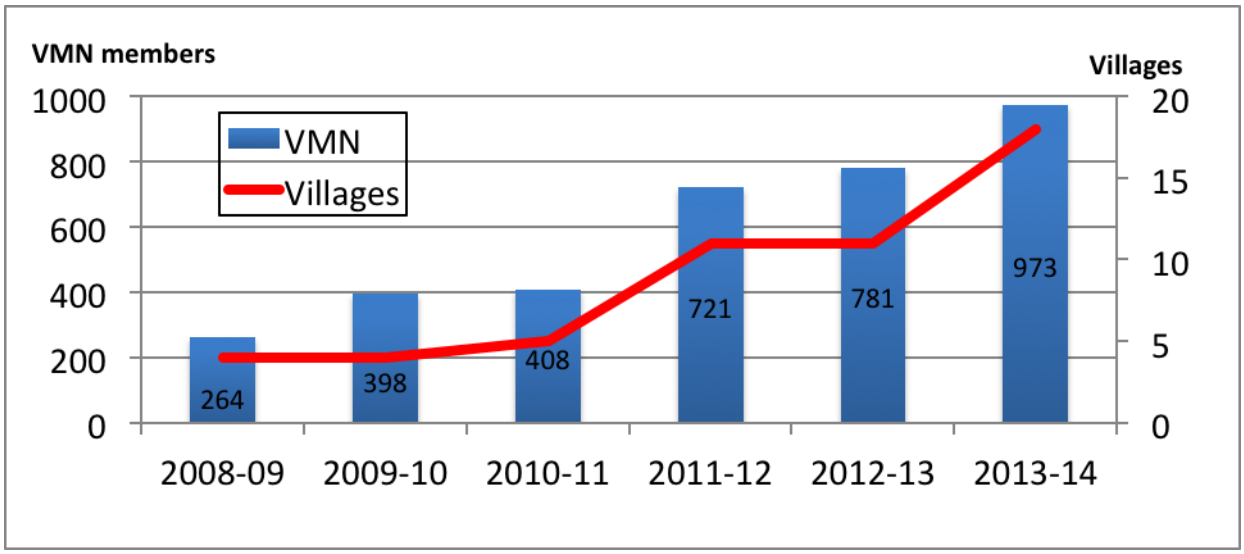

Figure 3. Increasing participation in Ibis Rice

Output 2: Land-use plans completed in 9 additional villages

A total of 18 villages (seven additional on top of last year's five) have now completed or are in the process of developing land-use plans (Indicator 2.1). This Indicator provides a good measure of the geographic spread of the Ibis Rice scheme, and therefore demonstrates that the project is impacting forest conversion across a greater geographic area than anticipated. It means that land-tenure has been secured for communities across a greater geographic area than anticipated, and more communities have legal access to vital forest resources. The community zonation process (mapping of residential and agricultural land) for KPWS has now been completed in 31 villages (four villages remaining), with the area of land under agreed contracts currently totalling 68,385 ha (Indicator 2.2). In addition to this process, Community Protected Areas (CPA's) in 5 additional villages were mapped and agreed upon by commune councils and relevant government authorities awaiting final approval from national level authorities (total of 19,661 ha) (Indicator 2.2). Combined this represents a total of 88,046 ha under community management contracts once the approval from national authorities is finalised. In 2015-2016, it is anticipated that the four remaining villages in KPWS will be completed and under agreed contracts, and therefore we are on target to complete the zonation of one protected area within the projects' lifetime (Indicator 2.3).

Output 3: Implementation of land-use plans

As mentioned in our previous annual report, anecdotal evidence suggests that since the project began there has been a rapid increase in illegal activities in the wider project area. New roads and agro-industrial development have brought a wave of migrants to the project area, and increased the opportunities for illegal logging and hunting. To enable protected area staff to respond adequately to enhanced threats, we have introduced the SMART conservation

software. This has led to an immediate improvement in patrolling efficiency and coverage, and facilitated adaptive management of law-enforcement responses to threats. The situation has not yet returned to where it was in the years prior to the project, and the rates of illegal incidents across the landscape as a whole remain high despite our efforts, primarily in PVPF as a result of an increase in migrant worker communities (not participating in this project's incentive scheme) to economic land concessions located along its southern border; this is now being strategically targeted. However, within areas managed by communities, the rates of habitat loss have been lower, because economic land concessions have been prevented from clearing land within community zones. This provides a strong indicated that providing land-tenure to local communities, and ensuring that land-use plans are respected, is an effective means of reducing encroachment. Within community zones, forest loss has taken place at a rate of 0.93% per annum, compared with 3.53% per annum across KPWS and PVPF as a whole, and there have been 160 incidences of forest clearance or hunting during Year 2 of the project.

Output 4: threatened bird populations increase

Overall the number of threatened bird nests found during 2014 was 270. It therefore remained stable compared with the 2012 baseline (274; as stated in the Year 1 report the number of nests stated in the proposal was incorrect). There was a slight decrease in the number of chicks fledged over the same time period, 449, against the 2012 baseline (532; as stated in the Year 1 report the number of chicks stated in the proposal was incorrect). As illustrated by Figure 4, nest and fledgling numbers have fluctuated from year to year, but remained relatively stable over the long term. There are two main reasons for the lack of increase in number of nests found and protected. Firstly, there is a reduction in the number of nests reported, due to the increase in other (often illegal) livelihood opportunities (such as logging) for community members who would otherwise find, report and protect nests. Secondly, it is probable that some nest trees have been lost owing to illegal logging, because the birds often choose to nest in the larger trees. Of the nests that are reported and protected, the rate of fledging success has remained constant over the last five years. Despite no increase in the number of nests found annually for six of the ten threatened species, an increase in the number of nests found for four threatened species was observed. The most notable increase being in the number of White-shouldered Ibis, Critically Endangered, nests which increased from 7 to 13 with an increase of 6 to 12 chicks fledging since the project began. All of these nests are within community-managed areas. It would be prudent to revise the target for number of birds nests found and chicks fledged to that of remaining stable against the 2012 baseline.

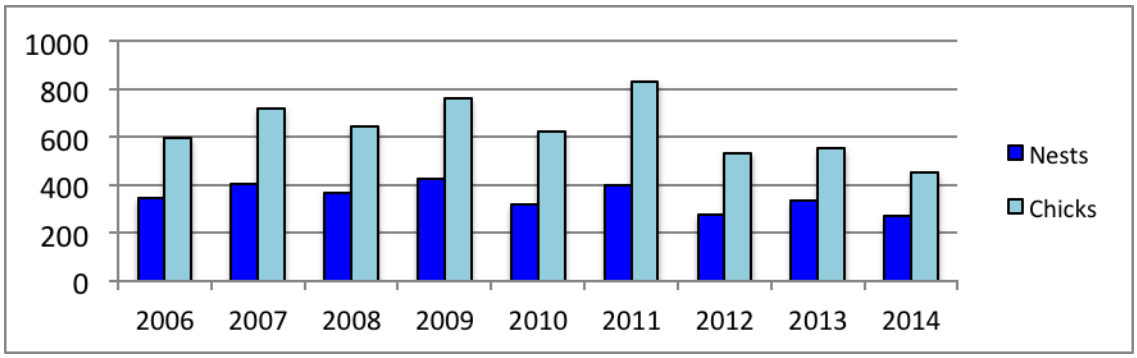

Figure 4. The number of protected nests and fledged chicks in the protected areas

Output 5: Ibis Rice is self-financing and sustainable.

In December 2014, Sansom Mlup Prey (SMP) employed a new business manager with extensive sales and business management experience in order to review and update current strategies for financial sustainability. After assessing historical financial performances and forecasting potential future performances it was shown that the financial sustainability of Ibis Rice is contingent upon successful execution of the milling and organic strategies contained in the newly developed Ibis Rice business strategy 2015-2019. The domestic market for Wildlife Friendly™ Ibis Rice is likely to grow less quickly than in preceding years.

SMP is currently conducting market research on domestic and international market demand, customer demographic and growth potential. Before this is fully understood, SMP is assuming slower domestic sales. However, it has been identified that the international market for organic rice, particularly jasmine rice, is both under-supplied and growing. In order to achieve financial sustainability rapidly, it would be prudent for SMP to access this market.

Following the revised Ibis Rice business plan, Ibis Rice will be financially sustainable when it reaches 700 tonnes purchased per annum (with 40% organic), a goal that is expected to be achieved by 2016/17. In 2014-5, purchases reached 510.2 tonnes (a 17% increase on the previous year), indicating that although Ibis Rice is on-track to attain the goal of 600 tonnes purchased per annum stated in Indicator 6.1, this will be insufficient to achieve financial sustainability, which is unlikely to be achieved during the lifetime of the project. The graph in Figure 5 shows the amount of paddy rice procured from the VMN by partner SMP.

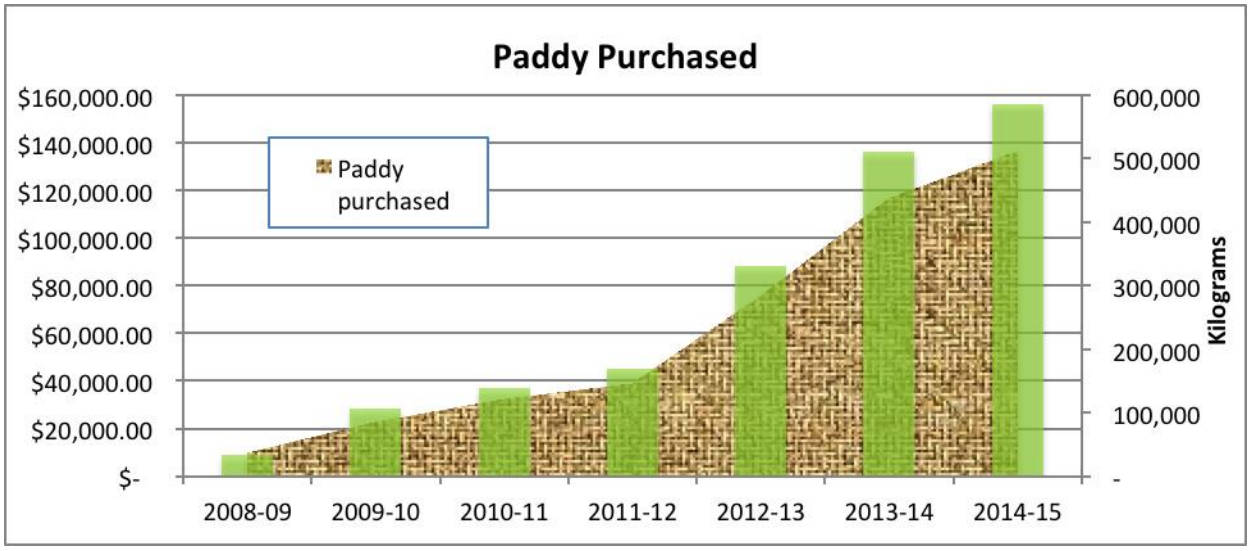

Figure 5. Amount of paddy sold by farmers increased 17%

Output 6: Impacts of Ibis Rice PES programme are assessed and documented

Research has been conducted by Imperial College London throughout the reporting period in order to assess and document the impacts of the Ibis Rice scheme on livelihoods and well-being. One draft publication for the period 2008-2011 is currently under review and will be published later in 2014. Publications for the period 2008-2014 are planned for publication in 2016.

3.3 Progress towards the project Outcome

The project is on track to achieve its defined outcome goals, exceeding some Indicator targets but not entirely meeting others.. Overall, it is meeting both its poverty alleviation and conservation goals, and the rapid growth of Ibis Rice has secured land tenure and legalised access to vital forest resources for the rural poor across a greater area than anticipated. Although it is more difficult to quantify, the project has established institutions that are beginning to bring about change in the way that decisions are made around land-use and natural resource use.

Improvements in the poverty status of participating households against the 2011 baseline will be determined by village surveys, which were completed in early 2015; results are anticipated in late 2015. However, preliminary data indicate that economic improvements have been approximately 30%, which would be greater than what we anticipated (*Indicator 1*).

Ibis Rice is expanding rapidly in both the previously established 11 and the additional 7 villages, bringing the total number of participating villages with land-use plans to 18 (exceeding the target of 15 villages; *Indicator 2).* This indicator has already been achieved and Ibis Rice will continue to focus on recruiting more households to join the program from within these

villages. Currently Ibis Rice is benefiting nearly 5,000 individuals (against a target of 10,000 people; *Indicator 3*), and interest continues to grow. Nonetheless, the project is unlikely to reach this target, and for reasons already explained under Section 3.2, we recommend that this target is revised downwards to 7,500 people. SMP bought 510 tons of wildlife-friendly Ibis Rice in the 2014-5 season (*Indicator 4*), and we expect to reach the target of 600 tons/year by the end of the project period.

Globally significant populations of highly threatened species continue to benefit from the growing number of participating farmers in the Ibis Rice scheme, as they agree to the no-hunting rules. However, as already explained under Section 3.2, the number of protected nests has declined slightly from the revised 2011 baseline in part due to habitat conversion for economic/social land concessions; however as a direct result of Darwin Initiative funding, vital areas of nesting habitat have been secured and communities continue to provide important protection to the remaining areas utilised by these threatened bird species (*Indicator 5*). Trends of species such as White-shouldered Ibis, which nests exclusively within these community zones, show annual increases, validating the approach of the project. In order to improve this in 2015/16, local nest protection and monitoring teams will employ SMART conservation software to strategically plan search effort and improve search efficiency.

The number of incidents of illegal land clearance around target villages was 160, considerably higher than the target in Indicator 6. It is for this reason that a Compliance Unit was established, so that hotspots of land clearance and poorly functioning committees can be targeted with capacity building and law enforcement. The Ibis Rice scheme was spread to a number of new villages during Year 2, and low compliance in the 'new' villages was anticipated. Rates of land clearance in the project area as a whole increased in 2014 as a consequence of a reduced rule of law following the 2013 national elections, rising to 3.53%. In contrast, within the community managed areas around target villages the rate of illegal land clearance was only 0.93%, within the target of <1%. This represents a significant result for the project, and a validation of the assumption that securing land tenure for communities and incentivising sustainable resource use can reduce rates of forest loss (*Indicator 6*).

The capacity of SMP will be re-assessed in the projects third year against the baseline established in 2012 using the Civil Society Tracking Tool (*Indicator 7*). A new SMP business manager was employed in December 2014 and there are plans to build capacity of all staff in 2015-2016.

3.4 Monitoring of assumptions

Outcome Assumption 1 – One of the primary assumptions of the project, that local communities will be receptive to the Ibis Rice scheme, still holds true. The number of VMNs has grown faster than expected, and nearly 1,000 families have joined the scheme.

Outcome Assumption 2 – The assumption that the Ibis Rice initiative promotes self-enforcement and compliance with signed agreements amongst participating households still broadly holds true, although compliance has not been at such a high level as we had hoped. In response to this, we have established a Compliance Unit to more closely monitor and ultimately improve compliance to conservation regulations. It will do this by tracing individual incidents to particular families, and is building up a database to achieve this. Families that do not comply with the regulations are not allowed to sell their rice to SMP, missing out on the price premium and instead selling it to the normal rice trader. Because we ultimately want to promote compliance, and experience has shown that this is best achieved through trying to be as inclusive as possible, people who break the regulations in one year are allowed to re-join the scheme the next year. Tracking compliance using with Output Indicator 3.1 may underestimate actual compliance project participants as it does not factor in whether perpetrators around target villages are participating or non-participating members of the Ibis Rice scheme. The trend of increasing illegal activities is likely driven largely by an increase in migrant worker communities resulting from neighbouring economic land concessions. For example recent increases in sugar cane production and therefore requirement for labouring staff at the *Ruy Feng & Lan Feng,(Cambodia) International Company Limited* (50,000ha) concession located south of Preah Vihear Protected Forest are likely to result in increased habitat loss close to some of the Ibis Rice villages. We have increased the size of the patrol teams and supported

the adoption of SMART to address the issue of forest clearance and hunting by non-Ibis Rice people.

Outcome Assumption 3 – The assumption that populations of threatened bird species can be increased through simple low cost conservation measures linked to conservation agreements is based on previous research has shown that nest collection by local people is the primary factor limiting populations. While nest collection by local people is still a limiting factor for threatened populations, it is now understood that loss of nesting habitat owing to economic land-concessions, and illegal logging of the large trees that birds typically nest in is also a significant limiting factor. If areas favoured for nesting are converted to agriculture through economic or social land concessions, populations may decrease in the short term but then rebound (if additional suitable nesting habitat is available) in the mid- to long term. Due to the project's short time span, these future rebounds would not be realised, but large areas of suitable habitat remain within the protected areas and we expect that populations can recover.

Outcome Assumption 4 – The assumptions that there is sufficient capacity to implement the project holds true, and where capacity gaps have been identified these have been filled.

Outcome Assumption 5 – The areas in which the project operates directly, the community managed zones and CPAs, have not been directly affected by land concessions. In contrast, the CPAs and community zones have in fact acted as an effective deterrent to land concessions, which have not been granted over community managed land. Nonetheless, the impacts of the project have been less than anticipated owing to the spill-over effect of land concessions, as detailed under Outcome Assumption 2 above.

Output Assumption 1: Participating VMN members growing rice under conservation agreements increased by a further 192 households within seven villages in 2014/15.

Output Assumption 2: Land use planning activities have continued in a timely manner within 22 villages involving 7,131 households.

Output Assumption 3: In 2014 the number of participating households continued to increase, while 830 participating VMN members attended a total of 59 meetings disseminating information about Ibis Rice rules and regulations.

Output Assumption 4: Increases in the number of retail and wholesale outlets selling Ibis Rice products have been maintained while diversification of Ibis Rice products will further strengthen future market potential.

Output Assumption 5: Researchers from RUPP and ICL continued to contribute to the projects' understanding of the impact of Ibis Rice on local communities and conservation.

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

The project has made a substantial contribution to biodiversity conservation in the target area, which has been achieved while tangibly improving household income of the rural poor. During 2014/15, monitoring within KPWS and PVPF indicates that household compliance with the key Ibis Rice regulation (clearance of new fields) is >90%, representing enhanced forest protection in community managed areas. The project has also maintained populations of threatened species, as indicated by the number of threatened bird nests found and protected by community teams. At Stoung Bengal Florican Conservation Area (BFCA), the number of Bengal Floricans has remained stable at approximately 35-40 displaying males during the project's lifetime.

There are also multiple immediate benefits to the communities taking part in the Ibis Rice scheme; the most obvious one is the cash premium of 100 riel per kilogram of paddy over the standard farm gate price, which is paid to each participating family. This varies from village to village, but is typically between 8% and 12% over the middlemen's price. The total premium paid to participating farmers for this buying season was $12,416, which averages $37 per family.

The other economic benefits to participating families are less easily quantified. SMP uses unbiased scales so weight of paddy is recorded more accurately than by traders. Local people report that traders' scales are typically biased by up to 30%. Secondly, the VMN provides free seeds to new members and technical assistance to all participating farmers, which increases yields. All farmers that participate in the Ibis Rice scheme, even those who leave part-way through the process, grow the same variety, high-value fragrant rice (*Malis*), which is worth more in the marketplace. In order to reduce the number of people who choose to break the regulations and leave the scheme part way through, from Year 2 of the project, SMP has started paying each family who sold rice in the previous season a bonus/dividend. Finally, all farmers in Ibis Rice villages benefit from the scheme because SMP creates competition with the middlemen who tend to raise their prices to compete.

It is possible to calculate the total direct economic benefit to each participating family as follows. Assuming the total benefit to each household is approximately 20% (10% from the price premium and an additional 10% from the other economic benefits detailed above), and based on SMP having spent $168,879 on paddy in 2014/15, the average per-household benefit increases to $98 ($168,879 x 20% / 341 households), from $83 in Year 1 of the project. That means Ibis Rice farmers received on average $428 for their produce rather than $330 had they sold to the middleman in a non-Ibis Rice village.

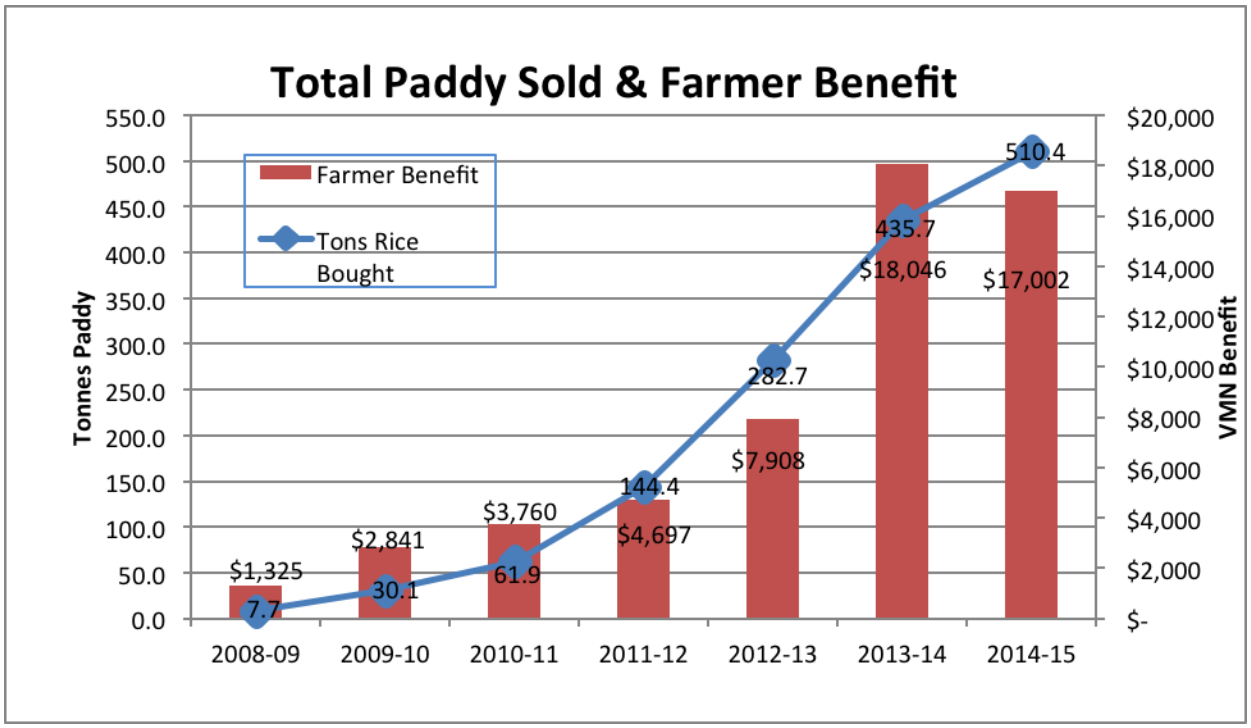

Figure 6. Immediate Benefits to the farmers from Ibis Rice during 2008-2015. Note that the data for Farmer Benefit (red bar) for 2014/15 are incomplete as data have not yet been received for all villages.

4. Project support to the Conventions (CBD, CMS and/or CITES)

The project continues in assisting the Government of Cambodia to fulfil its obligations under the CBD. Specifically, it is implementing a mechanism to ensure that agricultural areas within a forested landscape are managed sustainably, for the benefit of biodiversity (Aichi Target 7). Because these areas are within protected sites, this also contributes to Aichi Target 11, as the project has improved the management of protected areas through training increased patrolling. These two factors together mean that the conservation status of some of Cambodia's most threatened species, such as Giant and White-shouldered Ibises has been improved (Aichi Target 12). During the second year of the project this is evidenced by the increased numbers of nests protected and chicks fledged of four key species, White-shouldered Ibis, Red-headed Vulture, Sarus Crane and Black necked Stork.

A core theme in the project is land-use planning and the transferral to Ibis Rice customers of the monetary value of ecosystem services provided by the forest to the local people. During the second year of the project the amount of Ibis Rice produced, number of people involved and sales of Ibis Rice have increased, indicating that the project is contributing to Aichi Target 14 by safeguarding access to essential resources for indigenous and remote rural communities and the poor and vulnerable, especially women.

5. Project support to poverty alleviation

The project is reducing poverty within the target villages in both the short term and the medium-long term. It is working directly with indigenous communities, and remote people who have limited access to markets. As detailed in Section 3.5, the project is providing direct economic benefits to households that participate in the Ibis Rice scheme. We have calculated this benefit to be, on average, $98 per household per year, which is highly significant in an area where average household cash income is $35-500 per annum (Clements *et al.* 2010). Beyond the monetary benefits, this project is also setting up village-level institutions, VMNs, which provide a forum for discussion of natural resource management issues. Ibis Rice and the associated land-use plans and regulations create the “discussion space” around which issues of sustainable use can be discussed. Because Ibis Rice incentivises wise use of natural resources, it creates the conditions in which social change can occur.

6. Project support to Gender equity issues

The project continues to address gender equality within target villages through encouraging mixed gender representation within all institutions, committees, trainings and meetings conducted at all stages of project implementation. During 2014, 830 participating VMN members (438 women, or 52%) attended a total of 59 meetings disseminating information on Ibis Rice rules and regulations. While gender inequality within the current village, commune and district institutions is still apparent, the indirect impacts of this project are already evident, with local commune councils opting to schedule village meeting at times and places that encourage women to attend (in line with Ibis Rice Policy).

7. Monitoring and evaluation

During Year 2 the project placed a strong emphasis on monitoring and evaluation. A Compliance Unit was formed to coordinate data on household-level compliance to conservation agreements. These data come from three main sources: the WCS PLUP teams; the VMNs and the government SMART patrol teams. These data have to be cross-referenced with records of participating families, village-level land-use plans and the conservation agreements. The Compliance Unit is already succeeding in its first aim, that of better documenting compliance and non-compliance events; it is hoped that in Year 3 it will also begin to increase the rate of compliance.

8. Lessons learnt

During the last year, we made a strategic decision to expand Ibis Rice more slowly, focussing on increasing compliance of participating families instead of rapid growth. We did this because we believe that it will both increase the level of economic benefits to participating farmers, and lead to greater conservation gains overall. Despite already exceeding some of our goals after only the second year of the project, this means that we may have to revise some of our other indicator targets to be more realistically achievable by the end of the project period. With the benefit of hindsight, it would have been better to aim for increased compliance from the start. However, Ibis Rice must be financially sustainable in order to operate over the long term, and this requires a certain scale of operations: rapid growth was necessary to approach that size quickly. There is a balance between achieving conservation and livelihood objectives (which are better implemented slowly), and growing to a scale at which financial sustainability is possible. We are still committed to both making Ibis Rice financially sustainable and achieving our livelihood and conservation objectives, and believe that this is possible even if it takes longer than originally anticipated.

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

In response to previous reviewer's concern about the sanctions applied to non-compliance with conservation agreements and the efficacy of those sanctions, please see our discussion in Section 3.4. It is worth noting that the Ibis Rice scheme takes a number of years to become "trusted" within a community, and for people to fully understand and accept the rules and processes. During this period it is important to retain as many people within the scheme as possible, because it is not possible to change the behaviour of those outside of the scheme. It is for this reason that families that break the conservation agreements in a given year are able to re-join the scheme the following year, allowing them another chance to keep the agreements experience the benefits of the scheme.

Risks and assumptions related to land-clearing and logging are also discussed in Section 3.4.

10. Other comments on progress not covered elsewhere

Refined methods, e.g. the newly established Compliance Unit, clarifications to the plan for financial sustainability of Ibis Rice and significant difficulties encountered owing to illegal logging and land clearance by people outside of the project scope are discussed in a number of places in the report.

11. Sustainability and legacy

The profile of Ibis Rice and the Darwin Initiative project has been raised through exposure within the MoE and at national and international conferences and events. Within MoE, Ibis Rice, branded in presentations with the Darwin Initiative logo, is discussed at national, provincial, district and commune levels. The Darwin project and Ibis Rice was presented by WCS at a regional social enterprise meeting in Singapore and the World Parks Conference in Sydney. SMP staffs have presented on Ibis Rice at the Society of Conservation Biology (SCB) and Association for Tropical Biology and Conservation (ATBC) regional conferences during Year 2, and Ibis Rice was featured at a green products trade fair in Phnom Penh.

A new business plan for Ibis Rice has been developed that will guide the product to financial sustainability by 2016/7. The domestic market for Ibis Rice is thought to be growing more slowly than in previous years. The new business plan for Ibis Rice adopts new measures to achieve financial sustainability, primarily: (1) Stabilisation of existing operations, which reduces Cost Of Goods Sold (COGS) per kg from $0.85 to $0.71, and (2) Growth through organic certification, which will increase the margin on sales from 33% to 48%. This revised business and operational strategy would require some adjustments to previously identified targets for measuring *Output 5* and, as a result, delay the expected date of reaching sustainability until one year after the Darwin project's completion date. This would not affect the long term exit strategy for the project, with the VMNs and SMP gradually taking over the management and expansion of Ibis Rice, and making the right decisions regarding conservation activities and monitoring the results of the activities. As this happens WCS will transition to providing a purely technical advisory and independent monitoring role and providing scientific evidence for decision-making, for instance through the new Compliance Unit. WCS is committed to working with the Cambodian government ministries, whose staff are project managers for the target protected areas and whose capacities are growing and expanding under WCS's guidance for as long as is necessary. They and the other local partner, SMP are committed to helping reduce poverty and linking that to conservation outputs. The expansion of Ibis Rice is in line with the revised business plan and we anticipate that the revenue from the sale of Ibis Rice will sustain biodiversity conservation and poverty alleviation efforts in the landscape over the long term.

12. Darwin Identity

In its second year this project has made a concerted effort to publicise the Darwin Initiative through recognising activities stated in the project log frame as a distinct Darwin Initiative-funded project. This has been achieved through consistent use of the Darwin Initiative logo for all documents, maps and presentations relating to participatory land use planning, community zonation, Ibis Rice VMN committee meetings/trainings conducted by project partners within local communities and at national/international workshops, including internal government meetings and scientific conferences. The Darwin Initiative's support for this project is undoubtedly recognised by relevant national authorities, relevant provincial and district authorities and the wider development partner network operating within Cambodia. Additionally, WCS Cambodia is following the Darwin Initiative on Facebook, linking it to both national and international audiences that support our work.

13. Project Expenditure

Please expand and complete Table 1.

Table 1 Project expenditure during the reporting period (1 April 2014 – 31 March 2015)

Project spend (indicative) since last annual report	2014/15 Grant (£)	2014/15 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				The zonation process required a greater number of community consultation meetings than anticipated, which were required to allow full participation from communities in the land-use planning process
Capital items (see below)				
Others (see below)				
TOTAL	**79,693.00**	**79,692.00**		

14. OPTIONAL: Outstanding achievements of your project during the reporting period (300-400 words maximum). This section may be used for publicity purposes

I agree for the Darwin Secretariat to publish the content of this section (please leave this line in to indicate your agreement to use any material you provide here)

In a Cambodian context, the project has led the field in land-use planning and zonation within protected areas in Cambodia. By taking a rights-based approach to land-use planning, it has prioritised zoning of forest for community use and consequently legalising use of vital forest resources. The areas of highest importance for biodiversity were zoned earlier, as were those villages where land-use plans were most urgently needed.

Lessons that have been learned in developing and implementing participatory land-use planning at community level, processes of obtaining legal approval for plans at appropriate levels and monitoring adherence to those plans have informed national-level policy. The inclusive processes that the project have followed have become best-practice examples in Cambodia and led to the development of new legislation.

In a similar way, Community Protected Area (CPA) participatory consultations and demarcation processes developed during the project were the first of their kind in Cambodia. They have now become the standard format for CPA designation in Cambodia, and the processes that were used to develop those management plans are now the standard government processes for developing CPA's nationally.

Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2014-2015

Project summary	Measurable Indicators	Progress and Achievements April 2014 - March 2015	Actions required/planned for next period
Goal/Impact Ensuring the long-term conservation of biodiversity and maintenance of ecosystem services in Cambodia's protected areas, whilst contributing to the reduction of poverty in rural Cambodia with a focus on the hundreds of thousands of protected area residents. The project will contribute towards this by building on pre-existing linkages between natural and human systems in remote, forest dependent communities. It will secure land tenure for vulnerable communities and guarantee access to essential forest resources. Through payment mechanisms community incomes are increased, patterns of sustainable resource use are established and threatened species protected.		The project has delivered increased incomes for over 4,865 people and provided them with secure land tenure, ensured that >90% of participants do not engage in new land clearance, and contributed towards the direct protection of nearly 88,046 hectares of forest of global importance for biodiversity conservation.	
Purpose/Outcome The outcome of the project will be to reduce deforestation rates across 300,000 hectares of three protected areas in Cambodia by 25-50%, protect globally significant populations of highly threatened species, support the livelihoods of up to 10,000 local residents through greater land security and greater incomes, increase understanding regarding how to integrate poverty reduction and conservation, and build the capacity of local partners to sustain the project outcomes. This will be achieved through the implementation of an innovative, payment for environmental services scheme that links poverty reduction to successful conservation of forests and critically endangered species through conditional	1. Improvements in the poverty status of participating households by 10-25%, against the 2011 baseline. 2. The number of villages inside or adjacent to protected areas with signed land-use plans and conservation agreements increased to 15 from a baseline of 6 in 2011. 3. The number of people taking part in the Wildlife Friendly™ Ibis Rice scheme increased to 10,000 from a baseline of 750 in 2011. 4. The number of tonnes of Wildlife Friendly™ produce bought annually by SMP increased to at least 600 tonnes from a baseline of 141 tonnes in 2011. 5. The population of birds of conservation concern increased by	1. Preliminary data indicate that the poverty status of participating households improved by 30% against the 2011 baseline, demonstrating results that have so far exceeded our expectations. 2. Number of villages with signed land-use plans and conservation agreements increased to 18, surpassing our overall goal of 15. 3. Number of people taking part increased to 4,865. 4. Number of tonnes of Wildlife Friendly™ produce bought increased to 510.2 in 2014/15. 5. The population of birds of conservation concern remained	1. This rate should prevail for the next procurement season. 2. Continue land-use planning in the protected areas. 3. Expand Ibis Rice to 4 new villages increasing the number of people taking part in Ibis Rice to at least 7,500. 4. 600 tonnes of Wildlife Friendly™ produce bought. 5. Nest protection scheme to be intensified and efficiently managed using SMART.

agreements.	10% from a baseline of 408 nests protected and 865 chicks fledged in 2011/2012. As stated in the Year 1 report the number of nests and chicks stated in the proposal was incorrect and should have been 274 and 532 respectively. 6. 25% reduction in incidences of illegal land clearance and hunting around participating villages from a baseline of 65 incidences in 2011. 7. Capacity of SMP increased from a baseline of 53 in March 2012, as measured using the Civil Society Tracker Tool (developed by the Critical Ecosystems Partnership Fund).	stable at 270 nests from which 449 chicks fledged. 6. 155 illegal land clearance incidents were registered in 2014, against a baseline of 65 in 2011. 7. SMP score has not changed from 53.	6. Existing participants will be reminded of their commitments to the land-use plans during 2015 7. Indicator scheduled to be reassessed in year 3
Output 1. 2,000 households (10,000 people) receive payments for environmental services as a result of taking part in the Ibis Rice initiative.	1.1. The number of signed conditional agreements linked to agreed land-use plans between SMP, Village Marketing Networks and participating households: current: 707, expected: 2,000 households (10,000 people). 1.2. Receipts and SMP ledger records of purchase of Ibis Rice from participating households: current: 140, expected: 2,000 households (10,000 people). 1.3. Number of functioning VMNs: 2012: 4; expected: 15	1.1. Number of participating households in Year 2: 973. **By the end of this project, we expect the total number reached for this indicator to be closer to 1,500 than 2,000**. 1.2. Receipts for rice purchases in Year 2: 341. **We propose a more realistic Year 3 target of 1,000 receipts** 1.3. Number of functioning VMNs in 2014: 18	
Activity 1.1. SMP inform target villages about Ibis Rice scheme		In 2014, a total of 18 villages were informed about the Ibis Rice scheme.	
Activity 1.2. Village Marketing Networks (VMNs) established in target villages		18 VMNs have been established in target villages.	

Activity 1.3. Conditional agreements explained and new members join VMNs		New members to the scheme in 2014: 192 households
Activity 1.4. Training and seed provided to farmers as necessary		Training took place in 18 villages over 12 months; 830 (438 females) community members were trained on compliance, understanding rules and regulations, use of GPS to measure paddy fields, rice quality, how to select seeds and clarifying roles and responsibilities for VMNs and local authorities. 5,000 kg of pkha malis rice seed was distributed to 161 VMN members.
Activity 1.5. VMNs identify eligible farmers with proper quality paddy		This process took place in October 2014 and 341 households were identified.
Activity 1.6. VMNs sell Ibis Rice paddy to SMP		A total of 341 VMN members sold paddy to SMP
Output 2. Land-use planning conducted in 9 additional villages, thereby securing land tenure, legalising access to forest resources and reducing additional habitat loss.	2.1. The number of land-use plans developed and agreed: current: 6 villages, expected: 15 villages. 2.2. Area of land under agreed contracts: 2012: 21,153 hectares; expected: 100,000 hectares. 2.3. At least one protected area is zoned.	2.1. Number of land-use plans developed: 18; number of villages: 18 2.2. Area of land under agreed contracts in 2014: 68,385 hectares 2.3. The zoning of KPWS is ongoing.
Activity 2.1. Participatory land-use planning conducted in target villages, including identification of community protected areas (community managed forest areas inside protected areas) and community conservation forests (community managed forest areas inside protected forests).		Community Protected Areas (CPA's) in 8 villages were mapped and agreed upon by commune councils and relevant government authorities with a further 5 CPAs awaiting final approval from national level authorities (total of 19,661 ha). Those CPAs are finalizing their rules and regulations for submission to provincial authorities.
Activity 2.2. Land-use plans and zoning agreed by villagers		Land use plans for 22 villages were finalized bringing the total to 31. Other villages teams are verifying and updating old data before finalizing the land use plans.
Activity 2.3. Land-use plans used to legalise Community Zones in protected areas, community protected areas, and community conservation forests.		The Provincial Community Zone Mapping Committee, appointed by the provincial governor, is verifying all land use in KPWS.
Output 3. Implementation of land-use plans by Government agencies (FA and MoE).	3.1. Rate of reduction in illegal land clearance and hunting around target villages from baseline: 2007: 166 incidences of land clearance; 2008: 138; 2009: 74; 2010: 61;	3.1. There were 155 incidences of illegal land clearance and hunting around target villages in 2014.

	2011: 65; expected: <30. 3.2. Deforestation rates around target villages. Baseline (2006-2010): 1.3%; Expected (2012-2015): 0.65-1%.	 3.2. Deforestation rates around the target villages were 0.93% in 2012-2014.
Activity 3.1. Consultations with government agencies and provincial authorities regarding land-use planning decisions, including allocation of lands for largescale economic development within conservation areas.		The Provincial Community Zone Demarcation Committee of the FA have agreed to provisional zoning map produced by the project, a similar response has been obtained from the MoE.
Activity 3.2. Monitoring of forest cover and land-use change by WCS using satellite images.		A GIS unit has been set up and staff are being trained.
Activity 3.3. Monitoring reports used as the basis of further discussion and consultation regarding activities causing deforestation and land-use planning decisions.		SMART reports are being used by managers to target patrols in protected areas.
Output 4. Threatened bird populations increase.	4.1. Number of birds nests protected: 2012: 408; expected 543 (10% increase per annum). 4.2. Number of chicks fledged successfully from protected birds nests: 2012 865; expected 1,151 (10% increase per annum).	4.1 The number of birds nests protected in 2014 was 270. The baseline given in the proposal was an error: as stated in end of Year 1 report, this should be revised to 274. The nest protection scheme will continue in Year 3. 4.2 The number of chicks fledged in 2014 was 449. The baseline given in the proposal was an error: as stated in the end of Year 1 report the number of fledglings in 2012 was 532.
Activity 4.1. Community birds nest protectors are recruited through village consultation meetings.		78 community members were recruited and trained as birds nest protectors.
Activity 4.2. Community birds nest protectors protect nests of key species and report to birds nest protection coordinator.		The nests of ten Globally Threatened or Near Threatened species were protected by community members.
Activity 4.3. WCS Rangers monitor the results of nests protected by community members.		Two WCS Rangers and one Technical Advisor monitored the results of community nest protection throughout the year.
Output 5. Ibis Rice PES programme is self-financing and sustainable.	5.1. Following the Ibis Rice business plan, Ibis Rice will be financially sustainable when it reaches 600 tonnes purchased per annum (expected by 2015/16): 2011 rice purchase 141 tonnes.	Amount of Ibis Rice paddy purchased in 2014-15 harvest season: 510.2 tonnes, therefore Ibis Rice is on track to reach the target of 600 tonnes per annum in 2015/16**. However, projections now indicate that it will not reach financial sustainability until 700 tonnes per annum are purchased.**

Activity 5.1. Marketing activities conducted with potential retailers in Phnom Penh and Siem Reap.		Marketing activities include one-on-one sales calls to hotels, restaurants and retail outlets in Phnom Penh and Siem Reap throughout the year.
Activity 5.2. Ibis Rice is sold in more outlets (supermarkets, hotels and restaurants).		The number of outlets for the period increased to 157 by the end of 2014, from 59 in 2013.
Activity 5.3. SMP business plans demonstrate that Ibis Rice has achieved financial sustainability.		A revised SMP business plan produced in 2015 indicates that Ibis Rice is on track to meet the updated schedule for achieving financial sustainability by 2016/17.
Output 6. Impacts of the Ibis Rice PES programme on poverty, land-use trends and threatened species monitored and documented.	6.1. Two peer-reviewed journal articles published in academic journals by WCS, Imperial and RUPP researchers.	Two peer-reviewed journal articles published in academic journals in Year 2.
Activity 6.1. Data on poverty and land-use trends is collected from target villages and appropriate paired control villages, through analysis of satellite images and ground surveys.		Data collection is underway. Results expected in 2015/16.
Activity 6.2. Data regularly synthesised and fed back to project team.		All data collected is regularly synthesised and communicated to project teams.
Activity 6.3. At least two scientific papers written.		Two peer-reviewed journal articles published in academic journals in Year 2.

Annex 2 Project's full current logframe

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Goal: Ensuring the long-term conservation of biodiversity and maintenance of ecosystem services in Cambodia's protected areas, whilst contributing to the reduction of poverty in rural Cambodia with a focus on the hundreds of thousands of protected area residents. The project will contribute towards this by building on pre-existing linkages between natural and human systems in remote, forest dependent communities. It will secure land tenure for vulnerable communities and guarantee access to essential forest resources. Through payment mechanisms community incomes are increased, patterns of sustainable resource use are established and threatened species protected.			
Outcome: The outcome of the project will be to reduce deforestation rates across 300,000 hectares of three protected areas in Cambodia by 25-50%, protect globally significant populations of highly threatened species, support the livelihoods of up to 10,000 local residents through greater land security and greater incomes, increase understanding regarding how to integrate poverty reduction and conservation, and build the capacity of local partners to sustain the project outcomes. This will be achieved through the implementation of an innovative, payment for environmental services scheme that links poverty reduction to successful conservation of forests and critically endangered species through conditional agreements.	1. Improvements in the poverty status of participating households by 10-25%, against the 2011 baseline. 2. The number of villages inside or adjacent to protected areas with signed land-use plans and conservation agreements increased to 15 from a baseline of 6 in 2011 3. The number of people taking part in the Wildlife Friendly™ Ibis Rice scheme increased to 10,000 from a baseline of 750 in 2011 4. The number of tonnes of Wildlife Friendly™ produce bought annually by SMP increased to at least 600 tonnes from a baseline of 141 tonnes in 2011. 5. The population of birds of conservation concern increased by 10% from a baseline of 408 nests protected and 865 chicks fledged in 2011/2012 6. 25% reduction in incidences of illegal land clearance and hunting around participating villages from a	1. Household poverty surveys conducted by Imperial College and WCS 2. Signed land-use plans and conservation agreements 3. VMN membership rosters 4. Receipts for rice purchase and SMP ledger records 5. Monitoring reports by WCS and community rangers 6. Monitoring reports from WCS rangers and satellite images (e.g. LandSat) 7. Civil Society Tracker Tool (developed by the Critical Ecosystems Partnership Fund)	1. The primary assumption of the project is that local communities will be receptive to the wildlife-friendly farming initiative "Ibis Rice". Our field surveys have suggested the scheme is very popular and large numbers of people want to join. The local people understand that the programme will provide genuine benefits, in terms of increased incomes, stable land tenure and legal rights to sustainably harvest forest resources in protected areas. We are therefore confident that sufficient farmers will want to take part in the programme. 2. The success of the Ibis Rice initiative depends on people keeping to the terms of signed agreements. Research conducted during the development of the Ibis Rice concept has shown that most people keep to the agreements because of the strong incentives for them to do so, and due to the independent monitoring of compliance (Clements et al. 2010). One key factor for success is local involvement in management of the programme, which promotes self-enforcement. PES research conducted by Imperial and WCS in Cambodia has shown that people who break the agreements in the first year will then apply to re-join the scheme and will keep to agreements in the following year after seeing the benefits that their neighbours received previously (Clements et al., unpublished). WCS and SMP will undertake specific capacity-building activities to ensure that local residents fully

	baseline of 65 incidences in 2011. 7. Capacity of SMP increased from a baseline of 53 in March 2012, as measured using the Civil Society Tracker Tool (developed by the Critical Ecosystems Partnership Fund).		understand the PES programme. 3. The project assumes that the populations of threatened bird species can be increased through simple low cost conservation measures linked to conservation agreements. Previous research has shown that nest collection by local people is the primary factor limiting populations (Clements et al. 2013). Nest collection brings marginal economic gain (birds have little value as food or in trade) and existing experience suggests that with increased awareness and the provision of cash incentives it is possible to change local behaviour (Clements et al. 2013). 4. The project assumes that the local civil society partner SMP, government agencies, village authorities and local people responsible for implementing the project have the capacity to implement activities to a high standard. Project staff with experience in local level indigenous institutional analysis will select reliable staff, identify skills gaps and build their capacity where necessary. 5. Project target areas within the protected areas are not allocated for large-scale concessions for agro-industrial development. Significant portions of Cambodia's protected areas network (10-15% or higher) have been allocated as concessions for economic development since 2008. In May 2012, the Royal Government announced a moratorium on all future concessions, however it is unclear the extent to which this moratorium will be enforced. Nevertheless, the evidence suggests that empowered local villages are able to advocate for their rights and can persuade local politicians and national ministries not to allocate lands for development, if alternatives (such as opportunities provided by Ibis Rice) are available. Although significant areas of some of the target protected areas have been allocated for development in the last two years, the villages engaged in PES programmes developed by WCS have been able to successfully persuade decision-

			makers not to place concessions on the lands around their villages. Implementing the Ibis Rice concept and helping the target communities to safeguard their rights to land and natural resources (through land-use plans, land titling and determining the Community Zone of each of the protected areas) will therefore have a strong impact on reducing the likelihood of land concessions. Under the law, the Community Zone is the area of the protected areas allocated for local use, which prohibits large-scale economic development activities.
Outputs: 1. 2,000 households (10,000 people) receive payments for environmental services as a result of taking part in the Ibis Rice initiative.	1.1 The number of signed conditional agreements linked to agreed land-use plans between SMP, Village Marketing Networks and participating households: current: 707, expected: 2,000 households (10,000 people). 1.2 Receipts and SMP ledger records of purchase of Ibis Rice from participating households: current: 140, expected: 2,000 households (10,000 people). 1.3 Number of functioning VMNs: 2012: 4; expected: 15	Signed conditional agreements, receipts and ledger records documenting rice purchases from households, updated databases of participating households in each village. Improvements in the poverty status of participating households by 10-25%, against the 2011 baseline. The number of people taking part in the Wildlife Friendly™ Ibis Rice scheme increased to 10,000 from a baseline of 750 in 2011 Household poverty surveys conducted by Imperial College and WCS Receipts for rice purchase and SMP ledger records	Villages value the premium paid for Ibis Rice paddy and it is sufficient to change villager behaviour. The primary assumption of the project is that local communities will be receptive to the wildlife-friendly farming initiative “Ibis Rice”. Our field surveys have suggested the scheme is very popular and large numbers of people want to join. The local people understand that the programme will provide genuine benefits, in terms of increased incomes, stable land tenure and legal rights to sustainably harvest forest resources in protected areas. We are therefore confident that sufficient farmers will want to take part in the programme.
2. Land-use planning conducted in 9 additional villages, thereby securing land tenure, legalising access to forest resources and reducing additional habitat loss.	2.1 The number of land-use plans developed and agreed: current: 6 villages, expected: 15 villages. 2.2 Area of land under agreed contracts: 2012: 21,153 hectares; expected: 100,000 hectares. 2.3 At least one protected area is	Land-use plans, protected area zonations, community protected area or community conservation forest areas declared. The number of villages inside or adjacent to protected areas with signed land-use plans and	The success of the Ibis Rice initiative depends on people keeping to the terms of signed agreements. Research conducted during the development of the Ibis Rice concept has shown that most people keep to the agreements because of the strong incentives for them to do so,

	zoned.	conservation agreements increased to 15 from a baseline of 6 in 2011	and due to the independent monitoring of compliance (Clements et al. 2010). One key factor for success is local involvement in management of the programme, which promotes self-enforcement. PES research conducted by Imperial and WCS in Cambodia has shown that people who break the agreements in the first year will then apply to re-join the scheme and will keep to agreements in the following year after seeing the benefits that their neighbours received previously (Clements et al., unpublished). WCS and SMP will undertake specific capacity-building activities to ensure that local residents fully understand the PES programme.
3. Implementation of land-use plans by Government agencies (FA and MoE)	3.1 Rate of reduction in illegal land clearance and hunting around target villages from baseline: 2007: 166 incidences of land clearance; 2008: 138; 2009: 74; 2010: 61; 2011: 65; expected: <30. 3.2 Deforestation rates around target villages. Baseline (2006-2010): 1.3%; Expected (2012-2015): 0.65-1%.	Illegal activity reports, deforestation rate analyses based upon analysis of remote-sensing images. 25% reduction in incidences of illegal land clearance and hunting around participating villages from a baseline of 65 incidences in 2011. Monitoring reports by WCS and community rangers Monitoring reports from WCS rangers and satellite images (e.g. LandSat)	Project target areas within the protected areas are not allocated for large-scale concessions for agro-industrial development. Significant portions of Cambodia's protected areas network (10-15% or higher) have been allocated as concessions for economic development since 2008. In May 2012, the Royal Government announced a moratorium on all future concessions, however it is unclear the extent to which this moratorium will be enforced. Nevertheless, the evidence suggests that empowered local villages are able to advocate for their rights and can persuade local politicians and national ministries not to allocate lands for development, if alternatives (such as opportunities

			provided by Ibis Rice) are available. Although significant areas of some of the target protected areas have been allocated for development in the last two years, the villages engaged in PES programmes developed by WCS have been able to successfully persuade decision-makers not to place concessions on the lands around their villages. Implementing the Ibis Rice concept and helping the target communities to safeguard their rights to land and natural resources (through land-use plans, land titling and determining the Community Zone of each of the protected areas) will therefore have a strong impact on reducing the likelihood of land concessions. Under the law, the Community Zone is the area of the protected areas allocated for local use, which prohibits large-scale economic development activities.
4. Threatened bird populations monitored by community members and WCS rangers.	4.1 Number of birds nests protected: 2012: 408; expected 543 (10% increase per annum). 4.2 Number of chicks fledged successfully from protected birds nests: 2012 865; expected 1,151 (10% increase per annum).	Nest protection reports and data records The population of birds of conservation concern increased by 10% from a baseline of 408 nests protected and 865 chicks fledged in 2011/2012	The project assumes that the populations of threatened bird species can be increased through simple low cost conservation measures linked to conservation agreements. Previous research has shown that nest collection by local people is the primary factor limiting populations (Clements et al. 2013). Nest collection brings marginal economic gain (birds have little value as food or in trade) and existing

			experience suggests that with increased awareness and the provision of cash incentives it is possible to change local behaviour (Clements et al. 2013).
5. Ibis Rice PES programme is self-financing and sustainable.	5.1 Following the Ibis Rice business plan, Ibis Rice will be financially sustainable when it reaches 600 tonnes purchased per annum (expected by 2015/16): 2011 rice purchase 141 tonnes.	SMP financial records, SMP annual reports, updated business plans Capacity of SMP increased from a baseline of 53 in March 2012, as measured using the Civil Society Tracker Tool (developed by the Critical Ecosystems Partnership Fund).	The market for Wildlife Friendly™ Ibis Rice grows and can absorb the increased volume. The project assumes that the local civil society partner SMP, government agencies, village authorities and local people responsible for implementing the project have the capacity to implement activities to a high standard. Project staff with experience in local level indigenous institutional analysis will select reliable staff, identify skills gaps and build their capacity where necessary.
6. Impacts of the Ibis Rice PES programme on poverty, land-use trends and threatened species populations are documented in at least two peer-reviewed papers published in scientific journals.	6.1 Two peer-reviewed journal articles published in academic journals by WCS, Imperial and RUPP researchers.	Data on changes in household poverty. Peer-reviewed journal publications resulting from the project.	Researchers from RUPP are sufficiently motivated to participate over the 3-year life of the project.
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) Activity 1.1 SMP inform target villages about Ibis Rice scheme Activity 1.2 Village Marketing Networks (VMNs) established in target villages Activity 1.3 Conditional agreements explained and new members join VMNs Activity 1.4 Training and seed provided to farmers as necessary			

Activity 1.5	VMNs identify eligible farmers with proper quality paddy
Activity 1.6	VMNs sell Ibis Rice paddy to SMP
Activity 2.1	Participatory land-use planning conducted in target villages, including identification of community protected areas (community managed forest areas inside protected areas) and community conservation forests (community managed forest areas inside protected forests)
Activity 2.2	Land-use plans and zoning agreed by villagers
Activity 2.3	Land-use plans used to legalise Community Zones in protected areas, community protected areas, and community conservation forests
Activity 3.1	Consultations with government agencies and provincial authorities regarding land-use planning decisions, including allocation of lands for largescale economic development within conservation areas
Activity 3.2	Monitoring of forest cover and land-use change by WCS using satellite images
Activity 3.3	Monitoring reports used as the basis of further discussion and consultation regarding activities causing deforestation and land-use planning decisions
Activity 4.1	Community birds nest protectors are recruited through village consultation meetings
Activity 4.2	Community birds nest protectors protect nests of key species and report to birds nest protection coordinator
Activity 4.3	WCS Rangers monitor the results of nests protected by community members
Activity 5.1	Marketing activities conducted with potential retailers in Phnom Penh and Siem Reap
Activity 5.2	Ibis Rice is sold in more outlets (supermarkets, hotels and restaurants)
Activity 5.3	SMP business plans demonstrate that Ibis Rice has achieved financial sustainability
Activity 6.1	Data on poverty and land-use trends is collected from target villages and appropriate paired control villages, through analysis of satellite images and ground surveys
Activity 6.2	Data regularly synthesised and fed back to project team
Activity 6.3	At least two scientific papers written

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 community members trained for natural resource management	693 female		500	830		1,330	1,500
7	Community facilitator's training framework	Male			1		2	1
8	Number of weeks UK staff on project work in Cambodia			6	40		46	14
9	Number of protected forest management plans to be produced for Ministry of Ag, Forestry & Fisheries in Cambodia						0	1
11A	Number of papers to be published in peer reviewed journals				2		2	2
12A	SMART database				1		1	1
14B	Conferences attended at which findings from Darwin project work will be presented				2		2	2
15A	Number of national press releases in Cambodia				1		1	0
23	Matching Funds Norwegian Agency for Development Cooperation (NORAD) John D & Catherine T MacArthur Foundation Margaret A Cargill Foundation Acadia via Imperial College London USAID							**£233,260** £32,240 £96,010 £76,250 £28,760
New - Project specific meas	Annual Sales Reports of ibis Rice			1	1	1	1	3

ures								
	Annual Report on VMNs' Membership & Benefits			1	1	1	1	3
	Civil Society Tracker Tool			0	0	1	0	1

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. website link or publisher)
The impact of Payments for Environmental Services and Protected Areas on local livelihoods and forest conservation in Northern Cambodia	Journal: Conservation Biology 29: 78-87.	Tom Clements, & E.J. Milner Gulland 2015	Male	British	Wiley	http://onlinelibrary.wiley.com/doi/10.1111/cobi.12423/epdf
Impacts of Protected Areas on Local Livelihoods in Cambodia	World Development 64: 125-134	Tom Clement Seng Suon, David Wilkie & E.J. Milner Gulland 2014	Male	British	Elsevier Ltd	http://www.journals.elsevier.com/world-development/

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.	X
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.	n/a
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.	X
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.	no
Have you involved your partners in preparation of the report and named the main contributors	X
Have you completed the Project Expenditure table fully?	X
Do not include claim forms or other communications with this report.	