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Darwin Initiative Main Project Annual Report

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

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

Submission Deadline: 30th April 2019

Darwin Project Information

Project reference	24-028
Project title	Future-proofing Cambodian Wildlife-Friendly farming: securing conservation and livelihoods
Host country/ies	Cambodia
Contract holder institution	Sansom Mlup Prey
Partner institution(s)	CIRAD
Darwin grant value	£299,491
Start/end dates of project	1 May 2018 – 31 March 2019
Reporting period (e.g., Apr 2018 – Mar 2019) and number (e.g., Annual Report 1, 2, 3)	May 2018 – March 2019, Annual Report 2
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Report author(s) and date	Socheat Keo, Marie Grovel, April 20, 2019

1. Project rationale

Critically threatened biodiversity and climate vulnerable livelihoods: The forests and wetlands of northern Cambodia are of exceptional importance for biodiversity conservation. They support more than 50 species of global conservation concern, including six critically endangered birds, among them the Giant and White-shouldered Ibises. Taken together, three protected areas located in the Northern Central Corridor (Chhep Wildlife Sanctuary, Kulen Promtep Wildlife Sanctuary and Prey Preah Roka Wildlife Sanctuary)(Annex 4, Item 1) cover more than 400,000 hectares of forest and wetland that also support more than 20,000 people. Those living in this region are amongst the very poorest in Cambodia and depend on the forest and land resources of the parks for their livelihoods.

Although Sansom Mlup Prey's (SMP) Ibis Rice project has been successful, climate change-induced droughts present a challenge to the wildlife-friendly farming that forms the link between improved incomes and biodiversity conservation. The wildlife friendly farmers are located in an area considered extremely vulnerable to climate change-induced drought. The current negative impacts of climate change and decreasing trend of productivity call for pronounced holistic changes in agricultural practices. It is widely accepted that organic agricultural practices are an effective strategy for mitigating climate change and building robust soils that are better adapted to extreme weather conditions associated with climate change in resource-limited regions. Soil, water conservation and carbon management, and the use of a wide vegetal biodiversity, are key to adapting farming systems to climate change. The project will address this by implementing organic agricultural practices and soil conservation techniques (not currently used) to ensure land fertility, sustainable production, secure livelihoods and food security.

2. Project partnerships

The core collaborations from Yr 1 continued through Yr 2. The results from the CIRAD research incorporate the masters students initial findings (evidence case No. 25). These collaborations along with SMP's recruitment of an agronomist in this project means that the learnings of climate smart agriculture are being extended through the project and shared academically through partnerships.

Collaboration between SMP, WCS and provincial departments of environment have developed such that there is cross representation between organisations at all planning meetings. National MoE (Ministry of Environment) is using IBIS rice as an example of best practice and the livelihoods department is encouraging us to expand to many more protected areas. We also see that the management systems developed in collaboration.

The most significant partner development is that of the Ibis Rice Conservation Co. Ltd (IRCC) . With a mandate to derive the best value possible from the wildlife friendly organic products IRCC has developed markets that can facilitate significant increase such as to allow essentially limitless ambition for participation in the project. It has done this whilst increasing the premium by 13%. IRCC now has branded product in Cambodia, Singapore and Canada such that increased incentives, ability to procure all product and reaching consumers that become potential supporters of IBIS rice are secured. Furthermore IRCC has developed markets for all the varieties of rice that farmers can produce meaning that farmers can have diverse production that is all under compliance and delivers premiums. As such we expect the impact on livelihoods and the volume of paddy procured to increase significantly per household in 2019.

3. Project progress

3.1 Progress in carrying out project Activities

Output 1. *Village Marketing Networks (VMN) have the capacity to manage the expansion of Ibis Rice compliance, organic internal controls and production independently.*

Activities towards output 1 are on track with the key achievements including the successful recruitment of SMP staff and the training of VMNs on the internal control system (ICS). See photos from this training, attendance lists and the course materials attached at annex four.

Activity 1.1: SMP has recruited 3 interns to support the internal control system to the 466 organic Ibis Rice households. Annex 4, Item 13,14.

Activity 1.2: A total of 305 VMN members comprising 198 women received training on organic requirements (principles and rules) and on record keeping. Also 9 VMN committee members and the 7 SMP staffs in PVH completed the Organic purchasing training. The training provides a deeper insight into the organic program's principles and rules giving them a more comprehensive understanding, and we expect generating greater buy-in to the programme.

In year 3: We plan to have 18 VMN inspectors.

Output 2. *Ibis Rice farmers have tested and adopted drought-resilient agricultural practices and complementary soil conservation techniques along with levelling and water efficiency trials.*

Activity 2.1: 150kg of foundation breeder seed of Pkha Romdoul was purchased in May. Pkha Romdoul has been observed to resist both drought and flood more effectively than other jasmine varieties. This seed was distributed to 5 seed farmers that will replicate this breeder seed such that the entire farming group can be supplied with very high purity, '1st generation' seed stock.

Activity 2.2: A second contract was signed with CIRAD in October to follow up on the activities of the year one: to sustain rice productivity and income generation through crop diversification of rice farming systems

using cover/relay crops after wet season rice. Five main activities were realised assessment of a rice collection, establishment of cover/relay crops after wet season rice, capacity building through training and field days for smallholder farmers, conduct research study assessing changes in soil functions between contrasted land uses.

Cover crops were established early November 2018 on 18.3 ha representing 9 households from 2 villages. The selection of cover crops is based on 3 main options and expectations from farmers with i) the use of cover crops for soils fertility improvement, ii) cover crops as a fodder source for cattle, and iii) cover crops for soil fertility improvement and seed/grains production.

The growth of cover crops was limited due to rapid end of the wet season early November in Preah Vihear. In addition, cattle roaming and fire were the main causes of the destruction of cover crops fields.

Seed producers have been trained in the uplands of Battambang and seeds of cover crops produced since two cropping seasons. In 2018/2019, the network of seed producers in Battambang reached 12 producers and 19.5 ha for the seed production of *sunnhemp*, *crotalaria ochroleuca*, *sorghum* and *Sesbania*.

Activities 2.3: These main groups of rice were assessed (in terms of yield, adaptability, cycle and resistance to the drought): fragrant, waxy, colored and white rice and seed production for two-colored waxy rice and two waxy non-colored rice. CIRAD made specific first recommendation for 2 rice groups sticky rice and one colored rice while pursuing the assessment for the three groups. Annex 4 Item 25- CIRAD report.

Activities 2.4: These activities, which are yet to be undertaken, focus on promoting among communities the various rice trials (activities 2.3) those actions – be they soil conservation techniques, drought-resilient jasmine rice varieties or fallow-year crops - most likely to strengthen resilience.

Activities 2.5: A Master study has been initiated and is on-going on the assessment of soil ecosystem services comparing different land uses and/or cropping system. This is conducted in partnership with the Royal University of Agriculture of Cambodia and with CIRAD follow up. Soil ecosystem services have been assessed under different cropping systems and soil types in different locations.

Output 3. Critically endangered species populations increase as a result of improved protection around Ibis Rice villages

Activity 3.1: In 2018, more than 100 local people from the Northern Plains were directly employed and trained to protect nests of threatened birds. 251 globally threatened nests, including 40 critically endangered birds' nests, were protected. Throughout the rainy season (May - December) community wildlife rangers conducted awareness raising and biodiversity SMART patrols in important breeding habitat areas for globally threatened waterbirds in the Northern Plains landscape. During this reporting period 30 Giant Ibis nests, 6 White-shouldered Ibis nests were located, monitored and protected by local community nest protectors within both Kulen Promtep and Chepp Wildlife Sanctuaries. Annex 4, item 19, 20.

WCS's support to these has had a strong emphasis on creation and capacity building of CPA management committees. This included supporting CPA elections, monthly committee meetings, awareness raising, boundary demarcation, sign-board installation and CPA foot/motorbike patrols. In 2018 a total of 235 CPA patrols were conducted across KPWS and CPA. CPA committee patrol monitoring and planning is currently at nascent stage, however, significant opportunities exist for its further development including the introduction of ranger-based monitoring techniques to verify effort, report findings and plan patrols.

Activity 3.2: WCS monitors forest loss and land use change across the Northern Plains landscapes where the Ibis Rice project works on a monthly basis using Landsat imagery and creates annual forest cover maps based on a standardised, qualitative forest monitoring system. Areas of suspected land use change are pinpointed on a map and provided to the protected area manager to plan a response. WCS community rangers and ministry of environment patrol team staff triangulate these data during regular patrols and log any land clearance in the Spatial Monitoring And Reporting Tool (SMART). Between 2017 and 2018 a total of 324 CPA patrols were conducted across KPWS and CWS. In the nine targeted villages, in 2018, there were 245ha deforested.

Output 4. *Community members living within the target protected areas experience reduced poverty and increased income as a result of Ibis Rice*

Activity 4.1: VMNs provide the conduit through which SMP and Ibis Rice works with communities. Currently there are 30 VMN committees operating in 9 villages. 41 VMN committee received training to promote the Ibis Rice scheme among farmers. After a feasibility assessment for new village expansion and opportunity, in year 3, we will expand Ibis Rice intervention into two more village, Our Kak and Krolas Pies. See output 1 regarding capacity-building of VMNs.

Activity 4.2: Participatory land use plans form the basis for the conservation agreements that Ibis Rice farmers sign up to. This project benefits from WCS's efforts in partnership with MoE over the past four years to map residential and agricultural land in 35 villages. WCS's community (zoning) team in partnership with the chair of the provincial zoning working group for KPWS have conducted 10 commune consultation meetings on zonation with participants from 11 Sangkat/communes including village vice chiefs/chiefs, commune council members, district/municipality representatives, provincial department representatives and provincial deputy governor (chief of provincial working group on zoning), in total there were 200 participants including 26 women. There were no significant comments or changes on the draft zoning boundaries from the consultation meetings. All draft management zoning maps were signed by commune chiefs, district governors and chief of provincial working on zoning. The village level awareness raising and PA zoning consultations were completed in 28 villages with participation from village representatives, commune council members, district representatives and provincial authorities. During the 28 village consultations on KPWS zoning, the principles of the four different management zones were explained and the proposed zoning boundary maps were presented by the working group members and endorsed by 1,373 participants including 733 women between February and April 2018.

A provincial level workshop to present the results of the data assessment, draft zoning boundaries and commune/village consultation results was held in Preah Vihear town on 26th June 2018 with 77 participants. Stakeholders included MoE representatives, provincial government departments, district governors, commune and village chiefs, CPA chiefs, national civil society organizations and other interested parties. The agenda covered speeches from H.E. Un Chenda, H.E Chea Samang General Director of GDANCP, Ken Sereyrotha WCS Country Director, in addition to a presentation on the results to date from Deputy Governor H.E Sou Serey and GDANCP official Sok Vutthin. During the workshop, while preliminary endorsement of the zoning plan was given by the provincial authorities, attendees agreed that the provincial zoning working group members should review all stakeholder comments and conduct a final ground truthing exercise with Ministry of Environment (GDANCP) officials prior to the national level workshop. Annex 4, Item 18.

In September 2018 an MoE field verification mission was completed with the Acting Director General of GDANCP, Director of Northern Plains, district deputy governor, FAO and KPWS director to Kear Pra, an area in the proposed core zone where villagers requested to establish a CPA supported by FAO. After the discussion with villagers, participants agreed to convert the areas from core zone to conservation zone. Following this, a provincial working group meeting was held with the MoE representatives with total of 37 participants. At the meeting, further verification steps were suggested and agreed, these included the use of drones to map habitat areas, holding another provincial working group meeting with MoE's three General Departments (GDANCP, GDLC and GDEKI), and finalize boundary revisions

In November 2017, WCS was made aware of an application by the Cambodian military forces based in Preah Vihear for a number of Social Land Concessions in KPWS. In August 2018, National level GDANCP staff from the Department of Northern Tonle Sap Protected Landscape visited the proposed sites in KPWS to assess the current on the ground situation regarding the locations for the proposed Social Land concessions. After meetings with the Provincial Governor and local authorities MoE officially stated that the proposed SLC should not be approved until further information and inventory analysis was conducted by the Ministry of Interior and Ministry of Defence for all known existing Military SLCs already granted throughout Preah Vihear Province and Cambodia.

Activity 4.3: Working with VMNs to broaden understanding of the conditionality attached to the Ibis Rice program is an extensive and on-going process. Once new farmers have joined the Ibis Rice Project by signing up to the conservation agreements (conditions to follow t requirements to be wildlife friendly producers), they are then confirmed on the Approved Farmer List if they pass the rigorous compliance testing associated with organic certification and can sell organic rice to the program. To ensure that farmers only sign conditional conservation agreements once they have fully understood the content of those agreements – in line with the principles of ‘free, prior and informed consent (FPIC)’ - requires a significant investment of SMP’s time and resources. In year two, 466 members have signed the conditional agreements and the program, 442 farmers were confirmed on the Approved Farmer List (AFL) and 393 had passed ICS.

Activity 4.4: New and existing farmers participating in the Ibis Rice program receive access and training to organic seed and organics know-how on an as-needed basis. This year the 11 farmers were seed breeders : 5 farmers in TB village are growing foundation seeds and 6 farmers in DP village are growing certified seeds - See activities 2.1 above regarding the distribution of drought-resilient, rice strains in year two.

Activity 4.5: The VMNs are responsible for confirming the eligibility of farmers to sell rice to the Ibis Rice program, and conversely, to identify any instances of non-compliance with land use plans that would render a farmer ineligible to sell to the Ibis Rice program. SMP and the provincial environment department provide the technical support to VMNs such that they can perform their investigative and decision-making role. In year two, 49 households were prevented from selling paddy to SMP due to issues of non-compliance. The seriousness of the non-compliance determines the length of time that the farmer is banned from participating in the program. Annex 4, item 12.

Output 5. *Impacts of Ibis Rice program on threatened bird populations, habitat trends and human livelihoods are monitored, recorded and disseminated to a wide audience, including relevant national and regional PES policy-makers.*

Activity 5.1: 942 households were interviewed in 16 villages (including both target and matched control villages) in year one to establish the baseline poverty status and the number of families benefiting directly or indirectly from Ibis Rice. The results of the evaluation into the impact of living inside the two protected areas managed for conservation suggest that within-PA households are more resilient to adverse exogenous effects. Furthermore, the results of the evaluation of the impacts of the three PES interventions show that the most promising intervention evaluated, Ibis Rice, has been successful in contributing to improvements in the wellbeing of participant households, particularly with respect to improving rice harvests and household food security. This result also suggests that the intervention’s impacts have increased over time, following the transition to organic certification and increased support for local management capacity. Annex 4, item 15, global evaluation report.

Activity 5.2: In activity 4.5 above we report on the work of the VMNs to confirm eligibility of farmers to sell to the Ibis Rice program. SMP’s Ibis Rice compliance unit provides the data upon which those decisions are based.

Activity 5.3: Details of SMP’s media activities are included in paragraphs 12 and 13 and annex four. Partnerships with CIRAD and a master thesis at RUPP is on-going. These are outlined in paragraph 2 above.

3.2 Progress towards project Outputs

Output 1. Village Marketing Networks (VMNs) have the capacity to manage the expansion of Ibis Rice compliance, organic internal controls and production independently.

The need for VMNs to take more responsibility for the continues to be a priority, as such a member of staff showing particular capacity building skills has been allocated specifically to this.

The ability of VMNs to manage the internal control system independently will be measured based on the number of inspection reports signed by the VMNs themselves. This is essentially 'proof' that an individual VMN inspector has passed the ICS training. VMNs will reach that point after completing a rigorous three phase training process. In Yr215 VMN's have completed this training process and will be working with the SMP team to deliver ICS inspections this year. They will be closely monitored for integrity and accuracy but it is expected that 20% of the inspections will be carried out by the VMN. This means we expect to be able to complete ICS even with an uplift of 300 households in Year 3 with a limited increase in SMP staff which is progress towards financial sustainability and community management.

Output 2. Ibis Rice farmers have tested and adopted drought-resilient agricultural practices and complementary soil conservation techniques along with levelling and water efficiency trials.

Activities towards the achievement of Output 2 are on track with trials underway to determine the most likely pathways to strengthening resilience in agricultural practices. There has been a strong uptake in growing more stress-tolerant rice varieties (In 2018, 437 Ibis Rice farmers covering 1 199 ha). Legume trials have begun with seven families participating in the trials (Annex 4, Item 9) trial plots deliberately located in highly visible areas and communities and as such we expect high participation in community meetings and recruitment for Year 3 participation in legume trials. 805 metric tonnes were produced in year 2 with around 46% adhoc organic and the rest is Organic.

Output 3. Critically endangered species populations increase as a result of improved protection around Ibis Rice villages.

Activities associated with Output 3 are well established in the Northern Plains and are a central component of protected area management in the area, providing the ongoing monitoring of efforts to avoid habitat and species loss. The indicators selected for measuring deforestation (3.1) and the number of critically endangered nests protected is appropriate for monitoring the achievement of Output 3.2. In 2018, 245.34ha were deforested into the Northern Protected area, in the nine target Ibis Rice villages. Number of critically endangered bird nests protected during 2018/19 breeding season increases by 17%.

Output 4. Community members living within the target protected areas experience reduced poverty and increased income as a result of Ibis Rice.

Overall progress towards this output is measured by the number of tonnes of organic rice produced, the number of farmers participating in or benefiting from the program, the number and coverage of Village Marketing Networks (VMNs) running the program and ultimately the impact the program has had on the poverty status of people in Ibis Rice villages. The poverty status analysis will be ongoing. We increased the total purchase of paddy by approximately 190MT an increase of 30%. We paid a higher price than ever before averaging \$400 per MT, this was a 13% increase on the previous year which was accommodated by secure high value markets for the product

Again in year 2 unpredictable rainfall had significant impact on household income and the availability of product to be sold. Lack of rains towards the end of the growing season impacted the traditional variety that farmers grow for home consumption. This variety matures very late in the season and was significantly impacted, this meant that farmers kept the volume of Pkha Rumdoul that they would have otherwise commercialised through the project. Indeed some 51 compliant households had no surplus to sell to the project.

This makes the recommendations from CIRAD for further diversification of rice varieties as well as new products, including Amaranth, finger millet and sesame absolutely vital. IRCC has developed market channels for these in preparation for diversification at the field. Climate resilience will be strengthened through stress tolerant varieties, soil improvement and as many options for production through the same value-added channels. This needs to be supported by increased technical agronomy support which will be integrated into SMP's approach through the collaboration with CIRAD.

Output 5. Impacts of Ibis Rice program on threatened bird populations, habitat trends and human livelihoods are monitored, recorded and disseminated to a wide audience, including relevant national and regional PES policy-makers.

All activities are on track to ensure the impact of this project are rigorously monitored, measured and reported on in an academically robust manner. Wider dissemination will be made possible through the

broad reach of social and mainstream media. The indicators selected for measuring progress towards this output are appropriate and are evidenced in annex four and paragraphs 12 and 13.

3.3 Progress towards the project Outcome

At the end of year two, the project is on track to achieve its intended outcome, and the indicators we have identified in the logframe are suitable for providing evidence of that. In year 2 we were slightly disappointed in new farmer recruitment which was largely driven by a poor rice harvest previously and delays in land verification from the Department of Environment. We are reassured that we are still on target for the project outcomes as in late Q4 we have over 300 new farming households requesting to join and have approval from pDoE for WCS and SMP to verify land within our own GIS departments respectively and submit for their final approval. We expect that this will be far more efficient and allow us to capture these new members for the rice season of year 3. The new markets and purchase power of IRCC should also deepen the value proposition of farmers ultimately supporting the pathway to achieving project outcomes.

3.4 Monitoring of assumptions

Outcome assumption 1: The primary assumption at the outcome level is that a switch to climate-resilient, rice-growing methods is needed because climate variability is likely to increase. All international modelling suggests that this assumption holds true. The logic implicit in the design of this project suggests that once SMP has strengthened farmers' ability to withstand the negative effects of climate change, then those farmers will want to participate in the Ibis Rice scheme, growing organic rice and selling it to Ibis Rice. Those same farmers could, however, choose to sell their organic produce elsewhere. If that were the case, those farmers will still have had to adhere to organic rules, and will still have earned a premium for their produce, thus the overall conservation and poverty alleviation objectives will be met.

Output one assumption: Building the capacity of VMNs to manage organic compliance independently is certainly a challenge. The project design assumed that good trainers could be hired for the project and that VMNs would be willing to undertake the training needed to reach that goal. The goal is that VMN can be capable to be inspectors. VMN follow training and are follow by the staff.

Output two assumption: The assumption holds true that it's needed to identify locally appropriate, stress-tolerant rice strains and growing methods in order to make local farmers more climate resilient. Than to our partnership with a highly experienced agricultural researcher, Dr Florent Tivet, in year two, sustainable agriculture practices improvement and seed recommendations has been identified. This will be try with volunteers farmers next year.

Output three assumptions: The primary assumption, that financial incentives offered by conservation enterprises are sufficient to induce behaviour change, has been previously shown to be true. But we continue to monitor the parameters within which this will hold true – i.e. the level of financial incentive needed to induce the type of behaviour change needed - including through a partnership with the International Initiative for Impact Evaluation (3ie) (see section nine on lessons learnt for more detail). The first result shows the positive impacts of Ibis Rice on households. This evaluation is still on going. The second assumption is that government park rangers will continue to enforce the Cambodian laws relevant to this project. SMP's risk mitigation strategy here is to work closely and maintain a constant, open dialogue with government partners. This means we are able to monitor this closely and would adapt the project design if the situation changed dramatically.

Output four assumptions: As a marketing enterprise, Ibis Rice Conservation Company Ltd keeps abreast of developments in international rice markets. The primary limiting factor for Ibis Rice being able to grow the incomes of participating farmers is that they choose not to participate, or do so in a piecemeal fashion. SMP is mitigating this risk through open dialogue with the VMNs, to ensure that the Ibis Rice program is still wanted by local people, and to find out and then remove any impediments to local participation. For example, during the rice buying season in year one there were many more middlemen visiting the Ibis Rice villages looking to buy rice than usual because of the poor rice crop across the country. These middlemen arrived before the ICS checks were complete. Some farmers became nervous that they would not pass organic certification, some were cash-strapped due to the drought, and some were said to have been put under significant pressure from these middlemen, thus choosing to sell to the other rice purchasers, rather than waiting for Ibis Rice. In response, Ibis Rice has adapted its approach for the 2018 purchasing season

by aiming to complete all ICS checks earlier, and is strengthening VMNs' capacity to communicate more effectively – and thereby assuage the concerns of – local farmers.

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

The project has contributed to a higher impact of **biodiversity conservation** in both direct and indirect ways. It is having a direct impact on biodiversity conservation by achieving all targets as detailed in the logframe under Output 3. This is being achieved by addressing specific Strategic Objectives and associated Key Actions of the Cambodia National Biodiversity Strategic Action Plan (NBSAP) 2016 as outlined in section 5 below.

In addition, the projects has contributed indirectly to a higher impact of biodiversity conservation by developing, testing and implementing new models for conservation and development that when widely adopted will result in broad behaviour change in Cambodia and beyond. By incentivising behaviour change in communities that results in conservation and improved protected area (PA) management and integrity, while also creating associated increases in livelihoods, social adaptive capacity and empowerment, the project is demonstrating a new model that is broadly applicable. This unique 'triple bottom line' for a conservation intervention is being acknowledged by the wide recognition the project is receiving (see sections 12 and 13 below) particularly by decision-makers (e.g. Cambodian Minister of Environment and Office of Council of Ministers – see section 12 below) who are in a position to ensure this approach is rolled out more broadly across the PA system in Cambodia.

The PA Law (2008) provides a framework for recognized communities within MoE protected areas to legally develop, designate and co-manage community protected areas (CPAs) for a period of 15 years. These CPAs can only be designated within the sustainable use zone and through agreement by the MoE as per the Prakas on "Procedure and Process of Community Protected Area (CPA) Establishment". CPAs form a key component of WCS's zoning strategy in the landscape since they provide the legal basis for communities to assert their rights to natural resources (including land) while strengthening protection from illicit resource extraction and land grabbing. Across the Northern Plains Landscape (Preah Vihear), WCS has supported 17 CPAs and facilitated the creation of 4 CPAs between August 2017 and October 2018. Annex 4, item 1.

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

As detailed in section 3.5 above, the project demonstrates a higher impact for conservation and development where economic gains for poor communities are possible in a context of sustainable use of natural resources. In doing this the project is contributing to Cambodia fulfilling its obligations under 2030 Agenda for Sustainable Development, through assisting the country in meeting several Sustainable Development Goals (SDGs). In the proposal we aimed to contribute to six SDGs (1, 5, 10, 12, 13 and 15) but through the course of the first year it has become obvious that the project can also contribute to an additional three goals (SDGs 2, 8 and 16), further growing the impact achieved. Supporting evidence for the contribution to these SDGs is given in sections 3 and 5-7, and in the logframe below and are not repeated here.

The building block of the Ibis Rice approach that has been implemented in the first year are strong local institutions (SDG 16), which are inclusive of women (SDG 5), and participatory land-use planning that secures land tenure for poor rural communities (SDG 16). By incentivising conservation and incorporating biodiversity values into decision-making processes, conservation is being achieved (SDG 15). In addition, by promoting climate-smart agriculture the project is taking direct climate action (SDG 13), while the resultant sustainable agriculture (SDG 2) is improving food security (SDG 2) and increasing rural livelihoods (SDG 1). The improvements in overall human well-being for rural communities that the project is delivering through increased access to markets for Ibis Rice farmers, and their increased self-determination through inclusive local institutions, secure land tenure and access to decision-making processes, are reducing the inequalities among these communities and others in Cambodia (SDG10) while also constituting full and productive employment (SDG 8). From the farm gate to the dinner plate, the entire value chain for certified organic Wildlife Friendly™ Ibis Rice is a model example of sustainable consumption and production (SDG 12).

5. Project support to the Conventions, Treaties or Agreements

Through the second year of implementation, the project has assisted Cambodia to implement the Convention on Biological Diversity (CBD; Strategic Goals A,B,C,D,E) by working towards the following Aichi Targets:

Aichi Target 2 (*biodiversity values integrated into development and poverty reduction*)¹ has been supported by implementation specifically incorporating biodiversity values into decision-making processes around sustainably managed agriculture within a forest-mosaic –the farmers need to keep some trees into their rice fields.

Aichi Target 5 (*reduction in loss, degradation and fragmentation of forests*) has been supported by putting in place land-use plans recognized and approved by local authority that will result in the reduction in unplanned deforestation that is a central to the Ibis Rice scheme and a core part of farmer compliance. Other criteria such as rice field burning is analysed and monitored within the project.

Aichi Target 7 (*areas under agriculture managed sustainably, ensuring conservation of biodiversity*) has been supported as Ibis Rice farmers must follow sustainable agriculture requirements (organic and wildlife friendly rules), ensuring conservation of biodiversity, to qualify for the incentives that drive the scheme.

Aichi Target 11 (*areas of particular importance for biodiversity and ecosystem services, conserved through protected areas integrated into the wider landscape*) has been supported through the land-use planning undertaken and the zoning, creation and registration of PAs which then contributes to landscape-scale management - the project improve the PAs management with new technics and patrols.

Aichi Target 12 (*the extinction of known threatened species prevented and conservation status improved and sustained*) has been supported through the reduction in hunting that is another core part of farmer compliance (Wildlife friendly commitment), and by the increase in populations of threatened species that will result from this and other initiatives in coming years of the project.

Aichi Target 14 (*ecosystems that provide essential services, contribute to health, livelihoods and wellbeing of the poor and vulnerable*) has been supported by the project using government endorsed land-use plan to secure access to essential ecosystem services for poor and vulnerable rural communities while transferring the monetary value of these services on to the consumers that purchase Ibis Rice.

Aichi Target 18 (*knowledge, innovations, practices and use of biological resources of local communities respected and with their full and effective participation*) has been supported as the planning process being used integrates and protects the rights and knowledge of local communities and secures their land tenure.

Progress towards the Aichi Targets is being achieved through addressing five themes of the **Cambodia National Biodiversity Strategic Action Plan (NBSAP) 2016**. The project has been designed to address specific Strategic Objectives and associated Key Actions under each Theme. Supporting evidence is given in section 3.5 above and in the logframe below and is not repeated here.

The project has interacted with Cambodian Convention focal point, with the proposal reviewed by Mrs. Chan Somaly, CBD focal point, and the Darwin Initiative Project Half Year Report also sent to the focal point.

6. Project support to poverty alleviation

The current SMP project design has benefited from a PHD thesis (see **Beauchamp, E.**, Clements, T. and E.J. Milner-Gulland. 2017. Assessing medium-term impacts of conservation interventions on local livelihoods in Northern Cambodia. *World Development*.) that confirmed the Ibis Rice project delivered improvements in well-being, including increasing incomes, for project beneficiaries. The first results of the study into the impact of living inside the protected areas managed for conservation suggest that within-PA households are more resilient to adverse exogenous effects. Furthermore, Ibis Rice, has been successful in contributing to improvements in the wellbeing of participant households, particularly with respect to

¹ The descriptions of the targets given in italics are paraphrased and focus on the parts of the target most relevant to the project.

improving rice harvests and household food security. This result also suggests that the intervention's impacts have increased over time, following the transition to organic certification and increased support for local management capacity.

These first results of the study are particularly encouraging, as it suggests that the intervention has evolved to a state where households are benefiting through their participation and that these benefits are not just financial but also relate to household food security, a key target of the Sustainable Development Goals.

- ⇒ The study is still on going and we will provide final result with robust evidence at project end whether, and to what extent, the project alleviates poverty.

7. Project support to gender equality issues

The Ibis Rice project strengthens women's role in decision-making through ensuring their membership on the VMN. All land use planning follows an FPIC process which requires active (and recorded) participation of women. The resultant community protected area committees also require female membership to be lawful. In monitoring the program, SMP maintains gender-disaggregated data, noting female-headed households on the Approved Farmer List, promoting (and counting) female participation in all training workshops, and disaggregating by sex in activities relating to the monitoring of poverty status of beneficiaries (Activity 5.1, Output 4.4, Outcome 0.5. We have worked hard to encourage mixed gender representation within all institutions, committees, trainings and meetings.

- ⇒ In Year 3, a gender specialist will be hired and will work on the gender strategy into the organization and will develop gender approach for Ibis Rice activities.

8. Monitoring and evaluation

SMP has an annual operational planning meeting, an annual pre-harvest operational planning meeting, and monthly reflection and planning meetings. Its key planning documents are the annual operational plan, the Approved Farmer List, which documents annually the details of participating Ibis Rice farms, and the range of documentation related to the ICS. These systems are in place and robust. SMP meets with project partners quarterly to determine next steps and partners provide written reports to SMP.

This year, SMP realized its first annual strategy meeting, to review global objectives and specifics one per locations and per projects.

Also, SMP reviewed and strengthen its own structural organization, with an additional financial officer and with a designated project coordinator in the field, additional to the program manager, this to improve the project monitoring quality.

To show project impact, we engage a mix of direct measures of performance (e.g. number of beneficiaries participating in trials, uptake of drought-resilient methods etc.) with less direct measures (e.g. overall income increases; improvements in conservation of critically endangered birds' nests).

We are relying on the proper impact evaluation assessment conducted by 3ie (with parallel funding) to demonstrate causality between the Ibis Rice program and ultimate improvements in poverty status and forest and biodiversity conservation.

9. Lessons learnt

Lessons learnt from year 3 are in part directly derived from recommendations from CIRAD in regards to diversification. Through an exchange with behavioural science practitioners facilitated at oxford university and learnings from a Phd looking at drivers and social norms of illegal activity that is being undertaken by a student facilitated with WCS, SMP is looking deeper into the non-economic drivers of both compliance and willingness to sign up. Although the VMN are our key conduit to interact with communities we have seen that it is also important for the project to approach smaller networks of farmers directly that for a multitude of reason may not be reached effectively by the VMN. This was in part a big contributor to the increased interest seen at the end of Q3.

SMP is also looking at how we can diversify the way incentives are paid and what form they take going forward. We would like to test and measure impact of these new approaches towards behaviour change rigorously and as such will be looking to use RCT's. To compliment the ongoing research of '3ie' we are looking to develop a working group dedicated to how to use Ibis Rice to change social norms towards illegal activity.

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

N/A Please see sales agreement with english included in evidence (case 26). In response to comment from year 1. The conditions included in this sales agreement are related to compliance necessary to achieve wildlife friendly and organic status, it is necessary to meet these conditions to access the additional price as these are consumer driven conditions, therefore it is essentially a 'take it or leave it process' for non-compliant farmers there is a pathway of conversion back into compliance which in some cases is a three year conversion period according to international organic standards.

11. Other comments on progress not covered elsewhere

The land levelling trials were not yet implemented. This is mainly due to the focus on cover crops immediately after rice in the dry season which is the time at which land-levelling should be conducted. This will be addressed in year 3 and year 4 as a priority.

12. Sustainability and legacy

The Ibis Rice scheme has developed a very high profile in its first 2 years through the use of social media (including in 2018 : 58 Ibis Rice Facebook posts with 333,728 people reached, 9229 reactions, comments and shares, 8212 Likes, 3940 On posts, 2079 On shares and 13960 Posts clicks), formal media (including 2 press releases that resulted in a number of published articles), the project being featured on YouTube and websites, and project staff presenting at several conferences, workshops and meetings. The promotion of the project detailed, and the overall success of the project, has resulted in it being seen as a model for sustainable development at the community level that will greatly contribute to its sustainability and legacy.

There is a constant increase of interest among farmers to be part of the Ibis Rice project. After Ibis rice promotion conducted in February and March, there are 300 new farmers from 9 villages targeted in CWS and KPWS, wanted to become Ibis rice member. The compliance Unit will now check which families can be part of the Ibis rice Project. Annex 4, item 17.

Several communication tools have been developed and implemented in both Khmer and English, as evidenced by the media exposure gained and detailed below.

The long term sustainability and legacy of the project are greatly supported now by the commercial progress of IRCC. Developing international markets with committed consumers means that the project is moving closer to being sustainably financed year on year. By project end we expect support from IRCC to be sufficient to maintain the core activities of SMP in these protected areas. This would mean that future grant support in these areas could be dedicated to rapid expansion and diversification and deepening of impact.

13. Darwin identity

The Darwin Initiative funding was recognised extensively through the project making a great effort to publicise the Darwin Initiative and the UK Government's contribution through the use of social media and videos published in YouTube and features on websites that also cite the Darwin Initiative. From April 1st 2018 to March 31st 2019, IBIS Rice have been primarily engaged in the Facebook platform. In this time period, IBIS Rice has 235 more followers, 292,929 views on all content and 53,759 engagements (likes, shares, reactions). IBIS Rice have also engaged in 8 Darwin specific posts that have had 67,009 views and 15,508 engagements. This has been below our yearly target due to the separation of social media groups of IBIS Rice and Sansom Mlup Prey. A media consultant has been hired to manage social media and press release targets for Year 3 Project staff have presented at several meetings and conferences, acknowledging Darwin support.

SMP organization has developed this year its own Facebook page, with article dedicated to Darwin activities and cites Darwin Initiative.

14. Project expenditure

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

Project spend (indicative) since last annual report	2017/18 Grant (£)	2017/18 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items (see below)				
Others (see below)				
TOTAL				

Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2018-2019

Project summary	Measurable Indicators	Progress and Achievements May 2018 - March 2019	Actions required/planned for next period
<p>Impact</p> <p>Long-term conservation of biodiversity and maintenance of ecosystem services in Cambodia is ensured even in a rapidly changing environment, through linking poverty reduction, security of land tenure and community-based conservation.</p>		<p>Systems in place for strengthening biodiversity conservation, whilst enhancing livelihoods and incentivising good resource stewardship by local communities</p>	
<p>Outcome</p> <p>Future-proof Ibis Rice by linking organic accreditations and drought-resilient agricultural practises with international markets, thus safeguarding livelihood improvements for > 2,500 families, protecting threatened species and preventing deforestation across >400,000ha.</p>	<p>0.1 The number of families benefiting from the Ibis Rice project exceeds 2,500 (baseline 2105/16: 1,230)</p> <p>0.2 The number of households participating in drought-resilient agriculture practises exceeds 1,250 (Baseline mid-2015: 0)</p> <p>0.3 The number of incidents of illegal clearance of forest around participating villages declines by 25% against the 2015 baseline of 72 incidents per annum)</p> <p>0.4 The number of critically threatened bird species, Giant and White-shouldered Ibis, that fledge successfully is 25% more than the 2015 baseline of 29 nests, 39 chicks</p> <p>0.5 The poverty status of participating households increases by 20% against the 2016 baseline</p>	<p>0.1, Will be measured during endline survey.</p> <p>0.2, 437 household's on March 2018. Expanding to one village this year and we will expand to 2 villages next year as well as 300 newly interested households in existing villages</p> <p>0.3 We are still awaiting the data from WCS of illegal incidents in Yr 2 for comparison, this can be updated in the Yr 3 mid-term report</p> <p>0.4 Year two will continue the monitoring of critically endangered species.</p> <p>0.5 Baseline survey for measuring poverty status through basic necessities survey undertaken.</p>	<p>0.1, 0.2: Preassessment of expansion to two new villages with VMNs with project promotion initiated, farmer sign up to commence Q1 Y3. From a remaining 6 villages under ongoing assessment 4 have been selected as viable and will have full assessment in Yr 3</p> <p>0.3: Continue to implement improved compliance monitoring and enforcement. Explore acceptable approaches for authorities and communities to reintegrate previously non-compliant farmers to future-proof impact.</p> <p>0.4: Monitoring and protection activities will continue with an expectation to see populations improve due to improved climatic conditions and increased compliance and reach of Ibis Rice.</p> <p>0.5: Baseline for new villages will be conducted such that impacts of improved income through Ibis Rice will be measurable.</p>

<p>Output 1. Village Marketing Network (VMN) have the capacity to manage the expansion of Ibis Rice compliance, Organic internal controls and production independently</p>	<p>1.1 By the end of the project, 50% of VMNs will be managing Ibis Rice compliance successfully</p>	<p>SMP has recruited 3 interns to support the internal control system to the 466 organic Ibis Rice households.</p>
<p>Activity 1.1 Additional SMP staff & VMN members are recruited and trained to manage Organic Ibis Rice internal controls, organic purchase, production, and institutional implementation.</p>		<p>SMP recruitment of new staff complete. 3 ICS staffs were recruited in May for this season.</p> <p>9VMN committee members and 7 SMP staffs in PVH completed on the job training in organic purchasing.</p> <p>Year 3: 1 additional agronomist staff will be recruited in April 2019 and trained in May 2019.</p>
<p>Activity 1.2 Training in organic internal control monitoring and record keeping provided to VMN members so that the organisation can be managed without the support of partners even after the switch to organic Ibis Rice which requires much more documentation than Wildlife-Friendly alone.</p>		<p>25 VMN members received additional training to become inspectors</p> <p>Year 3: We plan to have 18 VMN inspectors.</p> <p>All new VMN members will receive training in proper record keeping in this period.</p>
<p>Output 2. Ibis Rice farmers have tested and adopted drought-resilient agricultural practices and complementary soil conservation techniques along with levelling and water efficiency trials.</p>	<p>2.1 Number of Ibis Rice farmers taking part in stress-tolerant rice trials exceeds 20% of all Ibis Rice farmers by the end of Year 1 (baseline: 2015/16:3%)</p> <p>2.2 Number of Hectares cultivated using stress tolerant rice seed produced during trials is at least 400Ha by end year 2 (baseline: 0)</p> <p>2.3 Number of farmers willing to adopt drought-resilient agricultural practises (legume trials and land levelling) exceeds 1,250 families by end of Year 4 (baseline: 0)</p> <p>2.4 Number of tons certified organic rice produced grows by 50% between Year 1 and Year 3 (baseline: 187 2015/16)</p>	<p>Output 2 is on track with partner organisation, CIRAD, having designed and begun trialling various techniques for improving drought-resilient rice production and nitrogen-fixing legumes in target villages. Evidence is provided at annex four with CIRAD's initial feasibility report.</p> <p>In 2018, 1199 hectares and 437 farmers are trialling stress-tolerant rice varieties - Pkha Rumduol and/or DSMK</p> <p>7 farming families are trying more drought-resilient practices (legume trials)</p> <p>The number of tonnes of certified organic rice at the end of year one is 642 MT (see Approved Farmer List attached at annex four)</p>

<p>Activity 2.1. Seed for drought-resilient jasmine rice strain purchased from CARDI</p>	<p>150kg of foundation breeder seed of Pkha Romdoul was purchased and distributed to 5 seed farmers at TB village. Then, 6 Farmers plants and breeds certified seed at DP village.</p> <p>Year 3: Plan to purchase 200kg of foundation seed.</p>
<p>Activity 2.2. SMP develops and tests an organic-certified version of drought-resilient rice seed stock and new soil conservation techniques. Ibis Rice fields that have been certified as organic can be used to develop the seed-stock for organic drought-resilient Ibis Rice seed.</p>	<p>Partner CIRAD Five main activities were realised assessment of a rice collection, establishment of cover/relay crops after wet season rice, capacity building trough training and field days for smallholder farmers, conduct research study assessing changes in soil functions between contrasted land uses</p> <p>Year 3: Expansion of the rice trial, a participatory process to manage establishment of cover crops ad collective action will be explored. Wet season trials of upland diversified crops will be conducted as well as analysis of previous periods post-rice dry season trails.</p>
<p>Activity 2.3 Evaluation of organic drought-resilient jasmine rice and fallow-year crops, including yield, ease of growing, ease of harvest, water requirements, and also taste and texture. Farmers, the VMNs and SMP will all be involved in the evaluation of the new rice strain and fallow-year crops.</p>	<p>Trials are underway and evaluation will be on-going with initial results reported</p> <p>These main groups of rice were assessed (in terms of yield, adaptability, cycle and resistance to the drought): fragrant, waxy, colored and white rice and seed production for two-colored waxy rice and two waxy non-colored rice.</p>
<p>Activity 2.4 VMNs promote organic drought-resilient jasmine rice and fallow-year crops across the Ibis Rice farmer network. In villages that have tested the organic drought-resilient rice, the VMNs can both promote the new rice strain to farmers within the village and to farmers in other Ibis Rice villages. At the same time they can provide training in growing the new strain of rice, based on their experiences during the trials.</p>	<p>Trials are underway and evaluation will be on-going. Local VMNs are either directly participating in trials or will be kept abreast of results and will use those to promote successful techniques and crops to other farmers in the community.</p>
<p>Activity 2.5 Organic product grown in all Ibis Rice villages using soil conservation techniques. If the field trials are successful it is anticipated that the new organic drought-resilient jasmine rice strain will replace the existing jasmine rice strain used by Ibis Rice farmers across all of the villages, new and existing, that take part in the scheme.</p>	<p>A Master study has been initiated and is on-going on the assessment of soil ecosystem services comparing different land uses and/or cropping system.</p>
<p>Output 3. Critically endangered species populations increase as a result of improved protection around Ibis Rice villages</p>	<p>3.1 Deforestation rates around target villages are lower compared to deforestation rates in the wider landscape (baseline 2012-2015: 0.93% around target villages, 3.53% in wider landscape)</p> <p>3.2 Number of critically endangered birds' nests protected are 20% higher when compared to baseline 2014/15: 29.</p> <p>In 2018, 245ha has been deforested in the nine targeted villages.</p> <p>Number of critically endangered bird nests protected during 2018/19 breeding season increases by 17% to 40 nests.</p>

<p>Activity 3.1. Birds nest protectors protect nests of key species and report to birds nest protection coordinator. Some of the birds nest protectors are also Ibis Rice farmers, who protect the birds that breed near to their fields. The species protected include six Critically Endangered species Giant and White-shouldered Ibis, Bengal Florican, Slender-billed, White-rumped and Red-headed Vultures, as well as a range of Endangered and Vulnerable species, such as Sarus Crane, Lesser and Greater Adjutants, Masked Finfoot and White-winged Duck.</p>	<p>In 2018, more than 100 local people from the Northern Plains were directly employed and trained to protect nests of threatened birds. 251 globally threatened nests, including 40 critically endangered birds' nests, were protected. Throughout the rainy season (May - December) community wildlife rangers conducted awareness raising and biodiversity SMART patrols in important breeding habitat areas for globally threatened waterbirds in the Northern Plains landscape. During this reporting period 30 Giant Ibis nests, 6 White-shouldered Ibis nests were located, monitored and protected by local community nest protectors within both Kulen Promtep and Chepp Wildlife Sanctuaries.</p> <p>Activity continues in year 3.</p>
<p>Activity 3.2 Monitoring of forest cover and land-use change by WCS rangers and GIS team. WCS staff use remote sensing (LandSat and other satellite imagery) to monitor land-cover change. These data are cross-checked by the VMNs and all incidents recorded by the Compliance Unit, who maintain a field by field and farmer by farmer database.</p>	<p>Monthly assessments carried out using Landsat imagery, then cross-checked by WCS community rangers and MoE patrol team staff</p> <p>Activity continues in year 2.</p>
<p>Output 4. Community members living within the target protected areas experience reduced poverty and increased income as a result of Ibis Rice</p>	<p>4.1 The number of people benefiting from the Ibis Rice project increases by 15% per annum (baseline 1,230 families in 2015/16)</p> <p>4.2 The number of tonnes Ibis Rice purchased per annum by SMP from participating farmers exceeds 1,000 by the end of the project (baseline 2015/16: 557)</p> <p>4.3 Number of functioning VMNs exceeds 20 (baseline 12 in 2016)</p> <p>4.4 Poverty status of people in Ibis Rice villages improves (baseline to be established at project inception 2016/17)</p> <p>The number of people benefiting from the Ibis Rice program includes those in the wider community who will benefit from agricultural interventions aimed at increasing climate resilience. This will be tested at project end. Ibis Rice Company purchased 805 tonnes of organic rice from approximately 364 households. Farmers selling rice to the program received a 40% premium for organic. 51 households had no rice to sell due to drought.</p> <p>Currently focused on redefining a "functioning VMN" as the role becomes more complex with introduction of organic certification, working with 9 existing VMNs and with 30 VMN committee members.</p> <p>942 households were interviewed in 16 villages (including both target and matched control villages) in year 1 and 2 to establish baseline poverty status and the number of families benefiting directly or indirectly from Ibis Rice (activity 5.1)</p>
<p>Activity 4.1 Village Marketing Networks (VMNs) established in target villages. The VMNs are a vital part of the Ibis Rice process. They are made up of members of the community, always including at least one woman. They are the link between farmers and SMP. As such, the VMNs are involved in promoting the scheme among farmers, and receive training that enables them to monitor compliance to conservation agreements and provide agricultural support to farmers.</p>	<p>Currently there are 30 VMN committee members operating in 9 villages.</p> <p>Year 3: We will expand to two more village, Our Kak and Krolas Pies. Although not directly funded by this project, Ibis Rice will do an assessment of 3 new villages opportunities in Western Siem Peng, an action plan will be developed</p>

<p>Activity 4.2 Participatory land-use planning conducted in target villages, and land-use plans agreed by government. Land-use plans are developed in a fully participatory process and denote areas where forest is of high importance for biodiversity and must be protected, areas that are farmed, and areas that are of low conservation importance and can be cleared for farming in the future with agreement from the VMN.</p>	<p>PLUP ongoing in 35 villages in the Northern Plains. See example attached at annex 4 item 18</p>		
<p>Activity 4.3 Conditional agreements explained and new members join VMNs. The conditional conservation agreements form the basis for Ibis Rice. Farmers can only sell their rice to SMP if the farmers adhere to the conservation agreements, and if they grow the correct type of rice (Jasmine Rice). The conservation agreements set out which species people are not allowed to hunt, and require them to adhere to the land-use plans; they are also not allowed use chemical fertilisers or pesticides.</p>	<p>In 2018, 466 farmers had signed conditional agreements, 442 farmers were confirmed on the Approved Farmer List (AFL) and 393 had passed ICS. These numbers is less than last year due to an increase or non compliance farmers.</p> <p>Year 3: We expect to have around 510 farmers participating in the organics program in existing villages and at least one additional village for recruitment of organic farmers.</p>		
<p>Activity 4.4 Training and seed provided to farmers as necessary.</p>	<p>See 2.1 and 2.2 above. The first phase will be to trial a range of alternative crops. 12 seed farmers are participating in the initial trial phase and 7 farmers are experimenting with legumes and all Ibis Rice farmers will be invited to awareness sessions on those trials</p>		
<p>Activity 4.5 VMNs identify eligible farmers and sell Ibis Rice paddy to SMP. Within each village, any land clearance must be authorised by the VMN, who make their decisions based on the land-use plan. Farmers who do not adhere to the conservation regulations cannot sell their rice to SMP, since it does not qualify as Ibis Rice. They weigh the rice before it is sold to SMP, which ensures that people in the village believe that they are getting a fair payment for their rice.</p>	<p>VMNs supported to identify any illegal land clearance. In year two, 28 households prevented from selling paddy to SMP due to issues of non-compliance.</p>		
<table border="1" style="width: 100%;"> <tr> <td data-bbox="174 906 667 1137"> <p>Output 5. Impacts of Ibis Rice program on threatened bird populations, habitat trends and human livelihoods are monitored, recorded and disseminated to a wide audience, including relevant national and regional PES policy-makers.</p> </td> <td data-bbox="678 906 1160 1137"> <p>5.1 Two peer-reviewed journal articles published in academic journals by WCS & RUPP researchers.</p> <p>5.2 Press releases, and social media used at least monthly to disseminate impacts of the Darwin Post project</p> </td> </tr> </table>	<p>Output 5. Impacts of Ibis Rice program on threatened bird populations, habitat trends and human livelihoods are monitored, recorded and disseminated to a wide audience, including relevant national and regional PES policy-makers.</p>	<p>5.1 Two peer-reviewed journal articles published in academic journals by WCS & RUPP researchers.</p> <p>5.2 Press releases, and social media used at least monthly to disseminate impacts of the Darwin Post project</p>	<p>Relationships with academic institutions formalised. A Master study has been initiated and is on-going on the assessment of soil ecosystem services comparing different land uses and/or cropping system.</p> <p>8 facebook post specifically about Darwin and creation of SMP facebook page.</p>
<p>Output 5. Impacts of Ibis Rice program on threatened bird populations, habitat trends and human livelihoods are monitored, recorded and disseminated to a wide audience, including relevant national and regional PES policy-makers.</p>	<p>5.1 Two peer-reviewed journal articles published in academic journals by WCS & RUPP researchers.</p> <p>5.2 Press releases, and social media used at least monthly to disseminate impacts of the Darwin Post project</p>		
<p>Activity 5.1 Data on poverty status is collected from target villages and appropriate paired control villages</p>	<p>Baseline poverty status data was collected from 942 households in 16 villages (including both target and matched control villages) in Year 1.</p>		
<p>Activity 5.2 Results of monitoring are used by Ibis Rice Compliance Unit, which works closely with the VMNs to ensure that SMP only purchases rice from farmers who have kept the conservation agreements.</p>	<p>Ibis Rice compliance unit provides data to VMNs prior to rice purchasing to assess adherence to conservation agreements and determine eligibility to participate in program. 28 households farmers removed from purchasing list due to not keeping conservation agreements (activity 4.5)</p>		

<p>Activity 5.3 Peer-reviewed papers, reports, presentations and social media are prepared and published.</p>	<p>From April 1st 2018 to March 31st 2019, IBIS Rice have been primarily engaged in the Facebook platform. In this time period, IBIS Rice has 235 more followers, 292,929 views on all content and 53,759 engagements (likes, shares, reactions). IBIS Rice have also engaged in 8 Darwin specific posts that have had 67,009 views and 15,508 engagements. This has been below our yearly target due to the separation of social media groups of IBIS Rice and Sansom Mlup Prey. A media consultant has been hired to manage social media and press release targets for Year 3.</p> <p>CIRAD have been contracted to commence legume trials.</p>
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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: Long-term conservation of biodiversity and maintenance of ecosystem services in Cambodia is ensured even in a rapidly changing environment, through linking poverty reduction, security of land tenure and community-based conservation.</p>			
<p>Outcome: Future-proof Ibis Rice by linking organic accreditations and drought-resilient agricultural practises with international markets, thus safeguarding livelihood improvements for > 2,500 families, protecting threatened species and preventing deforestation across >400,000ha.</p>	<p>0.1 The number of families benefiting from the Ibis Rice project exceeds 2,500 (baseline 2105/16: 1,230)</p> <p>0.2 The number of households participating in drought-resilient agriculture practises exceeds 1,250 (Baseline mid-2015: 0)</p> <p>0.3 The number of incidents of illegal clearance of forest around participating villages declines by 25% against the 2015 baseline of 72 incidents per annum)</p>	<p>0.1 Signed conservation agreements, land-use plans, household records, receipts for rice purchase. (Annex 4. Item 8/19/20/21/24)</p> <p>0.2 Signed and verified farmer diaries showing adoption of at least one resilient practice. (Annex 4, Item 2/4)</p> <p>0.3 Monitoring reports from WCS rangers and satellite images. (Annex 4, Item 23/8)</p>	<p>The primary assumption is that through developing and trialling a comprehensive climate smart agricultural system, including more stress tolerant varieties and associated soil conservation techniques, the Ibis Rice scheme will continue to grow in size and impact. The evidence gathered during a previous Darwin project (20-014) indicates that this switch to drought-resilient organic rice is necessary. Without this, farmers would be a greater risk from climate variability and Ibis Rice would become financially unsustainable and lose the trust of the farmers, with consequences for biodiversity conservation and poverty alleviation</p>

	<p>0.4 The number of critically threatened bird species, Giant and White-shouldered Ibis, that fledge successfully is 25% more than the 2015 baseline of 29 nests , 39 chicks</p> <p>0.5 The poverty standards of participating households increases by 20% against the 2016 baseline</p>	<p>0.4 Monitoring reports from WCS rangers. (Annex 4, Item 23)</p> <p>0.5 Household poverty surveys (using Basic Necessity Survey). (Annex 4. Item 17)</p>	gains made during the previous 3 years.
<p>Outputs:</p> <p>1. Village Marketing Network (VMN) have the capacity to manage the expansion of Ibis Rice compliance, Organic internal controls and production independently</p>	<p>1.1 By the end of the project, the capacity of VMN to manage Ibis Rice compliance is increased by at least 50% (baseline to be established in 2016)</p>	<p>1.1 Number of VMNs conducting their own internal control systems, measured using number of inspection reports signed by VMNs. (Annex 4. Item 4/5)</p>	The primary assumption is that trainers are available and VMN are willing to learn new skills. Trainers have already been identified and prior to this project VMN have demonstrated that with the specialised and focused capacity building this project will deliver; they will be ready to manage the expansion of Ibis Rice compliance, marketing, production and sale.
<p>2. Ibis Rice farmers have tested and adopted drought-resilient agricultural practices and complementary soil conservation techniques along with levelling and water efficiency trials.</p>	<p>2.1 Number of Ibis Rice farmers taking part in stress-tolerant rice trials exceeds 20% of all Ibis Rice farmers by the end of Year 1 (baseline: 2015/16:3%)</p> <p>2.2 Number of Hectares cultivated using stress tolerant rice seed produced during trials is at least 400Ha by end year 2 (baseline: 0)</p> <p>2.3 Number of farmers willing to adopt drought-resilient agricultural practises (legume trials and land levelling) exceeds 1,250 families by end of Year 4 (baseline: 0)</p>	<p>2.1 SMP, organic certifier and VMN farmer records. (Annex 4. Item 6/12)</p> <p>2.2 SMP, organic certifier and VMN farmer records. (Annex 4. Item 6/12)</p> <p>2.3 SMP, organic certifier and VMN farmer records. (Annex 4. Item 6/12)</p>	The primary assumption is that locally appropriate stress tolerant jasmine rice strain can be developed. Potentially appropriate drought-resilient seed-stock have already been identified, and methods for developing and testing organic seed stock have been obtained from relevant experts. Agronomists that support this activity will also identify paddy field that need most physical intervention for water efficiency.

	2.4 Number of tons certified organic rice produced grows by 50% between Year 1 and Year 3 (baseline: 187 2015/16)	2.4 SMP, organic certifier and VMN farmer records. (Annex 4. Item 6/12)	
3. Critically endangered species populations increase as a result of improved protection around Ibis Rice villages	<p>3.1 Deforestation rates around target villages are lower compared to deforestation rates in the wider landscape (baseline 2012-2015: 0.93% around target villages, 3.53% in wider landscape)</p> <p>3.2 Number of critically endangered birds' nests protected are 20% higher when compared to baseline 2014/15: 29.</p>	<p>3.1 Deforestation rate analysis based on remotely-sensed images. (Annex 4. Item 8)</p> <p>3.2 Ranger nest protection reports and monitoring team data records. (Annex 4. Item 23)</p>	The primary assumption is that villagers value the premium paid for Ibis Rice, and that it is sufficient to change behaviour. Experience from partnerships with DARWIN projects indicates that the premium and other benefits of the Ibis Rice scheme do change behaviour. This project will further increase the financial incentives to farmers to take part in the scheme as the purchase of organic rice will effectively double the premium paid. A secondary assumption is that Cambodian law is enforced by government park rangers proportionately throughout all zones within the protected area network.
4. Community members living within the target protected areas experience reduced poverty and increased income as a result of Ibis Rice	<p>4.1 The number of people benefiting from the Ibis Rice project increases by 15% per annum (baseline 1,230 families in 2015/16)</p> <p>4.2 The number of tonnes Ibis Rice purchased per annum by SMP from participating farmers exceeds 1,000 by the end of the project (baseline 2015/16: 557)</p> <p>4.3 Number of functioning VMNs exceeds 20 (baseline 12 in 2016)</p> <p>4.4 Poverty status of people in Ibis Rice villages improves (baseline to</p>	<p>4.1 Signed conditional agreements, database of households benefiting from Ibis Rice. (Annex 4. Item 17)</p> <p>4.2 Receipts and SMP ledger records. (Annex 4. Item 11)</p> <p>4.3 SMP farmer records. (Annex 4. Item 12)</p> <p>4.4 Basic Necessity Survey (BNS) scores. (Annex 4. Item 17)</p>	The primary assumption is that the market for Ibis Rice will continue to grow, and that organic certification will open up new markets. Market research and consumer trends indicate that there is no shortage in market demand for Ibis Rice, and projections by commodity traders suggest global demand for organic rice will outstrip supply for several years to come. The primary limiting factor is the number of farmers taking part and the number of tons Ibis Rice produced.

	be established at project inception 2016/17)		
5. Impacts of Ibis Rice program on threatened bird populations, habitat trends and human livelihoods are monitored, recorded and disseminated to a wide audience, including relevant national and regional PES policy-makers.	<p>5.1 Two peer-reviewed journal articles published in academic journals by WCS & RUPP researchers.</p> <p>5.2 Press releases, and social media used at least monthly to disseminate impacts of the Darwin Post project</p>	<p>5.1 Data on changes in household poverty, species populations and habitat trends; peer-reviewed journal articles.</p> <p>5.2 Number of Facebook posts, tweets and news stories about Ibis Rice. (Annex 4, Item 13)</p>	Research permits will be granted. Excellent relationship with MoE means that this should be no problem
<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>1.1 Additional SMP staff & VMN members are recruited and trained to manage Organic Ibis Rice internal controls, organic purchase, production, and institutional implementation.</p> <p>1.2 Training in organic internal control monitoring and record keeping provided to VMN members so that the organisation can be managed without the support of partners even after the switch to organic Ibis Rice which requires much more documentation than Wildlife-Friendly alone.</p> <p>2.1 Seed for drought-resilient jasmine rice strain purchased from CARDI</p> <p>2.2 SMP develops and tests an organic-certified version of drought-resilient rice seed stock and new soil conservation techniques. Ibis Rice fields that have been certified as organic can be used to develop the seed-stock for organic drought-resilient Ibis Rice seed.</p> <p>2.3 Evaluation of organic drought-resilient jasmine rice and fallow-year crops, including yield, ease of growing, ease of harvest, water requirements, and also taste and texture. Farmers, the VMNs and SMP will all be involved in the evaluation of the new rice strain and fallow-year crops.</p> <p>2.4 VMNs promote organic drought-resilient jasmine rice and fallow-year crops across the Ibis Rice farmer network. In villages that have tested the organic drought-resilient rice, the VMNs can both promote the new rice strain to farmers within the village and to farmers in other Ibis Rice villages. At the same time they can provide training in growing the new strain of rice, based on their experiences during the trials.</p> <p>2.5 Organic product grown in all Ibis Rice villages using soil conservation techniques. If the field trials are successful it is anticipated that the new organic drought-resilient jasmine rice strain will replace the existing jasmine rice strain used by Ibis Rice farmers across all of the villages, new and existing, that take part in the scheme.</p> <p>3.1 Birds nest protectors protect nests of key species and report to birds nest protection coordinator. Some of the birds nest protectors are also Ibis Rice farmers, who protect the birds that breed near to their fields. The species protected include six Critically Endangered species Giant and White-shouldered Ibis, Bengal Florican, Slender-billed, White-rumped and Red-headed Vultures, as well as a range of Endangered and Vulnerable species, such as Sarus Crane, Lesser and Greater Adjutants, Masked Finfoot and White-winged Duck.</p> <p>3.2 Monitoring of forest cover and land-use change by WCS rangers and GIS team. WCS staff use remote sensing (LandSat and other satellite imagery) to monitor land-cover change. These data are cross-checked by the VMNs and all incidents recorded by the Compliance Unit, who maintain a field by field and farmer by farmer database.</p> <p>4.1 Village Marketing Networks (VMNs) established in target villages. The VMNs are a vital part of the Ibis Rice process. They are made up of members of the community, always including at least one woman. They are the link between farmers and SMP. As such, the VMNs are involved in promoting the scheme among farmers, and receive training that enables them to monitor compliance to conservation agreements and provide agricultural support to farmers.</p>			

- 4.2** Participatory land-use planning conducted in target villages, and land-use plans agreed by government. Land-use plans are developed in a fully participatory process and denote areas where forest is of high importance for biodiversity and must be protected, areas that are farmed, and areas that are of low conservation importance and can be cleared for farming in the future with agreement from the VMN.
- 4.3** Conditional agreements explained and new members join VMNs. The conditional conservation agreements form the basis for Ibis Rice. Farmers can only sell their rice to SMP if the farmers adhere to the conservation agreements, and if they grow the correct type of rice (Jasmine Rice). The conservation agreements set out which species people are not allowed to hunt, and require them to adhere to the land-use plans; they are also not allowed use chemical fertilisers or pesticides.
- 4.4** Training and seed provided to farmers as necessary.
- 4.5** VMNs identify eligible farmers and sell Ibis Rice paddy to SMP. Within each village, any land clearance must be authorised by the VMN, who make their decisions based on the land-use plan. Farmers who do not adhere to the conservation regulations cannot sell their rice to SMP, since it does not qualify as Ibis Rice. They weigh the rice before it is sold to SMP, which ensures that people in the village believe that they are getting a fair payment for their rice.
- 5.1** Data on poverty status is collected from target villages and appropriate paired control villages
- 5.2** Results of monitoring are used by Ibis Rice Compliance Unit, which works closely with the VMNs to ensure that SMP only purchases rice from farmers who have kept the conservation agreements.
- 5.3** Peer-reviewed papers, reports, presentations and social media are prepared and published.

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
7	Number of (i.e., different types - not volume - of material produced) training materials to be produced for use by host country. Training materials may take many forms but may include videos, information leaflets or posters providing advice or guidance on specific topics, or guides, tool kits, and manuals which are to be translated by project staff for wider use in host countries. Training materials are those to be developed directly by the project. They will not include materials donated to the project, those items to be included at Standard Measures 20 or lecture notes to be distributed to course participants.	Mixed	Mixed	24 training materials	7 training materials		31 training materials	TBD
11A	Number of papers to be published in peer reviewed journals.	Mixed	Mixed	0- Masters students have been selected and their thesis are being	1 student is already developing a masters study at RUA.		0	Two peer-reviewed journal articles published in academic journals by WCS

				reviewed by CIRAD.				& RUPP researchers.
14B	Number of conferences/seminars/workshops attended at which findings from Darwin project work will be presented/ disseminated.	Mixed	Mixed	6. Ibis Rice concept presented	11 concept presented to private investment dinner including the Deputy Prime Minister of Singapore. To WCS China and Mongolia team. Regional Oxfam event. Regional Agence Francais de Development		18	24
21	Number of permanent educational/training/research facilities, structures, or organisations to be established and then continued after Darwin funding has ceased. Structures (e.g., committees), facilities or organisations should only be included where their establishment will come as a direct result of the Darwin project. They may include facilities such as research laboratories or outreach facilities or formalised societies or organisations co-ordinating and administering aspects of training or research.	-	-	0			0	10 VMN's projected.

	Informal groups should be entered under Measures 17.							
22	Number of permanent field plots and sites to be established during the project and continued after Darwin funding has ceased. Field plots and sites are those to be established for the purposes of field research under the Darwin project.	-		756 new plots totalling 1021 ha of organic rice were established in year 1 1021 ha.	We reached a total of 823 plots totalling 1342 ha in year 2		823 plots	
23	Value of resources raised from other sources (i.e., in addition to Darwin funding) for project work. Funding from all other sources are to be included including contributions in kind which should be quantified.	-						

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

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.	YES

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.	NO
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.	YES
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	YES
Have you completed the Project Expenditure table fully?	YES
Do not include claim forms or other communications with this report.	