Darwin Initiative Main and Post Project Annual Report

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

Submission Deadline: 30th April 2020

1. Darwin Project Information

Project reference	24-028
Project title	Future-proofing Cambodian Wildlife-Friendly farming: securing conservation and livelihoods
Country/ies	Cambodia
Lead organisation	Sansom Mlup Prey
Partner institution(s)	CIRAD
Darwin grant value	£299,491
Start/end dates of project	1 April 2017 – 31 March 2021
Reporting period (e.g. Apr 2019 – Mar 2020) and number (e.g. Annual Report 1, 2, 3)	Annual Report Year 3 ; Apr 2019 – Mar 2020
Project Leader name	Nicholas Spencer
Project website/blog/social media	http://ibisrice.com/ https://www.facebook.com/IbisRice/ https://www.facebook.com/sansommlupprey/
Report author(s) and date	Socheat Keo, Maïwenn Piquet-Brottier

1. Project summary

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 Year 3. CIRAD supports SMP on technical consultation, trials on stress-tolerant rice cultivars to identify the best varieties for farmers, trials to identify cover crops and support to masters students' initial findings. During this reporting period, through this partnership, SMP could assess different drought-resilient rice varieties that will bring additional options to farmers (diversify rice cultivars, breaking pests/diseases cycle, adaptability to climate change) as well as to consumers. Specifically, the HNN, a sticky rice variety, has been identified as the best option and seeds will be replicated for farmers' use.

Collaboration between SMP, WCS and provincial departments of environment have continued to be key through all management and decision making processes in the protected area. This provincial level collaboration focussed on the compliance process which engages all stakeholders in monitoring and implementation of incentives is becoming the example for the national level MoE and the department for local livelihoods. The MoE have undertaken a process by which the historical PLUP information and habitat and biodiversity data produced by WCS to 'zone' the wildlife sanctuary into (a)community zone (b) sustainable-use zone (c) conservation zone (d) core-zone. The compliance manual developed by SMP and WCS over the course of this project is being seen as the primary management model and decision making tool for community zone and sustainable use zone compliance nationally.

The partnership with the impact evaluation institute and post-doc researcher has resulted in a full impact evaluation of "Measuring impacts of conservation interventions on human well- being and the environment in Northern Cambodia" with the IBIS rice incentives a key part of the evaluation. These results were shared at a workshop conducted by the lead researcher and was attended by Senior MoE management and representatives from the wider conservation community. This has resulted in SMP being invited to new wildlife sanctuaries to initiate the IBIS rice project with other organisations and MoE such as Conservation International in the Prey Lang Wildlife Sanctuary and Virecheay Wildlife Sanctuary.

USAID Greening Prey Lang (GPL) https://usaidgreeningpreylang.exposure.co/ is a 5-year activity funded by the United States Agency for International Development that promotes resilient, low-emission development and inclusive, sustainable management of the Prey Lang Extended Landscape in north-central Cambodia which covers this project area. GPL is working with WCS and MoE to take forward the zoning and supporting lasting impacts of the management processes. There is a focus in this project on the development and expansion of sustainable financing mechanisms such as IBIS rice as well as the development of a feasibility of a REDD+ project in Preah Vihear to which the IBIS rice mode would be central. GPL have also since July 2019 co-financed the activities of this project in Preah Vihear as well as supported expansion into Prey Lang.

IRCC continues to grow as a company and deepen its support for farmers, with an average price which reached 60% above market price. IRCC has expanded its markets and is now in a position to work with communities to commercialise any favoured rice variety or any other agricultural product that can be produced under both the organic and wildlife-friendly compliance. IRCC also is providing seed and trailing certified organic fertilizer at 0% credit to compliant households.

(Annex 4, Items 14, 17 and 25)

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)

Activity 1.1: During Year 3, SMP has replaced 4 Field staff in Preah Vihear (3 new positions between April and June 2019 : 2 Assistant Community Officers, 1 Team Leader ; and 1 existing position in February 2020 : 1 Field Staff), reaching the number of 8 for Field staff in Preah Vihear. This is due to the necessity to replace some members, but also to a willing of SMP to strengthen its team capacities, especially regarding ICS. Indeed, within PVH team 1 staff has been promoted as PVH Project Coordinator and 1 staff has been promoted as Data Officer. Similarly, 1 staff has been promoted as Compliance Manager for managing the data collection and coordinating the overall ICS system and process for all SMP projects. Finally, 1 Financial Assistant has also been recruited to support the Financial team in Phnom Penh in June 2019 *(Annex 4, Items 2, 3).*

Activity 1.2 : During Year 3, 2 VMN Committees have been established in the 2 new villages (Our Kak and Krolas Peas), managed by 6 VMN leaders (including 3 women). The leads now to 11 VMN Committees established in Preah Vihear, with 37 VMN members (including 16 women). *(Annex 4, Item 4)*

In July 2019, 21 (6 women) have been trained to become VMN Inspectors. They have been trained on the roles of VMN Inspectors and the rules to follow, as well as organic internal control monitoring and record keeping. In the future, this will enable them to manage external organic inspection and certification *(Annex 4, Items 5, 6, 7, 8)*. SMP is still supporting their capacities, especially regarding the conduct of ICS inspection. During the reporting period, 11 inspections have been conducted independently by 2 VMN Inspectors *(Annex 4, Item 9*).

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.*

(Annex 4, Item 10)

Activity 2.1: In 2019, SMP bought 400kg of foundation seed (Phka Rumduol and Sbai Mongkul sticky rice) and provided to 6 IBIS Rice members to involve in seed multiplication to support other IBIS Rice farmers to produce high quality paddy. SMP also provided 1,197kg of registered seed (seed produced from foundation seed in 2018) to 13 Ibis rice farmers as well to produce certified seed. As the result in 2019, there were 23 Ibis rice farmers who joined the seed multiplication program and they produced 34,502kg of rice seed (12,200kg registered seed produced from foundation seed, and 22,302kg of certified seed).

Activity 2.2: Between May and September 2019, our partner CIRAD followed-up the activities implemented on the 2 first years of the project, focusing specifically on 4 activities : (i) the assessment of drought-resilient rice cultivars, (ii) empowering farmers into rice seed production, (iii) paddy production for one sticky rice variety (HNN) which was produced in 2018, and (iv) the production of cover crops after wet season rice *(Annex 4, Item 10).*

An assessment of rice varieties has been conducted as well as trials in rice seed and paddy production (see details in Activity 2.3 below).

Over 100 farmers (50 men and 58 women) from 4 villages (Kampech, Thmat Boey, Yearng, and Kong Yoang) were trained on the use of cover crops for soil fertility improvement. The majority of participants expressed their concerns on the depletion of the soil fertility and productivity, and are convinced that the use of cover crops can contribute to the improvement of soil health as well as rice crop yield. However, they strongly suggested to provide further evidence of the increase of soil fertility and crop productivities as well as technically know-how for the implementation within their own context.

To response to the constraints that farmers have raised, 3 fields (1.5 ha) from 2 villages have been identified for the establishment of on-farm demonstration with the objectives: (i) to implement and assess the performances and impacts of cover crops after wet season rice, (ii) to generate empirical evidence on soil health, crop productivity and change in profitability, and (iii) to build capacity of farmer on CA-based production systems *(Annex 4, Item 11).*

Activity 2.3: An assessment of a total of 38 rice varieties that belong to 4 groups was conducted with the main objective to assess their adaptability, productivity and grain quality : fragrant rice (8), waxy rice (14), colored rice (9), and white aerobic rice (7).

Furthermore, 4 varieties of sticky, colored and fragrant rice cultivars previously identified by CIRAD, were selected to be cultivated under 4 plots (totalling 90 ha) : Rubi, Local black cultivar, TDK8, SBT 254. Farmers of Dorng Phlet, Kom Penh, and Thmatboey villages were involved in the production with the aims to empower farmers into rice seed production, diversify rice cultivars, breaking pests/diseases cycle, and improve the adaptability to climate variability and change.

In addition, 10 households (on a total area of 8.62 ha) were selected to conduct a paddy production trial with the waxy rice (cv. HNN) in 4 villages (Thmat Boeuy, Kom Penh, Dorng Phlet, and Koang Yoang). The advantages of this cultivar are a large adaptability, higher productivity than Phka Rumduol, and photosensitivity, with a nursery stage in early July, and a harvest early-mid November. Average yield was however only 1.4 t/ha due to the late transplanting and long drought period.

Globally, we can say that SMP has now a large range of rice cultivars from fragrant, waxy, colored to aerobic rice. This is an advantage bringing additional options to farmers (diversify rice cultivars, breaking pests/diseases cycle,adaptability to climate change) and to consumers. Furthermore, farmers capacities in rice seed production have been strengthened.

Activity 2.4: These activities, which are yet to be undertaken, focus on promoting among communities the various rice trials (please see Activity 2.3 above) as well as the identified cover crops (please see Activity 2.2 above). Those actions – soil conservation techniques, drought-resilient jasmine rice varieties or fallow-year crops - will most likely strengthen resilience.

Activity 2.5: A Master study has been conducted on the assessment of soil ecosystem services comparing different land uses and/or cropping systems. This is conducted in partnership with the Royal University of Agriculture of Cambodia and with CIRAD follow up. The study compared 3 main soil functions under contrasted land uses : paddy fields, former paddy fields, upland cultivation with juvenile cashew plantation, and forest land in Tmatboey village (*Annex 4,Item 12*). These results were also included in a broader scientific study, which was published in November 2019 (*Annex 4,Item 13*).

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

Activity 3.1: Our partner WCS 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. Between April 2019 and March 2020, 20 joint agreements were signed between CPA committee across 4 protected areas namely Kulen Promptep Widlife Santuary (KPWS) in Preah Vihear, Phnom Tbeng National Heritage Park (PTNHP), Preah Roka Widlife Sanctuary (PRWS) and Chhep Wildlife Sanctuary (CWS) with subnational authorities including village and commune chiefs, district governors, director of provincial department of environment. Within this period, a total of 480 CPA patrols were conducted across KPWS and CWS-PRWS. 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.

Two joint patrols were conducted in the last quarter and it is at its beginning stage with cooperation from local authorities and the Provincial Department of Environment (*Annex 4, item 14)*.

Throughout the rainy season (May 2019 - January 2020) community wildlife rangers conducted awareness raising and biodiversity SMART patrols in important breeding habitat areas for globally threatened waterbirds in the Northern Plains landscape, both within Kulen Promtep (total number of globally threatened waterbirds nests monitored : 82) and Chepp Wildlife Sanctuaries (total number of globally threatened waterbirds nests monitored : 94).

175 globally threatened nests, including 31 critically endangered birds' nests (29 nests of Giant and White-Shoulders Ibis), were protected by 88 protectors.
Regarding specifically critically endangered birds, during this reporting period, 31 bird nests were located, monitored and protected by local community nest protectors : 22 Giant Ibis nests, 7 White-shouldered Ibis nests and 2 Red-headed Vultures nests (*Annex 4, items 15, 16, 17).*

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 2019 and 2020 a total of 480 CPA patrols and 2 joint patrols (Rangers and local communities) were conducted across KPWS and CWS. In 2019, the ranger patrols in charge of ground investigation, the GIS team and the Satellite imageries confirmed that there were 878 ha deforested around the villages participating in IBIS Rice program (*Annex 4, items 18, 19 and 20*).

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: Village Marketing Networks (VMNs) are vital for IBIS Rice program, as they are the link between SMP, IRCC and the farmers, in promoting the scheme among the community. In 2019, IBIS Rice program has been successfully expanded to 11 villages : 3 in CWS : DangPhlet, NaRang, Bra villages ; 7 in KPWS : Tmatboey, Kampenh, KaongYaong, Yeang, Preyveng, SamBeur, Our Kak villages ; 1 in PPRWS : Krolas Peas. In each villages, a VMN Committee has been established (11), with 37 VMN Committees members (including 16 women). See output 1 regarding capacity-building of VMNs.

Activity 4.2: During this reporting period, IBIS Rice project has been promoted in 2 news villages Krala Peas and Okak villages. In cooperation with PDoE (Provincial Department of Environment), local authorities, key persons and local community, information regarding land of the interested farmers has been collected (plots location, number of ha, historic). SMP uses SPOT satellite imagery to create maps of each farmer's land holdings. This in order to control the compliance with the IBIS Rice rules in the coming years (no extension of the rice fields, deforestation).

Between April and September 2019, internal meetings were held to draft a protocol on resource use mapping and data collection methods for CWS and PPRWS. After a meeting with the Director General and the Department of Northern Plains, KPWS-PVH zoning was submitted and approved by the Secretary of State of Ministry of Environment based on the consultation with provincial working and national key persons from Ministry of Environment.

After a consultation meeting with all key stakeholders,Our Kak was selected as the pilot village for testing the protocol on resource use data collection process. The working group (39 participants, 19 women).successfully identified sacred areas, NTFP areas, paddy fields and wildlife areas. In addition, field verification was organized to double check on the ground what have been discussed. Citizens were actively involved in identifying areas such as Prey Dam nom, Prey Areak, species and locations of NTFPs, and important wildlife and habitats. To follow the process, a meeting with Pou and Kompong Srolao commune council members and village chiefs (gathering 21 participants) to discuss and plan the resource use mapping in the two communes of CWS and PRWS.

At the beginning of year 2020, the data collection and identification of natural resources and areas was extended to 3 new villages : Kham Keut, Suong and Kompong Sanger villages (with a total of 329 participants, including 175 women). They were able to identify : Prey Damnom, Prey Areak, and locations of NTFPs, key species and wildlife, and habitats. Field verifications were thereafter conducted in the three villages to verify information provided.

Finally, KPWS-PVH zoning was approved by the Provincial Governor and the Minister of Environment. However, in order to get the sub-decree from the Prime Minister, the working group must complete the remaining zoning parts in Siem Reap and Oddor Meanchey provinces in the coming months. Furthermore, the National working group on protected areas zoning and demarcation was established for Preah Vihear province by the Minister of Environment. With

this decision, the provincial administration can now process to create a provincial sub-working group to support zoning and demarcation for all protected areas in Preah Vihear province. (*Annex 4, item 21*).

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 the conservation agreements (12 rules to follow the 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 (the ICS and external certification) and can sell organic rice to the program.

They after need to pass the test certifying they followed the Wildlife-friendly compliance rules. In 2019, 579 farmers had signed conditional agreements, 424 farmers were confirmed on the Approved Farmer List (AFL) and 400 had passed the Wildlife-friendly inspection.

(Annex 4, items 22 and 23).

Activity 4.4: In 2019, SMP bought 400kg of foundation seed (Phka Rumdoul and Sbai Mongkul sticky rice) and provided to 6 IBIS Rice members to involve in seed multiplication to support other IBIS Rice members to produce high quality paddy. SMP also provided 1,197kg of registered seed (seed produced from foundation seed in 2018) to 13 Ibis rice farmers as well to produce certified seed. As the result in 2019, there were 23 IBIS Rice members joined the seed multiplication program and they produced 34,502kg of rice seed (12,200kg registered seed produced from foundation seed, and 22,302kg of certified seed).

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, WCS and the Provincial Department of Environment (PDoE) provide the technical support to VMNs such that they can perform their investigative and decision-making role.

During the reporting period, 172 households have been prevented from selling paddy to SMP due to issues of non-compliance. SMP noticed in 2019 an increasing number of non-compliant members, mainly due to land clearing (167 cases), but also the use of pesticide (35 cases), illegal logging (13 cases) and illegal hunting (1 case).

(Annex 4, item 24)

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: Data on poverty status have been collected from target villages and appropriate paired control villages from 2008 to 2017 (with surveys conducted every 3 years). Please see part *6. Project support to poverty alleviation* and Output 4.4.

Activity 5.2: Please, refer to activity 4.5 above, on the work of the VMNs to confirm eligibility of farmers to sell to the Ibis Rice program. SMP's Ibis Rice compliance unit and its partner WCS provide the data upon which those decisions are based. In 2019, 172 households farmers removed from purchasing list due to not complying with conservation agreements (*Annex 4, item 25)*

Activity 5.3: The SMP team participated in 5 conferences/seminars/ workshops at which findings from Darwin project work have been presented. Furthermore, please refer to part 6. Project support to poverty alleviation, regarding the long-term impact evaluation which studied the impacts of PAs and PES (including IBIS Rice).
A media consultant has been hired to manage social media and press release. IBIS Rice program has been promoted on several social media : Youtube, Facebook (235 more followers, 292,929 views on all content and 53,759 engagements (likes, shares, reactions)). IBIS Rice also engaged in 8 Darwin specific posts that have had 67,009 views and 15,508 engagements. (Please, see part *13. Darwin Identity*)

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.

In response to comments from Darwin on Year 2 report, we have changed the indicator 1.1, which is referring to the ability of VMNs to manage the IBIS Rice compliance independently. Therefore, the new indicator suggested is the number of ICS inspections reports conducted and written by VMN Inspectors *(See Annex 4, Item 9*). In 2019, SMP expanded the IBIS scheme to 2 new villages, and with a limited increase of SMP staff monitored and conducted the ICS inspection in the all 11 target villages. All VMN members have been trained in VMN ICS inspection (following a rigorous three phase training process), and two VMN conducted 11 reports by themselves. This is an important improvement, as it shows that VMN members understand well the organic and wildlife-friendly compliance rules and can implement by themselves the inspection process. All VMN inspectors are closely monitored for integrity and accuracy during the inspections, and SMP continues to enhance capacities of all VMN members, who are key stakeholders in supporting the development and implementation of the IBIS Rice program among the communities and ensure the sustainability and future take-over of the program. Indeed, during the reporting period, SMP focused in strengthening their compliance internal processes, and by promoting a Data officer in Preah Vihear and a Compliance manager.

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.

In 2019, 579 farmers were trialling stress-tolerant rice varieties (Phka Rumduol) for a total of 1,663 ha hectares under cultivation. 719 tons of certified organic rice were purchased in Preah Vihear for the harvest 2019. SMP is still supporting the high quality seed multiplication program for foundation seeds and registered seeds (seeds produced from foundation seeds in 2018). As a result in 2019, there were 23 Ibis rice farmers joining seed multiplication program who produced 34,502kg of rice seed (12,200kg registered seed produced from foundation seed, and 22,302kg of certified seed).
In the same time, our partner CIRAD continues to support the trials of rice drought-resilient cultivars (38 rice varieties that belong to 4 different groups + 3 waxy rice cultivars previously identified), paddy production for one sticky rice variety (HNN) which was produced in 2018, and trainings and demonstrations of cover crops after wet season rice.
The progress are ongoing towards the Output 2 in testing and adopting drought-resilient agricultural practices. The land levelling will be conducted soon during the following period (wet season).

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 and the number of critically endangered nests protected are appropriate for monitoring the achievement of Output 3.2. In 2019, 878 ha were deforested into the Northern Protected area, in the nine target Ibis Rice villages. The number of critically endangered bird nests protected during the 2019/20 breeding season increases by 7% (31 nests), compared to baseline 2014/15.

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

The results of the Impact evaluation conducted by The International Initiative for Impact Evaluation (3ie) showed that households living inside PAs improved their economic status at a greater rate than matched households villages outside these zones between 2008 to 2017. The results also showed that among the 3 PES interventions evaluated, participation in the IBIS Rice intervention was found to be the most positively associated with increased economic status, especially from 2014 to 2017, with an estimated increase household economic status by 0.34. This was approximately equivalent to the estimated effect size of owning a mini-tractor, which is known to have a transformational impact on household productive capacity.

In 2019, SMP expanded the IBIS scheme to 2 new villages, with the current villages participating to the program reaching now 11 villages from KPWS, CWS and PPRWS, where functioning VMNs have been established in all villages (11 VMNs, managed by 37 VMNs Committees members - including 16 women). The total population of these villages is 2,375 families who are benefiting directly or indirectly from IBIS Rice program, among them 579 households registered as IBIS Rice members and benefited from the program activities. During the harvest 2019, 400 farmers complied to organic and wildlife friendly rules and were approved in AFL and to sell rice. Finally, 346 decided to sell to IRCC (mainly as they had enough surplus) for a total of 916 tonnes to IRCC, for which they received a premium of 50%. From January to March 2020, SMP team continued its activities of recruiting new members (even if SMP had to stop field activities in March and April due to the international sanitary crisis of COVID-19). At the time of writing, a total of 558 households have been identified by SMP team as the most reliant members wishing to join the IBIS Rice program for 2020, even though it doesn't represent the final number of IBIS members for 2020 (399 (fully compliant) + 89 (new registered) + 70 (rejoining the program)).

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.

IBIS Rice has recruited a media consultant to manage social media and press releases. Therefore, the IBIS Rice program is promoted on several social media : Youtube, Facebook (235 more followers, 292,929 views on all content and 53,759 engagements (likes, shares, reactions)). IBIS Rice has also been engaged in 8 Darwin specific posts that have had 67,009 views and 15,508 engagements. The impact evaluation conducted by The International Initiative for Impact Evaluation (3ie) has monitored the human wellbeing and deforestation rates inside PAs of the Northern Plains landscape of Cambodia. The results of the evaluation were

presented during a workshop in Phnom Penh, gathering a total of 40 participants, from national and local authorities (MoE, PDoE, ...), Royal University of Phnom Penh (RUPP) and local research institutions, international and local NGOs involved in conservation issues, SMP and its partners. Furthermore, SMP and its partners continue to monitor threatened bird populations on a regular basis. SMP team participated in 5 conferences/seminars/ workshops at which findings from Darwin project work have been presented.

3.3 Progress towards the project Outcome

At the end of this third year of implementation, we consider that we are making good progress towards the Outcome. The indicator 0.1 may not represent to the best the benefits that the IBIS Rice program brings to its beneficiaries. The indicator was initially designed to monitor the number of families living in the target villages, who do benefit from the IBIS Rice program as indirect beneficiaries. It may also be useful to include here the number of direct beneficiaries, calculated as the farmers participating to the IBIS Rice scheme each year. During the reporting period, SMP successfully extended the program to 2 new villages, reaching the number of 2,375 families benefiting indirectly, and 579 households directly benefiting from IBIS Rice. These 579 households also participated in drought-resilient agriculture practises, especially in cultivating Phka Rumduol, a high quality stress-tolerant rice variety, totalling for 2019 : 1,663 ha of improved fields.

In 2019, 167 incidents of land clearing were reported by the Compliance unit. However, it is not clear for the moment these land clearings were perpetrated by IBIS Rice farmers, due to lack of information on new members' lands. In this regard, SMP and WCS will continue to work with the PDoE on the PLUP system, and especially are waiting for the final approval of the overall Preah Vihear zoning by the Ministry of Environment. The smallest number of threatened birds nests monitored compared to the previous year, is mainly the reason of a reduced rainy season which resulted in unfavorable breeding conditions, especially for Lesser adjutants.

Regarding the alleviation of poverty standards for households participating in IBIS Rice scheme, the impact evaluation conducted by The International Initiative for Impact Evaluation (3ie) has shown that : Participating in Ibis Rice increased household economic status to a similar extent as having a family member in full-time employment or owning a Koyun. The randomized control trial showed that IBIS Rice families clear four times less forest than non-participant families (on the results of the impact evaluation, please refer to part *6. Project support to Poverty alleviation*).

3.4 Monitoring of assumptions

Outcome assumption : 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. 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 1 assumption : Building the capacity of VMNs to manage organic compliance independently is certainly a challenge. The goal is that VMN can be capable of becoming inspectors. SMP continues to train them and VMN Committees members feel more and more confident in conducting ICS inspections by themselves (this year, 2 VMN inspectors conducted inspections by themselves).

Output 2 assumption : This assumption still holds true. SMP, with help of its technical partner CIRAD, already identified stress-tolerant rice species, that we will continue to replicate. At the beginning of this project, SMP wanted to do the land leveling in dry conditions, however we discovered that this technique might disturb the local wildlife. Then, we decided to conduct land leveling during the next wet season, which will be done with lighter machinery.

Output 3 assumption : Based on the results of the impact evaluation conducted by 3ie, this assumption has been proven to be true. Overall, the results showed that among the 3 PES interventions evaluated, participation in the IBIS Rice intervention was found to be positively associated with increased economic status, increased rice harvest and improved household food security, especially in the period from 2014 to 2017. Moreover, the RCT showed that that households participating in the programme were significantly less likely to clear forest. The second assumption of Output 3 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 4 assumption : This assumption still holds true, organic certification has opened up new markets for IBIS Rice farmers, and IRCC has a waiting list of international food brands awaiting supply. Indeed, as we see selling prices continuing to increase, premium to farmers also increase accordingly.

Output 5 assumption : This assumption still holds true. Research permits have been delivered from the authorities, notably for all households surveys conducted for the impact evaluation. SMP and its partner WCS work since a long time in the two protected areas of KPWS and CWS. Furthermore, SMP is currently preparing the signing of a MoU with the Ministry of Environment, which will support the sustainability of its actions.

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 project 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.

Furthermore, the impact evaluation from which benefited the IBIS Rice program, proved that between 2008 and 2017, the households inside PAs increased their wellbeing, calculated through a survey on basic necessary score, annual rice harvest and food security, at a better rate than paired control villages outside the PAs. Among the 3 PES evaluated through this study, participating in Ibis Rice was proven to be the most likely to increase household economic status, which was compared to having a family member in full-time employment or owning a mini-tractor.

Regarding the impacts on behaviours towards conservation of biodiversity, the evaluation showed that points (monitored by the Compliance unit to follow-up potential land clearance) around within-PA villages were approximately three times less likely to be cleared than similar points around control villages outside PAs. Only two villages where the IBIS Rice was implemented had significantly lower rates of forest loss during years, correlated with the length of implementation and the high number of participants. Moreover, the randomized control trial showed that Ibis Rice families clear four times less forest than non-participant families.

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. Between April 2019 and March 2020, 20 joint agreements were signed between CPA committee across 4 protected areas namely Kulen Promptep Widlife Santuary (KPWS) in Preah Vihear, Phnom Tbeng National Heritage Park (PTNHP), Preah Roka Widlife Sanctuary (PRWS) and Chhep Wildlife Sanctuary (CWS) with subnational authorities *(Annex 4, item 14*).

Although some challenges are being faced in reaching target participation in the project area, the long term drivers of success have made very good progress. We see through very strong engagement a much increased awareness and interest from the Cambodian Government in our compliance system. This will be further strengthened by the finalization of zoning that will give legal clarity around our compliance system. The initiative is growing beyond the projects geographic scope with new communities, partners and funding sources. The commercial sustainability of the project is also supported by a businesses that is sustaining a 50% incentive and has a market ready for significantly more volume.

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.

[1] The descriptions of the targets given in italics are paraphrased and focus on the parts of the target most relevant to 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. The focal point also attended the 3ie impact evaluation workshop.

6. Project support to poverty alleviation

The IBIS Rice program has benefited from an Impact evaluation conducted by The International Initiative for Impact Evaluation (3ie) : Clements, T, Neang, M, Milner-Gulland, EJ and Travers, H, 2020. Measuring impacts of conservation interventions on human well-being and the environment in Northern Cambodia, 3ie Impact Evaluation Report 106. New Delhi: International Initiative for Impact Evaluation (3ie).

The aim of this evaluation was to quantify the environmental and human wellbeing impacts of Protected Areas (PAs) and Payments for Environmental Services (PES) interventions in the Northern Plains landscape of Cambodia. Indeed, a lot of studies focused more on assessing impacts of PAs on environmental outcomes, but not a lot of rigorous research has been done on the impacts PAs had on social aspects, and especially regarding PES which are often cited as examples and promoted within environmental policy for their supposed benefits both regarding protection of biodiversity (SDG 15) and eradication of poverty (SDG 1) in the South-East Asian region and worldwide. In this evaluation, the three PES interventions implemented by WCS to complement PA management, were selected : protection of nests of globally threatened birds; a community-managed ecotourism intervention and the IBIS Rice program.

The evaluation built on a nine year monitoring program (2008 to 2017) ans socio-economic household survey with the same panel of households every three years (2008,2011, 2014, 2017).

A presentation of the results has been organized at the Cambodiana Hotel in Phnom Penh, October 31st 2019. It gathered 40 participants, from national and local authorities (MoE, PDoE, ...), Royal University of Phnom Penh (RUPP) and local research institutions, international and local NGOs involved in conservation issues, SMP and its partners (*Annex 4, Items 28 to 31*).

The evaluation methodology was designed with three main components: a quasi-experimental assessment of household wellbeing, a desk based deforestation analysis and a randomised control trial (RCT).

The quasi-experimental assessment of household wellbeing between households within or without PAs, was conducted via surveys in villages located within the two PAs (11) and matched control villages (5) outside the PAs. This sampling strategy and size were determined in 2008 and unchanged for following surveys. It gave a total sample of 946 households. To assess the household wellbeing between households participating in IBIS Rice program and the ones who were not, similar surveys were conducted in the 11 villages located within the two PAs with treatment (participating in IBIS Rice program) and control villages (not participating).

The household wellbeing was analysed following 3 measures :

- the main measure, derived from the Basic Necessity Survey, was calculated using a list of 26 items of households assets and basic services weighted by the proportion of respondents that thought they defined as the minimum requirement for living that all households of the community should have ;

- the household total annual rice harvest ;

- an indicator of household food security, calculated as the total annual rice harvest minus the household's expected consumption needs over the year.

The deforestation analysis focused on assessing deforestation trends within 5km buffers surrounding within-PA (19 households were selected) and matched control villages after PA management started (2006-2018).

The RCT was conducted in 2018 to assess the behaviours of IBIS Rice members (87 households in total) in whether or not the participation in the program impacted their respect of the compliance rules, and especially the respect of no forest clearing.

The results of the evaluation showed that households living inside the PAs are no worse off relative to households in similar villages outside the PAs for any of the indicators considered. Over the period from 2008 to 2017, the first ones even improved their economic status at a greater rate than matched households villages outside the PAs . No impact of PAs, either positive or negative, was found for total rice harvest or household food security.

For the three PES interventions studied, participation in the Ibis Rice intervention was found to be the most positively associated with increased economic status, increased rice harvest and improved household food security in the period from 2014 to 2017. This coincides with a period of significant expansion of the intervention to include 5 more of the within-PA villages, as well as a transition to organic certification and subsequent significant growth of the end market for the product. However, as the study panel suggested, it is households that already produced more rice and had the capital capability enabling them to do so, who were more likely to choose to participate in the IBIS Rice program. Participants in the Ibis Rice programme had an average annual surplus of 381kg more than matched non-participants, with the effect being positive in 95.0% of model runs.

The effect of participating in the IBIS Rice programme was estimated to increase household economic status by 0.34, with the effect positive in 95.6% of model runs. This was approximately equivalent to the estimated effect size of owning a mini-tractor, which is known to have a transformational impact on household productive capacity.

Deforestation was found to be significantly lower for points surrounding within-PA villages than for matched points in control villages. Regarding the impacts of participating to IBIS Rice program on deforestation, the study found little evidence of reduced annual deforestation for villages in which the Ibis Rice programme had been implemented, except for the villages with the highest level of participation and the longest period of implementation.

Furthermore, although caveated by the small sample size, the results of the RCT showed that households that participated in the IBIS Rice programme were 4 times less likely to have cleared than households in the control arm of the trial.

The findings of the evaluation are broadly positive for the interventions assessed, showing that management of the PAs has had a positive impact on households living inside PA boundaries and has significantly reduced deforestation relative to matched control villages. Similarly, household wellbeing was found to be significantly higher for participants of the Ibis Rice programme in comparison to non-participants. This is a particularly encouraging result, 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.

7. Consideration of gender equality issues

In mid-May 2019, a Women Economic Empowerment (WEE) Program manager has been recruited by SMP to facilitate and coordinate the development of a WEE strategy for a project Sustainable Rice Platform promotion standards in Kampong Thom province, as well as for SMP as an organization.

In this regard, a Gender Policy has been created for SMP that each staff, consultant, volunteer, intern is complied to follow as representatives of the NGO (*Annex 4, Item 32*).

All along the project, SMP team is careful about strengthening the targeted villages women inhabitants capacities, specifically by :

- ensuring that they benefit fully from trainings (being careful that women are fully represented during the program meetings/trainings/activities and participate) ;
- encouraging more women to take up leadership positions (ensuring their membership on the VMN) ;
- making sure that the training methods used are appropriate for women as well as men ;
- ensuring that women receive information and equal opportunities for men and women to access trainings in agronomy and Climate Change Adaptation rice farming as well as access to premium markets ;
- keeping to improve monitoring of effectiveness of women-focused and gender-focused interventions.

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).

Furthermore, in September 2019 the Program and Finance team have been participating in an online training about Gender equality and Female empowerment, organized and developed by USAid *(Annex 4, Items 33 and 34)*.

8. Monitoring and evaluation

SMP has an annual operational planning meeting, an annual pre-harvest operational planning meeting, and monthly program, finance and operational 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.

At the beginning of 2020, SMP held an annual strategy meeting, to review global objectives and specific ones per location and per project. Furthermore, from the 3rd to the 6th March 2020, SMP team as well as IBIS Rice gathered together for the annual staff retreat. It was the opportunity to review the achievements of 2019, the alignment of SMP and Ibis Rice Strategy, as well as present the workplan and budgets for 2020.

During the reporting period, SMP continued to strengthen its own organization, with the recruitment of a Financial assistant working in the Headquarters, but also with the promotion of a Project Coordinator in Preah Vihear, to improve the project monitoring quality. Moreover, in order to improve the management of the ICS system and compliance data, a Compliance Manager has been recruited for all SMP projects, as well as a Data Officer for Preah Vihear location.

To demonstrate project impacts, 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).

The IBIS Rice program has benefited from an Impact evaluation conducted by The International Initiative for Impact Evaluation (3ie), which results have been presented end of October 2019 in Phnom Penh, and final written version has been shared in March 2020. The aim of this evaluation was to quantify the environmental and human wellbeing impacts of Protected Areas (PAs) and Payments for Environmental Services (PES) interventions in the Northern Plains landscape of Cambodia. Overall, the results showed that among the 3 PES interventions evaluated, participation in the IBIS Rice intervention was found to be positively associated with increased economic status, increased rice harvest and improved household food security, especially in the period from 2014 to 2017.

Although deforestation rates were not found to be lower in villages in which the IBIS Rice programme was implemented (except for 2 villages with the longest time of implementation and the highest numbers of participants), the study showed that households participating in the programme were significantly less likely to clear forest than those that had expressed willingness to participate in IBIS Rice but were not selected to join it in the 2018 growing season (please, see more details above in part *6. Project support to poverty alleviation*).

9. Lessons learnt

Regarding the increase of non-compliance in Preah Vihear, it is still not clear for the moment, that the non-compliance is from actual IBIS Rice members, as a lot of rice parcel of new members were not registered in the PLUP system (the land plots registration system), and as there was also a lack of information from authorities before IRCC could buy the paddy.

Indeed, in 2019 SMP conducted small groups promotion in all targeted villages and there were many new farmers in those villages interested and registered in Ibis rice project, but when SMP sent the list of those people to compliance and GIS team for checking, they found out their fields were not in the PLUP (participatory land use plan) data system. As a result, they were not eligible to join the IBIS Rice project. There are two main reasons which can explain this, their plots were new land clearing after PLUP verification or they were not mapped during PLUP.

However, we could notice that in our targeted villages, the land price is becoming more expensive. Some farmers express their interest that the income from selling new land is much higher than selling paddy to IRCC and that no action is taken about farmers clearing new lands.

Indeed, the majority of the non-compliance cases (167 cases) were due to land clearing, which is difficult for SMP to mitigate because SMP doesn't have the authority to deal further with

these cases (to take further legal action is the Park Director's authority), but we are working with WCS and PDoE to have the approval of zoning from Ministry of Environment (*Annex 4, Item 21*).

For the non-compliant farmers which used prohibited substances (35 cases), most of farmers applied herbicides and chemical fertilizers. To mitigate these issues, SMP will focus its trainings more on soil fertility improvement, nutrient and pest management for the next period. We also plan to establish a pilot collective compost pile and land levelling demonstrations which could help to reduce weeds without using any chemical inputs.

Regarding the lack of information on the lands of non-compliant farmers, SMP needs more time to work with PDoE and WCS to verify the plots not registered in the PLUP system in 2019. The approval of zoning in KPWS will help new registered Ibis rice members having rice parcel inside the community zone but still not registered in PLUP to be eligible in Ibis rice project participation for next year (please, see the Activity 4.2 above).

Regarding the trials and training for cover-crops, trials and demonstrations are going on and farmers seem interested. However, the cover crops species used exhibited contrasted adaptability (Stylosanthes guianensis,a high drought tolerant specie ; Sunnhemp (Crotalaria juncea) is also an interesting specie at the end of the wet season but the biomass inputs can be limited by early drought in December). The main problems for taking over these techniques are related to risk of fire and cattle roaming, which are destroying the fields. The price of fences has been calculated and remains really high compared to the benefits for farmers. Notably as a way to mitigate this issue, SMP will focus on collaborative wildlife friendly ponds management in a new pilot project funded by CEPF proposal in the target location. Furthermore, this project will also promote crops diversification, as well as the purchase of electric fencing to protect the fields from cattle roaming.

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

- In return for being involved, farmers have to agree to reduce hunting etc. in the Protected Area. In order to know how much poverty alleviation is actually being achieved, it is necessary to know how exactly much income is being 'lost'/forgone/relinquished from hunting, etc.? Also who are and what has happened/will happen to the rice traders/middle-men who are now being displaced/excluded? How many? Were/are they all wealthy/non-poor? If the new rice and its associated trading systems have made (some/any of) them poor(er), could they become involved in positive ways in the new/organic rice scheme?

The middle men would visit our communities relatively infrequently and often use this to create a 'buyers market' and drive down price. The middle-man approach is very fluid and they will move around to where the opportunity and the market pull is, meaning that this project is unlikely to have significant impact on individual traders overall ability to manage their businesses. IRCC now buys direct from farmers using the VMN as a service provider for checking quality and aggregating according to organic standards. By sourcing directly we are making sure as much value as possible is staying in a community. The other important note is that IRCC still contracts middle-man service providers but specifically for their transport services based on a perMT fee. This means a guaranteed income with a contract rather than relying on the unpredictable price differential between rice mill and farm gate which puts pressure on farmers and middle-men.

- Can we get an idea of the multiplier effect of the seed production activities? Are there any plans to commercialise the seed production activities if the trial is successful?

In 2019, there were 23 Ibis rice farmers joining seed multiplication program who produced 34,502kg of rice seed (12,200kg registered seed produced from foundation seed, and 22,302kg of certified seed). At the same time, our partner CIRAD was conducting an assessment of 38 rice varieties that belong to 4 groups with the main objective to assess their adaptability, productivity and grain quality. 3 other rice cultivars' seeds (waxy rice) were under cultivation in 4 plots (in total 14,689 m2). Finally, another variety of waxy rice grown in 2018 (cv. HNN) has been selected to conduct a paddy production trial with 10 households (on a total area of 8.62 ha) in 4 villages. Average yield was 1.4 t/ha due to the late transplanting and long drought period. SMP is planning to keep reproducing this waxy rice variety and distribute it to the farmers (Please see Activity 2.1 and Activity 2.3).

- Share the Research study assessing changes in soil functions.

The Master research on assessment of changes in soil functions has been conducted. Furthermore, some of the findings were integrated in a scientific article, written by a consortium of researchers and published in November 2019 (please, Annex 3, Table 2 and the documents in *Annex 4, Items 12 and 13)*.

- Cover crops : Any plans to mitigate the risks related to droughts, fire and cattle roaming ?

Regarding the trials and training for cover-crops, trials and demonstrations are ongoing and farmers seem interested. However, the main problems for taking over these techniques are still related to risk of fire and cattle roaming, which are destroying the fields. The price of fences has been calculated and remains high for farmers. Notably as a way to mitigate this issue, SMP will focus on collaborative wildlife friendly ponds management in a new pilot project funded by CEPF in the target location. The ponds will supplement the fields in water during long drought periods (making the roots stronger). The project will also cover electrical fencing to protect fields from cattle roaming and will continue to promote crops diversification (please, see the part 9. Lessons learnt).

- Number of VMN members, disaggregation by gender :

There has been a mistake in previous report between numbers (only 30 VMN members in 2018-19). Efforts have been made to disaggregate data by gender (only IBIS members cannot, as number monitored is done by HHs).

- Please keep the Darwin team updated on the military's application for land concessions.

The Military social land concession requests were rejected in late 2018 after MoE officials conducted ground truthing visits to evaluate the social land concession requests. During a meeting with the National level Ministry of Environment on the 18th November 2018, all social land concessions requests within the boundaries of the Kulen Promtep wildlife sanctuary were rejected. With the recommendation that they seek land outside the protected area for these requests (*Annex 4, item 35)*.

- Can you clarify is 28 (activity 5.2) or 49 (as per activity 4.5) households were removed for non-compliance ?

There might have been a mistake between the phases reported. Indeed, the IBIS Rice's compliance system is a long process and is separated into two main phases. After verification with the compliance team, the final number was 70 households removed for non-compliance for the Year 2.

- A better indicator for Output 1.1 might be the proportion of inspections undertaken independently by the VNMs rather than % of VNMs managing Ibis Rice compliance.

- For output indicator 4.1, it would be useful to at least track changes in the number of direct beneficiaries.

These comments on indicators have been taken into account and changed as they best fit the monitoring of the progress towards outputs 1.1 and 4.1. For the latter, direct beneficiaries have been calculated in reference to registered IBIS Rice members, calculated each year and who benefit from all the project's activities. SMP also suggests to add the number of sale agreements signed between the compliance households and IRCC before the harvest. According to the change of this indicator (Output 4.1), SMP suggests to modify also the indicator for Outcome 0.1, so that we can track direct beneficiaries (please, see Annex 2). These changes have been made following the comments from Darwin in Year 2 Annual report review, however please, notify us if we need to follow a process to change these indicators for the following years.

11. Other comments on progress not covered elsewhere

The reduction of threatened birds' nests from Year 2 (251 nests) to Year 3 (175 nests) is mainly the consequence of unfavorable breeding conditions due to a reduced rainy season. Reduced rain resulted in less forage availability for breeding pairs which may have resulted in a reduced number of nests. A key factor in the reduced number of nests between 2018/19 and 2019/20 is the reduction in the number of Lesser adjutant stork nests found 181 in 2018/19 and 120 in 2019/20. Lesser adjustants breed in colonies and reduced rain (Seasonal open water areas) will impact on the adults willingness to form colonies to breed. We have witnessed this same reduction in 2015/16 as well.

12. Sustainability and legacy

The IBIS rice initiative through support from Darwin is now a nationally recognised approach. As reported in section 1 of this report, the partnerships that are being developed are allowing the challenges faced in Preah Vihear under this project to inform National level management plans and decision making tools under the zoning process. The sharing of impact evaluations and training partners on our compliance processes.

The IBIS rice initiative is being supported by a wide range of partner organisations and donors to expand within existing areas as well as new landscapes. As the initiative expands it gives scale and resilience to the business model that benefits the communities.

IBIS rice is now also imbedded as a strategy within one existing REDD+ (Keo Seima wildlife sanctuary MoE and WCS) project and two proposed projects; Northern Plains (GPL, MoE and WCS) and Prey Lang (Conservation International, Mitsui, MoE). These sustainable financing mechanisms support the Protected Area management that is needed for the IBIS rice approach long-term as well as provide benefit sharing and performance management mechanisms that the initiative is influencing and can integrate with going forward.

The successes of the innovation supported by this project have allowed SMP to leverage many new funding sources to expand and diversify the project, this includes $300k through the Greening Prey Lang project, a USAID funded project working in Preah Vihear and Prey Lang https://usaidgreeningpreylang.exposure.co/organic-growth. A CEPF grant in the target villages of this project for $208k over 2 years from June 2020 to look at wildlife friendly ponds and climate resilience. Mitsui via Conservation International are supporting SMP to integrate the IBIS rice initiative in their REDD+ project in Prey Lang Wildlife Sanctuary with $100k over 2 years to establish the VMN and initiate the project.

IRCC is also pursuing the increase of its current credit facility from $900,000 to $3,000,000 to ensure ability to procure all products from farmers and absorb the expansion. 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

A media consultant has continued to promote the project but with a focus on product quality and linking impact to product in a consumer-friendly way. This has included videos that have gained engagement rates of more than 200k and involved the launch of Ibis rice instagram. The website has been updated to reflect this strategy and recipe videos have been very successful across media. The increased brand awareness has brought a wider audience to the initiative and the impacts supported by darwin. https://ibisrice.com/ https://www.instagram.com/ibisrice/.

SMP is developing its own social media presence separate from the products sites where more detailed project information can be published and then shared by the product focussed sites where appropriate. In year 4 SMP is going to create a specific communication campaign for the project that promotes lessons learnt and legacy of the project. A communications plan specifically for this will be shared with Darwin in June such that there is good coordination.

The new UK Ambassador to Cambodia has been sent a summary of the project as well as seen videos on our social media. A visit to Preah Vihear to visit the IBIS rice site's is planned for June and would be an excellent opportunity to kick off a communications campaign that links SMP UK Embassy to Cambodia and Darwin.

14. Safeguarding

As part of its organizational internal strengthening efforts, SMP has developed during the reporting period, Staff internal policies setting out clear expectations of behaviours, that all staff, consultants, interns and volunteers have to follow.
These documents include : a Code of Conduct, a Gender policy and a Child protection policy (*Annex 4, Items 32, 36 and 37*).

As part of the scheme of IBIS Rice program, SMP has also developed grievance mechanisms to support the communities that the NGO's team is directly and indirectly working with.

At all target villages, SMP has helped support the formation of Village Marketing Network (VMN) groups and Community Protected Area (CPA) committees, who plays the role of local intermediaries between SMP as well as its partners, and the communities. To implement ICS, VMN inspectors are trained to follow clear and strict rules in order to avoid conflict of interests and ensure due diligence (*Annex 4, Item 8*). After the completion of ICS inspection, the compliance results are subject to a village-level review and grievance hearing. In that regard, the AFL is only finalized once appeals and clarifications have been addressed and settled.

Furthermore, in all villages, letterboxes are installed in visible public areas, so that the overall population of the program target communities is able to report anonymously any information or grievance regarding the local activities or outputs of the program. This mechanism is a way to ensure SMP of having feedbacks from the direct and indirect populations impacted by its program.

15. Project expenditure

Please note that SMP will submit for a final version of the project expenditures during this reporting period as soon as possible, after a final verification with Darwin and SMP team on funds allocation.

Table 1: Project expenditure during the reporting period (1 April 2019 – 31 March 2020)

Project spend (indicative) since last annual report	2019/20 Grant (£)	2019/20 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)		-	-	
Monitoring & Evaluation (M&E)		-	-	-
Others (see below)		-	-	
TOTAL		**-**	**-%**	

2. Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2019-2020

Project summary	Measurable Indicators	Progress and Achievements April 2019 - March 2020	Actions required/planned for next period
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.		Although some challenges are being faced in reaching target participation in the project area, the long term drivers of success have made very good progress. We see through very strong engagement a much increased awareness and interest from the Cambodian Government in our compliance system. This will be further strengthened by the finalization of zoning that will give legal clarity around our compliance system. The initiative is growing beyond the project's geographic scope with new communities, partners and funding sources. The commercial sustainability of the project is also supported by a business that is sustaining a 50% incentive and has a market ready for significantly more volume.	[redacted]
Outcome Future-proof Ibis Rice by linking organic accreditations and drought-resilient agricultural practises with	**0.1** The number of families benefiting from the Ibis Rice project exceeds 2,500 (baseline 2015/16: 1,230)	**0.1** 2,375 families are benefiting directly or indirectly from the IBIS Rice program. In 2019, 579 households were directly benefiting from IBIS Rice, as officially IBIS Rice members.	**0.1** SMP will continue to promote the project in the 11 target villages (and especially strengthen its activities and compliance rules in the 2 villages which joined last year), assuring a 50% premium price for the farmers and the possibility to purchase all products. **0.2** During the next period, SMP will focus on collaborative

international markets, thus safeguarding livelihood improvements for > 2,500 families, protecting threatened species and preventing deforestation across >400,000ha.	**0.2** The number of households participating in drought-resilient agriculture practises exceeds 1,250 (Baseline mid-2015: 0)	**0.2** All the 579 households participating in the program have grown high quality drought-resilient seeds (Phka Rumduol).	wildlife friendly ponds management in a new pilot project funded by CEPF in the target location.The project will also promote crops diversification. **0.3** SMP and its partners are waiting for final zoning approval from the MoE. Then, we will work with PDoE and WCS to bring clarity about the land tenure and verify the plots not registered in the PLUP system in 2019.
	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)	**0.3** In 2019, 167 incidents of land clearing were reported by the Compliance unit. However, it is not clear for the moment these land clearings were perpetrated by IBIS Rice farmers, due to lack of information on new members' lands.	**0.4** WCS will continue to locate and protect the critically threatened bird species nests for the next period. **0.5** The lead author of the impact evaluation is working on a paper on a 10-years perspective and reflection on the IBIS Rice initiative, which will include annual basic needs assessment data from 2010 to 2020.
	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	**0.4** In 2019, 29 nests of Giant and White-shouldered Ibis have been protected, and 42 chicks fledged successfully.	
	0.5 The poverty standards of participating households	**0.5** The effect of participating in the IBIS Rice programme was estimated to increase household economic status by 0.34, with the	

	increases by 20% against the 2016 baseline	effect positive in 95.6% of model runs.	
Output 1. Village Marketing Network (VMN) have the capacity to manage the expansion of Ibis Rice compliance, Organic internal controls and production independently	**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)	**1.1.** 11 VMN Committees have been established in the 11 targeted villages (37 VMN members). Their capacities are still strengthened by SMP, but 2 VMN Committees members are able to independently manage IBIS Rice compliance in 2019. (*Section 3.1, Annex 4, Items 2 to 9*)	
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.		During the reporting period, 4 new staff have been recruited on the field (replacement of 1 Field Staff, and replacement of 3 staff at new positions : 2 Assistant Community Officers + 1 Team Leader). In the Field staff team of PVH, SMP also promoted 1 Project Coordinator in charge of managing the project in Preah VIhear office in July 2019, 1 Data Officer for Preah Vihear, as well as 1 Compliance Manager in charge of managing ICS system for all SMP projects. 1 Assistant finance officer has also been recruited to support the overall Financial team in PP office. 2 VMNs have been formed in the 2	SMP will provide training to VMN Committees members,so that they are able to manage the quality check of the paddy by themselves (SMP more as observant).

		new villages of Our Kak and Krolas Peas (6 members, including 3 women), totalling 11 VMN Committees in PVH with 37 VMN members (including 16 women).	
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.		All IBIS Rice farmers have been trained in Farmer diary completion. 21 VMN Inspectors (6 women) have been trained in the reporting period, on organic internal control monitoring and record keeping which will enable them in the future to manage external organic inspection and certification.	SMP will also continue to support VMNs Committees members to carry out ICS inspection by themselves. We will also focus on trainings to VMNs Committees members in farmer diaries completion and training, so that they can provide the trainings to farmers by themselves.
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.	**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%) **2.2** Number of Hectares cultivated using stress tolerant rice seed produced during trials is at least 400Ha by end year 2 (baseline: 0) **2.3** Number of	**2.1** 23 Ibis rice farmers joining seed multiplication program who produced 34,502kg of rice seed (12,200kg registered seed produced from foundation seed, and 22,302kg of certified seed). **2.2** In 2019, 98.62 ha are under cultivation for stress tolerant rice seed multiplication produced during trials. Moreover, 1,663 hectares and 579 farmers are trialling stress-tolerant rice varieties - Pkha Rumduol. **2.3** SMP is working with its partner CIRAD on training and demonstrations drought-resilient agricultural practises. We are expecting that farmers will adopt more and more these practises when they will the results of the trials undertaken. 108 (50 men / 58 women) took part in a training on the use of cover crops for soil health improvement in 4 villages (Kampech, Thmat Boey, Yearng, and Kong Yoang). 3 fields (1.5 ha) have been used to demonstrate to implement and assess the performances and impacts of cover crops after wet season rice, to generate empirical evidence on soil health, crop productivity and change in profitability, and finally to build capacity of farmers on CA-based production systems. Land leveling could not be implemented during Y3, due to dry soil conditions which required heavy machinery having negative impact on wildlife.	

	farmers willing to adopt drought-resilient agricultural practises (legume trials and land levelling) exceeds 1,250 families by end of Year 4 (baseline: 0) **2.4** Number of tons certified organic rice produced grows by 50% between Year 1 and Year 3 (baseline: 187 2015/16)	**2.4** 719 tons of certified organic rice were purchased in Preah Vihear for the harvest 2019. (*Section 3.1 , Annex 4, Items 10 to 13 and 26*)	
Activity 2.1. Seed for drought-resilient jasmine rice strain purchased from CARDI		SMP bought 400kg of foundation seed and provided them to 6 ibis rice members to involve in seed multiplication to support other IBIS Rice farmers to produce high quality paddy. SMP also provided 1,197kg of registered seed (seed produced from foundation seed in 2018) to 13 Ibis rice farmers as well to produce certified seed. As a result in 2019, there were 23 IBIS Rice farmers joining seed multiplication program who produced 34,502kg of rice seed (12,200kg registered seed produced from foundation seed, and 22,302kg of certified seed).	SMP will continue the seed multiplication, targeting 30 IBIS Rice farmers to become seeds producers.

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.	Our partner CIRAD followed-up the activities implemented on the 2 first years of the project, focusing specifically on : (i) the assessment of rice drought-resilient cultivars, (ii) empowering farmers into rice seed production, (iii) paddy production for one sticky rice variety (HNN) which was produced in 2018, and (iv) the production of cover crops after wet season rice. Over 108 farmers (50 men and 58 women) from 4 villages were trained on the use of cover crops for soil fertility improvement. 3 fields (1.5 ha) from 2 villages have been identified for the establishment of on-farm demonstration with the objectives: (i) to implement and assess the performances and impacts of cover crops after wet season rice, (ii) to generate empirical evidence on soil health, crop productivity and change in profitability, and (iii) to build capacity of farmer on CA-based production systems. Cover crops selected were the following : Sunnhemp, C. ochroleuca,, Sorghum, Stylosanthes guianensis, Centrosema pascuorum, Crotalaria juncea, finger millet, cowpea, rattle pod). Upland trials (on the production of finger millet and seed of sunnhemp) have been cancelled, due to unavailability of cultivated area and within IBIS farmers present in the	We are planning to do the land levelling in Y4, during the wet season which requires small machinery (hand tractor) and will avoid negative effects on local wildlife. For this year, we plan to 5 demonstration fields and we expect the yields to increase by 15%. SMP will also facilitate organic fertilizer loan from IRCC, and will initiate the creation of a compost pile collectively managed. SMP will continue the activity of cover crops with the species identified by CIRAD.

	area.	
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.	An assessment of 38 rice varieties that belong to 4 groups was conducted with the main objective to assess their adaptability, productivity and grain quality. 4 plots under cultivation (90 ha) of 4 sticky, colored and fragrant rice cultivars' seeds cultivated :Rubi, Local black cultivar, TDK8, SBT 254. Another variety of waxy rice grown in 2018 (cv. HNN) has been selected to conduct a paddy production trial with 10 households (on a total area of 8.62 ha) in 4 villages. Average yield was 1.4 t/ha due to the late transplanting and long drought period.	SMP will scale up the HNN waxy rice variety (identified as the best cultivar) production and distribute seeds to farmers.
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.	These activities, which are yet to be undertaken, focus on promoting among communities the various rice trials undertaken (*please see Activity 2.3 above*) as well as the identified cover crops (*please see Activity 2.2 above*). Those actions – soil conservation techniques, drought-resilient jasmine rice varieties or fallow-year crops - will most likely strengthen resilience.	Activities related to Activity 2.2 and Activity 2.3.

Activity 2.5. Organic product grown in all Ibis Rice villages using soil conservation techniques. If the field trails 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.		A Master study (conducted by the Royal University of Agriculture of Cambodia and with CIRAD follow-up) has been conducted on the assessment of soil ecosystem services comparing different land uses and/or cropping systems.. Soil ecosystem services have been assessed under different cropping systems and soil types in different location	SMP will support farmers to grow other organic products such as beans, sesame.
Output 3. Critically endangered species populations increase as a result of improved protection around Ibis Rice villages	**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) **3.2** Number of critically endangered birds' nests protected are 20% higher when compared to baseline 2014/15: 29.	**3.1** In 2019, 878 hectares ha has been deforested in the eleven targeted villages. **3.2** Number of critically endangered bird nests protected during the 2019/20 breeding season increases by 7% (29 nests of Giant and White Shouldered Ibis- 31 nests with Red-headed Vultures), compared to baseline 2014/15. (*Section 3.1 , Annex 4, Items 14 to 21*)	
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,		480 CPA patrols were conducted across KPWS and CWS-PRWS and 2 Joint Patrols were conducted between January and March 2020. 175 Endangered and Vulnerable species nests have been monitored and protected , whose 31 were critically endangered bird nests	The activity will continue in Year 4.

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.		(Giant and White-shouldered Ibis, Red-headed Vultures).	
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.		Monthly assessments carried out using Landsat imagery, then cross-checked by WCS community rangers and MoE patrol team staff.	The activity will continue in Year 4.
Output 4. Community members living within the target protected areas experience reduced poverty and increased income as a result of Ibis Rice	**4.1** The number of people benefiting from the Ibis Rice project increases by 15% per annum (baseline 1,230 families in 2015/16) **4.2** The number of tonnes Ibis Rice purchased per annum by IRCC from participating farmers exceeds 1,000 by the end of the project (baseline 2015/16: 557) **4.3** Number of functioning VMNs exceeds 20	**4.1** 2,375 families are benefiting directly or indirectly from the IBIS Rice program. In 2019, 579 households were directly benefiting from IBIS Rice, as officially IBIS Rice members and 424 households signed a sale agreement with IRCC. **4.2** During the 2019 harvest, 400 farmers were certified as organic and wildlife-friendly compliant. Finally, a total of 346 farmers had sufficient surplus and sold 916 tonnes to IRCC. **4.3** 11 functioning VMN have been established in the 11 target villages, working with the involvement of 37 VMN members (including 16 women). **4.4** 946 households.have been surveyed from 2008 to 2017 on human wellbeing (BNS, rice harvest and food security). The effect of participating in the IBIS Rice programme was estimated to increase household economic status by 0.34, with the effect positive in 95.6% of model runs. This was approximately equivalent to the estimated effect size of owning a mini-tractor, which is known to have a transformational impact on household	

	(baseline 13 in 2016) **4.4** Poverty status of people in Ibis Rice villages improves (baseline to be established at project inception 2016/17)	productive capacity. (*Section 3.1 , Annex 4, Items 22 to 27*)	
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.		11 VMN Committees are established and functioning in the 11 target villages of PVH. They gather 37 VMN members (including 16 women).	SMP will focus on encouraging women to be part of VMN Committees.
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.		PLUP ongoing in all villages in the Northern Plains.	SMP and its partners will continue to monitor the PLUP system, identify new land clearing and expansion. We will update the data after the final zoning approval from the MoE.
Activity 4.3. Conditional agreements explained and new members join VMNs. The conditional conservation agreements form the basis for		In 2019, 579 farmers had signed conditional agreements, 424 farmers were confirmed on the (AFL) Approved Farmer List (having	SMP will continue to promote organic and wildlife rules, especially to new villages.

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.		passed the ICS and external certification) and 400 had passed the Wildlife-friendly inspection.	
Activity 4.4. Training and seed provided to farmers as necessary.		See 2.1 and 2.2 above. In 2019, SMP provided a total of 1,597 kg of seeds (foundation and registered seeds), to 19 IBIS Rice members in order to involve them in high quality rice seed multiplication.	This activity will be continued during Year 4.
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.		11 VMN Committees have been established and are still supported by SMP team. Based on PLUP data, they support to identify any illegal land clearance and more generally, non-compliant members. In 2019, 2 VMN Inspectors conducted themselves the ICS inspection. During the reporting period, 172 households have been prevented from selling paddy to SMP due to issues of non-compliance.	This activity will be continued during Year 4.
Output 5. Impacts of Ibis Rice program on threatened bird populations,	**5.1** Two peer-reviewed journal articles published in academic journals by WCS & RUPP	**5.1** One research has been conducted by a lecturer of RUPP and involved researchers from RUA, CIRAD and the University of Montpellier. Their research looks at the impacts of conservation agriculture on soil health, and has been published in the journal *Soil and Tillage Research*, in November 2019.	

habitat trends and human livelihoods are monitored, recorded and disseminated to a wide audience, including relevant national and regional PES policy-makers.	researchers. **5.2** Press releases, and social media used at least monthly to disseminate impacts of the Darwin Post project	**5.2** An impact evaluation which studied the impacts of PAs and PES (including IBIS Rice) has been published and results presented during a workshop in Phnom Penh. SMP team participated in 5 conferences/seminars/ workshops at which findings from Darwin project work have been presented. IBIS Rice program is promoted on several social media : Youtube, Facebook (235 more followers, 292,929 views on all content and 53,759 engagements (likes, shares, reactions)). IBIS Rice also engaged in 8 Darwin specific posts that have had 67,009 views and 15,508 engagements. (*Section 3.1 , Annex 4, Items 12, 13 and 28 to 31*)	
Activity 5.1. Data on poverty status is collected from target villages and appropriate paired control villages		Data on poverty status have been collected from target villages and appropriate paired control villages from 2008 to 2017 (with surveys conducted every 3 years). See part 6. Project support to poverty alleviation and Output 4.4.	At the end of the grant, an endline survey will be conducted, using the same indicators than the impact evaluation.
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.		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. 172 households farmers removed from purchasing list due to not complying with conservation agreements (activity 4.5)	We are estimating that next year, two articles related to impact evaluation will be published : one on impacts ; one on the methodology used for the RCT.
Activity 5.3. Peer-reviewed papers, reports, presentations and social media are		IBIS Rice program benefiting from a long-term impact evaluation which studied the impacts of PAs and PES	SMP will continue the promotion of the program on social media (Facebook) and will produce 2 press releases.

prepared and published.	(including IBIS Rice). SMP team participated in 5 conferences/seminars/ workshops at which findings from Darwin project work have been presented. A media consultant has been continued to promote the project but with a focus on product quality and linking impact to product in a consumer-friendly way. This has included videos that have gained engagement rates of more than 200k and involved the launch of Ibis rice instagram. SMP is developing its own social media presence separate from the products sites where more detailed project information can be published and then shared by the product focussed sites where appropriate (Please, see 13. Darwin Identity)	The team will continue to participate in workshops and promote the IBIS Rice scheme and results.

3. 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
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.			
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.	**0.1** The number of families benefiting from the Ibis Rice project exceeds 2,500 (baseline 2015/16: 1,230) ***0.1 If Darwin agrees, SMP would like to add to this indicator :*** ***The number of households registered as IBIS Rice members, calculated each year and benefiting from all of the project's activities. By the end of the project, this number reaches : 600 (baseline 2016 : 291).*** **0.2** The number of households participating in drought-resilient agriculture practises exceeds 1,250 (Baseline mid-2015: 0) **0.3** The number of incidents of illegal clearance of forest around participating villages declines by	**0.1** Signed conservation agreements, land-use plans, household records, receipts for rice purchase. (*Annex 4. Items 4, 21 to 23, 26 and 27*) **0.2** Signed and verified farmer diaries showing adoption of at least one resilient practice. *(Evidence not possible to collect as the document is stored in PVH Office, emptied due to the COVID-19*) **0.3** Monitoring reports from WCS	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 gains made during the previous 3 years.

	25% against the 2015 baseline of 72 incidents per annum) **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 **0.5** The poverty standards of participating households increases by 20% against the 2016 baseline	rangers and satellite images. (*Annex 4, Items 19 and 20*) **0.4** Monitoring reports from WCS rangers. (A*nnex 4, Items 20 and 15 to 17*) **0.5** Household poverty surveys (using Basic Necessity Survey). (*Annex 4. Item 30*)	
Outputs: **1**. Village Marketing Network (VMN) have the capacity to manage the expansion of Ibis Rice compliance, Organic internal controls and production independently	**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) ***1.1 If Darwin agrees, we would like to modify this indicator to :*** ***By the end of the project, 20 VMN Committees members are able to manage Ibis Rice compliance by conducting their own internal control systems (baseline : 2016 : 0).***	**1.1** Number of VMNs conducting their own internal control systems, measured using number of inspection reports signed by VMNs. (*Annex 4, Item 9*)	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.
2. Ibis Rice farmers have tested and adopted drought-resilient agricultural practices and complementary soil conservation techniques along with levelling and water efficiency trials.	**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%)	**2.1** SMP, organic certifier and VMN farmer records. (A*nnex 4. Items 22, 23 and 26, 27*)	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

	2.2 Number of Hectares cultivated using stress tolerant rice seed produced during trials is at least 400Ha by end year 2 (baseline: 0) **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) **2.4** Number of tons certified organic rice produced grows by 50% between Year 1 and Year 3 (baseline: 187 2015/16)	**2.2** SMP, organic certifier and VMN farmer records. (*Annex 4. Items 22, 23 and 25 to 27*) **2.3** SMP, organic certifier and VMN farmer records. (*Annex 4. Items 10 and 11*) **2.4** SMP, organic certifier and VMN farmer records. (Annex *4. Items 22, 23 and 25 to 27*)	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.
3. Critically endangered species populations increase as a result of improved protection around Ibis Rice villages	**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) **3.2** Number of critically endangered birds' nests protected are 20% higher when compared to baseline 2014/15: 29.	**3.1** Deforestation rate analysis based on remotely-sensed images. (*Annex 4. Items 14 and 18 to 20*) **3.2** Ranger nest protection reports and monitoring team data records. (*Annex 4. Items 15 to 17*)	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 effective 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	**4.1** The number of people benefiting from the Ibis Rice project increases by 15% per annum (baseline 1,230 families in 2015/16) ***4.1 If Darwin agrees, SMP would like to add to this indicator :*** ***- The number of households registered as IBIS Rice members, calculated each year and benefiting from all of the project's activities. By the end of the project, this number reaches : 600 (baseline 2016 : 291).*** ***- The number of households which have signed a sale agreement with IRCC. By the end of the project, this number reaches : 494.***	**4.1** Signed conditional agreements, database of households benefiting from Ibis Rice.*(Annex 4. Items 4, 21 to 23, 26 and 27*)	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.
	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)	**4.2** Receipts and SMP ledger records. (*Annex 4. Items 22 and 23*)	
	4.3 Number of functioning VMNs exceeds 20 (baseline 12 in 2016)	**4.3** SMP farmer records. *(Annex 4. Items 4 to 9*)	
	4.4 Poverty status of people in Ibis Rice villages improves (baseline to be established at project inception 2016/17)	**4.4** Basic Necessity Survey (BNS) scores. (*Annex 4. Items 28 to 31*)	

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.	**5.1** Two peer-reviewed journal articles published in academic journals by WCS & RUPP researchers. **5.2** Press releases, and social media used at least monthly to disseminate impacts of the Darwin Post project	**5.1** Data on changes in household poverty, species populations and habitat trends; peer-reviewed journal articles. (*Annex 4. Items 12, 13 and 29 to 31*) **5.2** Number of Facebook posts, tweets and news stories about Ibis Rice.	Research permits will be granted. Excellent relationship with MoE means that this should be no problem

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)

1.1 Additional SMP staff & VMN members are recruited and trained to manage Organic Ibis Rice internal controls, organic purchase, production, and institutional implementation.

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.

2.1 Seed for drought-resilient jasmine rice strain purchased from CARDI

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.

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.

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.

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.

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.

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.

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.

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.

5. 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	3 training materials	34	**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 reviewed by	1 student is already developing a masters study at RUA.	1 RUA student was involved in a bigger team, which was conducted by a lecturer of RUPP and involved researchers from RUA, CIRAD and the University of Montpellier. Their research looks at the impacts of	1	Two peer-reviewed journal articles published in academic journals by WCS & RUPP researchers.

				CIRAD.		conservation agriculture on soil health, and has been published in the journal *Soil and Tillage Research*.		
	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 Francaise de Developme nt	Findings from IBIS Rice project has been presented in this reporting period, at 5 conferences/seminars/work shops : 1. the SRP Plenary focusing on use of incentives at the forest frontier ; 2. Promotion of IBIS Rice project in Steung Treng with CI ; 3. in Kratie with CEDT ; 4. in Preah Vihear with WCS ; 5. the 3ie workshop in Phnom Penh (presentation of the impact evaluation results). Aims of the presentations were : (i) promote the IBIS Rice project, (ii) to show key lessons learnt and success stories, (iii) workplan and activities to be implemented.	22	24

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	We reached a total of 1,663 ha in year 3	1,663 ha	
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.	-						.

Table 2 Publications

Title	Type (e.g. journals, manual, CDs)	Detail (authors, year)	Gender of Lead Author	Nationality of Lead Author	Publishers (name, city)	Available from (e.g. weblink or publisher if not available online)
Measuring impacts of conservation interventions on human well-being and the environment in Northern Cambodia.	Impact evaluation	Tom Clements, Maline Neang, EJ Milner-Gulland and Henry Travers ; March 2020	Henry Travers (M)	Henry Travers (British)	International Initiative for Impact Evaluation (3ie), New Delhi	https://doi.org/10.23846/DPW1IE106
Multi-functional assessment of soil health under Conservation Agriculture in Cambodia.*	Scientific article	Sambo Pheap, Clara Lefèvre, Alexis Thoumazeau, Vira Leng, Stéphane Boulakia, Ra Koy, Lyda Hok, Pascal Lienhard, Alain Brauman, Florent Tivet ; November 2019	Sambo Pheap (M) , Clara Lefèvre (F)	Sambo Pheap (Cambodian) , Clara Lefèvre (French)	Soil & Tillage Research	https://doi.org/10.1016/j.still.2019.104349

7. Checklist for submission

	Check
Is the report less than 10MB? If so, please email to Darwin-Projects@ltsi.co.uk putting the project number in the Subject line.	
Is your report more than 10MB? If so, please discuss with Darwin-Projects@ltsi.co.uk about the best way to deliver the report, putting the project number in the Subject line.	
Have you included means of verification? You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	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. However, we would expect that most material will now be electronic.	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?	NO, we will resubmit the final version in the following days.
Do not include claim forms or other communications with this report.	