

Darwin Initiative Final Report

*To be completed with reference to the Reporting Guidance Notes for Project Leaders (<http://darwin.defra.gov.uk/resources/>) it is expected that this report will be a **maximum** of 20 pages in length, excluding annexes)*

Darwin project information

Project reference	21-007
Project title	Livelihoods in the balance – protecting Cambodia’s remaining seasonally-inundated grasslands
Host country(ies)	Cambodia
Contract holder institution	Wildfowl & Wetlands Trust
Partner institution(s)	Mlup Baitong ((MB), Chamroen Chiet Khmer (CCK), Birdlife International – Cambodia Programme (Birdlife), Forestry Administration (FA) and Ministry of Environment (MoE) of the Royal Cambodian Government
Darwin grant value	£222,241
Start/end dates of project	April 1st 2014 – March 31st 2017
Project leader’s name	Tomos Avent
Project website/blog/Twitter	
Report author(s) and date	Tomos Avent – 30th June 2017

1 Project Rationale

30% of Cambodia comprises wetlands providing critical natural resources to millions; 80% depend on wetlands for their livelihoods. Over half its seasonally-inundated grassland has been lost as a result of land conversion and agricultural intensification.

Boeung Prek Lapouv (BPL) and Anlung Pring (AP) are important remnants of seasonally-inundated grasslands in the Cambodian Lower Mekong delta. Both sites have been given official protection by the Cambodian government, formally in 2010 through designation as ‘Management and Conservation Areas for Sarus Crane and Other Birds’, and later transitioning to ‘Protected Landscapes’ under the Ministry of Environment in 2016. Despite this, the threats are complex and numerous, with a broad suit of community owned solutions required to attain sustainable conservation of habitats and secure ecosystem services for over 6,880 households around the Reserves.

Large tracts of land in and around the reserves have been converted to paddy field and commercial shrimp farms, and natural resource exploitation from large-scale external ventures hamper the ability of local people to access and sustainably manage resources. Unsustainable farming techniques result in unnecessarily high quantities of pesticide and chemical fertilizer being applied to rice paddies. An increase in the number of canals (some for irrigation and others for transport) has led to flood waters receding from BPL much earlier than in the past, which in turn; increases the length of the ‘lean season’ in between rice harvests, decreases

length of the peak fishing season, and shortens the feeding period for visiting birds like the sarus crane. The sites are very important wildlife habitats, supporting 30% of sarus crane (VU) regional population during the non-breeding season along with other bird species of global concern.

This project takes an integrated approach to wetland management; creating and supporting community-based natural resource management associations, helping farmers to convert to more sustainable and resilient practices, increasing cooperation and communication between stakeholders, adaptively managing towards an agreed optimal state, and cascading approaches to produce wise-use guidance at a national level.

2 Project Partnerships

The Wildfowl & Wetlands Trust (WWT), Mlup Baitong (MB), Chamroen Chiet Khmer (CCK), Birdlife International – Cambodia Programme, and the Royal Government of Cambodia have been working together since 2010. This project supported the continuation and growth of this partnership, combining international wetland expertise with locally experienced community-based conservation organisations and national government. During the lifetime of this project the government authority with overarching responsibility for Anlung Pring (AP) and Boeung Prek Lapouv (BPL) was changed from the Forestry Administration of the Ministry of Agriculture Forestry and Fisheries (MAFF) to the Ministry of Environment (MoE). This transfer process took longer than anticipated and once again highlighted the importance of our approach to engage with different government departments and at national, provincial and local levels, ensuring key stakeholder relationships are resilient and not overly reliant on certain individuals.

BirdLife International, Cambodia Programme (Birdlife) have supported the in-country administrative facilitation of the project, especially in the provision of assistance to Chamroen Chiet Khmer (CCK), a primarily Khmer speaking organization. Birdlife have been the first point of contact with the Ministry of Environment during the sites' transitions to MoE Protected Landscapes and throughout the cross-sectorial Wise Use Guidelines development process.

Chamroen Chiet Khmer (CCK) have delivered elements of the community-based conservation and livelihoods work at BPL and have been the direct point of contact with community groups, especially for Community Fisheries and the Sarus Crane Rice sustainable farming groups. CCK have also led on the community consultations for water management features. CCK have delivered environmental awareness linking all conservation interventions with the message of healthy wetlands for healthy people.

Mlup Baitong (MB) have supported livelihood work at AP and delivered environmental education programmes through established courses and the creation of eco-gardens in school grounds. Livelihood work has focused on alternative farming demonstration sites, community-based savings groups and ecotourism. They have long-established relationships with local community institutions and were initially instrumental in building trust within neighbouring villages.

The **Ministry of Environment (MoE)** of the Royal Government of Cambodia has supported ongoing management of the sites and helped the project gain government endorsement and approvals when necessary. The Department of Freshwater Conservation (within the MoE) helped to bring together all relevant stakeholders involved in wetland management for workshops and formal feedback during the development of wise use guidance.

Project Management Group meetings, joint fieldwork planning, and annual Liaison Panel meetings were the main mechanisms for project communication and coordination. Partner meetings were held in Phnom Penh regularly during the first two years of the project, after which the partners decided that site-based meetings focusing on specific interventions would be a more appropriate use of time – an example being the eight CBET management meetings attended by all relevant stakeholders, including MB, WWT and Birdlife at Anlung Pring in the

final year of their project. Separate provincial (for high level political support) and district level (for more detailed discussions about the project and relevant stakeholders) Liaison Panel meetings were held in 2015 and 2016. In 2017 the District and Provincial meetings were combined at each site so that the new MoE Protected Landscape designation could be clearly communicated to stakeholders and a direct dialogue facilitated.

The partnerships strengthened by this project will continue into our next phase of work in Cambodia. Due to the improved conservation resilience of Anlung Pring, Mlup Baitong will be focusing the majority of their resources on other areas in Cambodia, but will continue to be involved in the project through education and handicraft development linked to ecotourism. Additional relationships with the tourism operator Wild Cambodia and the International Crane Foundation at AP will help to ensure sustainability of work at that site. At Boeung Prek Lapouv, CCK, Birdlife and WWT are entering into a new phase of work together. CCK have had problems with their financial administration towards the end of this project but WWT and Birdlife have helped to ensure that this has not had any impact of activities or administration and will continue to support them moving forward.

3 Project Achievements

3.1 Outputs

Output 1 - People have enhanced understanding of rights and opportunities under the new MoE Protected Landscape system, are engaging in community-based schemes, and human land-use is comprehensively understood

During this project 1,736 households have engaged with schemes centring on community-based natural resource management and/or conversion to more environmentally sustainable practices (see Annex 2 for details). This is more than doubles our originally stated target and justifies the additional emphasis placed upon community management associations through an official Darwin Change Request during this project. From the results of a large representative household survey at the end of the project, it is estimated that a total of 3,641 households are aware of the benefits of the new community-based associations (see Annex 2, Output 1.1 for details), suggesting that the associations are likely to grow as their capacity to take on and train additional members increases through the in-built trainer extension programmes. These associations were not established prior to this project so both figures come from a baseline of zero.

The percentage of people aware that Anlung Pring (AP) and Boeung Prek Lapouv (BPL) were officially protected areas increased from 82% to 96% and 68% to 93% respectively between 2014 and 2017 (see Annex 8). This is a positive indication that awareness interventions and community integration have been successful for the project, especially during a period where government management authority at the sites has changed.

In 2016 the sites were transferred from Sarus Crane Reserves under the Ministry of Agriculture, Forestry and Fisheries (MAFF) to Protected Landscapes under the Ministry of Environment (MoE). This protracted process caused confusion for local people, with the rights of the newly created fishery associations challenged. Community fisheries will now continue to operate inside BPL Protected Landscape until the new zoning is completed. During this zoning process WWT and project partners are helping the CFi groups to retain all newly attained rights, ensuring that the new CFi areas (which cannot officially exist within an MoE Protected Landscape) are transferred to sustainable use zones with equal use rights within the MoE system. This can only be achieved due to the strong relationships that the project has developed with multiple government departments through the Liaison Panels and original CFi designation process.

During the management transition at BPL, land encroachment has increased, with some high-powered external stakeholders seeking to grab land prior to the formal zoning process. Our LCG teams were able to report and address some threats, but much greater law enforcement support was needed. It is very disappointing to see an increase in encroachment, but the MoE

Protected Landscape framework does offer the opportunity to address the ongoing land-disputes at BPL and create a more realistic and fair integrated landscape. This project has formed a Land Tenure Review Committee (see Annex 2 Activity 1.1 for membership) which is tasked with, and formally endorsed to, conduct a review of all historical land claims at the site prior to the new MoE zoning. WWT and project partners are strongly supporting this process and have shared all land use maps, satellite imagery, ecosystem service assessments and attitudes and awareness surveys with the committee.

The land use maps (Annex 7) and Ecosystem Service Assessments (ESA) mentioned above were conducted at the start of the project. The ESA was repeated at the end of the project (Annex 8) along with an updated high-resolution satellite map (Annex 9) and attitudes and awareness survey (Annex 8). The outputs from this project have been shared with the Liaison Panels and Land Tenure Review Committee. Ecosystem services stayed relatively stable throughout the project. In AP, awareness of the two main local threats to the reserve was strong, with <90% of respondents knowing that it was illegal to poison birds and start fires. 92% of people knew that regulated use was allowed within the reserve and 86% of respondents knew that it was illegal to hunt birds. There is generally good support for, and understanding of, conservation protection at AP. The change in status from Sarus Crane Reserve (under MAFF) to a Protected Landscape (MoE) has resulted in very few changes for this site, with regulations staying largely the same.

In BPL 75% of respondents said that wetlands are important for their livelihoods. This was a statistically significant, if small, increase from 67% at the start of the project. Of the activities that have been illegal both pre and post management authority transfer (from MAFF to MoE), 88% of respondents knew that it was illegal to hunt birds, 92% knew it was illegal to poison birds, 94% knew it was illegal to start fires.

Output 2. - Co-management structures legally/formally established for CFis, sustainable tourism and SFPs and stakeholders are able to deliver sustainable wetland management through them

Community fisheries have received formal designation at Kampong Kransang and Romenth North (formally called Koh Andet). Management Plans are in place and are being followed, with regular patrolling, awareness posters shared, and awareness messages played in all 15 villages around the site. A one hectare fish nursery habitat has been created and the project has facilitated an Illegal Fishing Crackdown Committee (IFCC) to bring together relevant government authorities and the CFis to tackle the wider threat of large-scale commercial itinerant fishers. It has been difficult to establish a suitable M&E strategy for assessing changes in levels of large-scale illegal fishing as the IFCC's crackdowns are irregular due to the scale of resources required for effective action. Much of the large-scale illegal activity is conducted at night by armed groups and therefore the IFCC's actions require members of the Fisheries Administration, Provincial Law Enforcement, and Department of Environment Rangers. IFCC have however managed to complete six major crackdowns since establishment (Annex 10 for example report). During the attitudes and awareness survey at the end of the project, 58% of surveyed households believed that illegal fishing pressure coming from external fishers had decreased over the last two years and 71% of surveyed households believed that the establishment of the illegal fishing taskforce was an effective mechanism to decrease illegal fishing (Annex 8).

The management authority transfer of BPL to a MoE Protected Landscape means that the CFis will have to transition into 'Sustainable Use Zones' during the formal MoE zonation process. Project partners are supporting this process to protect all existing CFi rights and will update and formalise both fishery management plans at the appropriate time. A Business Plan (Annex 11) has been created to identify mechanisms through which the community fisheries can deliver additional benefits to members and decrease reliance upon membership fees. This plan has suggested a combination of trust funds, savings groups, and waterway access fees for external fishing groups.

Anlung Pring Community-based Ecotourism (CBET) Group is fully functioning and has legal rights to accrue income from crane viewing and value added activities (Annex 12). The project centres on the sarus crane, providing incentives for the conservation of a healthy wetland with

healthy biodiversity. There is a clear governance structure and members have decided upon and documented all roles and responsibilities (Annex 12). Training has been given to 55 CBET members in hospitality, financial management, critical thinking, leadership, management, safety and security, and bespoke operational management. At an end-of-training test, 93% of all questions were answered to an acceptable or higher level. The CBET is supported by a voluntary a-political Board to review progress and provide ongoing support into the future. A new CBET Centre and restaurant have been established, improvements have been made to the ranger station and viewing platform, eight homestays have been equipped and supported to become operational, and additional cultural products have been created. The benefit sharing system is structured to provide; employment for local people, revenue for community projects, and support for reserve management (Annex 12). The CBET marketing is described in Annex 2, Activity 2.15. Sustainable tourism at AP has provided regular employment to six community members and in the final year of the project the total income from site entrance fees and the restaurant was US\$2,182.13, of which US\$674.81 fed back into Reserve Management (the remainder covering operational and staffing costs (Annex 13). A CBET group has also been established at BPL with an associated Tourism Business Assessment completed (Annex 14).

Nine sustainable farming partnerships were established at AP and BPL, including a Buffalo Bank as an alternative livelihood scheme, farmer field schools, vegetable demonstration sites, and sustainable rice groups (see Annex 2 Activities 2.4-2.9). The main monitoring and evaluation was conducted on the two Sarus Crane Rice Groups at BPL, comprising a total of 60 households converting to systems of rice intensification (sustainable rice production). Each household farmed an average of 3 ha of land and average profitability increased from 1,980,000 Riel/ha to 2,791,400 Riel/ha, mainly due to a decrease in inputs and operational costs (Annex 15). These SCRGs also were directly linked to community-based savings programmes (which held a total of 2,330,000 Riel by the end of the project) and cooperative equipment groups. A value chain analysis has also been completed, providing a plan to increase incentives for other farmers to join the group and convert to more sustainable practices (Annex 16). Annual festivals have been held to promote the work of these groups and the 30 initial households engaged in the project in Y2 were instrumental in cascading lessons learnt to the second group (also comprising 30 households) in Y3, sharing guidance and training material delivered by the project.

Output 3. - Reserve management plans (2013-2018) are implemented

As detailed in Output 1, during this project the management of Anlung Pring and Boeung Prek Lapouv transitioned from the Ministry of Agriculture, Forestry and Fisheries to the Ministry of Environment. Although this has a number of implications in the long-term, the site Management Plans remained largely relevant throughout this Darwin project and continued to be followed. At the point of formal transfer, a meeting was held with all local stakeholders and the Department of Freshwater Conservation of the MoE. New reporting frameworks were confirmed for both sites and the Site Manager and site-based ranger teams were given new roles and responsibility descriptions, and supported with additional training.

Throughout this project capacity has been built in community groups (monitoring, farming, fishing and ecotourism) through training and the provision of resources. A capacity needs assessment was completed for the Local Community Groups (LCGs) early in the project (Annex 17). The groups were subsequently provided with new equipment for monitoring (GPS's, handheld PDAs to streamline data collection, boat engines, optics) and additional training on bird identification and communication and awareness raising. After transition of protected areas to the MoE, new rangers were added to the LCG teams and were given training on identification and reporting systems. Awareness training on reserve rules, regulations, sustainable management, and impact of unsustainable practises was given to the community-based ecotourism group, sustainable farming partnerships (see Annex 18 for example of associated poster), community fisheries, project Wetland Apprentices and at local primary schools. Additional Welcome the Bird events were held in BPL (2016) and AP (2017) bringing together local students to celebrate seasonal migrations and learn about the importance of a healthy environment (Annex 19).

The LCGs have been responsible for ongoing data collection on biodiversity and human use, and have coordinated the Invasive Non-Native Species (INNS) control programme. Patrols have been conducted on average 15 times per month at both sites, with monthly reporting to the National Project Manager as standard, and ad hoc reporting of illegal activities when required. A comprehensive grassland assessment was completed at the start of the project (Annex 20) with fixed points re-assessed at the end of the project. Key grassland indicator species (*Eleocharis* communities) and habitats on both reserves showed that populations remained stable throughout the project (Annex 8). The spatial extent of grassland remained the same at Anlung Pring, but some areas of grassland were encroached upon towards the end of the project at BPL during ministerial transition (see Output 1). The newly established Land Tenure Review Committee is endorsed by the Ministry of Environment and tasked with addressing, and where possible reversing, this loss.

Liaison Panels were constituted at the beginning of this project, with annual meetings held in 2015, 2016 and 2017. During the first two years, separate meetings were held for provincial (for high level political support) and district (for more detailed discussions about the project and relevant stakeholders) stakeholders. In 2017 the District and Provincial meetings were combined at each site so that the new Protected Landscape designation could be clearly communicated and a direct dialogue could be facilitated. At the start of this project it was decided that Liaison Panels should have the widest possible representation of stakeholders, so large annual meetings were preferred to smaller quarterly meetings. Representatives included; national and provincial government departments, commune councils, village chiefs and natural resource management associations. More regular project partner meetings and thematic community for a met regularly throughout the project. Training needs assessments, roles and responsibilities of LCG groups and results of biodiversity and human use monitoring were presented at Liaison Panel (Annex 21). An end of project ecosystem service and attitudes and awareness report (some results described in Output 1) was shared with the Liaison Panel and the MoE. Emergency Community Liaison meetings were held to address specific issues that arose in the community and protected landscapes, including illegal fishing meetings (Annex 22) in Aug 16, Sep 16, and Oct 16, and land encroachment meetings in Jan and Feb 17.

The INNS programme focused on *Mimosa pigra*, *Ipomoea rubens*, and *Nelumbo nucifera*, creating over 500 days of employment for local people. For the dominant *Mimosa pigra*, 31.92 ha (2015) and 23 ha (2016) were subjected to non-chemical pre and post flood control. Average rate of plant mortality was 84.84%, with 7.77% stem re-growth after one year. 11.95 ha of *Ipomoea rubens* and 22.25 ha of *Nelumbo nucifera* was also removed. Additional habitat restoration was carried out on a one hectare fish-pool habitat restoration area, where inundated plant species were re-planted and nursery habitats recreated. Grazing trials have been conducted through WWT and Birdlife's Buffalo Bank programme, but due to a delayed start the project would like to collect additional data over the coming year so that we can be confident enough in the results to feedback into adaptive management.

A Wetland Health Risk Assessment (Annex 23) was completed in 2017 to feed into adaptive land use planning and provide the managers of BPL with information about key health risks and impacts, and provide options to effectively mitigate threats to domestic livestock, wildlife and people.

Output 4. - Water level management plans for both reserves and floodplain land use plan for AP developed and agreed with stakeholders through participatory working methods.

A Water Level Management Group (WLMG) is established at Anlung Pring (Annex 24 – Only available in Khmer) which, together with project partners, has developed a water management plan and monitoring protocol. The project has supported this group and management plan by providing; digital elevation models and advice on hydrological flows, land use mapping, water analysis of the hydrologically isolated northern and southern sections, repair of the main sluice gate at the site (completed by the Ministry of Water Resources and Meteorology), installation of water level gauges, and data collection by the community. The Water Level Management Group is now directly responsible for controlling water levels at the site (by-law created in Oct 2016) and is advised by WWT and Birdlife.

After mapping land use upstream from, and directly abutting Anlung Pring, the water quality study (assessments conducted in Jan 2016, Mar 2016, May 2016, Nov 2016, and Mar 17) was designed to evaluate the effects of rice and shrimp farming on levels of pollution in the protected area. The results, published in the Cambodian Journal of Natural History (Annex 25) showed that shrimp farm effluent was generating un-naturally high levels of three key pollutant parameters (coliforms and biological and chemical oxygen demand), which led to local community and government action to pressure Vietnamese businesses to abandon high intensity shrimp farming and convert to more sustainable practices. The project has investigated alternative uses of these areas, but these were of little interest to the foreign-owned company who moved their operations. The area is back in the hands of local people who we are supporting to develop sustainable farming on the sites. The water quality assessments have also highlighted a bottle-neck area where rice agricultural inputs are settling in the northern section of the reserve. This has fed back into the land use plan of the area and has influenced the sustainable rice conversion programme around Anlung Pring.

The creation of Chres Community Wetland has provided an important source of clean non-saline water to local people, and helped to decrease anthropogenic pressure and disturbance on the Protected Landscape.

Digital elevation models at both sites have inputted to hydrological management (Annex 26). At BPL, the DEMs were reviewed by the Liaison Panel (who were given direct responsibility for water level management) to identify a suitable location for the fish pond sanctuary and 16 hectare water management trial. The latter trial was established to investigate methods to retain water in the site for a longer period once the flood water recedes. This has been necessary due to the increasingly rapid anthropogenic drainage from the site. Early results indicate that the soil at the trial site is highly porous, so blocking infrequently used canals surrounding the plot may also be necessary to prevent water leaching away. Lessons learnt from this trial will be integrated into future MoE Management Planning at the site. The BPL Liaison Panel have requested a continuation of trials before further decisions are made on management.

LCGs have been responsible for collecting data on water levels at both sites since the water level gauges were installed by the project. This data feeds into the respective water level management associations.

A disease risk assessment has also helped to identify areas of highest human/wildlife disease risk and suggest appropriate mitigation (Annex 23). Along with land use maps (see Output 1), ecosystem service appraisals (see Output 1), water quality assessments (see above), the Disease Risk Assessment fed into Land Use planning at BPL. This has influenced the locations and establishment of Romenth North community fishery, the Buffalo Bank Programme and sustainable rice conversion schemes. The creation of a formal land use plan at BPL has not been possible due to contentious land claims at the site. WWT is however now supporting the MoE with their Land Tenure Review Committee (see Output 1) and site zoning process which has the authority to conduct a full assessment and finally accept or reject all claims.

Output 5. - Wise-use guidelines for sustainable management of wetlands in Cambodia supported by government and in use at other wetland sites including Ramsar wetlands

Guidance for the Wise Use of Freshwater Wetlands in Cambodia (Annex 27) has been produced using a multi-stakeholder process alongside the MoE. A participatory planning workshop was held in Aug 2016 to agree the structure and contents of the guidelines. To ensure the guidance would be relevant to the widest range of wetland users and managers, representatives attended from all relevant government ministries (MoE, MAFF, Ministry of Water resources and Meteorology, Ministry of Land Management and Ministry of Tourism) and all key Cambodian wetland management implementing organisations (WCS, CI, ICF, WWF, FFI, Birdlife, Mekong River Commission, International Development Enterprises, NGO forum, WorldFish, FACT & IUCN) (Annex 28).

Once a working group was formally established and endorsed (Annex 29), a study tour to BPL was facilitated to meet community members and discuss practical elements and use of the guidance. This was also an opportunity to ensure local community views and requirements

were represented. The attendees visited the project's fish restoration ponds, ranger station, LCG groups, invasive species management areas, Buffalo Bank, water management trial plot and the Sarus Crane Rice Group cooperative equipment scheme (Annex 30). Again, stakeholders on this tour included site managers, development and environmental NGOs, all relevant government departments.

Draft guidance was completed at the end of 2016 and submitted to the working group and other interested parties for feedback. External feedback was received from the Ramsar Secretariat, International Water Management Institute, Ramsar Scientific and Technical Review Panel, IUCN Cambodia, BirdLife International, Birdlife Cambodia, and WWT Consulting.

A finalization and dissemination workshop was held in March 2017. The attendants of the workshop broke into sub-groups and discussed each section of the draft guidelines. All Ramsar site managers attended final workshop and so are aware of, and have contributed to, the guidelines. All have committed to using the guidance at their sites in the future. In the development of the wise use guidelines all key ministries and organisations representing the majority of wetland managers in Cambodia were in attendance (see above) and actively contributing to the output, so we are confident that nearly all wetland managers are aware of the guidance and at least 50% will already be adopting the recommended wise-use in their management. It was unnecessary to complete a questionnaire to confirm this at the end of a workshop specifically relating to it.

A final draft of the guidelines was published on WWT website (<http://www.wwt.org.uk/conservation/saving-wetlands-and-wildlife/influencing-action/guidance/>). The link was shared with all relevant stakeholders. The final version has not yet been published due to delays from the Ministry of Environment in producing an official Khmer translation of the document. Once this is complete the Minister will provide a Foreword and the document will be updated and shared with all stakeholders.

It was pleasing to note that other regional projects are now contacting WWT about using this guidance as the foundation for additional wetland stakeholder capacity building (KFW-funded Lower Mekong Basin Wetland Management and Conservation Project) and as a template for similar processes in other countries (Indo-Burma Ramsar Regional Initiative).

3.2 Outcome

Outcome - 6800 households in the most wetland-dependent communities have more secure access to wetland resources which are managed in ways that sustain livelihoods and enhance wetland biodiversity

Over the last three years, this project has supported community-based management mechanisms for local people to accrue benefits from the sustainable use of wetland resources. In total 1,736 households have joined sustainable natural resource management groups over the life of the project, engaging in more sustainable fishing, grazing, farming and/or tourism practices. This comfortably exceeds our indicator of 600 households, mainly through a higher than expected membership take up of the new Romenth North (formally Koh Andet Community Fishery).

Two Community Fisheries; Romenth North and Kampong Krasang, are established and legally registered (see Annex 2, Output 2.1-2.3), with open membership to all households around BPL. 71% of households surveyed believed that the mechanisms in place to address illegal external fishing pressure are sufficient to secure an effective closed-access fishery, and 60% of respondents reported that illegal fishing had already decreased over the past two years (Annex 8). Business Plans have been created to enhance shorter-term membership incentives, which will be vital to retain the strong membership at inception.

At Anlung Pring, the community-based ecotourism programme has exceeded the target income indicator of \$400, accruing a total of US\$2,182.13 in the first three months of 2017 alone (Annex 13). CBET is recognised by the district government and has permission to accrue

income from reserve entrance fees (Annex 12). Membership is open to all households around AP, and has supported 55 people through training and some form of employment. The CBET currently supports six full-time community members during the core off-season operation. Additional value added benefits cascade to other surrounding villages through value-added products.

Sixty members of Sarus Crane Rice Groups are selling agricultural products, under a bespoke name and logo (Annex 31), with increased average incomes of over 40% (from 1,980,000 Riel/ha before the project to 2,791,400 Riel/ha after conversion to sustainable practices – as measured at end of season harvest festivals (Annex 15).

The national population of sarus crane has decreased sharply during the period of this project. From sub-population censuses conducted in March/April each year, the number has decreased from 671 in 2014 to 379 in 2016 (data from 2017 is not yet available). The report from Darwin University suggests that the level of threat is increasing in the breeding areas, but the links to the El Nino climate cycle and natural annual variations are also poorly understood at present. WWT has been involved in a regional action planning process to work towards better understanding in this area. In Dec 2016, BPL and AP were home to over 70% of the total population. At BPL the population decreased from 203 (2014) to 152 (2016) and population at AP decreased from 314 (2014) – 172 (2016). At both sites, the population actually increased in 2015 (234 and 321 respectively), so the 2016 figure may be an anomaly, caused by extraordinary weather that year.

There was no significant change in the condition of *eleocharis dulcis* grassland - the main sarus crane habitat and priority indicator species - at either site (Annex 8). Land encroachment however remains a major threat at the site. A Land Tenure Review Committee has been established and supported by the Minister of Environment to address this ongoing challenge.

Although not specifically listed as an Outcome Indicator, at the end of this project the Ramsar-adapted Management Effectiveness Tracking Tool was used, and the results compared with the original METT conducted prior to the start of this project. The Ramsar-adapted tool is now being used due to specific relevance to wetlands, but there was significant overlap in areas of scoring to allow direct comparison to be made.

The adapted R-METT score for BPL Protected Landscape has increased from 58% (2013) to 68% (2017) demonstrating an increase in protected area management effectiveness for BPL. Areas where the score had increased included resource inventory, security of budget, education and awareness, engagement with state and commercial neighbours, and benefits to local communities.

The adapted R-METT score for AP Protected Landscape has increased from 69.69% (2013) to 78.79% (2017). Areas where the most significant improvement had been gained was in visitor facilities, commercial tourism operators, reserve staffing, equipment, protection systems and site objectives.

Guidance for the Wise Use of Freshwater Wetlands in Cambodia has been developed and published in draft form, awaiting official translation into Khmer from the Ministry of Environment (this process was delayed due to local elections). All Ramsar site managers attended final workshop and so have contributed to, and are now following, the guidelines. In the development of the wise use guidelines all key ministries (MoE, MAFF, MWMR, MLM, MoT) and key implementing organisations (WCS, CI, ICF, WWF, FFI, Birdlife, MRC, IDE, NGO forum, Worldfish, FACT & IUCN) (Annex 28) and existing Cambodian Ramsar site managers contributed and were engaged in the process.

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

Impact statement from logframe: Seasonally-inundated grasslands and other wetlands in Cambodia are sustainably co-managed by local people enhancing wetland biodiversity, supporting livelihoods and acting as a model for wetland management in the region.

Anlung Pring and Boeung Prek Lapouv Protected Landscapes represent some of the few remaining seasonally inundated grasslands in the Lower Mekong Delta. This Darwin project has supported an integrated approach to enhance livelihoods, sustainable natural resource management and the protection of globally important Key Biodiversity Area habitats. This approach has been shared with the Cambodian conservation community and government agencies to inform national level wise use guidance, which have been cascaded to site management organisations throughout the country.

Through the creation and legal endorsement of two community-based fishery associations and a multi-stakeholder Illegal Fishing Crackdown Committee, 1,488 household members have increased security and input into management of natural resources (see Annex 2, Outcome 3 and Outputs 2.1, 2.2 and 2.3).

Sustainable farming groups have been established at both sites with associated community-based savings mechanisms for increased poverty resilience (see Section 4.3). 193 people are benefiting from these schemes, with around 40% profit increases experienced by the 60 members of the Sarus Crane Rice Groups when Y3 data was compared to the baseline. A community-based ecotourism project linked to the conservation of Anlung Pring wetland and healthy populations of sarus crane, has exceeded income expectations, creating local employment for 6 full time and 49 other temporary staff (Annex 13) and contributing to reserve conservation management (Annex 2, Output 2.7).

Greater cooperation systems and access to resources (see Annex 2, Activities 4.1–4.7) have empowered local water users around Anlung Pring to understand the effects different land use practices and water management regimes on local people and the natural environment. These groups are now formally responsible for controlling water levels and work with government to encourage sustainable practices directly around the site. An additional community wetland at Chres village has increased clean freshwater security for approximately 500 local people.

Local Community Groups have regularly gathered data on biodiversity and human-use to support adaptive management and lay the foundations for the new MoE zonation process. These groups have also led the invasive species control programmes and advised on habitat restoration and water management trial plots, covering a total area of over 100 hectares.

In the final year of the project, national workshops and study tours to Boeung Prek Lapouv Protected Landscape were held to government and NGO conservation and development stakeholders to develop guidance for the wise use of freshwater wetlands in Cambodia. This is published, available online, and shared with wetland managers, who have also been engaged throughout the drafting and finalisation processes.

4 Contribution to Darwin Initiative Programme Objectives

4.1 Contribution to Global Goals for Sustainable Development (SDGs)

This project has obvious direct links to: SDG1, to end poverty in all its forms everywhere; SDG 2, to end hunger, achieve food security and improved nutrition and promote sustainable agriculture; SDG 3 to ensure healthy lives and promote well-being for all at all ages; SDG 6, to ensure access to water and sanitation for all and to SDG 15, to halt and reverse land degradation and halt biodiversity loss.

A total of 193 members have joined sustainable farming partnerships. After two rice seasons, members of the Sarus Crane Rice groups had stopped using chemical phosphate fertilizers completely and decreased pesticide and herbicide use over a total of 180 hectares of land, contributing to more sustainable agricultural practices and an improvement in water quality. The increase in profitability using the newly adopted systems of rice intensification (See Annex 2 Outcome 2) contributes to increasing food security amongst these groups. The Buffalo Bank project now has a total of 17 buffalo, and members of community-based savings groups have a total of 2,230,000 Riel in accounts. These initiatives increase financial security during

challenging seasons (e.g. between rice harvests) and unpredictable climatic events in the future (e.g. poor annual rains), building resilience against poverty.

The two community fisheries (with a total of 1,448 members) are formally recognised and supported to sustainably manage their natural resources into the future. The creation of Chres Community Wetland outside Anlung Pring has provided safe access to sweet (non-saline) water for around 500 people from all ages and sectors of society in and around Chres village.

The community-based ecotourism venture at Anlung Pring is creating employment for local people and generating revenue (see Annex 2, Output 2.7) which will be, in part, spent on community-wide benefit projects through a structure benefit-share scheme.

Although some land was lost to encroachment at BPL, this project has made significant contributions halt land degradation and biodiversity loss in two globally important Key Biodiversity Areas, supporting Local Community Group patrols, multi-stakeholder Liaison Panels (see Output 3), INNS clearance over a total of around 90 hectares and fish pool habitat restoration schemes.

4.2 Project support to the Conventions or Treaties (CBD, CMS, CITES, Nagoya Protocol, ITPGRFA)

The project has liaised with Ms. Chan Somaly, the Protected Area National Focal Point for the CBD, and has had comprehensive workings alongside Dr Srey Sunleang, the National Ramsar Focal Point for Cambodia, and Mr Bou Vorsak, the NGO Ramsar Focal Point, when developing Guidance for the Wise Use of Freshwater Wetlands in Cambodia. This is a recommended national guidance document under the Ramsar Convention on Wetlands, and brought together all relevant stakeholders involved in wetland management and use. This also helps to meet **CBD Aichi Target A4**, for governments, business and stakeholders at all levels to taken steps to achieve sustainable use of natural resources.

The project also supports Cambodia's meeting of its obligations under CBD in other ways, specifically towards the following **Aichi targets** (<https://www.cbd.int/sp/targets/>):

Strategic goal A/Target 1 (A1) – Members of the LCGs have been carrying out awareness events in local communities, the project has hosted Welcome the Bird events at both of our sites in the final two years of the project and an ecoschools programme at Anlung Pring. Through education programmes, awareness events, and community-based natural resource management programmes, 1268 people have received training and education to be more aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.

A3 – Positive incentives for the conservation and sustainable use of biodiversity have been developed through the two newly established Community Fisheries (Annex 2, Output 2.1, 2.2 and 2.3), and the Community-based Ecotourism Programme at Anlung Pring (Annex 2, Output 2.7), which created an incentive mechanism for local communities to conserve sarus crane.

B5 – There has been no encroachment by farmers involved in the project's Sarus Crane Rice Groups, with all farmers signing long-term agreements for zero encroachment, giving greater security to natural habitats around these farms. No encroachment was recorded at Anlung Pring throughout this project.

B6 – The designation of two community fisheries, creation of a fish nursery habitat and increased patrolling and illegal activity crackdowns through greater cross-sectorial cooperation (see Output 2 for details) have made significant contributions to create legally-recognised ecosystem based approaches for the sustainable management of natural fish populations.

B7 – 90 hectares of land within the BPL Protected Landscape is now converted to sustainable agriculture (see Output 2) and unsustainable shrimp farming practices have been abandoned around AP (see Output 2).

B9 – Community-based clearing of alien species (*Ipomea rubens*, *Nelumbo nucifera*, and *Mimosa pigra*) at BPL (see Output 3) have cleared over 88 ha of land and led to employment of over 500 days of employment for local people.

D14 – Chres community wetland has secured fresh water access for local people and the two protected landscapes support community-based associations include local women and are designed specifically to benefit rural poor local people.

4.3 Project support to poverty alleviation

As Outlined in Section 4.1, this Darwin project has built financial resilience in community groups through savings programmes, a Buffalo Bank and sustainable employment through a functional ecotourism programme. The Buffalo Bank Initiative is located at the poorest village in the region, as identified during our pre-project house-hold survey. The Chres community wetland provides safe, and importantly easy, access to drinking and irrigation water for 500 people, freeing up time for other livelihood and/or wellbeing activities. This is an important multi-dimensional element to poverty alleviation. Investigations into water retention at BPL are providing data for interventions that will contribute to providing greater water security during the dry season for thousands of local people living around that site.

The creation and support of two Community Fisheries has helped to secure sustainable management of local resources for 1,488 people, with incentive mechanisms being investigated to expand these benefits into the future. Fish nursery habitat restoration aims to increase recruitment into this fishery.

Sixty members of Sarus Crane Rice Groups are benefiting from increased profitability after conversion to sustainable systems (see Annex 2, Outcome 2), have access to income generation opportunities through cooperative equipment schemes, and membership is likely to grow after investigations into opportunities within the market value chain and through extension trainer programmes.

The CBET programme has created employment opportunities and shown promising income figures (see Annex 2, Outcome 4) with associated value-added products in other villages (e.g. rice wine distillery tours, Khmer noodle making courses, traditional fishing experiences etc) and an in-built benefit-share system in place to support community-wide projects in the future.

Fifteen Community Information Panels and awareness messages played in local villages have helped to build knowledge amongst local people on the health dangers of unsustainable practices and the links between healthy wetlands and healthy people.

4.4 Gender equality

All community-based associations supported by the project have complete open membership policies, ensuring that women have equal rights to benefit from these livelihood initiatives. Our internal Wetland Apprentice scheme had an equal gender ratio, and direct employment through our INNS programme was evenly split between men and women.

Many traditional community structures in Cambodia are male dominated so the promotion of women's membership within community associations has made a positive contribution to gender equality in the local area. The CBET established in Anlung Pring promoted female membership, and resulted in two female members on a six member Management Committee, a female-only food & service group (7 members) with a female manager. Five of the eight members of the homestay group are female, including the leader. Women play a crucial role in the decision-making and delivery of ecotourism at AP.

Attendance at sustainable rice training has equal gender representation. In Cambodia, the reality is that rice farming is traditionally implemented by the men, but with the creation of associated community-based saving groups, the project has been able to develop more a leading role for the females, creating opportunities for a greater input into financial management. A women-only community-based savings group has also been set up at AP. The Buffalo Bank programme supports seven households, with women from all households attending all meetings and responsible for much of the buffalo husbandry.

Gender ratios were monitored for the eco-schools programme with girls representing 36% of recipients. Twelve of the 22 teachers, including 1 Head teacher were female.

4.5 Programme indicators

- **Did the project lead to greater representation of local poor people in management structures of biodiversity?**

The community-based fisheries associations established in this project have membership of 1,488 local people, with a further 2153 aware of the potential benefits of joining such community associations. These groups have management rights for natural resources at BPL. The LCGs have continued to monitor and enforce regulations alongside the Provincial Department of Environment at AP and BPL.

- **Were any management plans for biodiversity developed?**

Management Plans were created for Kampong Krasang CFI, Romenth North CFI, with an associated business plan to increase membership incentive mechanisms

- **Were these formally accepted?**

Both CFI Management Plans have been endorsed, although areas overlapping with the Protected Landscape will need to be transferred to Community Sustainable Use Zones during the new MoE zoning process at BPL

- **Were they participatory in nature or were they 'top-down'? How well represented are the local poor including women, in any proposed management structures?**

Membership elections selected representatives to input into multi-stakeholder Management Planning processes supported by project partners.

- **Were there any positive gains in household (HH) income as a result of this project?**

Overall household income was not directly measured, but members of the Sarus Crane Rice Group recorded an average increase in income, and employment opportunities have been created for members of Community-based Ecotourism programme (CBET) and through the INNS clearance programme.

- **How many HHs saw an increase in their HH income?**

1736 households have joined community groups, but the number benefiting from actual income increases during the project was not measured. Six permanent and a further 49 temporary staff benefited from employment through the AP CBET, 60 members of the Sarus Crane Rice Group recorded an average increase in income and 500 employment days were created through the INNS programme.

- **How much did their HH income increase (e.g. x% above baseline, x% above national average)? How was this measured?**

Members of Sarus Crane Rice Group recorded an average increase in income of over 40% from the conversion to sustainable rice production as a result of this project. This was a direct comparison from income measures in Years 1 and 3.

4.6 Transfer of knowledge

One of the main Outputs of this project was to produce Guidance on the Wise Use of Freshwater Wetlands in Cambodia. Practitioners and policy makers were involved through the development process (see Annex 2, Output 5.5) and have access to the final draft of the guidance. A study tour was held so that stakeholders from across the country could visit BPL to facilitate a two-way knowledge exchange and develop a network of organisations involved in wetland management and use.

Project staff presented work from BPL and AP Protected Landscapes at; the International Conference on Sarus Crane held by the Sarus Protection Society (2016), Sarus Crane Regional Action Planning Conference (2016); and the Cambodian Conference on Community Fisheries (2016).

The Cambodian Journal of Natural History was chosen as the most appropriate destination for our paper on the impact of shrimp farming on water quality at Anlung Pring. It was assumed that this would maximise the local impact of the publication.

WWT and project partners have contributed to national World Wetland Day and World Environment Events to promote the sustainable management and use of freshwater wetlands in Cambodia, and held Welcome the Bird events at both project sites to bring together young people from across the country to celebrate migratory species.

Did the project result in any formal qualifications?

None.

4.7 Capacity building

As stated in Section 4.6, capacity was increased within Cambodian wetland stakeholders through the provision of guidance and the enhanced communication networks. Within project staff, Bou Vorsak (local staff member from Birdlife International, Cambodia Programme), along with Tomos Avent (WWT), were invited to join the Indo-Burma Ramsar Regional Initiative Technical Committee (IBRRI) and attend an inception workshop in March 2017. Hour Pok, WWT's local Wetland Technical Officer, presented work at the 2016 Sarus Crane Regional Action Planning Conference and the Cambodian Conference on Community Fisheries (also 2016). Hem Sela has now been promoted from a local community Wetland Apprentice to a fulltime WWT field staff member.

One male, and one female Wetland Apprentice were given ongoing training throughout this project in wetland conservation, community engagement, and computer literacy and operations administration. Both received a certificate of achievement from WWT at the end of the project.

5 Sustainability and Legacy

The sustainability of the project is largely down to the participatory approach taken throughout, and the involvement of local partners who had already built trust with the local communities. It is pleasing to see the increased awareness of Protected Landscapes, and potential community use of resources, amongst local people (see Output 1). Short-term interventions like the creation of Chres Community Wetland at the beginning of the project were useful in decreasing human impact on the wetland, but also showed local people that the project was designed to support people's needs. BPL is a site with facing many different challenges so it was important for us to think about how these can be addressed beyond this project period. The multi-stakeholder networks created through the Illegal Fishing Crackdown Committee and Land Tenure Review Committee have helped to develop communication channels that would not normally be possible between local community groups and government. These committees have also enabled transboundary cooperation with Vietnamese counterparts, as Cambodian district government representatives are now able to report on these topics at standard quarterly transboundary meetings.

The Business Plan and Value Chain Analyses for the CFIs and Sarus Crane Rice groups respectively were developed to integrate mechanisms for financial resilience for our community associations. These networks and support plans are especially important during this transitional period to a MoE Protected Landscape at BPL. The Community-based ecotourism group is the closest to now being completely operationally independent from project partners. The benefit share system is well-structured and being followed, and it is anticipated that one more season of sarus crane tourism will test the group suitably and identify any areas of weakness. WWT will ensure that any gaps are filled so that the group are even more resilient into the future.

WWT, CCK and Birdlife are committed to carry on with projects, and have retained project staff. Mlup Baitong have made a major contribution to community-based conservation at AP, but will be allocating their limited resources to other important projects in the country now that Community-based ecotourism is well established. There has been a transition of project activities from MB to WWT over the last six months of this project.

The equipment and resources provided to these community groups have been formally transferred to the associations through user agreements. CCK and WWT are on advisory boards for the BPL Farming Associations and CBET group respectively, and will continue to ensure that the investment in resources at both programmes continues to be used fairly and wisely as outlined in the user agreements.

Guidance for the Wise Use of Freshwater Wetlands in Cambodia has been created through consultation with multiple stakeholders and is well known throughout the country (see Output 5). The process was actually inadvertently well-timed to fit in with the major changes to wetland protected area management over the last year and helped the creation of a network and forum for constructive dialogue for future approaches to zonation and management.

6 Lessons learned

A key lesson learnt from this project is the value of having a diverse partnership and maintaining strong relationships with multiple government ministries/departments at local, provincial and national level. A lot of the progress made throughout this project was due to the networking done by project staff in country, tapping into the broad wealth of knowledge on the wide spectrum of elements in this complex integrated project. The ability of the project to adapt to the dynamic political environment was increased through the involvement of Birdlife International, Cambodia Programme, who assisted us in navigating the regular changes and uncertainty.

The main project partners were invaluable in facilitating on-site conservation and development interventions, but the project was also reliant on external consultants to deliver some of the technical livelihood elements. It may be useful to also partner with a larger development organisation in the future so that we have international expertise in this area. It would be vital to ensure that this partner has full buy-in to the long-term success of the interventions rather than the short-term interest that naturally comes with an external consultant.

The major variations in weather conditions caused by the El Nino cycle made annual comparisons were difficult for our monitoring and evaluation, which highlighted the importance of considering control sites. These would play an increased role in future projects.

This was an ambitious project from outset, and the delayed start to our work did put additional strain on our project teams. As mentioned in our first annual report, in the future we would aim to have staff members in place before the official start date of the project to avoid unnecessary delays with overseas recruitment. It may also have been beneficial to have utilised project partners during the recruitment process.

The complexity of interventions at Anlung Pring and Boeung Prek Lapouv was necessary given the challenges and opportunities, but in hindsight, a streamlining of activities would have been beneficial. Original ideas to secure land tenure rights to local people around Boeung Prek

Lapouv were politically sensitive and the impact of local elections on local government decision-making was underestimated. Of course, the change in Management Authority from MAFF to MoE could not have been predicted, but, given the political context, the ambition to secure land rights whilst also completing all other interventions was probably too great for a project of this size.

6.1 Monitoring and evaluation

Linked to section 6 above, the complexity and delayed start of this project did make effective monitoring and evaluation a challenge. Even at Outcome level, some of the originally stated indicators were overly focused on products rather than observed change and impact. Due to this, baselines were not always collected for important project initiatives, an example being the lack of an adequate baseline for monitoring changes in fish catch yields. This has been added into our M&E for the next phase of the project. The impact of the community fisheries programme has been generally hard to assess. As mentioned earlier in this report, much of the large-scale illegal activity is conducted at night by armed groups and therefore action (and realistically M&E) require members of the Fisheries Administration, Provincial Law Enforcement, and Department of Environment Rangers working together. These joint crackdowns were not regular enough to support reliable M&E data, which was a frustration to project staff as anecdotally the impact of this initiative was very high. The attitude and awareness survey helped somewhat to show that some positive change was at least perceived to have occurred.

This project would also have benefited from collecting data at control sites. During this period the region was affected by the El Nino cycle, making change attribution difficult over just three years. Fortunately our cooperation with, and contribution to, the regional saurs crane monitoring programme and action planning process has allowed us to compare our data to that of the whole regional sub-population.

The main positive of our M&E approach was the involvement of Local Community Groups in data collections on all facets of the project. This helped to spread awareness and link causality to changes amongst community members. The regular formal (monthly) and informal reporting also facilitated rapid adaptive management responses when necessary, which was especially important when cascading information on illegal encroachment to the relevant enforcement agencies.

6.2 Actions taken in response to annual report reviews

Feedback to our Y2 Annual Report stated that a formal Change Request was needed to update the Project Logframe based on the adaptations necessary to account for unforeseen external changes to protected area management at Anlung Pring and Boeung Prek Lapouv during the project.

This was submitted and accepted by the Darwin Initiative. The Change Request can be summarised as follows:

- A change of emphasis from land tenure rights (after Ministerial level changes to Management Authorities at sites) to increase support for community-based organisations and laying the foundations for fair and equitable zonation.
- A move away from fishery quota-based regulations to support actions recommended by a multi-stakeholder committee set up to tackle major external threats from itinerant fishers.
- Delays to the National Wetland Guidance process to allow all project activities to be completed in Y3.

7 Darwin identity

The project has included the Darwin Initiative logo and acknowledged Darwin Initiative financial contributions on all key reports, consultancies, sign boards, and publications (see Annexes 10, 11, 12, 13, 14, 15, 16, 18, 20, 25, 27 and 31 for examples) and on all presentations at multi-stakeholder meetings, training events and Liaison Panels. The Darwin Initiative's contribution to the development of the Anlung Pring Community-based Ecotourism venture is also acknowledged on the ['Learn More' page on the CBET website](http://mekongcrane.com) (see <http://mekongcrane.com>) and tourism interpretation material at the site.

The Darwin Initiative and UK government's contribution to the development of Wise Use Guidelines was acknowledged in promotion materials and presentations throughout the process, with formal thanks in writing in the final Guidance. We can be confident that all stakeholders involved in this process are aware of the UK Government's Darwin Initiative, especially with the Department of Freshwater Conservation within the Ministry of Environment.

Darwin's major contribution to our Cambodia programme has also been highlighted through education and awareness programmes, including the major 'Welcome the Birds' events at Anlung Pring and Boeung Prek Lapouv.

8 Finance and administration

8.1 Project expenditure

Project spend (indicative) since last annual report	2016/17 Grant (£)	2016/17 Total actual Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)			+9.60	
Consultancy costs			-4.46	
Overhead Costs			-12.73	The overhead costs for the year were slightly less than anticipated, due to lower rental costs
Travel and subsistence			+0.84	
Operating Costs			+1.26	
Capital items (see below)			-9.68	
Others (see below)			-4.25	
Audit			0	This is the amount of funding ring-fenced for our audit, which will take place before the deadline of Sept 2017
TOTAL	98,118.00	98,117.69		

Staff employed (Name and position)	Cost (£)
Tomos Avent - Project Leader	
Seng Kim Hout - National Project Manager	

Hem Sela - Wetland Apprentice 1	
Van Tevy - Wetland Apprentice 2	
Hour Pok - Technical Officer	
Holly Pal - Admin Officer	
TOTAL	28,073.00

Capital items – description	Capital items – cost (£)
Water gauges Solar power system for ranger station Engine for boat Stand for boat engine – CBET homestay Engine for boat, for AK CFI Boat for AK CFI	
TOTAL	3,567.59

Other items – description	Other items – cost (£)
Locally hired labour Farmer subsidies Micro-site development Publications Translation	
TOTAL	21,558.84

8.2 Additional funds or in-kind contributions secured

Source of funding for project lifetime	Total (£)
Critical Ecosystem Partnership Fund (CEPF)	
AG & NG Youngman Trust	
The Martann Trust	
Donations from WWT members/supporters	
TOTAL	189,138.26

Source of funding for additional work after project lifetime	Total (£)
Critical Ecosystem Partnership Fund (CEPF)	
Keidanren Nature Conservation Fund	
Ocean Park Conservation Fund Hong Kong	
TOTAL	63,253.20

8.3 Value for Money

This project has supported a large suite of community-based projects, bringing benefits to local people and biodiversity conservation. Much of the investment has been into start-up costs for sustainably designed initiatives with in-built benefit share systems. An example being the Sarus Crane Rice Group, which now has an associated cooperative equipment scheme (with maintenance and replacement budget) and has benefited from a full value-chain analysis to identify market-based membership incentive mechanisms. The project has drawn upon international expertise through local and international partnerships, and created – and benefited from – a network of wetland stakeholders through the development of wise-use guidance. Wherever possible, we have employed local people to complete project activities, examples being the creation of Chres Community Wetland, the 500 days employment created by the INNS programme, direct CBET start-up employment costs, Local Community Groups for monitoring biodiversity and human use, the employment of Wetland Apprentices and local project staff. Furthermore, receiving Darwin funding towards the project helped us to leverage much additional funding - in excess of £174,000. This meant the project benefited from cost-savings and efficiencies by enabling a more comprehensive programme of activities to take place in tandem with Darwin-funded work.

Annex 1 Project's original (or most recently approved) logframe, including indicators, means of verification and assumptions.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>Impact: Seasonally-inundated grasslands and other wetlands in Cambodia are sustainably co-managed by local people enhancing wetland biodiversity, supporting livelihoods and acting as a model for wetland management in the region.</p>			
<p>Outcome: 6800 households in the most wetland-dependent communities have more secure access to wetland resources which are managed in ways that sustain livelihoods and enhance wetland biodiversity</p>	<ol style="list-style-type: none"> 1. One new ecotourism and one new fishery community-based association established with formally recognised sustainable use rights for local people by yr 3 2. "Wildlife-friendly" agricultural products being produced and sold by SFPs by yr 3 3. 50% of local community members interviewed believe that illegal incursions from external parties have decreased and have confidence in work of the multi-stakeholder illegal fishing taskforce. 4. Sustainable tourism project at AP will be generating \$400 income by yr 3 and employment for 5 local people by year 2 5. Crane numbers will be stable or have increased at both sites by 5% by year 3 compared with Sarus Crane non-breeding census results for 2012 	<ol style="list-style-type: none"> 1. Legal documents 2. Sales receipts, video 3. Meeting minutes, community surveys, reports of illegal activity taskforce. 4. CBET bank statements, CBET financial reports 5. Annual crane census records, survey reports 	<p>That the political unrest which continues following elections that took place in July 2013 do not reduce the government's support for our work on the two reserves or in general its Protected Area/environmental policies</p> <p>That climatic events (or other extreme events e.g. civil unrest) do not impact on the viability of sustainable farming, fishing or tourism and cause target communities to become reluctant to enter into partnership with us</p>

	<p>6. Eco-hydrology of seasonally-inundated <i>eleocharis</i> grassland will be in more favourable condition in yr 3 based on trends of community of bio-indicator species identified in yr 1. Extent of these grasslands will not have reduced in yr 3 compared to yr 1.</p> <p>7. At least 600 more households (approximately 10% of all households for both reserves) adopting sustainable natural resource management practices by yr3 compared to project start</p> <p>8. Guidelines for wise-use management of wetlands in Cambodia supported and known by government at other wetlands including Ramsar sites by yr 3</p>	<p>6. Rapid condition assessment reports, bio-indicator survey reports</p> <p>7. Attitude/awareness/behaviour surveys undertaken by project partners at beginning and end of project.</p> <p>8. Wise-use guidelines document in existence and features foreword by government representative; national reporting forms to Ramsar Convention secretariat</p>	
<p>Outputs:</p> <p>1. People have enhanced understanding of rights and opportunities under the new MoE Protected Landscape system, are engaging in community-based schemes, and human land-use is comprehensively understood.</p>	<p>1. 3000 people are aware of available benefits of joining new land-use groups (CBET, CFis, SFPs). Baseline of zero.</p> <p>2. 750 people have become members of new community-based groups and believe that the protected area will benefit them in the future. Baseline of zero.</p> <p>3. Land-use maps to showing current and historic use are created and shared with MoE to be incorporated into new zonation.</p>	<p>1. Land-use maps, meeting with MoE staff responsible for new Protected Landscape management, membership records, social survey.</p> <p>2. Membership records from community groups (fisheries, ecotourism, and farming) and social surveys.</p>	

<p>2. Co-management structures legally/formally established for CFis, sustainable tourism and SFPs and stakeholders are able to deliver sustainable wetland management through them</p>	<p>1. CFis informally established and building membership whilst working towards formal government-endorsed designation in Y1.</p> <p>2. Cross-sectoral illegal fishing taskforce group established with members of CFis, Fisheries Administration, Vietnamese counterparts, Department of Environment, Forestry Administration and actively contributing to patrolling and enforcement in Y2 and Y3</p> <p>3. CFi formally endorsed by government and identifying methods to increase benefits for CFi members.</p> <p>4. 6 pilot SFP farms established by yr 1 (3 at each reserve)</p> <p>5. Guidance manual distributed to extension trainers by yr 2</p> <p>6. Annual sustainable farming workshop inaugurated yr2</p> <p>7. Income generated from CBET enterprise at AP increases from \$225 in 2012 to \$400 in yr 3</p> <p>8. CBET established at BPL</p>	<p>1. Membership lists and meeting minutes</p> <p>2. Reports of illegal crackdowns and patrols, meeting minutes, Membership lists for CFi</p> <p>3. Legal agreement for CFi designation, maps and CFi Business Plan.</p> <p>4. Contracts with landowners and farmers</p> <p>5. Guidance manual</p> <p>6. Workshop reports/minutes</p> <p>7. CBET group (AP) bank statements</p> <p>8. CBET group (BPL) inaugural meeting minutes</p>	<p>Wet season weather does not unduly affect project implementation</p> <p>Farmers and fishers are still willing to sign agreements to enter into</p>
<p>3. Reserve management plans (2013-2018) are implemented</p>	<p>1. Training programme (based on participatory needs assessment) produced and endorsed by all</p>	<p>1. Training programme, training needs workshop report</p>	<p>Continuing support of government especially through MAFF's Dept of Wildlife & Biodiversity</p>

	<p>stakeholders and submitted to liaison panel by yr 1</p> <p>2. Stakeholders from government and local community undertaking invasive species control and biological survey programme from yr 1</p> <p>3. Report of grazing trials undertaken on seasonally-inundated <i>eleocharis</i> grasslands submitted to liaison panel and MAFF in years 2 and 3</p> <p>4. Annual reports of biological survey programme submitted to liaison panel and MAFF for review from yr 1</p> <p>5. Reports on LCG law enforcement and awareness raising activities submitted to liaison panel quarterly for consideration from yr 1</p> <p>6. Reports produced detailing findings of ESA at both sites submitted to MAFF and MoE in yr 3</p>	<p>2. Video, activity reports submitted to liaison panel</p> <p>3. MAFF official in receipt of grazing trial reports, MAFF comments and review of findings Record of payments to local participants in conservation activities, video footage</p> <p>4. MAFF official in receipt of biological monitoring reports, MAFF comments and review of findings Minutes of meetings/workshops</p> <p>5. Liaison panel comments in official minutes</p> <p>6. MAFF/MoE report and comments</p>	
<p>4. Water level management plans for both reserves and floodplain land use plan for AP developed and agreed with stakeholders through participatory working methods.</p>	<p>1. Water level management regime agreed through participatory methods for both sites by yr 2</p> <p>2. Water level management infrastructure in place at both reserves by yr 2</p>	<p>1. Record of endorsement of water level management plans by liaison panel and provincial government</p> <p>2. Video, field check</p> <p>3. Records held by LCGs</p>	

	<p>3. Water levels managed according to plan by yr 3</p> <p>4. Floodplain land use plan agreed through participatory methods for both sites by yr 2</p> <p>5. Floodplain land use plan being implemented from yr 3</p>	<p>4. Record of endorsement by liaison panel and provincial government</p> <p>5. Records held by LCGs and CLDMC (Community livelihoods development management committee) at AP</p>	
<p>5.</p> <p>Wise-use guidelines for sustainable management of wetlands in Cambodia supported by government and in use at other wetland sites including Ramsar wetlands</p>	<p>1. National working group established by yr 1</p> <p>2. Participatory planning workshops agree draft guidelines by yr 2</p> <p>3. Working group agrees final guidelines by yr 3</p> <p>4. National conference held on wise-use wetland management</p> <p>5. Wetland managers across Cambodia aware of, and have access to, the guidelines. >50% of wetland manager respondents to questionnaire show awareness and understanding of guidelines. Ten stakeholders committed to using the guidance at their sites in 2017. Baseline zero.</p>	<p>1. Minutes of meetings</p> <p>2. Minutes of meetings, draft guidelines</p> <p>3. Minutes of meetings, final guidelines</p> <p>4. Conference proceedings</p> <p>5. Conference attendance records, questionnaire of awareness and understanding of guidelines amongst Site Managers</p>	
<p>Activities (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)</p> <p>1.1 Establish land registration committee (to include government and community representatives)</p> <p>1.2 Create map of current land use and users in the two communes of Kampong Krasang and Chey Chouk (with village and commune chiefs)</p> <p>1.3 Submit agreed map to Chief of Land Management (Takeo province) for approval</p> <p>1.4 Install information panels to disseminate the Protected Area rules and regulations.</p>			

- 1.5 Provide quarterly progress report to BPL liaison panel
- 1.6 Create map of landuse at BPL to feed into new MoE zoning system
- 2.1 Constitute liaison panels (to receive progress reports from partners, review progress make recommendations for action)
- 2.2 Hold liaison panel meetings (quarterly; plus one joint liaison panel meeting annually)
- 2.3 Hold community fora (quarterly)
- 2.4 Hold workshops on sustainable farming and SFP at both reserves
- 2.5 Identify locations for SFP demonstrations and sign agreements with SFP participants
- 2.6 Design and undertake trials of low-input and wildlife-friendly rice production, natural fertiliser production at 6 locations
- 2.7 Collect data, do analysis, produce report on findings of activity 2.6
- 2.8 Develop and agree marketing strategy for wildlife-friendly rice and other products
- 2.9 Market wildlife-friendly products
- 2.10 Complete legal designation process for Kampong Krasang CFI at BPL
- 2.11 Undertake legal designation process for Koh Andet CFI at BPL
- 2.12 Undertake wild fishery yield analysis for both CFIs (beginning and end of project); produce report (use to inform CFI management plans)
- 2.13 Develop, agree and produce CFI management plans (including agreeing annual quota and plan for fish habitat restoration) using a participatory planning process
- 2.14 Implement CFI management plans
- 2.15 Develop and agree marketing strategy and support implementation of eco-tourism at AP
- 2.16 Hold workshops on CBET project at BPL
- 2.17 Constitute CBET group for BPL
- 2.18 Agree development and marketing strategy for CBET at BPL
- 2.19 Produce quarterly progress report for both liaison panels on all activities
- 2.20 Produce annual review of progress on all activities
- 2.21 Establish network of information/training points
- 3.1 Undertake wetland health risk assessments at BPL in Y3; produce report
- 3.2 Develop and produce training manual
- 3.3 Develop training and conservation action programme (through training needs assessment and informed by site management plans)
- 3.4 Train extension training team (constituted from existing community groups at both sites)
- 3.5 Deliver training and conservation action programme (including invasive species control) to target audiences
- 3.6 Engage with Vietnamese government counterparts to address illegal activities
- 3.7 Assess impacts of Vietnamese shrimp farming activities and offer training in sustainable practices.
- 3.8 Design biological survey and monitoring programme (BSMP)
- 3.9 Implement BSMP
- 3.10 Produce BSMP report
- 3.11 Design habitat management trials
- 3.12 Implement habitat management trials
- 3.13 Produce report on habitat management trials
- 3.14 Support LCGs in delivering law enforcement activities
- 3.15 Undertake ESA at both sites; produce report
- 3.16 Produce quarterly progress report for liaison panels

- 3.17 Produce annual review of management plan implementation for liaison panels
- 4.1 Run launch workshops for both plans
- 4.2 Establish stakeholder groups and work programme
- 4.3 Draft plan consultations
- 4.4 Secure stakeholder endorsement of final plans
- 4.5 Publish and disseminate plans
- 4.6 Implement water level management plan
- 4.7 Implement land use plan
- 4.8 Produce quarterly progress reports for liaison panels
- 4.9 Produce annual review of progress and activities
- 5.1 Establish national working group to draft guidelines
- 5.2 Run workshop to draft guidelines
- 5.3 Run study tour to Cambodian Ramsar wetland for key stakeholders
- 5.4 Publish draft guidelines and consult with all stakeholders
- 5.5 Workshops to finalise guidelines co-chaired by MAFF and Ministry of Environment
- 5.6 Publish and disseminate guidelines
- 5.7 Run national conference for wetland managers and wetland policy makers
- 5.8 Publish conference proceedings
- 5.9 Produce quarterly progress reports for liaison panels

Annex 2 Report of progress and achievements against final project logframe for the life of the project

Project summary	Measurable Indicators	Progress and Achievements
<p>Impact:</p> <p>Seasonally-inundated grasslands and other wetlands in Cambodia are sustainably co-managed by local people enhancing wetland biodiversity, supporting livelihoods and acting as a model for wetland management in the region.</p>		<p>This project has established nine Sustainable Farming Partnerships, achieved endorsement for two Community Fisheries, and established the profitable operation of a Community-based Ecotourism Programme. These associations provide the foundations for sustainable management of natural resources by the 1,736 current household membership, and are starting to accrue livelihood benefits for local people. There is strong community belief in the potential benefits of the actions conducted by these institutions.</p> <p>Community-based biodiversity and human-use monitoring has collected comprehensive data to feed into adaptive management planning and tackling the many external threats facing these seasonally-inundated grasslands. Multi-stakeholder committees have been established and supported to bring together local people and government to ensure communities can benefit from the sustainable management of secure natural resources. Invasive species control programmes and habitat restoration plots have helped to reverse habitat loss at the sites.</p> <p>Wise Use Guidance has been produced alongside national government, local NGOs and wetland managers, and shared widely to cascade best-practice throughout the country.</p>
<p>Outcome</p> <p>6800 households in the most wetland-dependent communities have more secure access to wetland resources which are managed in ways that sustain livelihoods and enhance wetland biodiversity</p>	<p>1. One new ecotourism and one new fishery community-based association established with formally recognised sustainable use rights for local people by yr 3</p>	<p>1. Anlung Pring Sarus Crane Conservation & Development Community is recognised by District government and endorsed to operate a community-led ecotourism project. Two Community Fisheries; Romenth North and Kampong Krasang, have been established and endorsed by the District Governor, the Borey Chulsar and Koh Andet Fisheries Divisions, Takeo Province Fisheries Cantonment Chief and the Fisheries Administration Inspectorate.</p> <p>2. Sarus Crane rice seed marketed and sold to a local market (Annex 31). Profitability increasing from 1,980,000 Riel/ha to 2,791,400 Riel/ha (Annex</p>

	<p>2. "Wildlife-friendly" agricultural products being produced and sold by SFPs by yr 3</p> <p>3. 50% of local community members interviewed believe that illegal incursions from external parties have decreased and have confidence in work of the multi-stakeholder illegal fishing taskforce.</p> <p>4. Sustainable tourism project at AP will be generating \$400 income by yr 3 and employment for 5 local people by year 2</p> <p>5. Crane numbers will be stable or have increased at both sites by 5% by year 3 compared with Sarus Crane non-breeding census results for 2012</p> <p>6. Eco-hydrology of seasonally-inundated <i>eleocharis</i> grassland will be in more favourable condition in yr 3 based on trends of community of bio-indicator species identified in yr1. Extent of these grasslands will not have reduced in extent in yr3 compared to yr 1</p>	<p>15). Rice value chain analyses completed outlining additional opportunities for enhancing profitability (Annex 16).</p> <p>3. Attitude and awareness survey implemented at BPL at the end of the project showed that 60% of surveyed households believed that illegal fishing pressure coming from external fishers had decreased over the last 2 years. 71% of surveyed households believed that the establishment of the illegal fishing taskforce was an effective mechanism to decrease illegal fishing (Annex 8).</p> <p>4. Sustainable tourism at AP has provided regular employment to six community members and in the final year of the project the total income from site entrance fees and the restaurant in 2017 alone was US\$2,182.13, of which US\$674.81 fed back into Reserve Management (the remainder covering operational and staffing costs (Annex 13).</p> <p>5. In Dec 2016, BPL and AP were home to over 70% of the total population. At BPL the population decreased from 203 (2014) to 152 (2016) and population at AP decreased from 314 (2014) – 172 (2016). At both sites, the population actually increased in 2015 (234 and 321 respectively). The 2016 figure may be anomaly caused by el nino events, but there is a worrying trend throughout the sub-population.</p> <p>6. There was no significant change in the condition or extent of <i>eleocharis dulcis</i> grassland - the main sarus crane habitat and priority indicator species - at either site. The Invasive Non-Native Species (INNS) programme focused on <i>Mimosa pigra</i>, <i>Ipomoea rubens</i>, <i>Nelumbo nucifera</i> and <i>Eichhornia crassipes</i>. The priority indicator species was the dominant <i>Mimosa pigra</i>. Results from direct removal interventions showed that we were achieving 92.23% stem mortality and 7.77% stem re-growth after one year.</p> <p>Land encroachment did however continue throughout the project. Although our LCG's reported, and were able to address some of, these encroachments, many were politically sensitive. A Land Tenure Review Committee has been established and supported by the Minister of Environment to address this ongoing challenge.</p>
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	<p>7. At least 600 more households (approximately 10% of all households for both reserves) adopting sustainable natural resource management practices by yr3 compared to project start</p> <p>8. Guidelines for wise-use management of wetlands in Cambodia supported and known by government at other wetlands including Ramsar sites by yr 3</p>	<p>7. 1,736 households have joined sustainable natural resource management groups over the life of the project, and are engaging in more sustainable fishing, grazing, farming and tourism practices</p> <p>8. Wise use guidelines have been produced through a multi-stakeholder participatory process (final draft published on WWT website (http://www.wwt.org.uk/conservation/saving-wetlands-and-wildlife/influencing-action/guidance/)). Representatives from all key government ministries engaged in wetland management and use attended workshops, a study tour to BPL, and the draft review process. Other stakeholders included; all Cambodia Ramsar Site managers, development organisations and conservation NGOs (Annex 28).</p>
<p>Output 1. People have enhanced understanding of rights and opportunities under the new MoE Protected Landscape system, are engaging in community-based schemes, and human land-use is comprehensively understood</p>	<p>1. 3000 people are aware of available benefits of joining new land-use groups (CBET, CFis, SFPs). Baseline of zero.</p> <p>2. 750 people have become members of new community-based groups and believe that the protected area will benefit them in the future. Baseline of zero.</p>	<p>1. This indicator has exceeded, with an estimated total of 3641 households aware of the benefits of joining at least one of the new land use groups. An end of project attitude and awareness survey (Annex 8) targeted 253 households across all 28 villages surrounding BPL. This showed that 47% of households were aware of the benefit of joining new land use groups which, when extrapolated across the entire area, gives an estimated total of 2,378 households at BPL. At AP a similar survey surveyed 113 households across all 5 villages, showing 56% to be aware of benefits, extrapolating to an estimated 1,263 households around the Protected Landscape.</p> <p>2. A total of 1,736 households that have joined new community-based groups over the life of the project. In BPL group numbers are as follows Dei Luk Buffalo Bank – 8, Sarus Crane Rice Association – 60, Kampong Krasang CFi – 332, Romenth North CFi – 1,156). At AP 55 people have joined the Community-based Ecotourism Group and a further 125 people have joined Sustainable Farming Partnerships and Self-help Groups. The Protected Landscapes provide the foundation for these groups. Sustainable</p>

	3. Land-use maps showing current and historic use are created and shared with MoE to be incorporated into new zonation.	<p>management of BPL Protected Landscape is integral to the success of the two community fisheries.</p> <p>3. A land-use map at the beginning of the project and updated high resolution satellite map at end of project have been shared with the MoE and incorporated into the Land Encroachment committee review process. This in-turn will input into the new MoE zonation of the reserve.</p>
Activity 1.1 Establish land registration committee (to include government and community representatives)		In the final year of the project a Land Tenure Review Committee was established with the following membership: GDANCP-MoE (chair), Takeo deputy provincial governor (Vice chair), DFWC-MoE, CPA-MoE, Inspector department-MoE, Bird Life, WWT, DoE-Takeo, Koh Andet district governor, Borey Chulsar district governor, Takeo fishery administration, Takeo department of land management, Takeo agriculture department, Takeo Military police and Takeo police. One of the roles of this committee is to collate and formulate local land registration in BPL. The district governors on this committee have collated this information although it has not been validated by the end of the project.
1.2 Create map of current land use and users in the two communes of Kampong Krasang and Chey Chouk (with village and commune chiefs)		A map of current land use was produced in the first year of the project (Annex 7). An updated satellite image was produced in the final year of the project which highlighted the extent of agricultural production and remaining natural wetland (Annex 9).
1.3 Submit agreed map to Chief of Land Management (Takeo province) for approval		The two produced maps have been shared with the Land Tenure Review Committee which includes the Chief of the Department of Land Management of Takeo. These maps are now being used as a baseline for land use change at BPL and helping to guide this committee's work to resolve land issues and develop appropriate zoning of the protected landscape.
1.4 Install information panels to disseminate the Protected Area rules and regulations.		Fifteen information points were established in the villages surrounding BPL (see Annex 18 for example of material) outlining community fishery maps, rules and regulations, dangers of high pesticide use. Information panels were also erected at the edge of the inundated forest zone to highlight illegal activities.
1.5 Provide quarterly progress report to BPL liaison panel		BPL Liaison Panel was established in the first year of the project with annual meetings held. Annual reports were presented at these meetings.

	<p>In addition to the formal annual Liaison Panel meetings, multi-stakeholder topic meetings were held to discuss specific issues as and when required. Examples being the Illegal Fishing crackdown committee with members of the CFIs, relevant provincial and district government authorities/departments, commune and village chiefs and NGO project partners. The outputs of the meetings were reported back to the BPL Liaison Panel.</p>		
<p>1.6 Create map of landuse at BPL to feed into new MoE zoning system</p>	<p>An updated map was produced in the final year of the project which highlighted the extent of agricultural production and remaining natural wetland (Annex 9). This map was provided to the Land Tenure Review Committee who are responsible for setting the criteria required for land tenure claims with the new MoE zoning process.</p>		
<p>Output 2. Co-management structures legally/formally established for CFIs, sustainable tourism and SFPs and stakeholders are able to deliver sustainable wetland management through them</p>	<table border="1"> <tr> <td data-bbox="618 600 1093 1394"> <ol style="list-style-type: none"> 1. CFIs informally established and building membership whilst working towards formal government-endorsed designation in Y1. 2. Cross-sectoral illegal fishing taskforce group established with members of CFIs, Fisheries Administration, Vietnamese counterparts, Department of Environment, Forestry Administration and actively contributing to patrolling and enforcement in Y2 and Y3 3. CFI formally endorsed by government and identifying methods to increase benefits for CFI members. </td> <td data-bbox="1099 600 2130 1394"> <ol style="list-style-type: none"> 1. Kampong Krasang CFI was formally designated in the first year of the project and has a membership of 332 households. Romenth North Community Fishery (CFI) (formally called Koh Andet CFI) has been established and approved by government, with a membership of 1,156 households. 2. An Illegal Fishing Coordination Committee (IFCC) was established in the 2nd year of the project with membership from KK CFI, Koh Andet CFI, Department of Environment, Fisheries Administration, and local government officials (district & commune level) (Annex 22). The purpose of the committee was to review the data on illegal fishing and crackdown activities, agree a crackdown strategy, and ensure good coordination and collaboration between all stakeholders. The IFCC oversaw community fishery, FiA and MoE patrolling of the reserve for illegal activities. The implementation of six joint large scale crackdowns in the 2nd & 3rd year of the project. Coordination with Vietnamese counterparts was through quarterly transboundary meetings between respective district departments. 3. Both CFIs were formally endorsed within the project. A business plan was developed for both Community Fisheries to outline potential sustainable funding models and generate greater membership incentives (Annex 11). </td> </tr> </table>	<ol style="list-style-type: none"> 1. CFIs informally established and building membership whilst working towards formal government-endorsed designation in Y1. 2. Cross-sectoral illegal fishing taskforce group established with members of CFIs, Fisheries Administration, Vietnamese counterparts, Department of Environment, Forestry Administration and actively contributing to patrolling and enforcement in Y2 and Y3 3. CFI formally endorsed by government and identifying methods to increase benefits for CFI members. 	<ol style="list-style-type: none"> 1. Kampong Krasang CFI was formally designated in the first year of the project and has a membership of 332 households. Romenth North Community Fishery (CFI) (formally called Koh Andet CFI) has been established and approved by government, with a membership of 1,156 households. 2. An Illegal Fishing Coordination Committee (IFCC) was established in the 2nd year of the project with membership from KK CFI, Koh Andet CFI, Department of Environment, Fisheries Administration, and local government officials (district & commune level) (Annex 22). The purpose of the committee was to review the data on illegal fishing and crackdown activities, agree a crackdown strategy, and ensure good coordination and collaboration between all stakeholders. The IFCC oversaw community fishery, FiA and MoE patrolling of the reserve for illegal activities. The implementation of six joint large scale crackdowns in the 2nd & 3rd year of the project. Coordination with Vietnamese counterparts was through quarterly transboundary meetings between respective district departments. 3. Both CFIs were formally endorsed within the project. A business plan was developed for both Community Fisheries to outline potential sustainable funding models and generate greater membership incentives (Annex 11).
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	<p>4. 6 pilot SFP farms established by yr 1 (3 at each reserve)</p> <p>5. Guidance manual distributed to extension trainers by yr 2</p> <p>6. Annual sustainable farming workshop inaugurated yr2</p> <p>7. Income generated from CBET enterprise at AP increases from \$225 in 2012 to \$400 in yr 3</p> <p>8. CBET established at BPL</p>	<p>4. Nine Sustainable Farming Partnerships (SFPs) have been established during the project. Two Sarus Crane Rice Groups and a Buffalo Bank at BPL and three Farmer Field Schools and three Farmer Producer Groups at AP.</p> <p>5. Training and guidance material generated for core members and extension trainers for all SFPs, Eco schools, and the AP CBET.</p> <p>6. Annual rice festivals were held in the 2nd and 3rd year of the project and attended by all members of Sarus Crane Rice Groups. These festivals were also used to collect M&E data for the initiative.</p> <p>7. The CBET at AP in the final year of the project raised US\$2,182.13, of which US\$674.81 fed back into Reserve Management (the remainder covering operational and staffing costs) (Annex 13).</p> <p>8. CBET for BPL was established, comprising four groups (2 accommodation groups, 1 boat transport group and 1 guide group). Inception workshops held and feasibility assessment completed (Annex 14).</p>
<p>Activity 2.1 - Constitute liaison panels (to receive progress reports from partners, review progress make recommendations for action)</p>		<p>Liaison panels for both AP & BPL were established in the first year of the project (see Annex 21). The purpose of the Liaison Panel meetings were discussed and agreed in the first meeting with all members.</p>
<p>2.2 - Hold liaison panel meetings (quarterly; plus one joint liaison panel meeting annually)</p>		<p>Liaison Panel meetings were held in 2015 and 2016; at each site there were meetings at provincial (for high level political support) and district levels (for more detailed discussions about the project and relevant stakeholders). In 2017 the District and Provincial meetings were combined at each site so that the new Protected Landscape designation could be clearly communicated to stakeholders and a direct dialogue could be facilitated. Representatives included; national and provincial government departments, commune councils, village chiefs and natural resource management associations.</p> <p>Ad hoc Community Liaison meetings were also held to address specific issues that arose in the community and protected landscapes. An Illegal Fishing Committee was established and met in Aug 16, Sep 16, and Oct 16</p>

	once the CFIs were becoming established and required support from law enforcement agencies and government. Similarly Land Encroachment meetings were held in 2016 and 2017.
2.3 – Hold community fora quarterly	Thematically focused community fora meetings were held regularly throughout the life of the project at both BPL & AP.
2.4 - Hold workshops on sustainable farming and SFP at both reserves	Sustainable farming workshops and training have been run at both reserves throughout the project. Each Sarus Crane Rice Group received 10 training sessions on sustainable agricultural methods and inputs.
2.5 - Identify locations for SFP demonstrations and sign agreements with SFP participants	At AP, Mlup Baitong were supported the development of three sustainable rice Farmer Field Schools (FFS) and three Farmer Producer Groups; vegetables, domestic fowl, and Lepironia Group - engaging a total of 126 households. At BPL, two Sarus Crane Rice Groups were established, each comprising 30 people around three villages (Keo Kampleung, Banteay Thleay and Chroy Pon). A Buffalo Bank was created at BPL to provide alternative livelihoods for one of the poorest villages. Seven households signed agreements to manage project buffalo.
2.6 - Design and undertake trials of low-input and wildlife-friendly rice production, natural fertiliser production at 6 locations	Each of the 60 households within the Sarus Crane Rice groups and the Farmer Field Schools have been supported to implement sustainable rice production. High quality seed and organic compost supplemented regular training on techniques and processes. Each household has an average of 3 ha of land. A cooperative equipment scheme provided access to drum seeders, a rice oven and seed selectors for members, and also offers future sustainable financing mechanisms through open rental schemes.
2.7 - Collect data, do analysis, produce report on findings of activity 2.6	A harvest festival is held at the end of each year to celebrate the project and collect M&E data. Profitability of new techniques was on average 40.4% greater than traditional techniques, mainly due to the lower investment required in quantity of seed and volumes of fertilizer and pesticide using new methods. The Community-based Savings groups linked to the Sarus Crane Rice Group at BPL held 2,330,000 Riel by the end of the project (Annex 15).
2.8 - Develop and agree marketing strategy for wildlife-friendly rice and other products	Market research showed that Sarus Crane Rice (SCR) could not be marketed as 'Organic' due to open nature of BPL system. Marketing shifted towards providing quality seed for farmers in the region. In the final year

	of the project a rice value chain analysis study was completed (Annex 16), which looked at most suitable rice varieties (growth potential and local demand), access to mills and access to markets.
2.9 - Market wildlife-friendly products	Higher quality rice seed was marketed to regional farmers. SCR logo being used to market differentiate SCR high quality seed (Annex 31), which was sold at a higher price.
2.10 - Complete legal designation process for Kampong Krasang CFi at BPL	Kampong Krasang CFi received complete legal designation at the first year of the project.
2.11 - Undertake legal designation process for Koh Andet CFi at BPL	Romenth North Community Fishery (CFi) (formally called Koh Andet CFi) has been established and approved by government and a basic management plan is in place (currently only available in Khmer).
2.12 - Undertake wild fishery yield analysis for both CFis (beginning and end of project); produce report (use to inform CFi management plans)	A wild Fishery yield analyses was completed for BPL in the first year of the project but emphasis was instead shifted to facilitate illegal fishing crackdown committees to deal with the major external fishing pressure. It was decided that enforcing quotas would not be fair nor sustainable until the external pressure had been addressed. A further fish yield survey was implemented in 2016 to assess the potential of a fish habitat restoration area at Prek Lapouv Stream.
2.13 - Develop, agree and produce CFi management plans (including agreeing annual quota and plan for fish habitat restoration) using a participatory planning process	<p>Kampong Krasang Community Fishery (CFi) is fully established with a management plan in place and regular patrolling is ongoing.</p> <p>Romenth North Community Fishery (CFi) (formally called Koh Andet CFi) has been established and approved by government. A basic management plan is in place (currently only available in Khmer) but the management authority transfer to a MoE Protected Landscape means that the CFi will have to transition into a 'Sustainable Use Zone' during the formal MoE zonation process. The project is supporting this process to protect all existing CFi rights and will update and formalise both fishery management plans at the appropriate time.</p> <p>A Community Fishery Business Plan has been created by an independent consultant and highlights options for membership incentives and sustainable financing mechanisms.</p>

2.14 - Implement CFi management plans	CFi plans have been followed. An awareness campaign, using posters and recorded messages, and regular patrolling have been the centre pieces of this. One hectare of inundated forest and fish habitat restoration has been completed and an illegal fishing crackdown committee have coordinated cross-sectorial action to address pressing threats, including the tackling of large-scale itinerant fishing groups. Smaller-scale illegal activities have led to signed agreements between the offender and the ranger group which act as a first warning and commit the offender to changing behaviours.
2.15 - Develop and agree marketing strategy and support implementation of ecotourism at AP	<p>Community-based Ecotourism (CBET) is now fully stablished at AP and benefit sharing system established and implemented. WWT has completed many additional activities to ensure the successful completion of this element of the programme. A new CBET Centre and restaurant have been established, improvements have been made to the ranger station and viewing platform, eight homestays have been equipped and supported to become operational, and additional cultural products (traditional fishing, rice wine distillery, lepironia weaving, Khmer noodle making) have been created to attract tourists when the crane is not present on site.</p> <p>Tourism management board was established to supervise the tourism operation and ensure transparency and fairness. CBET have 55 members who have been trained and have received benefit over the first season of tourism operation.</p> <p>Marketing targeted to individual tourists and tour agents has proved successful, exceeding our targeted revenue from the site. In the last two months of the project a total of 172 people visited the Anlung Pring CBET project. US\$674.81 was raised for Reserve management.</p> <p>Marketing strategy implemented:</p> <ul style="list-style-type: none"> - Logo & brand developed

		<ul style="list-style-type: none"> - Website developed with linked facebook and instagram (www.mekongcrane.com), additional online marketing and filtering completed. - Marketing material produced for crane season and distributed: 2 A3 leaflets, A4 & A3 Tuk Tuk card, Business cards, A4 leaflet. Focus distribution in Kep & Kampot - Marketing material produced for off-season and distributed: 1 A3 poster & 1 A4 leaflet. Focus distribution Kep, Kampot, Sihanoukville & Phnom Penh - Marketing events at Kampot Sea festival in 2016
2.16 - Hold workshops on CBET project at BPL		Workshops were held in the final year of the project with local community members living around Boeung Prek Lapouv.
2.17 - Constitute CBET group for BPL		Four groups were established which make up the CBET for BPL. Two accommodation groups were formed, one boat transport group and one guide group.
2.18 - Agree development and marketing strategy for CBET at BPL		Tourism markets identified and agents and potential agent feedback received and reported on. In addition a sustainable tourism assessment was carried out which provides a road map for additional development of the site to increase the product desirability and income.
2.19 - Produce quarterly progress report for both liaison panels on all activities		Progress on co-management structures was reported back to the Liaison Panel for both BPL & AP throughout the life of the project.
2.20 - Produce annual review of progress on all activities		Progress on co-management structures was reported back to the Liaison Panel joint annual meetings at both AP and BPL and reviewed by the panel.
2.21 - Establish network of information/training points		Community Information points established at AP CBET centre and Chres Community Wetland. CFI Community Information Points were established in 15 villages surrounding BPL.
Output 3. Reserve management plans (2013-2018) are implemented	1. Training programme (based on participatory needs assessment) produced and endorsed by all stakeholders and submitted to liaison panel by yr 1	1. Training needs assessment completed and training given to key stakeholders, including LCGs, sustainable management groups, two local community Wetland Apprentices and village primary schools.

	<p>2. Stakeholders from government and local community undertaking invasive species control and biological survey programme from yr 1</p> <p>3. Report of grazing trials undertaken on seasonally-inundated <i>eleocharis</i> grasslands submitted to liaison panel and MAFF in years 2 and 3</p> <p>4. Annual reports of biological survey programme submitted to liaison panel and MAFF for review from yr 1</p> <p>5. Reports on LCG law enforcement and awareness raising activities submitted to liaison panel quarterly for consideration from yr 1.</p> <p>6. Reports produced detailing findings of ESA at both sites submitted to MAFF and MoE in yr 3</p>	<p>2. Invasive Non-Native Species (INNS) and biodiversity monitoring plan developed and followed during the project. LCGs collected data on bird diversity, habitat quality and human use of the wetlands during regular (approx. 15 time per month) patrols. LCGs also facilitated INNS clearance programme, focusing on <i>Mimosa pigra</i>, <i>Ipomoea rubens</i>, and <i>Nelumbo nucifera</i>. This created over 500 days of community employment. For the dominant <i>Mimosa pigra</i>, 31.92 ha (2015) and 23 ha (2016) were subjected to pre and post flood non-chemical control. Average rate of plant mortality was 84.84%, with 7.77% stem re-growth after one year.</p> <p>3. Grazing trials through the WWT (Darwin funded) and Birdlife Buffalo Bank Projects are ongoing but, due to delayed start, data will only be analysed in late 2017.</p> <p>4. Monthly reports were produced on biological survey programme throughout the project and collated for annual presentation to Liaison Panel meetings (see Annex 21 for example) along with results of the Darwin university PhD data on sarus crane population trends.</p> <p>5. LCGs produced monthly reports on law enforcement and awareness raising activities, with a full report produced at the end of project. Activities were reported to Liaison Panel at annual meeting and at specific illegal crackdown committees.</p> <p>6. Report produced on ESA in the final year of project (Annex 8) and shared with the Ministry of Environment. Results feeding into new MoE zoning process and site Vulnerability Assessments. Ecosystem services provided by the reserves have not changed significantly through the project.</p>
<p>Activity 3.1 - Undertake wetland health risk assessments at BPL in Y3; produce report</p>	<p>A wetland health risk assessment was implemented at BPL in the final year of the project, and a report was produced (Annex 23) and shared with the</p>	

	Ministry of Environment, to be incorporated into their future management planning of the site.
3.2 - Develop and produce training manual	Training resources were created for Environmental Education Programme, LCG reserve monitoring and delivery of INNS programme (Annex 17). An updated reserve management data collection protocol was developed in the final year of the project and training implemented to the new MoE rangers.
3.3-3.5 - Develop training and conservation action programme (through training needs assessment and informed by site management plans), train extension team, implement plan	The LCGs and Wetland Apprentices were given training in data collection protocols and impacts of unsustainable practices. Further Wetland Apprentice training was given in computer literacy, English Language and communication in order to provide closer and faster communication links between the Protected Landscapes and central management teams. All community-based associations have received relevant training and awareness, examples being the CBET at AP who were taught about links between healthy wetland practices and healthy biodiversity, and the sarus crane rice groups, who were taught about the harmful effects of high levels of chemical inputs on human health. An Ecoschools programme was run at primary schools in AP, covering topics such as waste management and the water cycle.
3.6 - Engage with Vietnamese government counterparts to address illegal activities	WWT did not hold direct meetings with Vietnamese government stakeholders after advice to route communications through the Cambodian government during the Illegal Fishing Coordination Committee meetings. District government officials meet their Vietnamese counterparts on a quarterly basis, where they are charged with representing the interests of local people through trans-boundary cooperation.
3.7 - Assess impacts of Vietnamese shrimp farming activities and offer training in sustainable practices	Vietnamese-owned commercial shrimp farms around AP increased in scale and intensity at the start of the project. The LCGs reported that polluted water was being released into the reserve by the creation of holes in the dyke surrounding the reserve and, in a few cases installing small sluice gates to control water levels. This led to an investigation into water quality. Data collected on water quality at Anlung Pring (which was published in the Cambodian Journal of Natural History) guided local government action to pressure Vietnamese businesses to abandon high intensity shrimp farming due to the detrimental impact that the effluent

	was having on water quality inside the protected area. The project has investigated alternative uses of these areas, but these were of little interest to the foreign-owned company who moved their operations. The area is back in the hands of local people who we are supporting to develop sustainable farming on the sites.
3.8 – 10 - Design biological survey and monitoring programme (BSMP), implement and produce report	The BSMP comprises; LCG monitoring programme of key species, Sarus Crane ecology and responses to conservation action, water quality monitoring programme, and an invasive species survey. All elements of this work were continued throughout the project life, and are continuing post the completion of this project.
3.11 – 13 - Design habitat management trials, implement and produce report	Three habitat management trials were created; 1 hectare fish-pool habitat restoration, 16 hectare water management plot, and the community-based INNS clearance programme. The INNS programme covers a total of 54.94 ha of <i>Mimosa pigra</i> clearance, 11.95 ha of <i>Ipomoea rubens</i> clearance and 22.25 ha of <i>Nelumbo nucifera</i> clearance. Reports produced on efficacy of interventions.
3.14 - Support LCGs in delivering law enforcement activities	Support ongoing throughout the project, with LCGs provided with equipment, training and operating costs for patrol and enforcement. There have been an average of 15 patrols per month at both sites. The LCG teams have now transitioned into Ranger teams under the MoE Protected Landscape system. Monthly reports compiled by National Project Manager.
3.15 - Undertake ESA at both sites; produce report	An updated ESA was carried out at both AP & BPL in the final year of the project and a report was produced (Annex 8).
3.16 - Produce quarterly progress report for liaison panels	Progress on reserve management was reported back to the Liaison Panel for both BPL & AP (see Annex 21) throughout the life of the project.
3.17 - Produce annual review of management plan implementation for liaison panels	Progress on reserve management and activities was reported back to the Liaison Panel joint annual meetings (see Annex 21) at both AP and BPL. End of project Management Effectiveness Tracking Tools were used to quantify progress made over the last three years (results reported in Output 3 of main report).

<p>Output 4. Water level management plans for both reserves and floodplain land use plan for AP developed and agreed with stakeholders through participatory working methods.</p>	<p>1. Water level management regime agreed through participatory methods for both sites by yr 2</p> <p>2. Water level management infrastructure in place at both reserves by yr 2</p> <p>3. Water levels managed according to plan by yr 3</p> <p>4. Floodplain land use plan agreed through participatory methods for both sites by yr 2</p> <p>5. Floodplain land use plan being implemented from yr 3</p>	<p>1. Water use assessed and Digital Elevation Models were completed for AP & BPL (see Annex 26). A Water Level Management Group (WLMG – formerly Water User Group (WUG)) established for Anlung Pring and water level management coordinated through Liaison Panel at BPL. The WLMG at AP have developed a management plan and monitoring protocol. The BPL Liaison Panel requested water management trials (with the aim of retaining water within the reserve for longer periods) to be conducted before further decisions are made on management.</p> <p>2. Sluice gates were repaired at AP. A 16 hectare water management trial plot and a CFi fish pond sanctuary were established at BPL.</p> <p>3. Water levels are monitored by the LCG at both sites. At AP the WLMG have are directly responsible for controlling the sluice gates and water levels (by-law created in Oct 2016) and is advised by WWT and Birdlife. At BPL water levels have been managed in the 16 ha water management trial and data collected to feed into Liaison Panels.</p> <p>4 & 5: Land use maps were created at the start of the project and floodplain land use plans have directed the areas in which interventions have focused on farm conversion to sustainable practices and prioritised data collection on impacts to water quality.</p> <p>At AP water analysis has been completed of the hydrologically isolated northern and southern sections (assessments throughout the year in; Jan 2016, Mar 2016, May 2016, Nov 2016, Mar 17), across the reserve, (Annex 25) which has guided the local community and local government action to pressure Vietnamese businesses to abandon high intensity shrimp farming due to the detrimental impact that the effluent was having on water quality inside the protected area. The WLMG has also consulted with communities who live upstream of the reserve and are investigating the potential impact of karst limestone extraction to the source of the river.</p>
<p>4.1-4.5 Create Water Level Management Plans</p>		<p>A Water Level Management Group (WLMG) was established at Anlung Pring. Together with project partners, the WLMG has developed a water management plan and monitoring protocol. The project has supported this group and management plan by providing digital elevation models of the</p>

		<p>site, water analysis of the hydrologically isolated northern and southern sections (Annexes 24, 25, and 26).</p> <p>At BPL digital elevation models have fed into a Hydrology Management Protocol, with clear priorities identified for water level management at BPL which is the need to retain water within the reserve for longer periods. All stakeholders have agreed to this priority.</p>
4.6-4.7 Implement Water Level and Land Use Plans		<p>At AP, repairs of the main sluice gate at the site were completed by the Ministry of Water Resources and Meteorology, water level gauges were installed, and data collection conducted by the community. The Water Level Management Group is now directly responsible for controlling water levels.</p> <p>At BPL Water level gauges have been installed and a 16 hectare water management trial established. This has been necessary due to the increasingly rapid anthropogenic drainage from the site. Early results indicate that the soil at the trial site is highly porous, so blocking infrequently used canals may be necessary to prevent water leaching away. Lessons learnt from this trial will be integrated into future MoE Management Planning at the site. Additional large water retention features were created at CFI fish pond sanctuary.</p>
4.8 - Produce quarterly progress report for liaison panels		Progress on water management was reported back to the Liaison Panel for both BPL & AP throughout the life of the project.
4.9 - Produce annual review of progress and activities		Progress on water management and activities was reported back to the Liaison Panel joint annual meetings at both AP and BPL.
<p>Output 5.</p> <p>Wise-use guidelines for sustainable management of wetlands in Cambodia supported by government and in use at other wetland sites including Ramsar wetlands</p>	<ol style="list-style-type: none"> 1. National working group established by yr 1 2. Participatory planning workshops agree draft guidelines by yr 2 	<ol style="list-style-type: none"> 1. A national working group was established in the third year of the project as shown by the attached ToR (Annex 29) 2. A participatory planning workshop was held in Aug 2016, which agreed the structure and contents of the guidelines (Annex 28). A further study tour to BPL gave participants an opportunity to discuss relevant examples and ensure the needs of local people were included.

	<p>3. Working group agrees final guidelines by yr 3</p> <p>4. National conference held on wise-use wetland management</p> <p>5. Wetland managers across Cambodia aware of, and have access to, the guidelines. >50% of wetland manager respondents to questionnaire show awareness and understanding of guidelines. Ten stakeholders committed to using the guidance at their sites in 2017. Baseline zero.</p>	<p>3. Draft guidelines were shared with 52 experts (Annex 28) for review and finalisation sign-off of the guidelines.</p> <p>4. A national workshop was held in March 2017, in which the Wise Use Guidance was shared, and group session held on each section.</p> <p>5. All Ramsar site managers attended final workshop and so are aware of, and have contributed to, the guidelines. All have committed to using the guidance at their sites in the future. In the development of the wise use guidelines all key ministries (MoE, MAFF, MWMR, MLM, MoT) and key implementing organisations (WCS, CI, ICF, WWF, FFI, Birdlife, MRC, IDE, NGO forum, Worldfish, FACT & IUCN) (Annex 28) contributed and were engaged in the process. These organisations represent the majority of wetland managers in Cambodia so it was deemed that a questionnaire was not necessary for us to be confident that this indicator has been exceeded.</p>
Activity 5.1 - Establish national working group to draft guidelines	A national working group was established in the final year of the project to develop the draft guidelines. This group included representatives from key government ministries, international & local NGOs and key experts. A ToR was created and agreed upon for the working group (Annex 29).	
5.2 Run workshop to draft guidelines	A workshop was held in August 2016 with over 50 attendants (Annex 28). The first half of the workshop provided the attendants with conceptual information on the Wise Use Guidelines, while the second half included group discussion sessions on what should go into the Wise Use Guidelines to make it a useful tool for wetland key decision makers in Cambodia.	
5.3 Run study tour to Cambodian Ramsar wetland for key stakeholders	A study tour to Boueng Prek Lapouv Protected Landscape was organised in August 2016, with the same attendants as the drafting workshop (Activity 5.2). The study trip was planned to visit different examples of wise use of wetlands in action in BPL, to stimulate discussion and thoughts in relation to the development of the guidelines. The attendees visited fish restoration area, ranger station, invasive species management area, buffalo bank, water management experiment and Sarus crane rice machinery centre (Annex 30).	
5.4 Publish draft guidelines and consult with all stakeholders	Draft guidelines were developed based upon the input received from activity 5.1 to 5.3. This initial draft of the guidelines was published (Annex	

	27) in January 2017 and the draft was shared with 54 experts for their review and comments.
5.5 Workshops to finalise guidelines co-chaired by MAFF and Ministry of Environment	A workshop was held in the final month of the project to finalise the guidelines. The workshop was chaired by MoE with strong attendance and engagement from MAFF.
5.6 Publish and disseminate guidelines	A final draft of the guidelines was created from the input received from the finalisation workshop. This draft was published on WWT website (http://www.wwt.org.uk/conservation/saving-wetlands-and-wildlife/influencing-action/guidance/). The link was disseminated to all attendants in the development process of the guidelines. The final version has not yet been published due to delays from the Ministry of Environment in developing an official Khmer translation of the document. Once this is complete the minister will provide a Foreword and the document will be re-published.
5.7 Run national conference for wetland managers and wetland policy makers	The finalisation workshop was extended to all stakeholder, and not just the original working group. The attendants of the workshop broke into groups and discussed each section of the draft guidelines. No larger conference was deemed necessary, although some stakeholders suggested that this would be a useful initiative once the MoE zonation process was completed at all wetland sites.
5.8 Publish conference proceedings	As the conference was not held, the proceedings have not been published.
5.9 Produce quarterly progress reports for liaison panels	Progress on the development of the Wise Use Guidelines was reported back to the Liaison Panel for both BPL & AP.
5.8 Publish conference proceedings	As the conference was not held, the proceedings have not been published.
5.9 Produce quarterly progress reports for liaison panels	Progress on the development of the Wise Use Guidelines was reported back to the Liaison Panel for both BPL & AP.

Annex 3 Standard Measures

Code	Description	Total	Nationality	Gender	Title or Focus	Language	Comments
Training Measures							
1a	Number of people to submit PhD thesis	0					
1b	Number of PhD qualifications obtained	0					
2	Number of Masters qualifications obtained	0					
3	Number of other qualifications obtained						
4a	Number of undergraduate students receiving training	7	Cambodian	5 m 5 f	Research final year projects: 1 group on ecotourism, 1 group on invasive species management	English & Khmer	
4b	Number of training weeks provided to undergraduate students	16			Linked with 4a		
4c	Number of postgraduate students receiving training (not 1-3 above)	1	Cambodian	1 m	Research project into land rights issue at BPL	English & Khmer	Project finished after completion of Darwin project
4d	Number of training weeks for postgraduate students	2			Linked with 4c		
5	Number of people receiving other forms of long-term (>1yr) training not leading	2	Cambodian	1 m 1 F	WWT wetland apprentices	English & Khmer	Wetland Apprentices both graduated.

	to formal qualification (e.g., not categories 1-4 above)				working f/t with BEA. Training in wetland management and community engagement, English language		
6a	Number of people receiving other forms of short-term education/training (e.g., not categories 1-5 above)	500	Cambodian	Male and Female	SFP participants - Low-input rice growing; safe pesticide use, making natural compost and pesticides, using green manure, Community-based Ecotourism	Khmer	
6b	Number of training weeks not leading to formal qualification	15					
7	Number of types of training materials produced for use by host country(s) (describe training materials)	10			Training materials: ppt, handouts in	Khmer	
Research Measures		Total	Nationality	Gender	Title	Language	Comments/ Weblink if available

9	Number of species/habitat management plans (or action plans) produced for Governments, public authorities or other implementing agencies in the host country (ies)	0					
10	Number of formal documents produced to assist work related to species identification, classification and recording.	0					
11a	Number of papers published or accepted for publication in peer reviewed journals	1			The impact of shrimp farming on water quality in Anlung Pring protected landscape in Cambodia	English (abstract also in Khmer)	Cambodian Journal of Natural History
11b	Number of papers published or accepted for publication elsewhere	1			Guidance for the wise use of freshwater wetlands in Cambodia	English	http://www.wwt.org.uk/conservation/saving-wetlands-and-wildlife/influencing-action/guidance/
12a	Number of computer-based databases established (containing species/generic information) and handed over to host country						
12b	Number of computer-based databases enhanced (containing species/genetic information) and handed over to host country						

13a	Number of species reference collections established and handed over to host country(s)						
13b	Number of species reference collections enhanced and handed over to host country(s)						

Dissemination Measures		Total	Nationality	Gender	Theme	Language	Comments
14a	Number of conferences/seminars/workshops organised to present/disseminate findings from Darwin project work	7			Community Fisheries, Guidance for Wise Use of Freshwater Wetlands, Sustainable Farming, Land Tenure Community-based Ecotourism.	Khmer and English	
14b	Number of conferences/seminars/ workshops attended at which findings from Darwin project work will be presented/ disseminated.	4			CEPF Regional Workshop, Cambodia 2016. Indo-Burma Ramsar Regional Initiative, Bangkok, 2017. Sarus Crane Regional Action Planning	English	

Dissemination Measures		Total	Nationality	Gender	Theme	Language	Comments
					Conference, Phnom Penh 2016. Cambodian Conference on Community Fisheries, Phnom Penh, 2016. International Conference on Sarus Crane held by the Sarus Protection Society (2016)		

Physical Measures		Total	Comments
20	Estimated value (£s) of physical assets handed over to host country(s)		Physical assets handed over to CBET, Community Fisheries, Sarus Crane Rice Group and DoE ranger team
21	Number of permanent educational, training, research facilities or organisation established	1	Anlung Pring Community Led Ecotourism Centre
22	Number of permanent field plots established		

Financial Measures		Total	Nationality	Gender	Theme	Language	Comments
23	Value of additional resources raised from other sources (e.g., in addition to Darwin funding) for project work						Funds secured from the Critical Ecosystem Partnership

							Fund (CEPF), AG & NG Youngman Trust, The Martann Trust, and donations from WWT members /supporters.
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Annex 4 Aichi Targets

	Aichi Target	Tick if applicable to your project
1	People are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.	✓
2	Biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.	
3	Incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.	✓
4	Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.	✓
5	The rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.	✓
6	All fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.	✓
7	Areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.	✓
8	Pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.	
9	Invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.	✓
10	The multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.	
11	At least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.	
12	The extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.	
13	The genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and	

	implemented for minimizing genetic erosion and safeguarding their genetic diversity.	
14	Ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.	✓
15	Ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.	
16	The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.	
17	Each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.	
18	The traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.	
19	Knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.	
20	The mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.	

Annex 5 Publications

Type * (e.g. journals, manual, CDs)	Detail (title, author, year)	Nationality of lead author	Nationality of institution of lead author	Gender of lead author	Publishers (name, city)	Available from (e.g. web link, contact address etc)
Journal publication	Yav N., Seng, K., Nhim, S., Chea, V., Bou, V., & Avent, T. (2017). The impact of shrimp farming on water quality in Anlung Pring, a protected landscape in Cambodia	Cambodian	Cambodian	Male	Cambodian Journal of Natural History	http://www.fauna-flora.org/publications/cambodian-journal-of-natural-history/ or tomos.avent@wwt.org.uk
Guidance Manual	Blackham, G.V. (2017). Wise Use Guidance for Freshwater Wetlands in Cambodia.	UK	UK	Female	WWT, UK	http://www.wwt.org.uk/conservation/saving-wetlands-and-wildlife/influencing-action/guidance/

Annex 6 Darwin Contacts

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