

## Biodiversity Challenge Funds Projects Darwin Initiative, Illegal Wildlife Trade Challenge Fund, and Darwin Plus Half Year Report

*Note: If there is any confidential information within the report that you do not wish to be shared on our website, please ensure you clearly highlight this.*

**Submission Deadline: 31<sup>st</sup> October 2023**

<b>Project reference</b>	DARNV015
<b>Project title</b>	Risk reduction of highly pathogenic avian influenza in Cambodia's wetlands
<b>Country(ies)/territory(ies)</b>	Cambodia
<b>Lead partner</b>	Ministry of Environment, Royal Government of Cambodia
<b>Partner(s)</b>	
<b>Project leader</b>	<i>Emily Denstedt</i>
<b>Report date and number (e.g. HYR1)</b>	<i>HYR1, October 31, 2023</i>
<b>Project website/blog/social media</b>	

**Outline progress over the last 6 months (April – Sept) against the agreed project implementation timetable (if your project has started less than 6 months ago, please report on the period since start up to end September).**

WCS and the Ministry of Environment began implementation of this project in April 2023 on the heels of the most recent mass mortality event in wild birds in Boeung Sne wetland, Cambodia. Within the first six months of implementation, the project focused on detailed work planning, recruiting, survey design, field assessments, and initial data gathering and mapping.

### **Output and activity progress**

**Output 1: At interfaces between poultry farming and waterbird habitat, longitudinal risk factors which may contribute to HPAI outbreaks and spillover are quantified and key sites for action are selected in and around one critical protected area.**

**Activity 1.1: Identification of key breeding and foraging areas for migratory and resident threatened waterbirds and their temporal use**

Ongoing - We began by gathering existing and new data on bird species present in each of the two original wetland sites (Boeung Sne and Boeung Prek Lapouv). Additional data will be collected over the continuation of this project.

**Activity 1.2: Gather and analyse existing and new ecological, temperature, weather, water parameter, and HPAI outbreak data around Boeung Sne**

Ongoing - Existing data from the last four years on rainfall, temperature, and water elevation at Boeung Sne have been collected from the Ministry of Environment (MoE), Department of Water Resource Management (DoWRM), and Google Earth. Analyses of these existing data sets are underway to identify trends and environmental factors potentially associated with HPAI outbreaks at this site. The results of these analyses will determine the types of data we will collect beginning in January 2024. See Annex 6 for meeting minutes with DoWRM and Annex 5 for a map of the most recent wild bird mass mortality event in Boeung Sne in 2023. [REDACTED]

**Activity 1.3:** *Spatial and temporal mapping of poultry farming and methods through participatory consultation, particularly use of waterbodies by domestic ducks*

Completed - All poultry farm locations have been mapped across the waterbody (Annex 4), with preliminary data gathered on farming methods (Annex 3).

**Activity 1.4:** *Analysis of combined data from 1.1 – 1.3 above used to inform selection of key sites for action.*

Completed - Eight duck flocks or farms and one abattoir located in close proximity to the wild bird nesting colonies have been selected for upcoming action/activities based on the above data (Annex 3 & 4). These farms were selected based on multiple criteria such as location relative to the HPAI outbreak site, permanence of their farming operations, risk behaviours, and previous mortalities noted in their domestic ducks.

**Output 2: A profile of poultry farmers and economic comparison of farming practices is completed, coupled with an identification of entry points for awareness raising, dialogue, and management interventions.**

Activities 2.1, 2.2, & 2.3 largely planned for Q3 and beyond.

**Activity 2.1** *Assessment of ownership patterns (including gender roles), buyers/offtakes, buying terms and identification of where demand originates and* **Activity 2.2** *Cost-benefit-loss assessment of status quo farming methods is conducted, with projections of financial losses due to disease outbreak events*

Started - Recruitment for the most suitable consultant took longer than expected, but this person has now been identified and contracts are in process to hire them. Economic assessments may be delayed by one month.

**Activity 2.3** - *Participatory assessment of current/future poultry-raising practices, including risk factors which may be associated with spillover/spillback, motivations behind these practices, and health issues in fowl to date*

Started - Preliminary data on current poultry practices, risk factors for spillover / spillback, and health issues noted in fowl to date were collected during Activity 1.3. Further data will be gathered during economic assessments and poultry farmer profiles.

**Output 3: Early detection, reporting, & response mechanisms to domestic and wild bird morbidity and mortality events due to HPAI are formalized and scalable so mitigation measures reducing risk of disease spillover and spread can be activated with haste and prompt coordination is ensured.**

Activities 3.1 & 3.2 planned for later in the project.

**Activity 3.3** - *Perform active surveillance for AIV in domestic and wild birds during select times of year*

Ongoing - One specimen (carcass of dead wild bird) was collected in October 2023 from Boeung Sne and submitted to the lab for avian influenza testing. Verbal results from the laboratory indicate this specimen tested negative for avian influenza.

**Activity 3.4** - *Finalize and implement Cambodia's Wildlife Health Surveillance SOP at key sites to ensure outbreaks are investigated quickly by appropriate stakeholders and response measures are taken.*

Ongoing - Two workshops with One Health partners are complete (Annex 7 & 8). One outstanding signature is required to formally approve this policy instrument. It is anticipated this signature will be obtained by December 2023. An interim introduction to the SOP in two wetlands may need to be conducted in the meantime ahead of the official adoption of this policy instrument.

**Output 4: Practical, low-cost, and culturally acceptable measures that improve farm biosecurity, fowl husbandry, and livelihood security, are designed and implemented.**

Activities 4.1, 4.2, 4.3, 4.4 planned for later in the project.

**ANNEXES**

1. Responses to feedback from Darwin Committee
2. Completed Darwin Risk Register
3. Duck Flock Assessment Report at Boeung Sne
4. Boeung Sne map of duck farms assessed and selected
5. Boeung Sne map of wild bird morbidity and mortality event (2023)
6. Meeting minutes from Department of Water Resource Management
7. Meeting minutes from Wildlife Health Surveillance Network Working Group meeting June 2023 – section on SOP discussion only
8. Meeting minutes from Wildlife Health Surveillance Network Working Group meeting September 2023 – section on SOP discussion only
9. Photos of project activities in 2023

**2. Give details of any notable problems or unexpected developments/lessons learnt that the project has encountered over the last 6 months. Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.**

Project implementation has been smooth during the first six months. WCS and the Ministry of Environment maintain a positive working relationship both at central and provincial levels.

**Reducing number of project sites** (“Change Request” submitted and approved): In the original submission and scope of this project, two separate wetlands (Boeung Sne & Boeung Prek Lapouv) were identified as key sites for project activities. We previously considered both sites to be high-risk for viral spillover due to the history of repeated outbreaks of Highly Pathogenic Avian Influenza at both sites in 2021 and 2022, the large waterbird colonies present, the history of duck mortalities on farms, and the obvious interface between wild birds and poultry farms. Boeung Prek Lapouv wetland, however, has since undergone changes to its landscape which has resulted in tree (and therefore nesting habitat) loss, waterbird colonies leaving and not returning this year, no outbreaks noted in 2023, and less of an interface between waterbirds and domestic duck farms. With far fewer wild birds than previously and less contact with duck farms, we no longer believed interventions on target farms to be appropriate in this location.

We will restrict farm-related activities and associated costs to Boeung Sne wetland only. We still intend, however, to conduct surveillance training in both sites to ensure any future disease outbreaks in Boeung Prek Lapouv are detected and responded to appropriately.

**Delay in consultant recruiting** (no “Change Request” at this time): Finding the most suitable candidate for Output 2 took more time than previously estimated. The project has now found a consultant and expects them to begin Output 2 activities in late October 2023. The delay in recruiting may lead to a knock-on delay in Indicators 2.1-2.3. A change request has not been made; however we are monitoring this timeline closely and will submit one if indicated.

**3. Have any of these issues been discussed with NIRAS and if so, have changes been made to the original agreement?**

Discussed with NIRAS: **Yes/No**

Formal Change Request submitted: **Yes/No**

Received confirmation of change acceptance **Yes (October 2023)/No**

Change request reference if known: No reference number was provided

4a. Please confirm your actual spend in this financial year to date (i.e. from 1 April 2023 – 30 September 2023)

Actual spend: £ [REDACTED]

4b. Do you currently expect to have any significant (e.g. more than £5,000) underspend in your budget for this financial year (ending 31 March 2024)?

Yes  No  Estimated underspend: £

4c. If yes, then you need to consider your project budget needs carefully. Please remember that any funds agreed for this financial year are only available to the project in this financial year.

If you anticipate a significant underspend because of justifiable changes within the project, please submit a re-budget Change Request as soon as possible. There is no guarantee that Defra will agree a re-budget so please ensure you have enough time to make appropriate changes if necessary. **Please DO NOT send these in the same email as your report.**

NB: if you expect an underspend, do not claim anything more than you expect to spend this financial year.

5. Are there any other issues you wish to raise relating to the project or to BCF management, monitoring, or financial procedures?

None.

If you are a new project and you received feedback comments that requested a response, or if your Annual Report Review asked you to provide a response with your next half year report, please attach your response to this document.

All new projects (excluding Darwin Plus Fellowships and IWT Challenge Fund Evidence projects) should submit their Risk Register with this report if they have not already done so.

Please note: Any planned modifications to your project schedule/workplan can be discussed in this report but **should also** be raised with NIRAS through a Change Request. **Please DO NOT send these in the same email.**

Please send your **completed report by email** to [BCF-Reports@niras.com](mailto:BCF-Reports@niras.com). The report should be between 2-3 pages maximum. **Please state your project reference number, followed by the specific fund in the header of your email message e.g. Subject: 29-001 Darwin Initiative Half Year Report**