Applicant: **Hurwitz, Skylar**
Organisation: **Wildlife Conservation Society**
Funding Sought: **£0.00**

DIR29IN\1134

Risk reduction of Highly Pathogenic Avian Influenza in Cambodia's wetlands

Cambodia supports some of the most threatened waterbird species in the world. Highly Pathogenic Avian Influenza (HPAI) has killed over 1,700 waterbirds in Cambodia since 2021, and wild bird mortalities are being recorded in unprecedented numbers globally (1,2). We aim to create a scalable model for Cambodia's wetlands via a network of informed and skilled communities taking collective action to reduce the risk of HPAI spillover at the poultry-waterbird interface, while protecting livelihoods and scaling up wildlife health surveillance.

PRIMARY APPLICANT DETAILS

Name	Skylar
Surname	Hurwitz
Tel (Work)	[redacted]
Email (Work)	[redacted]
Address	[redacted]

Section 1 - Contact Details

PRIMARY APPLICANT DETAILS

Name	Skylar
Surname	Hurwitz
Tel (Work)	[redacted]
Email (Work)	[redacted]
Address	[redacted]

GMS ORGANISATION

Type	**Other local charitable organisation**
Name	Wildlife Conservation Society
Phone	[redacted]
Email	[redacted]
Website	[redacted]
Address	[redacted]

Section 2 - Project Summary, Ecosystems, Approaches and Threats

Q3. Title

Risk reduction of Highly Pathogenic Avian Influenza in Cambodia's wetlands

Q4a. Is this a resubmission of a previously unsuccessful application?

⦿ No

Please attach a cover letter.

Please include a response to any previous feedback in your cover letter.

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Q5. Key Ecosystems, Approaches and Threats

Please select up to 3 biomes that are of focus, up to 3 conservation actions that characterise your approach, and up to 3 threats to biodiversity you intend to address, from dropdown lists.

Biome 1

Palustrine wetlands (flooded forests, wetlands, marshes, floodplains)

Biome 2

Intensive land-use systems (agric., plantations and urban)

Biome 3

Freshwater (streams, rivers and lakes)

Conservation Action 1

Land/water protection (area/resource/habitat)

Conservation Action 2

Livelihood, economic & other incentives (incl. conservation payments)

Conservation Action 3

Education & awareness (incl. training)

Threat 1

Invasive & other problematic species, genes & diseases

Threat 2

Agriculture & aquaculture (incl. plantations)

Threat 3

Natural system modifications (fires, dams)

Q6. Summary of project

Please provide a brief summary of your project: the problem/need it is trying to address, its aims, and the key activities you plan on undertaking. Please note that if you are successful, this wording may be used by Defra in communications e.g. as a short description of the project on the website.

Please write this summary for a non-technical audience.

Cambodia supports some of the most threatened waterbird species in the world. Highly Pathogenic Avian Influenza (HPAI) has killed over 1,700 waterbirds in Cambodia since 2021, and wild bird mortalities are being recorded in unprecedented numbers globally (1,2). We aim to create a scalable model for Cambodia's wetlands via a network of informed and skilled communities taking collective action to reduce the risk of HPAI spillover at the poultry-waterbird interface, while protecting livelihoods and scaling up wildlife health surveillance.

Section 3 - Dates & Budget Summary

Q7. Project Country(ies)

Which eligible country(ies) will your project be working in? Where there are more than 4 countries that your project will be working in, please add more boxes using the selection option below.

Country 1	Cambodia	**Country 2**	*No Response*
Country 3	*No Response*	**Country 4**	*No Response*

Do you require more fields?

⦿ No

Q8. Project dates

Start date:	End date:	Duration (e.g. 1 year, 8 months):
01 April 2023	31 March 2025	2 years

Q9. Budget Summary

Darwin Funding Request	2023/24	2024/25	Total request
(Apr - Mar) £	[redacted]	[redacted]	[redacted]

Q10. Proportion of Darwin Initiative budget expected to be expended in eligible countries: %	100

Q11a. Do you have proposed matched funding arrangements?

⦿ Yes

What matched funding arrangements are proposed?

Matched funding is confirmed from a project underway with WHO titled "Wildlife health surveillance to advance One Health Surveillance and support early detection of zoonotic respiratory pathogens of pandemic potential including SARS-CoV-2" (USAID & EU funded, 2022 – 2023)

Q11b. Total confirmed & unconfirmed matched funding (£)

Q11c. If you have a significant amount of unconfirmed matched funding, please clarify how you will fund the project if you don't manage to secure this?

Not applicable

Section 4 - Darwin Objectives and Conventions

Q12. Problem the project is trying to address

Please describe the evidence of the problem your project is trying to address in terms of biodiversity and its relationship with poverty. What is the need, challenge or opportunity?

For example, what are the drivers of loss of biodiversity that the project will attempt to address? Why are they relevant, for whom? How did you identify these problems? Please cite the evidence you are using to support your assessment of the problem (references can be listed in a separate attached PDF document).

Cambodia supports populations of some of the most threatened species of waterbirds in the world, such as Giant Ibis, Sarus Crane, and Spot-billed Pelican. Just as many populations of these threatened species are beginning to recover, the expansion of agriculture and communities into waterbird habitat poses increased disease threats, particularly from Highly Pathogenic Avian Influenza (HPAI).

An outbreak of HPAI in Boueng Sne and Boueng Prek Lapouv in Cambodia in February and March 2021, respectively, killed over 1,700 Asian Openbills, plus other egrets, pond-herons, and cormorants1. Wild bird mortality events were detected in a total of 3 sites in Cambodia and 2 in neighbouring Vietnam, exemplifying the impact of transboundary disease transmission amongst free-ranging wildlife. Genetic sequencing and temporal data suggest that the virus likely spilled over from domestic poultry populations. Then in 2022, HPAI outbreaks recurred at these very same sites at the same time of year. Globally, HPAI is now impacting both domestic and wild birds on an unprecedented scale in terms of mortality, economic and livelihood losses, and geographic spread (3). Several species have been affected including wildfowl, waders, cranes, grebes, herons, pelicans, corvids, and raptors. Cases have also been detected in mammals such as red fox, Eurasian otter, American black bear, and four species of captive wild cats in Cambodia highlighting the breadth of ecological impacts and the potential for complex cascading effects (2,4).

Avian influenza has become endemic in Cambodia and is associated with the growing intensity of the live poultry trade. Domestic ducks are a particular concern for pathogen spillover to wild birds because they are often kept in large flocks numbering hundreds of individuals that are ranched in wetlands co-occupied by wild waterbirds.

Disease transmission between and among domestic animals, wild animals, and humans is most likely at the interface between areas of natural habitat and human or farming landscapes (5). Cambodia is characterized by high rates of rural-rural migration, which has been exacerbated by the impacts of the COVID-19 pandemic on ecotourism. Road development within and around protected areas has further contributed to the spread of human populations into previously remote areas. As settlements grow and rural people intensify their farming methods, many are likely to switch from keeping a few ducks and chickens for home consumption to larger flocks for commercial purposes. Many developing countries have compensation systems in place to support farmers in the event of an outbreak and associated farm de-population; however, no such safeguards for livelihoods exist in Cambodia.

Despite great efforts around the world (6,7,8), knowledge of predictive factors for where and when the next HPAI outbreak is likely to occur remain scarce, hindering preparation measures. It is unknown to what degree improved animal management practices in smaller farms will prevent HPAI spillover/spillback specifically, however we can be confident that establishing a stronger barrier between livestock and wildlife while conserving biodiversity is necessary to prevent pathogen transmission between them broadly and to protect public health (9,10). Conservation must be a public health priority.

Q13. Biodiversity Conventions, Treaties and Agreements

Q13a. Your project must support the commitments of one or more of the agreements listed below.

Please indicate which agreement(s) will be supported.

- ☑ Convention on Biological Diversity (CBD)
- ☑ Convention on the Conservation of Migratory Species of Wild Animals (CMS)
- ☑ Ramsar Convention on Wetlands (Ramsar)
- ☑ Global Goals for Sustainable Development (SDGs)

Q13b. National and International Policy Alignment

Using evidence where available, please detail how your project will contribute to national policy (including NBSAPs, NDCs, NAPs etc.) and in turn international biodiversity and development conventions, treaties and agreements that

the country is a signatory of.

The project supports delivery of the CBD (Strategic Goals A-E), and its Aichi Targets 2, 7, 11, 12, and 14. For instance, the project promotes sustainable management of agricultural areas, ensuring conservation of biodiversity (Target 7), and safeguards an agricultural ecosystem that contributes to the livelihoods and health of communities (Target 14). The project also delivers on Cambodia's country-specific CBD national actions by addressing themes stipulated in the National Biodiversity Strategy and Action Plan (NBSAP), most directly Group 1: Protection of Biodiversity – Theme 1: Protected Area System, Theme 2: Threatened Species and Theme 12: Sustainable animal wildlife resources management; Theme 13: Sustainable agriculture and animal production; and Group 3: Enabling Environment – Theme 19: Community Participation and Theme 22: Quality of Life and Poverty Reduction. The project supports SDGs within the 2030 Agenda for Sustainable Development, especially Goals 1, 3, 12 and 15: 'reduce poverty', 'promote sustainable agriculture', 'ensure sustainable production and consumption patterns', and 'promote sustainable use of terrestrial ecosystems and halt biodiversity loss'. Furthermore, improving wildlife health surveillance to maximize health-conservation co-benefits for birds and people is in direct alignment with the International Health Regulations, World Organization of Animal Health's (WOAH) Guidelines for Wildlife Disease Surveillance, and the Tripartite Zoonotic Guide to address zoonotic disease in countries jointly developed by WHO, WOAH and FAO, and the National Comprehensive Avian and Human Influenza Plan in Cambodia. Several SDGs, including poverty reduction, are supported both directly and indirectly by effective Wildlife Health Surveillance (WHS). The few WHS systems that are in place provide evidence of their value for conservation, food supply chains, and public health, although critical gaps remain (11,12).

Section 5 - Method, Innovation, Capability & Capacity

Q14. Methodology

Describe the methods and approach you will use to achieve your intended Outcome and contribute towards your Impact. Provide information on:

- **How you have reflected on and incorporated evidence and lessons learnt from past and present similar activities and projects in the design of this project.**
- **The specific approach you are using, supported by evidence that it will be effective, and justifying why you expect it will be successful in this context.**
- **How you will undertake the work (activities, materials and methods).**
- **What the main activities will be and where will these take place.**
- **How you will manage the work (governance, roles and responsibilities, project management tools, risks etc.).**

Please make sure you read the guidance documents, before answering this question.

Threats to waterbird biodiversity from HPAI will be reduced through increased understanding of factors associated with spillover, improved poultry management, expanded wildlife health surveillance, and strengthened agriculture and livelihood resilience around two wetlands with recurring outbreaks – Boueng Sne (BS) and Boueng Prek Lapouv (BPL).

Output 1
Predicting HPAI outbreaks will occur in wild birds is challenging (13) in part due to their historically sporadic nature. We have the unique advantage of knowing where, predictably, outbreaks may occur in Cambodia given the recurring history of HPAI in two locations. During the known risk windows, data on waterbird activity and ecological factors will be gathered by the Ministry of Environment and WCS to analyse trends potentially associated with spillover events. Poultry farm locations will be mapped. Key sites for action will be selected based on data gathered.

Output 2
Given the history of wild and domestic bird losses due to HPAI in the area, we expect some existing motivation among communities to apply risk reduction techniques. To ensure interventions are effective and sustainably adopted, a profile of farmers (including farm economics) will be compiled by a contracted economist, farmers, WCS, and animal health authorities. Through these field assessments, entry points for poultry management interventions, awareness raising, and motivations for change will be identified.

Output 3
To ensure timely reporting and response to waterbird mortality events in BS and BPL, stakeholders from the animal health

and environmental sectors will be trained as part of Cambodia's new WHS Network. The successful surveillance approach of this Network, piloted through the WildHealthNet project, facilitated responses to wildlife disease outbreaks in Cambodia between 2019-2022. Its model has potential for scaling up to other key wetlands so any future events can be detected efficiently across more landscapes. Animal health and environmental authorities, with technical support from WCS, will be trained to report events through the channels defined in the newly developed SOP and to conduct outbreak investigations safely and effectively. Rangers will be trained to collect data on wild bird morbidity/mortality events using SMART (Spatial Monitoring and Reporting Tool) for Health. Stakeholders will work closely to ensure WHS coordination in target sites, collaborating on outbreak responses when required.

Output 4
While we acknowledge improved animal management on small-holder farms in Cambodia will not be gold standard in preventing spillover in either direction, establishing more robust physical and natural barriers to pathogen transmission between domestic and wild birds reduces transmission risk for a range of diseases (14). Protection of wetland integrity and the associated separation of poultry operations from wildlife habitat has been found to lower the risk of HPAI outbreaks(15). The project team will work with famers to improve poultry husbandry and biosecurity at the interface with waterbirds around two wetlands drawing on both local knowledge and current international guidance. Communities themselves will play a primary role in the development, implementation, and evaluation of practical, low-cost measures which improve poultry management (e.g. poultry housing improvements, poultry waste management). They will also lead the development of economic safeguards.

Q15. Innovation

Please specifically outline how your approach or project is innovative.

Is it the application of a proven approach in a distinctly different geography/issue/stakeholder (novel to the area), or in a different sector (novel to the sector), or an unproven approach in any sector (novel to the world)?

This project creates practical risk reduction model using a One Health approach innovative to Cambodia's wetlands which can be scaled to other landscapes with domestic poultry/waterbird interfaces with high potential for HPAI spillover/spillback.

Our approach is as follows:

-Annual HPAI outbreaks in waterbirds are recurring in BS and BPL. We can gain a deeper understanding of what ecological and behavioural risk factors are at play during HPAI spillover events, thereby contributing to knowledge gaps globally so we can better anticipate and mitigate outbreaks in these landscapes and others (Output 1).

-Poultry farming profiles, including economic assessments, will be conducted in these protected areas for the first time (Output 2). Improved poultry farming practices as a strategy for protecting waterbird health in Cambodia have not yet been implemented in any WCS-supported protected areas (Output 4).

-WHS remains extremely rare globally, with just a few developed countries conducting established, nationwide programs for certain pathogens. This project will help expand the work of WildHealthNet which laid the groundwork for a novel, functional WHS network in Cambodia, to additional key biodiversity areas (Output 3).

-SMART is currently used in ~1,000 protected areas in over 70 countries for law enforcement and biodiversity monitoring. Mobile data collection tools for WHS are largely absent globally but remain crucial for early detection/reporting of events involving sick and dead wildlife, facilitating an efficient response. "SMART for Health", a new SMART model developed by WCS to collect wildlife health data, will be piloted by rangers patrolling wetlands in Cambodia.

Q16. Capability and Capacity

How will you support the strengthening of capability and capacity in the project countries at organisational or individual levels? Please provide details of what form this will take, who will benefit, and the post-project value to the

country.

-Provide training to existing community research rangers, to check for signs of disease outbreaks in wild populations of threatened waterbirds and use the SMART for Health tool to report them appropriately

-Provide training of trainers to animal health authorities, and then support them to continue training priority stakeholders (e.g. other livestock officers) on detecting, reporting, and investigating outbreaks of HPAI and other diseases in poultry and wild birds to ensure early intervention during unusual morbidity or mortality events which may pose a threat to wild bird populations

-Individual farmers and communities will gain experience in designing and implementing sustainable interventions and evaluations. Knowledge on disease transmission and mitigation measures such as more robust poultry housing, physical separation from wild birds, improved overall poultry health, and poultry waste management will be provided. Training will be provided to poultry farmers on simple, low-cost livestock husbandry measures co-developed with communities and they will be empowered to perform evaluations on their own interventions.

-Local wildlife health experts in Cambodia will lead this project and gain new knowledge and skills on mitigating threats at the livestock-wildlife interface.

If necessary, please provide supporting documentation e.g. maps, diagrams, references etc., as a PDF using the File Upload below:

Map of wild bird mortality events
07/11/2022
22:53:32
pdf 1.04 MB

References
07/11/2022
22:53:31
pdf 210.34 KB

Section 6 - Gender, Awareness, Change Expected & Exit Strategy

Q17. Gender equality

All applicants must consider whether and how their project will contribute to reducing inequality between persons of different gender. Explain your understanding of gender equality within the context your project, and how is it reflected in your plans. Please summarise how your project will contribute to reducing gender inequality. Applicants should, at a minimum, ensure proposals will not increase inequality and are encouraged to design interventions that proactively contribute to increased gender equality.

Gender equality is a WCS core value, foundational to its culture and realised through proactive approaches to the inclusion of women in staff positions, working groups, communities, trainings, fieldwork, and assessments in Cambodia.

Typically, women work closely with men on farming in a gendered division of labour that follows traditionally defined roles. Women are more involved in feeding and watering poultry as well as collecting and selling eggs, while men are more likely to handle the movement of animals, buying and selling, and communication with animal health authorities. A consultant will evaluate the profile of poultry farmers and, as part of this assessment, will determine entry points to remediate more detailed or nuanced gender equality concerns. Gendered division of labour provides a point of entry to discussions around gender equity in livestock and farming and collection of data to support benchmarking of gender roles.

Q18. Awareness and understanding

How will you raise awareness and understanding of biodiversity-poverty issues in your stakeholders, including who your stakeholders are, what approaches/formats/products will you use, how you will ensure open and free access to all data, and how will you know that the messages are understood?

Farmers and animal health authorities:

Concrete numerical evidence justifying changes in poultry practices will be provided to small- and medium-holder farmers to enhance understanding of the benefits of improved animal husbandry. This evidence will be in the form of a profile of poultry farmers, an assessment of buyers/off-takers to evaluate the conditions of their farming arrangements, and a

cost-benefit-loss assessment of status quo farming vs. outbreak loss projections. Local stakeholders skilled in knowledge translation/transfer will ensure the evidence generated from these economic assessments will be easily understood by farmers, community members, and animal health sector staff. Direct links between poultry health and wild bird health will be drawn, including basic theory on disease transmission, risk reduction practices, and the benefits of investing in improved biosecurity on farms.

Farmers, animal health authorities, environmental sector authorities:

One Health principles will be integrated into all activities, particularly around HPAI and the links between maintaining biodiversity and agricultural livelihoods in parallel. This will help stakeholders understand the overlapping benefits of protecting both. Previously developed training and communication materials designed and piloted during WildHealthNet for specific stakeholder groups will be utilized so that we can be more confident the information is being understood.

Any suspected HPAI outbreaks which are detected and reported by stakeholders will be communicated through the appropriate channels in a transparent manner, including reporting back results to those who made the initial reports in a manner that is understood (e.g. a farmer). This encourages continued reporting of future events, establishes trust among stakeholders, and reinforces the need for cross-cutting communication between environmental and animal health sectors.

Q19. Change expected

Detail the expected changes to both biodiversity and poverty reduction, and links between them, this work will deliver. You should identify what will change and who will benefit a) in the short-term (i.e. during the life of the project) and b) in the long-term (after the project has ended) and the potential to scale the approach.

When talking about how people will benefit, please remember to give details of who will benefit, differences in benefits by gender or other layers of diversity within stakeholders, and the number of beneficiaries expected. The number of communities is insufficient detail – number of households should be the largest unit used.

Short Term:

-The project will continue to strengthen management systems with the communities responsible and necessary for the conservation of these globally important ecosystems and threatened species. Impacts will include:

-Civil society capacity strengthened across a minimum of 5 farms per wetland to develop and promote simple low-cost measures that reduce the risk of spillover/spillback of HPAI between domestic fowl and threatened waterbirds.

-Civil society capacity expanded through a network of communities to share ideas and agree on action to improve poultry husbandry in two wetlands

-Biodiversity is protected by establishing more robust physical and natural barriers between domestic and wild birds, reducing the threat of disease to at least four large waterbird species (Sarus Cranes, Asian openbills, Intermediate egrets, Glossy ibis) known to be susceptible to HPAI, across Boeung Prek Lapouv and Boueng Sne.

-Community well-being and understanding about zoonotic diseases and prevention is enhanced, through training of at least 15 local animal health authorities and reporting mechanisms among at least 2 communities so that outbreaks that occur are addressed quickly by the relevant authorities.

-Improved agricultural resilience and food security on at least 5 farms per wetland in the face of immediate term HPAI threats (which is anticipated to persist long term)

-More efficient detection, reporting, investigation, and response to wildlife morbidity and mortality events using novel tools (e.g. SMART for Health)

Long term:

-The wildlife health surveillance network developed under WildHealthNet will be formalized and expanded to include

communities around threatened pilot landscapes Boueng Prek Lapouv and Boueng Sne. The surveillance network is designed to incorporate and connect stakeholders with diverse backgrounds (i.e. from a ranger patrolling a protected area to high level public health officials). The surveillance network has potential to benefit all, with net benefits for women and children, by protecting wildlife and domestic animals as well as safeguarding the health and livelihoods of communities.

-At least 10 poultry farmers around two wetlands expand their strengths and understanding through a network of Committees by sharing best practices in taking collective action to prevent HPAI outbreaks, with potential for sharing and scaling to other protected areas in the future

-Livestock husbandry and health will improve, which leads to agricultural resilience, improved food security, better ecological integrity, reduced disease transmission between domestic and wild animals, and public health co-benefits

-WCS will continue to support communities in these landscapes while seeking additional funding to strengthen and expand positive results from the pilots that are started under the project to other critical waterbird habitats across Cambodia where WCS works

-Potential to scale the novel SMART for Health mobile data collection tool to bring standardized, efficient wildlife health event reporting to an international level

Q20. Pathway to change

Please outline your project's expected pathway to change, including how your outcome can be scaled. This should be an overview of the overall project logic and outline why and how you expect your Outputs to contribute towards your overall Outcome and, longer term, your expected Impact.

This should directly relate to your overall project's Theory of Change which must be uploaded alongside your application. See the separate Monitoring, Evaluation and Learning Guidance **for further information on your Theory of Change.**

BS and BPL will operate as pilot sites for a model scalable to wetlands with similar domestic-wild bird interfaces across Cambodia.

If we can understand farm dynamics and practices, we can construct a profile of what poultry farming is in these critical wetlands and use it to identify gender-sensitive entry points for intervention and sustainable change. We will conduct a cost-benefit-loss assessment of status quo farming methods comparing it to the cost-effectiveness of farming changes to gain community understanding and buy-in.

Practical, low-cost, culturally acceptable measures improving farm biosecurity, fowl husbandry, and livelihood security will be co-designed with communities, strengthening the physical and natural barriers to pathogen sharing between threatened waterbirds and domestic fowl occupying pilot wetlands. Sustainable community safeguards are designed to remedy the economic impacts of potential future HPAI outbreaks.

WHS mechanisms, including novel data collection tools, will be piloted so outbreak mitigation measures can be activated quickly. Animal health and environmental authorities will monitor waterbird health events following the network defined by the WildHealthNet initiative, formally enacting Cambodia's new national SOP for WHS.

This model restores ecological integrity, promotes sustainable co-management of wildlife and livestock, and provides economic resilience for communities whilst achieving biodiversity conservation outcomes.

Q21. Exit strategy

How will the project reach a sustainable point and continue to deliver benefits post-funding?

Will the innovation be mainstreamed into "business as usual" to continue to deliver the benefits? How will the required capability and capacity remain available to sustain the benefits? How will your approach, if proven, be

scaled? Are there any barriers to scaling and if so, how will these be addressed?

Improved farming practices to reduce HPAI spillover/spillback risk and protect livelihoods:

Practical, low-cost measures will be designed and evaluated by communities themselves. Committees at the community level will promote these measures and encourage broad adoption among poultry farmers. Improved animal management will be mainstreamed in this manner so that benefits to waterbird health, livelihoods, and food security are realized long-term. This approach will be scaled to other wetlands of concern within Cambodia. Funding to do so is the primary barrier, but WCS will actively work to secure additional financial resources.

Safeguards (e.g. a village insurance fund), will be co-designed with and funded by communities to introduce novel livelihood protection mechanisms against economic hardship due to outbreaks. This is contingent on continued implementation of the improved farming practices. Committees and animal health authorities will introduce this mechanism to additional high-risk landscapes during future scaling of this model.

Surveillance to monitor domestic and wild bird health:

A newly formed national SOP for wildlife health surveillance (currently under review) will be finalized and formally introduced to these two sites. We will plan for further government-led dissemination of this SOP to network stakeholders in other biodiversity areas at risk. Barriers include possible failure of SOP approval by ministries as well as the costs associated with dissemination. One Health partners will work together with government to gain adoption of this SOP into national policy and to secure ministerial funding for broader dissemination/implementation.

Animal health authorities will trial SMART for Health as their main data collection tool in these sites. A training of trainers approach will be used, and participants will lead the scaling up of this mobile data tool to other wetlands. Continued technical support for SMART will be reliant on additional funding, however SMART itself is freely available and commonly used in developing countries.

Section 7 - Risk Management

Q22. Risk Management

Please outline the 6 key risks to achievement of your Project Outcome and how these risks will be managed and mitigated, referring to the Risk Guidance**. This should include at least one Fiduciary, one Safeguarding Risk, and one Delivery Chain Risk.**

Projects should also draft their initial risk register, using the Risk Assessment template**, and be prepared to submit this when requested if they are recommended for funding. Do not attach this to your application.**

Risk Description	Impact	Prob.	Gross Risk	Mitigation	Residual Risk
Fiduciary (financial) Corruption within government agencies may lead to misappropriated funds meant for project activities.	Draft	Draft	Draft	WCS has strong financial management policies and procedures in place to mitigate the risks of fraud or bribery. WCS will be solely responsible for managing this budget.	Draft

Safeguarding There is a risk of project staff contractive HPAI or other zoonotic pathogens during surveillance missions.	Draft	Draft	Draft	All staff and stakeholders conducting any type of HPAI surveillance will be train, or is already trained, in personal protective equipment use, safe sampling techniques, and other biosafety practices. WCS Health Program has years of extensive experience training partners in safe surveillance practices.	Draft
Delivery Chain Despite implementing improved animal management practices, farmers still experience poultry losses (to HPAI or otherwise), eroding trust and willingness to implement these practices long term.	Draft	Draft	Draft	Stakeholders will be briefed at project commencement on this potential risk as well as the overarching benefits despite this in order to manage expectations. One project outcome mitigates this risk directly, compensating farmers for mass losses via a safeguard of their own design (e.g. a community insurance fund).	Draft
Risk 4 Relevant government agencies are unwilling to release diagnostic results or reports of HPAI outbreaks/cases to other project stakeholders and international animal health bodies.	Draft	Draft	Draft	WCS Health Program fosters a culture of support and encouragement for transparency with partner governments around sensitive disease data. A written agreement on sharing results and data among project stakeholders will be put in place at the project start.	Draft
Risk 5 Because the project is short, it does not lead to long term change.	Draft	Draft	Draft	WCS maintains strong relationships with the Ministry of Environment and animal health authorities in both pilot sites and other key biodiversity areas across Cambodia. WCS will build on this strong foundation as well as ongoing plans to scale up wildlife health surveillance and longer-term protection of waterbirds against health threats.	Draft
Risk 6 Poultry farming intensification continues to increase around pilot sites.	Draft	Draft	Draft	WCS will work with MOE and rangers to encourage consistent, continued enforcement of laws regarding use of protected wetlands for agriculture to the greatest extent possible.	Draft

Section 8 - Implementation Timetable

Q23. Provide a project implementation timetable that shows the key milestones in project activities

Provide a project implementation timetable that shows the key milestones in project activities. Complete the Word template as appropriate to describe the intended workplan for your project and upload this below as a PDF.

Implementation Timetable Template

Please add/remove columns to reflect the length of your project. For each activity (add/remove rows as appropriate) indicate the number of months it will last, and fill/shade only the quarters in which an activity will be carried out.

BCF-Implementation-Timetable-Template-2022-23-FINAL_ForUpload
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pdf 135.49 KB

Section 9 - Monitoring and Evaluation

Q24. Monitoring and evaluation (M&E)

Describe how the progress of the project will be monitored and evaluated, making reference to who is responsible for the project's M&E.

Darwin Initiative projects are expected to be adaptive and you should detail how the monitoring and evaluation will feed into the delivery of the project including its management. M&E is expected to be built into the project and not an 'add on'. It is as important to measure for negative impacts as it is for positive impact. Additionally, please indicate an approximate budget and level of effort (person days) to be spent on M&E (see Finance Guidance**).**

The Monitoring and evaluation of the project will be conducted by in-country WCS staff in collaboration with our government partners.

The WCS M&E system was developed to accomplish the following objectives, which include generating data on project progress for donors, providing data for adaptive management, and producing learning documentation for sharing, collaborating, and course correction. The Performance Indicator Reference Sheet (PIRS) documentation, data collection forms, Data Quality Assessment (DQA) tools, form tools for various assessments, Activity Management Database (Asana), and M&E Database (Airtable) are among the resources used in the project's M&E system. The M&E framework documents all indicator names and codes, donor names and codes, baseline values, baseline dates, annual targets and results for each performance indicator, cumulative target type, unit of measure, indicator status and reporting frequency. The PIRS documentation for particular donor project indicators provides the following: indicator description and definition; the unit of measure; data disaggregation, rationale or justification for the indicator; plan for data collection; potential risks related to data quality; baseline timeframe and rationale for the target, changes made to the indicator; and the date of modifications.

To promote learning and knowledge management, other tools have also been developed and applied for rapid assessments which depend on the topics of learning identified. These types of tools include checklists and questionnaires for direct observations, in-dept interviews (IDI), key informant interviews (KII) and focused-group discussions (FGD). Asana, which is an online project management tool, has been adopted for activity planning, monitoring, and reporting. Reporting through Asana replaces the need for submitting activity reports because all activity information and supporting documents can be submitted through Asana. Furthermore, this system provides clear framework of outputs, activities, and sub-activities from the annual work plan; direct, collaborative access for monthly work planning; and up-to-date tracking of work plan activity status and streamlined activity reporting due to its integration with Airtable, the M&E system. Airtable, the project's M&E database, is an online, collaborative relational database and shared platform for activity and indicator data management, assessment, and visualization. Using Airtable means direct and collaborative M&E data management; up-to-date tracking of indicator data; and streamlined activity reporting (integration with Asana system) and data management.

The WCS Cambodia M&E National Manager is responsible for overseeing and supporting data collection that engages the following steps:

Step 1: Data is collected by the program team and submitted to the M&E team.

Step 2: Data is reviewed and cleaned by the M&E team.

Step 3: Data is entered into the Airtable M&E database by the M&E team

Step 4: Data is generated from the M&E database for analyzing and reporting by the M&E team.

Total project budget for M&E (this may include Staff and Travel and Subsistence Costs)	[redacted]
Percentage of total project budget set aside for M&E	
Number of days planned for M&E	72

Section 10 - Logical Framework

Q25. Logical Framework (logframe)

Darwin Initiative projects will be required to monitor and report against their progress towards their Outputs and Outcome. This section sets out the expected Outputs and Outcome of your project, how you expect to measure progress against these and how we can verify this.

Logframe Template

Please complete your full logframe in the separate Word template and upload as a PDF using the file upload below - please do not edit the logframe template structure (other than adding additional Outputs if needed) as this may make your application ineligible. On the application form, you will be asked to copy the Impact, Outcome and Output statements and activities - these should be the same as in your uploaded logframe.

Please upload your logframe and Theory of Change as a combined PDF document.

Logframe and TOC
07/11/2022
23:10:37
pdf 156.15 KB

Impact:

To pilot new, scalable approaches to reduce risk of highly pathogenic avian influenza (HPAI) spillover negatively impacting globally threatened waterbird species, agricultural resilience, and local livelihoods in KBAs in Cambodia.

Outcome:

Threats to waterbird biodiversity from HPAI are reduced through increased understanding of risk factors, improved poultry management, wildlife health surveillance, and strengthened agriculture and livelihood resilience around critical protected areas.

Project Outputs

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 two critical protected areas.

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.

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.

Output 4:

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

Output 5:

No Response

Do you require more Output fields?

It is advised to have less than 6 Outputs since this level of detail can be provided at the activity level.

⦿ No

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.

Activities towards Output 1:
1.1 Identification of key breeding and foraging areas for migratory and resident threatened waterbirds and their temporal use
1.2 Collection of ecological data, temperature, weather, water parameters
1.3 Spatial and temporal mapping of poultry farming and methods through participatory consultation, particularly use of waterbodies by domestic ducks
1.4 Analysis of combined data from 1.1 – 1.3 above used to inform selection of key sites for action.

Activities towards Output 2:
2.1 Assessment of ownership patterns (including gender roles), buyers/offtakes, buying terms and identification of where demand originates
2.2 Cost-benefit-loss assessment of status quo farming methods is conducted, with projections of financial losses due to disease outbreak events
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

Activities towards Output 3:
3.1 Provide training of trainers to animal health authorities on detecting and responding to morbidity/mortality events in domestic poultry and wild birds
3.2 Train rangers to assist in detecting, reporting, and responding to wild bird morbidity/mortality events, and to collect data using SMART for Health tool
3.3 Perform active surveillance for AIV in domestic and wild birds prior to and during the historical months of the outbreak window (Feb – April)

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.

Activities towards Output 4:
4.1 Co-develop with communities simple, low-cost biosecurity measures and farming practices that reduce pathogen spillover/spillback risk (including HPAI) between domestic fowl and threatened waterbirds, ensuring equal gender contributions
4.2 Conduct training for poultry farmers on the measures designed above
4.3 Establish gender-balanced Committees who promote the measures from 4.1 within their communities encouraging broad adoption, and who monitor their uptake using a simple framework
4.4 Co-design livelihood safeguards (e.g. insurance funds) with priority communities to lessen economic impacts of domestic fowl disease events on farmers contingent on good farming practices

Section 11 - Budget and Funding

Q26. Budget

Please complete the appropriate Excel spreadsheet, which provides the Budget for this application. Some of the questions earlier and below refer to the information in this spreadsheet.

Note that there are different templates for projects requesting under £100,000 and over £100,000. Please refer to the Finance Guidance for more information.

- Budget template for projects under £100k
- Budget template for projects over £100k

Please ensure you include any co-financing figures in the Budget spreadsheet to clarify the full budget required to deliver this project.

NB: Please state all costs by financial year (1 April to 31 March) and in GBP. The Darwin Initiative cannot agree any increase in grants once awarded.

Please note the next section is about the financial aspects of your project, rather than technical elements.

BCF-Budget-over-100k-MASTER-Darwin-Wildlife Health_KK_KD_ST_ED 200K-31 Oct 22
07/11/2022
22:58:14
xlsx 126.81 KB

Q27. Funding

Q27a. Is this a new initiative or does it build on existing work (delivered by anyone and funded through any source)? Please give details.

⦿ Development of existing work

Please give details.

The wildlife health surveillance component of this initiative builds on work from three projects:

1. WildHealthNet (funded by the US Defense Threat Reduction Agency, 2018-2022):

-WildHealthNet is an approach to developing wildlife health surveillance networks on a national scale through policy development, capacity bridging, data management, and operationalized surveillance strategies in hotspots for pathogen spillover. WildHealthNet laid the groundwork for systemized, functional surveillance across pilot sites in Cambodia and ultimately lead to the detection of HPAI outbreaks in wild birds in 2021 and 2022 in Boueng Sne and Boueng Prek Lapouv.

2. WHO-WCS: Wildlife health surveillance to advance One Health Surveillance and support early detection of zoonotic respiratory pathogens of pandemic potential including SARS-CoV-2 (USAID & EU funded, 2022 – 2023):
-WHO partnered with WCS to ensure wildlife health surveillance continues in protected areas, wildlife trade markets, and wildlife rescue centres with a particular focus on detecting zoonotic respiratory pathogens (e.g. HPAI, SARS-CoV-2).

3.PREZODE/AfriCam (AFD funded, 2022-2025 first phase):
-The AfriCam project supports national strategies preventing the emergence of zoonotic diseases while ensuring food security and community livelihoods. WCS is a partner in Cambodia, but this project is in the early stages and partner roles are now being defined.

Q27b. Are you aware of any current or future plans for similar work to the proposed project?

⦿ Yes

Please give details explaining similarities and differences, and explaining how your work will be additional and what attempts have been/will be made to co-operate with and learn lessons from such work for mutual benefits:

In the event of a mass mortality event in wild birds, investigations will be in cooperation with the ongoing WHO project on zoonotic respiratory pathogen surveillance project (mentioned above). The public health sector will be engaged as both projects work to strengthen and bridge capacity for wildlife health surveillance at key sites and in coordination with human and domestic animal health sectors to strengthen One Health surveillance for respiratory pathogens in Cambodia, generating critical One Health Intelligence. The WHO-WCS project, however, does not have any objectives pertaining to spillover mitigation measures at the livestock-wildlife interface making this proposed Darwin initiative unique in these high-risk sites.

In the future, we intend to scale this work to other critical habitats where wild birds and domestic poultry closely cohabitate and are at risk of HPAI transmission.

Q28. Capital items

If you plan to purchase capital items with Darwin funding, please indicate what you anticipate will happen to the items following project end. If you are requesting more than 10% capital costs, please provide your justification here.

Potential building materials for improved poultry housing would be used to improve farming infrastructure and biosecurity and would remain on farms.

One laptop will be purchased for project staff and will remain with WCS Cambodia following project end.

Mobile phones for data collection would remain with animal health authorities and/or rangers to continue standardized data collection beyond the project lifetime.

No other capital costs are anticipated. <10% capital costs are expected.

Q29. Value for Money

Please demonstrate why your project is good value for money in terms of impact and cost-effectiveness of each pound spend (economy, efficiency, effectiveness and equity).

The cost of primary prevention of zoonotic pathogen spillover, through actions such as reducing deforestation, halting commercial wildlife trade, and improving livestock biosecurity, is far less devastating than the lives lost (animal or human) and economic fallout of pandemics17,18. Many basic animal husbandry and biosecurity measures which can be applied to small- and medium-holder poultry farmers are relatively inexpensive (e.g. simple poultry housing) in comparison to the time, effort, and resources required to investigate and manage an outbreak of HPAI. The protection of biodiversity, wetland integrity, and ecosystem service availability has far-reaching benefits – from the communities who directly utilize

these wetlands to other areas of the country to which these resident and migratory waterbirds range. Given the transboundary nature of HPAI transmission via wild bird populations, this project provides indirect risk reduction to neighbouring countries especially when scaled to additional key biodiversity areas in the future. Additionally, the successful piloting of the first robust, low-cost mobile data collection tool developed for wildlife health surveillance (SMART for Health) begins to fill the global technological gap in standardized, efficient wildlife health event reporting.

Section 12 - Outputs, Open Access, Ethics & Safeguarding

Q30. Safeguarding

Projects funded through the Darwin Initiative must fully protect vulnerable people all of the time, wherever they work. In order to provide assurance of this, projects are required to have appropriate safeguarding policies in place.

Please confirm the Lead Partner has the following policies in place and that these can be available on request:

We have a safeguarding policy, which includes a statement of our commitment to safeguarding and a zero tolerance statement on bullying, harassment and sexual exploitation and abuse	Checked
We have attached a copy of our safeguarding policy to this application	Checked
We keep a detailed register of safeguarding issues raised and how they were dealt with	Checked
We have clear investigation and disciplinary procedures to use when allegations and complaints are made, and have clear processes in place for when a disclosure is made	Checked
We share our safeguarding policy with all partners	Checked
We have a whistle-blowing policy which protects whistle blowers from reprisals and includes clear processes for dealing with concerns raised	Checked
We have a Code of Conduct in place for staff and volunteers that sets out clear expectations of behaviours -- inside and outside the work place – and make clear what will happen in the event of non-compliance or breach of these standards	Checked

Please outline how you will implement your safeguarding policies in practice and ensure that all partners apply the same standards as the Lead Partner. If any partner of the responses are "no", please indicate how it is being addressed.

WCS's policies used in the field are designed to ensure that conservation actions are consistent with best practices for social safeguards and comply with international human rights standards. Projects receive support from WCS's Social Safeguards Management Team (SSMT) for issues regarding WCS's global social safeguards policies/procedures. SSMT provides guidance to teams in the implementation of global social safeguard strategies and thought leadership and training regarding best practices. WCS personnel are held accountable for their actions and those of others under their management authority, and for ensuring compliance. Staff will be briefed on WCS's safeguards policy at the project's commencement.

Q31. Ethics

Outline your approach to meeting the key principles of good ethical practice, as outlined in the guidance.

WCS has a robust Code of Conduct that details institutional and employee obligations to create an environment of safety and concern in fulfilment of our mission. WCS is committed to compliance with human rights standards and protections, and as such has adopted national and global standards for safeguarding rights.

We are further supported by WCS's Institutional Review Board that outlines the ethical principles and guidelines for the protection of human subjects of research. WCS's IRB reviews the level of risk to human subjects, assesses methodology and protections, and mitigates risk by ensuring Free, Prior and Informed Consent has been obtained at all levels of our engagement with local communities.

Communities will be empowered through direct participation in project co-design, implementation, and evaluation to ensure interventions are practical, while incorporating their interests and traditional knowledge. Rights and privacy of communities will be respected always, and WCS acknowledges the sensitive nature and confidentiality sometimes required particularly during disease outbreak events.

WCS will ensure anyone participating in surveillance has been appropriately trained and are equipped with necessary personal protective equipment. Health and safety of project stakeholders will be top priority.

As with all projects through WCS Cambodia, national laws are strictly followed.

Section 13 - FCDO Notifications

Q32. FCDO notifications

Please state if you think that there are sensitivities that the Foreign Commonwealth and Development Office will need to be aware of should they want to publicise the project's success in the Darwin Initiative in any country.

No

Please indicate whether you have contacted FCDO Embassy or High Commission to discuss the project and attach details of any advice you have received from them. If you have not, please say why not.

⦿ Yes (no written advice)

Section 14 - Project Staff

Q33. Project staff

Please identify the core staff (identified in the budget), their role and what % of their time they will be working on the project.

Please provide 1-page CVs or job description, further information on who is considered core staff can be found in the Finance Guidance

Name (First name, surname)	Role	% time on project	1 Page CV or job description attached?
Technical Officer (To be hired)	**Project Leader**	100	Checked
Chea Sokha	Wildlife Health Program Manager	15	Checked
Sreyem Sours	Wildlife Health Officer	30	Checked
Emily Denstedt	Regional Technical Advisor (Health Program)	10	Checked

Do you require more fields?

⦿ Yes

Name (First name, surname)	Role	% time on project	1 Page CV or job description attached?
Diego Montecino	Health Data Manager	3	Checked
Phearun Sum	Tonle Sap Landscape Manager	10	Checked
Ek Sovannda	Driver	50	Checked
Alistair Mould	Operations Manager	5	Checked
Kannitha Khon	Senior Budgeting Officer	5	Checked
Tao Sarath	Finance Manager	5	Checked
Duch Nirorn	Administration Officer	5	Checked
No Response	*No Response*	0	Unchecked

Please provide 1 page CVs (or job description if yet to be recruited) for the project staff listed above as a combined PDF.

Ensure the file is named clearly, consistent with the named individual and role above.

CV Package
07/11/2022
23:01:46
pdf 1.13 MB

Have you attached all project staff CVs?

⦿ Yes

Section 15 - Project Partners

Q34. Project Partners

Please list all the Project Partners (including the Lead Partner – i.e. the partner who will administer the grant and coordinate the delivery of the project), clearly setting out their roles and responsibilities in the project including the extent of their engagement so far and planned.

This section should demonstrate the capability and capacity of the Project Partners to successfully deliver the project. Please provide Letters of Support for all project partners or explain why this has not been included.

The partners listed here should correspond to the Delivery Chain Risk Map (within the Risk Register template) which you will be asked to submit if your project is recommended for funding.

Lead Partner name:	Wildlife Conservation Society (WCS)
Website address:	https://www.wcs.org/
Why is this organisation the Lead Partner, and what value to they bring to the project? **(including roles, responsibilities and capabilities and capacity):**	WCS is a US-based non-profit organization that works in more than 60 countries around the world. For more than two decades, WCS Cambodia has worked with local communities, government, and private sector partners to balance the needs of people and wildlife. This includes advice and technical support in natural resource management and policy development, livelihood improvements while promoting conservation, sustainable agriculture, and wildlife health monitoring.
International/In-country Partner	⦿ International
Allocated budget (proportion or value):	[redacted]
Represented on the Project Board	⦿ Yes
Have you included a Letter of Support from the organisation?	⦿ Yes

Do you have partners involved in the project?

⦿ Yes

1. Partner Name:	Ministry of Environment (MoE)
Website address:	https://www.moe.gov.kh/en

What value does this Partner bring to the project? **(including roles, responsibilities and capabilities and capacity):**	MoE is a close government partner working together with WCS across multiple key biodiversity areas. They are primarily responsible for law enforcement to protect and conserve natural habitats and wildlife, including wild birds, by conducting regular patrols in protected areas. MoE brings expertise and local knowledge about wildlife and their respective habitats, and policy around these. They have been previously trained in wildlife morbidity/mortality reporting and response under the WildHealthNet project to report any wildlife health events detected during their regular duties. If they have encountered any wildlife mortality/morbidity cases, they are now trained to collect data, report cases of wildlife morbidity/mortality to the wildlife health surveillance network, and safely collect samples and carcasses for submission to laboratories for testing. In events suspicious for disease outbreaks (e.g. mass mortality events), they provide their support to close off affected habitats if required, and work closely with the local authorities, communities, and other partners to implement the recommended control and prevention measures
International/In-country Partner	⦿ In-country
Allocated budget:	0
Represented on the Project Board	⦿ Yes
Have you included a Letter of Support from this partner?	⦿ Yes

2. Partner Name:	*No Response*
Website address:	*No Response*
What value does this Partner bring to the project? **(including roles, responsibilities and capabilities and capacity):**	*No Response*
International/In-country Partner	○ International ○ In-country
Allocated budget:	0
Represented on the Project Board	○ Yes ○ No

Have you included a Letter of Support from this partner?	◯ Yes ◯ No

3. Partner Name:	*No Response*
Website address:	*No Response*
What value does this Partner bring to the project? **(including roles, responsibilities and capabilities and capacity):**	*No Response*
International/In-country Partner	◯ International ◯ In-country
Allocated budget:	0
Represented on the Project Board	◯ Yes ◯ No
Have you included a Letter of Support from this partner?	◯ Yes ◯ No

4. Partner Name:	*No Response*
Website address:	*No Response*
What value does this Partner bring to the project? **(including roles, responsibilities and capabilities and capacity):**	*No Response*
International/In-country Partner	◯ International ◯ In-country
Allocated budget:	0

Represented on the Project Board	○ Yes ○ No
Have you included a Letter of Support from this partner?	○ Yes ○ No

5. Partner Name:	*No Response*
Website address:	*No Response*
What value does this Partner bring to the project? **(including roles, responsibilities and capabilities and capacity):**	*No Response*
International/In-country Partner	○ International ○ In-country
Allocated budget:	0
Represented on the Project Board	○ Yes ○ No
Have you included a Letter of Support from this partner?	○ Yes ○ No

6. Partner Name:	*No Response*
Website address:	*No Response*
What value does this Partner bring to the project? **(including roles, responsibilities and capabilities and capacity):**	*No Response*
International/In-country Partner	○ International ○ In-country

Allocated budget:	0
Represented on the Project Board	○ Yes ○ No
Have you included a Letter of Support from this partner?	○ Yes ○ No

If you require more space to enter details regarding Partners involved in the project, please use the text field below.

No Response

Please provide a combined PDF of all letters of support.

Letters of Support
07/11/2022
23:03:28
pdf 128.01 KB

Section 16 - Lead Partner Track Record

Q35. Lead Partner Capability and Capacity

Has your organisation been awarded Darwin Initiative, Darwin Plus or Illegal Wildlife Trade Challenge Fund funding before (for the purposes of this question, being a partner does not count)?

◉ Yes

Please provide details of the most recent awards (up to 6 examples).

Reference No	Project Leader	Title
29-010	Edgard Herrera	Community conservation of critically endangered Hawksbill turtles in Nicaragua
28-015	Jeni Pareira	Delivering public-private partnerships to benefit farmers and biodiversity in Sulawesi
IWT116	Rhett Bennett	Equipping southwest Indian Ocean countries to combat illegal shark trade
IWT115	Md. Zahangir Alom	Demand reduction for threatened freshwater turtles and tortoises in Bangladesh
IWTEV003	Thuy Hoang	Exploring drivers of wild meat consumption and interventions in Vietnam
IWTEV001	Sarah Fumey	Developing a problem-oriented approach to reduce turtle trafficking in Cambodia

Have you provided the requested signed audited/independently examined accounts?

If yes, please upload these on the certification page. Note that this is not required from Government Agencies.

⦿ Yes

Section 17 - Certification

Q36. Certification

On behalf of the

Trustees

of

Wildlife Conservation Society

I apply for a grant of

[redacted]

I certify that, to the best of our knowledge and belief, the statements made by us in this application are true and the information provided is correct. I am aware that this application form will form the basis of the project schedule should this application be successful.

(This form should be signed by an individual authorised by the applicant institution to submit applications and sign contracts on their behalf.)

- **I have enclosed CVs for key project personnel, a cover letter, letters of support, a budget logframe, theory of change, Safeguarding Policy and project implementation timetable.**
- **Our last two sets of signed audited/independently verified accounts and annual report (or other financial evidence - see Financial Guidance) are also enclosed.**

Checked

Name	EMILY DENSTEDY
Position in the organisation	Regional Technical Advisor (Health Program) for Greater Mekong and South Asia
Signature (please upload e-signature)	Joe W. Signature 2 07/11/2022 23:05:26 jpg 41.3 KB
Date	07 November 2022

Please attach the requested signed audited/independently examined accounts.

6fmdelwbr6_Audited_Financial_Statements_2020_WCS
07/11/2022
23:06:03
pdf 355.95 KB

2dkjperhcs_Audited_Financial_Statements_2021_WCS
07/11/2022
23:06:03
pdf 375.63 KB

Please upload the Lead Partner's Safeguarding Policy as a PDF

1. WCS Safeguarding Policy FINAL_EN_2020_1203 (1)
07/11/2022
23:06:15
pdf 517.23 KB

2. WCS Harassment Sexual Harassment Policy Revised Feb 2021 (1)
07/11/2022
23:06:15
pdf 413.84 KB

3. WCS Code of Conduct APPROVED 2019-02-26 (1)
07/11/2022
23:06:14
pdf 239.39 KB

4. WCS Whistleblower Policy English Approved 2014-05-19 (2017-12-06) (1)
07/11/2022
23:06:14
pdf 198.65 KB

Section 18 - Submission Checklist

Checklist for submission

I have read the Guidance, including the "Guidance Notes for Applicants**",** "Monitoring, Evaluation and Learning Guidance**",** "Risk Guidance**" and "**Finance Guidance**".**	Checked
I have read, and can meet, the current Terms and Conditions **for this fund.**	Checked
I have provided actual start and end dates for my project.	Checked
I have provided my budget based on UK government financial years i.e. 1 April – 31 March and in GBP.	Checked
I have checked that the budget is complete, correctly adds up and I have included the correct final total at the start of the application.	Checked
The application has been signed by a suitably authorised individual (clear electronic or scanned signatures are acceptable).	Checked
I have attached the below documents to my application:	Checked
• my completed **logframe** as a PDF using the template provided	
• my 1 page **Theory of Change** as a PDF which includes the key elements listed in the guidance	Checked
• my **budget** (which meets the requirements above)	Checked
• my completed **implementation timetable** as a PDF using the template provided	Checked
• **1 page CV or job description for all the Project Staff** identified at Question 32, including the Project Leader, or provided an explanation of why not.	Checked
• a **letter of support** from the Lead Partner and partner(s) identified at Question 33, or an explanation of why not.	Checked

• a **cover letter from the Lead Partner,** outlining how any feedback received at Stage 1 has been addressed where relevant.	Checked
• a copy of the **Lead Partner's safeguarding policy**, which covers the criteria listed in Question 29.	Checked
• a signed **copy of the last 2 annual report and accounts** for the Lead Partner, or provided an explanation if not.	Checked
(If copying and pasting into Flexi-Grant) I have checked that all my responses have been successfully copied into the online application form.	Checked
I have been in contact with the FCDO in the project country(ies) and have included any evidence of this. If not, I have provided an explanation of why not.	Checked
I have checked the Darwin website **immediately prior to submission to ensure there are no late updates.**	Checked
I have read and understood the Privacy Notice on the Darwin Initiative website**.**	Checked

We would like to keep in touch!

Please check this box if you would be happy for the lead applicant (Flexi-Grant Account Holder) and project leader (if different) to be added to our mailing list. Through our mailing list we share updates on upcoming and current application rounds under the Darwin Initiative and our sister grant scheme, the IWT Challenge Fund. We also provide occasional updates on other UK Government activities related to biodiversity conservation and share our quarterly project newsletter. You are free to unsubscribe at any time.

Unchecked

Data protection and use of personal data

Information supplied in the application form, including personal data, will be used by Defra as set out in the **Privacy Notice**, available from the Forms and Guidance Portal.

This **Privacy Notice must be provided to all individuals** whose personal data is supplied in the application form. Some information may be used when publicising the Darwin Initiative including project details (usually title, lead partner, project leader, location, and total grant value).

Project Title: Risk reduction of Highly Pathogenic Avian Influenza in Cambodia's wetlands

	Activity	No. of months	Year 1 (23/24)				Year 2 (24/25)			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
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 two critical protected areas.									
1.1	Identification of key breeding and foraging areas for migratory and resident threatened waterbirds and their temporal use	6	X			X	X			
1.2	Collection of ecological data, temperature, weather, water parameters	6	X			X	X			
1.3	Spatial and temporal mapping of poultry farming and methods through participatory consultation, particularly use of waterbodies by domestic ducks	3	X	X						
1.4	Analysis of combined data from 1.1-1.3 above used to inform selection of key sites for action.	3	X	X						
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,									

	Activity	No. of months	Year 1 (23/24)				Year 2 (24/25)			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	dialogue, and management interventions.									
2.1	Assessment of ownership patterns (including gender roles), buyers/offtakes, buying terms and identification of where demand originates	3		X	X					
2.2	Cost-benefit-loss assessment of status quo farming methods is conducted, with projections of financial losses due to disease outbreak events	3		X	X					
2.3	Participatory assessment of current and future poultry-raising practices, including risk factors which may be associated with spillover or spillback, motivations behind these practices, and health issues in fowl to date	3		X	X					
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.									
3.1	Provide training of trainers to animal health authorities on detecting and responding to	2					X	X		

	Activity	No. of months	Year 1 (23/24)				Year 2 (24/25)			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	morbidity/mortality events in domestic poultry and wild birds.									
3.2	Train rangers to assist in detecting, reporting, and responding to wild bird morbidity/mortality events, and to collect data using SMART for Health tool.	3					X	X	X	
3.3	Perform active surveillance for AIV in domestic and wild birds prior to and during the historical months of the outbreak window (Feb – April)	4	X			X	X			
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.	19		X	X	X	X	X	X	X
Output 4	Practical, low-cost, and culturally acceptable measures that improve farm biosecurity, fowl husbandry, and livelihood security, are designed and implemented.									
4.1	Co-develop with communities simple, low-cost biosecurity measures and farming practices that reduce pathogen spillover/spillback risk (including HPAI) between domestic fowl and threatened waterbirds, ensuring equal gender contributions	9			X	X				

	Activity	No. of months	Year 1 (23/24)				Year 2 (24/25)			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
4.2	Conduct training for poultry farmers on the measures designed above	3			X	X	X			
4.3	Establish gender-balanced Committees who promote the measures from 4.1 within their communities encouraging broad adoption, and who monitor their uptake using a simple framework	21			X	X	X	X	X	X
4.4	Co-design livelihood safeguards (e.g. insurance funds) with priority communities to lessen economic impacts of domestic fowl disease events on farmers contingent on good farming practices	18			X	X	X	X	X	X

Project Title: Risk reduction of Highly Pathogenic Avian Influenza in Cambodia's wetlands

Project Summary	SMART Indicators	Means of Verification	Important Assumptions
Impact: To pilot new, scalable approaches to reduce risk of highly pathogenic avian influenza (HPAI) spillover negatively impacting globally threatened waterbird species, agricultural resilience, and local livelihoods in Key Biodiversity Areas (KBAs) in Cambodia. (Max 30 words)			
Outcome: (Max 30 words) Threats to waterbird biodiversity from HPAI are reduced through increased understanding of risk factors, improved poultry management, wildlife health surveillance, and strengthened agriculture and livelihood resilience around critical protected areas	0.1 Incidence of both wild and domestic bird illness and death are reduced around two critical wetlands (Boueng Sne & Boueng Prek Lapouv) by 2024 0.2 All detected events involving ill or dead wild birds around two wetlands are reported through the wildlife health surveillance network throughout project lifetime 0.3 Improved farming practices are designed, implemented, and evaluated by local committees around two wetlands by project end 0.4 Livelihood safeguards are designed and implemented around two wetlands by project end	0.1 Data shows a decreasing incidence morbidity and mortality rates among domestic and wild birds 0.2 All events are entered into the Wildlife Health Intelligence Platform and cross-checking the numbers with farmers and rangers is performed monthly 0.3 Target farms demonstrate modified farming practices consistently following implementation 0.4 Communities agree on safeguard design and roll out implementation	• Stakeholders are willingly and consistently collecting data on bird morbidity/mortality • Wild bird mortalities may go undetected within wetlands despite best efforts • Communities are willing to implement new farming practices • Outbreaks of HPAI may still occur despite project interventions, as it is realistic to assume only risk reduction can be achieved and not complete prevention
Outputs: 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	1.1 Data on key breeding and foraging areas for threatened waterbirds and their temporal use are gathered between the months of February to May 1.2 Ecological data is gathered and analyzed from 10 specific locations around each of Boueng Sne, and Boueng Prek	1.1 Data is collated into a data management platform (e.g. Excel) 1.2 Data is collated and analyzed to produce a report 1.3 A map is produced indicating locations of each farm, area of coverage, and farming methods 1.4 Target farms are listed for action	• Poultry will continue to be raised in these areas

around two critical protected areas	Lapouv, between the months of February to May 1.3 By Q3, poultry farm locations and methods are mapped across each waterbody through participatory engagement with farmers 1.4 Analysis of data collected from 1.1-1.3 above is conducted and at least 5 farmers for action per wetland are selected based on this data by Q3		
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.	2.1 Economic assessments of buyers/offtakes/demand and ownership patterns (including gender roles) conducted at each selected farm by Q4 by a contracted economist 2.2 By Q4, a cost-benefit-loss assessment of status quo farming methods vs. projections of financial losses due to outbreak events (based on past losses) is completed for each selected farm by a contracted economist 2.3 By Q4, a participatory assessment on current and future poultry raising practices (including gender roles) and respective motivations, risk factors for spillover/spillback, and health issues noted in fowl to date is conducted with each selected farmer	2.1 A profile of poultry farmers is produced in the form of a report, with entry points for interventions identified and gender data disaggregated 2.2 A comparison between status quo farming methods and projections of losses due to HPAI outbreaks is produced in the form of a report 2.3 A report is produced to inform gender-sensitive entry points for interventions/activities	• Stakeholders are willing to participate in assessments • Stakeholders provide accurate and true information • Results of assessments conclude that implementing interventions which may prevent HPAI spillover are more cost effective than maintaining status quo methods while facing mass mortality events

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.	3.1 Training of trainers provided to at least 10 animal health authorities on domestic and wild bird morbidity and mortality reporting and response 3.2 Provide training to at least 20 rangers to assist in detecting, reporting, and responding to wild bird morbidity/mortality events in key protected areas, and at least 2 rangers to collect data using SMART for Health, by Q7 3.3 Collect at least 50 samples per farm from domestic poultry and at least 50 from wild birds in each wetland to test for AIV throughout Feb – April each year. 3.4 Hold at least two final workshops by Q4 with One Health partners to finalize Cambodia's Wildlife Health Surveillance SOP and introduce it formally to the two wetlands by December 2023	3.1 List of attendees by gender with signatures 3.2 Written guidance is made available to stakeholders and records of reminders (emails, messages) are available 3.3 Sample data and diagnostic results are available on Wildlife Health Intelligence Platform 3.4 Ministry signature on SOP is obtained. Target farms/wetlands sign off on having received a copy with information disseminated.	• Government, rangers, and communities are willing to receive training • Farmers are willing to have technical teams sample poultry • Cambodia's government approves the final Wildlife Health Surveillance SOP into national policy
4. Practical, low-cost, and culturally acceptable measures that improve farm biosecurity, fowl husbandry, and livelihood security, are designed and implemented.	4.1 Work with priority communities to develop and promote simple low-cost biosecurity and animal management measures by Q3 that reduce the risk of spillover of HPAI from domestic fowl to threatened waterbirds. WCS will facilitate a process whereby communities design the activities themselves, ensuring equal contribution from women	4.1 Designs for interventions are created 4.2 Training record complete with attendee signatures 4.3 Committee lists are available disaggregated by gender; evaluation survey is designed and used to assess target farms 4.4 Livelihood safeguard plan is produced and signed by all participating communities;	• Communities willingly design, adopt, and implement the measures • Communities willingly and consistently implement safeguards • Implemented measures follow the "precautionary principle", mitigating pathogen spillover risk even in the absence of any documented outbreaks in these

	4.2 Conduct 2 trainings by Q5 for all selected poultry farms on the measures designed above 4.3 Two committees will be formed by Q4 and simple framework for evaluation of interventions will be co-created 4.4 Work with 2 priority communities to design livelihood safeguards (e.g. community insurance funds contingent on good farming practice) and roll out in each village by Q4	record evidence of safeguards practice is available	locations during the life of the project • Domestic poultry farming will continue in these key sites • If no additional HPAI occurs during the life of the project, protection for waterbirds and agricultural livelihoods will be achieved against other infectious disease threats beyond Avian Influenza Virus (AIV)

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. Each activity should start on a new line and be no more than approximately 25 words.)

Activities towards Output 1:

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

1.2 Collection of ecological data, temperature, weather, water parameters

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

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

Activities towards Output 2:

2.1 Assessment of ownership patterns (including gender roles), buyers/offtakes, buying terms and identification of where demand originates

2.2 Cost-benefit-loss assessment of status quo farming methods is conducted, with projections of financial losses due to disease outbreak events

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

Activities towards Output 3:

3.1 Provide training of trainers to animal health authorities on detecting and responding to morbidity/mortality events in domestic poultry and wild birds

3.2 Train rangers to assist in detecting, reporting, and responding to wild bird morbidity/mortality events, and to collect data using SMART for Health tool

3.3 Perform active surveillance for AIV in domestic and wild birds prior to and during the historical months of the outbreak window (Feb – April)

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.

Activities towards Output 4:

4.1 Co-develop with communities simple, low-cost biosecurity measures and farming practices that reduce pathogen spillover/spillback risk (including HPAI) between domestic fowl and threatened waterbirds, ensuring equal gender contributions

4.2 Conduct training for poultry farmers on the measures designed above

4.3 Establish gender-balanced Committees who promote the measures from 4.1 within their communities encouraging broad adoption, and who monitor their uptake using a simple framework

4.4 Co-design livelihood safeguards (e.g. insurance funds) with priority communities to lessen economic impacts of domestic fowl disease events on farmers contingent on good farming practices