
CV19RR\1032

Understanding post-COVID-19 illegal wildlife-based medicine consumption to inform effective interventions

We will compare our unique pre-COVID-19 baseline data to post-COVID-19 surveys and interviews with the public, consumers, and medical practitioners, to look at how bear bile consumption has changed in China during the pandemic. We will also collect data on pandemic-related consumption of key illegal wildlife-based medicines (e.g. tiger bone). This will identify high-risk consumer groups, who will participate in co-design workshops, developing prototype interventions to reduce illegal wildlife consumption in post-COVID-19 China, and in other countries with similar markets.

Section 1 - Contact Details

PRIMARY APPLICANT DETAILS

Title Dr
Name Amy
Surname Hinsley
Organisation University of Oxford
Tel (Work) [REDACTED]
Email (Work) [REDACTED]
Address [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

GMS ORGANISATION

Type	General
Name	University of Oxford
Phone	[REDACTED]
Email	[REDACTED]
Address	[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]

Section 2 - Project Title & Previous Applications

Q3. Project Title:

Understanding post-COVID-19 illegal wildlife-based medicine consumption to inform effective interventions

Q4. Existing project

Q4a. Does your organisation have an existing (or recently finished) project under either Darwin Initiative, Darwin Plus or Illegal Wildlife Trade Challenge Fund?

Yes

If yes, please list the project reference and title of relevant projects (e.g. 25-001, DPLUS090, IWT099).

Reference of current/recent project:

Title of current/recent project:

Q4b. Is this proposal directly relevant to one of the projects listed above? No**Section 3 - Countries, Dates & Budget Summary****Q5. Which Fund's objectives will your project most directly address? (please only select one)** Illegal Wildlife Trade Challenge Fund**Q6. Country(ies)****Which eligible country(ies) will your project be working in?**

Country 1	China	Country 2	<i>No Response</i>
Country 3	<i>No Response</i>	Country 4	<i>No Response</i>

Do you require more fields? No**Q7. Project dates****Start Date:**

01 January 2021

End date:

31 March 2021

Q8. Budget summary**Darwin/IWT Funding Request****Total request 2020/21:**

30,859.00

Please note all spending must fall between 1st January 2021 - 31st March 2021**Q8a. If any matched funding arrangements are proposed, please detail them here.**

Total: £ [REDACTED]

Amy Hinsley's salary and overheads are fully covered for the duration of the project (20% of her time):

£ [REDACTED]

Tien Ming Lee's salary is fully covered for the duration of the project (10% of his time): [REDACTED]

Section 4 - Project Outcome and Summary

Q9. Outcome

What is the expected Outcome of this project?

Post-COVID-19 consumption of illegal bear bile and other wildlife-based medicinal products is better understood, and decision-makers and conservation practitioners have the evidence needed to design effective interventions to reduce consumption.

Q10. Summary of project

Please provide a brief summary of your project, 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 GOV.UK.

We will compare our unique pre-COVID-19 baseline data to post-COVID-19 surveys and interviews with the public, consumers, and medical practitioners, to look at how bear bile consumption has changed in China during the pandemic. We will also collect data on pandemic-related consumption of key illegal wildlife-based medicines (e.g. tiger bone). This will identify high-risk consumer groups, who will participate in co-design workshops, developing prototype interventions to reduce illegal wildlife consumption in post-COVID-19 China, and in other countries with similar markets.

Section 5 - Project Partners

Q11. Project partners


Please list all the partners involved (including the Lead Organisation) and provide a summary of their roles. Please upload letters, emails or other confirmation of support from any new partners.


Lead Organisation name:	University of Oxford
Other partners involved:	Sun Yat Sen University (SYSU)
Summary of roles and responsibilities in project:	<p>Oxford will lead the project, design survey and interview methods, and analyse the data. They will also advise on co-design workshops, developing theories of change, and designing final prototype interventions.</p> <p>SYSU will co-lead the project, coordinate data-collection in China (including leading teams of local research assistants to carry out surveys in each province), facilitate links with TCM stakeholders and the National Forestry and Grassland Administration, and provide links for dissemination and discussion of results with Chinese decisions-makers.</p>

If you have not provided evidence of support from the Lead Organisation or partners above, please explain why: N/A

Please provide a combined PDF of letters of support from the lead organisation and partner(s) as relevant.

 [Final Letters of support](#)

 02/11/2020

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 pdf 444.68 KB

Section 6 - Project Staff

Q12. Project staff

Please identify the core staff on this project, their role and what % of their time they will be working on the project. Further information on who should be classified as core staff can be found in the guidance. Please provide a 1 page CV for the proposed Project Leader and any co-Project Leader if relevant.

Name (First name, surname)	Role	% time on project	1 page CV attached?
Amy Hinsley	Project Leader	20	Checked
Tien Ming Lee	Co-Lead	10	Checked
Diogo Verissimo	Behaviour change intervention expert	10	
Sifan Hu	Lead research assistant	50	

Do you require more fields?

No

Please provide 1 page CVs for the proposed Project Leader and any co-Project Leader listed above as a combined PDF.

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

Section 7 - Problem, Method and Change Expected

Q13. Problem the project is trying to address

Please describe the problem your project is trying to address in terms of Covid-19 and its impact on biodiversity or IWT and sustainable livelihoods. 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 an additional attached PDF document).

Highly-publicised links between the virus behind COVID-19 and the consumption of certain high-risk wild animals has brought issues of wildlife trade and health to the attention of people worldwide. The Chinese government acted quickly to ban consumption and trade of high-risk species used for food (e.g. civets) but little is known about how consumers view the risks from animal products used for medicine, which currently remain exempt from new restrictions. Some consumers may now prefer to use plant-based or synthetic medicines to avoid products made from species where the risks from zoonotic disease have been highly-publicised following the pandemic (e.g. pangolins). However, consumption of products such as bear bile, which was named as an ingredient in an official list of COVID-19 treatments, may have increased. Although legal bear bile farms exist in China there is also a market for illegal wild bile, and hunting for this trade is known to be widespread in Laos, Vietnam and Cambodia (Davis et al. 2016; Crudge et al 2020), representing a leading threat to the Asiatic black bear and sun bear across its range (Garshelis & Steinmetz, 2016). Past consumer studies (including our 2018 work) found that some see wild bile as more effective than alternative products, and may be particularly motivated to seek out these illegal products when facing severe illness (Dutton et al. 2011; Hinsley et al. in prep). Beyond bear bile, there are many other wildlife-based medicines that are traded illegally in China and in other countries around the world, but our knowledge of how consumer behaviour changes following an extreme event such as COVID-19 is poor. This means that current approaches to reducing illegal consumption of bear bile and other products may no longer be as effective, and an updated evidence-base is needed in order to design effective future interventions.

Q14. Methodology

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

- How you have analysed historical and existing initiatives and are building on or taking work already done into account in project design. Please cite evidence where appropriate.
- The rationale for carrying out this work and a justification of your proposed methodology.
- If relevant, how this project links to an ongoing Darwin/IWT project.
- How you will undertake the work (materials and methods).
- How you will manage the work (roles and responsibilities, project management tools etc.).

Projects should also consider how best they can address inequality, especially gender inequality, as per the existing guidance for each fund.

Please make sure you read the Guidance Notes, particularly Section 3, before answering this question.

Building on our strong baseline data collected in 2018 in China, we will use the same methods to provide a pre- and post-COVID-19 comparison. We aim to examine how consumer behaviour may have changed, identify potential reasons for these changes, and use our conclusions to design prototype interventions to reduce illegal trade. We will use the following methods:

- Public surveys with around 2000 respondents, 1000 each in Nanning (Guangxi) and Guangzhou (Guangdong). These provinces were chosen due to their proximity to international borders, and high-levels of illegal wildlife trade. Matching our original surveys, we will use trained teams of research assistants to survey people in public places, asking direct questions about bear bile and other wildlife use, indirect questions using the Unmatched Count Technique (which ensures anonymity and encourages honesty in questions related to illegal behaviour), plus additional questions about changes in wildlife consumption during and after COVID-19.

- Key-informant interviews with medical practitioners in Nanning and Guangzhou. Practitioners are key mediators in demand for wildlife products, and their experiences and views on how their own behaviour, and their patients', behaviour has changed post-COVID-19 will provide essential data for the design of interventions. Qualitative questions about prescription, patient requests, and perceptions of wild bear bile and other wildlife products (e.g. tiger bone) will provide in-depth details on changing consumption, and allow triangulation with quantitative public survey data. We will also use choice experiments to gather quantitative data on prescription behaviour.

- Online surveys to look at shifting preferences for wild products amongst real consumers. Often, conclusions about wildlife consumer behaviour are based on surveys with non-consumers, but to gain insights into how and why consumption has changed requires targeted work with real consumers of these products. As in 2018, we will apply choice experiments (an economics method to look at preferences underlying purchasing decisions) to gather quantitative data on how/why preferences for wild products may have changed. We will also add in questions about preferences for other wildlife products (e.g. tiger bone) consumed during and after COVID-19.

- Co-design workshops with the different groups identified by the above detailed consumer research to identify and define potential interventions to influence future purchase. Co-design processes are a quick way to generate consumer-centric intervention ideas and transform them into feasible prototype interventions. Co-design has its conceptual origin in the field of design thinking and has been successfully used in other areas of sustainability, but has yet to be applied in the context of the wildlife trade. Ensuring that consumers are at the heart of any intervention design process will be key in the context of wildlife-based medicine consumption, as the motivations behind this use are likely to be complex, and context as well as culturally specific.

- Meeting to present results and intervention designs to National Forestry and Grassland Administration (NFGA) policy-makers who focus on reducing illegal wild bear bile and other illegal wildlife trade. NFGA were involved in our 2018 project and support the aims of the repeated data-collection.

Q15. Change expected





Detail the expected changes 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). Please describe the changes for biodiversity/environment and for people in developing countries, and how they are linked. If you are proposing building on a current or past

project, be clear how additional benefits will be delivered through this project.

When talking about people, please remember to give details of who will benefit and the number of beneficiaries expected. The number of communities is insufficient detail – number of households should be the largest unit used. If possible, indicate the number of women who will be impacted.

COVID-19 may have dramatically changed wildlife consumption, and its links with health may have altered how people view wildlife-based medicines. Therefore, current interventions to reduce illegal trade in these products may no longer focus on the drivers of consumption that are most pertinent, and may use messaging that will be ineffective at changing behaviour in a post-COVID-19 world. The change we expect to see within the project timescale is an improvement of our understanding of wildlife-based medicine consumption and how consumers react to extreme shocks such as a global pandemic. We will also analyse our data to draw conclusions on how new patterns of consumer behaviour can be considered when designing interventions to reduce illegal wildlife consumption, and demonstrate the co-design process for intervention design for the first time in wildlife trade work, involving real consumers in developing effective interventions. In the longer term, this deeper understanding of consumption and our evidence-based prototype intervention designs will inform how conservation practitioners and policy-makers in China and elsewhere design interventions to reduce the illegal wildlife trade. This will improve the effectiveness of interventions to reduce illegal trade in products that threaten wild species used in medicine, which includes diverse species of animals, plants and fungi.

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

-
-  [References](#)
 -  02/11/2020
 -  10:54:23
 -  pdf 30.52 KB

Section 8 - Aims, Objectives and Exit Strategy

Q16. Aims and objectives

Clearly outline the aim and objectives of the project and how the achievement will be measured. Use SMART objectives if possible.

Aim

To improve understanding of how consumption of wildlife-based medicines may have changed post-COVID-19, and how conservation interventions may need to change to account for this.

Objectives

- Carry out surveys with at least 2000 members of the public in two Chinese provinces (measure of success: number of completed surveys)
- Carry out key-informant interviews with at least 50 medical practitioners (measure of success: number of completed interviews)
- Carry out targeted consumer surveys online with at least 1000 respondents (measure of success: number of surveys completed)
- Conduct at least two co-design workshops with consumer and practitioner groups (measure of success: number of workshops completed)
- Develop two prototype evidence-based intervention designs with clear theory of change for each (measure of success: 2 x theory of change and prototype intervention designs)

- Communicate our findings to policy makers and practitioners in China and elsewhere (measure of success: meeting to present and discuss findings with Chinese NFGA; policy brief and journal articles produced).

Q17. Exit strategy

State how the project will reach a stable and sustainable end point, and explain how the outcomes will be sustained, either through a continuation of activities, funding and support from other sources or because the activities will be mainstreamed in to “business as usual”.

Findings will be written up into a report to practitioners and policy-makers in both Chinese and English, and used as the basis for discussion about future management of illegal bear bile and other wildlife consumption with collaborators in the National Forestry and Grassland Administration (NFGA) in China. These products are also used and traded illegally in neighbouring countries such as Vietnam, Cambodia, Laos and Nepal, and we will share our report along with recommendations on how post-COVID-19 interventions should be structured with NGOs and other actors working to reduce consumption of these products. Our 2018 surveys were part of an international collaboration between IUCN and NFGA to look at the sustainability of bear bile consumption, and our updated data will also feed into policy reports for this project to the IUCN World Conservation Congress (date to TBC in 2021). We will also use the data to publish at least two open-access academic papers detailing changes in consumption and implications for evidence-based intervention design, so that this knowledge is freely available in a peer-reviewed format. The prototype interventions will form the basis of a real intervention that will be implemented in China in 2021, once funding has been secured.

Section 9 - Budget

Q18. Budget

Provide a detailed breakdown of costs to be funded by the Darwin Initiative/Darwin Plus/IWT Challenge Fund in GBP.

See [Finance for Darwin/IWT](#) for which costs sit under which budget line.

Budget Line	Cost in £ (GBP)
Staff costs	██████████
Consultancy costs	0
Overhead costs	██████████
Travel and subsistence	██████████
Operating costs	██████████
Capital equipment*	██████████
Other costs	██████████

Total (Must be less than or equal to £60,000) 30,859.00

***If you are proposing to purchase any capital items over £1,000 please detail these here and provide justification below** N/A

Q19. Financial Risk Management

This question considers the financial risks to the project. Explain how you have considered the risks and threats that may be relevant to the successful financial delivery of this project. This includes risks such as fraud or bribery, but may also include the risk of fluctuating foreign exchange and internal financial processes such as storage of financial data.

The University of Oxford has anti-bribery and anti-fraud policies that clearly set out standards for staff members to ensure that all work is carried out in an open, fair, legal and honest way. It includes specific guidance on how to assess risks from bribery and fraud, and it encourages staff members to carry out this process at both the start and during project implementation. We have been through this process for this project. Oxford defines as high-risk any projects in China that are >12 months in length, especially when it involves gaining permissions from government or government-organised groups (as China is 'high risk' according to Transparency International Corruption Perceptions Index). As this would be a short-term project with existing partners and government collaborators who we have an established relationship with, the risk is reduced significantly. To mitigate risks from fluctuating foreign exchange rates, we have designed our budget using exchange rates to Chinese Yuan that consider the current market uncertainty.

Q20. Capital items

If you plan to purchase capital items with Darwin/IWT 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.

We have budgeted █████ to renew licenses on choice experiment design software (Ngene). After the project the software will be used to design follow-up surveys for the post-project implementation of the co-designed interventions, which will form part of M&E and ensure the continuation of the project's aims.

Q21. Value for Money

Please describe why you consider your application to be good value for money including justification of why the measures you will adopt will secure value for money.

With existing in-country networks, tested methodologies, and protocols in place to rapidly replicate and build on our original studies, we are in a unique position to gather the data needed to understand how the situation has changed, while also ensuring that data-collection is efficient and cost-effective. In addition, co-financing for salaries from the UK and China are in place, meaning that lead staff members' time on the project is funded 100% by their organisations/institutions. This covers their time to coordinate data collection and analyse data. Our main costs will be payments, transport and subsistence costs for a lead research assistant (Sifan Hu) to manage fieldwork and survey teams, and payments for large teams of

trained field researchers to collect the data. We have included costs for organisation, translation and facilitation costs at two co-design workshop with target consumers, which will be a cost-efficient way to produce evidence-based prototype interventions that will be made widely available to practitioners and policy-makers.

Section 10 - Ethics and Safeguarding

Q22. Ethics

Outline your approach to meeting Darwin/IWT's key principles for ethics as outlined in the guidance note. Additionally, are there any human rights and/or international humanitarian law risks in relation to your project? If there are, have you carried out an assessment of the impact of those risks, and of measures that may be taken in order to mitigate them?

Our project has been co-designed with Chinese partners and will be implemented with support from our contacts in the TCM industry. The team has extensive experience researching illegal wildlife consumption in China and will apply tried-and-tested strategies for preventing risk to participants and researchers. All data collection will be carried out with full prior informed consent, and will be subject to the University of Oxford's Central University Ethics Committee approval process. This process involves multiple rounds of review by ethics experts in relevant fields, to ensure that all possible measures are taken to protect researchers, participants and project staff members.

Q23. Safeguarding

Projects funded through the Darwin Initiative/IWT Challenge Fund 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. The award Terms and Conditions set out clear requirements on safeguarding. Please confirm you have read and understand these and that you comply with them all.

Checked

Section 11 - Key Milestones

Q24. Provide an overview of your proposed project, outlining key milestones.

N.B. This should cover the period of your requested project only and the start/end dates should match with those provided in Question 7.

Date	Key Milestone
01 January 2021	START

14 January 2021	Public surveys, practitioner interviews and online surveys begin.
28 February 2021	All data analysed. Target groups for co-design workshops identified.
15 March 2021	Co-design workshops completed.
29 March 2021	Prototype interventions and theories of change completed
31 March 2021	Results and intervention designs presented to decision-makers in the National Forestry and Grassland Administration and communicated to relevant stakeholders.
<i>No Response</i>	<i>No Response</i>
<i>No Response</i>	<i>No Response</i>
<i>No Response</i>	<i>No Response</i>
<i>No Response</i>	<i>No Response</i>
<i>No Response</i>	<i>No Response</i>
<i>No Response</i>	<i>No Response</i>
<i>No Response</i>	<i>No Response</i>
31 March 2021	FINISH

Section 12 - Certification

Q25. FCDO notifications

Please check the box 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/IWT competition in the host country.

Unchecked

Please indicate whether you have contacted your Foreign Ministry or the local embassy or High Commission (or equivalent) directly to discuss security issues (see Guidance Notes) and attach details of any advice you have received from them.

- Yes (no written advice)
- Yes, advice attached
- No

Q26. Certification

On behalf of the

Company

of

University of Oxford

I apply for a grant of





£30,859.00

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 a CV for the Project Leader/co-PL and letters or confirmation of support (uploaded at appropriate points in application)

Checked

Name	Zoë Lee
Position in the organisation	Research Funding Manager, Research Services
Signature (please upload e-signature)	 CV19RR_1032-2 signed  02/11/2020  11:45:38  pdf 328.74 KB
Date	31 October 2020

Section 13 - Submission Checklist

Checklist for submission

	Check
I have read the Guidance, including the “Guidance Notes for Applicants” and “Finance for Darwin and IWT Challenge Fund”.	Checked
I have read, and can meet, the current Terms and Conditions for the relevant fund.	Checked
I have provided actual start and end dates for my project.	Checked
I have provided my budget in GBP.	Checked
The application has been signed by a suitably authorised individual (clear electronic or scanned signatures are acceptable).	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 included a 1 page CV for the Project Leader (and co-Project Leader if relevant).	Checked
I have included a letter or electronic confirmation of support from the lead organisation and main partner organisation(s) identified at Question 11, or an explanation of why not.	Checked
I have checked the website on GOV.UK immediately prior to submission to ensure there are no late updates.	Checked
I have read and understood the Privacy Notice on GOV.UK.	Checked

Data protection and use of personal data

Information supplied in this application form, including personal data, will be used by Defra as set out in the latest copy of the Privacy Notice for Darwin, Darwin Plus and the Illegal Wildlife Trade Challenge Fund available [here](#). 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 organisation, location, and total grant value) on the GOV.UK and other websites.

Information relating to the project or its results may also be released on request, including under the 2004 Environmental Information Regulations and the Freedom of Information Act 2000. However, Defra will not permit any unwarranted breach of confidentiality nor will we act in contravention of our obligations under the General Data Protection Regulation (Regulation (EU) 2016/679).