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# **CV19RR\1031**

## **Green Health and Covid-19**

The pandemic impacted on the livelihood of indigenous partners, increasing food insecurity while increasing wildlife hunting and gathering. This emergency response aims to create local jobs for project participants, generating income covering a year's supply of food staples. Local jobs will include:

- Gathering seeds of local species through forest transect walks;
- Planting and nurturing of seeds in a local ethnobotany garden;
- Research the adaptations families make to food gardens
- Documenting traditional medicine used for respiratory syndromes

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## Section 1 - Contact Details

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### PRIMARY APPLICANT DETAILS

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**Title** Prof  
**Name** Michael  
**Surname** Heinrich  
**Organisation** University College London  
**Tel (Work)** [REDACTED]  
**Email (Work)** [REDACTED]  
**Address** [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

### GMS ORGANISATION

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Type	General
<b>Name</b>	ucl
<b>Phone (Work)</b>	[REDACTED]
<b>Email</b>	[REDACTED]
<b>Address</b>	[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]

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## Section 2 - Project Title & Previous Applications

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### Q3. Project Title:

Green Health and Covid-19

### 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:**

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**Q4b. Is this proposal directly relevant to one of the projects listed above?**

Yes

**If yes, please list the relevant project reference and title.**

26-005 Green Health: improving indigenous participation through the CBD's ABS

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## Section 3 - Countries, Dates & Budget Summary

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**Q5. Which Fund's objectives will your project most directly address? (please only select one)**

Darwin Initiative

**Q6. Country(ies)**

**Which eligible country(ies) will your project be working in?**

<b>Country 1</b>	Guatemala	<b>Country 2</b>	<i>No Response</i>
<b>Country 3</b>	<i>No Response</i>	<b>Country 4</b>	<i>No Response</i>

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**Do you require more fields?**

No

**Q7. Project dates**

**Start Date:**

01 January 2021

**End date:**

31 March 2021

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**Q8. Budget summary**

**Darwin/IWT Funding Request**

**Total request 2020/21:**

54,255.83

***Please note all spending must fall between 1st January 2021 - 31st March 2021***

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**Q8a. If any matched funding arrangements are proposed, please detail them here.**

Matched funding includes the time of the PI ( ) of the co-PI ( ) and of one investigator as well as all the associated costs of the institution including overheads, and running costs.

## Section 4 - Project Outcome and Summary

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### Q9. Outcome

#### What is the expected Outcome of this project?

Recuperate food security and improve livelihoods of indigenous partners affected by Covid-19 supporting the restart of fieldwork, through research on traditional medicine and biodiversity's roles as coping mechanisms.

### 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.

The pandemic impacted on the livelihood of indigenous partners, increasing food insecurity while increasing wildlife hunting and gathering. This emergency response aims to create local jobs for project participants, generating income covering a year's supply of food staples. Local jobs will include:

- Gathering seeds of local species through forest transect walks;
- Planting and nurturing of seeds in a local ethnobotany garden;
- Research the adaptations families make to food gardens
- Documenting traditional medicine used for respiratory syndromes

## Section 5 - Project Partners

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### 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:** UCL (School of Pharmacy)

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**Other partners involved:** Universidad del Valle de Guatemala (UVG)  
Asociación de Consejos de Guías Espirituales Releb'aal Saq'e'  
(ACGERS)

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**Summary of roles and responsibilities in project:** UVG will supervise all activities in the field for the duration of the three-month intervention, including the design of research instruments, training of indigenous partners, supervision and processing of data collection, implementation of garden, data analysis and synthesis.  
UCL will coordinate the activities including the reporting and provide scientific oversight for the research part of the project

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

See the enclosed letter by Prof. Todd. Based on the guidelines, we did not include a letter by UVG, who are fully supporting this application

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

 [MH Let Darwin fund tbs MTsgnd301020](#)

 31/10/2020

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 pdf 90.93 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?
Michael HEINRICH	<b>Project Leader</b>	12	Checked
Mónica Berger-Gonzalez	Co-project leader	25	Checked
Francesca Scotti	Researcher	20	
Daniela Ochaita	Ethnographer (aid documenting traditional medicine role in pandemic)	100	

**Do you require more fields?**

Yes


Name (First name, surname)	Role	% time on project
Ana Isabel Garcia	Ethnobotanist (documenting species)	100


No Response	No Response	0
No Response	No Response	0
No Response	No Response	0
No Response	No Response	0
No Response	No Response	0
No Response	No Response	0
No Response	No Response	0

**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.**

 [CVS-Joint-10-20](#)

 29/10/2020

 02:57:35

 pdf 332 KB

## **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).**

The Covid-19 pandemic caused a major halt to formal and informal economic activities in Guatemala, hitting particularly hard already impoverished rural communities (<https://soy.usac.edu.gt/?p=11962>), more so those depending on tourism, such as Petén, where our team was developing the Green Health project. An initial assessment conducted in August 2020 by UVG showed that of the 83 families participating with the ACGERS Council, two thirds could not procure more than one formal meal a day. With the suspension of classes in the public sector, many children also lost the free meal the Ministry of Education provided, pushing further food and nutritional insecurity (ForbesCA, 2020). Activities listed by ACGERS families as coping mechanisms affecting biodiversity included increased hunting and plant collection activities in the surrounding forests, adaptation of family gardens to include more local species of food plants, and increased visits to local traditional Ajilonel (medicine men) to treat respiratory illness (UVG, internal GH report 2020). Local families fear traveling to official health posts for the increased chance of contracting coronavirus, making traditional medicine (and involved plants) increase in demand. Overall, the pandemic has pushed families' livelihood strategies to increase the burden on the surrounding forest, pushing poaching and hunting activities with negative impacts on biodiversity forward, while at the same time creating incentives to augment the number of local species brought closer to home to increase production in local gardens and for use as medicines. Unless additional income can be quickly generated for these

families to recuperate the negative balance in food availability, the impacts on malnutrition and worsened livelihood conditions will have long-term effects. This presents an opportunity to create synergies between urgent income generation and participatory research to understand the role of traditional Q'eqchi' knowledge in biodiversity use for medicinal as well as food security strategies.

## 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.**

The ongoing Green Health project is conducting transdisciplinary (TD) research with the Maya Q'eqchi' families of the ACGERS Council of Elders, having already engaged local partners in 18 months of participatory methodologies to document plant species relevant in ethnomedical practice. This TD orientation has installed capacity among Q'eqchi' men and women to conduct complex and systematic research, upon which this proposal builds. Gender equity has been monitored from the start, setting rules for equal participation and decision-making processes and promoting culturally appropriate activities for men and women, that guarantee a curving of male-oriented and gerontocratic behaviour. This focus will continue to be applied throughout this emergency response project by ensuring that an equal number of male and female household heads participate in the income-generating strategies proposed here. All activities will be paid equally, at a rate of 20 pounds per completed task (1-1.5 days per task), allowing each individual a maximum of 30 tasks for the duration of this project. This means a family head can earn up to 600 pounds in the trimester, enough to guarantee a supply of corn, beans, oil, etc. for an entire year. We plan to organize four activity clusters lead by a team in UVG in coordination with the Board of ACGERS Council, to allocate participating families as follows:

Cluster 1: Younger women and men working in seed collection strategies. Led by the ethnobotanic expert and Q'eqchi' 'forest keepers', transect walks into the forest will target the collection of seeds from several native species of trees that have been identified earlier as desirable (cultural, commercial or biodiversity value) for production in the Council's plant nursery.

Cluster 2: Older women tending to the plant nursery and garden. Led by UVG's agricultural engineer, older women not able to go on transect walks will work with the collected seeds and aid in the preparation of seedlings in the plant nursery, as well as in the planting and tending of the permanent botanical gardens in the Council's headquarters.

Cluster 3: Older men working on researching family strategies to plant expanded food gardens. Older men knowledgeable in local agricultural strategies will research and document ongoing strategies of Q'eqchi' families developing new types of food gardens, led and supervised by the team's ethnographer. Using a specific instrument to record space-utilization in a family plot, the research will include documenting

species, reasons for choosing certain combinations and uses of each species.

Cluster 4: Specialized medicine men and women (Ajilonel, midwives) documenting their medical practices to treat respiratory illness. Led by the medical anthropologist at UVG, we will use an existing instrument (cultural epidemiology booklet) to train the local medicine men and women into documenting all services given in a trimester to patients seeking their services, particularly focusing on respiratory syndromes. Plants will be described thoroughly and a minimum of one transect walk will be carried to collect unknown specimens for identification.

UVG will systematize all data to produce a report and contribute to ongoing research questions.

## 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.**

The intervention is needed in order to restart the activities planned in the project 'Green Health', since the pandemic caused considerable economic and social problems impacting on the participants' ability to participate. It will directly reverse the negative trend on food insecurity and deteriorating livelihoods of indigenous, rural, poor families brought by the pandemic, by ensuring access to income generating strategies that will guarantee a year of food supplies as per the local diet main staples (corn, beans, oil, salt, baby chicks to raise).

Secondly, two jobs clusters will generate valuable data on the coping mechanisms of Q'eqchi' families as they relate to the use of biodiversity for increasing food options in family plots, and in the role of traditional medicine in coping with constraints posed by the pandemic. The former refers not only to the specific trends to treat respiratory illness that may include Covid-19 cases, but also on the general relevance of traditional medicine when facing a national collapse of the public healthcare facilities.

Thirdly, the other two job clusters will offer a direct response to conservation by creating a biodiverse plant nursery with local species that will produce enough seedlings to aid in regional reforestation programs our current project is already in contact with.

We expect to directly benefit 80-90 families participating in the conservation and research activities of the Green Health project, encompassing a total of about 990 people, since each family has 10-11 members on average (USP, 2018). At least 15% of these families are single-parent households led by women, which means that more female household heads will be benefitted through this project. Incentives paid to participating families providing data on garden strategies, may increase the number of direct beneficiaries by about 70 more families, albeit receiving a smaller amount of funds.

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

*No Response*

## Section 8 - Aims, Objectives and Exit Strategy

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## 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 recuperate food security and improve livelihoods of indigenous partners affected by Covid-19, through creating local jobs in conservation and research on traditional use of biodiversity.

Objectives:

1. To generate enough additional income for local Q'eqchi' families working in the Green Health project, to guarantee food security for one year.
2. To conduct participatory research with Q'eqchi' specialists to understand local use of biodiversity in food production strategies.
3. To generate evidence on the role of traditional medicine to face the Covid-19 pandemic in the study region.
4. To kick-start a nursery of local plant species capable of producing seedlings for aiding ongoing reforestation campaigns.

Measurement of achievements:

Obj1: A minimum of 80 Q'eqchi' household heads participate in income generating strategies. A minimum of 700 people are directly benefited by increasing access to urgently needed food resources.

Obj2: A minimum of 50 family plots are documented for strategies on improving biodiversity of food sources.

Obj 3: A minimum of 20 healers document two months of patient attention in the cultural epidemiology booklets. All plant species described in the respiratory syndromes are identified at least in an ethnographic archive.

Obj 4: At least 4 transect walks are conducted and a minimum of 2000 seeds of 20 local species of trees and useful plants are gathered. A minimum of 1000 seedlings are planted for production in a local plant nursery created for this purpose.

## 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".**

The proposed intervention was jointly identified by local partners in UVG and the ACGERS Council because of the potential to facilitate ongoing activities for which the Q'eqchi' families are already committed.

Outcomes related to the establishment of a plant nursery will add on to existing plans of the Council for which there was only partial funding. The seedlings to be produced are expected to be used in reforestation efforts in the Poptun region for which individual families of the Council are a part of, which has prompted the Council itself to support efforts as an institution.

Outcomes related to the generation of evidence on the role of traditional medicine and of the knowledge on biodiversity use to increase food sources, will be extremely valuable for ongoing efforts of this consortium. Not only for advancing science, but for promoting local adaptation strategies that value biodiversity and that may act as incentives to push the agenda on conservation, as well as for documenting Q'eqchi' biodiversity use for potential development of ABS initiatives.

## Section 9 - Budget

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### 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)
<b>Staff costs</b>	██████████
<b>Consultancy costs</b>	██████████
<b>Overhead costs</b>	0
<b>Travel and subsistence</b>	██████████
<b>Operating costs</b>	██████████
<b>Capital equipment*</b>	0
<b>Other costs</b>	██████████
<b>Total (Must be less than or equal to £60,000)</b>	54,256.00
<b>*If you are proposing to purchase any capital items over £1,000 please detail these here and provide justification below</b>	---

## 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.**

Since the local partner UVG has already been managing prior Darwin funding successfully, we see no risk or fraud, bribery or lack of capacity to manage the fund. Final payments will be made once the aims as defined in the milestones have been reached by ACGERS - the Council- Maya herbalists. It is foreseen that 50 fam/elders at day rate of ██████ £, for 30 days each will receive these funds, based on the supply of seeds and samples.

We see the risk that UCL will not be able to allocate funds in Guatemala on a timely manner to guarantee that UVG can indeed execute all funds within the three-month period, since prior experience has shown that internal UCL procedures are extremely complicated and can take up to 5 months to transfer funds successfully abroad. We now have a clear understanding what went wrong in the first half of 2020 and UCL has taken measures to ascertain that this is not being repeated. Importantly all funds will be transferred in US\$

## 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.**

No capital items will be bought.

## 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.**

This is an emergency response to offer relief to populations severely affected by the Covid-19, which is why that most of the funds are directly allocated to guarantee food security for these families in order to counteract predatory practices in the surrounding forest. After evaluating over a dozen different possibilities for measuring the best value for money, we concluded that the four presented here are the ones where we achieve the largest impact (measured as positive impact on livelihoods and positive impact on conservation efforts) with the least amount of resources. We will be able to produce four milestones with large amounts of evidence and concrete impacting actions, in little time, thank's to our focus on participatory approaches that focus added value amongst local Maya partners in the Peten region.

## Section 10 - Ethics and Safeguarding

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### 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?**

The ethical considerations are the same as for the project Green Health and the mechanisms implemented within this project will be used. UVG has an IRB that supervises all activities conducted with human subjects within research or applied projects. Green Health project already has an ongoing approved protocol, which will make it easier to present an addendum with the new activities to guarantee that all principles for ethics are met, particularly when involving indigenous groups that are considered vulnerable populations.

### 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

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## 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.**

<b>Date</b>	<b>Key Milestone</b>
01 January 2021	START
15 February 2021	2000 seeds have been collected and are safeguarded in the ACGERS repository.
31 March 2021	1000 seedlings of native species produced in the local plant nursery.
31 March 2021	Report: Results of the adaptation strategies for increasing biodiversity of food plants in family gardens, and of the role of traditional medicine during the pandemic.
<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>
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<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

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### 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.**

No

### Q26. Certification

**On behalf of the**

Company

**of**

University College London

**I apply for a grant of**

£54,255.83

**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** Michael Heinrich

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**Position in the organisation** Prof

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**Signature**  
**(please upload**  
**e-signature)**

 [Darwin Rapid Response Q26-Confirmation](#)  
 30/10/2020  
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**Date** 30 October 2020

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## Section 13 - Submission Checklist

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### Checklist for submission

	<b>Check</b>
<b>I have read the Guidance, including the “Guidance Notes for Applicants” and “Finance for Darwin and IWT Challenge Fund”.</b>	Checked
<b>I have read, and can meet, the current Terms and Conditions for the relevant fund.</b>	Checked
<b>I have provided actual start and end dates for my project.</b>	Checked
<b>I have provided my budget in GBP.</b>	Checked
<b>The application has been signed by a suitably authorised individual (clear electronic or scanned signatures are acceptable).</b>	Checked
<b>(If copying and pasting into Flexi-Grant) I have checked that all my responses have been successfully copied into the online application form.</b>	Checked
<b>I have included a 1 page CV for the Project Leader (and co-Project Leader if relevant).</b>	Checked
<b>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.</b>	Checked
<b>I have checked the website on GOV.UK immediately prior to submission to ensure there are no late updates.</b>	Checked
<b>I have read and understood the Privacy Notice on GOV.UK.</b>	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).