
DIR25S2\100016

Green Health: improving indigenous participation through the CBD's ABS mechanisms.

With limited access to biomedicine, herbal medicines (based on indigenous healthcare practices) remain a vital part of Guatemala's socio-natural capital. Biodiversity loss hinders access, while marginalization excludes traditional knowledge holders from benefits. Through a transdisciplinary platform involving indigenous groups, government, academia, and the private sector, we collaboratively research Mayan medical use of biodiversity, develop mechanisms protecting this knowledge, augmenting access and sustainable use, assessing its potential, and defining mechanisms for benefit sharing to increase health and prosperity of marginalized groups.

PRIMARY APPLICANT DETAILS

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Section 1 - Contact Details

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GMS ORGANISATION

Type	Organisation
Name	University College London
Phone	
Email	
Address	

Section 2 - Title, Dates & Budget Summary

Q3. Project title:

Green Health: improving indigenous participation through the CBD's ABS mechanisms.

What was your Stage 1 reference number? e.g. DIR25S1\100123

Q4. 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	Guatemala	Country 2	No Response
Country 3	No Response	Country 4	No Response

Do you require more fields?

☒ No

Q5. Project dates

Start date:	End date:	Duration (e.g. 2 years, 3 months):
01 April 2019	31 October 2021	31 months

Q6. Budget summary

Year:	2019/20	2020/21	2021/22	Total request
Amount:	£127,585.00	£114,498.00	£80,885.00	£ 322,968.00

Q6a. Do you have proposed matched funding arrangements?

☒ Yes

What matched funding arrangements are proposed?

There will be a direct in kind contribution by the UCL School of Pharmacy (covering 10% of the staff time of the PI and matched funding by the UVG. UCL is claiming for the overheads as stipulated in the guidelines. The remainder of the overheads, at Full Economic Cost, are also a matched funding contribution from UCL. UVG's contribution includes both their own funds as well as funds secured through the R&D programme. Dr. M. Hitziger's time on the project will be funded by the CITES Office, while his flights and accommodation costs will be charged to the project.

Q6b. Proposed (confirmed and unconfirmed) co-financing as % of total project cost 38.7

Section 3 - Project Summary

Q7. 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](#). Please write this summary for a non-technical audience.

With limited access to biomedicine, herbal medicines (based on indigenous healthcare practices) remain a vital part of Guatemala’s socio-natural capital. Biodiversity loss hinders access, while marginalization excludes traditional knowledge holders from benefits. Through a transdisciplinary platform involving indigenous groups, government, academia, and the private sector, we collaboratively research Mayan medical use of biodiversity, develop mechanisms protecting this knowledge, augmenting access and sustainable use, assessing its potential, and defining mechanisms for benefit sharing to increase health and prosperity of marginalized groups.

Section 4 - Lead Organisation Summary

Q8. Lead organisation summary

Has your organisation been awarded a Darwin Initiative award before (for the purposes of this question, being a partner does not count)?

☒ Yes

If yes, please provide details of the most recent awards (up to 6 examples).

Reference No	Project Leader	Title
14029	Anson Mackay	Monitoring and Simulating Threats to Aquatic Biodiversity in the Okavango
EIDPR013	Martin Todd	Simulating potential future threats to biodiversity in the Okavango Delta
5093	Roger Flower	Darwin Initiative for Lake Baikal Diatoms
14047	James Mallet	Tropical Andean Butterfly Diversity Project
No Response	No Response	No Response
No Response	No Response	No Response

Have you provided the requested signed audited/independently examined accounts? If you select "yes" you will be able to upload these. Note that this is not required from Government Agencies.

☒ Yes

Section 5 - Project Partners

Q9. Project partners

Please list all the partners involved (including the Lead Organisation) and explain their roles and responsibilities in the project. Describe the extent of their involvement at all stages, including project development.

This section should illustrate the capacity of partners to be involved in the project. Please provide Letters of Support for each partner or explain why this has not been included.

N.B. There is a file upload button at the bottom of this page for the upload of a cover letter (if applicable) and all letters of support.

Lead Organisation name:	UCL School of Pharmacy
Website address:	https://www.ucl.ac.uk/pharmacy/
Details (including roles and responsibilities and capacity to engage with the project):	<p>UCL will contribute with expertise relating to ethnobotanical fieldwork and the assessment of the species in terms of their safety. It is not within the remits of the project to provide an assessment of the species evidence-base in terms of their use, it is essential to ascertain that the species included can be considered as safe. The coordination of all activities, reporting of the research outcomes and financial matters to the funding are another core task of the UCL team.</p> <p>The daily activities will be led by an experienced postdoc, who has experience in research on medicinal plants. We anticipate that MSc and MPharm students will contribute to the projects (ca 1 – 3 per year) and these will be supervised by the postdoc.</p> <p>MH will oversee the entire project and monitor its progress. With his background in anthropology and pharmaceutical biology / ethnopharmacology he will coordinate the activities and help in the intercultural communication in order to develop the anticipated outcomes. He will oversee risk management, and will solve any wider problems, will communicate the key outcomes to a wider audience in the UK (outreach) and will lead the scientific dissemination.</p>

Have you included a Letter of Support from this organisation? ☒ Yes

Have you provided a cover letter to address your Stage 1 feedback? ☒ Yes

Do you have partners involved in the Project?

☒ Yes

1. Partner Name: UVG (Universidad del Valle de Guatemala)

Website address: <http://web.uvg.gt/>

Details (including roles and responsibilities and capacity to engage with the project): UVG will conduct most of the fieldwork activities (in coordination with UCL). Based on social-sciences and ethnobotanical experience in similar endeavours (Berger et al., 2016; <https://www.youtube.com/watch?v=IfVQnsqLbas&feature=youtu.be>), it will design, conduct and document the transdisciplinary process to negotiate Nagoya implementation with local stakeholders, through its Center for Health Studies. UVG staff will also conduct the ethnographic research with the Maya communities involved, research targeted plant species distribution and their ecosystems, collect and prepare specimens for the ethnobotanical collection, identify species at their city herbarium (Hitziger et al., 2016), and produce new geo-referenced datasets for discussions of potential protected areas with government authorities (GIS unit). For the reconstruction of medicinal case studies involving human subjects, UVG will obtain approval from a Guatemalan ethics committee, and run the medical case reconstruction with support of a medical anthropologist and an MD to ensure compliance with IRB guidelines (cf Hitziger, Berger et al., 2017; Zinsstag et al. 2018). UVG's Center for Biodiversity and Environmental research will support activities related to implementation of areas for artificial reproduction of selected species, in response to agreements with Maya communities involved. UVG will coordinate all ABS negotiations with consortium partners and co-produce lay and scientific publications.

Have you included a Letter of Support from this organisation? ☒ Yes

2. Partner Name: Indigena Biodiversity Limited

Website address: www.indigena.ltd

Details (including roles and responsibilities and capacity to engage with the project):

Indigena Biodiversity is a company that facilitates the development of naturally-occurring materials. Using expertise in intellectual property and commercialization, the company mission is to help biodiversity-rich countries to benefit from their local genetic resources.

In order to achieve that objective, Indigena acts as a foreign partner for countries of origin, to identify and develop naturally occurring genetic materials, which may have commercial potential. Whenever possible Indigena seeks opportunities to create intellectual property, as a basis for higher value commercialization.

As part of its activities, Indigena builds local collaborations and relationships, in order to tackle cultural misunderstandings and legal hurdles.

In the company operations, we follow the principles of the Convention on Biological Diversity (CBD) and the Nagoya Protocol. That includes obtaining Prior Informed Consent, applying for Access Permits and negotiating Mutually Agreed Terms with all stakeholders. Indigena ensures that a share of any benefit from the commercialization of products derived from plant material is returned to country of origin. We have built up considerable practical expertise in the national operation of these conventions, in particular in Central America.

Have you included a Letter of Support from this organisation?

☒ Yes

3. Partner Name:

CITES

Website address:

<https://www.cites.org/>

Details (including roles and responsibilities and capacity to engage with the project):

CITES is mandated to ascertain the sustainable use of biodiversity through regulating international trade in endangered species. CITES regulates trade in endangered species, based on findings of legal acquisition, and non-detriment (NDF) of such trade to the survival of the species' populations in the wild. NDF's are derived from science-based assessment procedures, conducted by Scientific Authorities in each state that is a Party to CITES. The CITES provisions for conducting NDF's include stipulations to comprehensively consider biological vulnerabilities of each species, population status and trends, overall threats to its survival, as well as existing population monitoring and management. CITES specifically invites the consideration of pertinent knowledge and expertise of local and indigenous communities in assessing, monitoring and managing species populations. It is also mandated to enable benefits to the livelihood of local populations through the sustainable use of biodiversity and envisions the implementation of these aspirations through participation and adaptive governance, as laid down in the Addis Abbeba principles. To enable a case study of the inclusion of indigenous knowledge into CITES decision making processes, the project consortium will collaborate with the Scientific CITES Authority of Guatemala, as well as the Conventions Secretariat in Geneva.

Have you included a Letter of Support from this organisation? ☐ Yes
☐ No

4. Partner Name: *No Response*

Website address: *No Response*

Details (including roles and responsibilities and capacity to engage with the project): *No Response*

Have you included a Letter of Support from this organisation? ☐ Yes
☐ No

5. Partner Name: *No Response*

Website address: *No Response*

Details (including roles and responsibilities and capacity to engage with the project): *No Response*


Have you included a Letter of Support from this organisation? ☐ Yes
☐ No

6. Partner Name:	No Response
Website address:	No Response
Details (including roles and responsibilities and capacity to engage with the project):	No Response
Have you included a Letter of Support from this organisation?	<input checked="" type="radio"/> Yes


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

Please provide a cover letter responding to feedback received at Stage 1 if applicable and a combined PDF of all letters of support.


 [Response to Feedback from stage30-11](#)


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Section 6 - Project Staff

Q10. Key project personnel

Please identify the core staff on this project, their role and what % of their time they will be working on the project.

Please provide 1 page CVs for these staff, or a 1 page job description or Terms of Reference for roles yet to be filled. Please include more rows where necessary. These should match the names and roles in the budget spreadsheet.

Name (First name, Surname)	Role	% time on project	CV attached below?
Michael HEINRICH	Project Leader	10	Checked
Dr Monica Berger-Gonzalez	Lead on the Guatemalan side	50	Checked
Dr Francesca Scotti	Postdoctoral researcher	50	Checked
Maria Renee Alvarez	Botanist	12	Checked

Do you require more fields?


☒ Yes

Name (First name, Surname)	Role	% time on project	CV attached below?
Pablo Ax	Maya research assistant	67	Checked
Martin Hitziger	Plant Species Officer (JPO) at the Secretariat of the CITES Convention, with specific expertise on policy processes for enabling sustainable use of biodiversity, and on Guatemalan ethnobotany and ethnomedicine.	5	Checked
No Response	No Response	No Response	Unchecked
No Response	No Response	No Response	Unchecked

Please provide 1 page CVs (or job description if yet to be recruited) for the Project staff listed above. Ensure the file is named clearly, consistent with the named individual and role above.

F Scotti 1-page CV


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CV Monica Berger


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Martin Hitziger CV en 2018-1


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CV Pablo Ax


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CV Maria Renee Alvarez

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Have you attached all Project staff CVs?

☒ Yes

Section 7 - Problem Statement & Conventions

Q11. Problem the project is trying to address

Please describe the problem your project is trying to address in terms of biodiversity and its relationship with poverty. 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?

Biodiversity loss in the Guatemala's Petén lowlands and central highlands is rapidly increasing due to urbanization, African palm plantations, and cattle farms. Our previous projects in these areas (MACOCC, Berger et al., 2016, see CVs), co-researching use of medicinal plants with Q'eqchi' and Kaqchikel healers (Hitziger et al., 2016, see CVs) show many species are at risk due to habitat loss and degradation, having a negative impact on livelihoods of vulnerable and impoverished indigenous populations. Up to 60% of the local populations with poor access to official healthcare services rely mainly on traditional Maya practitioners (Hitziger, Berger et al., 2017. see CVs), whose ability to provide assistance/treatment is compromised by the loss of natural capital. Therefore, organized groups of healers have requested the consortium's support in researching medicinal plant knowledge in order to protect it, and to develop strategies for ascertaining the equitable and sustainable use of biodiversity. With limited research capabilities in Guatemala, this requires international collaboration and equitable access to such biological resources for the purpose of research, requiring the implementation of international biodiversity policies at a national level based on a community-driven approach (document Raxnaq'il-Nuk'aslemal: Maya Medicine in Guatemala, 2016). This project follows on a transdisciplinary process (TD) with five Councils of Maya Elders, Guatemalan and European academics, health practitioners, and government representatives that since 2010 has addressed equitable access to healthcare supporting cultural perseverance. Guatemala ratified the Nagoya protocol, but lacks procedures for putting access-and-benefit sharing (ABS) into practice. The project aims at mutually acceptable implementation procedures that comply with pertinent national and international regulations. Implementing ABS mechanisms, linked to ongoing empirical research on traditional medicine and intercultural health, will foster mutual appreciation of the procedures. We specifically address the challenges and obstacles to secure the benefits of biodiversity for the most vulnerable, poor communities.

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

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Q12. Biodiversity Conventions, Treaties and Agreements

Q12a. Your project must support the objectives of one or more of the agreements listed below. Please indicate which agreement(s) will be supported and describe which objectives your project will address and how. Note: projects supporting more than one will not achieve a higher score.

- ☒ Convention on Biological Diversity (CBD)
- ☒ Nagoya Protocol on Access and Benefit Sharing (ABS)
- ☒ Convention on International Trade in Endangered Species (CITES)

Q12b. Biodiversity Conventions

Please detail how your project will contribute to the objectives of the agreement(s) your project is targeting. You should refer to Articles or Programmes of work here. Note: No additional significance will

be ascribed for projects that report contributions to more than one agreement.

This project will directly contribute to address CBD articles 15, 10, and 8-j. It will develop a replicable mechanism for jointly developing conditions for biodiversity research and benefit-sharing between indigenous communities, government, academia, and the private sector. The importance of developing tools for supporting implementation mechanisms in a complex political setting is extremely relevant in the Guatemalan context.

At present the Nagoya protocol is suspended due to a mandate by the Constitutional Court deeming it possibly unconstitutional after two Maya congressmen appealed. This was the result of poor communication with societal stakeholders, particularly indigenous Mayan communities and leaders. Consequently, novel models of collaboration between stakeholders are needed and it is essential to facilitate this with the support and leadership of an internationally recognized, independent and well respected project partner, who can mediate between stakeholders.

This project will take a scientific approach centred around Maya medicine and facilitate the creation of a transdisciplinary process with all stakeholders having equal footing, with the final goal of developing a new formal framework for access-and-benefit sharing. This requires a constructive dialogue and co-developed tools to reach consensus on biodiversity protection, use and benefit sharing. CONAP, the agency in charge of overseeing CBD and Nagoya, has requested to use this project to develop adequate tools to strengthen the participation of indigenous groups.

By involving a private company to facilitate identification of opportunities for protection of intellectual property (TMK) and benefit sharing, the project sets a relevant precedent for replication by other initiatives in the country. Indigena is strongly committed to sustainable development, benefit sharing and access based on prior informed consent.

Collaboration with national and international CITES representatives enables a comprehensive elaboration of procedures for including indigenous knowledge into decision making processes for the sustainable use of biodiversity (see attached figure on sustainable use of biodiversity). In this framework, sustainable use of biodiversity is represented through ecological, social and economic aspects. Integrating indigenous knowledge into access and benefit sharing processes enhances social and economic sustainability of medicinal plant use. Integrating indigenous knowledge into CITES decision making processes enhances the nexus of conservation and livelihoods / trade of biodiversity capital, and thus contribute to ecological and economic sustainability. Our transdisciplinary research approach will enable participative and adaptive approaches, which are reflected in CBD and CITES through the so-called Addis Ababa principles. Exemplifying and formalizing their application within this project will contribute to social and ecological sustainability of plant use.

Q12c. Is any liaison proposed with the CBS/ABS/ITPGRFA/CITES/CMS/Ramsar focal point in the host country?

☒ Yes

Please give details:

The Project has entered a partnership with the Guatemalan authority CONAP (Concejo Nacional de Areas Protegidas) in charge of implementing CBD, ABS mechanisms and CITES in the Country. They will be part of the Transdisciplinary process and will integrate the project's steering board. A formal institutional letter will be processed after securing project funding. For now, CONAP's focal point (José Luis Echeverría) provided confirmation of their interest to participate in this project via an institutional email response that has been added to the institutional letters of support.

Q12d. Global Goals for Sustainable Development (SDGs)

Please detail how your project will contribute to the Global Goals for Sustainable Development (SDGs)

The project strongly supports SDG 3 (healthy lives and well-being for all), particularly by addressing access to traditional medicinal plants for the most marginal sector of society: impoverished indigenous populations. It addresses goal 12 (responsible consumption and production) and 15 (life on land) through designing a participatory mechanism, in line with the Addis Ababa principles, that ascertains the conservation and sustainable use of medicinal biodiversity. It also addresses SDG 16, by promoting “just, peaceful, and inclusive societies” through offering those traditionally marginalized a mechanism to participate in the public policy domain, and SDG 17, “revitalize the global partnership for sustainable development” through a concrete North-South TD platform for strategic alliances in research and opening opportunities for benefit sharing.

Section 8 - Method, Change Expected, Gender & Exit Strategy

Q13. Methodology

Describe the methods and approach you will use to achieve your intended Outcome and Impact. Provide information on how you will undertake the work (materials and methods) and how you will manage the work (roles and responsibilities, project management tools etc.).

This may be a repeat from Stage 1, but you should update or refine as necessary.

On a national policy level, it is essential to secure a constructive dialogue between key stakeholders that have historically clashed in Guatemala. A Transdisciplinary (TD) Methodology will facilitate collaboration and mutual learning across knowledge systems and societal boundaries.

Steering board

A legitimated steering board with representatives from key societal actors and institutions needed to affect change will be operational throughout the project's life. This group, including indigenous leaders (> 25%) and women (>30%), will lead negotiations of participants from wider institutional sectors.

Basic conceptual and methodological considerations

The project will follow the Addis Ababa Principles and Guidelines for the Sustainable use of Biodiversity including their instruments. Biodiversity conservation and sustainable use is a key goal of all partners. Importantly, all stakeholders will base their work on:

- Formally recognizing indigenous traditional knowledge concerning medicinal plants,
- Identifying appropriate mechanisms for protection of intellectual property if desired,
- Defining concrete mechanisms for benefit sharing.

UCL and UVG will lead the Transdisciplinary Process fostering dialogue and negotiations towards consensus on policy, from which specific tools (manuals or technical guide) will facilitate future replicability.

Create inventories of plants

In order to understand the role of local biodiversity and jointly with the Councils of Elders, we will select traditional female and male Maya healers to create plant empirical inventories. Using participatory observation, open and structured interviews and focus groups we will document Maya ethnomedicine. To understand the embeddedness of plants within the traditional medical knowledge, we will do case-reconstructions of specific patient's ailments as diagnosed and treated by the healers (following all ethical requirements). Transect walks with healers will also be used to collect medicinal plants. Plants collected will be curated and identified at the herbarium of UVG. Experiential exchanges between project partners will be conducted fostering mutual learning, respect and tolerance throughout the project as well as to understand key concerns of indigenous communities, academia and the private sector as a mechanism to reach consensus towards the desired implementation mechanisms for ABS [based on the Bidirectional Emic Etic (BEE) framework]. This includes reflexive dialogue in a multi-epistemological setting addressing differing knowledge systems, values, and institutional organization styles.

Selection of species

Indigena and UCL will jointly select local plant species with commercial potential, including ones for which research is appropriate to gain intellectual property protection, and define concrete avenues for benefit-

sharing in case of a commercial product development.

Define benefits

Monetary and non-monetary benefits potentially arising from the implementation of the CBD and Nagoya Protocol in Guatemala, will be defined jointly, serving as specific indicators for biodiversity's future potential impact on Mayan communities. Concrete and tangible mechanisms for recuperating, protecting and potentially utilizable endangered medicinal plants will be included. Outputs will contribute to assessing conservation status, threats and trends of selected species populations (CITES Non-Detriment Findings), a precondition for complying with sustainable use regulations. Funds to jumpstart some initiatives (i.e. seed repositories, plant nurseries, protected areas, etc) will be included plus guidance on the use the monetary benefits up-scaled use of the local biodiversity.

Q14. 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 and for people in developing countries, and how they are linked. 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.

Guatemala ratified the Nagoya protocol, but lacks procedures for putting access and benefit sharing (ABS) into practice. Considerable indigenous opposition triggered legal appeals by indigenous congressmen, and led to its suspension. Likewise, inclusion of indigenous knowledge for sustainable use of biodiversity is stipulated, yet rarely implemented, by both CITES and CBD provisions. The project will facilitate a roundtable of national and international stakeholders to jointly propose mutually acceptable implementation procedures that comply with pertinent national and international regulations. An implementation of ABS mechanisms, linked to ongoing empirical research on traditional medicine and intercultural health, will foster mutual appreciation of the procedures. This project will facilitate an implementation mechanism for ABS in Guatemala that installs local capacity for government institutions in charge of CBD and Nagoya, but that also provides a toolkit for academics and indigenous groups to make sure that future projects can replicate this type of process in respectful, ethical, accountable and constructive ways. In addition, as a proof-of-concept, the municipal areas of Petén and Alta Verapaz (corresponding to the ethnolinguistic region of the Q'eqchi' Maya collaborating in this project) working on medicinal plants and intercultural healthcare services with the project consortium will already benefit from applying the ABS framework. Guatemala health authorities will also gain a research process by which indigenous knowledge on traditional medicine and phytotherapy is analysed to determine mechanisms for inclusion into the healthcare system, which is of direct interest to biodiversity authorities in the country (CONAP) as a way of formalizing recognition of intellectual property of indigenous groups. This would set a precedent for replication in the larger Latin American region. In the long run, this project's results will strengthen Guatemala's national policies as they relate to ratified international conventions for biodiversity protection and benefit sharing, modelling an internal dialogue capable of reaching consensus and bridging differences that had earlier made implementation stagnant. Thus, they will provide a case study for putting the Addis Ababa principles to practice within a real-world context which might pave the way for replication in other settings.

Direct and indirect beneficiaries (indigenous Maya Q'eqchi' participants)

54 Ajq'ij Ajilonel involved in the ethnomedical and Transdisciplinary research

52 Q'eqchi' women (household heads) in charge of managing the medicinal garden

106 Q'eqchi' elders and their families (aprox. 540 People) benefit directly from ABS mechanisms implemented in the future

23 communities (where healers live/provide direct healthcare), composed of approximately 5,900

households benefit indirectly of plant Access (see letter of AGERS Council)

Academic institutions in Guatemala and abroad benefit from clear guidelines for future similar research
Government authorities benefit from a consented implementation strategy for CBD's ABS mechanisms, including Nagoya, and the inclusion of local and traditional knowledge in the assessment and management of CITES-listed species

Larger indigenous communities in Guatemala will benefit from the concrete implementation strategies and mechanisms resulting from this project, if they decided to adopt/ratify them.

Q15. Gender

All applicants must consider whether and how their project will contribute to reducing inequality between persons of different gender. Explain how your project will collect gender disaggregated data and what impact your project will have in promoting gender equality.

Academia:

The (small) team is committed to foster women's participation in research. Women make up a large share of students in the departments involved of the universities in Guatemala and the UK and we will encourage their participation. Both academic institutions are committed to sustain structural and cultural changes that advance gender equality and other intersectional factors wherever possible, to combat the underrepresentation of women, and specifically in case of the UCL School of Pharmacy to advance their careers in science, technology, engineering, maths and medicine (STEMM) research and academia.

Governance processes:

We acknowledge that the participation of women in governance processes in Guatemala is low. For example, in previous transdisciplinary processes it has been only 7%, including indigenous women. We make a commitment to increase participation of women to a minimum of 30%, tracking gender-sensitive participation lists in all project activities related to the Transdisciplinary process for fostering a dialogue towards implementation of Nagoya procedures and concrete ABS procedures.

Maya indigenous beneficiaries:

We have agreed with the AGERS Maya Council of elders to balance the participation of women in the ethnomedical/phytotherapy research component and the implementation and caring of the medicinal plant garden, keeping precise records of participation by gender in each activity conducted at the local level. Initial commitments are to ensure that women always participate in Council decision-making to a minimum of 25%, and that 80% of upkeep activities for the medicinal plant garden are in the hands of women. Negotiations of specific ABS mechanisms to be developed will ensure equal benefits for women and the project will keep an accurate record of the distribution of benefits by gender. We will pay close attention to identifying women who can make particular contributions to a better use of biodiversity and to leading a change in its use.

Q16. Exit Strategy

State whether or not the project will reach a stable and sustainable end point. If the project is not discrete, but is part of a progressive approach, give details of the exit strategy and show how relevant activities will be continued to secure the benefits from the project. Where individuals receive advanced training, for example, what will happen should that individual leave?

The governance process is sustainable given government authorities responsible for CBD-Nagoya and CITES are directly involved in producing the desired outcomes for future implementation of similar projects. The TD process ensures buy-in and secures that outcomes are deemed relevant and appropriate. Given these institutions have the legal mandate to implement such processes in the country, they are interested to continue using the tools developed here at national level.


The relationship with the Maya AGERS Council and communities has been ongoing since 2010 with

academic partners and is foreseen as a long-term collaboration to advance steadily their own agenda towards recognition of Maya medicine in the country. This specific project's boundaries are clear to them and relate to: advancing the component on identification of key species for medicinal use, potential protection and commercial value, and ABS mechanisms for generating benefits at the local level. The Council is aware of the constraints in funding and time of this particular project and is prepared to assume responsibility for continuation out of their own interests, but is also aware that the relationship with academic partners will continue beyond this grant. This allows for benefits of implemented activities to be carried on in time.

Please provide supporting documentation e.g. maps, diagrams etc., using the File Upload below:

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Section 9 - Existing works, Ethics & Safeguarding

Q17a. Harmonisation

Is this a new initiative or a development of existing work (funded through any source)?

☒ Development of existing work

Please give details:

Prior work with Maya Q'eqchi' communities regarding research of their ethnomedicine and plants in traditional therapies for inflammatory processes (possibly cancer) and zoonotic disease, was limited in scope and depth. These studies were unable to complete sharing of plant samples with European universities in Zurich and London given radical constraints in Guatemala around the Nagoya protocol, and were also unable to address challenges to the sustainable use of biodiversity resources. This project is a direct consequence of addressing these prior constraints with government authorities, but also of addressing the needs of local Maya populations to increase access to native medicinal plants while finding mechanisms to generate future benefits for the communities at large. In this sense, the boundaries of these project activities are clear. However, as fieldwork is expensive in this area, we found synergies with an ongoing "research for development grant" of the Swiss National Science Foundation awarded to UVG in a consortium with Zurich University. While the R4D is focused on cultural pertinence of health care provision systems at the first level of attention of the government, it will allow us to cover partial time of members of the research team, aid in fieldwork costs, and enhance the participatory process.

Q17b. Are you aware of any other individuals/organisations/projects carrying out or applying for funding for similar work?

☒ No

Q18. Ethics

Outline your approach to meeting the Darwin Initiative's key principles for research ethics as outlined in the Guidance.

Our project will meet all key principles for research ethics and human rights, as follows:

1. We will submit a research protocol for ethical approval of the UCL Research Ethics Committee (currently

co-chaired by the PI) and a Guatemalan IRB, which guarantees compliance with protection of human subjects and of research staff. We are conscious that this also includes the researchers' safety and wellbeing. Approval letters will be submitted to funders.

2. We will follow all relevant access and benefit sharing legislation as they are in place at the time of the project pertaining to the utilisation of genetic resources and associated traditional knowledge as directed for UK and Guatemala partners. This project works directly with government authorities in Guatemala in charge of CBD, Nagoya and CITES precisely to create the implementation mechanisms for this and future research.

3. We have a strong leadership and participation from Guatemala's academics and indigenous communities directly involved in the project. We follow a strong Transdisciplinary process at equal footing, guaranteeing full recognition of indigenous and national rights and that all knowledge systems are equally acknowledged and will benefit.

4. We have secured Prior Informed Consent with all partner communities, as evidenced in the letter from the Maya AGERS Council of Elders.

5. We uphold the credibility of all research findings via a rigorous internal and external peer review process.

Q19. Safeguarding

(see Guidance Note 3.8)

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, we would like projects to ensure they have the appropriate safeguarding policies in place. Please tick the box to confirm you have relevant policies in place and that these can be available on request.

Checked

Section 10 - Biodiversity & Project Information

Q20. Raising awareness of the potential worth of biodiversity

If your project contains an element of communications, knowledge sharing and/or dissemination please provide a description of your intended audience, how you intend to engage them, what the expected products/materials will be and what you expect to achieve as a result. For example, are you expecting to directly influence policy in your host country or is your project a community advocacy project to support better management of biodiversity?

This project has a direct intention to influence policy by co-developing with government authorities and indigenous communities a viable mechanism for implementation of the Nagoya protocol and CITES provisions for participation of local communities and inclusion of traditional ecological knowledge. Therefore, we made provisions to host a transdisciplinary dialogue that secures all project outputs are agreeable to partners (having participated at equal footing during workshops and meetings), and have allocated funds to produce printed and digital material for dissemination of the process and of the tools created.

Communication will be conducted using online web-based applications and social media, as well as through lay publications in local media and in international academic journals. For keeping open communication with indigenous rural communities, printed material and visual (video) material following culturally pertinent content will be produced and disseminated.

A major goal of the project is to create a process that other research consortia can follow in the future. Therefore, all materials will be available in several formats with results being widely shared with relevant government authorities, academic institutions in Guatemala, and NGOs related to work with biodiversity and indigenous groups.

We will use this as a model for collaboration and disseminate the results in such a form, that they can also be used by other UK or European academic institutions and thus serving as a model to overcome the access of these institutions to biodiversity. UCL has a well-developed baseline policy on access to biodiversity, and, as a result of this, this policy can be developed further serving also as a model for other HEI. MH will take a lead in promoting best practice in the context of changing the practice of research ethics especially as it relates to training.

Q21. Capacity building

If your project will support capacity building at institutional or individual levels, please provide details of what form this will take and how this capacity will be secured for the future.

We will engage in co-production of knowledge via the Transdisciplinary process. All project partners (international and local) will work together to co-develop tools for implementing Nagoya protocols and concrete ABS mechanisms given the study case. We expect that participating partners from the government offices in charge of implementing CBD, Nagoya and CITES will acquire new tools for participatory decision-making and consensus-building in a multicultural and polarized environment, particularly learning how to engage and conduct TD processes and facilitate the co-creation of other tools for managing biodiversity in the country. It will be essential that junior researchers both from Guatemala and the UK participate in these processes and the students involved in the project will directly benefit from this participatory approach. By producing ample documentation of the process and disseminating broadly these procedural outputs and the concrete tools for implementing Nagoya/ABS, we expect that capacity gets installed at country level and at institutional levels (academia, government offices, NGOs –indigenous leadership, CITES and CBD conventions).

The partner from industry (IBL) will aid in building local capacity for government and academic institutions for developing concrete pathways and mechanisms in which Guatemala and the indigenous communities can produce concrete access and benefit sharing models.

Q22. Access to project information

Please describe the project's open access plan and detail any specific funds you are seeking from the Darwin to fund this.

UCL is committed to ascertaining open access of all research output: publications where the corresponding author is a UCL staff member are currently published with full financial support from UCL. Therefore, we will in first instance publish the results open access.

As importantly, we will provide summaries or the entire document in Spanish translations. These documents will be hosted at the website of the UVG and short overviews will be made available through social media widely used in Guatemala. The information will be presented in such a way that it is accessible to the relevant stakeholders in Guatemala and we will take care in developing the best forms of communicating key outcomes. Both the group at UVG and UCL have extensive experience in this. MH and collaborators, for example, successfully communicated the results of a major EU project 'Local Food-Nutraceuticals' (QLK1-CT-2001-00173, coordinator: M. Heinrich) to the wider public in Spain, Italy and Greece using a variety of techniques including curricular material for schools and dissemination material. We will use a range media and out participation in high-quality international congresses to communicate the results in Spanish and English.

Section 11 - Logical Framework

Q23. Logical Framework

Darwin projects will be required to report against their progress towards their expected Outputs and Outcome if funded. 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.

Impact:

Guatemala’s national policies related to ratified international conventions for biodiversity protection and access/benefit sharing are strengthened and have operational implementation mechanisms inclusive and respectful of indigenous people’s knowledge and priorities.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
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Outcome:

Implementation framework for sustainable use, access and benefit-sharing in Guatemala involving consensus between indigenous groups, government, academia and industry, based on natural capital and traditional knowledge to sustain healthy livelihoods.

0.1 Participation of indigenous people within the project increased by at least 40% in relation to prior similar initiatives led by CONAP. Of these, by the project end, at least one fourth are women.
0.2 A multi-stakeholder, transdisciplinary process to foster dialogue at equal footing between government, academia, industry and indigenous communities has resulted in a new framework of collaboration by project end and is documented for replication.
0.3 New scientific information on indigenous Maya medical knowledge and on the relevance of natural capital to sustain healthy livelihoods (ethnography and plant collections in herbarium) based on collaborative research is produced by the end of the project.
0.4 Maya healers have increased access to medicinal plants by at least 20% more through biodiversity protection initiatives in the study area by year 3, as evidenced through local repositories of biodiversity and knowledge about them.
0.5 A concrete strategy for benefit sharing opportunities for indigenous groups is defined and ready for implementation by project end.

0.1 Registered participation in project meetings, conformation of steering board by gender and ethnicity.
0.2 Signed cooperation agreement by all project partners, meeting reports, final written publication of the process in the form of manual and tools.
0.3 Digital ethnographic reports, plant collections in UVG herbarium, reports of identified species shared with CONAP, UCL and UVG.
0.4 A report on the number of species accessible from Year 1 (baseline) and a final report in Year 3, per healer in each area, which can be compared.
0.5 Report by Indigena Biodiversity Ltd. (in English and Spanish).
0.6 Report on guidelines for operationalization of the Addis Abbeba principles for traditionally used medicinal species are elaborated (in English and Spanish).

- The polarized political climate in Guatemala still allows participation of all stakeholders under a Transdisciplinary format that fosters dialogues at equal footing.
- Government authorities in charge of CBD-Nagoya and CITES remain in their current efforts to facilitate consensus building to overcome the temporal suspension of the Nagoya protocol and CITES implementation.
- Organized indigenous Communities participating in the process remain open to dialogue with all other stakeholders and continue to actively participate in joint research efforts.
- The represented industry sector is capable of finding reasonable and viable avenues for access and benefit sharing for the Guatemala context and for indigenous groups in particular.
- Enough matching funding is allocated by project partners to secure newly identified and defined project activities derived from the dialogue and consensus-building process.
- Legitimacy of the dialogue is reached/afforded by all stakeholder representatives at the onset of and during the

0.6 A concrete strategy for implementing the Addis Ababa principles for the sustainable use of biodiversity, by eliciting pertinent traditional knowledge and incorporating into CITES decision-making processes, is defined and partially implemented by project end.

project's development.

Output 1:

Policy Framework: an implementation framework for a policy on biodiversity and ABS is developed through a dialogue between government, local indigenous groups, academia and industry, which could break down barriers and misunderstandings that have opposed the ratification of Nagoya, and serve as a basis for future research collaboration on traditional medical Maya knowledge, sustainable use of biodiversity, intellectual property recognition and other forms of benefit sharing.

1.1 The appointed/elected TD steering board with at least 30% women and 25% indigenous leaders is active by month 3
1.2 Dialogues and achieved agreements on project objectives based on at least 2 TD meetings per year starting from year 1, where European collaborators will be expected to take part in person once a year; any additional meeting will be joined via proxy, using conference calls
1.3 Production of a policy draft for ABS by month 18.
1.4 Ethical approval is completed in academia, government and Indigenous consuetudinary practice and is approved by month 8.
1.5 Stakeholder's agreement on the guidelines for accessing traditional ecological knowledge for sustainability assessments (NDFs), monitoring and management of biodiversity by month 24

1.1 Signed document by all project partners of the TD process.
1.2 Minutes from steering board constitution.
1.3 Minutes from all meetings held
1.4 Policy document draft signed as received by government authorities.
1.5 Completed manuscripts of tools/manuals in electronic format.
1.6 Letter of ethical approval from the IRB of Guatemala, signed agreement with Releb'aal Saq'e stating approval of Maya protocol compliance (equivalent to an IRB).
1.7 Project and guidelines presented at side event of CITES policy conference

- The ethical approval will be granted (this process follows a Transdisciplinary (TD) approach solidly based on ethical approval consented by all partners, as well as y ethical approval by UVG and UCL's IRB procedures and/or the IRB representing government in Guatemala. It will also follow consuetudinary law as defined by Maya participants in the project, in order to ensure that design and implementation of project activities has the buy-in and ethical acceptance of all involved). We will be in a pre-campaign year for presidential elections, some IRB procedures within government might take longer than usual, or negotiations with Mayan authorities may take longer than planned.
- Upcoming electoral process in Guatemala half-way into the project does not hinder participation of government stakeholders into the project, nor does it polarize indigenous representatives in a way that prevents them from reaching consensus to participate in the entire project life.
-The constitutional court of Guatemala resumes the judicial process to restore the Nagoya

protocol validity, or at least allows the national authority to implement joint research under approved CBD statutes.

- CITES scientific authority of Guatemala, and CITES Secretariat in Geneva maintain priority on attending transdisciplinary roundtable.
- All participants understand and value sustainable use of biodiversity as resulting from fair and equitable access and benefit sharing and integration of traditional knowledge into biodiversity assessment, monitoring and management.

Output 2:

Information Collection: ethnomedical body of information on selected Maya phytomedicine is produced.

2.1 General list of most used plants and ethnomedical bibliographic research (including safety assessment) is completed by year 2.

2.2 A minimum of 25 patient cases are researched through ethnography and traditional Maya medical treatment comprehensively documented by month 24.

2.3 Plants collection, identification and cataloguing is completed by year 2 (the number of species collected cannot be specified prior to case studies completion).

2.1 Catalogues of plants collected available at UVG herbarium (complete of scientific name, common names, Maya names)

2.2 Database of reports, original audios and transcriptions from each completed case study

2.3 Document on bibliographic findings on collected species (including potential health benefits and risks)

- Ethical approval is granted (is part of Output 1 but applies here too).
- CONAP grants all legal permits to academic partners and indigenous groups for plant collection.
- Maya healers continue to lead collaborative research for secure documentation of plant medicines and lead expeditions into habitats for their collection.
- Climatic conditions allow for the timely collection of full specimens (during flowering times) to facilitate process of species' identification.

Output 3:

Access and Benefit Sharing Proposal: proposal for access and benefit sharing and protection of intellectual property, is defined by the industrial partner.

3.1 Stakeholders' agreement on the proposal for benefit sharing (including non-monetary benefits relevant to local priorities), in the event that a commercial product is developed, by the end of month 20 and indigenous community approval by month 24.

3.1 List of species with commercial potential documented.
3.2 Minutes from stakeholders' meetings.
3.3 Approved agreements.
3.4 Community and stakeholders group attendance sheet.

- Presence of species with commercial potential.
- The political climate does not hinder participation of industry in the consortium.
- Communities and stakeholders agree on IP and ABS principle proposals.
- Key indigenous leaders adhere to commitments made within the TD stakeholders' platform and abstain from smearing campaigns which previously impeded advancing dialogues, such as the misinformation campaign of 2016 placing Nagoya regulations in the same law-package informally known as the "Monsanto" law (allowing benefits to multinational companies in detriment of small farmers), which generated great opposition.

Output 4:

Local Framework: improved (from baseline) and sustainable access and availability of key medicinal plants for indigenous healers/communities based on locally defined strategies and terms, ensuring equal participation of women.

4.1 The number of species to which individual healers have direct access by the end of year 3 is increased by at least 20% in relation to the baseline at the onset of the project.
4.2 Participation in medicinal garden cultivation and management is over 50% by knowledgeable women by the end of year 3.
4.3 A municipal proposal for potential implementation of one protection area still holding biodiversity of medicinal plants is drafted by month 22 and evaluated and potentially agreed by the government by year 3.

4.1 Healers and community household surveys on access to medicinal plants to be compared to the established baseline at the beginning of the project
4.2 Pre and post training knowledge assessment
4.3 List of appointed garden managers
4.4 Proposal draft in Spanish (with English summary) and eventual signed agreement on the protection area by the government.

- A satisfactory process of Outputs 1 and 2 is able to be transformed into direct actions for protection and increased availability of medicinal plant species selected as by indigenous healers and other stakeholders.
- Population adjacent to the medicinal garden site do not interfere with the establishment/extension of the garden.
- Data showing the value of natural capital for improving health in Maya communities is legitimate and recognized by project partners, allowing implementation.
- Enough funding is available to implement the main activities chosen by this consortium (TD platform).

Output 5:

Dissemination:
dissemination of the
project's results and
strengthening of the
national dialogues on
biodiversity and
traditional knowledge.

5.1 At least five
academic papers
published (Open Access)
addressing key findings
of project components
by project end.
5.2 Online and printed
publication of tools
developed via the TD
process in the form of a
manual, to foster
replication by project
end.
5.3 Lay publications for
stakeholders use
according to strategy
defined jointly by TD
table by project end.
5.4 At least one video
documenting the
process of the
stakeholders' dialogue
to develop the project,
and one on research
outcomes (traditional
medical knowledge and
biodiversity protection).
5.5 Two presentations at
international
conferences.

5.1 Electronic (or
printed, in case of
books) copy of
publications, URL
addresses, conference
abstracts, proceedings
and videos available on
Open Access platforms.

- Discussions and
agreements on
intellectual property
rights of indigenous
groups follow
due-process as
described in the
CBD/NAGOYA and local
TD table agreements
during the course of this
project and allow for the
timely publication and
dissemination of results.

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)

The word count for each individual activity should be no more than 25 words.

Activity details

Activity Number

1.1

Activity Details

A 'round table' comprising all relevant stakeholders to sign a cooperation agreement for the project's duration, following a TD format

Activity details

Activity Number

1.2

Activity Details

Writing and submission of IRB protocols for UK, Guatemala and Maya Council

Activity details

Activity Number

1.3

Activity Details

Appointment/election of a TD steering board constituted by at least 30% women and 25% indigenous leaders, signing of MOU with operational plan for year 1

Activity details

Activity Number

1.4

Activity Details

Steering board meetings are conducted to discuss the development of the framework with all stakeholders (including preparation of materials for discussion)

Activity details

Activity Number

1.5

Activity Details

Conduction of eight TD workshops for discussion and negotiation of components for implementing Addis Ababa's principles and Nagoya

Activity details

Activity Number

1.6

Activity Details

Drafting of procedural protocols for inclusive application of Addis Ababa principles in sustainability assessments (NDFs), monitoring and management of medicinal plant resources

Activity details

Activity Number

1.7

Activity Details

Production and dissemination of procedural tools (manuals and documents) for implementing Guatemala's Nagoya protocol including proposed ABS pathways for Guatemala and Q'eqchi' participating communities

Activity details

Activity Number

2.1

Activity Details

Organisation of community meetings via AGERS Council to present project details to elders, individual enrolment of healers, creation of participants' list within Maya ceremonial protocol

Activity details

Activity Number

2.2

Activity Details

Initial ethnographic research of most-common referred plant lists per ailment (syndromic and cultural ailments)

Activity details

Activity Number

2.3

Activity Details

Participatory observation, interviews and focus groups to build up medical case studies

Activity details

Activity Number

2.4

Activity Details

Analysis of the ethnomedical and ethnobotanical data to assess how gender, age and socio-cultural background affect access and use of medicinal plants

Activity details

Activity Number

2.5

Activity Details

At least 90% of plants used by the healers in the medical case studies are collected, deposited and identified at UVG herbarium

Activity details

Activity Number

2.6

Activity Details

Integration of academic knowledge on the species collected through literature research on traditional uses, toxicological and pharmacological assessment (safety and efficacy) based on bibliographic evidence

Activity details

Activity Number

2.7

Activity Details

Production of maps highlighting areas of medicinal plant diversity, risk assessment and proposed areas for protection

Activity details

Activity Number

3.1

Activity Details

Sharing information on medicinal species (from Output 2) with industrial partners and identification of species with commercial potential, protectable by IP rights

Activity details

Activity Number

3.2

Activity Details

Selection of 1 or 2 plants from the list produced by the industrial partners in 3.1 that will be used as a proof of concept

Activity details

Activity Number

3.3

Activity Details

Stakeholders meetings/workshops lead by the industrial partners to build a model ABS agreement

Activity details

Activity Number

3.4

Activity Details

Workshops to present the model agreement to the broader indigenous groups to facilitate consensus and agreement on potential pathways to benefits

Activity details

Activity Number

3.5

Activity Details

Stakeholders' meetings to discuss examples of non-monetary benefits of interest to the communities involved or propose new ones

Activity details

Activity Number

4.1

Activity Details

Establish the baseline of access and availability of medicinal plants to the healers

Activity details

Activity Number

4.2

Activity Details

Consensus meeting with AGERS Council elders to choose local options for assisted (artificial) reproduction of key species

Activity details

Activity Number

4.3

Activity Details

Creation of medicinal plant gardens and seed repository (following technical assessment of the areas, suggested by AGERS, and adaptation needs for reproduction of selected species)

Activity details

Activity Number

4.4

Activity Details

Planting of selected species in the gardens and disseminated via seed and seedling exchange (based on the assessment in 2)

Activity details

Activity Number

4.5

Activity Details

Organization, training and supervision of women that will be tending/managing the garden

Activity details

Activity Number

4.6

Activity Details

Meetings of for the identification of biodiversity-rich areas (including key medicinal plants) that could be targeted for protection (GIS mapping)

Activity details

Activity Number

4.7

Activity Details

Discussion with government officials on the feasibility of the creation of protected areas with presentation of mapped areas

Activity details

Activity Number

5.1

Activity Details

Writing of lay publications regarding process (replication) and outcomes (communities' information process), dissemination in digital and printed forms

Activity details

Activity Number

5.2

Activity Details

Writing of academic papers

Activity details

Activity Number

5.3

Activity Details

Production of videos and dissemination in online-formats

Activity details

Activity Number

5.4

Activity Details

Conference presentations

Section 12 - Implementation Timetable

Q24. Provide a project implementation timetable that shows the key milestones in project activities

Please complete the Excel spreadsheet linked below to describe the intended workplan for your project.

Implementation Timetable Template

Please add 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. The workplan can span multiple pages if necessary.

Section 13 - Monitoring and Evaluation

Q25. Monitoring and evaluation (M&E) plan

Describe, referring to the Indicators above, 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 for Darwin and IWT Guidance](#)").

This project will use a two-pronged approach to monitoring and evaluation, which includes an outcome and a process focused tool. Progress towards the project's agreed outcome will be monitored by UCL London as the lead institution against a baseline that will be established for means of verification to all outputs, and using the implementation timetable that is part of the application. The monitoring will be continuous; progress, delays, and potential need for adaptation will be discussed at steering board meetings as appropriate, but at least once per year. By the conclusion of the project, this will lead to a clear and straightforward assessment of achieved progress with regard to enabling the sustainable use of Guatemalan biodiversity. The outcome evaluation will be complemented by a process evaluation, to assess the capacity to foster the integration of knowledge between academic, indigenous, governmental and international partners throughout the entire project cycle. We will use the EVOLvINC tool, which was developed and validated by Hitziger et al. in the framework of a European Cost-Action initiative, and in collaboration with several transdisciplinary research institutions. EVOLvINC measures 23 criteria to assess the project's capability to facilitate mutual learning, capacity building, strengthening of networks and collective action between multiple partners, and thus enable lasting impact. It is designed as formative evaluation tool, which will enable readjustments within the project execution, as appropriate. The process evaluation will be implemented by M. Hitziger at three points of the project's execution. At the first steering board meeting, the tool will be presented, and it will be discussed with all partners how crucial criteria shall be met throughout the project's execution. After year one, a second steering board meeting will re-discuss the consortiums research process and adopt readjustments where required. A final evaluation will take place after year two, in formal interviews with key participants, measuring all criteria semi-quantitatively. This approach will enable the integration of all perspectives within the consortium into a comprehensive assessment of the collaborative multi-stakeholder process. Triangulation with the outcome evaluation will further strengthen relevant insights. These will contribute to the produced guidelines for implementing the Addis Abbeba principles, and lessons learnt will be made accessible to other initiatives. In itself, the monitoring and evaluation will constitute one element of the projects scientific publications, on enabling progress towards the sustainable use of biodiversity.

The calculation below is based on the total budget of £527,001 (incl. in kind contribution).

Total project budget for M&E (this may include Staff and Travel and Subsistence Costs)

Number of days planned for M&E	60
--------------------------------	----

Percentage of total project budget set aside for M&E	7
--	---

Section 14 - Funding and Budget

Q26. Budget

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

[Darwin and IWT Budget Template](#)

Please refer to the [Finance for Darwin/IWT Guidance](#) for more information.

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 upload your completed Darwin Budget Form Excel spreadsheet using the field below.

 [Budget_St2 - Darwin_R25_IWT_R5_UCL](#)

 27/11/2018

 08:37:50

 xls 129.5 KB

Q27. Value for Money

Please explain how you worked out your budget and how you will provide value for money through managing a cost effective and efficient project. You should also discuss any significant assumptions you have made when working out your budget.

The costing required is most notably for all the activities to be led and coordinated by UVG directly in Guatemala. Many of the running costs will be co-financed by UVG and a large number of participants, most notably Mayan elders have agreed to participate giving their own time. The costs are needed to support an experienced local coordinator who holds a PhD from the ETH Zurich. With these funds she can work part time on the project. In addition, two staff are needed, one for the botanical aspects and one field assistant. UVG will make the administrative services available to the team.

UCL needs a part time postdoctoral researcher, who will coordinate all aspects of the London activities on a daily basis. Based on the funding available, only a part time position can be offered. She will work on an assessment the species' safety and evidence-base. Again a postdoctoral researcher is needed, since the work requires experience with the analysis of large datasets. We assume that the literature for well over 100 species will need to be assessed, requiring detailed searchers for each and an assessment of the

primary sources (journal articles). UCL has made a very strong financial commitment to the project including an in kind contribution covering the PI's time and will also have to cover any additional costs arising from a higher than allowed rise in the salary of Dr. Scotti (set at 3% by the Darwin Fund). UCL will contribute administrative and technical staff time. The project will also involve MSc and MPharm students and no costs to the projects

The costs of Indigena are well below the company's normal consultancy rate and are driven by Dr. Hesketh's interest to facilitate an ABS mechanism in Guatemala.

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.

Only minor items for plant collection including a plant press and a field dryer will be bought. If still functional, after the end of the project they will continue to be used by the UVG Herbarium.

Q29. Match funding (co-financing)

Are you proposing co-financing?

☒ Yes

Secured

Provide details of all funding successfully levered (and identified in the Budget) towards the costs of the project, including any income from other public bodies, private sponsorship, donations, trusts, fees or trading activity, as well as any your own organisation(s) will be committing.

Donor Organisation	Amount	Currency code	Comments
UCL		GBP	This includes' MH's time on the project, the estate costs and other cost items
UVG		GTQ	UVG will contribute £= XXX for a range of in= kind contributions, most= notably staff time and= additional costs for= supporting the= transdisciplinary= process.
CITES Secretariate		CHF	The CITES Secretariat's= contribution is the staff= time of Dr. M. Hitziger= (£XXX)
No Response	No Response	No Response	No Response

Unsecured

Provide details of any co-financing where an application has been submitted, or that you intend

applying for during the course of the project. This could include co-financing from the private sector, charitable organisations or other public sector schemes.

Date applied for	Donor Organisation	Amount	Currency code	Comments
No Response	No Response	No Response	No Response	No Response
No Response	No Response	No Response	No Response	No Response
No Response	No Response	No Response	No Response	No Response
No Response	No Response	No Response	No Response	No Response

Do you require more fields?

- ☐ Yes
☐ No

Q30. Financial Risk Management

Explain how you have considered the risks and threats that may be relevant to the success of this project, including the risks of fraud or bribery.

Risks associated to this Project have been carefully evaluated. First, Guatemala presidential elections will take place during the second year of this project. There is the risk that specific people within the CONAP agency, a government counterpart to this project, may be removed from their posts and new personnel assigned. To make sure that the work with CONAP can continue regardless of personnel changes, Universidad del Valle de Guatemala (UVG) will sign a formal Cooperation Agreement with CONAP, valid for the entire duration of the Project. Furthermore, in order to avoid fraud and bribery, UVG will execute all funds directly with no allocations to government parties of any sort. UVG is a reputable University with yearly internal and external audits by national and international companies and a transparent track record. Allocations to Maya partners will follow best practices through a formal contract signed by the AGERS Council of elders, which will be responsible of transparently run local expenditures using a recognized tax and auditing mechanism. Poptun is not prone to natural disasters except seasonal flooding in some areas, but not in the one designated for the medicinal plant garden.

Section 15 - FCO Notifications

Q31. FCO Notifications

Please put an X in the box if you think that there are sensitivities that the Foreign and Commonwealth Office will need to be aware of should they want to publicise the project's success in the Darwin 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

Section 16 - Certification

Q32. Certification

On behalf of the

Trustees

of

UCL (School of Pharmacy)

I apply for a grant of









£322,969.00

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 uploaded CVs for project principals and letters of support.
- I have uploaded our most recent signed audited/independently verified accounts and annual report.

Checked

Name	Michael Heinrich
Position in the organisation	Prof
Signature (please upload e-signature)	<div> <u>2284678 signed certification form</u></div> <div> 03/12/2018</div> <div> 16:37:15</div> <div> pdf 58.78 KB</div> <div> <u>Signature-single</u></div> <div> 03/12/2018</div> <div> 16:35:34</div> <div> pdf 102.48 KB</div>
Date	02 December 2018

Section 17 - Submission Checklist

Stage 2 Application - Checklist for submission

	Check
Have you read the Guidance (including Guidance for Applicants and Finance for Darwin and IWT Guidance)	Checked
Have you read, and can you meet, the current Terms and Conditions for this fund?	Checked
Have you provided actual start and end dates for your project?	Checked
Have you provided your budget based on UK government financial years i.e. 1 April – 31 March and in GBP?	Checked
Have you checked that your budget is complete and correctly adds up?	Checked
Has your application been signed by a suitably authorised individual?	Checked
Have you uploaded a 1 page CV for all the Project Staff on this project, including the Project Leader?	Checked
Have you uploaded a letter of support from the main partner(s) organisations?	Checked
Have you included a cover letter from the lead organisation, outlining how any feedback received at Stage 1 has been addressed?	Checked
Have you been in contact with the FCO in the project country/ies and have you included any evidence of this?	Checked
Have you uploaded a signed copy of the last 2 years annual report and accounts for the lead organisation?	Checked
Have you checked the Darwin website to ensure there are no late updates?	Checked
Have you read and understood the Privacy Notice on GOV.UK?	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 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, but not personal data, may be used when publicising the Darwin Initiative including project details (usually title, lead organization, 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).